

LAWAI‘A PONO: EXPLORING CHALLENGES AND OPPORTUNITIES IN COMMUNITY-  
BASED MARINE MANAGEMENT IN HAWAI‘I

by

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Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the  
Mi'kmaq. We are all Treaty people.

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## **List of Abbreviations Used**

**BLNR**- Board of Land and Natural Resources

**CBD**-Convention on Biological Diversity

**CBM**-Community-Based Management

**CBPR**-Community-Based Participatory Research

**CBSFA**- Community-Based Subsistence Fishing Area

**DAR**- Division of Aquatic Resources

**DLNR**- Department of Land and Natural Resources

**IPO**-Indigenous Partner Organization

**IUCN**- International Union for the Conservation of Nature

**KUA**- Kua ‘āina Ulu Auamo

**PA**- Protected Area

**UNDRIP**- United Nations Declaration on the Rights of Indigenous Peoples

## **Abstract**

Native Hawaiian communities are striving to protect their customary ways of life and use Indigenous Traditional Knowledge for stewardship of their natural and cultural resources in Hawai‘i. These resources face major threats and have consistently dwindled over the past few years. The colonial and neo-colonial management strategies have eroded traditional practices and management systems that had sustained the Hawaiian Archipelago for centuries. To tackle resulting contemporary environmental issues and counter commercial interests and tourism challenges, a resurgence of traditional management systems and effective co-management arrangements is needed. Communities across the Hawaiian Archipelago are engaged in the establishment of Community-Based Subsistence Fishing Areas (CBSFAs) which regulate resource use and strive to protect traditional fishing practices. CBSFAs allow communities to self-govern their natural and cultural resources and amplify their roles in environmental management. However, since the passage of the CBSFA legislation, only two communities have established CBSFAs with approved management plans. With a specific focus on CBSFAs, this research identifies the conflicts and challenges that hinder Native Hawaiian participation in the management and stewardship of Hawaii’s rich biocultural resources. The study also explores the role of capacity-building, community representation, and institutional structures in co-management arrangements with state government in Hawai‘i. Using a qualitative research design and aided by Community-Based Participatory Research approach (CBPR), 13 semi-structured interviews were conducted that engaged participants in discussions on the research objectives. The interview transcripts were transcribed, and thematic analysis was conducted on *NVivo 12*. The results provide important insights into challenges that Native Hawaiian communities face in partnering with state agencies including lack of political will, scarcity of funds, and ineffective relationship-building and communication. Findings also include a list of recommendations for state agencies to enhance co-management arrangements and foster trust with communities. Native Hawaiian sovereignty and self-determination, impacts of colonialism, and importance of subsistence culture were discussed in detail by participants. Connection to place, family, and ancestors was elaborated on and the vital importance of traditional practices was emphasized.

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## Chapter 1: Introduction

### 1.1 Background and Community Partners

#### *1.1.1 Designing Governance Frameworks for Protected Areas with Meaningful Indigenous Participation*

This thesis project is part of a larger research initiative titled “Designing Governance Frameworks for Protected Areas with Meaningful Indigenous Participation” which explores more equitable and enhanced frameworks of governance with co-benefits for Indigenous communities and stakeholders in the government. The project is funded by a Social Sciences and Humanities Research Council (SSHRC) Insight grant and brings together several Indigenous Partner Organizations (IPOs) (NAILSMA, MOPAWI, KUA, CIPRED, ISAAK OLAM) and academic institutions (Dalhousie University, University of Winnipeg, Macquarie University) from across the globe. The project seeks to examine existing governance frameworks for Protected Areas (PAs) and seeks to make them more inclusive with the help of Indigenous collaboration. These inclusive frameworks are expected to generate more cultural, social, economic, and environmental benefits for communities and complex social-ecological systems.

This thesis project is a collaborative effort with one Indigenous Partner Organization: Kua‘ Āina Ulu ‘Auamo (KUA) based in Honolulu, Hawai‘i. KUA is a non-profit grassroots organization that represents and amplifies Indigenous voices in natural resource management. KUA strives to create spaces for knowledge exchange and mobilization for ecological integrity of Hawaii’s ecosystems. KUA has worked consistently to present community-based solutions and initiatives for the wellbeing of the culture and natural heritage of Native peoples of Hawai‘i (thereof referred to as Native Hawaiians; Also known as “Hawaiians” and “Kānaka Maoli”).

KUA engages in many partnerships, research projects, and community initiatives to inform conservation practices and empower communities (Kua' āina Ulu 'Auamo, n.d).

### ***1.1.2 Kua' āina Ulu 'Auamo***

Kua' āina Ulu 'Auamo (“grassroots growing through shared responsibility”) was born out of the vision of Kelson “Mac” Poepoe who wanted rural communities across Hawai'i to come together to protect their fishing resources, traditional knowledge, and subsistence practices (Morais, 2017). The purpose was to preserve natural resources that provide subsistence to these communities, build community capacity, and share knowledge across communities.

Since 2003, KUA- initially then called the Hawai'i Community Stewardship Network or HCSN- has supported several networks for advocacy, building capacity and community resilience, and stewardship of lands and waters of rural fishing communities of Hawai'i. Major networks include E Alu Pū (“Move Forward Together”) which has gathered knowledge holders, practitioners, and community stakeholders each year since 2003. Hui Mālama Loko I'a works with fishpond practitioners to share knowledge and support restoration and management efforts. The Limu Hui aims to preserve Native Hawaiian knowledge of Limu (seaweed) and the practices important for traditional, cultural, and religious Limu practices. KUA has garnered international recognition with contributions to the International Union for the Conservation of Nature (IUCN)'s manual for traditional fisher's knowledge. KUA has also become an important facilitator for the establishment of Community-Based Subsistence Fishing Areas (CBSFAs) in Hawaiian communities. In 2019, the Hāena and Mo'omomi CBSFA were recognized by the United Nations Equator Prize.

### ***1.1.3 Lawai'a Pono and E Alu Pū***

E Alu Pū and its work over the years has evolved a working group called Lawai'a Pono Hui, a group focused around advancing CBSFAs and other community-based fishery initiatives.

Through Lawai‘a Pono, KUA has facilitated efforts by various communities in their bid to fight for more representation in management of their resources. These communities include the Hui Maka‘āinanan o Makana (Hā‘ena, Kaua‘i), Hui Mālama o Mo‘omomi (Mo‘omomi, Moloka‘i), Kīpahulu Ohana (Kīpahulu, Maui), and Miloli‘i’s Kalanihale (Miloli‘i, Hawai‘i) and are at various stages of the CBSFA process. Since 2017, the Lawai‘a Pono Hui has accelerated their efforts and have met regularly to discuss barriers, challenges, opportunities, and legislative changes for communities.

#### ***1.1.4 Description of collaboration***

Discussions with KUA and its executive director Kevin Chang based in Honolulu became the starting point of this research project and its focus on community efforts in Hawai‘i. I had the privilege to attend weekly Lawai‘a Pono meetings for over six months before commencing the data collection stage of the project. My proposal and research objectives were designed as a result of participating in the Lawai‘a Pono Hui meetings during this period. Soon afterwards, Kevin joined my thesis supervisory committee and worked closely with the rest of the team to review my proposal and make suggestions where necessary.

KUA and Kevin’s help was instrumental in building relationships with the community members and connecting me with knowledge-holders while also providing background and context for projects in the Lawai‘a Pono hui. Recruitment of participants was directly facilitated by KUA and access to documents and other important information was also provided.

#### ***1.1.5 Study Area***

The geographical study area for this project consists of the US state of Hawai‘i. Hawai‘i consists of eight major islands (Ni‘ihau, Kaua‘i, O‘ahu, Moloka‘i, Lāna‘i, Kaho‘olawe, Maui, and Hawai‘i) in the Pacific Ocean. In addition to these eight islands, Hawai‘i has 127 remote islets (Heckathorn et al., 2021). The state has a population of around 1.4 million people more

than 10% of which are Native Hawaiians and other Pacific Islanders (US Census Bureau, 2021). Hawai‘i has a highly diverse population.

This study aims to bring learning and lessons from Hawai‘i to global practices of conservation and management of protected areas. However, for the purpose of achieving the research objectives, the focus will rest entirely on the context of Hawai‘i and may not be generalizable to other contexts.

## **1.2 Historical and Cultural Landscape of Hawai‘i**

### ***1.2.1 Settling of the Hawaiian Archipelago and European Contact***

The Hawaiian Islands were first settled by the Polynesians who travelled through the Pacific Ocean and made contact with several Islands. Governed by Chiefs, the Native Hawaiians developed rich management regimes to support subsistence (La Croix, 2019). Before western contact, the people of Hawai‘i known as Kānaka Maoli, Native Hawaiians, or Hawaiians lived lives rich with spirituality and culture that included artistic traditional practices. The colonial era began with the first European contact when Captain James Cook landed in Hawai‘i. Soon after European contact, the various chiefdoms in Hawai‘i united and formed the Kingdom of Hawai‘i. The Kingdom was overthrown in 1893 when Queen Lili‘uokalani was deposed and the monarchy in Hawai‘i was formally dissolved with force.

In 1959, Hawai‘i became the 50th US state after a vote that gave respondents the choice between staying a US territory or becoming a state (largely regarded as a US strategic plan to avoid a debate on independence for Hawai‘i). Many movements for Hawaiian independence and Native Hawaiian autonomy and rights became popular after statehood and well into the 70s and 80s (Trask, 1987). Many of these movements focused on land and economic rights that Native Hawaiians had been deprived of. In 1972, as part of an era often referred to as the Hawaiian Renaissance, the State Legislature of Hawai‘i held a concon and amended the constitution to

include among other things environmental rights, recognized rights of Native Hawaiian Traditional Customary Practice and created an Office of Hawaiian affairs to start the process of reconciliation with the Native Hawaiian people (Appropriations Act, 2004). In 1993, the US passed a resolution that apologized to the Hawaiian peoples and recognized them as Indigenous peoples. The US government has ignored calls to recognize Native Hawaiians as Indigenous peoples under federal US law opening channels for more direct negotiations on reparations and land rights as well as the right to self-governance afforded to other Indigenous and Native populations in the US (Den Ouden & O'Brien, 2013).

### ***1.2.2 The Kingdom of Hawai'i***

The Kingdom of Hawai'i united all different Islands and governing systems under one monarch, Kamehameha I, and established relations with other nations around the globe. The Kingdom of Hawai'i remained a recognized sovereign state until the Bayonet constitution of 1887 which strictly curtailed the powers of the King and allowed the US and its strategic ambitions to have more influence in the region (Mirza & Rocky, 2010). In 1893, a US backed coup overthrew the monarchy of Queen Lili'uokalani and started the process of annexing Hawai'i as a formal territory of the United States (Kauanui, 2005).

### ***1.2.3 Annexation***

In 1898, the annexation of Hawai'i as a US territory was finalized through a vote on what is called the Newlands resolution in the US congress against the wishes of the Hawaiian people. The deposed Queen stated that "the people of the Islands have no voice in determining their future but are virtually relegated to the condition of the aborigines of the American continent" (Kauanui, 2005). In 1959, Hawai'i became the 50th US state.

## **1.3 Study Purpose and Objectives**

### ***1.3.1 Hawaiian Fisheries and Traditional Practices***

Fishing practices have been vital for the survival and subsistence of Native Hawaiian communities while also possessing substantive cultural and traditional significance. Since the settling of the Hawaiian Archipelago, Native Hawaiians put in place efficient management regimes for their marine natural resources (Kahā'ulelio, 2006). These effective management practices were highly integrated and ensured that Hawai'i remained self-sufficient for centuries before western contact (Carl, 2009). Fishing in ancient Hawai'i was sustainably managed under the larger belief system of Kapu. Under Kapu, fishing practices were highly regulated through the management of the Konohiki. The Konohiki were overseers who bridged the gap between the governing and the governed (Chang et al., 2019). They strictly enforced practices in each ahupua'a (sub-unit within each district or Moku) (Poepoe et al., 2003). The word ahupua'a refers to the stone altars that were constructed and used to mark boundaries between districts. These altars often held the head of a pig (or pua'a). In addition, these altars were also used for religious ceremonies and for offerings to the god of agriculture: Lono (Mueller-Dombois, 2007). The ahupua'a consisted of land divisions which often included inland areas extending all the way to the ocean (Blaisdell et al. 2005). The ahupua'a were first introduced by the 15<sup>th</sup> century Oahu Chief Mailikukahi and were designed in a sophisticated way that ensured appropriate resource allocation within each community (Mueller-Dombois, 2007) but were also sensitive to political factors (Beamer, 2008). This tiered system of land distribution and resource management effectively protected the natural resources of Hawai'i for generations before the colonial era began (Vaughn & Ayers, 2016). The colonial rule over Hawai'i decimated these traditional fishing and marine resource management practices and opened them to unregulated, commercial, and often illegal interests (Tanaka, 2008). The Kapu system made sure that as population

increased across the Islands, agriculture was suitably adapted to feed the growing numbers. With European contact, nature-based systems that had been in place for generations for Native Hawaiian subsistence were abandoned and dismantled as conflict, disease, and pests ravaged the Islands on large scales (Kagawa & Vitousek, 2012).

Marine resource management in the US is steeped in colonial ideals (Nesper, 2002). After appropriating lands and resources of Indigenous communities, their fishing rights and cultural practices were systematically replaced with western management systems that ignored Indigenous cultural norms, values, and practices (Richmond, 2013). These management systems continue to marginalize Indigenous voices and circumvent their stewardship resulting in declining cultural and ecological integrity of pristine ecosystems (Sepez-Aradanas, 2002; Kittinger et al., 2011).

### ***1.3.2 Hawaiian Systems of Governance***

Indigenous governance encompasses the myriad ways of self-governing Indigenous lands and waters according to cultural practices, laws, and values of Indigenous peoples all over the world (Coulthard, 2014; McGregor, 2014). In the last few decades, Indigenous peoples have strived to reclaim their rights (such as in Canada and Australia) and exercise their historical authority of self-determination (Borrows, 2002) over lands and waters that have been part of their territories since time immemorial (Napoleon, 2013). Indigenous communities have also explored political avenues to realize this right to self-determination and have engaged with national and subnational governments at various levels (McClean et al., 2015). These engagements differ in various contexts and depend on the colonial politics of recognition dominant among governments (Coulthard, 2014). These engagements have also resulted in practices led by Indigenous communities that prioritize the social justice dimensions of conservation (Artelle et al., 2019). Indigenous involvement in environmental governance has been vital for conservation

on national and global scales (Watson, 2013). This involvement brings traditional ecological knowledge and diverse perspectives on conservation to environmental governance. Traditional ecological knowledge refers to Indigenous knowledge systems that have accrued after centuries of practice in traditional natural environments (Whyte, 2013). Using traditional knowledge and practices, Indigenous-led initiatives in conservation have helped protect species and natural ecosystems (IPBES, 2019) and their involvement in conservation can help policymakers better understand our changing environments (Johnson et al., 2015; Wiseman & Bardsley, 2016). Lack of this involvement in management systems reduces the effective ability of communities to successfully govern protected areas (Roe, 2008; Blom et al., 2010). In addition, ignoring the role of local Indigenous communities in governance of protected areas and conservation goals reinforces colonial governance approaches and adds further complexity to the management and co-management of social-ecological systems.

### ***1.3.3 Contemporary challenges around biocultural resources***

Democratic and progressive governments in Hawai‘i have supported community-based resource management. At institutional levels, DLNR and DAR have shown the desire to partner with communities and are in the process of establishing CBSFAs in collaboration with several communities (e.g., Miloli‘i and Kīpahulu). However, institutional capacities within DAR and DLNR are limited and allow only weak channels of communication to be established with Indigenous communities. Moreover, roles that can bridge the gap between state government and communities are lacking and no mandate exists for positions that can expertly liaison between state agencies and grassroot community organizations and community members. This inevitably results in increased barriers to meaningful collaboration and distances the community from decision-making processes that directly impact their lives and livelihoods.



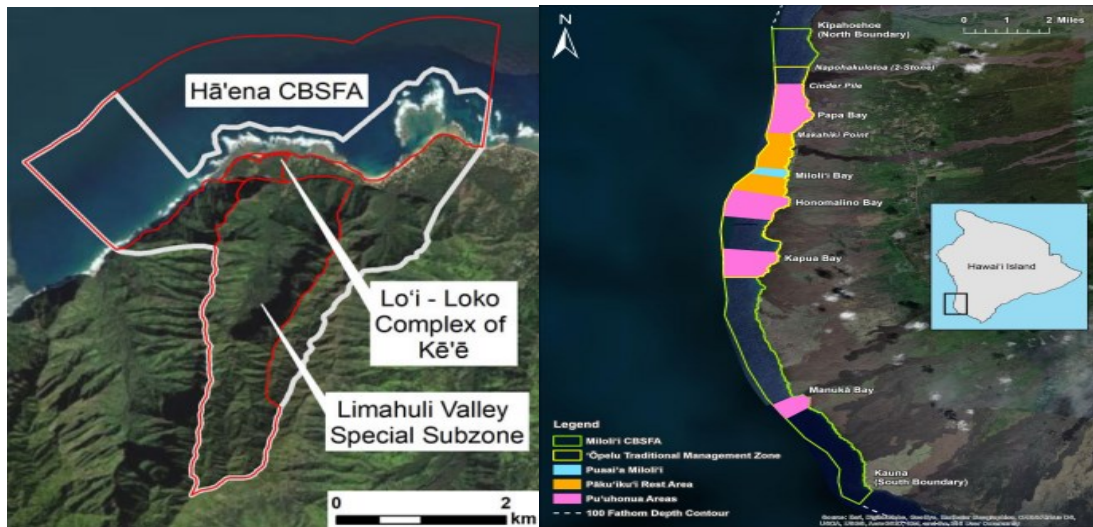


Figure 1: Haena and Miloli'i CBSFAs and their boundaries (adopted from Winter et al., 2023 & DLNR, 2022 respectively)

## 1.4 Objectives

It is vital to support learning and trigger structural changes in existing law, public policy, and neo-colonial power structures to support robust and effective Native Hawaiian governance. The overarching goal of the project is to assist KUA and Lawai'a Pono in their efforts to establish community-based management of resources and to mobilize knowledge that can inform the establishment of inclusive governance frameworks with meaningful Indigenous participation.

The objectives of the project are:

1. Identifying the challenges and conflicts that hinder Native Hawaiian participation in management of Hawaii's natural and cultural marine resources.
2. Exploring the role of capacity-building, community representation, and institutional structures in co-management arrangements with state government in Hawaii.
3. Understanding Native Hawaiian conceptions of challenges and opportunities for the ongoing establishment of CBSFAs in Hawai'i.

4. Determining learning from community, KUA, and state institutes engaged in co-management and shared governance arrangements in Hawai‘i and drawing lessons from this learning for larger implementation of community-based management on global scales.

#### ***1.4.1 Thesis Structure***

This thesis is divided into 4 chapters in addition to a reference list and appendices. The first chapter details the introduction to the thesis while highlighting the community partnership that helped conduct this research. Chapters 2,3 and 4 outlay the research objectives and discuss in detail the methods, results, and findings of this master’s research thesis. These chapters have been formatted in the form of journal articles which will be submitted for publication in peer-reviewed journals. Consequently, formatting for specific journals is followed in each of the two chapters and is complete with introduction, background, methods, results, and discussions. A word limit is also followed in both chapters that aligns with the submission guidelines of the selected potential journals.

Chapter 3 consists of the first two objectives of the thesis and highlights the challenges identified by the participants in partnering with state agencies and the state government of Hawai‘i at various levels. Participants also identify the important role that can be played by building institutional capacity within state agencies while also providing vital resources for communities across the Hawaiian Islands. Participants of the study reflect on the significance of Institutional capacity and representation while working with the government under co-management arrangements like CBSFAs. Finally, the chapter aims to answer the important question of delay and denial of CBSFA designation s for communities and its larger repercussions for the future of community-based management in Hawai‘i.

Chapter 4 encompasses Objectives 3 and 4 and attempts to comprehensively synthesize the responses of the participants on Native Hawaiian conceptions of community-based management (and especially the CBSFA designations) while also reflecting on the principles and lessons that can be derived from the experiences of participants in engaging with the state agencies and government over the last few years.

Chapter 5 summarizes the thesis and attempts to contextualize the results of the two seminal chapters that comprise the core of this research. The chapter lists key findings and recommendations while also grounding those findings in pertinent literature. Finally, the boundary object and dissemination of the project are discussed, and future directions are briefly elaborated on.

### **1.5 Positionality**

As the researcher in this research project, I acknowledge the fact that I am an outsider to the community I will be engaging with and have no cultural or historical ties with them. While I do not belong to a background embedded in western knowledge systems, my heritage and worldview is not similar to communities that participated in this study. Many families migrated from India to Pakistan after “partition”. Partition refers to the end of British colonial rule in the Indian Sub-continent and the birth of two countries in South Asia. I was born and raised in Gujranwala: an industrial city in the heartland of Pakistan side of the Punjab province. I grew up in a large middle-class family on the rural outskirts of the city and on military bases throughout my life. My lived experiences and belief systems were shaped by cultural and religious traditions of the country and the cities of Gujranwala and Lahore where I went to university for my undergraduate degree.

My hometown is one of the most polluted cities in the world and industrial waste makes it unsafe for many communities to reside there. My interest in environmental issues was motivated by my time in Gujranwala and witnessing various communities disadvantaged by toxic pollutants. My undergraduate research in Environmental Sciences and Sociology both focused on cleaning up polluted ecosystems and exploring issues of environmental justice. My academic interests are still grounded in these issues, and I strive to center these in my work in an effort to amplify community concerns. Much of my undergraduate education was focused on Marxist interpretations of the world and these continue to be instrumental to my understanding of the world.

I moved to Canada for a masters degree in 2021 and wanted to continue to work on environmental challenges with socio-political dimensions and economic implications. My thesis was a result of the generosity of our research partners and community members who saw value in it. My intention was to listen and learn from people who have worked tirelessly over decades to fight for their rights and to not embed my own ideas in any research process. I tried to think of myself as a glorified note-taker rather than a researcher throughout the two years of my masters.

I also acknowledge that my positionality has the potential to affect the research processes involved in this study including data collection, analysis, and interpretations. My lived experiences and belief systems decide the way I view the world and this project helped me reflect on and learn from my experiences in the field as an outsider.

## Chapter: 2 Methods

Studies included in the literature employ a range of methodological approaches. Most research is dominantly based in qualitative methods while some employ quantitative analysis and mixed methods approaches as well. Primary methods include interviews (Nasser et al., 2020; Wilson et al., 2018; Bataille et al., 2020), surveys (Kuokkanen, 2019), participant observation (Marks-Block & Tipps, 2021), case studies (Adeyeye et al., 2016; Buscher et al., 2021; Green et al., 2009; Arruda et al., 2017; Zimmerer, 2015t), mixed methods (Ruiz-Mallen, 2013) or a combination of the above. Major methodological approaches used were Community-Based Participatory Research (CBPR) (Wilson et al., 2018), action co-research (Hill, 2011), and Collaborative Event Ethnography (CEE) methodology (Adeyeye et al., 2016).

### 2.1 Theoretical Frameworks

Community-engaged research often requires greater flexibility during the research on part of the researcher. To serve this function of flexibility with the partners and participants involved, a qualitative research paradigm will guide the methodological progression of the research process.

#### 2.1.1 *Governance and Institutional Theory*

Native Hawaiians in Hawai'i have long endured colonial suppression that has excluded their experiences, perspectives, and knowledge systems from environmental governance and management. Neo-colonial state institutions have overtaken management and monitoring tasks that were undertaken by Indigenous peoples since millennia. Western knowledge systems dominate Native Hawaiian traditions, values, and practices. While contemporary management of resources includes collaboration with the government and has resulted in cooperative arrangements between communities and government, serious and complex barriers continue to

exclude meaningful Indigenous participation. These barriers have also ensured that relationships between community and government are difficult to build and are plagued with mistrust. Transformational learning framework can help bridge the gaps between communities and government by challenging existing modes of management through the research process which emphasizes collaboration and learning.

The CBSFA establishment process offers a pertinent example of how learning might look like in this thesis project. In Hawai‘i, communities, and DAR partner within cooperative arrangements to navigate the CBSFA process. The community of Miloli‘i is part of one such arrangement and has been working on a management plan with DAR that includes rule-making processes (regarding fishing limits, type of species allowed etc.). The proposed rules by Miloli‘i and DAR were agreed upon and taken to DLNR. While DLNR approved the proposed rules, it made significant changes (that reduced bag limits for fishing and changed boundaries of the proposed CBSFA) without community feedback. This was seen as a huge setback by Miloli‘i and even DAR, who were all taken by surprise over the sudden changes. The community was frustrated by the changes and is pursuing ways to reverse back to the original proposed rules by the community for the CBSFA. This amounts to increased administrative and community work for Miloli‘i, growing mistrust among the community, and new challenges for DAR.

Learning within this context is not only significant for the community, DAR, and DLNR but will also assist other communities that are seeking the establishment of CBSFAs on their marine resources. By enhancing understanding and communication between communities and state agencies, individual and collective learning will take place on both sides resulting in the formulation of new frames of references around the process of CBSFAs that challenge the existing legacy of neo-colonial environment management and transform it into an inclusive

paradigm which works for all actors and stakeholders involved through social and transformative learning processes. Demonstrably, these processes will reduce or eliminate setbacks such as the Miloli'i rule changes and will help build long term trust.

Kooiman's work on governance is central to this project and its understanding of concepts around interactions within institutions and governance mechanisms. Kooiman (2003) defines governance as "the totality of interactions, in which public as well as private actors participate, aimed at solving societal problems or creating societal opportunities". This thesis project deals with governance at various levels between state agencies and communities where opportunities are created for enhanced participation and interactions in search of common goals and co-benefits. The thesis also delves deeply into the nature of co-management and shared governance and Kooiman's governance theory is a fitting theoretical framework that does well to guide the research.

Within governance systems, the role of institutions is central in guiding interactions and solving societal issues at multiple levels of governance (Kooiman & Jentoft, 2009). Institutions can be conceptualized as devices of broad social organization that result in change within social structures (Crawford & Ostrom, 1995). Ostrom's (2005) institutions are loosely defined and may include organizations or community groups working on issues of common interest. Institutional theory is a widely used framework within the social sciences that sees social organization and agency as a function of institutions and the way these institutions are structured (Donsbach, 2008). The institutions under study in this research thesis include Indigenous communities, non-profit organizations, and state agencies. Moreover, the role of institutions in shaping action and changing existing norms for wider implementation of equitable environmental governance

benefits is explored. These objectives are well-served by an institutional theory framework and has much to gain from governance theory as well.

The broader objectives of this project include contributing to formulation of governance and co-management frameworks that assigns meaningful roles to a diverse set of stakeholders and actors especially Indigenous communities within environmental governance. To attain these objectives, it is important to understand and define governance while also recognizing the range of actors and their roles involved in governance systems. Similarly, institutions make up the core of governance systems and can include community interest groups to highly organized state agencies. These institutions shape individual and collective actions and are pivotal in challenging existing forms of governance in favor of contemporary and novel governance arrangements with inclusive and action-oriented institutions capable and conducive to desirable change.

## **2.2 Research Approaches**

In addition to the theoretical frameworks that guide the broader philosophical and methodological direction of the research processes, additional research approaches drawn from literature were utilized. These include:

### ***2.2.1 Community-Based Participatory Research Approach (CBPR)***

The research also incorporated Community-Based Participatory Research (CBPR) approach which has strong basis within the literature and is the best fit for community-based research as guided by theoretical frameworks used in the study. CBPR is a methodological approach that aims to maximize the participation of social actors such as community members or organizations (Israel et al., 2001). CBPR rejects the idea that social phenomena can simply be observed and documented in isolation. As the proposed research includes community partners and seeks the output of community members through their participation in the study, CBPR is an apt approach to ensure that active community engagement will be an important part of the



research process. Furthermore, CBPR also emphasizes the significance of local and traditional knowledge systems (Stevens & Hall, 1998) and avoids repeating research abuses involving Indigenous participants that have occurred in the past (Smith, 1999; Wilson, 2009). This emphasis is also very relevant for the present research and will help make the study not only inclusive and respectful but also poised to benefit the community itself.

### **2.2.2 *Boundary Work***

Boundary work is an emerging concept that grapples with the complex and multidimensional nature of research involving layered governance systems (Berkes, 2010). With diverse actors and stakeholders vying for varied interests, governance can become difficult to enact (Andersson & Ostrom, 2008; Zurba et al., 2018). Within this complex matrix of competing interests and differing perspectives, it is important to put in place processes that stimulate participation and engagement with stakeholders in order to formulate effective and socially responsible governance systems (Coombes et al., 2012).

Boundaries between groups (especially Indigenous communities and government) are often rife with barriers that limits the available roles for diverse actors to challenge structural injustices embedded in our social systems (Zurba et al., 2018). There is a growing understanding among Indigenous and non-Indigenous stakeholders that these structural injustices need to be addressed in order to bring about positive change within governance systems that can provide co-benefits for a range of involved actors (Zurba et al., 2012; Gebara, 2013).

Boundary work can be defined as “those acts and structures that create, maintain, and break down boundaries” (MacMynowski, 2007). Boundary work has the potential to promote co-production of knowledge between researchers and partners as well as community stakeholders resulting in positive outcomes with the potential to change existing frameworks (Zurba et al., 2018). Research that incorporates boundary work ensures equitable partnerships with adequate

participation in research processes from beginning to end (Zurba & Berkes, 2014). Boundary work also results in useful “boundary objects” which are collaborative products of research with benefits for all stakeholders involved in boundary work (Cash & Moser, 2000). These boundary objects can be any items on a vast spectrum ranging from concepts, knowledge mobilization products, and policy recommendations.

This research thesis incorporates a boundary work approach towards the research objectives as well as the partnership with KUA. The objectives of the research are sensitive to the needs of the community and KUA and aim to provide insights for the community and help mobilize knowledge that can ultimately have co-benefits. The research aims to fill gaps in knowledge surrounding co-management and shared governance arrangements between Hawaiian communities and relevant government agencies. Within KUA, the research will help facilitate learning outcomes that align with KUA’s goals of furthering community-based management in partnership with state authorities. The project will also gather insights on the CBSFA process that will not only be helpful to the many communities working on their establishment but will also assist KUA in its role as a facilitator of those communities. The project documents opportunities and challenges in this regard that can inform decision-making processes. Finally, the mobilization of knowledge through this project will determine learning from Hawai‘i’s context and will add to the existing scholarship on global management of Protected Areas (PAs). The policy recommendations, conceptual findings around CBSFAs and knowledge mobilization will serve as the boundary objects of this research.

### ***2.2.3 Ethical Considerations***

All ethical considerations were given utmost importance in the research procedures. An informed consent form was developed along with an interview guide. Ethics approval was sought from the Institutional Review Board at Dalhousie University. Moreover, all participants will be

an active part of the research process and will have access to all data at any point. Any participant can choose to withdraw his/her/their participation without explanation. Participants were recruited through the partner organization and were not solicited in any other manner. Individual community protocols around engagement with researchers were carefully considered and followed wherever applicable and/or when prompted by communities. After development of the interview and focus group guide, recruitment of the participants began. Once a robust dataset was collected, analysis and review ensued.

### **2.3 Field Methods**

The research design strived to include insights from both western and Indigenous research methods. The research is designed after careful review of the existing literature. The instruments and procedures included are dominant in the field and effectively employed in the literature by Indigenous as well as western scholars. The study employs qualitative research methods to engage participants in the research. The participants of the research include Indigenous community leaders, Indigenous community members, and members of the Indigenous partner organization. These participants took part in semi-structured interviews and had the opportunity to impart their knowledge, experiences, and aspirations in an open-ended interview and group setting. The interview method allowed all participants to freely talk in response to the interview guide questions while also encouraging them to talk about pertinent issues participants wanted to highlight that may diverge from the guide questions.

In addition, participation in weekly community meetings provided the study (and the researcher) with a much needed social and historical context in which the community lives. The mentioned methods are detailed below:

### ***2.3.1 Semi-Structured Interviews***

Semi-structured interviews were the primary method used during the study. Semi-structured interviews consist of broad questions of significance for the study but also allow for flexible and divergent opinions on a question (Britten, 1999). For interviews, recruitment began after the Research Ethics Board at Dalhousie University approved the application for the study. The recruitment of participants was facilitated by KUA through the Lawai'a Pono Hui. The participants include members of Lawai'a Pono Hui that agreed to be interviewed. Through KUA, members of DAR, non-profits and others were also approached and recruited for interviews. This ensured that perspectives from both the community and agencies became part of the thesis research.

Interviews were conducted via Zoom and audio recorded for transcription. Each interview spanned around 60-120 minutes and included questions that address the research objectives. These questions made a detailed interview guide which drove the interview process. The community members were asked about their experiences during the CBSFA establishment process as well as their work alongside state agencies. The participants identified barriers and conflicts which impede their participation in management of their natural and cultural resources. Moreover, respondents gave their opinions on ways to bridge the gaps between DAR, DLNR, and communities in Hawai'i. Their thoughts on co-management in Hawai'i, representation in state agencies, and capacity-building within DAR (and other state agencies) to accommodate community input and feedback were also recorded.

Interviews of community members (from the Lawai'a Pono Hui) also helped determine transformational learning for all stakeholders involved. The data collected from the interviews is important in drawing insights around the objectives of this thesis and challenge existing notions

of co-management and shared governance for both the community and the government and will potentially be capable of changing individual and collective opinions and interactions.

### ***2.3.2 Data Verification and Validity***

Within qualitative research there is a distinct possibility that researcher bias may permeate the processes involved in data collection and analysis (Mason, 2002). To counter this bias, it is important to include the participants of the research at all stages and to verify the data that has been collected (Birt et al., 2016). Member-checking and data triangulation was used at various stages of this thesis project to ensure that the data collected and analyzed was not contaminated with personal bias and has been verified and authenticated by original sources.

Member-checking is the process by which collected, processed, and analyzed data is returned to the respondent for verification (Birt et al., 2016). This process ensures that transparency within research processes is prioritized, and qualitative research and its various stages can be trusted (Doyle, 2007). The transcripts of the interviews conducted for the research will be shared with the respondents. Moreover, at the later stages, the analyzed data will also be shared with the respondents and complete transparency will be maintained. This process will ensure that the data collected and analyzed has been authenticated and no disconnect between the transcript and the analyzed data exists.

It is the goal of qualitative study to have reliable data, credibility, and confirmability (Boyd, 2000; Moon et al., 2016). To add a further layer of reliability to this research, methodological triangulation will be used. Methodological triangulation refers to the utilization of more than one method of data collection (Kimchi et al., 1991). The research design for this thesis included consistent contact with the Lawai'a Pono Hui before and after collection of data. Combined with member-checks and transparent participatory research approaches, the data

collection and various other stages of the research provided verification and validity to the findings.

The role of member checking was essential in making sure that all research processes and data included in the thesis were carried out with the consent of the participants. It was imperative to iteratively check with participants about their contribution to the project to uphold the ethical standards that must be central to research that engages with Indigenous communities. Moreover, the member checking phase of the research resulted in enhanced learning outcomes for the researcher as well. Contacting participants several months after the interviews had been completed were helpful in enhancing communication between participants and the researcher. Participants made many changes in their transcripts, quotes, and provided clarifications and other edits that improved quality of the transcripts and quotes and provided more clarity for the researcher. Several Hawaiian concepts and Hawaiian words came under discussion during the member checking process and participants appreciated the opportunity to review the transcripts for their final approval.

### ***2.3.3 Analysis***

The analysis of the collected data included the transcription of the interviews as well as any other notes taken during interviews. In the subsequent step, this data was coded as appropriate. The analysis plan was validated with member checks to ensure the accuracy of participant contributions. Methodological triangulation (Denzin, 2009) was utilized to ensure that data is collected by various methods (as mentioned above) and analysis is broadly nuanced.

The qualitative data analysis software NVivo 12 was used to analyze the data and for identifying themes within that help explain and explore the study subject (Daly et al., 1997). Within NVivo 12, the data collected during fieldwork was coded using a hybrid approach that includes both deductive and inductive codes. Deductive coding using the study's theoretical

frameworks allowed the data to be organized by a set of a priori codes that identify patterns and important themes in the data. Inductive coding on the other hand included codes that emerge from the data itself prior to the process of interpretation of said data (Boyatzis, 1998). This hybrid of deductive-inductive coding ensured a robust and complete thematic analysis of the research data collected. Careful attention was also paid to make sure that the context of the participant's responses is preserved during data analysis (Horsfall et al., 2001).

## **Chapter 3:**

### **Exploring challenges, conflicts, and opportunities in the establishment of Community-Based Subsistence Fishing Areas (CBSFAs) in Hawai‘i**

**Target Journal: Regional Environmental Change/Global Environmental Change**

#### **3.1 Introduction**

Native Hawaiians and communities in Hawai‘i have long strived to preserve their traditional fishing practices and formulate management systems that integrate Indigenous traditional knowledge systems and empower communities (Kittinger et al., 2012). Communities have shown increased interest in exerting more influence over the management of their natural and cultural resources by entering co-management arrangements with state government and agencies (Friedlander et al., 2013). Indigenous peoples across the US have worked hard to have their voices heard on their traditional rights including fishing (NMFS, 2009). This has resulted in relative progress that has opened up space for community-based Indigenous management of natural resources. Policies that integrate Indigenous knowledge systems into natural resource and fisheries management have gained traction (Huntington, 2011). While Marine Protected Areas (MPAs) often fail to garner community support over loss of subsistence fishing and other concerns (Pauly, 2009), community-based conservation efforts are favored. Efforts in Hawai‘i for the revitalization of traditional practices are noteworthy in this regard (Richmond, 2011). Community-based management of natural resources in Hawai‘i has been exceptionally successful and has resulted in positive outcomes for Hawai‘i’s cultural and ecological heritage even when compared with Marine Protected Areas (MPAs). Moreover, there is a desire among Hawaiian communities to establish community-based management structures that oversee their natural resources (Friedlander et al., 2013). These structures can result in various shared governance arrangements between communities and various levels of local government (Berkes, 2010).



Community-Based Subsistence Fishing Areas (CBSFAs) are co-management arrangements between communities and state agencies that allow communities to propose and pass management rules for their nearshore fishing resources (Richmond, 2013) “for the purpose of reaffirming and protecting fishing practices customarily and traditionally exercised for the purposes of [Native] Hawaiian subsistence, culture, and religion” (HRS, 2005). The formulation of the legislation on CBSFA opened up opportunities for communities to assert a more prominent role in the management of their biocultural resources. CBSFAs allow Native Hawaiian communities to regulate and oversee the management of resources that are important to their subsistence and culture (Richmond, 2011).

Communities across Hawai‘i expressed their interest in proposing CBSFAs and continue to work for their establishment (Levine & Richmond, 2015). However, after more than 25 years the CBSFA legislation remains largely unimplemented. For years, the Hāena CBSFA stood alone as the only instance in the history of the state of Hawai‘i where community-based management of natural resources based on Indigenous knowledge was enacted (Delevaux et al., 2018). In 2022, Miloli‘i became the second community to successfully establish a CBSFA. This included an arduous and extended process spanning several years. The CBSFA process is complex and involves several steps ranging from community feedback, scientific data collection, and public hearings. While many communities continue to navigate the complex process with the Hawai‘i Department of Land and Natural Resources (DLNR), others like Mo‘omomi have withdrawn due to the complicated challenges woven into the CBSFA process (Poepoe et al., 2003).

The purpose of the proposed study is to understand the issues faced by Native Hawaiian communities that impede their participation in management of natural and cultural resources in Hawai‘i. These include issues in partnering and communicating with state government, state

agencies (Hawai‘i Department of Land and Natural Resources (DLNR) and Division of Aquatic Resources (DAR)), as well as reduced community resources and capacity. The study also aims to provide insights into institutional structures that are desperately needed to help bridge the gaps between Indigenous communities and various levels of local and state government.

## **3.2 Background**

### ***3.2.1 Subsistence fishing in Hawai‘i***

Fishing practices have been vital for the survival and subsistence of Native Hawaiian communities while also possessing substantive cultural and traditional significance. Native Hawaiian communities have effectively managed their marine resources for generations (Kahā‘ulelio, 2006). Even as the Islands were isolated, Hawai‘i was able to function as self-sufficient before western contact (Carl, 2009). Under the traditional system of *Kapu*, fishing practices were highly regulated through the management of the *Konohiki*. The *Konohiki* were overseers who bridged the gap between the governing and the governed and enforced management in each district (Chang et al., 2019; Poepoe et al., 2003). Under these traditional systems, natural resource management in Hawai‘i thrived for centuries before western contact. Western contact brought disease and destruction to the Islands and opened them up to exploitation as colonial rule oversaw the dismantling of traditional systems of governance and management that had sustained the Kingdom.

### ***3.2.2 Community-Based Subsistence Fishing Areas (CBSFAs)***

CBSFAs are designed to center community management informed by local and traditional practices and knowledge. The process is a co-management arrangement that brings together communities and state agencies-and once a CBSFA has been established-strives to steward the proposed CBSFA with co-manager roles for communities and state actors. These management roles are carried out in close collaboration between communities and government and involves

monitoring, enforcement, and review of the CBSFA among other steps in subsequent years. Contemporary management of natural resources in Hawai‘i falls under the purview of the state and federal government which are assisted by various agencies that share jurisdiction. Most of the land and water resources are managed by the Hawai‘i Department of Land and Natural Resources (DLNR). The DLNR is managed and overseen by a Board of Land and Natural Resources (BLNR) consisting of seven members. DLNR has a dedicated Division of Aquatic Resources (DAR) which handles marine affairs and has the authority to formulate rules that regulate fisheries and other marine resources (Tissot et al., 2009). DAR also has the mandate to work with fishers, community members, and stakeholder organizations. DLNR and DAR have the Hawai‘i Division of Conservation and Resources Enforcement (DOCARE) at its disposal which is in charge of enforcing rules and regulations handed down by DLNR.

In 1993, the Governor of Hawai‘i formulated a subsistence task force which concluded in its report that subsistence is vital to the survival of traditional Hawaiian practices, culture, and values (Moloka‘i Subsistence Task Force, 1994). The findings of the task force resulted in the passage of a seminal bill that allowed communities and state government to enter shared management arrangements in the form of Community-Based Subsistence Fishing Areas (CBSFAs) “for the purpose of reaffirming and protecting fishing practices customarily and traditionally exercised for the purposes of [Native] Hawaiian subsistence, culture, and religion” (HRS, 2005). The formulation of the legislation on CBSFA opened up opportunities for communities to assert a more prominent role in the management of their biocultural resources. CBSFAs allow Native Hawaiian communities to regulate and oversee the management of resources that are important to their subsistence and culture (Richmond, 2011) while formulating co-management arrangements with mandated state agencies (Ayers & Kittinger, 2014).

CBSFAs allow communities to collaborate with DLNR and its relevant divisions to formulate areas-based and context-specific management plans that align with Native Hawaiian traditional practices and values (Higuchi, 2008). Communities are directly involved in the process at various stages and work closely with the Division of Aquatic Resources (DAR) to devise a management plan and a rules package.

### ***3.2.3 Challenges and developments***

Since the passage of the CBSFA law, several communities in Hawai‘i have shown interest in partnering with state agencies for CBSFA designations in their communities (Levine & Richmond, 2015). In 2015, Hāena became the first CBSFA designated area on the Hawaiian Archipelago after going through an arduous process with the state government that spanned years (Levine & Richmond, 2015). In 2022, the Miloli‘i CBSFA became the second designation with an approved rules package. Other communities (e.g., Kipahulu) continue to navigate the process of CBSFAs and have been engaged with state agencies for years to achieve CBSFA designation.

Despite the establishment of the Hāena and Miloli‘i CBSFAs, community-based management in Hawai‘i continues to lag and faces numerous challenges. These challenges include persistent issues in communities co-managing their marine resources with state agencies and the government. The processes involved in CBSFAs are rife with delays and susceptible to miscommunication. Furthermore, communities and state agencies lack the resources and staff that can help speed up the processes of CBSFA designations. These factors contribute towards ineffective collaborations which have also resulted in communities forced to pause their CBSFA efforts (e.g., Mo‘omomi). The following study investigates the reasons behind the delays in CBSFA designations for communities and makes recommendations for the future.

### **3.3 Methods**

The methods for the study were influenced by the methodology of the research grounded in boundary work and Community-Based Participatory Research Approach (CBPR). Boundary work and CBPR enhance participation of stakeholders in research and promote co-production of knowledge based on principles of equity and transparency (Zurba et al., 2018). The interview questionnaire was developed in line with transformative learning and governance theory. This helped highlight and frame questions around institutional change, capacity-building, and challenging existing modes of natural resource governance in Hawai'i.

Kooiman's governance theory and an institutional framework for the research were fitting as participants were asked questions that delved into the institutional structures of the state government in Hawai'i. These included reflections on DLNR and its Division of Aquatic (DAR) resources in particular and explored how these institutes can transform in order to meet community and environmental needs in Hawai'i. This transformation is also pivotal to create spaces for community voices and roles within neocolonial institutions that enforce management of natural resources. Common interests and community voices are deemed essential in advancing co-management and shaping effective action.

Semi-structured interviews were the primary method used during the study. Semi-structured interviews consist of broad questions of significance for the study but also allow for flexible and divergent opinions on a question (Britten, 1999). For interviews, recruitment began after an appropriate approval and institutional ethics review process.

#### ***3.3.1 Semi-Structured Interviews***

13 semi-structured interviews were conducted online for the study. The interview lasted from 60-120 minutes and were audio recorded. The participants were recruited based on their involvement and experience with community-based management and CBSFAs in Hawai'i.

Additionally, all participants were members of the Lawai'a Pono Hui: a working group of E Alu Pū and a community network of advocates, activists, fishers, practitioners, and knowledge holders.

An interview guide (supplementary materials appendix A) was used to direct the interviews and questions were shared with participants before beginning the interview. The participants were asked about their experiences during the CBSFA establishment process as well as their work alongside state agencies. The participants identified barriers and conflicts which impede their participation in management of their natural and cultural resources. Moreover, respondents gave their opinions on ways to bridge the gaps between state agencies, and communities in Hawai'i. Their thoughts on co-management in Hawai'i, representation in state agencies, and capacity-building within DAR (and other state agencies) to accommodate community input and feedback were also recorded.

### **3.3.2 Analysis**

The qualitative data analysis software *NVivo 12* was used to analyze the data and for identifying themes within that help explain and explore the study subject (Daly et al., 1997). Within *NVivo 12*, the data collected during interviews was coded using a hybrid approach that included both deductive and inductive codes. Deductive coding using the study's objectives allowed the data to be organized by a set of a priori codes that identified patterns and important themes in the data. Inductive coding, on the other hand, included codes that emerge from the data itself prior to the process of interpretation of said data (Boyatzis, 1998). This hybrid deductive-inductive coding will ensure a robust and complete thematic analysis of the research data collected. Careful attention was also paid to make sure that the context of the participant's responses was preserved during data analysis (Horsfall et al., 2001).

### **3.3.3 Data Verification and Validity**

Within qualitative research there is a distinct possibility that researcher bias may permeate the processes involved in data collection and analysis (Mason, 2002). To counter this bias, it is important to include the participants of the research at all stages and to verify the data that has been collected (Birt et al., 2016). Member-checking was conducted to ensure that the data collected and analyzed is not contaminated with personal bias and has been verified and authenticated by original sources.

Member-checking is the process by which collected, processed, and analyzed data is returned to the respondent for verification (Birt et al., 2016). This process ensures that transparency within research processes is prioritized, and qualitative research and its various stages can be trusted (Doyle, 2007). The transcripts of the interviews conducted for the research were shared with the respondents and all quotes were confirmed with the participants before including them in this paper. A detailed informed consent process with flexible options around anonymity was carried out at the recruitment stage and before the beginning of the interviews.

## **3.4 Results**

The analysis conducted on *NVivo 12* resulted in multiple thematic clusters that were identified frequently by participants of the study. These themes and sub-themes were grouped together and are described below in detail:

### **3.1.1 Burden on communities**

#### **I. Lack of infrastructure to help communities:**

Many participants of the project identified the inequitable burden on communities during CBSFA administrative and rule making processes as major impediments to community participation. The CBSFA process was flagged as complex, and many communities are unable to navigate the process without substantial resources at their disposal. The process requires

significant resources and investment on part of the communities that are interested in establishing Community-Based Subsistence Fishing Areas (CBSFAs). In addition, bureaucratic processes involved in the rule making process are slow and roadblock progress at various stages. Participants emphasized the need to engage communities in the process equitably and to provide ample resources to help support community-led management in Hawai‘i.

*“...Definitely a double standard that's applied to communities seeking community-based management, including Native Hawaiian communities in particular...”*  
(Wayne Tanaka, Sierra Club of Hawai‘i)

Participants recognized the importance of support by state agencies to facilitate communities in the CBSFA process. While Non-Government Organizations (NGOs) have provided much needed support to communities to facilitate in the CBSFA establishment process, the state government and state agencies have regularly neglected their duty to assist communities in navigating processes around CBSFAs.

*“...I guess I can speak broadly: DLNR and state agencies generally are incredibly slow and understaffed, and it's just difficult to get even their normal work done much less something that's innovative, like community-based subsistence fishing areas.”*  
(Letani Peltier, Sierra Club of Hawai‘i)

## II. Outreach, Communication, and Education:

The state places the responsibility of conducting outreach, communication, and education around CBSFAs on the communities proposing these CBSFAs. This creates enormous workload for the communities who must conceive, design, and execute strategies to reach out to local leaders, community members, fishermen, and other stakeholders and get them on board for the establishment of subsistence fishing areas. This outreach and communication are often difficult, requires trained personnel, is drawn-out resulting in lengthy timeline delays for communities. Additionally, this stage requires many technical skills as well and places additional burdens on communities and community organizations.



*“...the state really sees how much work it took, but it's immense and I feel that... you know... this cannot be the solution to getting more communities on board. I think the communities have spoken enough already because they are continuing to live off the resource. They have a relationship with the resource. They're telling their story as best as they can, and if you want them to be successful, then provide and outsource support so that they can get the technical skills to get their proposals through the door...”*

*(Ka'imi Kaupiko, Miloli'i CBSFA)*

### III. Unpaid work:

Many community leaders and members actively engaged in the process of promoting community-based and community-led natural resource management often do so on their own time and are forced to do countless hours of unpaid work. Grassroots community organizations taking the lead on CBSFA establishment are primarily responsible for community outreach and administrative work with inadequate support and resources. Many of the community members volunteer their time while working other jobs to help with the process and their time is often taken for granted by the state. Community outreach and conflict resolution are essential to community engagement and a pivotal stage in the CBSFA rule making process which ends up burdening communities and forcing them into volunteering thousands of hours without compensation. This also results in fatigue for the community which might not be able to hold up to the unreasonably high standards the state has established for them with little to no training and resources provided before, during, and after the CBSFA has been established. While developers and other commercial interests can hire consultants, communities are often left to fend for themselves.

*“I think it's important for us to remember that DLNR, they have a budget, they have staff that do this. Communities do it... and I know you've heard this for a million times already... they do this outside of all of the other expectations of life which mainly include working two to three jobs, doing all of the things that are necessary to do to survive and so you know what makes it hard for communities is that there's an expectation that they're going to be doing this, and they're doing it voluntarily, for free”.*

*(Ulu Ching, Conservation international)*

Therefore, the CBSFA process can take decades to complete and community commitment towards stewardship of their vital resources faces unnecessarily long delays.

*“It's frustrating to see how much burden is placed on people who are just trying to do what the state is supposed to be doing anyways. And can do it better and it's all coming out of their own pockets or their own lives”.*

*(Wayne Tanaka, Sierra Club of Hawai‘i)*

Participants emphasized that community-based management is a long-term commitment on part of all co-managers and without appropriate support, communities run the risk of losing support over time and exhausting their resources.

*“...It can be a gradual process, but I think communities run out of steam, you know, again, they're not getting paid, they've got their own personal and family things that they need to look after. And all of this work that they're doing is being done in their spare time. And they didn't go to school for this, you know, this is not something communities have been trained for...”*

*(Charles Young, Kamaaina United to Protect the Aina and Hawai‘i Island Aha Moku (KUPA)*

*Representative)*

### **3.4.2 Leadership and Political Will**

*“I feel that the government shows us the bones to appease us. When it comes down to the meat, they keep the meat for themselves.”*

*(Uncle Damien Kenison, Kauhako ‘Ohana Association)*

Participants identified lack of political will to empower communities and failure of leadership within state agencies on challenges facing communities in Hawai‘i as significant barriers to the success of community-based management and the timely establishment of CBSFAs for communities.

*“Lack of political will, I think active efforts to undermine marine resource management, nearshore management generally. And specifically... and managers who within the state’s... you know Department of Natural Resources and Division of Aquatic Resources who were specifically antagonistic to community-based management approaches.”*

*(Wayne Tanaka, Sierra Club of Hawai‘i)*

Respondents highlighted the role of the Department of Land and Natural Resources (DLNR) and resistance within the department to transformational change. While recent

improvements were noted, substantial changes within the department leadership and approach to community-based management has largely remained absent.

*“I think there's pockets of places within the department that are trying their best to understand how to embrace these changes and how to make those changes within the department. And so, that's good, but it's not... it hasn't permeated all areas within the department, and it hasn't really come from the top down, right? It hasn't come from leadership saying we're going to completely transform the way that we-DLNR-are doing things, so you know no leadership is coming in to say that... I mean, I hope that they would, but that's not happening.”*

*(Ulu Ching, Conservation International)*

The need for the state to recalibrate its priorities and open itself up to systemic change was emphasized:

*“...the state itself has to sort of readjust his priorities and invest more, I think, in the environmental issues, vis a vie through the department of land and natural resources. So, I think that's something that... that's kind of like systemic within the state that there needs to be a mindset. And that's not easily done. And that's done by changing people.”*

*(Charles Young, KUPA Representative)*

The role of lobbyists and special interest groups was highlighted as well, and it's influence on community efforts for natural resource management were elaborated on as well:

*“...there's a huge lobby group and they're very politically powerful. And that's been another one of the obstacles”.*

*(Uncle Presley Wann, Hāena CBSFA)*

*“I think the other intimidating factor-which is more shadow factor-is that there's tons of money being thrown in by lobbyists to maintain the status quo.”*

*(Charles Young, KUPA Representative)*

Participants highlighted the harmful impacts of commercial activities on resource depletion and management and discussed how communities have to compete with these interests in their pursuit of stewardship of their lands and waters.

*“...you've got these huge commercial fishing people, the tourism industry itself, these are our competitors as far as environment goals, they're not environmental managers, they are environmental users, and, you know, their use of the environment, is not intentionally harmful. But it's harmful because they place money above the resource itself. And I believe there's a place for both...”*

*(Charles Young, KUPA Representative)*

### **3.4.3 Capacity within state agencies**

State agencies like DLNR and their Division of Aquatic Resources (DAR) are woefully understaffed and under-funded, limiting their ability to effectively engage with communities. Participants pointed out that DLNR remains chronically under sourced and lacks staff. Additionally, DLNR is not set up to meet the goals that the state of Hawai‘i aspires to meet. These include the 30 by 30 initiative which seeks to designate 30% of the world’s land and oceans as protected by 2030 and the United Nations Sustainable Development Goals (SDGs) which call nations to action on 17 high priority goals for sustainable development. The department and the Division of Aquatic Resources (DAR) have minimal staff who are unable to take on the immense responsibilities of facilitating all communities engaged and interested in community-based management in Hawai‘i.

*“...DLNR does not have many personnel that can help communities through the process. So maybe they can focus on one or two at a time and that's it. So other communities, you got to wait your turn.”*  
(Uncle Damien Kenison, Kauhako ‘Ohana Association)

Themes from the interviews also focused on the neglected position of DLNR which stands in contrast to their vast responsibilities and significant role in decision making around natural resource management that impacts communities and ecosystems in Hawai‘i. The respondents expressed their disappointment in the state’s inability to conduct processes important for communities and for CBSFA establishment including outreach, data, and communication.

*“DAR is overworked, I think they don't have enough personnel.”*

(Uncle Damien Kenison, Kauhako ‘Ohana Association)

### **3.4.4 Disconnect between Worldviews**

*“...there was an old saying that the land is the Ali'i. The land is the Chief. And we are its servants, so that's... you know, so the idea of... the concept of owning land was so totally foreign to the Hawaiian...”*

*(Uncle Presley Wann, Hāena CBSFA)*

Contemporary management systems in Hawai'i are in stark conflict with traditional management systems that existed in Hawai'i for centuries and resulted in effective management regimes based on the *Kapu* system overseen by the *Konohiki*. These systems of management are based on values that do not represent an Indigenous worldview.

The establishment of a CBSFA to protect and perpetuate the traditional values of the Native Hawaiians contradicts state management systems that have a worldview of centralized and top-down governance differs from the Native Hawaiian way of seeing and stewarding land. This results in lack of understanding and conflict between the two approaches. There is an urgent need to incorporate traditional and oral Native Hawaiian traditions into management approaches in Hawai'i.

*“...this is where we live. We know the place the most and we have to be able to take charge of that.”*

*(Ka'imi Kaupiko, Miloli'i CBSFA)*

### **3.4.5 Other themes**

In addition to the themes explained above, many other important barriers to CBSFA establishment and community-based management in Hawai'i were identified by participants in the study. The role of commercial interests were highlighted multiple times and participants expressed reservations about the influence of powerful industries to dictate policy that takes precedence over community and ecological concerns. The lack of funding for state departments and agencies as well as for communities was also recognized. Other themes discussed the importance of prioritizing relationship building with communities in the spirit of collaboration to truly deliver on the promise of co-management and empower communities. The importance of

unity and consensus building within the community was also stressed and was identified as vital to achieving pronounced roles for Native Hawaiian communities in natural resource governance across the Islands.

*“...community based seems the most... seems the most culturally solid, traditionally sound, environmentally sound, sustainably sound answer that I can think of, and our community could think of.”*

*(Uncle Presley Wann, Hāena CBSFA)*

### **3.5 Recommendations:**

The interviews conducted focused heavily on asking participants their opinions on solutions and remedies to challenges they had identified. These were compiled and synthesized to formulate a list of recommendations that may inform co-management arrangements between communities and state agencies in Hawai‘i in the future.

#### **3.5.1 Coordinators and liaisons:**

The state agencies need to invest more in creating positions that work closely and intimately with communities during the process of CBSFA establishment. These positions should be housed within communities and be held by personnel who are aptly trained to work with communities and can bring their expertise to challenges that are persistent in co-management.

*“Maybe DLNR and DAR should designate some of their personnel to be community liaisons and help them through the process.”*

*(Uncle Damien Kenison, Kauhako ‘Ohana Association)*

The participants in the study recognized the need for dedicated positions within state agencies. These positions will be vital to build bridges between communities and the department of land and natural resources.

*“...the state has to invest more in the types of positions that are working directly and intimately within communities to see these Community based management area types come to fruition.”*

*(Ulu Ching, Conservation International)*

In addition, the Division of Aquatic Resources is severely understaffed with personnel and would benefit from having personnel that can assist with planning, administrative, and legal processes involved in the CBSFA establishment. These community-based liaisons can help speed up core processes that delay CBSFAs and can bypass capacity issues within state agencies.

*“Dedicated positions within the division of aquatic resources, including... you know, I think dedicated planner position... legal fellow. I think, positions in the Attorney general's office ideally.”*

*(Wayne Tanaka, Sierra Club of Hawai‘i)*

In addition, participants also expressed the need to have Native Hawaiian representation in personnel at state agencies as well as scientists who can assist with surveys and scoping essential for the CBSFA process. The role of the biologist was identified as an important one while the need for other personnel (such as accountants, and legal fellows) was also mentioned. There is also an urgent need for better communication with stakeholders and facilitating outreach activities that directly pertain to community-based management arrangements. The state must make itself and the resources at its disposal available to community organizations and leaders to provide a conducive environment for community-based subsistence fishing areas to flourish in Hawai‘i and to accommodate communities that are interested in obtaining CBSFA designations as well as other place-based management and shared governance arrangements with the state.

### **3.5.2 Funding and technical support:**

The state legislature and administration have a fiduciary responsibility to provide ample funds not only to the Department of Land and Natural Resources (DLNR) but also to make those

funds available directly to communities that are engaged or wish to engage in community-based management arrangements.

*“...I would prefer to see the funds go as much as possible directly to the communities...”*  
(Charles Young, KUPA Representative)

The Community-Based Subsistence Fishing Area (CBSFA) designation is a complex process that requires substantial and dedicated legal, administrative, scientific, and community outreach work. At present, much of the onus is on the communities to conduct surveys, undertake grueling administrative tasks, coordinate legal legwork, and unite the community in support of CBSFAs while also dealing with opposition within communities. This extensive work in preparation for the rule making process and public hearings requires many resources and strong funding support. The state (and other philanthropic organizations) must ensure that this funding is made available to communities for enhancing capacity and funds are directed towards steps where community resources are stretched.

*“...community-based management, it is more based on traditional fishing practices, but you need scientific data to... to support your proposal.”*  
(Uncle Damien Kenison, Kauhako ‘Ohana Association)

Participants highlighted the need to provide technical support to communities. While many communities are engaging with non-profit organizations to outsource some of their technical needs during the CBSFA establishment process, there needs to be more resources available to communities to undertake and complete technical aspects of the CBSFA process. These technical processes include extensive scientific surveys, proposal preparations, and administrative work that demands technical skills.

*“So funding, you know, all the way up and down the line needs to be sustainable and not just people's commitment.”*  
(Charles Young, KUPA Representative)

### **3.5.3 Partnerships and trust:**



Communities engaged in CBM and CBSFA processes are often left out of decision making concerning the management of lands and waters they call home. The communities are eager to build partnerships with the state that have the potential to generate co-benefits over long periods of time. However, the process of establishing trust with agencies have been precarious and often rife with sudden decisions taken by the state that lacked community consultation and excluded rightsholders. Communities often have to lean on non-profit organizations to get through CBSFA steps and to liaison with the state. This erodes trust between stakeholders and rightsholders and results in delays in the process. Building long term partnerships with communities based on mutual respect, transparency, and inclusion will reap rewards for future collaborations and help avoid unforeseen grievances.

*“...government generally don't want to give up control to somebody else. They don't trust Native Hawaiians. And they don't want to relinquish their authority to manage the resources.”*

*(Uncle Damien Kenison, Kauhako 'Ohana Association)*

The collaboration of the state with the community in Hāena to establish the first community-based subsistence fishing area was appreciated by community leader:

*“...I think it's been a story of collaboration with the state.”*

*(Uncle Presley Wann, Hāena CBSFA)*

Areas for mutual collaboration and benefit were mentioned:

*“...we all want the same thing. We want to protect the resources, and we want... our communities want to protect our fish for our food, and our cultural practices. So why not enact legislation that... kind of allows us to do more of that without being hindered by all the restrictions?”*

*(Uncle Damien Kenison, Kauhako 'Ohana Association)*

#### **3.5.4 Adaptive Management:**

Participants emphasized the need for the state to recognize adaptive management as the standard that should be offered to all communities seeking collaborative management. Adaptive

management is key to recognizing differences in landscapes, values, and needs of individual communities and their unique place-based context.

*“...it should be community based because it's adaptive management. That's the key here: what kept us, our kupuna, and our people here, pre-Western contact was being able to be adaptive. And every place, every Ahupua'a, is different.”*

*(Uncle Presley Wann, Hāena CBSFA)*

The established rules during the CBSFA process should be flexible to quick changes based on community feedback and management needs of the fishing area.

*“...hopefully the adaptive management rules... DLNR will get that stood up in that process running because that would not only allow for a faster response time, but may also mitigate some of the fears people have about making sure rules are perfect and like and evergreen before agreeing to support them...”*

*(Wayne Tanaka, Sierra Club of Hawai'i)*

### **3.5.5 Knowledge exchange:**

Participants recognized the vital significance of having community networks that can facilitate knowledge exchange between communities and provide opportunities for learning between and within communities. Each community has their unique experiences and place-based contexts. Unity within communities and facilitating buy-in from local leaders, fishers, and residents is essential to the establishment and success of CBSFAs. Participants stressed the need for communities to share their knowledge and experiences while engaging in the CBSFA process. This will significantly help other communities to avoid the pitfalls in the process and to manage expectations while also bringing together people from across remote areas to like-minded community-based ventures. Furthermore, the state must ensure that opportunities for this knowledge exchange are adequately made available to communities that express an interest in community-based management arrangements like CBSFAs. Existing networks that bring communities together from across the Islands include *E Alu Pū*: a network of more than 13 (now almost over 40) communities envisioned and established in 2003 by Uncle Mac Poepoe on

Moloka‘i. Many non-profit organizations like Kua‘āina Ulu Auamo (founded by E Alu Pū) continue to provide opportunities to foster relationships between communities and facilitate effective networks of learning. The importance of these networks and the need to enhance support for them was identified by several participants.

*“...I think the biggest hurdle is-hopefully they're getting better at it- is recognizing how important it is to get Indigenous knowledge into that planning.”*

*(Uncle Presley Wann, Hāena CBSFA)*

### **3.5.6 Non-profits:**

The role of Non-profits in facilitating processes and providing resources for communities was recognized by participants as an important contribution. Organizations mentioned includes Kua āina Ulu Auamo (KUA), Conservation International (CI), and The Nature Conservancy (TNC). The role of non-profits was often articulated in conjunction with the inability of state agencies to adequately support communities in the CBSFA process. This leaves a vacuum that is often filled by non-profits who have the ability to provide communities with the resources that assist them in their journey. Participants highlighted that the complex processes involved in CBSFAs brings about the need for multiple allies and non-profits have been vital to the story of community-based management in Hawai‘i. These organizations have been able to help communities and grassroots community groups with valuable resources including but not limited to communication, outreach, funds, and technical support.

*“...what I would suggest to those communities that are coming up to us is that they need to get involved with E Alu Pu, KUA, because that's really where the work begins. Once you get involved with them, you can find other like-minded communities, similar stories, similar situation frustrated with the state frustrated with, you know, development. Frustrated with commercial interests trying to take over these places that you know are truly like, you know their home, their sacred places, and I think once they get plugged in with an organization like KUA, it starts to have that deeper conversation so that they can feel empowered...”*

*(Ka‘imi Kaupiko, Miloli‘i CBSFA)*

### 3.6 Discussion

Many communities in Hawai‘i remain interested in establishing community-based fisheries that provide prominent and meaningful roles in co-management with the government. However, progress remains sedentary (Ayers & Kittinger, 2014). Only two communities have successfully established a CBSFA with an approved rule package and management plan through the Chapter 91 rule-making process, which is laid out in the Hawai‘i Revised Statutes (HRS) for administrative processes and rulemaking for CBSFA designations. These communities worked closely with DAR to establish these rules in each CBSFA under the Chapter 91 statute. Many other communities have also expressed interest in CBSFA and other similar co-management arrangements. The state of Hawai‘i is pursuing ambitious goals on national and international stage and has committed to the 30 by 30 initiative. This initiative was launched by the Division of Aquatic Resources as *Holomua: Marine 30 by 30*. In order to achieve the goals of the initiative and protect the precious marine resources of Hawai‘i, state agencies need to build relationships with communities from across the islands and ground the goals of conservation within community-based management and stewardship.

This study seeks to uncover the barriers and conflicts that have stalled progress on community-based management in Hawai‘i. In-depth interviews were conducted with rightsholders from various communities engaged in community-based management of their natural resources and pursuing various co-management settings (like community-based subsistence fishing areas). In addition, the researcher also participated in weekly meetings of the Lawai‘a Pono Hui for 18 months. The Lawai‘a Pono Hui brings together communities from across the Islands to share knowledge, build grassroots support for community initiatives, and strategize in favor of more prominent community-based management of marine resources in

Hawai'i. The meetings helped educate the researcher and assisted in contextualizing the issues and challenges discussed in the study.

The findings of the study compile and synthesizes knowledge from knowledge holders with intimate understanding of community-based management and community-based subsistence fishing area designations in Hawai'i. Participants identified several challenges that hinder participation of Native Hawaiian communities in community-based management. These challenges speak to the delays that have roadblocked many communities and their pursuit of more meaningful management roles for places that they have called home since time immemorial.

The study elaborates on the role of state agencies like DAR and the department of land and natural resources and points out lack of resources within these state agencies to adequately collaborate with communities and facilitate their efforts for CBSFA designations. DAR has serious deficiencies including in capacity, personnel, funds, and outreach and has underperformed when assisting communities with desired designations (Tissot et al., 2009). The study also recognized the importance of traditional Hawaiian knowledge and worldviews to conservation (Friedlander et al., 2013) which often contradict contemporary management strategies. Therefore, traditional knowledge must be incorporated in community-based management undertaken by the state and respect for Native Hawaiian practices and worldviews must remain paramount. Participants of the study also highlighted the need for political leadership to pay attention to persistent challenges that impede progress on community representation in management. Often, political leaders have introduced legislation which has served to derail community-based management in favor of commercial interests and personal biases. Native Hawaiian rights-protected under the state constitution- have repeatedly taken a

backseat as political maneuvers have taken preference over community and ecosystem needs. Political commitment to protect marine resources in Hawai‘i under the stewardship of Native Hawaiian communities is urgently required. This stewardship is also essential for community subsistence and food security while also perpetuating Native Hawaiian traditional, cultural, and religious practices that have been threatened under contemporary and western management regimes. Communities also expressed their dissatisfaction with the state and its way of approaching management. While for communities, management is centered on subsistence, holistic stewardship, and taking care of traditional lands and waters, the state prioritizes ownership and revenue. The disconnect in these two worldviews promotes distrust among stakeholders and rightsholders and widens the community-state communication gap.

This qualitative study also elucidates recommendations to bolster the sluggish progress made on CBSFAs and community-based management in Hawai‘i. While Governor Ige was quick to announce that Hawai‘i would sign on to the 30 by 30 pledge to protect 30 percent of marine resources by 2030, the target remains far out of reach and has recently seen setbacks. To speed up progress, it is vital that communities are invited on board and offered roles in natural resource management that go beyond symbolic gestures. To achieve statewide, nationwide, and global targets around conservation, the state agencies mandated by the government must invest in community engagement, outreach, and communication. In addition, dedicated positions must be created with the state agencies that can take on the extensive work of community engagement and can help facilitate various processes. There is also a dire need to provide ample funds and resources such as technical support for communities. This technical support can encompass scientific, administrative, and legal support that communities are not trained to undertake.

The importance of place was emphasized in the study at length. Each place and each community are unique and have their own histories, stories, and contexts that formulate identity and sense of stewardship. The state must not use the same mold for each community and should leave room for flexibility. This will ensure that rules are able to adapt and evolve over time as communities and the state learn from data that is generated after CBSFAs are established. The rule making process should be unique to each community and their specific biocultural needs.

Finally, the importance of knowledge exchange between and within communities was a major theme in the study. The role of this knowledge exchanged from one community and their experiences to another is vital in transformational learning and can help communities with more resources at their disposal. Many non-profit organizations have facilitated knowledge exchange opportunities for communities but more of these opportunities need to be incubated by the state for long term benefits for co-managers.

### **3.7 Conclusions:**

This study summarizes challenges that are inherent in the CBSFA and CBM processes in Hawai'i. The study delves into the lack of resources, personnel, funds, and capacity within state agencies while also discussing the unequal and unsustainable burdens of community-based management that are borne by communities for decades before a designation is achieved. Community-based subsistence fishing areas are vital for food security in many communities and allow Native Hawaiian communities to practice and preserve their cultural and traditional practices. In addition, CBSFAs empower communities as co-managers of their place and provide opportunities for more meaningful and assertive roles in natural resource management. The state government and its mandated agencies are bound by the Hawai'i state constitution to help

facilitate CBSFAs. However, the state has often failed to exercise its responsibilities in favor of communities pursuing CBM and CBSFAs.

This failure is also threatening global commitments made by the United States and the state of Hawai‘i. These commitments include the United Nations 30 by 30 initiative essential for communities and ecosystems in Hawai‘i. Without community buy-in and support, the state of Hawai‘i may not be able to deliver on its commitments and will have to abandon the pledges made to protect marine resources.

As more recognition of the role of Indigenous peoples and their traditional knowledge in resource management is taking place around the world this study also provides recommendations that can help enhance co-management in other parts of the world. Lessons learnt from Hawai‘i may prove to be critical for other communities around the world pursuing and taking on more roles that are meaningful and rejuvenate community voices in natural resource management.

*“...they need to learn from us. They have to or it is not going to be understood. The next administration coming in... they're going to be... you're going to have to be taught again. I went through eight administrations. Eight! And I see differences in every single administration. And I don't know why they aren't really catching on. Because seems like we always have to backtrack, every single administration has got to relearn all this. So, all this stuff is foreign to them. Indigenous knowledge is foreign to them.”*

*(Uncle Mac Poepoe)*



## **Chapter 4:**

### **Understanding Community Perspectives on Community-Based Management, CBSFAs, and Native Hawaiian Sovereignty Target Journal: Environmental Management OR Coastal Management**

#### **4.1 Introduction**

Community-based conservation is not widespread despite the fact that Indigenous lands and protected areas often intersect (Garnett et al., 2018). A long history of dispossession and colonial repression has reduced Indigenous stewardship of natural ecosystems (Watson et al., 2021), exacerbated issues of environmental injustice (Adeola, 2001), and contributed to mistrust among Indigenous communities regarding national parks and other Protected Areas (PAs) (Zurba et al., 2019). Moreover, with an increased focus on Indigenous resurgence and the establishment of Indigenous Protected Areas, the issue of limited self-governance has been highlighted by Indigenous communities with strong emphasis on the need for change. To alleviate these issues of disenfranchisement, securing meaningful and inclusive Indigenous participation in PA management is vital. Collaborative management partnerships can potentially lead towards increasingly effective conservation efforts while also delivering on promises of community empowerment in natural resource management that affords meaningful co-manager roles to communities.

Historically, the establishment of PAs were a colonial approach to nature conservation that resulted in the dispossession of Indigenous peoples' land (Hibbard et al., 2008; Zurba et al., 2019). In the name of conservation, colonial governments appropriated lands from Indigenous communities and denied them access and ownership to lands and waters that had been under their stewardship since time immemorial. This dispossession and appropriation continues to

thrive under neocolonial governments in various forms. In face of increasingly threatened biodiversity and conservation efforts (Betts et al., 2017; WWF, 2018), the historically detrimental impact of colonial approaches to conservation is being widely recognized (Ban & Frid, 2018; Moola & Roth, 2018; Ruru, 2012). While challenges persist, recognition of destructive colonial approaches towards conservation marks a transformative shift in the last few years and presents an opportunity for government and non-government actors to approach conservation through decolonized reconciliation efforts. Since the passage of the Community Based Subsistence Fishing Areas (CBSFAs) legislation in Hawai‘i nearly three decades ago, a legal process exists that allows for community-based management of natural resources in Hawai‘i. Efforts on the national and global level have set the stage for various organizations, academic institutes, communities, and state/federal agencies to engage in resource management (Tissot et al., 2009).

The objectives of this paper are to explore and understand Native Hawaiian conceptions of opportunities for the ongoing establishment of CBSFAs in Hawai‘i. With the loss of many traditional practices in the wake of the fall of the Hawaiian Kingdom and repressive colonial rule, it is vital to understand community perspectives on governance, Native Hawaiian sovereignty, Community-Based Management (CBM), and Community-Based Subsistence Fishing Areas (CBSFAs). The role of Indigenous knowledge and traditional practices is discussed while community aspirations for CBM and CBSFAs are also highlighted.

## **4.2 Background**

In the last few decades, Indigenous peoples have strived to reclaim their rights (such as in Canada and Australia) and exercise their historical authority of self-determination (Borrows, 2002) over lands and waters that have been part of their territories since time immemorial

(Napoleon, 2013). International forums and treaties have recognized these rights and affirmed the importance of traditional knowledge and rights for conservation going forward.

There is growing awareness among governments, non-profits, non-state actors, and communities that global environmental governance systems have much to gain from Indigenous inclusion and participation (Gebara, 2013). The 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) unequivocally affirms the rights of Indigenous peoples across the globe. The importance of the right to self-determination and the right to exercise control and management over Indigenous land and waters was formally recognized in the declaration (UN, 2015). Adopted by 144 countries, the declaration emphasizes the relationship between states and Indigenous populations and advocates for enhanced cooperation and recognition of common goals (UNGA, 2007). While many international agreements have existed before UNDRIP, it is particularly significant due to its affirmation of the collective rights of Indigenous peoples and their inalienable right to self-determination (Isa, 2018). Within international law, UNDRIP stands as an important document that openly and explicitly acknowledges historical dispossession of Indigenous people around the world and accepts the burden of responsibility for injustices that had long been ignored. Article 29.1 establishes the important role Indigenous communities have to play in conservation while also affording them the freedom to manage their historical lands and territories. UNDRIP also has clauses that outline and highlight the importance of seeking Free, Prior, and Informed Consent (FPIC) from Indigenous communities and peoples before implementing any legal and administrative measures that might infringe upon their lands, rights, and livelihoods.

The Convention on Biological Diversity (CBD) also acknowledges the important relationship between Indigenous peoples and biological diversity while also stressing the need to

afford the utmost importance to traditional knowledge systems (UNEP, 1992). The convention advises national governments to formulate legislation that takes these provisions into account and aligns Indigenous knowledge with biodiversity goals of the future. CBD stresses the need to establish PAs in collaboration with stakeholder groups while ensuring that issues of equity are thoroughly addressed, and local communities are not impacted negatively (Zafra-Calvo et al., 2017). The convention also explicitly recognizes people located within or near a PA and having traditional claim over territory as active stakeholders in management (Reckwitz, 2002). The Convention on Biological Diversity (CBD) is a binding convention that has been signed and ratified by 193 nations around the world. Article 8(j) includes provisions that identify Indigenous peoples and their roles in conservation of biodiversity. The article also affirms the importance of traditional knowledge and lifestyles and directs actions that will result in generation of benefits from such knowledge (COP-CBD, 1996).

Similar international agreements and declarations include the important developments at the World Parks Congress of 2003 which resulted in the Durban Accords. The Durban Accord accepts the historical and cultural impacts of PAs and advocates for the need to explore different approaches to protected areas that embody Indigenous values (Colchester, 2004). The Paris Climate Agreement (2015) also reaffirms the role of traditional and local knowledge systems and the importance of Indigenous peoples in multiple articles of its text. The overarching theme of these global agreements is to address issues of equity and community participation at local levels in order to enhance the conservation of Earth's protected areas with the central belief that environmental governance and Indigenous governance are closely inter-related. With climate catastrophe looming over humanity and accelerating natural and anthropogenic biodiversity loss

there is an urgency to explore and channel the role of Indigenous governance for the environment.

Under the legislation passed in 1994, communities can enter into co-management arrangements with state agencies in Hawai‘i. These arrangements are meant to protect and perpetuate Native Hawaiian traditional gathering rights while guaranteeing survival of the subsistence culture. These state-community co-management can take the shape of a Community-Based Subsistence Fishing Area (CBSFA) where communities assume prominent and meaningful management roles and collaboratively work on management plans and rule-making processes with state agencies like the Division of Aquatic Resources (DAR) and the Department of Land and Natural Resources (DLNR).

Recently, CBSFA designations have seen increased interest from Hawaiian communities with the communities of Hāena and Miloli‘i successfully establishing CBSFAs with a management plan and rules with DAR. Many other communities are following similar pathways towards management and have sought CBSFA designations on various Islands. Success of CBSFA designations have the potential to persuade other communities to take up meaningful roles in natural resource management and enter into partnerships with state agencies. However, CBSFAs are designed specifically to protect Native Hawaiians practices and traditions and Native Hawaiian communities have significant aspirations around this purpose.

### **4.3 Methods**

The methods for the study were informed by a boundary object approach and following the principles of Community-Based Participatory Research (CBPR) approach. Boundary work allows for a more collaborative co-production of knowledge that can challenge existing

understanding of phenomena while CBPR can help researchers include a more diverse set of social actors in research for a broader and more precise interpretations (Zurba et al., 2018; Israel et al., 2001). This co-production of knowledge emphasizes the need for partnerships between researchers and end-users of that research (Djenontin & Meadow, 2018) and rejects traditional production of science that isolates it from societal problems (Latour, 1998). These approaches to research guided the methods and analysis for the study.

The broader project explores governance frameworks that need to become more inclusive and open for participation of local communities in place-based and context-specific natural resource governance. The thesis project refers to governance exercised by various levels of state and federal governments in Hawai‘i extensively. Participants were asked questions around governance during the interviews and provided extensive contributions on the subject. Kooiman’s governance theory in this regard was helpful and relevant for questions around Native Hawaiian governance and its relationship with contemporary ideas of governance in nation states. Moreover, concepts of governance were closely related to the role of state institutions concerned with natural resource management as well as governance of resources under the Kingdom of Hawai‘i by Native Hawaiians.

#### **4.3.1 Semi-Structured Interviews**

13 semi-structured interviews were conducted with participants from Hawai‘i. The participants went through a detailed informed consent process which included options around anonymity as well. The participants were given access to information about the project and an interview guide was provided before the interview. The Research Ethics Board (REB) at Dalhousie University provided ethical approval for the study including the data collection and knowledge mobilization stage (Appended REB file #: 2022-6131).

Each interview was conducted online on Zoom and lasted between 60-120 minutes. All interviews were audio recorded with consent. The participants were asked questions from the semi-structured interview guide which was divided into various sections. The questions were open ended and pertained to the objectives of the study around community-based management and stewardship of natural resources. The interview guide has been appended to the document (Appendix 1).

The participants answered questions around CBM and CBSFAs and were asked to elaborate on Native Hawaiian sovereignty and self-determination. Questions also included prompts about conceptions of community-based management, aspirations for CBSFA designations, implications for communities at large, and motivations that the participants hold.

#### **4.3.2 Analysis**

The audio recording of each interview was transcribed, and all 13 interview transcripts were imported into *QSR NVivo 12* for thematic coding. The inductive-deductive coding approach was derived from the methodology of the study and community perspectives and narratives were carefully included. Based on the coding, several themes from the transcripts were elucidated and classified into sub-themes corresponding to each research objective. Similar and frequent themes were aggregated to report the results. These results were interpreted and understood in the larger context of each transcript and quotes were used frequently to provide commentary on each theme within the results.

To avoid misrepresenting responses of the participants, a thorough member-checking process was conducted. Member-checking allows researchers to return collected data to the original respondent for verification (Birt et al., 2016). All transcripts were shared with

participants and their consent was verified for sharing quotes and data from the transcribed interviews. Additionally, all participants were free to make additions, revisions, or redactions to their transcripts for any reason. This ensured that all data included in the study was transparently shared with respondents and went through a stringent validity check. Analysis of the interview transcripts was conducted on qualitative software QSR *NVivo 12*. Using a blended approach, the transcripts were coded and classified into various clusters and themes. Many of these themes further consist of sub-themes that provide a more nuanced understanding of the participants' views on the research objectives.

#### **4.4 Results**

The analysis yielded several themes and sub-themes. Major among these are listed and explained below:

##### ***4.4.1 Impacts of Colonialism***

Most participants identified the impacts of colonialism as significant barriers to effective and culturally appropriate natural resource management in Hawai'i. The overthrow of the Hawaiian kingdom was accompanied by the dismantling of the Konohiki system of traditional management over the last hundred years resulting in decimation of ecosystems on the islands. The land of the Indigenous peoples throughout North America was stolen, and countless abuses of rights were perpetrated by the colonizing powers. In addition, the state agencies including DLNR and DAR were seen to ignore traditional Native Hawaiian management approaches that incorporated Indigenous knowledge. The contemporary systems of management perpetuated by DAR and DLNR are very different than traditional management and therefore, results in clashes between the state and rights holders who continue to be guided by traditional and cultural



knowledge passed down by generations and seek to protect it. Participants lamented the fall of the Kingdom of Hawai‘i and the annexation of Hawai‘i with the United States (which was characterized as an occupation by multiple participants). They highlighted the reluctance of the state to learn from Indigenous communities and their traditional knowledge and traced this back to the colonial and imperialistic overthrow of the Hawaiian Kingdom. The reinstating of the Konohiki and other aspects of the traditional Kapu system in Hawai‘i was recognized as an effective solution to contemporary management challenges.

*“...we need to set up a process for reconciliation, and they've never reconciled. In fact, you know, they're colonizing even more now, assimilation even more by sort of whatever we pass it, just keep piling it on.”*

*(Charles Young, KUPA Representative)*

The references to the overthrow of the Hawaiian Kingdom and colonialism point to the lack of trust between state agencies and Native Hawaiian communities on the archipelago. Participants felt that the state did not have the right to dictate management of natural and cultural resources to Indigenous communities in Hawai‘i. State agencies lack the knowledge that has guided these communities since time immemorial and efforts to ignore this knowledge will only serve to undermine community-based management in Hawai‘i. Super imposing neo-colonial interpretations of natural resource management negate effects of any possible and potential reconciliation process between communities and the state.

*“CBSFAs are a means to co-management - an approach that empowers and elevates Indigenous voices in the management framework. The approach provides community members who have felt helpless, hopeless, and powerless with legitimacy and a pathway to do something. Co-management is resulting in improved marine management and health as well as more resources for the community.”*

*(Alana Yurkanin, The Nature Conservancy)*

The impacts of ongoing colonial policies were deeply felt by the participants and highlighted in detail. This included references to military bases on the islands, current socio-

economic conditions of Native Hawaiian communities, and institutionalized exclusion of rights holders. The difficulty of adapting traditional practice to western and colonial understanding of management was also mentioned.

#### ***4.4.2 Self-determination and Sovereignty***

Colonial rule and ongoing effects of discriminatory policies has resulted in systematic dismantling of traditional practices in Hawai'i. CBSFAs present one avenue for communities to reassert their right to govern their lands and waters and pursue self-determination and sovereignty with more prominent and meaningful roles in natural resource management. All participants shared their reflections on sovereignty and highlighted it as an important aspect of CBSFAs in Hawai'i. CBSFAs were identified as avenues to reclaim Native Hawaiian sovereignty and a pathway to empower and elevate Indigenous voices in management frameworks. CBSFAs are governance in action and can provide opportunities to re-gain more control over governance for communities. They add legal protection to traditional practices and protect subsistence culture while also providing a strong foundation for communities to take charge as Native Hawaiians.

*“I think, yes, it is a step to sovereignty. But let's not try to define what that is, at this point. I think the sovereignty is in our action... and we need to keep this thing moving. And that's sovereignty, you know, that's, every time we go someplace, and we tell our story that's sovereignty.”*

*(Charles Young, KUPA Representative)*

Participants expressed the importance of exercising their sovereignty through the practice of their culture and through traditional management. While CBSFAs represent significant gains for communities, they do not define Native Hawaiian right to self-determination and sovereignty. They only tell a part of the story of the journey of Native Hawaiian self-governance.

As long as the cultural practices are kept alive and perpetuated by Native Hawaiians, the Indigenous and traditional knowledge of the Kupuna will be protected. This is what sovereignty entailed for many participants who felt that the culture of Native Hawaiians must survive and thrive in the face of contemporary threats and that Native Hawaiians have a right to self-govern and exercise their sovereignty. The CBSFA designation can benefit and complement these enshrined rights, but they do not stand on their own as a symbol of Native Hawaiian sovereignty.

*“Rules or no rules, CBSFA or no CBSFA.... this is the way we conduct our way of life. And all we're asking is for other people to respect and have the same code of conduct coming into our waters.”*

*(U'ilani Naipo, Miloli'i CBSFA)*

Participants also discussed the various ways in which sovereignty can be exercised.

While for many participants it meant the perpetuation of Native Hawaiian culture and practices and the importance of being independent at heart, others felt that political sovereignty and taking back control from the state were equally vital for Native Hawaiian self-determination. The lived experiences and the learned lessons from the Kupuna were highlighted as pathways to Native Hawaiian sovereignty and conserving the natural world for the next generation.

*“...that meant that sovereignty was within us. We hold it all the time and we're as individuals but as a collective we hold... we hold the potential or the reality of sovereignty through our... in ourselves already, and so we... the decisions that we make, the behaviors that we engage in, the traditions that we choose to carry on, whether or not there is any kind of designation behind it, that's... that's sovereignty.”*

*(Ulu Ching, Conservation International)*

Participants made clear connections between sovereignty and practicing of Native Hawaiian traditions. The practicing of these traditions meant exercising sovereignty for many participants and greater desire to assume meaningful roles in co-management of cultural resources. While government's help is appreciated, Native Hawaiian sovereignty is rooted in the Kuleana (responsibility) to take care of place, culture, and the natural world. This Kuleana

supersedes any designation and must be focused on what nature’s clock is telling communities. Amplifying voices and stories of communities who take up this responsibility is important. An equally important connection to sovereignty is protecting and carrying on traditional knowledge. The Kanaka (Native Hawaiians) have a close relationship with the land and the ocean and hold important knowledge about them. Exercising Native Hawaiian sovereignty is also to carry this knowledge, practice its effectiveness, and use it to protect natural resources.

*“I think it's giving community members who have felt helpless, and hopeless and powerless to do something. It's giving them a pathway to do something.”*

*(Anonymous Participant)*

Participants also discussed that the state does not want to devolve power to Indigenous communities and other grassroots organizations and wants to continue to perpetuate top-down governance to the detriment of Hawaiian traditions and natural ecosystems.

#### ***4.4.3 Traditional Native Hawaiian Practices and Knowledge***

Community-led management and CBSFAs were identified as pathways towards reinvigorating traditional fishing practices, protecting traditional ecological knowledge, and honoring the Kupuna. Participants identified traditional knowledge and Native Hawaiian practices as the core of management approaches in Hawai‘i. The connection of Native Hawaiian communities with their natural environment is intimate and sacred. Any management that involves this natural environment must be intertwined with cultural and traditional practices guided by traditional ecological knowledge handed down by generations of Kupuna. This knowledge is held by Native Hawaiian communities and practiced in a number of ways to this day. Community based subsistence fishing areas are not merely places to protect natural resources that are threatened but more importantly places that perpetuate Native Hawaiian

gathering rights and practices which have stewarded the natural resources of the land and sea for generations. They also add a layer of legal protection to these practices and help enforce rules formulated by communities.

*“I feel it's going to help motivate them. I think for a lot of people they still don't understand the whole context of CBSFAs. But I feel that once they see us and see what's happened to Miloli'i, they're gonna understand it more and more, and the thing it has to be... we have to follow the ways of the rules we created, the traditional rules that are aligned to the Konohiki system.”*

*(Ka'imi Kaupiko, Kalanihale)*

Participants emphasized that Native Hawaiian cultural practices must sustain with or without management plans and strategies. However, the importance of CBSFAs in codifying these practices in law was also recognized. These practices are at the core of the idea of CBSFAs and articulate the importance of incorporating Indigenous Knowledge in contemporary management regimes. They enhance the management of natural resources while also harnessing cultural approaches and knowledge for conservation.

*“The most important way to protect your traditional practice.... practices and culture is to practice your traditions and your culture. Now, the CBSFA process, it makes the government aware of your communities of practices. And that's a positive. So, you know, and ultimately, protecting a fish is going to help you preserve, protect your culture, your practices, because you have no more fish, you cannot teach how to catch fish to your children.”*

*(Uncle Damien Kenison, Kauhako 'Ohana Association)*

For many Native Hawaiians, traditional practices come naturally and are inherited from the Kupuna. This knowledge is part of the Native Hawaiian identity. It is safeguarded and practiced while fishing and performing other subsistence activities and including them in management plans (such as CBSFAs) can leverage their wisdom and tested effectiveness in service of conservation of resources in Hawai'i. Many participants voiced their concerns about the loss of cultural practices in the face of colonial policies of erasure and the loss of Kupuna over time. Many families have been disconnected from places they traditionally and historically

resided in, resulting in loss of perpetuation of many practices. It is, therefore, vital that community-based management approaches in Hawai‘i must contain Indigenous Knowledge in them.

*“I’m learning from Uncle Mac and why and how CBSFAs got started in the first place. It wasn’t because you need to prove like an X amount of fish coming back and restoring, but it’s about the subsistence culture and perpetuation of Native Hawaiian gathering rights and practices.”*

*(Kehau Springer)*

#### **4.4.4 Subsistence**

Native Hawaiian rights are protected under the constitution and subsistence is fundamental to the survival of communities and their food security for current and future generations. Participants recognized the importance of the subsistence culture of Native Hawaiians and its connection with community-based management generally and CBSFAs specifically. Many communities on various islands are tied to this subsistence culture and depend on it for sustenance. This practice of subsistence has been passed down through generations and are enacted by communities in their lifestyles.

*“...community-based management that’s informed by the... by the communities that have daily intimate familiarity with their resources... and who have almost existential dependence upon their being protected and perpetuated for future...for present and future generations... like that’s...It’s what it’s...it’s the only proven approach that’s worked before...”*

*(Wayne Tanaka, Sierra Club of Hawai‘i)*

CBSFAs often limit the number of species that can be taken by fishers. This is instrumental in protecting fishing resources that are vital for the survival of many communities. The designation is therefore, directly connected to the protection and perpetuation of subsistence fishing in Hawaiian communities while also limiting commercial fisheries interest in areas. Participants elaborated on the fact that subsistence and gathering rights of Native Hawaiian

populations are protected under the state constitution and must be guaranteed by the state while making it clear that Native Hawaiian communities have interests and rights that are unique from the general public. It is imperative that protection of these rights be carried out as Native Hawaiian communities continue to benefit from the subsistence culture to provide for their families and practice traditional gathering rights.

*“If there are traditional practices tied to resources from that place - and if those resources go away - so to do the traditions, the practices, the culture, the religion and spirituality, and then a person’s identity. And that loss has been linked to the demise of the health and wellbeing of so many local communities. There is so much good that comes from being connected to our resources, and it is particularly our subsistence communities that are impacted when those things go away.”*

*(Alana Yurkanin, The Nature Conservancy)*

#### **4.4.5 Connection to Place, Family, and Ancestors**

Native Hawaiian communities have been displaced and disenfranchised under a century of colonial rule and many have lost connection to place. Taking care of the ‘Ohana and honoring the Kupuna through traditional practices and community centered approaches can help reconnect people with places. Participants frequently identified their connection to place and family as their motivation for engaging in community-based management. Participants living in Miloli’i, Hāena, Mo‘omomi and other communities explained their relationship with the place they grew up in and expressed the sense of responsibility they feel to protect their rich natural and cultural resources. While respondents agreed that CBSFAs and other community-based management arrangements were a step in the right direction and afforded Native Hawaiian communities the opportunity to reassert their sovereignty and governance rights, the idea of sovereignty was strongly rooted in the Kuleana (responsibility) to take care of the land and the ocean. This Kuleana is inherited from the Kupuna or the Elders and its fulfilment by the practice and perpetuation of Hawaiian culture is central to exercising individual and community sovereignty.

This Kuleana does not require any designation and comes from the work of the Kupuna and their knowledge. While CBSFA designations and community-led initiatives can help increase stewardship capacity of communities, they are not essential elements of Native Hawaiian sovereignty and its exercise.

Recreation activities focused on the ocean (like swimming, diving etc.) were also mentioned.

*“One of the main challenges to our communities is the passing of our kupuna. We lose a lot of connection to our past with the kupuna passing away... with them, because their knowledge and their ability to help them guide us... so we got to hurry up and prepare young generation... to prepare them for the challenges they will face later on.”*

*(Uncle Damien Kenison, Kauhako ‘Ohana Association)*

Participants also indicated their strong connection to family and their ancestors as a reason for engaging in community-based activities and believing in protecting the environment. The importance of intergenerational connections between families and individuals within the families was clearly evident. In addition, most participants felt a responsibility to protect and perpetuate the knowledge and work of their Kupuna and incorporate it in their practices and lifestyles. Further, participants recognized being self-sufficient in terms of sustenance as another factor for supporting and engaging in CBSFAs and other community-led work in Hawai‘i.

*“I learned in my time that we are caretakers of this land. We're not going to talk about Aloha āina and Mālama āina and not do anything about it. I've been doing this my whole life. So, I don't even talk about it. I don't have to talk about it, I don't have to remind my kids, you already see what I do. And it's automatic for them to follow suit. So, in that sense, I don't even teach them. It's simple as that. You don't have to teach this. It's learned. It's inherited. It's inside you and it flows in your blood.”*

*(Uncle Mac Poepoe)*

#### **4.4.6 Building Partnerships and Empowering Communities**



It is important to center community narratives, traditions, stories, and connection to place while collaborating with them on co-management. Hawaiian ways of management have worked for centuries and learning from them is vital. Participants stressed the need to build equitable partnerships between communities and state agencies to foster trust and transparent communication.

*“Try to devote more time, energy, and resources to it. And in good faith. Like working with the community and having the community actually think, oh, they're here to help us.”*

*(Letani Peltier, Sierra Club of Hawai‘i)*

Many participants mentioned one DAR manager who has helped build relationships between community and state co-managers and emphasized the need to further deepen that relationship. In addition, the need for Native Hawaiian representation in the state was highlighted frequently and cited as an important step in building relationships and empowering community perspectives. The lived experiences of DAR managers were identified as important for their positions and the success of one DAR manager was often brought up as an example.

*“But we need to sit with the communities, I think DAR has definitely opened up to being at the table with communities. Sitting with them and listening to them. That didn't happen before.”*

*(Edward Kekoa, Division of Aquatic Resources)*

Participants discussed CBSFAs as a new form of governing natural resources. This new frontier makes it difficult for communities to navigate the process. The state is also often unsure of the many legal and administrative steps involved as well as the nature of the CBSFA designation which centers community perspectives (during the public hearing) and allows communities to act as co-managers. The novel nature of this designation, therefore, demands building strong partnerships with communities based on the principles of transparency and equity where communities must take the leading role. Participants expressed disappointment in the way

the state took decisions during the CBSFA designation process that excluded communities from decision-making.

*“...with the government side it is just not being open to think outside the box. And not being flexible to like how communities think.”*

*(Edward Kekoa, DAR)*

The need to build trust between DAR, DLNR, and communities is vital for the success of community-based management in Hawai‘i. While many non-profits continue to fill up gaps between these state-community partnerships, the state agencies are mandated to step up efforts and meet communities halfway.

*“I think it's really intimidating to be sitting across the table of a government agency, local government agency. And they're not experienced in working with traditional practitioners.”*

*(U‘ilani Naipo, Miloli‘i CBSFA)*

There is an urgent need for a more prominent and pronounced state presence and outreach on different islands. While DAR is based in Oahu, participants suggested that having offices and officers on different islands will make it easier for communities to access DAR and work collaboratively and solely to get CBSFA designations faster. It is vital to note that this increased presence will require more funds and resources from the state to be invested in DAR in order to create positions and spaces that facilitate communities. This facilitation will extend beyond just the establishment of CBSFAs and will carry on through the enforcement phase as well where communities require help in monitoring their resources and reporting on violations. It is imperative that throughout these processes community narratives and stories are centered and the process is used to empower communities seeking CBSFA designations or engaging in other co-management and community-based arrangements.

*“I can share that with people. Because I'm out there doing the work. I'm out there looking at all these. DLNR is never there. DAR is never there.”*

*(Uncle Mac Poepoe)*

The need for the Division of Aquatic Resources to have an extended presence on each Island was stressed.

*“The ideal DAR I think would have a hub on each island.”*

*(Kehau Springer)*

#### **4.4.7 Other themes**

In addition to the major themes discussed above, several others were also brought up by multiple participants. Respondents discussed the perspectives of fishers on CBSFA designations who often have reservations about closures and restrictions on fishing that may be seen to impact subsistence activities. The role of commercial fisheries and coastline development were also mentioned as detrimental to the relationship between state and communities and to community-based management and community aspirations for natural resources.

#### **4.5 Discussion**

This paper explores perspectives of members of various Native Hawaiian communities on the archipelago in relation to recent developments in community-based management. Several communities in Hawai‘i have expressed interest in collaborating with state agencies to assume more meaningful and sovereign roles in natural resource management. Community-Based Subsistence Fishing Areas (CBSFAs) is one example of a community-based co-management arrangement with the state that allows Native Hawaiian communities to formulate rules in collaboration with state agencies to protect natural and cultural resources while protecting and perpetuating Native Hawaiian cultural and traditional practices. The CBSFA designations pose interesting questions for Native Hawaiian sovereignty and self-determination. It is also important to amplify community voices, opinions, and perspectives on CBSFAs and what they mean for communities engaged in management in Hawai‘i.

The CBSFA legislation has opened up pathways for Native Hawaiian aspirations for CBM to take shape in Hawai‘i. The legislation has allowed the communities of Hāena and Miloli‘i to achieve CBSFA designation with a management plan that allows local communities to protect vulnerable species and limit exploitation of important cultural and natural resources. Many other communities including Kipahulu on Maui Island are next in line to achieve the CBSFA designation. With this new push by state agencies and communities to collaborate and enter shared governance arrangements over natural resources, it is important to explore community attitudes towards questions of sovereignty, self-determination, cultural practices, and empowerment. Over the span of 13 interviews, respondents shared their outlook on community-based management and its present and future directions. The interviews highlight how Native Hawaiian communities conceive the idea of sovereignty, its resurgence, its future, and its connection to resource management.

Respondents made explicit references to the impacts of colonial rule in Hawai‘i and its contribution towards the devastation of natural and cultural resources. In addition, colonial rule dismantled traditional systems of Hawaiian governance and stewardship and jeopardized management regimes that had protected Hawaiian cultural practices and natural ecosystems since time immemorial. Participants discussed the abuses of the past and the ongoing systems of neo-colonial rule that continue to deteriorate relationships between communities and state to the detriment of the natural environment. The traditional systems of governance were important for the cultural and biological vitality of the Islands and their decimation resulted in irreconcilable conflicts with communities who had been stewards of their lands and waters for generations. Participants discussed the need to take charge as Native Hawaiians and re-affirm their historical rights.

*“...but if we really wanna be where we want to go, we really have to start to take charge of our own story.”*

*(Ka’imi Kaupiko, Kalanihale)*

The paper explains how the idea of Indigenous sovereignty is complex and its understanding is rooted in various concepts that are often foreign to western democratic and liberal order. Therefore, new interpretations of a legitimate political theory must reconcile and accept differences in the idea of sovereignty for Indigenous peoples (Iverson et al., 2000).

*“CBSFAs are a means to kind of re-gain opportunities to govern.”*

*(Letani Peltier, Sierra Club of Hawai‘i)*

Participants also stressed the importance of traditional practices for the survival of subsistence culture in Hawai‘i. Community-Based Subsistence Fishing Areas (CBSFAs) were recognized as specialized arrangements where the primary goal is to protect and perpetuate Native Hawaiian customary practices and gathering rights enshrined in the state constitution. It is essential that contemporary management frameworks respect the importance of traditional knowledge and accept its effectiveness in tackling environmental and management challenges. The CBSFA designation helps incorporate Indigenous knowledge into management and reaffirms the effectiveness of the Hawaiian Konohiki system of natural resource governance.

*“...a community can perpetuate tradition and culture without a CBSFA. But when you have the CBSFA you can codify, you can make it known, you can be recognized by the government for those practices, and then not just practices, but related management rules.”*

*(Kehau Springer)*

Community narratives about relationship to place, practice, and family were also highlighted during the interviews and the sense of Kuleana was expressed by all participants that are actively engaging in community-led management of places that they have called home for generations. Participants also expressed the importance of building relationships with the state and the need to establish trusting and long-term partnerships that help communities reconcile

with the past and take charge of community-based management for the future. Indigenous communities have stewarded their lands for centuries and continue to heed the call of their natural environments for protection of their resources. State agencies and governments must enhance the stewardship capacities of communities by building long-term and transparent relationships that yield environmental and management benefits for everyone.

*“To me, this is really a step towards co-management. So, building trust between community and the state, where currently there is a lot of distrust.”*

*(Anonymous Participant)*

In order to establish these partnerships and cultivate long-term and trusted relationships, participants hoped for better funding for state agencies which will allow them to have more personnel to work closely with state agencies on each Island and speed up the process of CBSFA designation and management plans with communities at their center. In order to make placed-based management approaches successful, DAR must be more accessible to each community in their unique cultural and geographical context and must have the resources necessary for its various functions in government and responsibility for communities.

*“...we have one statewide coordinator; what would help is that if we had Island coordinators. Island and community-based coordinators...”*

*(Edward Kekoa, DAR)*

#### **4.6 Conclusion**

The paper provides significant insights into community perspectives and opinions on approaches towards managing natural and cultural resources in Hawai‘i. The state of Hawai‘i has ambitious plans for conservation under the global 30 by 30 initiatives. However, without community support and ample resources available to DAR, these initiatives are destined to fall short of targets that are important for local, national, and global fight against climate change and

environmental crises. Incorporating local perspectives and paying attention to community aspirations for these initiatives will result in co-benefits for stakeholders in the state and rights holders on the ground.

*“We have this Holomua 30 by 30. We can help support their efforts with the true intent of what that Holomua 30 by 30 initiative is supposed to be- to do it from a traditional perspective.”*

*(U’ilani Naipo, Miloli’i CBSFA)*

This paper explores the perspectives of Hawaiian communities on CBM and CBSFA designations that have recently been obtained by communities in Hawai‘i in an attempt to assert more meaningful roles in management. The study employs perspectives from 13 participants from various communities on the Hawaiian Archipelago to traverse the idea of Hawaiian sovereignty as well as aspirations for CBM and CBSFAs. For communities to enter co-management arrangements with the government, it is important to reaffirm that traditional practices, their protection, and pursuit is available to communities through CBM and CBSFAs. While many more avenues of Indigenous governance and self-determination are possible, CBM and CBSFAs in Hawai‘i are a vital avenue that can help protect biocultural resources and empower communities to meet global targets. In addition, communities bring historical expertise to management and incorporate valuable Indigenous knowledge into practices around conservation. This knowledge has sustained Hawai‘i for generations and embracing its effectiveness will enhance management strategies.

The paper is important in highlighting the need to empower communities through partnerships that encompass the principles of equity and transparency. To cultivate these relationships, Native Hawaiian traditions, narratives, and histories must remain front and center and management approaches should incorporate placed-based and context specific practices to protect subsistence communities and ensure the survival of sacred practices. Similarly important

is to acknowledge the right of Native Hawaiian communities to exercise their sovereignty and self-determination that historically belong to them and is endorsed by national and global agreements and legislation.

It is important to note that the study is limited by the number of participants it includes and cannot be used to generalize the Lāhui (Hawaiian Nation). Nonetheless, important interpretations of Native Hawaiian aspirations around CBM and CBSFAs are articulated and stress the need to further explore Indigenous community perspectives rooted in historical sovereignty and its relationship to contemporary forms of management frameworks.



## **Chapter 5: Conclusions**

### **5.1 Summary of Results**

This research focused on exploring community-based management arrangements in Hawai‘i and included members of community from across the Hawaiian Islands. Participants were engaged in semi-structured interviews and questions centering around the study objectives were posed. The objectives of the study highlighted the conflicts that have hindered Native Hawaiian participation in natural resource governance and slowed down progress on community-based management in Hawai‘i over the last three decades. In addition, objectives also explored state institutional structures that require transformation in order to be conducive to community-based management solutions to environmental crises. Native Hawaiian conceptions and aspirations on CBSFA designations and community-based management in Hawai‘i were also central to this study. The analysis of the interview data yielded important insights into community perspectives on the study objectives:

#### **5.1.1 Challenges and conflicts hindering Native Hawaiian participation in management of Hawaii’s natural and cultural marine resources:**

The study synthesized data from the interviews to directly identify challenges to community-based management in Hawai‘i under the stewardship of Native Hawaiian communities. Financial, administrative, and social burdens were seen to be borne largely and inequitably by communities that chose to engage in community-based management arrangements (such as CBSFA designations) with the government. In addition, a lack of political will and legislative roadblocks were recognized as significant drivers of delay in CBM arrangements. The modest capacity within state agencies and especially the Division of Aquatic Resources (DAR)

was reported as another major challenge. DAR and DLNR remain underfunded, understaffed, and under resourced and are unable to amply assist communities in their struggle for co-management roles.

The differences between an Indigenous worldview and western interpretations of management approaches were also cited as a significant barrier to successful and community-led management. Contemporary state agencies are disconnected from Hawaiian systems of natural resource governance that have sustained the Islands for centuries. This disconnect also contributes towards distrust in relationship building and causes conflicts.

### **5.1.2 Role of capacity-building, community representation, and institutional structures:**

The study also posed important questions around capacity-building, representation, and institutional structures to the respondents. Several recommendations were made by participants to improve capacity within state agencies, increase Native Hawaiian representation in positions within the state, and transformation in institutional structures necessary to speed up CBM in Hawai'i. The need for more spaces and positions created to cater to community needs was stressed and participants emphasized the importance of funding and technical support that is vital for communities to navigate CBM and CBSFA processes. Furthermore, a trusted relationship between state and local communities based on equal partnership and transparency was identified as well. Participants recognized the importance of knowledge exchange and commended the work of several non-profit organizations that have helped bridge the gap between state and communities while also providing important logistical support and resources ranging from funds to administrative duties. CBSFA designations were also cited as placed-based and context-

specific arrangements that must be applied as adaptive management plans specific to the needs of the communities and places they call home.

### **5.1.3 Native Hawaiian conceptions of challenges and opportunities for the ongoing establishment of CBSFAs in Hawai‘i:**

Important insights were offered on the ongoing establishment of CBSFAs and progress on CBM in Hawai‘i by the study participants. The idea of Native Hawaiian sovereignty and importance of co-management were explored at length while the impacts of colonialism were also discussed in detail. The Native Hawaiian connection to place, practice, and ancestors was also examined and interesting insights on the Native Hawaiian identity and its relationship to traditional practices and relational values were gained. CBSFA designations were seen as an important avenue to take up prominent roles and were identified as pathways to Native Hawaiian sovereignty. Transparency and equity in relationships with state agencies and the incorporation of Indigenous knowledge for the protection of subsistence culture and practices was discussed.

Building trust and having more access to government agencies is an important precursor to communities entering co-management arrangements with the state. A more robust, community-centric, and amply funded DAR will be instrumental in engaging more communities into CBM arrangements which will lead to more holistic and effective management approaches to environmental crises in Hawai‘i. The *Holomua: 30 by 30* initiative in Hawai‘i joins a global pledge to designate 30 percent of land and waters of the world as protected areas by 2030. This pledge by the United States and other countries around the globe is essential in delivering substantially pivotal conservation targets by 2030. As DAR gears up to make 30 by 30 initiative successful, community support and backing is pivotal to achieve regional, national, and global targets. Especially important is incorporation of traditional management in these contemporary

management strategies and goals in order to enhance stewardship capacities of Native Hawaiian communities.

#### **5.1.4 Lessons from Hawai‘i for co-management**

CBSFAs are co-management arrangements with collaborative roles for communities and state actors in stewardship of nearshore fishing resources. The goal is to strengthen community-based management that is informed by and co-managed by communities who have resided on the land. Hawai‘i has been a leader in community-based management and introduced legislation on co-management decades ago. Hawai‘i also took the lead on the 30 by 30 initiative and Governor Ige announced it in 2016, officially launching the initiative. However, these ambitious targets stand in stark contrast with community aspirations for CBM. Several communities in Hawai‘i are pursuing CBSFA designations for their areas to protect natural and cultural resources important to communities. However, decades long delays and the success of merely two communities in establishing CBSFAs with management plans and rules highlight the urgent need for the state to dedicate more resources to communities.

Indigenous communities have been stewards of their lands and waters for generations and have devised effective ways of managing and protecting natural resources. The wisdom of Traditional Ecological Knowledge (TEK) and contemporary cultural practices have guided communities to foster holistic understanding of the natural world which has resulted in the protection of natural resources for millennia. Nation states around the world must empower community voices and local knowledge to achieve equitable environmental co-benefits in the face of climate change and other contemporary existential challenges and threats to nature. Centering community narratives, perspectives, knowledge, and participation will help counter

the environmental devastation that has accompanied colonial plunder of the natural world over the last two centuries.

The Hawaiian Islands are home to diverse communities with place-based practices, knowledge, and needs. While there are competing interests active in Hawai‘i, communities engaged in CBM have consistently proved to be effective managers of lands and waters they have stewarded for generations. Helping and empowering communities in Hawai‘i by formulating partnerships built on trust presents the only viable path towards natural resource management rooted in social justice, equity, and reconciliation. Governance frameworks all over the world must adapt to this reality and strive to include and center community participation in order to achieve environmental sustainability. The communities that have been stewards of their lands and waters since time immemorial must be allowed to interpret co-management and how each arrangement will work in each specific place and context.

## **5.2 Limitations of the Study**

It is important to acknowledge that this work does not speak for all Native Hawaiian communities and each community holds their own unique and important perspectives on the objectives of this work. This thesis only synthesizes the perspectives of the participants in this study and the Lawai‘a Pono Hui which consists of members of community from various Islands. Many other diverse opinions are missing as the study only engages a small number of participants about their experiences with CBM and CBSFAs. The study is also limited by the analysis and interpretations of the author who may have erroneously missed themes in the transcripts during the coding process.

### **5.3 Future research**

The study raises some important questions that warrant further exploration in future research. The erosion of traditional fishing and cultural practices and their impact on marine management and subsistence communities in Hawai'i is an important research avenue that requires further exploration. The traditional fishing practices were highlighted as vital for CBM and were cited as the most important motivation for Native Hawaiian communities to undertake CBM. Additionally, identifying pathways towards collaborative management and shared governance for protection of Hawaiian marine resources will contribute greatly to our understanding of CBM. While CBSFA designations were central to this thesis, detailed look into other similar and better arrangements may help identify optimal state-community arrangements that can yield co-benefits for stakeholders and rights holders.

The study also provided insights about the role of traditional knowledge and the conflicts that may arise due to Indigenous and western worldviews around management. Understanding the role of Traditional Ecological Knowledge (TEK) and conventional scientific research in informing natural resource management policies and exploring conflicts between the two will also help contribute to CBM arrangements and efforts to better navigate collaboration between states and local communities.

### **5.4 Dissemination and Knowledge Translation**

The dissemination of the thesis project will happen in a number of ways and was guided by the participants who gave feedback at the end of each individual interview. The participants suggested various ways to mobilize the knowledge synthesized in the study including publications, presentations, and sharing of findings with stakeholders in the state and rights holders in the community.

The two papers included in the document will be submitted for publication to appropriate peer-reviewed journals. In addition, a plain language report will summarize the results of the study and will be communicated to all study participants, the Indigenous Partner Organization (IPO), and other community members. The first paper in this thesis was presented at the 30<sup>th</sup> Hawai'i Conservation Conference (HCC) in Honolulu on 28<sup>th</sup> June. Additionally, the papers will also be presented to the community through the Lawai'a Pono hui and other community channels. Presentations will be organized where needed and the findings of the research will be openly shared with stakeholders.

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## Appendix A: Interview Guide

### Introduction:

1. How long have you worked in community driven and community-based management of natural resources in Hawai‘i?
2. How did you start engaging in CBM of natural resources in Hawai‘i?
  - a) What motivated you to participate?
  - b) What makes CBM of natural resources in Hawai‘i important for you and your community?

### Objective 1: Challenges

3. What do you think is the reason behind minimal progress on CBSFAs in Hawai‘i over the past two decades?
4. What makes the CBSFA process difficult for communities to engage in?
5. How has the role of DLNR and state agencies made the navigation of CBSFA process easier or more difficult for communities in Hawai‘i?
6. How has your experience been in engaging with DLNR, DAR, and other state agencies?
  - a) What are the biggest issues in partnering with state agencies? What challenges have you encountered?
7. Which steps/aspects of the CBSFA establishment process are the most difficult and exclusionary for communities in Hawai‘i?

### Objective 2 & 3: Capacity-building, community representation, and institutional change:

8. What steps can make the process of CBSFAs easier for communities to navigate?
9. What can the government (DLNR, DAR etc.) do to make community-led natural resource management (like CBSFAs) more viable in Hawai‘i?
  - a) What resources do you think can help Native Hawaiian communities pursue CBSFA establishment more robustly and with success?
  - b) How can the gap between communities and state agencies be bridged for collaboration in CBM?
  - c) What new spaces and positions can and should be created?
  - d) What changes within state agencies are required for the promotion of enhanced CBM?

10. What role do you see for organizations like KUA and networks like Lawai'a Pono for increased and enhanced CBM in Hawai'i?

a) What opportunities exist for collaboration between communities?

11. How and why are CBSFAs important for communities in Hawai'i with respect to:

a) Preservation of traditional cultural and subsistence practices.

b) Native Hawaiian governance and right to self-determination.

**Objective 4: Lessons and learning:**

12. This thesis project will result in findings that may be relevant to the community and the ongoing CBSFA process. What knowledge product do you think would be the most useful? What would you like to see come out of this research project?

13. Would you be interested in participating in a focus group with other participants of this research project?

**Appendix B: REB Letter of Approval**  
**Social Sciences & Humanities Research Ethics Board**  
**Letter of Approval**

July 15, 2022

Ahmad Hameed  
Management\School for Resource and Environmental Studies

Dear Ahmad,

**REB #:** 2022-6131  
**Project Title:** Community-Based Subsistence Fishing Areas (CBSFAs): Exploring Native Hawaiian conceptions of conflict and opportunities for shared governance of Hawai'i's marine natural resources.

**Effective Date:** July 15, 2022  
**Expiry Date:** July 15, 2023

The Social Sciences & Humanities Research Ethics Board has reviewed your application for research involving humans and found the proposed research to be in accordance with the Tri-Council Policy Statement on *Ethical Conduct for Research Involving Humans*. This approval will be in effect for 12 months as indicated above. This approval is subject to the conditions listed below which constitute your on-going responsibilities with respect to the ethical conduct of this research.

Sincerely,



Funding: SSHRC

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Post REB Approval: On-going Responsibilities of Researchers

After receiving ethical approval for the conduct of research involving humans, there are several ongoing responsibilities that researchers must meet to remain in compliance with University and Tri-Council policies.

## 1. Additional Research Ethics approval

Prior to conducting any research, researchers must ensure that all required research ethics approvals are secured (in addition to Dalhousie approval). This includes, but is not limited to, securing appropriate research ethics approvals from: other institutions with whom the PI is affiliated; the institutions of research team members; the institution at which participants may be recruited or from which data may be collected; organizations or groups (e.g. school boards, Indigenous communities, correctional services, long-term care facilities, service agencies and community groups) and from any other responsible review body or bodies at the research site.

## 2. Reporting adverse events

Any significant adverse events experienced by research participants must be reported **in writing** to Research Ethics **within 24 hours** of their occurrence. Examples of what might be considered “significant” include: a negative physical reaction by a participant (e.g. fainting, nausea, unexpected pain, allergic reaction), an emotional breakdown of a participant during an interview, report by a participant of some sort of negative repercussion from their participation (e.g. reaction of spouse or employer) or complaint by a participant with respect to their participation, report of neglect or abuse of a child or adult in need of protection, or a privacy breach. The above list is indicative but not all-inclusive. The written report must include details of the situation and actions taken (or proposed) by the researcher in response to the incident.

## 3. Seeking approval for changes to research

Prior to implementing any changes to your research plan, whether to the risk assessment, methods, analysis, study instruments or recruitment/consent material, researchers must submit them to the Research Ethics Board for review and approval. This is done by completing the amendment request process (described on the website) and submitting an updated ethics submission that includes and explains the proposed changes. Please note that reviews are not conducted in August.

## 4. Continuing ethical review - annual reports

Research involving humans is subject to continuing REB review and oversight. REB approvals are valid for up to 12 months at a time (per the Tri-Council Policy Statement (TCPS) article 6.14). Prior to the REB approval expiry date, researchers may apply to extend REB approval by completing an Annual Report (available on the website). The report should be submitted 3 weeks in advance of the REB approval expiry date to allow time for REB review and to prevent a lapse of ethics approval for the research. Researchers should note that no research involving humans may be conducted in the absence of a valid ethical approval and that allowing REB approval to lapse is a violation of the University Scholarly Misconduct Policy, inconsistent with the TCPS and may result in the suspension of research and research funding, as required by the funding agency.



## 5. Final review - final reports

When the researcher is confident that all research-related interventions or interactions with participants have been completed (for prospective research) and/or that all data acquisition is complete, there will be no further access to participant records or collection of biological materials (for secondary use of information research), a Final Report (available on the website) must be submitted to Research Ethics. After review and acknowledgement of the Final Report, the Research Ethics file will be closed.

## 6. Retaining records in a secure manner

Researchers must ensure that records and data associated with their research are managed consistent with their approved research plans both during and after the project. Research information must be confidentially and securely retained and/or disposed of in such a manner as to comply with confidentiality provisions specified in the protocol and consent forms. This may involve destruction of the records, or continued arrangements for secure storage.

It is the researcher's responsibility to keep a copy of the REB approval letters. This can be important to demonstrate that research was undertaken with Board approval. Please note that the University will securely store your REB project file for 5 years after the REB approval end date at which point the file records may be permanently destroyed.

## 7. Current contact information and university affiliation

The lead researchers must inform the Research Ethics office of any changes to contact information for the PI (and supervisor, if appropriate), especially the electronic mail address, for the duration of the REB approval. The PI must inform Research Ethics if there is a termination or interruption of his or her affiliation with Dalhousie University.

## 8. Legal Counsel

The Principal Investigator agrees to comply with all legislative and regulatory requirements that apply to the project. The Principal Investigator agrees to notify the University Legal Counsel office in the event that he or she receives a notice of non-compliance, complaint or other proceeding relating to such requirements.

## 9. Supervision of students

Faculty must ensure that students conducting research under their supervision are aware of their responsibilities as described above and have adequate support to conduct their research in a safe and ethical manner.

## Appendix C: Interview Consent Form

**Project title:** Community-Based Subsistence Fishing Areas (CBSFAs): Exploring Native Hawaiian conceptions of conflict and opportunities for shared governance of Hawai‘i’s marine natural resources

**Lead researcher:** Ahmad Hameed, Dalhousie University ([Ahmad.Hameed@dal.ca](mailto:Ahmad.Hameed@dal.ca))

**Supervised by:**

Dr. Melanie Zurba, Dalhousie University ([Melanie.Zurba@dal.ca](mailto:Melanie.Zurba@dal.ca))

**Funding provided by:** SSHRC

### Introduction

You are invited to take part in a research study being conducted by Ahmad Hameed, who is a graduate student at Dalhousie University. Choosing whether or not to take part in this research is entirely your choice. There will be no impact on you if you decide not to participate in the research. The information below tells you about what is involved in the research, what you will be asked to do and about any benefit, risk, inconvenience, or discomfort that you might experience. You should discuss any questions you have about this study with Ahmad Hameed. Please ask as many questions as you like. If you have questions later, please contact Ahmad ([Ahmad.Hameed@dal.ca](mailto:Ahmad.Hameed@dal.ca)).

### Purpose and Outline of the Research Study

The purpose of the proposed study is to understand the issues faced by Native Hawaiians that impede their participation in management of natural and cultural resources in Hawai‘i. These include issues in partnering and communicating with state government, state agencies (Hawai‘i Department of Land and Natural Resources (DLNR) and Division of Aquatic Resources (DAR)), as well as reduced community resources and capacity. The study also aims to provide insights into institutional structures that are desperately needed to help bridge the gaps between Indigenous communities and various levels of local and state government in Hawai‘i.

### Who Can Take Part in the Research Study

You have been invited to participate in this study because you are a valued community member who has worked in community-based management initiatives in Hawai‘i, and you are familiar with community work in context of Community-Based Subsistence Fishing Areas (CBSFAs). Your insights for co-management and shared governance arrangements in Hawai‘i will be very important for this study and will help achieve its objectives.

### What You Will Be Asked to Do

If you agree to participate in this study, you will be taking part in an online interview lasting 75 minutes to 120 minutes. The interview will occur online (Zoom or Microsoft Teams) at your

convenience and at a time of your choosing. You will be asked questions that focus on your experience in community-based resource management, your thoughts on ongoing progress, and your views of challenges and opportunities. The interview will be audio recorded for transcription purposes. You can indicate your consent for this recording within this form. If you do not want your interview to be audio recorded, I will take notes during the interview that reflect your responses. You can keep your participation in the study confidential if you wish (please indicate that on this form). You can withdraw your participation at any point during the study. This applies after the interview has been conducted and recorded as well. The study will be completed by 31st March 2023 and you will be able to withdraw your participation by that date. After your participation, I will also contact you for member checks. This will include myself showing you what you said during the interview and making sure that it is represented as you meant it. This may include quotes (if you consented to being quoted anonymously or otherwise). You can ask me to omit anything you do not want to include in the study during member checks.

### **Possible Benefits, Risks and Discomforts**

There are no direct benefits anticipated for the participants in the study. Your participation in this study will contribute knowledge and insights on the CBSFA process and wider community-based resource management in Hawai'i. This knowledge will benefit broader understanding of co-management and community participation in the US and beyond. The risks associated with this study are minimal. The interviews will be conducted through relatively secure and reliable platforms (Zoom and Teams). However, these platforms have data security risks associated with them. The US patriot act has provisions that allow authorities to monitor data without any notice. This risk exists with using Teams and Zoom during our interview. Best data practices will be used to mitigate these risks wherever possible, but it is important that you be aware of the risks involved to your privacy and understand that it cannot be guaranteed. There are low risks for participating in this research beyond being fatigued during the interview period. You will be offered breaks to reduce this risk and you will be able to pause the interview whenever you want. The interview might generate painful memories of marginalization, exploitation, exclusion, and racism. You may terminate the interview at any time if you experience any distress. Contentious topics on natural resource management may come up during the interview. If you choose to remain identifiable, it may increase your risk associated with this study. You may choose to remain anonymous.

### **Compensation / Reimbursement**

No compensation/reimbursement will be offered. While no financial compensation and reimbursement is part of the study, the research will result in a knowledge product for the community. This knowledge product will seek to summarize the results of the study in a way that can benefit the community. You will have a chance to provide ideas on what this knowledge product should be.

### **How your information will be protected:**

Any identifiable information in your interview will only be known by the lead researcher, Ahmad Hameed. Information you provide will remain confidential. Steps including the de identification of data provided, omitting identifiable quotes, and using pseudonyms will take place to ensure your decided upon level of confidentiality is upheld. Until this confidentiality process is completed, only the lead researcher will have access to your information. As a researcher at Dalhousie University, Ahmad has a responsibility to uphold your privacy and confidentiality. All electronic records, which includes the recording or notes from your interview, will be stored on a password-protected computer that will be kept with the lead researcher and will not be accessible by anyone else. The study will result in the completion of my Master's thesis at Dalhousie University in 2023. The findings will be shared in this thesis and may result in presentations, public media, and journal articles. I will only report group results and not individual results. However, quotes may be used that identify you with your consent. This means that you will not be identified in any way in these findings if you do not wish to be and do not give consent.

### **Data retention:**

Once the study is over your data (transcripts and their analysis etc.) will be retained for 2 years. Only the lead researcher will have access to this secure data retention. After this period, your data will be deleted completely without the possibility of retrieval. The data collected in this study will not be used beyond this study.

### **If You Decide to Stop Participating**

You are free to leave the study at any time. If you decide to stop participating during the study, you can decide whether you want any of the information that you have provided up to that point to be removed or if you will allow us to use that information. After participating in the study, you can decide until **31<sup>st</sup> March 2023** to withdraw participation by contacting the lead researcher. After this time, withdrawal will not be possible due to submission of thesis and any papers/reports.

### **How to Obtain Results**

I will provide you with a summarized report of the findings when the study is finished. No individual results will be provided and no identifiable information about participants will be shared. However, quotes may be used that identify you with your consent. These findings will be shared through email (provide email address below). The final thesis, academic dissemination, and knowledge products will also help communicate findings of the study.

### **Questions**

I am happy to talk with you about any questions or concerns you may have about your participation in this research study. Please reach out to me at [Ahmad.Hameed@dal.ca](mailto:Ahmad.Hameed@dal.ca) for any comments, feedback, concerns, or questions. You can also contact my research supervisor Dr. Melanie Zurba ([Melanie.Zurba@dal.ca](mailto:Melanie.Zurba@dal.ca)) at any time with questions, comments, or concerns about the research study.

If you have any ethical concerns about your participation in this research, you may also contact Research Ethics, Dalhousie University at (902) 494-3423, or email: [ethics@dal.ca](mailto:ethics@dal.ca). If you are calling long distance, please call collect.

### Signature Page

**Project Title:** Community-Based Subsistence Fishing Areas (CBSFAs): Exploring Native Hawaiian

conceptions of conflict and opportunities for shared governance of Hawai‘i’s marine natural resources

**Lead Researcher:** Ahmad Hameed, Dalhousie University ([Ahmad.Hameed@dal.ca](mailto:Ahmad.Hameed@dal.ca))

I (the participant) has been invited by the lead researcher to take part in this study addressing co-management and shared governance in Hawai‘i.

**I have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I understand that I have been asked to take part in an interview that will occur online at a time acceptable to me. I agree to take part in this study. My participation is voluntary, and I understand that I am free to withdraw from the study at any time, until 31st March 2023.**

\_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

Options (you can still participate in the research if you select no):

- I agree that my interview may be audio-recorded • Yes • No
- I agree that direct quotes from my interview may be used that may identify me • Yes • No
- I agree that direct quotes from my interview may be used without identifying me • Yes • No
- I wish to have my interview remain anonymous • Yes • No
- I agree to having the researcher contact me after the interview for clarification • Yes • No
- I would like to receive a summary of the study results • Yes • No

---

Date                      Name    Signature

Please provide an email address below if you answered yes to the last two questions.

Email address: \_\_\_\_\_

## **Appendix D: List of Hawaiian Words Used**

**Ahupua‘a-** Land division usually extending from the uplands to the sea.

**E Alu Pū-** Moving forward together

**Hui-** Group

**Kapu-** Taboo, Prohibited

**Konohiki-** Headman of an Ahupua‘a

**Kua āina Ulu Auamo-** Grassroots growing through shared responsibility.

**Kuleana-** Responsibility

**Kupuna-** Elder, grandparent, living ancestor.

**Kūpuna-** Ancestors; the many who have passed on.

**Lawai‘a Pono-** Righteous Fishers

**Moku-** District

**‘Ohana-** Family