THE CASE FOR 'ĀINA BACK ON MOLOKA'I: A HISTORICAL NARRATIVE OF COMMUNITY SELF-DETERMINATION

SCHOOL FOR ENVIRONMENT AND SUSTAINABILITY
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THE CASE FOR ʻĀINA BACK ON MOLOKAʻI: A HISTORICAL NARRATIVE OF COMMUNITY SELF-DETERMINATION

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INTRODUCTION & SCOPE

This report reviews a timeline, power analysis, and GIS (Geographic Information System) materials created by a research team from the University of Michigan's (UM) School for Environment and Sustainability (SEAS) in partnership with the community-based nonprofit organization Sust'āinable Molokai, in service to the Kānaka 'Ōiwi (Native Hawaiian) and allied inhabitants of the Hawaiian island of Moloka'i. These resources were created from information shared by Moloka'i kūpuna (keepers of ancestral knowledge) to support the community's land back campaign. The function these resources will play in supporting the campaign can only be understood with reference to self-determination, consent, self-governance, and the land back movement.

Self-determination, as defined by Mililani B. Trask, is the ability of Kānaka 'Ōiwi to determine for themselves what their land base is and how they will use it (M. B. Trask, 1991). Kānaka 'Ōiwi self-determination is underpinned by the concepts of aloha 'āina and mālama 'āina (love and care for the land). The inherent right of Kānaka 'Ōiwi to self-determination is enshrined at the international level. In the first instance, the right to self-determination has evolved from a right of States to a collective Human Right (Chartier et al., 2011). The United Nations Covenants ensure the right to self-determination of all "peoples" (Chartier et al., 2011), and per Anaya, "self-determination is properly interpreted as arising from the framework of human rights of contemporary international law more than from the framework of the rights of the States (Anaya, 2009)." Secondly, self-determination is enshrined as a right specific to Indigenous peoples under the 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (United Nations Declaration On The Rights of Indigenous Peoples, 2007). Embedded within the right to self-determination is the right to consent (Free Prior and Informed Consent: An Indigenous Peoples' Right and Good Practice for Local Communities, 2016).

Consent is the participative procedural aspect of the right to self-determination (Chartier et al., 2011). It refers to societies being able to choose the ways in which the systems of another society affect them (Whyte, 2018). The exercise of Kānaka ʻŌiwi consent is framed by kuleana, which refers to the responsibility and privilege each member of a society has to care for and protect the land and community to which they belong (Pintor, 2023). The right of Kānaka ʻŌiwi, as the Indigenous peoples of Hawaiʻi, to Free, Prior, and Informed Consent (FPIC) is enshrined in UNDRIP and the Convention on Biological Diversity, among other instruments (Free Prior and Informed Consent: An Indigenous Peoples' Right and Good Practice for Local Communities, 2016). Although the United States Government has not ratified these instruments, FPIC is a universal norm of international law (Free Prior and Informed Consent: An Indigenous Peoples' Right and Good Practice for Local Communities, 2016), and the right of Kānaka ʻŌiwi to FPIC has been recognized in Hawaiian Department of Land and Natural Resources rules of practice and procedure (AMAC Rules of Practice & Procedure, 2016). Embedded within the right to self-determination and consent is self-governance.

Self-governance refers to the actual capacities needed to exercise self-determination and consent (Whyte, 2023). This includes institutional, decision-making, economic, and diplomatic capacities (Whyte, 2023). It is a society's ability to process and utilize the means of exchange, to plan and implement plans, and to make agreements with other societies and nations (Whyte, 2023). Kānaka ʻŌiwi have expressed and asserted their right to self-governance since time immemorial (Kapilialoha MacKenzie, 2015). While international recognition of the right to self-governance is limited because of the United Nations protection of territorial integrity and political unity of States, the right of Indigenous peoples to autonomy or self-government in matters related to their internal and local affairs, as well as ways and means for financing their autonomous functions, is enshrined in Article 4 of UNDRIP (United Nations Declaration On The Rights of Indigenous Peoples, 2007).

Kānaka ʻŌiwi self-determination, consent, and self-governance cannot be fully realized without land back. Land back is a movement that has existed for generations to return Indigenous lands to Indigenous hands (NDN Collective, n.d.). In 2020, the NDN Collective launched "LANDBACK" as a campaign to amplify the movement and as a political framework that allows Indigenous Peoples to deepen their relationships

across organizing movements working towards collective liberation (NDN Collective, n.d.) In recent years, the land back effort on Moloka'i has been revitalized with Kānaka 'Ōiwi and allied inhabitants organizing to secure community ownership of Molokai Ranch - a third of the island currently owned by the Guoco Group, a Hong Kong investment firm. In Kānaka 'Ōiwi hands, this land will be a source from which Moloka'i Kānaka 'Ōiwi can continue practicing self-determination, consent, and self-governance to contest and resist settler colonialism.

This report outlines how the timeline, power analysis, and GIS materials created by the UM research team seek to directly uplift Moloka'i self-determination, consent and self-governance. The following sections will contextualize the research objectives used to create the resources with reference to relevant literature, describe the methodology used to carry out these objectives and discuss key findings. In conclusion, research process limitations and recommended next steps will be outlined.

LITERATURE REVIEW

To understand how a timeline, power analysis, and GIS materials will support community acquisition of Molokai Ranch, it is necessary to review literature on self-determination, consent, self-governance in Hawai'i pre-European contact, the impact of Western colonization on these principles, and the continued expression of these principles by Moloka'i Kānaka 'Ōiwi under settler colonialism. This literature will then be applied to a discussion of the theoretical underpinnings of a timeline, power analysis and GIS materials and how these resources can operate to support the Molokai Ranch land back campaign.

Hawaiian Self-determination, Consent, and Self-governance Pre-European Contact

In the centuries before European contact in 1778, Kānaka 'Ōiwi created and managed systems that centered their own traditions of self-determination, consent, and self-governance to produce pono (balanced) ecosystems and self-sustaining communities. These principles were embodied in the ahupua'a, the traditional land and ocean tenure system of Hawai'i, 'aha councils, an organizational system of resource management, and the kapu, the sacred system of law. The following section will review how self-determination, consent, and self-governance converged in the practice of these traditions.

The ahupua'a, the traditional land and ocean tenure system of Hawai'i, facilitated self-determination by enabling self-governing chiefdoms to determine their land base and how they would use it to ensure the fulfillment of aloha 'āina and mālama 'āina at different hierarchical levels (McGregor, 1996). An ali'i 'ai moku (district or island chief)

provided stewardship over a major section of an island, which was then delegated to konohiki (lesser ranking chiefs) who oversaw wedged-shaped parcels of land known as ahupua'a that ran from the mountain to the sea (McGregor, 1996). In turn, the ahupua'a of the konohiki were divided into strips of land called 'ili on which the 'ohana – the multigenerational family system of the maka'āinana (people of the land) – lived and worked cooperatively (McGregor, 1996). How land was determined and used was defined by reciprocity rather than private ownership, with mutual obligation and interdependence between the hierarchical levels (H.-K. Trask, 1999). The ali'i 'ai moku and konohiki fulfilled their kuleana to the maka'āinana by regulating the use of resources and distributing them per principles of fair usage. In return, the maka'āinana provided labor to make the ahupua'a productive (McGregor, 1996).

Consent was facilitated by the 'aha councils, the participative procedural aspect of the land tenure tradition that managed differences between the hierarchical levels to support the interests of all in an abundant ecosystem. The 'aha councils empowered representative decision-making and ensured people's approval before the implementation of an action that would affect them. Within each ahupua'a, a council of experts selected by the maka'āinana would advise ali'i 'ai moku and konohiki on resource management decision-making (Akutagawa & Wong, 2020). These were experts in astronomy, navigation, farming, healing arts, architecture, fisheries management, hydrology, and water distribution (Akutagawa & Wong, 2020). A moku, a larger district composed of many different ahupua'a, was stewarded by a council of representatives from its various ahupua'a, and the resource management of a mokupuni, an island, was determined by a council of representatives from the moku councils (Akutagawa & Wong, 2020). This organizational system structured inter-society consensual decision-making, ensuring harmonious and nurturing relationships between people, forces, elements, and other beings of nature (H.-K. Trask, 1999).

Self-governance was expressed through kapu, the Kānaka 'Ōiwi sacred system of law. This moral code enshrined an extraordinary respect for the life of the sea, the heavens, and the earth by recognizing the relationality and consciousness of all elements in the cosmos (H.-K. Trask, 1999). In this way, it protected the mana (spiritual power) of beings and places and prevented mana from harming others (H.-K. Trask, 1999). Kapu empowered ali'i 'ai moku with the information and

capacities needed to structure the ahupuaʻa and ʻaha councils in accordance with kuleana, aloha ʻāina and mālama ʻāina (H.-K. Trask, 1999). The exercise of these capacities by aliʻi ʻai moku, in turn, built the capacity of Kānaka ʻŌiwi societies to plan and implement plans for a resilient and sustainable future (Murakami & Chung Tanaka, 2015).

The Impact of Colonization on Hawaiian Self-determination, Consent and Self-governance

European contact, and later U.S. settler colonialism, significantly eroded the self-determination, consent, and self-governance once structured by the ahupuaʻa system, the ʻaha councils, and kapu. To understand the impact of this external imposition, it is important to define settler colonialism and its primary ecological characteristics.

Although debate exists in Hawaiʻi as to whether "occupation" or "colonization" is the more appropriate term ("Hawaiʻi: The Difference Between Occupation and Colonization," 2013), for the purpose of this report, we use the term colonization in accordance with Dr. Kyle Whyte's definition of settler colonialism. Per Whyte, settler colonialism refers to complex social processes in which at least one society seeks to move permanently onto the terrestrial, aquatic, and aerial places lived in by one or more other societies who already derive economic vitality, cultural flourishing, and political self-determination from the relationships they have established with the plants, animals, physical entities, and ecosystems of those places (Whyte, 2018). Settler colonialism engenders environmental injustices against Indigenous peoples through two primary ecological characteristics: vicious sedimentation and insidious loops (Whyte, 2018). Vicious sedimentation is the constant ascription of settler ecologies onto Indigenous ecologies, fortifying settler ignorance against Indigenous peoples over time (Whyte, 2018). Insidious loops refer to the development of a historical pattern of violence against Indigenous peoples by the pernicious industries that embody settler colonialism (Whyte, 2018). How these characteristics operated to restrict Kānaka ʻŌiwi self-determination, self-governance, and consent will be discussed with reference to the privatization of Hawaiian lands, the overthrow of the Hawaiian Kingdom, and the enclosure of Hawaiʻi into Statehood.

Vicious sedimentation, in the form of the Māhele, ascribed the settler ecology of private property, erased the ahupuaʻa land tenure system, and eroded the self-determination it had facilitated. The 1848

privatization and division of communal lands, known as the Māhele, was forced upon King Kamehameha III by Western gunboat diplomacy (H.-K. Trask, 1999) and has been described as "the single most critical dismemberment of Hawaiian society" (Osorio, 2002). The Māhele dispossessed Maka'āinana of their hānau – their homeland (H.-K. Trask, 1999) – and although they could acquire fee-simple title to land under the Kuleana Act of 1850, only 8,421 claims were awarded out of the 14,195 applications submitted from the population of 800,000 Kānaka 'Ōiwi (Kauanui, 2018). By dismantling the ahupua'a system and the mutual obligation it had ensured, the Māhele and Kuleana Act undermined the labor of land management. Ali'i 'ai moku and konohiki were no longer entitled to maka'āinana labor and could not deny them access to land that was guaranteed in law., This in turn meant there was little left to incentivize their obligation to the maka'āinana (Osorio, 2002). Thus, this sedimentation was vicious because settler law became the arbiter between Kānaka 'Ōiwi relations the law itself sought to estrange, and rights were "constituted as a form of war through colonial biopolitics by state mediation" (Kauanui, 2018).

The Kānaka 'Ōiwi consent once facilitated by the 'aha councils was significantly eroded by the vicious sedimentation and insidious loops operationalized during and after the 1893 overthrow of the Hawaiian monarchy. Kānaka 'Ōiwi were denied the ability to exercise a veto over the actions of annexationists and American troops who took control of the Hawaiian Kingdom government, declared the monarchy abolished, and proclaimed the existence of a Provisional Government (Kapilialoha MacKenzie, 2015). The Provisional Government created further opportunities for settler ecology ascription when it repealed an 1865 act that had made Government Lands inalienable, allowing haole businessmen to accumulate a land base and economic monopoly (Kapilialoha MacKenzie, 2015). This, in turn, consolidated Kānaka 'Ōiwi dispossession and exploitation, a pattern of violence that continues today. Through the overthrow, the devised American oligarchy that was the Republic of Hawai'i and the Joint Resolution of Annexation, Hawaiian control and Hawaiian citizenship were replaced with American control and American citizenship (H.-K. Trask, 1999). Kānaka 'Ōiwi were denied the exercise of consent and suffered a unilateral redefinition of their homeland (H.-K. Trask, 1999).

The enclosing of Hawai'i into the settler concept of American statehood and the vicious sedimentation and insidious loops inherent

to that process, disregarded Kānaka ʻŌiwi self-governance. While Kapu had been abolished in 1819, the system had enshrined Kānaka ʻŌiwi respect for, and relationship with, the cosmos. In enacting the 1959 Admission Act, settlers attempted to sever this relationship and erase the enduring elements of the system that ensured capacities for self-determination and consent. Statehood saw the ascription of military and corporate tourism ecologies with planeloads of military personnel and tourists dispossessing Kānaka ʻŌiwi from their lands (H.-K. Trask, 1999). This ascription has sedimented viciously over time, fortifying settler ignorance of Kānaka ʻŌiwi self-governance. This ,in turn, has bolstered settlers' discriminatory beliefs about Kānaka ʻŌiwi, damaged their inclinations for consensual decision-making, and increased the "acceptability" of violence that further disrupts Kānaka ʻŌiwi relationships with the cosmos (Whyte, 2018).

The Unbroken Expression of Kānaka ʻŌiwi Self-determination, Consent, and Self-Governance on Molokaʻi

Despite colonization, Kānaka ʻŌiwi have continued to express self-determination, consent, and self-governance at the local, state, federal, and international levels (Kapilialoha MacKenzie, 2015). This expression, at its core, is about protecting and energizing Kānaka ʻŌiwi systems and traditions. Kānaka ʻŌiwi have resisted the ongoing forces of U.S. vicious sedimentation in courtrooms, on the streets, at the capitol building, in front of landowners' and developers' offices, on bombed-out sacred lands, in classrooms, and from tents on the beaches (Goodyear-Kaʻōpua, 2014). In observing the flow of this continued expression, moments can be discerned when the arbitrary boundaries between activities represented as merely cultural (such as hula or the voyage of the Hōkūleʻa) and those cast as political (land rights protests or sovereignty rallies) are blurred (Goodyear-Kaʻōpua, 2014). According to Goodyear-Kaʻōpua, it is in these moments, when people have explicitly asserted the ways cultural practice is political, and political movement is cultural, that Kānaka ʻŌiwi movements have leaped forward (2014).

This synergy between the cultural and political is visible in the continued expression of self-determination, consent, and self-governance on Molokaʻi. Molokaʻi is a cultural kīpuka (McGregor, 1996). In Kānaka ʻŌiwi epistemology, a kīpuka is an oasis within a lava bed where native vegetation grows and regenerates fresh lava with seeds and spores (McGregor, 1996). The island is considered a cultural kīpuka because of how the self-determination, consent, and self-governance

once facilitated by the ahupua'a, 'aha councils, and kapu are being regenerated and revitalized in a contemporary setting to resist the vicious sedimentation and insidious loops of settler colonialism. This can be seen most clearly in the traditional practices carried out on Moloka'i, the activities of Protect Kaho'olawe 'Ohana, and the Lā'au Point protests.

In carrying out traditional cultural practices and protesting restricted access to the land on which these activities take place, Moloka'i Kānaka 'Ōiwi have exemplified the synergy between the cultural and political and maintained their practice of self-determination. In traveling to the various 'ili for subsistence practices via dirt roads and trails and along spring-fed streams and shorelines, Kānaka 'Ōiwi continue to determine and manage their land base (McGregor, 1996). Just as the ahupua'a system was once framed by aloha 'āina and mālama 'āina, so too is this expression of self-determination with natural resources sustaining a subsistence lifestyle and a subsistence lifestyle sustaining natural resources (McGregor, 1996). When the vicious sedimentation perpetrated by settlers has prevented access to land for the exercise of these traditional cultural practices, Kānaka 'Ōiwi have protested. In 1975, Walter Ritte, Emmett Aluli, and Adolph and George Helm formed Hui Alaloa to protest the closing of trails by Molokai Ranch and their success in opening up access led them to undertake other protests on different parts of Moloka'i (Osorio, 2014). This political element of the synergy continues today and Moloka'i Kānaka 'Ōiwi, in expressing their self-determination, have legitimized the right of Kānaka 'Ōiwi to pursue traditional gathering and fishing activities (Osorio, 2014).

Hui Alaloa members and other Moloka'i Kānaka 'Ōiwi went on to express consent in the face of vicious sedimentation and insidious loops in their involvement with Protect Kaho'olawe 'Ohana (PKO). At the start of World War II, Kaho'olawe, the smallest of the eight main Hawaiian Islands and a spiritual center for Kānaka 'Ōiwi, was taken by the U.S. military for weapon testing (Kapilialoha MacKenzie, 2015). In the 1970s, Moloka'i Kānaka 'Ōiwi, along with Kānaka 'Ōiwi from other islands, founded the PKO to stop the bombing of Kaho'olawe and reclaim the island through persistent, nonviolent, and highly publicized action (Osorio, 2014).The PKO filed a suit in Federal District court, repeatedly landed on the island without military permission, and raised awareness of their motto - Aloha 'Āina - throughout Hawai'i (Osorio, 2014). The movement combined the political and cultural with

the PKO exercising a veto over the military's actions by occupying Kahoʻolawe and raising awareness of the ancient religious practices that could restore the island's mana (Osorio, 2014). The PKO succeeded in stopping the bombing; in 1993, the U.S. Congress formally recognized the cultural significance of the island and required the navy to return the island to the state of Hawaiʻi. Upon this return, the Hawaiʻi State Legislature established the Kahoʻolawe Island Reserve for Kānaka ʻŌiwi cultural, spiritual, and subsistence use (Kapilialoha MacKenzie, 2015). PKO's actions restored Kahoʻolawe consent and had a significant impact on the revitalization of the Hawaiian sovereignty movement (Osorio, 2014).

Molokaʻi once again embodied its cultural kīpuka reputation when Molokaʻi Kānaka ʻŌiwi practiced self-governance to prevent the vicious sedimentation and insidious loops of the Guoco Group. In 2003, Molokai Ranch, under the ownership of the Guoco Group, introduced the Lāʻau Point development plan to the Kānaka ʻŌiwi-led Molokai Enterprise Community (MEC) with whom they were collaborating for community-based planning (Baker, 2011). The development plan incorporated many priorities consistent with the Molokaʻi community vision statement, including transferring 26,200 acres of Molokai Ranch to the Molokai Land Trust, easements over an additional 24,000 acres to preserve agricultural and rural land use designation, and the re-opening of the Molokai Lodge Hotel to provide employment opportunities (Baker, 2011). In exchange for these concessions, however, Molokai Ranch expected community support for the development of 200 luxury homes at Lāʻau Point (Baker, 2011). While the community was united in its desire for additional employment opportunities, as well as protection from future land speculation through the Molokai Land Trust and easements, the community was divided about the Lāʻau Point luxury housing (Baker, 2011). Ultimately, community protest against the plan led to the withdrawal of the development petition before the Hawaiʻi Land Use Commission, the Guoco Group ceasing all activities on the island, and the listing of the land for sale in 2017. Through an egalitarian process of community-based self-governance involving a diverse cross-section of Molokaʻi residents, the community resisted the ascription of settler systems and prevented the looping of violent patterns (Baker, 2011)

The Importance of Land Back for the Continuation and Strengthening of Kānaka ʻŌiwi Self-determination, Consent, and Self-governance on Molokaʻi

While Kānaka ʻŌiwi expression of self-determination, consent, and self-governance on Molokaʻi has remained unbroken for centuries, the breakdown of master land-use conversations between the community and Molokai Ranch developers highlighted the need for Kānaka ʻŌiwi and the island's allied inhabitants to determine their own future (Sustʻāinable Molokai, n.d.). It was this experience, with its profound impact on community relations, that reenergized Molokai Ranch land back efforts and refocused the possibility of community ownership (Lyte, 2022). Molokaʻi Kānaka ʻŌiwi cannot fully determine their land base and its use, choose the ways in which the actions of another affect them, and develop necessary capacities if one-third of the island is owned by an external interest. In the hands of an outsider, Molokai Ranch lands will continue to be subjected to settler ecology ascription and insidious loops of violence.

Thus, land back is essential for the continuation and strengthening of the Kānaka ʻŌiwi self-determination, consent, and self-governance once facilitated by the ahupuaʻa system, ʻaha councils, and kapu. Community ownership of the ~55,000 acres of Molokai Ranch will allow Kānaka ʻŌiwi to determine land use and facilitate the continued vetoing of projects that disrupt relationality and responsibility. Moreover, it will be a source from which Kānaka ʻŌiwi can continue to build the capacities necessary to contest and resist ongoing and future contortions of settler colonialism in Hawaiʻi. This long-term Kānaka ʻŌiwi stewardship of the land without the threat of vicious sedimentation or insidious loops will allow for the continuance and creation of Kānaka ʻŌiwi economies based on kuleana, aloha ʻāina, and mālama ʻāina. It will also facilitate community-determined climate change mitigation and adaptation (Pasternak & King, 2019), an essential element considering the predicted three feet of sea level rise the island will face in the latter half of the century (Rados, 2022).

Given the importance and urgency of land back, Molokaʻi Kānaka ʻŌiwi are considering various strategies for community acquisition along with their strengths and limitations. As community organizing continues, resources that are adaptive to various land back strategies and changing sociopolitical dynamics are needed to support community land back efforts (Pieratos et al., 2020).

How a Timeline of Molokaʻi Self-determination, Consent, and Self-governance Can Support The Molokai Ranch Land Back Campaign

A community-created and owned timeline is one such resource that can be adapted to a variety of prospective land back strategies. In narrating the unbroken expression of self-determination, consent, and self-governance on Molokaʻi, a timeline will evidence the rights of Kānaka ʻŌiwi, which in turn can be asserted at the county, state, federal or international legal and political spheres to secure land back.

Kānaka ʻŌiwi rights derive from more than a millennium of Kānaka ʻŌiwi expressing self-determination, consent, and self-governance on their land base (Kapilialoha MacKenzie, 2015). These rights are rooted in the aforementioned customs and practices that encompass traditional, religious, and subsistence activities (McGregor, 1996). They relate to each major aspect of Hawaiian lifestyle and livelihood, including family, community life, human well-being, spirituality, the natural environment, economics, and cultural and ecological resources (McGregor, 1996). These rights have been continuously asserted and formed through the unbroken expression of self-determination, consent, and self-governance described above (Kapilialoha MacKenzie, 2015).

Until the 1970s, American law – with the exception of the 1920 Hawaiian Homes Commission Act and the 1959 Admission Act – did little to acknowledge Kānaka ʻŌiwi rights (Kapilialoha MacKenzie, 2015). The prolonged territorial period of assimilation culminating in Hawaiʻi's admission as the fiftieth state did not acknowledge specific rights for Kānaka ʻŌiwi (Kapilialoha MacKenzie, 2015). In part due to the successful efforts of the PKO throughout the 1970s, there was an increase in recognition of Kānaka ʻŌiwi rights (Osorio, 2014). 1978 state constitutional amendments saw trust lands designated for Native Hawaiian beneficiaries, the establishment of the Office of Hawaiian Affairs, affirmation of the traditional and customary rights of ahupuaʻa tenants, the declaration of the Hawaiian language as an official language of the state, and the establishment of Hawaiian language, cultural and history programs in public schools (Kapilialoha MacKenzie, 2015). Kānaka ʻŌiwi rights have been further recognized in other state and federal instruments. Sections 1-1 and 7-1 of the Hawaiʻi Revised Statutes codified protection of traditional and customary gathering rights and were expanded upon in court cases (Land Use Commission, 2022), while the 1993 Apology Resolution by the United States Congress specifically recognized the unrelinquished claims of

Kānaka ʻŌiwi to their inherent sovereignty and national lands (Kapilialoha MacKenzie, 2015).

While these legal codifications represent improved settler state acknowledgment of Kānaka ʻŌiwi rights, full recognition of the self-determination, consent, and self-governance practiced for centuries and the rights that derive from this expression remains restricted due to settlers' desire to erase Kānaka ʻŌiwi and to erase/legitimate settler causation of this attempted domination (Whyte, 2018). Kānaka ʻŌiwi rights, even where enshrined in international law, remain unrecognized to their full extent under the settler legal system. Where they are acknowledged, recognized rights can often be used as a weapon to disrupt Kānaka ʻŌiwi relational cosmologies (as was the case with the 1850 Kuleana Act) (Osorio, 2002). The Hawaiian State is a container of structures that will always attempt to operate in a way that guarantees the ascription of settler systems and the concentration of power in the hands of those who perpetuate insidious loops (Baker, 2011).

Considering this manipulated recognition by American law and how vicious sedimentation operates to overwrite the continuous expression of the Kānaka ʻŌiwi self-determination, consent, and self-governance that has formed rights, a community created and owned timeline is an important resource for the Molokai Ranch land back campaign. The timeline of Anishinaabe Treaty Rights in the Northern Great Lakes (Appendix A), created by the Great Lakes Indian Fish & Wildlife Commission, provides an excellent example of how such a document can be created and used for Indigenous rights assertion and advocacy (Ryan et al., n.d.). A similar timeline documenting Molokaʻi's unbroken expression of self-determination, consent, and self-governance can be used as evidence in the case for the Kānaka ʻŌiwi right to ancestral lands and natural resources. Notwithstanding the limited acknowledgment of Kānaka ʻŌiwi rights by the Hawaiian State and the United States' lack of endorsement of enshrined principles of international law, the right to ancestral lands, as embedded within the rights to self-determinaton, consent, and self-governance is pre-existing –meaning it exists independently of settler recognition (Chartier et al., 2011). Thus, the timeline can be used in making a case for this inherent right in the legal and political spheres at the county, state, federal, and international levels.

How a Power Analysis Can Support The Molokai Ranch Land Back Campaign

A power analysis, created from information shared by Moloka'i kūpuna, is another resource adaptive to the Molokai Ranch land back campaign. A power analysis is a community organizing tool that identifies and describes the multiple power dimensions that affect a given situation (OXFAM, 2021). Such an investigation reveals current power imbalances and can facilitate strategizing for the shifting of power to Kānaka 'Ōiwi (National Academy of Community Organising & Community Organisers, 2022). Although no single definition of power exists, for the purpose of this report, it will be defined as 'the capacity of actors to mobilize to achieve ends' (Avelino, 2021). Thus, in organizing for community ownership of Molokai Ranch, the challenge is to approach the notion of power in terms of the community's capacity to change land relations from what they are into what they must be for the Kānaka 'Ōiwi right to self-determination, consent, and self-governance to be realized. In this regard, the potential purpose of the power analysis in supporting land back is threefold and each will now be outlined.

Firstly, the power analysis can support the campaign by mapping current distributions and forms of power. A power analysis details visible, hidden, and invisible forms of power, the closed, invited, and created spaces power is acted out in, and the local, state, and national levels at which power occurs in order to identify actors and structures of oppression, resistance, capacity-building, and cooperation (OXFAM, 2021). The framework provided in Appendix B, created by Human Impact Partners, provides a template for such mapping (Human Impact Partners, 2022). Goodyear-Ka'ōpua and Baker allude to the importance of understanding distributions of power so that points of intervention that shift power to Kānaka 'Ōiwi can be identified (Goodyear-Ka'ōpua & Baker, 2012). Examining the power held by oppressive actors is essential for understanding and overcoming contortions of vicious sedimentation and insidious loops. Conversely, detailing the power held by actors of capacity-building and cooperation facilitates an analysis of their intellectual, social, and financial resources and allows for the short and long-term strategizing of how such actors can fulfill their kuleana to Moloka'i (Goodyear-Ka'ōpua & Baker, 2012).

The second purpose of the power analysis is to build on this understanding of current power distributions to assess strategies for

achieving community ownership of Molokai Ranch. Various strategies for land back exist, each rejecting land alienation, exploiting settler rights recognition, and operating outside standard legal and institutional channels in different ways and to different degrees (Pasternak & King, 2019). Asking community members their opinions on strategies, researching said strategies, and synthesizing results can support organizing for Molokai Ranch land back. How Kānaka ʻŌiwi and Molokaʻi's allied inhabitants acquire Ranch lands will have long-term implications for the community. For example, an acquisition agreement with easement conditions could restrict how the community can use land for future food and energy sovereignty. Thus, in outlining the conditions and challenges of strategies, there is recognition of the need to prepare for the future (Goodyear-Kaʻōpua & Baker, 2012). Strategies for land back must be assessed for their potential to strengthen self-determination, consent, and self-governance, and the importance of documenting community opinions in the assessment process is evidenced by the Yellowhead Institute (Pasternak & King, 2019).

The third purpose of the power analysis is to document community-created decision-making protocols. For the participative procedural aspect of land use determination to be realized once community ownership is successful, vigorous participatory decision-making structures will be necessary (Baker, 2011). Land back furthers the possibility of restoring the kuleana-informed community decision-making structures once embodied in the ʻaha councils (Goodyear-Kaʻōpua & Baker, 2012). The creation of preliminary protocols that document how the Molokaʻi community has been making decisions for generations and how kūpuna want decisions to be made in the future will ensure consent when internal and external projects are proposed. Such protocols will support the stewardship and healing of Molokai Ranch lands and facilitate a cohesive community response to forms of vicious sedimentation and insidious loops (Whyte, 2018) (Pasternak & King, 2019). Outlining community-based decision-making protocols before land back is achieved is a deliberate assertion of Kānaka ʻŌiwi self-determination, consent, and self-governance that strengthens land back organizing and preparation.

How Molokaʻi Geographic Information System Materials Can Support The Molokai Ranch Land Back Campaign

Geographic information system (GIS) materials are another resource adaptive to prospective land back strategies. GIS is a computer system for capturing, storing, checking, and displaying data related to positions on the Earth's surface (National Geographic, n.d.). GIS integrates location data (where things are) with all types of descriptive information (what things are like at a particular location) to allow users to understand patterns, relationships and geographic context (esri, n.d.). GIS materials can directly support the Molokai Ranch land back campaign in three ways.

Firstly, like the timeline, GIS materials can document self-determination, consent and self-governance on Molokaʻi and thereby evidence the rights of Kānaka ʻŌiwi to their ancestral lands and natural resources. Fujikane discusses how maps based on Indigenous cartographic principles and rooted in ancestral knowledge offer essential insights into past and present land stewardship (Fujikane, 2021). In this regard, GIS facilitates the creation of an interactive century-spanning map that visualizes how Molokaʻi land was determined by the the ahupuaʻa, the aforementioned traditional land and ocean tenure system of Hawaiʻi, and how the lands now comprising Molokai Ranch are arranged today. Such a tool can show the self-determination, consent and self-governance expressed on Molokaʻi through pre-Māhele land management and how the settler ecology of private property was ascribed in an attempt to erase this expression. This provides evidence of Kānaka ʻŌiwi rights and how they have been breached, which can support legal and political Molokai Ranch land back advocacy.

Secondly, GIS materials directly uplift self-determination, consent and self-governance by facilitating land use planning. By informing land determination for purposes such as agriculture, conservation, subsistence, housing or cultural preservation, the materials can empower the community to make informed decisions that uphold aloha ʻāina and mālama ʻāina. Kurashima and Kirch have previously pointed to how GIS modeling can be used to strengthen sustainable Kānaka ʻŌiwi-determined agricultural practices on Molokaʻi, informed through agricultural production capacity assessments on the island (Kurashima & Kirch, 2011). In this regard, Fujikane discusses how cartography based on Kānaka ʻŌiwi values emphasizes

interconnectedness and abundance-mindedness to prioritize the health of ecosystems and communities over profit-driven agenda (Fujikane, 2021). Thus, GIS materials can be used as mobilizing and advocacy materials to evidence how Molokai Ranch Lands in Kānaka ʻŌiwi hands would be more efficiently and sustainably managed. Additionally, the materials can ensure the Molokaʻi community is prepared to manage the land once community ownership is achieved. In other words, they can bolster the Kānaka ʻŌiwi capacity to change land relations from what they are currently, into what they must be for the Kānaka ʻŌiwi rights of self-determination, consent, and self-governance to be realized.

Lastly, the evaluation of GIS materials over time can support long-term Kānaka ʻŌiwi stewardship of Molokai Ranch Lands. By establishing baseline data and indicators of success, Kānaka ʻŌiwi can assess the impact of their stewardship, monitor changes in land and natural resources, and adapt strategies as needed to continue practicing aloha ʻāina and mālama ʻāina (Buenemann et al., 2011). This function of GIS materials is particularly relevant for predicting and adapting to the effects of climate change, specifically land degradation (Obi Reddy, 2018). Preserving the productivity of current agricultural and grazing areas is crucial, while also ensuring preservation of the ecosystem's resources and benefits (Obi Reddy, 2018). These are challenges that can be addressed with GIS materials that can monitor the health of the land over time. As mentioned previously, long-term Kānaka ʻŌiwi stewardship of Molokai Ranch lands will be a source from which the community can resist the forces of settler colonialism and continue acting as a cultural kīpuka. Thus, GIS materials are an important tool to support the realization of self-determination, consent and self-governance.

PROJECT OBJECTIVES AND RESEARCH AIMS

Given the effectiveness of a timeline and power analysis in supporting community organizing campaigns, the potential for GIS materials to empower self-determination in land use planning, and the fact no such Molokaʻi-specific documents currently exist, our team constructed the following research objectives in response to the above literature review:

- Document a kūpuna-created timeline of the unbroken expression of Kānaka ʻŌiwi self-determination, consent, and self-governance on Molokaʻi.

- Conduct a power analysis detailing current distributions and forms of power, the strengths and limitations of Molokai Ranch land back strategies, and preliminary community-created decision-making protocols from information shared by kūpuna.

- Construct comprehensive and accurate GIS map layers of the island of Molokaʻi.

- Build an ArcGIS StoryMap that ties all three resources together.
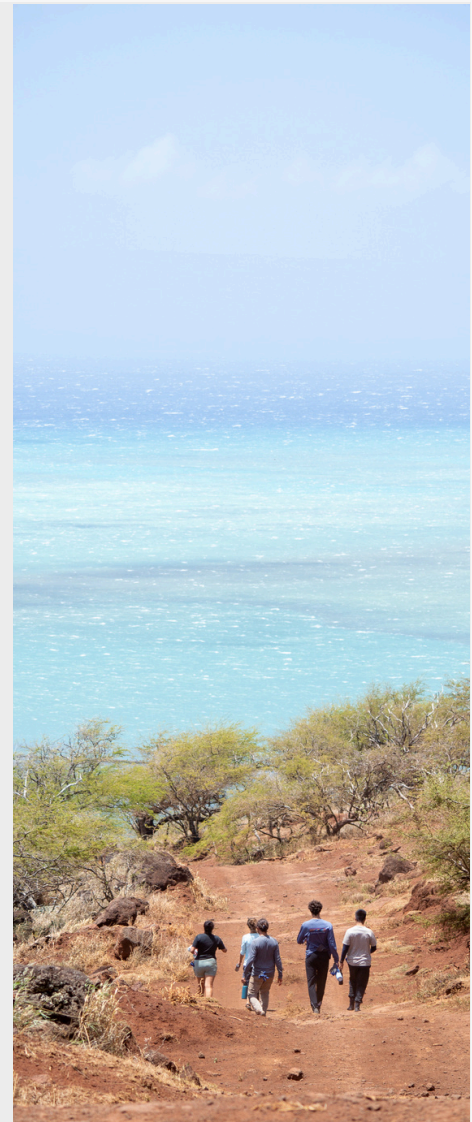
METHODOLOGY

The methods for this research were developed through Indigenous research paradigms, specifically looking at Kanaka ʻŌiwi methodologies. This manifested in our work being created through mentorship, community focus, and connection to place. In her foundational text, Decolonizing Methodologies: Research and Indigenous Peoples, renowned Māori scholar Linda Tuhiwai Smith articulates that the methods with which researchers conduct their work within communities are often more important than its outcome.

 "In all community approaches process - that is, methodology and method - is highly important. In many projects, the process is far more important than the outcome. Processes are expected to be respectful, to enable people, to heal and to educate. They are expected to lead one small step further towards self-determination (Smith, 2021, p. 149)."

In Kanaka ʻŌiwi Methodologies: Moʻolelo and Metaphor, the editors define Indigenous methodologies as: "research by and for Indigenous people, using techniques and methods drawing from the traditions and knowledge of those peoples" with a particular focus on Kanaka ʻŌiwi epistemologies (Oliveira & Wright, 2016). In her included chapter, Noelani Goodyear-Kaʻōpua expands on this definition, noting the importance of acknowledging the political stakes of this work:

What distinguishes Hawaiian studies from studies of Hawaiian topics is a commitment to revitalizing the collective ability of Kanaka Hawaii to exercise our ea [self-determination] in healthy, respectful, and productive ways. Hawaiian studies methodologies support the revitalization of vessels that support the revitalization of vessels that promote a robust flow of ea (Goodyear-Kaʻōpua, 2016, p. 9).

This framework became a touchstone resource for contextualizing our mixed-methods approach.

In the chapter, Ua Noho Au A Kupa I Ke Alo, R. Keawe Lopez Jr. uses King Kalākaua's mele (song) to demonstrate key components of relationship building with mentors. His definition of mentors includes "kūpuna, community participants, practitioners, and teachers," often elders who provide "counsel, encouragement, support, advice and correction (Lopes, 2016, p. 31)." He states that the quality of our research is only as strong as the relationships with our mentors, and describes a reciprocal process of turning attention towards each other, known as "he alo a he alo" or "face to face (Lopes, 2016, p. 35)." Our team embedded this notion of mentorship throughout our research process. Our work was only possible through the guidance of our mentor, Malu Castro, whose dedication to relationship-building with community partners and deep familial ties to the island facilitated our ability to interact meaningfully with a community we were outsiders to. It was through these connections and careful relationships that our research was able to continue, and only by having the opportunity to establish relationships of our own were we able to connect with additional mentors within the Moloka'i community who were willing to share their time and stories with us. This mentor relationship allowed us to be invited into the community in an authentic way.

This invitation into community is a critical aspect of conducting research on Moloka'i. Informed by interviews with Drs. Davianna Pōmaika'i McGregor and Jonathan Kay Kamakawiwo'ole Osorio, Summer Puanani Maunakea provides an Aloha 'Āina research framework rooted in 'Ike Kupuna (ancestral knowledge). This framework includes Mālama 'Āina (to care for, protect, and maintain all that feeds—land, water, ocean, and all contained therein), Laulima (many hands working together towards a specific goal), and Pu'uhonua (a safe palace, a sanctuary for plants, animals, ecosystems, and all people in which to learn, work, and relax) (Maunakea, 2016, p. 145). In a response from McGregor about her time working on Moloka'i, she states:

The importance is that the community invites you in or welcomes you. Then you work with the community and the families in the community to ask who are the long-time families living here that rely on these resources, who would be willing to talk with us, and which of those people would be good for more in-depth interviews (Maunakea, 2016, p. 152).

This reflects our research process, where we were first invited into the community and then began building trust by participating in volunteer efforts and community building activities. As Maunakea concludes, "In terms of methodology, the community must guide and inform every aspect of the process, and researchers must humble themselves to truly understand the realities of those they are researching while being honest and open about the research intent (Maunakea, 2016, pp. 156 -157)."

On our team's first day on Moloka'i, we got our hands in the 'āina by helping with a lo'i field restoration with the Molokai Hunting Club, working shoulder to shoulder with community members. When discussing the concept of mālama āina in her chapter, Goodyear-Ka'ōpua includes an excerpt about working in the lo' i: "Learning at the lo'i is about producing food and being self-sustainable….It is the idea of taking care of the entire system instead of just your own parcel. The idea of being accountable to more than one person —- oneself (Goodyear-Ka'ōpua, 2016, p. 11)." It was fitting then that one of our first introductions to the people and the 'aina of Moloka'i was through a process that imbues a sense of kuleana, or responsibility. We continued to show up by assisting at fish pond restoration days, a beach clean up, restocking the community food pantry, and solar installation with the Ho'āhu Energy Cooperative. By participating in these activities, we demonstrated that we were there to work alongside the community, making our intentions and interest in building authentic relationships clear.

RELATIONSHIP BUILDING

Internal Relations

Before engaging with Sust'āinable Molokai and even our advisors, our team began building a secure foundation with each other. We made it a point to spend time together outside of our research tasks for the duration of our project. Whether we were bonding over music, food, or reality television, it was always an atmosphere of camaraderie. The more time we spent together, the more our bond became one of family. Starting our work with such an enjoyable outing set a positive tone for future interactions and highlighted the core value of relationship building that is so integral to our project.

Additionally, our participation in the Tishman Center's S.A.L.T. (Sustainable Action Leadership Training) program provided a platform

for our team to align our goals and expectations for the project. We gained insights into each other's perspectives and priorities through open dialogue and active listening. At one of the first S.A.L.T. meetings, we participated in an activity called the River of Life. The River of Life is a relationship-building exercise often used in community engagement processes to facilitate conversation, reflection, and collaboration. This exercise asks participants to create a visual representation of their past, present, and future experiences, challenges, and aspirations, symbolizing the ebbs and flows of a river. In our case, the River of Life activity was presented in the context of narrating our journeys of environmental justice and activism. We partnered up and took turns sharing the rivers of our lives. It is important to note that at this point in our project, our team was still getting to know one another. The lack of familiarity with each other coupled with the task of sharing personal experiences of our lives pushed our team to be open, trusting, and vulnerable with each other from the beginning. In all, the activity helped to cultivate a sense of belonging and community within our team.

Client Relations

As described above, every stage of our project was centered around relationship building. Our advisors emphasized the importance of slowing down, stepping back, and moving at a pace of trust. Under this guidance, we adopted a deliberate approach that prioritized the cultural practice of "talking story" before delving into an agenda. At its core, "talking story" is more than just exchanging words; it is about weaving together the fabric of community through shared narratives and collective memory.

Before arriving on the island, our team began meeting with Sust'āinable Molokai staff over Zoom. On our initial call, we shared a presentation depicting our methods and goals for our research. Our first draft of materials and deliverables was vetted and edited by Sust'āinable Molokai staff.

Community Relations

From the moment we arrived on the island, all of our experiences were connected to the community: our mode of transportation was a van that was loaned to us from a community member; our lodging was a homestead in Hoʻoleahua. Upon our arrival at the homestead, Sust'āinable Molokai staff members were there to welcome us.

As described previously, our first few days on the island are an illustrative example of how we prioritized relationship building. We did not conduct any interviews the first week, as we did not yet have a secure relationship. Instead, we built trust and credibility by engaging in community projects.

QUALITATIVE ANALYSIS

Overview of Qualitative Methods
Our team conducted qualitative research to achieve the objectives listed above. While the overarching principles of data collection and analysis were the same for both the timeline and power analysis, the specific methodology used to analyze and create the respective resources differed. The overarching principles will be outlined, followed by a description of the methodology pertaining to each resource.

Data Collection
Our team conducted fourteen in-person interviews with seventeen participants over the course of three weeks in August 2023. We chose interviews as the primary mode of data collection because of the role storytelling and oral histories play in connecting the past with the future, the land with the people, and the people with the story (Smith, 2021).

Our interview participants were identified using a mixture of purposive and snowball sampling. Purposive sampling is the identification and selection of individuals who are especially knowledgeable about or experienced with a phenomenon of interest (Creswell & Plano Clark, 2017). In this case, Sust'āinable Molokai identified a small group of participants who had intimate knowledge of the island's history and decision-making processes. Snowball sampling, a recruitment technique wherein interviewees are asked to assist in participant identification, was then used to identify additional participants to consult (Parker et al., 2019). This approach allowed our team to discuss

controversial topics with a diverse range of perspectives and opinions. Selected participants were a mix of cultural practitioners, policy experts, activists, legal experts, and subsistence practitioners.

Our team developed a semi-structured interview protocol (Appendix C) that facilitated follow-up questions and the expansion of points of interest identified by participants. The questions in the protocol focused on (1) the participant's background and role on the island, (2) the participant's understanding of Moloka'i self-determination, consent, and self-governance, (3) the participant's knowledge of community decision-making processes on Moloka'i, and (4) the participant's suggestion for how the resources created should be used and shared. Most interviews lasted approximately one hour. On two occasions, two participants were interviewed simultaneously resulting in interviews of longer duration. Two team members were present at each interview, with one person asking the questions while the other managed Zoom's recording and transcription software. All participants were offered a $75 honorarium in recognition of their time. After each interview, the team members discussed information the participant had shared. These initial discussions allowed for interview protocol adjustments and

the preliminary development of emergent power analysis themes for later analysis.

The team conducted interviews at the location that best suited the participant. Locations included participants' homes, offices, the office of Sust'āinable Molokai, and the homestead where our team resided during our island stay. Overall, flexibility in location was an advantage of the research process. However, it must be noted that the wind and background noise interfered with the recording quality of some interviews conducted outside. Two participants requested not to be recorded,and team members took handwritten notes in both instances. Owing to technical difficulties, the recording of one interview was compromised but the transcription was retained.

Data Analysis
For efficiency, our team outsourced interview transcription cleaning to Landmark Associates, a third party who provides English and Hawaiian transcription services. Once transcriptions were complete, we began the coding process using NVivo software. Coding is an analysis strategy in which some aspect of the qualitative data is assigned a descriptive label (a code) that allows the researcher to identify related content across the data (Illinois Library, 2024). We were guided by the processes of

of analytic deduction and induction, in which the researcher both applies predetermined codes to the data and allows codes to emerge throughout the analytic process (Bingham & Witkowsky, 2021). Using a combination of both approaches facilitated a comprehensive and adaptive analysis (Bingham & Witkowsky, 2021).

Prior to commencing analysis, we created a book of descriptive and analytic codes. The descriptive codes were used to summarize whether the primary topic of the excerpt related to the timeline, power analysis, or both. The analytic codes built on the initial emergent power analysis themes developed throughout the course of the interviews. To begin, all four team members separately coded the same subset of interview transcripts for the predetermined descriptive and analytic codes (Appendix D). We then compared these transcripts to confirm that codes were identified and used consistently in order to achieve intercoder agreement. Having achieved agreement, each remaining transcript was coded by one team member. Topics and information uncovered in a transcript were either subsumed under an appropriate existing code or a new analytic code was created to describe an emerging theme. Ongoing theme development was triangulated amongst team members through group discussion. Finally, representative quotations for each pre-determined and new theme were selected to exemplify key findings.

Timeline Methods

The Moloka'i timeline of self-determination, consent, and self-governance was created from an interlinked process of interview data and secondary data analysis.

The aforementioned GLIFWC timeline of Anishinaabe Treaty Rights provided inspiration for the Moloka'i timeline (Appendix A). Using the GLIFWC timeline as a reference, we created a draft timeline of sixteen examples of Moloka'i self-determination, consent and self-governance with support from Sust'āinable Molokai staff (Appendix E). Both documents were used in interviews as supporting materials. Interviewers showed the GLIFWC timeline to participants and explained how it provided a template for what a Moloka'i specific timeline could look like.The interviewer then showed the draft Moloka'i timeline and asked "When you look at this timeline, what planning processes, community development, or kū'e (resistance) movements have you been a part of on Moloka'i?" We intentionally avoided using the terms "self-determination," "consent," and "self-governance" in our questions because of their theory-heavy and wide-ranging

definitions.

In response to the initial description of events shared by participants, interviewers asked follow-up questions such as (1) How long did that event/process go on for? (2) Who was the opposition and what were they like? (3) What was the community's position on this issue? and (4) What do you think the legacy of this movement is today?. When participants shared an event not already included on the draft timeline, interviewers added the event to the draft using sticky notes and a spreadsheet. This facilitated a dynamic process of timeline building across interviews. During and after several interviews, kūpuna shared resources with interviewers to use as references and to add context to the information that was shared. These resources included DVDs, newspaper articles, high school yearbooks, legal judgments, and community reports.

In coding, our team used temporally descriptive codes divided into fifty year increments to decipher and organize the transcript excerpts related to timeline creation (i.e. 1800-1850, 1850-1900, 1900-1950 etc). We also had a code for events that were shared without reference to a specific date and a code for discussions of how kūpuna wanted the timeline to be used and disseminated.

Once coding was complete, we ensured that all dated events from the coding analysis were included in the spreadsheet created during interviews, and we also dated and added previously undated events. We built out the spreadsheet adding descriptions, sources, pictures, map links and notes columns. The information shared by kūpuna on an event was added to the description column as were de-identified relevant quotes. Where qualitative analysis revealed differing perspectives on an event, we included multiple quotes that exemplified this diversity.

When further research was required,we used primary and secondary resources. Some of these resources were shared by kūpuna during interviews, while others were sourced by us. Primary resources included legal judgments, government documents, community reports, and newspaper articles (the majority of which were from the Molokai Dispatch). To the greatest extent possible, secondary resources used were created by Kānaka ʻŌiwi authors.

Once all events shared by participants were researched and added to the timeline, we sent the timeline to community members for review. We incorporated community member's feedback and made necessary changes. When this process was complete,

we transferred the timeline spreadsheet into TimelineJS, an open-source interactive timeline tool created by the Knight Lab at Northwestern University. Using a google spreadsheet as the database, this software allows users to see the timeline events in relation to each other and how they overlap. To make the visual interaction more user friendly, we divided the events into the following categories: power shifts, outside influences, law and policy, kūʻē , Molokai Ranch lands, and community building. We also added pictures and map links where relevant. Ownership and storage of the data source spreadsheet was then transferred to Sustʻāinable Molokai who can continuously add events to the timeline as they see fit.

Power Analysis Methods
In order to unveil embedded power imbalances and begin strategizing to build power within the Molokaʻi community, our team conducted a power analysis based on the qualitative data described above. This power analysis includes the creation of a power map and a qualitative analysis of the strategies and barriers to land back and community-centered processes for decision-making, centered around the campaign for community ownership of Molokai Ranch. By understanding where power rests in the current social and political relations surrounding Molokaʻi, community groups such as Sustʻāinable Molokai will be better situated to implement community-led strategies and decision-making methods swiftly and effectively when an opportunity for progress arises. The ability for a movement to be unified and nimble when opportunities materialize or obstacles occur is a result of its culture; ultimately, this is the culture our analysis aims to understand.

Power Map
In order to map current distributions, forms, and instruments of power surrounding Molokaʻi's campaign for community ownership of Molokai Ranch, our team followed guidance from Oxfam (2014) to conduct this power analysis. We analyzed power relations using the qualitative data collected from community interviews by seeking to identify the following:

1. **Actors, organizations, and institutions:** Who is involved? Whose voice is trying to be heard in the fight for land back? Who is directly helping these voices to be heard? With indirect support from whom? To be heard by whom?

2. **Contexts, levels, and spaces:** In what context would the community ownership of Molokai Ranch take place? At what levels are voices trying to be heard? In what kinds of "spaces" are voices trying to be heard? (e.g. formal/closed, invited, created/claimed from below)
3. **Sectors, issues, or power:** Which aspects of land relations are being addressed? What change is Sust'āinable Molokai and its partners trying to affect? Which kinds of power relations are relevant to the right to be heard? (e.g. visible, hidden, invisible/internalized).
4. **Motivations:** What are the interests motivating actors and organizations for or against land back and community ownership?
5. **Strategies,** methods, and models: What strategic approaches could be used for responding to the above? What is the logic behind the choice of partners, allies, and actors? What is Sust'āinable Molokai's and/or its partners' role and strategy in the work they support or carry out? What are the models of change and understandings of power relations?

Once the above elements were identified, we built a power map consisting of various actors identified by interview participants and additional key players discovered in the research process that visually depicts the contexts, levels, and spaces in which power lies. Relationships between entities were determined based on the context provided in community interviews, asking participants direct questions, and additional independent research. Actors were then placed on the map in four quadrants that ranged from "strongest partners," "supporting collaborators," "opposing influence," and "strong opposition," per a power mapping structure provided by Human Impact Partners (2022).

After completion of the power map, key actors were sorted by the spaces they occupy (e.g. "Moloka'i community" or "U.S. Federal entities") within each category and paired with a relevant quote from community interviews to provide additional context within the campaign for land back (Appendices F-I).

Strategies and Barriers to Land Back
For the Moloka'i power map to become a functional tool, we needed to understand the strategic approaches that could be used to respond to the identified actors, the spaces they occupy, and their motivations for

or against land back. Our team analyzed participant interviews to identify these prospective strategies and any potential barriers that could inhibit the campaign for community ownership of Molokai Ranch. Once strategies and barriers were identified, our team sorted these strategies and barriers into more specific divisions to unify underlying thematic patterns. Land back strategies were sorted into four categories: infrastructure building, legal approaches, land buybacks, and special land designations. In addition to strategies, many participants discussed the necessary values required for community land management. These values were also sorted into four categories: community care, collaborative decision-making, cultural anchors, and land stewardship. Additionally, we sorted land back barriers into two categories: internal barriers and external barriers. Internal barriers included leadership limitations, and external barriers included political disempowerment, outside interests, financial barriers, and cultural disrespect. These themes and sub-themes provided essential information for interpreting the power map. We considered various methods of implementing these identified strategies within the context of the power map and discussed their relative strengths and weaknesses with regard to their potential to strengthen community self-determination, consent, and self-governance.

Decision Making

The final stage of the power analysis was to elucidate decision-making protocols that were community-identified and self-determining. Similar to the methodology utilized for strategies and barriers to land back, our team analyzed interviews to discern the community-identified methods of decision-making that can be utilized to affirm self-determination, consent, and self-governance in the context of community ownership of Molokai Ranch. Our initial research process aimed to identify agents (who makes or should make decisions), process (how these decisions should be made), barriers, and how interviewees spoke about free, prior and informed consent (FPIC). While this initial framework was a helpful starting point, we restructured this framework in our analysis to better capture community input. During our analysis, we recognized that when participants discussed agents of decision-making, they focused less on who should be making decisions, and instead placed an emphasis on the values and qualities key leadership should have. Additionally, when speaking about decision-making processes, participants discussed both values that should drive this decision making princess as well as distinct procedural elements of a productive community decision-making process. After identifying these values, we .

constructed a mind map to visually depict themes and connections between them.

GEOSPATIAL MATERIALS
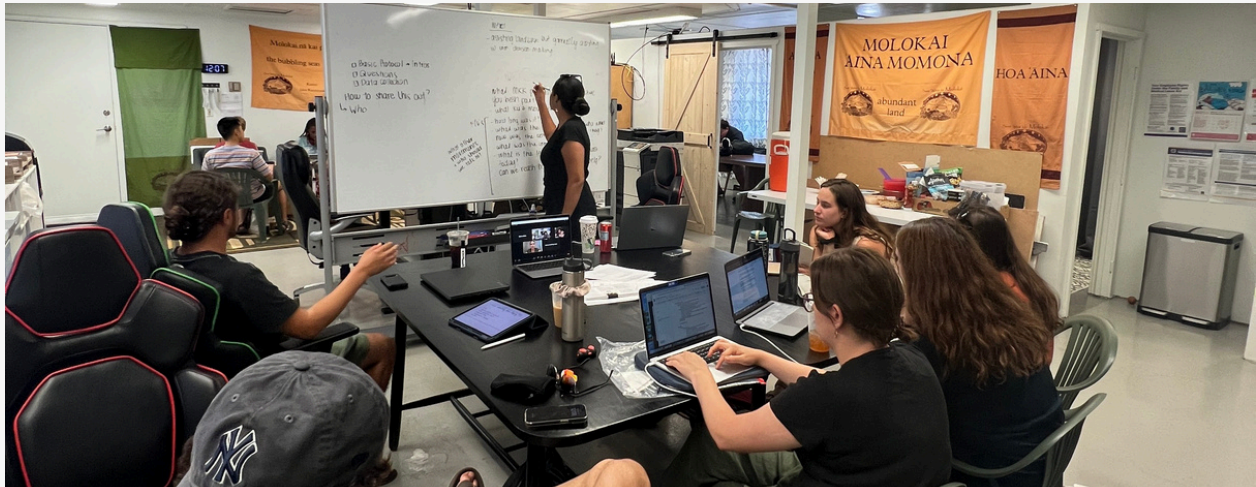
There is a notable absence of mapping and spatial analysis onMoloka'i, leaving a critical gap in understanding and future planning. Specifically, our work aims to fill this gap by providing interactive maps that demonstrate the mismanagement of lands as well as the public health consequences of land degradation. Additionally, our work provides a structure of geospatial methods that can be used to inform current and future land management strategies of Moloka'i. At its most basic, our work aims to answer the question: How can geospatial data and tools be used to help inform the argument that Molokai Ranch lands should be under community ownership? To answer this question, our primary focus has been to digitize Molokai Ranch boundary lines and to consolidate relevant data that supports SM's initiative of reclaiming their lands. Our mapping efforts rely on a suite of data sources from the State of Hawaii Office of Planning and Sustainable Development, Hawaii Geospatial Data Portal, the Commission on Water Resource Management in the State of Hawaii, county records, and community participation.

Data Aggregation & Cleaning
As we were not able to collect our own data, we used open-source data to obtain layers at the county level. Due to Molokai being part of Maui County, the layers required substantial data cleaning. Data cleaning included clipping all of the layers to just Molokai, simplifying datasets,

playing with symbology to improve visualizations, and editing attribute tables, among other methods to inform our spatial analysis. As evident below, we reference where we received each individual layer.

Layers that required no cleaning:
- Coastal Flood Zone with 3.2 ft Sea Level Rise (2022) | County of Maui, Hawaii Statewide GIS Program Geoportal
- Registered Wells | Received from Malie Beach-Smith, Geologist, Commission on Water Resource Management, Department of Land and Natural Resources, State of Hawaii
- Stream Diversion | Received from Malie Beach-Smith, Geologist, Commission on Water Resource Management, Department of Land and Natural Resources, State of Hawaii

  - *Data Clipping*

To clip all of the necessary layers to just Moloka'i, we imported every shapefile into ArcGIS Pro and examined the attribute tables. As most of the data was packaged at the county level, most of the layers needed to be clipped. Within the attribute tables, if there was a field, typically "Island," or some other identifier that indicated the data to be associated with a particular island, we used the Select by Attributes tool to isolate only data presented on Moloka'i. For layers that did not have an "Island" field or other identifying attribute, the Select by Location tool was used. In this case, Moloka'i was selected and data was clipped to its location.

Layers that required clipping (to the island of Moloka'i):
- Land cover/use (1976) | State of Hawaii Office of Planning and Sustainable Development
- Airports (2019) | State of Hawaii Office of Planning and Sustainable Development
- Fire Risk Areas (2021) | County of Maui, Hawaii Statewide GIS Program Geoportal
- Zoning (2023) | County of Maui, Hawaii Statewide GIS Program
- Small Boat Harbors (2015) | State of Hawaii Office of Planning and Sustainable Development
- Parcels - Maui County (2023) | County of Maui, Hawaii Statewide GIS Program Geoportal
- Soils (MU) - polygons (2023) | County of Maui, Hawaii Statewide GIS Program Geoportal
- Wetlands (2022) | County of Maui, Hawaii Statewide GIS Program Geoportal

- Highway Performance Monitoring System (HPMS) (2023) | County of Maui, Hawaii Statewide GIS Program Geoportal
- Hospital (2021) | State of Hawaii Office of Planning and Sustainable Development

  - *Symbology*

We utilized a combination of symbology adjustments and data simplification techniques to enhance the clarity and usability of various spatial layers.

- Land Cover/Use (1976)

We simplified the symbology to represent Level 1 land cover codes. This includes the categories of Agriculture, Barren, Forest, Rangeland, Urban/Built-Up, Water and Wetland. This simplification was implemented to streamline the visualization and facilitate comparison with potential future classifications using more recent satellite imagery where only Level 1 classification would be feasible without extensive ground surveys.

- Stream Diversions and Registered Wells

Both of these layers are represented as point data. For both datasets, we retained the original display format to accurately convey the location and distribution of these features.

- Highway Performance Monitoring System (HPMS) (2023)

Highways and roads, depicted as line vector data, maintained the standard representation to highlight transportation infrastructure throughout the island.

- Fire Risk Areas (2021)

For this layer, we adjusted the color symbology to correspond to the stock fire risk rating from low to high, ensuring consistency and clarity in depicting potential areas of fire hazards.

- Zoning (2023)

We opted to preserve the original zoning designations used by Maui County and did not simplify the zoning codes. While this decision resulted in a multitude of zoning designations, reflecting the complexity of the data, we refrained from editing the layer to ensure accuracy of the official zoning boundaries and classifications. Additionally, the color scheme was left unchanged to maintain consistency with established zoning conventions.

Overall, these symbology adjustments and data simplification strategies were implemented to improve the interpretability and usability of our geospatial datasets and to facilitate a more effective analysis of these layers.

- *Projection*

All of our data for local spatial analysis in ArcGIS Pro was projected into the NAD83 HARN UTM Zone 4 projected coordinate system. The NAD83 gcs is most frequently used when displaying data from Hawaii. Furthermore, the project coordinate system of UTM Zone 4 is the most ideal for displaying data from the island of Moloka'i. We are using HARN as it provides higher accuracy than standard NAD83.

However, due to accessibility and collaboration purposes, when uploading the maps into ArcGIS Online, all layers were projected into the default WGS 84 projected coordinate system. This reprojection happens to any map that is uploaded to ESRI's online platform as all uploaded data must match the coordinate system of the basemap.

For more complex spatial analyses, this reprojection could pose an obstacle. However, as SM will mainly be using our maps and layers as a general tool in their land-back efforts, the projection should not serve as a complication. In the case that more complex analysis is required, we have developed a program to be imported into ArcPy to project all layers of a map into the preferred projection choice of NAD83 gcs. Though this program can be used to reproject layers into any given coordinate system, it was created for our client to ease the use and increase the efficiency when going between ArcGIS Online to desktop software like Pro.

Molokai Ranch Digitization

One of our main objectives was to create a digitized layer of Molokai Ranch. In order to create this, we used the following resources as references:

- Molokai-Lanai Large Landowners (2013) | Data Basin
- Parcels Layer | Jeff Allenby, Director of Geospatial Innovation, Center for Geospatial Innovation at Lincoln Institute of Land Policy
- Parcels - Maui County (2023) | County of Maui, Hawaii Statewide GIS Program Geoportal

Both parcel shapefiles were imported into ArcGIS Pro where we used the Create and Snap tools to construct the boundary layer. The parcel boundaries served as edges and vertices we could snap to in order to obtain the most accurate polygons. After extensive research, we found the Molokai-Lanai Large Landowners map to be the best reference map for Molokai Ranch. The reference map along with the parcel layers were used in tandem to create the boundary layer.

To increase efficiency, we found the Continue Feature and Trace tools to be incredibly helpful. The Continue Feature tool was used to create curvy polygon features whereas the Trace tool was used to trace entire polygon edges of the parcel layers. Throughout the digitization process, polygon features were checked to ensure they were accurately snapped onto vertices and edges of the parcel layers. We corrected any polygon that was not accurately snapped. Due to the nature of Molokai Ranch not being cohesive plots of land under private ownership, there are small sections of land within that are not classified as being part of the ranch. For these instances, we used the Clip tool within Modify Features; we selected Discard (Remainder) with a 0 buffer distance in order to identify overlapping portions of the parcel layers and digitized Ranch layers. The non-overlapping selections were then discarded from the digitization.

All Inclusive Map
After all of our data was cleaned, we were able to create an all-inclusive map of the island. The intention behind creating this map is for the community to have a tool to visualize the island's infrastructure, land use, and climate mitigation in order to create informed land management strategies. On this map, the following layers were included:

- Highway Performance Monitoring System (HPMS) (2023)
- Stream Diversions
- Land Cover/Use (1976)
- Zoning (2023)
- Registered Wells
- Hospital (2021)
- Airports (2019)
- Small Boat Harbors (2015)
- Soil (2023)
- Wetlands (2022)
- Coastal Flood Zone with 3.2 ft Sea Level Rise (2022)

- Fire Risk Areas (2021)
- Molokai Ranch Boundary (Digitized)

Native and Medicinal Plants Map

In addition to the digitized Ranch layer and all-inclusive map, we created two other maps that display data on native plants. One shows native plants that are found only on Molokaʻi and none of the other Hawaiian islands and the other one shows a number of common native medicinal plants that are used in traditional Hawaiian healing practices. Data for this was sourced from, USGS, specifically an extensive appendix table containing maps that show the modeled ranges of 1,158 Hawaiian plant species, including all native Hawaiian vascular plant species where sufficient data was available. Each species contains an entry that includes information on its family name, common name, conservation status, and native status, according to the Smithsonian National Museum of Natural History's Flora of the Hawaiian Islands database. As the table displays information for plant species across all eight main Hawaiian islands, entries were combed through thoroughly to only extract plant species found on Molokaʻi. Each entry is accompanied by a downloadable jpg file as well as a zipped shapefile of each plant's estimated range, with the jpg file displaying the polygon shapefile layer over maps of the eight main islands. Each jpg file was manually opened to check if Molokaʻi is included in the plant's estimated range. If so, the entire entry for said plant was extracted and put into a google sheets document. Once all entries were examined and plants with ranges on Molokaʻi extracted, data began to be sorted. Separate sheets were created for different subsets of the extracted data. One such subset was a sheet containing plant species endemic to Molokaʻi. Another subset was a sheet containing all plants with known medicinal uses sourced from the Bishop Museum's Hawaiian Ethnobotany Online Database. One last subset contained a more truncated version of the medicinal plants sheet, with just the nine most common medicinal plant species found on Molokaʻi. The two maps were created utilizing the first subset of endemic plant species and the last subset of the truncated medicinal plant species. Methods for creating the maps are outlined below.

With the way the native plants data was packaged in that table format - all zipped shapefiles were downloaded and manually unzipped to be imported into ArcGIS Pro. Once unzipped they were imported and each shapefile was in essence just polygons with empty fields, thus no data whatsoever. Using the created google sheets of subsets of our extracted

data, as well as the fields created with our own research, the primary objective was to produce a map with each shapefile as its own layer, containing direct information from our subsetted sheets. First, because of the way the shapefiles were zipped and packaged, when imported into ArcGIS Pro, they would appear in Africa and not at all in their proper position on Moloka'i. This was because they had "Unknown Coordinate Systems," and needed to be projected to the projected coordinate system of the original data source, which happened to be NAD83 HARN UTM Zone 4N, the same gcs we had used for our aggregated data layers. Using Model Builder in ArcGIS Pro, a model was developed to project all shapefiles to NAD83 HARN UTM Zone 4N, rather than manually projecting all 29 layers. These actions were taken before the python program was developed, thus why that was not used. Attribute tables for each shapefile were basically empty, only containing geometric data on the size of the polygons. In addition, each shapefile had multiple rows as numerous polygons made up each individual shapefile. Our goal was for each attribute table to be a direct import of information from the subsetted google sheets, thus requiring merging of these polygons. Once projected and each layer was correctly appearing on the island of Moloka'i, again using Model Builder, a model was created to use the "merge" tool to combine the polygons for each respective plant shapefile. Before this, each shapefile was renamed from its given acronym filename, to the proper scientific and common name.

Once the polygons were merged into one row, the fields from the google sheet were manually inputted into the attribute table using the "edit" tool in ArcGIS Pro. This included for the endemic plant species map: family name, native status, conservation status, medicinal status, part, use and plant species name. For the common medicinal plant species map this included: family name, native status, conservation status, part, use and plant species name. *Part* in these contexts refer to the part of the plant used for medicinal or therapeutic uses, while *use* refers to the specific medicinal or therapeutic uses/s. Medicinal status was included in the endemic plant species for those endemic plant species with relevant medicinal properties and uses, however many of these plants have N/A values for these relevant fields as they have no medicinal properties and uses. Once information was inputted, maps were uploaded to ArcGIS Online where they are meant to serve as interactive tools for Sust'āinable Molokai and their own land management initiatives.

ArcGIS StoryMap

After each map was uploaded into ArcGIS Online, we used the platform of ArcGIS StoryMap to weave our geospatial materials with our qualitative findings. The StoryMap includes the interactive timeline, the Molokai Ranch boundary layer and the native and medicinal plants. Using features within the StoryMap, we were able to take a number of events from the timeline and geographically place them where they occurred on the island. Additionally, we paired existing maps, such as traditional Hawaiian land divisions and land use data, with the ranch layer to see how the ranch has changed the landscape of Moloka'i.

DELIVERABLES & KEY FINDINGS

TIMELINE

Through coding analysis and secondary research, we created a collated timeline of 208 events. While we had envisioned this timeline would focus exclusively on Moloka'i self-determination, consent, and self-governance, it became evident throughout the course of the interviews and data analysis that participants wanted a more extensive timeline. As a result, the completed timeline includes instances of self-determination, consent, and self-governance that took place on other Hawaiian islands that participants indicated were important to the Moloka'i context. Participant's also added events to the timeline that involved the breach of Kānaka 'Ōiwi rights by external actors. These events contextualize how Moloka'i Kānaka 'Ōiwi have continuously expressed self-determination, consent, and self-governance to resist settler colonialism.

As stated, events were divided into categories on the interactive timeline tool. The breakdown of these categories is as follows:

Category	Description	Number of Events
Power Shifts	Events that marked transfers of governance or decision-making power on Moloka'i or for Hawai'i.	8
Outside Influence	Events involving external interests that have (often negatively) impacted Moloka'i or all of Hawai'i.	41
Law & Policy	Events of legal and policy change at the county, state, or federal levels.	62
Kū'ē	Events involving protest against or the prevention of extractive activities.	37
Molokai Ranch Lands	Events that marked changes in ownership or management of the lands comprising Molokai Ranch.	17
Community Building	Events of community organizing to create positive changes on Moloka'i or for all of Hawai'i.	43

Table 1. A representation of how the timelines is divided into categories along the numeric value of associated events.

Interview participants were also asked how they would like the timeline to be used and disseminated. The graph at Figure 1 depicts their responses:
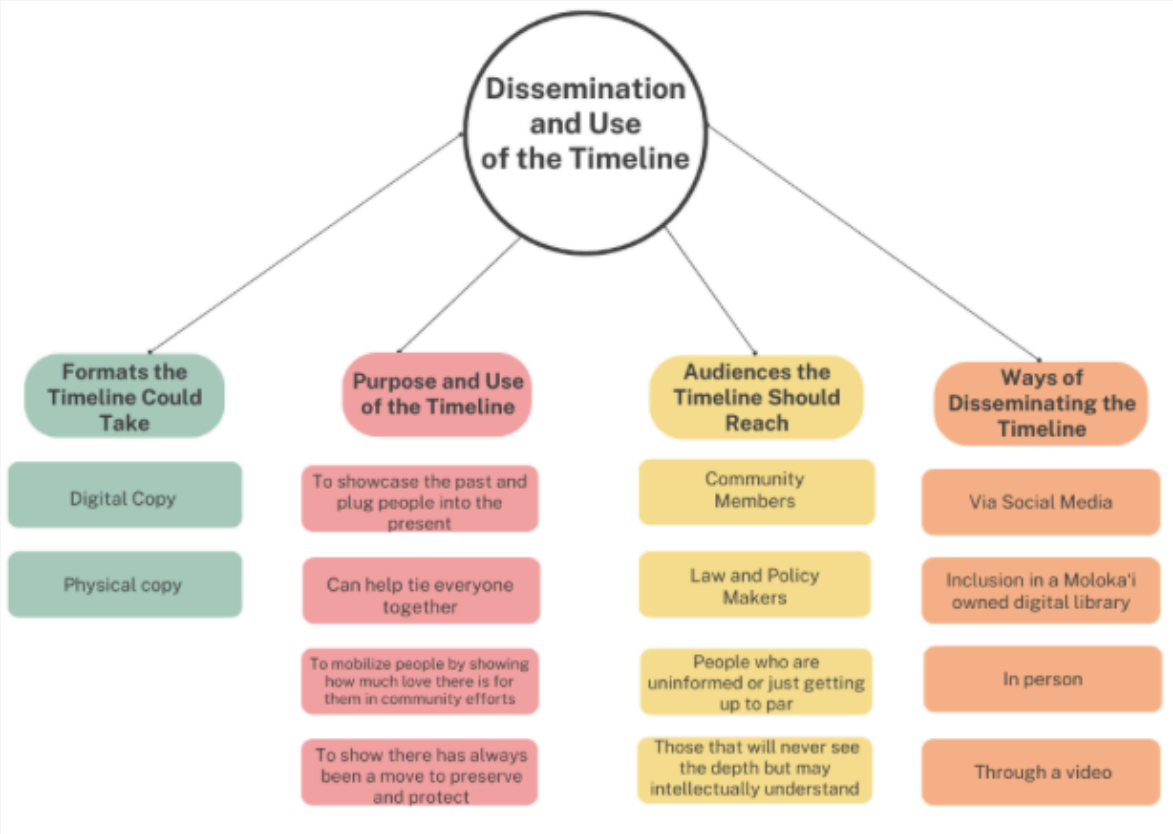
Figure 1. Suggested methods of use and dissemination of the interactive timeline from interview participants.

In terms of formats for the timeline, participants recommended the creation of both digital and physical copies to ensure accessibility for community members who do not want to use technology.

Participants suggested purposes and uses of the timeline varied. One participant spoke of how in showing what the community had been through and how past efforts could inform the future, the timeline had the potential to increase community cohesion. Similarly, another participant stated the timeline could build hope and operate as a tool for community mobilization. They stated:

> You show people how much they're loved by the efforts that being put into them, it ignites a fire in them and then you can have short spurts of real popularity in your interest and so to motivate the group to be propelled to the next level. This may be a good tool for that, you know, like highlighting these things and getting that rush of I wanna be on this, right?

Another suggestion was the role the timeline could play in showing how there has always been a movement on Moloka'i to preserve and protect the land, and that mobilization was not just prompted by the opportunity to buy Molokai Ranch.

Participants saw the primary audiences of the timeline as community members, law and policymakers, and people who are uninformed about Moloka'i's history. In particular, one participant highlighted the role the timeline could play in informing people who may never understand the depth of what land back would mean but can understand the rights of Kānaka 'Ōiwi on an intellectual level.

When asked how the timeline should be shared, participants suggested in-person dissemination, Sust'āinable Molokai's social media platforms, and videos. One participant suggested the creation of a Moloka'i-owned digital library where the timeline and other resources could be stored for public use.

Power Analysis
The following power analysis includes the power map of the campaign for community ownership of Molokai Ranch, the strengths and limitations of land back strategies, and an overview of community-based decision-making protocols.

Power Map
The power map shown in Figure 2 displays the relevant actors thought to be involved in the campaign for Molokai Ranch. The y-axis symbolizes an actor's level of decision-making power, starting at the bottom, where land back is likely not on the actor's radar at all, to the top, where the actor has significant decision-making power to return land. The x-axis

signifies the actors' support in regards to land back: all the way to the left is a stance of "die-hard against," and all the way to the right is "die hard support."
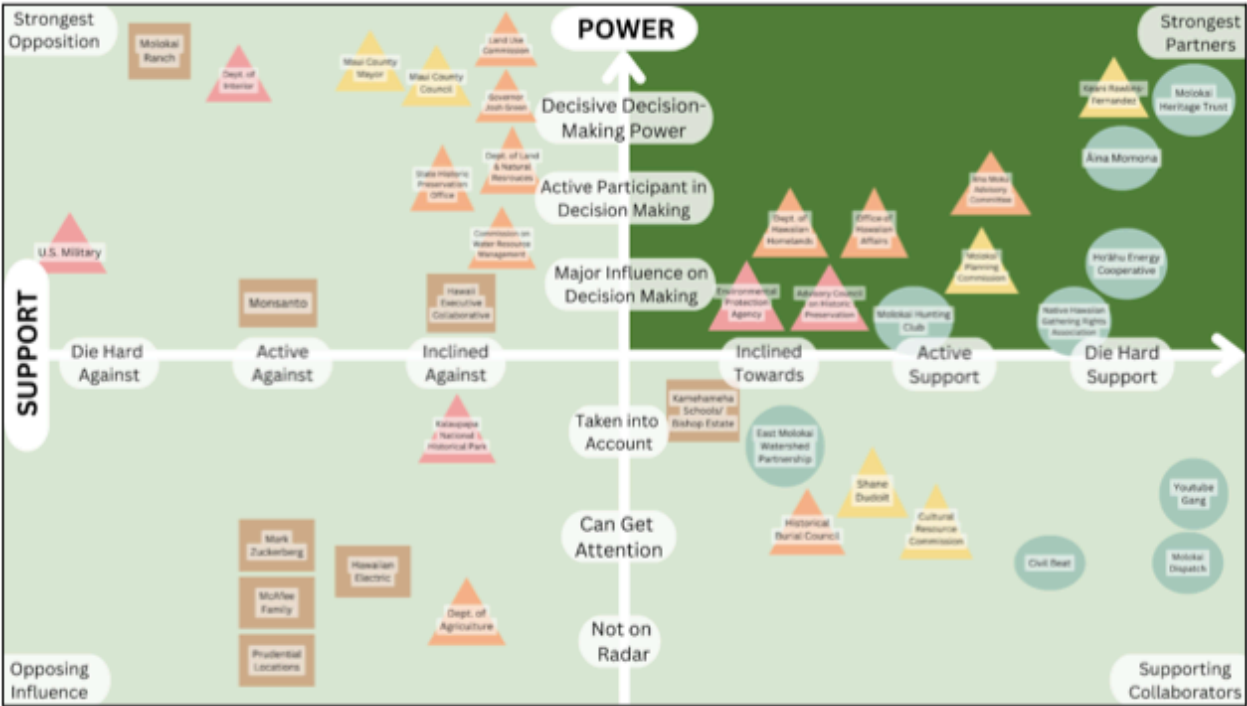
Figure 2. Power map of the campaign for community ownership of Molokai Ranch

The following sections provide an overview of each quadrant's group of actors in regards to their respective levels of support and influence for community ownership of Molokai Ranch. For in-depth descriptions of each individual actor, see Appendices E–H.

Figure 3. Strongest Partners in the campaign for community ownership of Molokai Ranch

Strongest Partners

This group represents the strongest partners and includes entities that Sust'āinable Molokai could work closely with to build power and share resources with to achieve community ownership of Molokai Ranch.
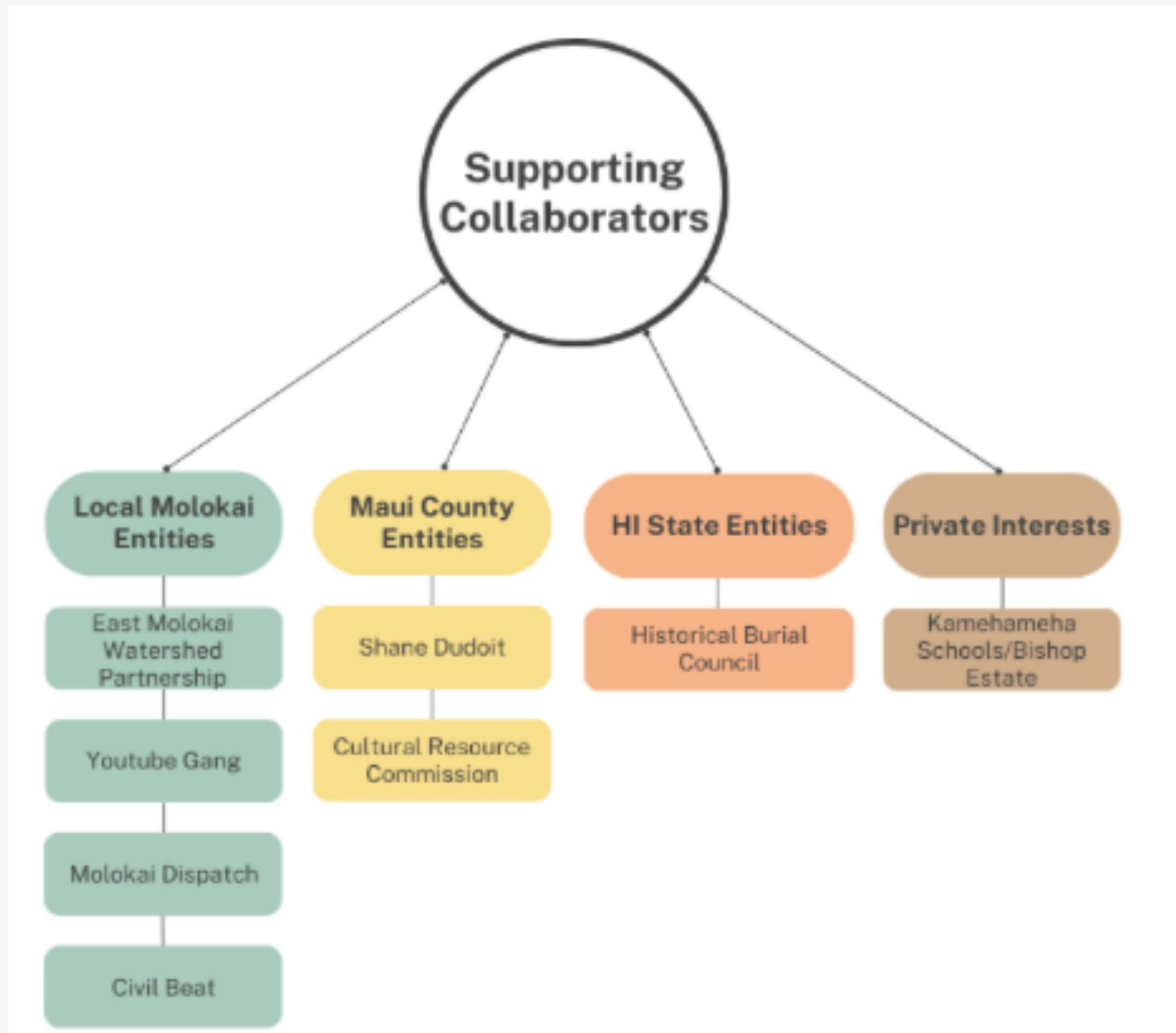
Figure 4. Supporting Collaborators in the campaign for community ownership of Molokai Ranch

Supporting Collaborators

The actors in this group will likely support the goal of community ownership of Molokai Ranch, and Sust'āinable Molokai could potentially collaborate with these entities to build collective power and grow influence.
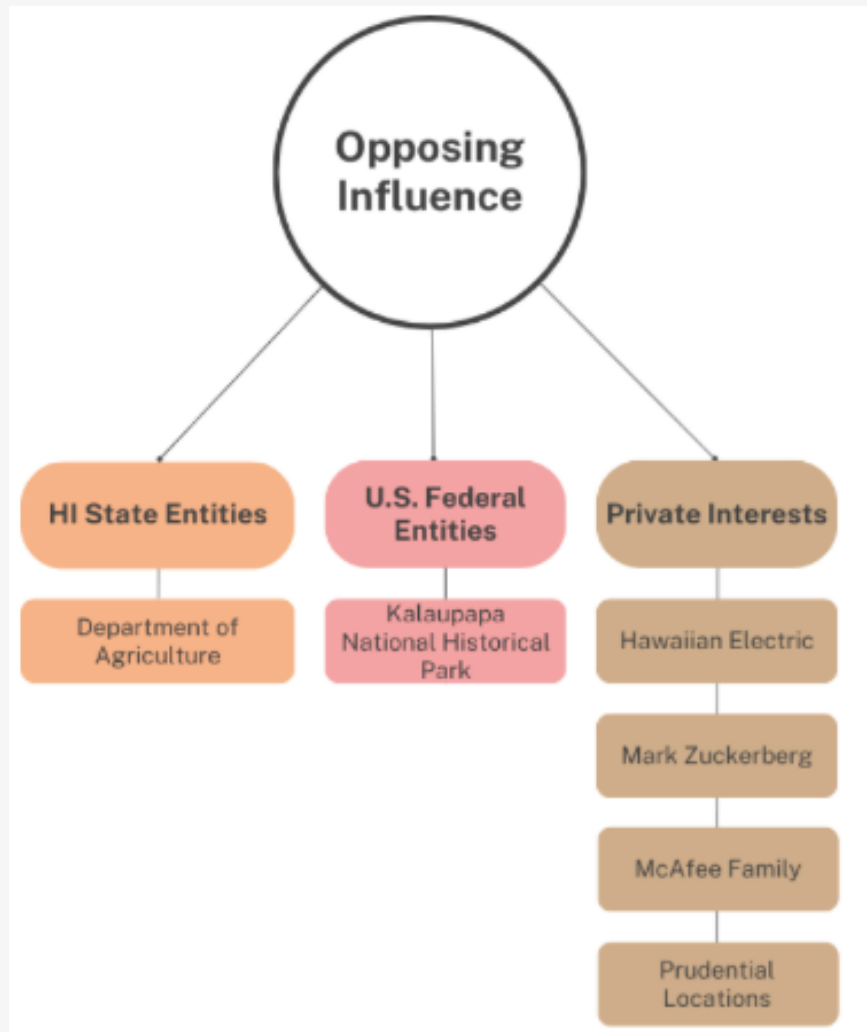
Figure 5. Opposing Influences in the campaign for community ownership of Molokai Ranch

Opposing Influence

Sust'āinable Molokai should not invest too much time in this group due to the low influence these actors have in decision-making spaces. They do, however, provide an opportunity to understand opposing arguments and strengthen the message around community ownership of Molokai Ranch.
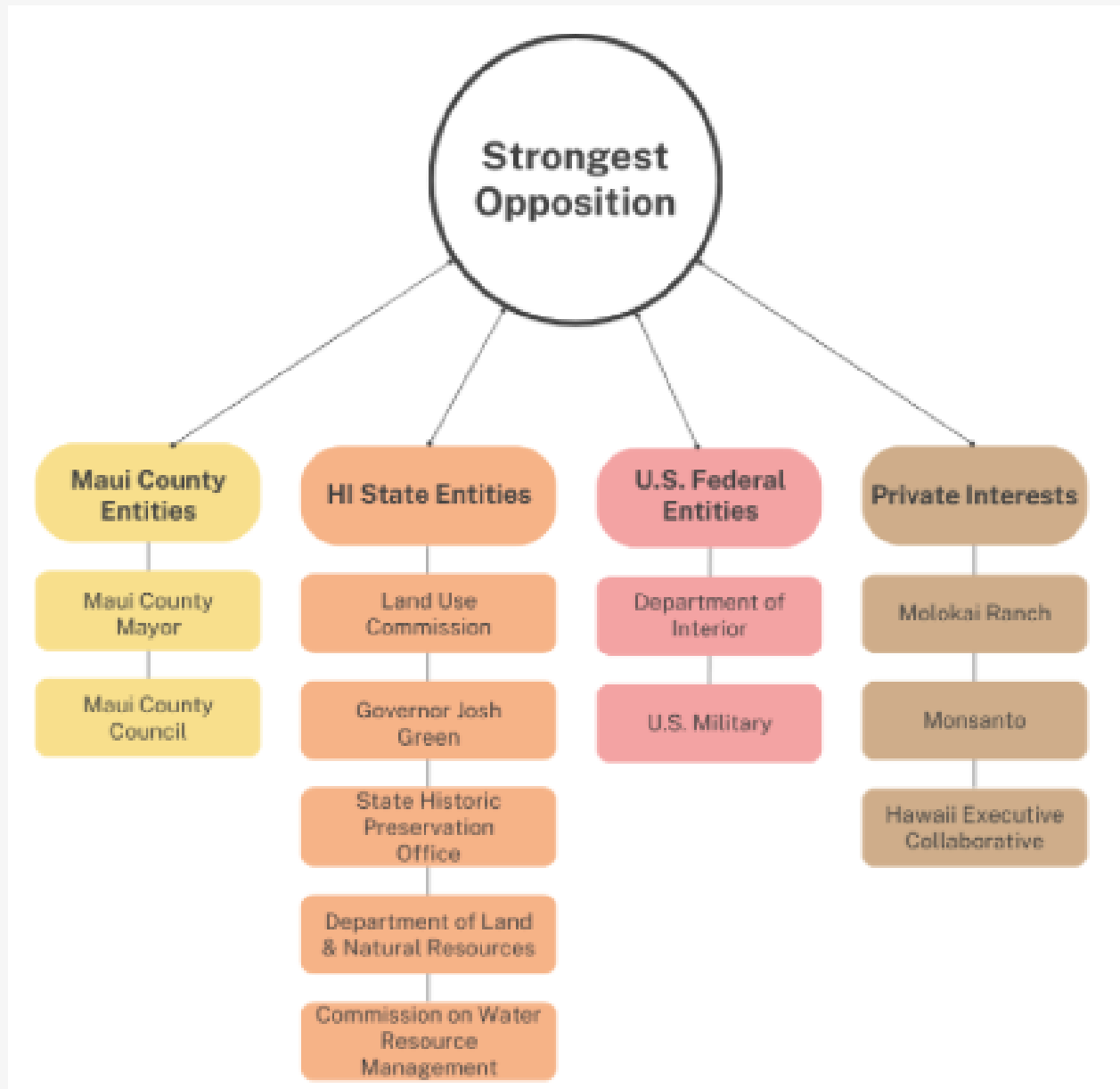
Figure 6. Strongest Opposition in the campaign for community ownership of Molokai Ranch

Strongest Opposition
This group has potential to derail Sust'āinable Molokai's target of community ownership of Molokai Ranch. Our team recommends tracking their actions and arguments; depending on how strongly they oppose, there may be opportunities to shift their support.
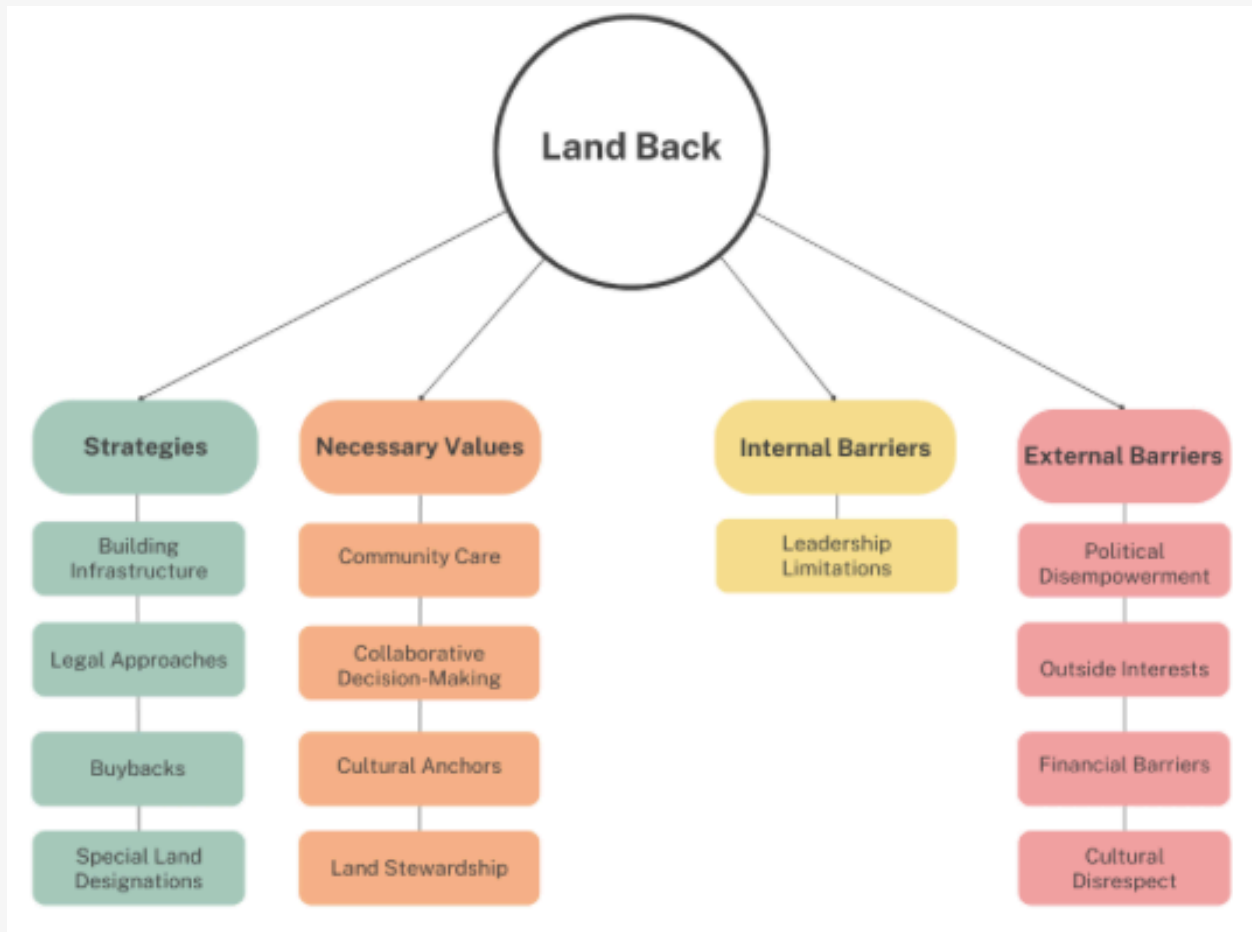
Figure 7. Land Back Strategies, Necessary Values, and Barriers (Internal and External)

Strategies

In analyzing the qualitative data, the most salient strategies for landback can be categorized into four sub-themes: **(1)** building infrastructure, **(2)** legal approaches, **(3)** land purchase, and **(4)** special land designations. Building infrastructure was the most frequently mentioned land back strategy and encompassed both community infrastructure and physical infrastructure. Building Community infrastructure strategies included engaging young people in community organizing, strengthening internal decision making protocols, sharing trade skills to make residents self-reliant, building energy sovereignty, starting a land back fund for other Indigenous communities, and creating inclusive community organizing engagement. Ideas for physical infrastructure were to develop partnerships with outside institutions and to construct sea-level rise retreat areas.

There was an overwhelming emphasis on prioritizing community infrastructure before, or as a means of, building physical infrastructure. One participant stated the deep importance of community infrastructure between Kānaka 'Ōiwi and other Indigenous communities working on land back campaigns:

We're gonna send out ripples that's gonna affect the entire globe. It's first gonna ripple throughout the islands, and then you're gonna see, this is how you get land back. This is how you get governance. This is the template you have to use. I said, "Then we gotta help finance that." We gotta create a huge, multi-billion-dollar fund that is gonna continue to grow and give capacity to other indigenous communities to get their land back.

This expression of solidarity and reciprocity was just one of the many examples of building infrastructure as a strategy for land back.

Following infrastructure building, the next most frequently mentioned land back strategy was exploring legal avenues for community land ownership. These legal approaches included eminent domain, establishing Moloka'i as an independent county, and generally operating under American settler law to build power. The legal approach differs from community infrastructure-building in that it seeks to leverage settler law as a means to disrupt its own systems of occupation. There is an inherent risk in this approach, as it could result in further validation of the settler legal system. One participant perfectly articulated this tension, "We're going to creatively navigate through this and we're going to figure out how to strategically get our point across while functioning within a colonized system. That's dangerous, but it's practical and it's something that we can actually do with minimal casualties, right?" Potential consequences of using legal avenues for land back are tempered by the knowledge that these strategies might be more permanent than other strategies

Additionally, several participants expressed that land purchase is an efficient land back strategy. Community purchase of Molokai Ranch was the most frequently referenced strategy in this category, but purchase by Maui County and by the Department of Hawaiian Homelands (DHHL) were also mentioned. This differentiation may be due to the fact that county purchase or DHHL purchase could limit some elements of community self-determination. The DHHL, for example, would most likely use the land for housing, which could create power imbalances and limit

the possibilities of community land management. Ultimately, a greater portion of the participants prefer community purchase over purchase by a government entity.

The final notable strategy for land back was to initiate special land designations on Moloka'i. These special land designations include DHHL homesteads, kuleana lands, and "Traditional Cultural Property" (TCP). Per HAR 10-3-30, the Kuleana Homestead Program differs from traditional DHHL homestead projects because it "places responsibility for the development of infrastructure in the hands of beneficiaries in return for availability and early access to un-improved land" (Department of Hawaiian Homelands, 2024). Both DHHL and Kuleana homesteads are applied for and administered through the state of Hawai'i. In contrast, TCPs are defined by federal agencies, such as the U.S. Department of the Interior or the National Parks Service. The designation of TCPs is upheld by the National Historic Preservation Act of 1966, National Environmental Protection Act, and the 36 CFR Part 800 (Bureau of Land Management, u.d.; Smyth, 2009). According to the guidelines outlined by the Department of the Interior, a TCP can be identified using the following steps: (1) Ensure that the entity under consideration is a property, (2) Consider the property's integrity,

(3) Evaluate the property with reference to the National Register Criteria, and (4) Determine whether any of the National Register criteria considerations (36 CFR §60.4) make the property ineligible (Parker & King,1992). For more specifics on criteria for TCPs, please refer to Appendix J. Establishing Moloka'i as a TCP means that federal, federally assisted, and federally licensed projects must consider the islands' status as a TCP before development. Although TCPs can be a useful tool to institutionally recognize the cultural importance of certain places, TCP status cannot legally protect areas from disturbance or damage if the final public interest analysis determines that development is "necessary" (Parker & King, 1992). Although the special land designations outlined above may be preferable to corporate land ownership, none of them would result in truly autonomous community management. For a deeper breakdown of land back strategies, please see Appendix K.

Necessary Values
In addition to outlining four overarching strategies for land back, participants also defined the necessary values required to secure and retain community ownership while maintaining relational practices. In order of how frequently they were discussed, these values were: (1) community

care, (2) collaborative decision-making, (3) cultural fortification, and (4) land stewardship. Regarding the importance of community care, one participant stated:

We go through some hardship to me that I don't like see our people going through for the rest of the time. I hope that someday that we can fix that together, and make Moloka'i what we want Moloka'i to be. Like I said, you don't change Moloka'i, Moloka'i change you. This quote encapsulates the sentiment that many participants expressed: collective well-being should always be prioritized.

Other core experiences of community care shared by participants were capacity building activities such as subsistence training to support other islands in building food sovereignty and fundraising for land back efforts amongst other Indigenous communities. This emphasis on mutual support as a way to strengthen land back efforts is demonstrative of the community's practice of collective power building. Participants also tended to focus on the practice of collective decision-making. This included co-developing decision-making protocols within a core group of trusted decision makers (several other similar points can be found in Appendix L). Although many participants noted the

importance of collaborative decision-making, we found that there was an intricate system of practices and values that community members identified as essential. A more thorough analysis of these decision-making components can be found in the section on decision-making.

In addition to collaborative decision-making as an important land back strategy and overall governance procedure, participants also discussed the importance of Hawaiian culture and land stewardship. Cultural focuses included reviving traditional Hawaiian food, infrastructure, and knowledge systems, healing the collective trauma caused by colonialism, and recognizing Moloka'i as a cultural kīpuka. One participant specifically stated the importance of Moloka'i-based group Hui Alaloa in protecting Kaho'olawe and the revival of the Hokule'a, which "created that Hawaiian renaissance, and if you read Davianna McGregor's writings on cultural kīpuka, kīpuka being like where Hawaiian culture and knowledge was never lost, in a sense. These are places where you can regenerate or reseed areas of Hawaii that have become more colonized." Moloka'i, as a cultural kīpuka, can help reestablish Hawaiian culture across the rest of the Hawaiian archipelago (McGregor, 1996). This sentiment echoes previous participants'

descriptions of Moloka'i helping the other islands and other Indigenous communities. This pairing of land and culture can also be seen within mentions of land stewardship, which included examples such as restoring Maunaloa, building sustainable family gardens, and protecting Molokai Ranch lands from further ecological destruction. All of these actions reinforce aloha 'āina and mālama 'āina, further demonstrating the important interconnection between Hawaiian culture and land stewardship on Moloka'i.

Barriers

While strategies for land back are essential to envisioning the campaign for community ownership of Molokai Ranch, it is important to also consider the associated barriers. Barriers to land back can be divided into two categories: internal barriers that are generated inside of the community, and external barriers that are imposed from outside of the community. Unsurprisingly, the vast majority of the barriers to land back are external, with only one distinctive internal barrier. The internal barrier that participants mentioned was leadership limitations within the community; this encompassed leadership burnout, lack of leadership training, and the lack of small committee leadership to make decisions regarding housing

initiatives once land return is secured. Leadership burnout was caused by capacity limits, such as individual organizers taking on multiple roles and the absence of a team trained to manage the ranch. It is important to note, however, that since these interviews were conducted, the Molokai Heritage Trust has elected a Board of Directors to manage Molokai Ranch once community ownership is established. The other issues – lack of leadership training and the absence of small committee leadership for housing – could likely be addressed through prospective revenue streams and community-designed development generated by land return. For a visual overview of the internal barrier to land back, please see Appendix M.

The main external barriers participants mentioned were (1) political disempowerment, (2) outside interests, (3) financial barriers, and (4) cultural disrespect. Political disempowerment was the most frequently mentioned theme and encompassed the U.S. Military's occupation of Hawai'i, the Office of Hawaiian Affairs stalling environmental negotiations, Moloka'i being designated as part of Maui County rather than its own separate county, government restrictions on gathering rights, and Governor Josh Green's emergency housing order in the wake of the August

2023 fires in Lahaina, Maui. Governor Green's proclamation suspended several state and county laws aimed at land use, historic and cultural preservation, and environmental review in order to encourage fast housing development as a way to address the housing crisis across the state (Yerton, 2023). According to one participant, this emergency order ended the most important institutional tool Kanaka ʻŌiwi have to protect their land from development since cultural assessments allow the Advisory Council on Historic Preservation to prevent the destruction of culturally important sites. Several months after these interviews, all of the legal protections Governor Green had suspended were reinstated (Oshiro, 2023). Although this specific barrier no longer exists, the extreme nature of the emergency order shows how cultural and environmental protections are not guaranteed, even if they are written into law. It is important to note that the reason these protections were reinstated was due to community resistance led by Kanaka ʻŌiwi groups and allied activists, continuing the long tradition of Kanaka ʻŌiwi asserting their right to self-determination.

Participants also noted that outside interests presented a barrier to community ownership and specifically mentioned real estate developers attempting to buy Lahaina lands after the fires, Molokai Ranch being under foreign ownership, and Molokai Ranch making decisions without community consent. Half of the participants in this group talked about outside interests attempting to take advantage of the destruction left by the Lahaina fires. One participant outlined the similarities between Lahaina development and development patterns throughout the rest of Hawaiʻi, stating that "it's the same repetitious thing that they're doing to Hawaiʻi. It's what they say might happen in Lahaina. The people with the money's gonna buy up that land that was just cleared out for some strange reason, guess who's gonna come in and take over Lahaina?" Both Lahaina developers and Molokai Ranch developers have caused displacement and destruction by refusing to support Hawaiian values (Jimenez, 2023). This leads to the third external barrier to land back: cultural disrespect.

One participant spoke directly about both the cultural disrespect in Lahaina and the cultural disrespect in Molokai Ranch development. Regarding Molokai Ranch, the participant stated that there were "decisions made by people who didn't or did not want to understand the importance of aloha ʻāina and Indigenous prioritization of our traditions and

what we're doing, and [developers at Molokai Ranch] were more concerned on economics or financial gain." Similarly, this participant stated that in the aftermath of the Lahaina fires:

You get people who live there and their families died in despair and then you have a Facebook post from some girl who lost her Rolex that she got from her parents who is in there sifting through because that's an important thing for her, right? She cannot understand the depth, right, of devastation.

These instances show the dangers of powerful parties having access to decision making power without understanding Native Hawaiian culture. Money is often at the root of these decision-making processes, which makes the financial barriers to land back especially tangible. These financial barriers were identified as lack of community funds to buy and maintain Molokai Ranch lands. As one participant stated succinctly, "The community has power, but they don't have money." For more information on the external barriers to land back, please see Appendix N.

Decision-Making
During our analysis, our team divided the components of community-identified decision-making into four distinctive categories: (1) Agents, who make the decisions, (2) Process, how those decisions should be made, (3) Barriers to effective decision-making, and how community members discussed (4) Free, Prior, and Informed Consent. Our analysis further broke this framework down to better capture community input.

Agents
Many participants noted that decisions should be made by the community, with some stating this explicitly and others noting that decision-making processes should be inclusive and involve some level of community engagement. That being said, participants overwhelmingly placed less of an emphasis on who should be making these decisions, and instead focused their discussions on the qualities decision-makers and leaders should hold, with an emphasis on (1) Commitment, (2) Deep Ties, (3)Hawaiian Values, and (4) Intergenerational Representation. Most commonly discussed was a shared level of commitment to Moloka'i. This involved a discussion of active participation, deep commitment, and a strong investment in the island. One participant discussed this as a matter of life and death, "If you're not willing to die for what you believe in, then get out of the way."

Process
In our analysis, we focused on decision-making as a general process (Appendix P), but it is important to note that these conversations often intersected with themes of decision-making regarding the land bank of Molokai Ranch. For example:

Everybody else's opinion needs to be put in. Because that land has to give us something. We gotta take care of the land so the land can take care of us. I think that's our number one goal to come together as a community, to find that portal. I think we can. I really think we can. We should be able to.

Another participant said, "There has to be a structure and a plan and a way to make decisions, especially thinking about community ownership."

Further, through analysis of community-identified decision-making processes, it became clear that community members were talking about the decision-making process in distinct ways – some responses broadly described the values that should inform successful decision-making, and some articulated necessary procedural requirements for making these values-based decisions. To capture this distinction, we divided these processes into two key groups: guiding values to inform decisions, and procedural requirements of values-based decision-making.

Guiding Values:
Participants established that a decision-making process should (1) incorporate the community, (2) be transparent, (3) incorporate Hawaiian values, (4) be future-forward, and (5) incorporate healing.

Procedural Components:
Interview participants also offered distinct recommendations for the procedural components needed to make island-wide decisions, including (1)unity, (2) trust-based relationships, (3) consensus building, (4) small group decision-making, (5) governance structures, and (6) structural frameworks.

Barriers
A significant barrier to decision-making identified in participant interviews was the complexity of making community-wide decisions within the context of a colonized system. One participant discussed this barrier at length, illustrating how this complexity could manifest

within "traditional" community engagement practices such as large community meetings or feedback surveys. They recognized the challenge of acting with authentic group integrity when functioning within colonized systems, and another participant discussed the "stuckness" of a colonized mind:

> We get stuck as a people because we so colonized. Our minds have been colonized for so long that we think that we have to have housing, we need to make development, we gotta do this, you know, I don't know, it's just, if we start switching that mindset, then we could start to realize what we all want.

Another barrier to the decision-making process was External forces; many participants shared examples of prior community decision-making protocols that were disrupted by outside interests. One was the discussion of a leadership group put in place that Molokai Ranch interfered with:

We call it ke aupuni Moloka'i, meaning the united leadership, basically, of governance. It fell apart, and that was mostly because the Ranch hijacked it, in my opinion, and [...] [...]. When they didn't get what they wanted, all of a sudden, there was no support anymore, for this governance thing that had been born out of a real community-based process.

Another participant discussed an outside facilitator interfering with community decision-making: "You are the facilitator. You do not make any decisions. You just go along with whatever it says."

Participants also identified burnout as a barrier to community decision-making. For example:

The other thing I've learned is that that process can only be sustained for so long. There's true burnout in the community. I burned out. I'm not the president anymore after two years for O'ahu. And it's because it was a halftime job, like 20 hours a week of meeting planning.

One factor potentially contributing to burnout is the challenge of including border communities in decision-making processes. "The planning process, getting everybody together, also adds a layer of difficulty for everybody," another echoed this in an explanation of the complexity of integrating community input.

Another participant discussed the degradation of cultural values, leading to the prioritization of personal gain over collective empowerment:

> I see a lot of – I see a degradation of cultural values. I see people overfishing or not so much wanting to protect ʻāina. They seem to be some people that – they're willing to lose it all for the immediate gain. For me, it's – sometimes people don't wanna be in your face; they just like to be nice.

Lastly, one participant discussed how the designation of Molokaʻi as part of Maui County could limit the island's decision-making power: "I just keep coming back to Maui County. That's the whole – I think it would be very different if we were our own county." Further details on barriers to decision-making can be found in Appendix Q.

FPIC

Regarding the Kanaka ʻŌiwi right to Free, Prior, and Informed Consent (FPIC), two participants mentioned what we consider to be an internationally recognized, legal concept of FPIC regarding working with outsiders. "We gotta negotiate some terms on how you work with us. That's where the FPIC is more important, I think, or conventionally, in terms of how FPIC is understood. There has to be some kind of reciprocity," as one participant stated.

Participants also described a specialized version of "community FPIC," where community engagement and inclusion provided an opportunity for community consent. One participant stated, "And you, you don't know, you don't need free and prior consent if it was a community itself that created the project and built it. That's built into it." Another participant indicated that this specialized conception of FPIC allowed for acknowledgment of the existing empowerment of Native Hawaiians: "It's not like your typical FPIC. You gotta take Hawaiians from an empowered standpoint, and then how do you have inclusion of those who are truly contributing."

Two participants described instances where FPIC was violated, including once when Molokai Ranch hijacked a community decision-making process and the Maui County government neglected to bring the community into a decision-making process. "The government set parameters and protocol but did not consider people as an important part of the process. This may have been avoided if developers were transparent about what they wanted from the beginning." These themes

are further represented in Appendix R.

Visual Data Assembly

In order to better illustrate the interrelatedness of these components of community decision-making, our team compiled the findings into the cohesive diagram found below in Figure 8. This visual assembly distinguishes each theme by color and also shows connections between themes. A procedural process of core leadership feeds into the values leadership should have. FPIC, as a procedural process, can be used when dealing with the threat of external interest. Small group decision making can be a procedural mechanism for including the community. Having transparency as a guiding value can help to build trust-based relationships.

Figure 8. Mind Map of Decision Making: This visual shows the four distinct themes pulled apart through analysis; Guiding Values, Procedural Requirements, Leadership Characteristics, Barriers, and FPIC. Through additional arrows, this mind map draws connections between these distinct themes.

GEOSPATIAL MATERIALS

Our final deliverables encompass several geospatial materials meant to inform decision-making of land use planning. These include a digitized Molokai Ranch layer, an all inclusive map of the island, maps delineating Moloka'i's native and medicinal plant species, and a StoryMap with interactive features that bring these components together.

Molokai Ranch Layer
The manually digitized polygon layer of Molokai Ranch can serve as an essential geospatial resource for Sust'āinable Molokai's future work. This layer can be seen in Figure 9. Given the absence of this data in publicly available sources, digitization became a top geospatial priority. The layer itself provides a visualization of Molokai Ranch boundaries, but it can also be overlaid with other datasets to provide valuable insights. For example, overlaying the Molokai Ranch layer with land use/cover (LULC) can show the variations between areas within and outside the ranch boundaries, thus, exhibiting how privatization has affected LULC type. Additionally, pairing this layer with the native and medicinal plants maps, as seen in Figure 13, can support community-driven land use decisions.

All Inclusive Map
By integrating different spatial datasets into a single map of Moloka'i, community members can visualize the interactions between land use, environmental factors, and socio-economic dynamics. This map (as seen in Figure 10) can serve as a foundation for evidence-based decision making as it pertains to land management and policy. By identifying
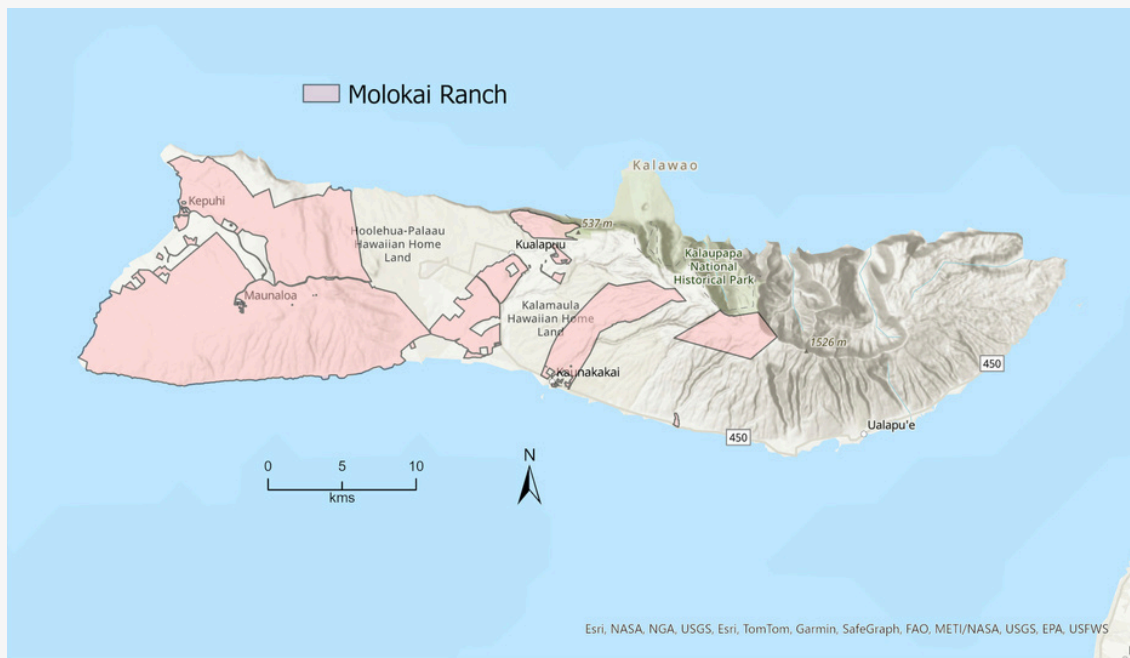
Figure 9. Map of digitized Molokai Ranch boundary layer

opportunities for sustainable land use practices, renewable energy development, and infrastructure improvement, it also provides broader socio-economic benefits for the community, contributing to economic resilience on Molokai. Additionally, by incorporating climate mitigation data, the map supports efforts in climate change adaptation to protect the island's communities and ecosystems.

Native Plants

Biodiversity

The native plants map (Figure 11), showcases the rich biodiversity of Moloka'i and highlights the importance of preserving native vegetation for ecological integrity and cultural significance. As stated above, users can see how access to native plants has been restricted when this map is overlaid with the Molokai Ranch boundary. This map also visualizes how private ownership of the ranch has harmed the abundance of native plants found on the island. By mapping the distribution of native plants that are found only on Moloka'i and indicating their conservation status, this deliverable supports conservation initiatives for land management practices aimed at protecting the island's unique flora and fauna.
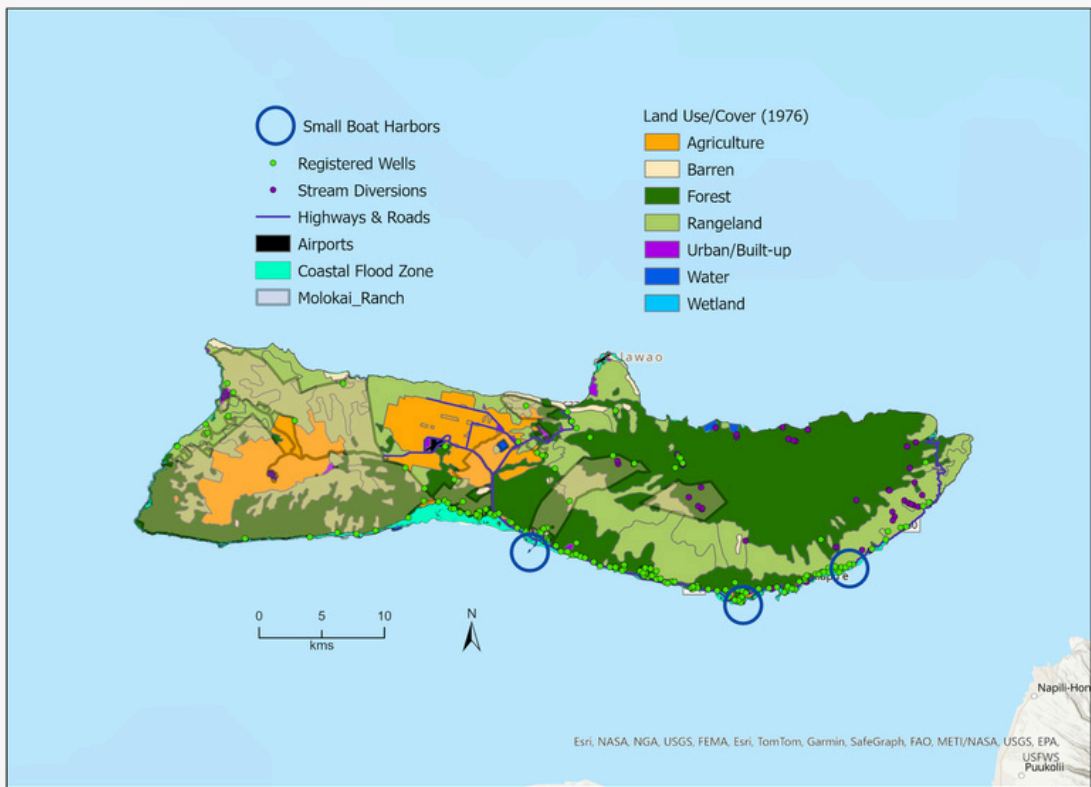
Figure 10. Map of a handful of layers included in the interactive all inclusive map housed in ArcGIS Online

Traditional Medicine

The second native plants map displaying commonly used medicinal plants (Figure 12), serves as a tool for ecological conservation and for understanding the island's cultural heritage in traditional healing practices. Native plant species found on Moloka'i have long been valued by the community for their medical properties and therapeutic uses. Mapping the distribution of these plants provides awareness into their ecological habitats. Similarly to the map of native plants, when the map of medicinal plants is overlaid with the Molokai Ranch Boundary layer, it reveals where on the island medicinal plants are restricted due to privatization of the land. This medicinal map only offers a select number of the many plants that are used in traditional healing, but serves as a representation of how access to traditional medicine is restricted. This spatial understanding of traditional medicine can inform contemporary healthcare initiatives that are aimed at incorporating Indigenous knowledge and resources.
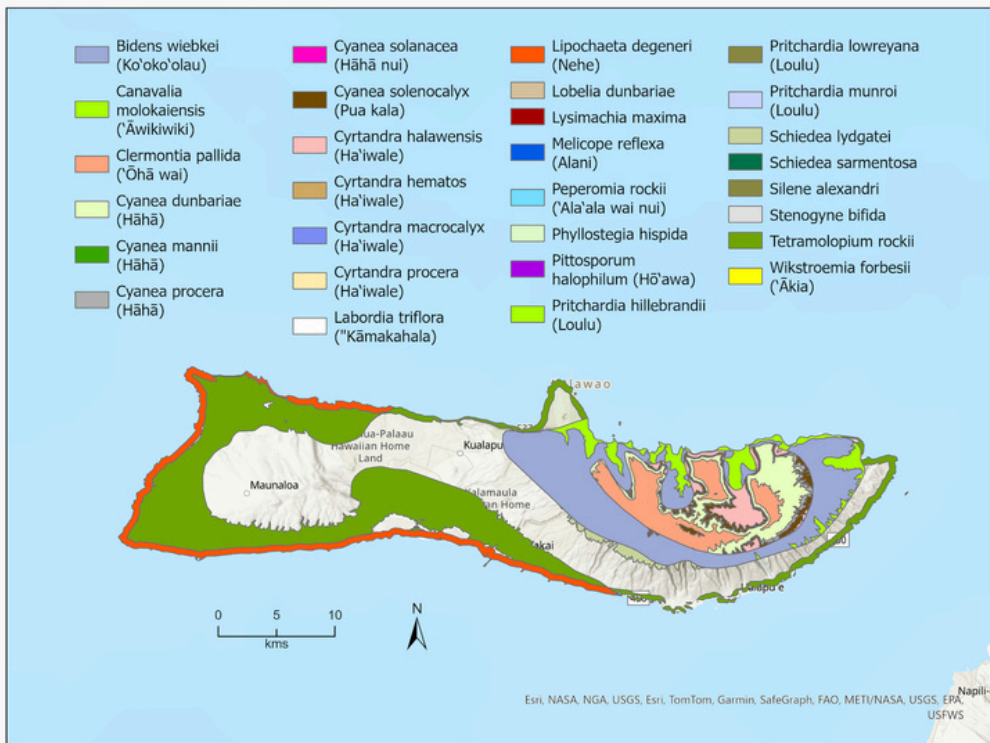
Figure 11. Map of endemic plant species' estimated ranges on Molokai (USGS)
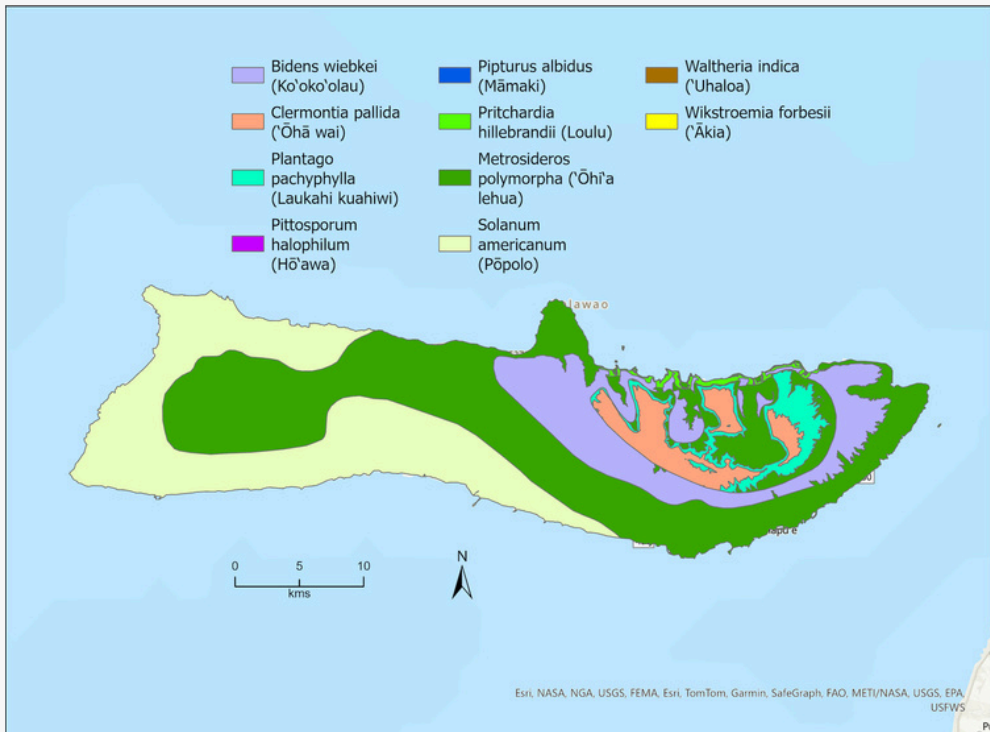
Figure 12. Map of common medicinal plant species found on Molokai (USGS)

Gathering Rights

Medicinal properties aside, both native plant maps (Figures 11 and 12), contribute to the recognition and preservation of traditional Hawaiian gathering rights, which are enshrined in the ancestral connections between Kānaka ʻŌiwi communities and the land. Mapping these native plants works to reaffirm the rights of Kānaka ʻŌiwi to access natural resources for cultural, spiritual and medicinal purposes. Furthermore, the spatial representation of native plants informs resource management for Indigenous sovereignty and environmental stewardship, serving as a powerful tool to support the gathering rights of Kānaka ʻŌiwi.
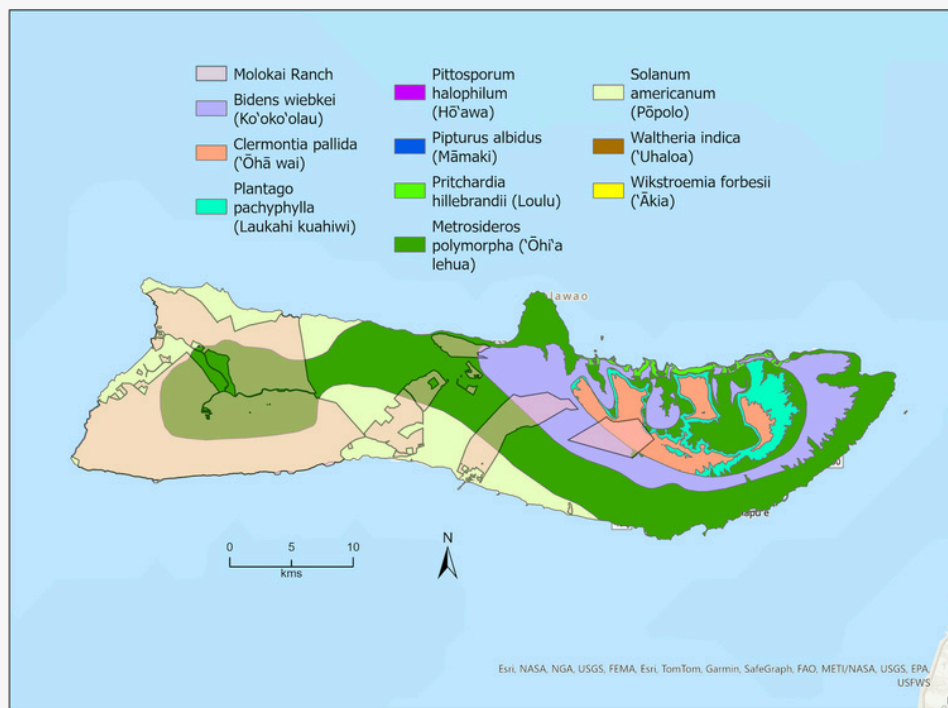
Figure 13. Map of common medicinal plant species found on Molokai overlaid with the digitized Molokai Ranch boundary layer (USGS). Displayed as an example to show how the ranch boundary layer can be used in conjunction with additional geospatial data.

StoryMap

Finally, our StoryMap serves as a comprehensive platform for visualizing and exploring the aspirations for self-determination and resource management on Molokaʻi. By integrating spatial data layers, multimedia content, and interactive features the StoryMap offers a dynamic representation of the historical, cultural and socioeconomic dynamics that shape the efforts and history of self-determination on Molokaʻi.

The StoryMap is organized in 8 sections: an introduction, a brief history of self-determination, an interactive version of the community-informed timeline, land arrangements on the island, Molokai Ranch history, land use on the island, the future of Moloka'i, and where viewers can find additional resources.

The first four tabs help weave together the narrative of community self-determination through a geospatial lens. Using the immersive map tour function, we took a number of events from our community-informed timeline and geographically placed them on the island where they took place. The timeline events are placed as blue markers in Figure 14.

Figure 14. ArcGIS StoryMap Immersive Map Tour function displaying events from the community-informed timeline

We also utilized the media swipe tool. Within this function, we displayed the digitization of the Molokai Ranch boundary layer alongside a map of the ahupua'a system. Here, the user can slide between map views, observing how traditional land systems have changed due to the privatization of land. Figure 15 shows the ahupua'a system (top), the digitized Molokai Ranch boundary layer (middle), and how the maps are displayed with the swipe tool (bottom).

Figure 15. ArcGIS StoryMap Swipe tool displaying ahupua'a system and Molokai Ranch boundary layer

After discussing land division and land use, the narrative dives into how the privatization of Molokai Ranch lands have impacted access and abundance of the island's native resources. Here, the native plants and medicinal plants are displayed. The next section touches on native plants found on Moloka'i. Our team documented 29 native plants and their corresponding spatial layers. These selected plants are found only on Moloka'i and not on any of the other islands. The attribute table of the data shows each plant's scientific name and their family, the common name if applicable, their conservation status, and their native status.

Under the definitions of the Global Conservation Status Ranks, plants labeled "apparently secure" refers to a species that is at fairly low risk of extinction due to its extensive range – but is a possible cause for concern due to local declines, threats or other factors. The "endangered" label refers to species that are in danger of extinction throughout all, or a significant portion, of their range. Plants labeled "vulnerable" are species at moderate risk of extinction due to fairly restricted range along with widespread declines, threats and other factors. "Rare" species have few individuals, making them especially vulnerable to extinction; and plants that are labeled as "extinct" refer to species that are no longer located despite intensive searches and virtually no likelihood of rediscovery (Natureserve, n.d.).
Of the 29 native plants displayed, only 21% are considered to be apparently secure. Of the remaining plants, 52% are considered to be endangered; 3% vulnerable; 21% rare; and 3% extinct. With over 50% of native plant species in danger of extinction and over 20% maintaining an extremely low number of individuals, it is vital to effectively monitor these populations. Setting a foundational framework of geospatial monitoring works toward accomplishing this goal and can act as a catalyst for future geospatial data collection efforts. This may take the form of simple vegetation surveying of the island as well as engaging with community members to understand their own observations of how the lands and populations of native plant species have changed over time. Regardless, visualization of where these at risk populations are distributed across the island is innately an incredibly powerful tool for prolonged ecological conservation.

The geospatial materials we've produced hold significant promise for the self-determination of the Moloka'i community in their campaign for land back. In anticipation of long-term use of these geospatial
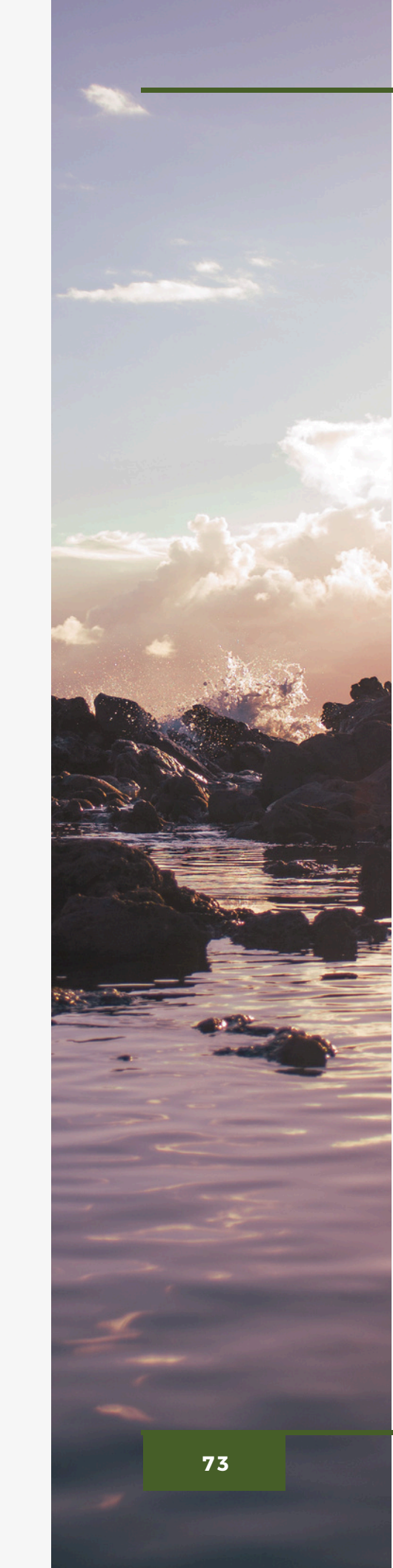
materials, we took proactive measures to ensure accessibility, sustainability, and autonomy for community use. We recognized the importance of ownership and control over these resources and began the process of securing Sust'āinable Molokai their own license for ArcGIS. We applied for ESRI's Nonprofit Program, which offers discounts on their software, training, and content for nonprofits. For Sust'āinable Molokai to have their own license means they could manage, use, and add to the data independently. We also developed comprehensive tutorials and instructional materials aimed at enhancing the community's proficiency in navigating geospatial data and software effectively. These tutorials were designed with a user-friendly approach and emphasized simplicity, clarity, and step-by-step guidance. With these learning resources, the community will have the necessary tools and knowledge to use the geospatial materials for their own initiatives. Ultimately, the StoryMap platform provides a means for community members to share their visions for the future of Moloka'i as it relates to land and resource management; it transforms abstract ideas into tangible plans that are informed by geospatial data. Additionally, our StoryMap can be used to raise awareness and mobilize support for Indigenous and community-led initiatives that are aimed at reclaiming and revitalizing their land. Overall, the StoryMap can be integrated into Moloka'i's advocacy strategies and their work towards self-determination.

CONCLUDING DISCUSSION

DELIVERABLES

These deliverables together (the power map, the timeline, the analysis of landback strategies and barriers, the analysis of decision-making, and the geospatial materials) provide documentation of the rich self-determination and community decision-making processes that already inform and guide community-driven change on Moloka'i. By consolidating this information into a cohesive whole, these deliverables can serve as a central resource to tap into this already existing knowledge, a resource that community members and decision-makers can turn to when developing decision-making structures, advocating for land back, and organizing to build power on Moloka'i. The comprehensive timeline weaves a wealth of community-held knowledge that demonstrates the staggering evidence of self-determination and resistance that has historically "kept Moloka'i Moloka'i," with an undisrupted legacy of community culture and power. The power map visually demonstrates the relationships between individuals and groups and the decision-making power they hold. While many of these relationships are known or intuited within the community, research into each actor informed a framework that can categorize these actors into quadrants of the power map to determine better if an entity can be influenced to support community ownership of Molokai Ranch. Analyzing strategies and barriers to land back helps summarize a prospective path forward, identifying fundamental values to inform the process, potential barriers that could obstruct land back, and a better understanding of the context in which these barriers are situated. The GIS and
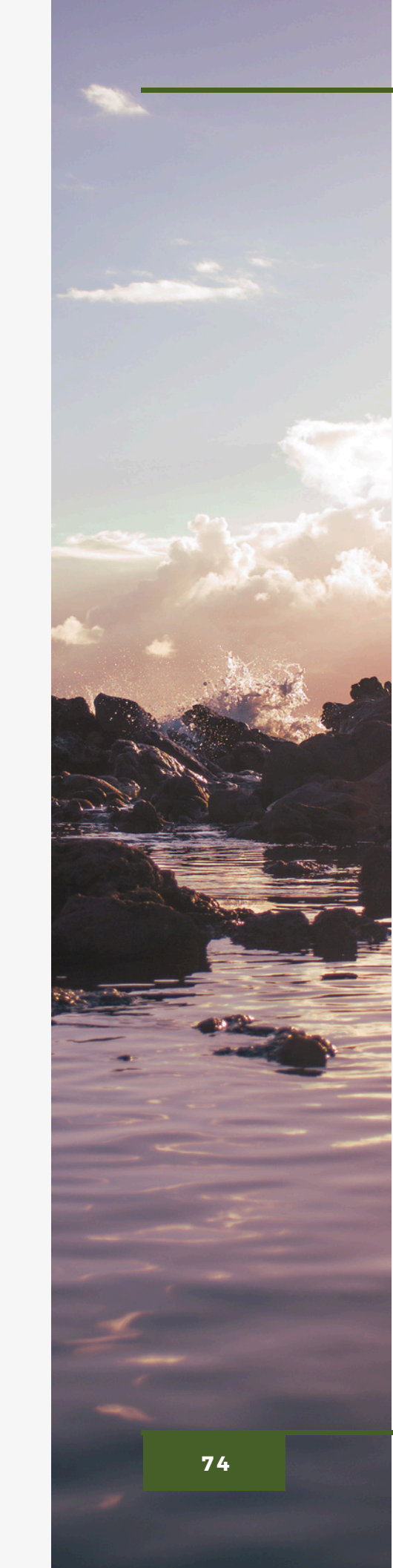
StoryMap components enhance spatial comprehension and resource management strategies that can empower Sust'āinable Molokai to better assert their sovereignty and self-determination. These tools were created with the understanding that they would evolve; however, their current iteration can provide strategic input and support for the organizational campaigns of Sust'āinable Molokai and the Moloka'i community.

LIMITATIONS

Positionality

It is important to acknowledge our team's identities and their inherent effect on our work. Our entire student team is white, and although we are from a variety of places around the world, none of us are from Hawai'i. Five out of the six of us are also American settlers born and raised on stolen Indigenous lands, including those originally stewarded by the Anishinaabeg (specifically Potawatomi and Odawa), Wyandot, Ohlone, and Siwanoy peoples. Given that white American settlers were responsible for the illegal overthrow of the Hawaiian Kingdom and a large part of the continued exploitation of Hawaiian lands and culture, the relationship between white continental Americans and Hawaiians can be fraught with tension. Additionally, we are all student researchers from a predominantly white, colonial university that has been implicated and complicit in both historic and current violence against Indigenous peoples. In addition to direct violence, the University of Michigan (and many other American universities) often partakes in extractive research practices that can harm Indigenous communities and reinforce existing power disparities between Indigenous groups and outside entities. We were aware of this context since we first began work on the project and did our best to remediate harm by following

the lead of Sust'āinable Molokai, the Moloka'i community, and our advisors. Our objective was to provide technical assistance in the form of data gathering, and to support data sovereignty by ensuring that Sust'āinable Molokai would have control of all the information we collected. We were intentional and transparent in how we approached this work, ensuring that we prioritized community consent and feedback over academic deliverables.

Timeframe
Conducting Research

The constraint in time, both in terms of the overall timeframe of the project and the limited days we had to conduct research on the island, presented challenges across both qualitative and geospatial disciplines. Undertaking qualitative research, particularly through interviews, on Moloka'i produced a distinct challenge due to time constraints. Given the island's tight-knit community and cultural context, establishing trust, rapport, and meaningful connections with participants requires significant time. There were multiple instances where community members did not feel comfortable being recorded due to not having a solid relationship with our team. Additionally, coordinating interviews involved traveling to remote or dispersed locations, further exacerbating time limitations. As we conducted open-ended interviews with community members, an additional layer of constraint was placed on our timeframe. As for the geospatial component, this type of research often relies on comprehensive datasets encompassing various spatial and temporal scales, which may not be readily available or accessible for Moloka'i. As our team learned, acquiring and validating such data can be time-intensive. Challenges within the scope of geospatial research are discussed later in this section.

Relationship Building

As mentioned above, an additional and more important challenge of limited time goes beyond our research logistics. It extends to the critical aspect of relationship building within the community of Moloka'i. The historical context of colonization and exploitation of indigenous lands and knowledge underscores the importance of establishing respectful and reciprocal relationships based on trust and mutual understanding. With our timeline restricted to 18 months, with only 3 of those weeks spent on the island, our team was intentional in how we navigated the project's time constraints while also prioritizing relationship building on Moloka'i. We found that doing so demanded a delicate balance between the requirements of our research timeline and the need to foster genuine community partnerships for ethically grounded and culturally relevant research outcomes. Even with careful considerations, the urgency to produce results has the potential to rush interactions, miss opportunities for meaningful dialogue and create insufficient community engagement.

Off-island Work

As our time on the island was limited, we had to complete our research and analysis remotely off-island. Though we are satisfied with our findings, it is possible that the physical detachment from the island compromised the depth and authenticity of our research, potentially leading to an incomplete summary. Though all of our interviews were conducted on the island, communication with our client and community members continued after we returned home. Later conversations were held over Zoom meetings or via email. It is possible that the physical distance hindered the relationship as well as the research process.

Geospatial Data

- *Data Restrictions*

Access to geospatial data is often restricted due to privacy concerns, proprietary interests and governmental regulations. When aggregating existing geospatial data, we found most data was not accessible for public use. Data restrictions such as these can exacerbate existing disparities that are prevalent in access to research and education; in the case of Moloka'i, this can disproportionately affect the community by hindering their efforts in community land ownership and self-determination.

- *Limited Existing Data*

The scarcity of existing geospatial data presented significant challenges for our research endeavors on Moloka'i. As our team experienced, with limited available open source data, it was difficult to conduct comprehensive spatial analyses. The data that does exist is often restricted and not for public use.

- *Licensing and Use*

Shortly after arriving on the island, we learned that Sust'āinable Molokai was not in possession of a GIS license. Additionally, they did not own the necessary PC system capable of running ArcGIS or other competing geospatial applications. Fortunately, as students at the University, we were able to use our student licenses. However, due to Esri's privacy restrictions, our student account has proved difficult to share our findings back with the community. To resolve these issues, our team supported Sust'āinable Molokai in applying to Esri's Nonprofit Program, which grants them low-cost access to Esri software, content, and training.

Funding

In an era of constrained resources and competing priorities, securing adequate financial support has become increasingly difficult. Our team was fortunate to receive funding from our advisor, the university, and multiple grants. Despite the funding we acquired, our project scope narrowed to adhere to budget restraints.

Language Barrier

As no one on our research team identifies as Kānaka 'Ōiwi or speaks Hawaiian, we occasionally experienced challenges with language accessibility. Since English and Hawaiian are both official languages of Moloka'i, most conversations took place in English. In Hawai'i, however, language has the power to connect oneself to their identity. Hawaiian language reminds one of who they are and where they came from. Lacking proficiency in the Hawaiian language serves not only as a barrier for entry but also as a limitation to the understanding and engagement with Hawaiian culture, history, and knowledge.

RECOMMENDATIONS FOR NEXT STEPS

While the future of Moloka'i may be uncertain, the island holds enormous promise in their ongoing efforts to return the land back to its people. It is guaranteed that in the years going forward, their efforts will continue to be guided and fueled by the island's long history of community activism. While building on the momentum of activism, there is additional work that needs to be done for the land to be back in the hands of the community. The materials that we have produced in this report will not only be given back to Sust'āinable Molokai and the community, but it will also be handed down to the next student teams from the University of Michigan. The incoming teams will continue and expand on our work to provide further assistance to Sust'āinable Molokai. Specifically, the teams will work on projects that support food and energy sovereignty on the island. Suggested recommendations are listed on the following page.

In addition, continuing the University's collaboration with Sust'āinable Molokai and the Moloka'i community is essential for fostering a meaningful and lasting relationship rooted in mutual respect and shared goals. Moving forward, it is crucial to prioritize open dialogue and active engagement with community members to understand their needs, concerns, and aspirations regarding the return of their land. Additionally, the university should continue to explore opportunities that provide resources and assistance to aid in their community-led initiatives. By committing to transparent communication, collaborative decision-making, and tangible action, the university can continue to build trust with the Moloka'i community, contributing to their vision for self-determination and sustainable development.

- **Different Timeline Program**

After we compiled the 208 events on the timeline of community self-determination, we realized that the timeline would need to be housed in an interactive format rather than a single visual since looking at all of the events at once would be overwhelming to the user. We elected to use Knight Lab as a storytelling platform for the timeline, because it is a free and easy-to-use program. While there are several upsides to using this program, such as its affordability and efficiency in sorting events into different categories, there are also several shortcomings. Knight Lab has limited design options, tedious processes for uploading images, and cannot sort the same event into multiple categories within the timeline. This system is a good place for the timeline to live currently, but we recommend switching to a different system in order to create a more user-friendly tool. There may also be value in creating different timelines to serve different purposes; for example, a grant application might only need a timeline of community building examples. If these modifications are made, the timeline could be a very useful tool that can be customized to focus on whatever context is most helpful at a given time.

- **Continually Update Power Map**

A key characteristic of conducting a power analysis and creating a power map is that the conditions and motivations surrounding the campaign for community ownership of Molokai Ranch are always changing. Our team recommends that as Sust'āinable Molokai collaborates with the Molokai Heritage Trust and other trusted partners, they reassess and update the placement of actors currently located on the power map. Current actors may come off the map and new actors may be added.

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- **Consulting More Community Members**

Although we received a lot of information from the qualitative interviews, only 17 interviews were conducted in total. These interviews focused on individuals with prominent community roles, but there are plenty of people we did not get to talk to that would have made incredible contributions to this work. Sust'āinable Molokai has a well-established practice of gathering extensive community input, as evidenced by their CERAP report. In addition to consulting more community members to expand this qualitative work, we recommend asking more specific questions about decision-making processes. Some of the information around decision-making we gathered was precise, but a lot of it was more broad. Including more follow-up questions and asking participants for additional detail would be helpful in understanding more about decision-making processes.

- **Distribution of Materials**

Based on conversations with community members, we recommend distributing the timeline both digitally and physically to encourage wider access. Physical distribution would present a challenge due to the number of events, but if the timeline was subdivided as suggested earlier in the recommendations, creating physical versions would be much more manageable. For the digital timeline, a video tour on SM's website about how to navigate it would likely be helpful to users. The digital timeline could be shared via social media or video, the physical timeline could be shared in person at community events, and both versions could be archived in a Moloka'i owned digital library.

- **Geospatial Data Collection**

Due to the lack of data and access to geospatial data of Moloka'i, it will be extremely beneficial for future teams to not only assist in data

collection but to also continue working to gain access to data that is controlled by agencies. To aid in this process, we have created a list of layers that we feel could be of use to Sust'āinable Molokai and the community. The list is divided into layers that exist but are restricted for public use and layers that either do not exist or are out of date.

1. Layers that require access:
   a. Solar Energy Usage | data shows energy usage around the island, particularly for critical and large infrastructure
   b. Public Water Systems of Molokai Ranch | data shows water systems within the boundaries of Molokai Ranch
   c. Moloka'i as a sole source aquifer | data that depicts the aquifer that supplies at least 50% of the drinking water to its service area
   d. Moloka'i Irrigation System service areas
   e. Hawaiian Electric Commercial Facilities | data to spatially catalog energy services on the island
2. Layers for additional data collection:
   a. Areas of soil erosion
   b. Solar farms | data points of where solar farms are currently located on island; can also be areas that are suited for future solar farms
   c. Large landowners

In addition, one of our initial geospatial objectives coming into our work with Sust'āinable Molokai, was the creation of new land use/cover classification (LULC) maps. The LULC data utilized for our own deliverables was over 40 years old and although it provides a useful reference and source of land management insights, with available satellite imagery of higher quality and resolution, a new more accurate LULC map seemed feasible. Although satellite imagery for Moloka'i from 2021 was acquired through NAIP, lack of any substantial training data was a severe limiting factor. As such, we recommend for geospatial data collection of on-the-ground data to help aid future LULC classification maps.

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APPENDIX

APPENDIX A: ANISHINAABE TREATY RIGHTS TIMELINE

APPENDIX B: HUMAN IMPACT PARTNERS' POWER MAP TEMPLATE

APPENDIX C: INTERVIEW PROTOCOL

SM Staff begins introductions:
- Provide an overview of SM's work with landback and community FPIC/decision making
- Introduce UM as resource partners to kāko'o (support) SM and the Moloka'i community
    - Explain connection to Malu & his connection between Moloka'i, SM, and UM students
    - Students are coming with their individual experiences and expertise to support our work, which they will share more about
- Emphasize that students are not in the driver's seat, and all the research is directly supporting SM/community efforts to strengthen self-determination
    - Students are assisting with landback efforts, but more generally assisting with documenting community decision-making processes
    - Student work is being guided and informed by what the community wants; their work can shift depending on what the community needs
- Explain what will happen with the data that is collected during the interviews:
    - Information and data is being collected and documented on behalf of the community
    - Data will be held by SM, but the community will be consistently updated and informed as information is collected and/or changes

UM Student introductions:
- Reiterate that community is in the driver seat
- Share your background: life experiences, relevant work experience, relevant academic experience, why are you part of this project? → WHO ARE YOU, WHY ARE YOU HERE, WHAT ARE YOU DOING? (what will you do when you go back home?)

DO YOU CONSENT TO BEING RECORDED?
ENABLE CLOSED CAPTIONING

Thank you for taking the time to speak with us today. We want you to know that your participation is completely voluntary; you can skip a question if you don't want to answer it, and your identity will always remain confidential.

In recognition of your time, expertise, and knowledge-sharing, we would like to compensate you with an honorarium of $75. So at the end of our conversation we'll ask for your email, phone number, etc.

Your thoughts and ideas will help us support the building of a process for Free, Prior, and Informed Consent (also referred to as FPIC) that the Moloka'i community can use to affirm its sovereignty and self-determination. We know this kind of work isn't new on Moloka'i and that people have been practicing self-determination for generations; now we are trying to understand how the current community is participating in this legacy. We're going to ask you a series of questions to help us understand a timeline of the rich history of community activism on Moloka'i, and how you would like to see community decision-making processes go. As a part of this process, we are gathering information to understand the landscape (e.g., cultural, social, economic, political) for how we can make decision-making by the residents of Moloka'i stronger.

[There are two main questions: Their timeline of engagement in rights, decision- making, development, and/or resistance. And context.]

Do you have any questions for us before we begin? [PAUSE] Feel free to interrupt us at any time if you remember something you want to add or clarify, if we're not being clear, or if we get a fact wrong.

Can you tell us about yourselves, your background? (Can you describe what you see as your role on the island?)

[Show timeline] When you look at this timeline, what planning processes, community development, or kū'e movements have you been a part of on Moloka'i?

If they don't touch on these topics, ask follow up questions:
- How long did that event/process go on for?
- Who was the opposition and what were they like?
- What was the community's position on this issue?
- How was the community split around this issue?
- What do you think the legacy of this movement is today?

Are there any other movements you think we missed? If so, who would you recommend we talk to about them?

As we said before, we are also looking to understand how decision-making happens on Moloka'i. What would you want to know about making decisions about things you care about?

How do you think we should share this timeline and power map as we move forward?

Can we reach back out to you for your help as we continue to gather information on how the community wants to make decisions in the future?

COLLECT EMAIL/PHONE NUMBER & explain that UM will reach out to the payee directly to obtain any personal/banking information. Shortly thereafter a check will be issued. The process may take 2-5 weeks

Specific interview questions for those with intimate knowledge of working conditions on Molokai Ranch when it was operational.

- How have you seen working conditions change for Native Hawaiian ranchers over time?
- How has the ecology of the island changed throughout your life?
- Are there any particular instances of ecological degradation or neglect of land that stand out in your mind? Who was involved?
- While we aim to document the history of Moloka'i self-determination, we are also looking at the flip side- instances where outside entities did wrong by Moloka'i residents, specifically on the ranch. Do you have any instances you would feel comfortable talking about?
- How would you like to see decisions made regarding the Moloka'i Heritage trust moving forward?

APPENDIX D: CODE BOOK

Parent Code	Children Code	Grandchildren Code	Description
Community Decision-Making			
	Agents		
	Process		
Timeline			
	Events	pre-1800s, 1800-1850, 1850-1900, 1900-1950, 1950-2000, 2000-present, undated	
	Deliverables	visuals and publication of timeline	information on how ppl want to receive information an
Place			
	Town	Kaunakakai, Maunaloa, Ho'olehua	
	Region	East end, center, west end, entire island, entire state	
Policy			
	Federal policies		
	State policies		
	County policies		
Law			
	Federal laws		
	State laws/cases		
	County codes/laws		
Actors			
	People	Community leaders, community members	
	Groups	Community groups, non-profits, government agencies, private external interests	
	Misc.		
Rights			
	Rights assertion	Protest, land stewardship, spiritual practices, subsistence	
	Rights breaches	Impeded access, land degradation	
	Social impacts of breaches	Suicide rates, poverty, health and well-being, drug use	
Community Relations			
	Conflict within		
	Mentoring		

APPENDIX E: FIRST DRAFT OF TIMELINE

	Entity	Description
Local Molokai Entities	Molokai Heritage Trust	A community-based non-profit that is in the process of being formed to acquire and provide oversight for management of Molokai Ranch lands.
	Āina Momona	Support work in grassroots communities to restore fragile ecosystems, promote cultural rights and practices, enhance community well-being, and advocate for native rights and social justice.
	Hoʻāhu Energy Cooperative	A community owned and managed energy cooperative with the goal of producing community-owned, affordable, renewable energy for the benefit of members, the community, and environment.
	Native Hawaiian Gathering Rights Association	Created in 2018 to fight for and testify to protect Native Hawaiian rights to subsistence practices.
	Molokai Hunting Club	Community hunting club that helps create platforms for managing, protecting, restoring, and preserving natural and cultural resources.
Maui County Entities	Keani Rawlins-Fernandez	Maui County Council Vice-Chair and holds the Molokai Residency Seat for the Maui County Council since November 2018.
	Molokai Planning Commission	Advises the Mayor, County Council, and Planning Director in matters concerning Molokai planning programs.
HI State Entities	Aha Moku Advisory Committee	Serves in an advisory capacity to the Chairperson of the Board of Land and Natural Resources; based on the concept of ʻahupuaʻa, the traditional land and ocean tenure system of Hawaiʻi.
	Department of Hawaiian Home Lands	Governed by the Hawaiian Homes Commission Act of 1920, which created a Hawaiian Homes Commission to administer certain public lands for homesteads. Native Hawaiians are defined as individuals having at least 50 percent Hawaiian blood. The land trust consists of over 200,000 acres on the islands of Hawaiʻi, Maui, Molokaʻi, Lānaʻi, Oʻahu, and Kauaʻi.
	Office of Hawaiian Affairs	A semi-autonomous state agency responsible for improving the wellbeing of all Native Hawaiians (regardless of blood quantum). Works to improve the wellbeing of Native Hawaiians through advocacy, research, community engagement, land management and the funding of community programs.
US Federal Agencies	Advisory Council on Historic Preservation	An independent federal agency composed of 24 statutorily designated members from federal agencies, preservation organizations, Indian tribes, and expert private citizens. Administers the Requirements of the National Historic Preservation Act
	Environmental Protection Agency	Responsible for the protection of human health and the environment. Provides technical assistance to support recovery planning of public health and infrastructure, such as waste water treatment plants; provides technical assistance for long-term cleanup to minimize public health threats, including environmental sampling and monitoring, site assessment, decontamination, and disposal; provides environmental surveillance.

	Entity	Description
Local Molokai Entities	East Molokai Watershed Partnership	With 14 partners, the East Molokai Watershed Partnership covers approximately 57,000 acres and was formed in 1999 to maintain a healthy watershed that would sustain the future quality and quantity of Molokai's water supply.
	Youtube Gang	A local, grassroots, informal media source that primarily publishes content on Youtube. Videos are produced by Matt Yamashita and Quazifilms Media.
	Molokai Dispatch	The only print newspaper on Moloka'i, serving a population of 7,500. It is operated on the belief that media can inspire positive change and empowerment within small communities.
	Civil Beat (Also known as Honolulu Civil Beat)	A nonprofit news organization known for its investigative and watchdog journalism, in-depth enterprise reporting, and in-depth analysis and commentary that provides a broad view of local issues.
Maui County Entities	Shane Dudoit	Deputy Director of the Maui County Department of Parks and Recreation, who was raised on Moloka'i.
	Maui County Cultural Resource Commission	Advises government agencies on how to fulfill their historic preservation responsibilities. Similar to the State Historic Burial Council, this group advises on how to best protect burial sites.
HI State Entities	State Historic Burial Council	Assists the DLNR and State Historic Preservation Division in building a catalog of Kānaka 'Ōiwi burial sites and makes recommendations to protect those burial sites. Molokai Ranch has been implicated in several disturbances of iwi kūpuna, and community ownership would protect these sites from further destruction.
Private Interests	Kamehameha Schools/Bishop Estate	Kamehameha schools were established by the Princess Bernicce Pauahi Bishop estate and are the largest private landowners in all of Hawai'i. In total, Kamehameha schools own 364,000 acres. A core mission of Kamehameha schools is to support Native Hawaiian well-being, making them a possible ally in the land back campaign for Molokai Ranch.

	Entity	Description
HI State Entities	HI Department of Agriculture	Works to support, enhance, promote, and protect Hawaii's agriculture and aquaculture industries. Aims to create and maximize opportunities for exporting; and facilitate growth of existing and new agricultural commodities and value-added products.
U.S. Federal Entities	Kalaupapa National Historical Park	Located on the Kalaupapa peninsula of Moloka'i. King Kamehameha V sequestered this area as a place for Hansen's disease patients before it was turned into a national park. The future of Kalaupapa National Historical Park is uncertain since the DHHL leases parts of the park but cannot take new homestead applicants for the area.
Private Interests	Hawaiian Electric	The largest electric utilities company in the state, with 95% of residents using their power. They are currently facing over a dozen different lawsuits due to negligence in maintaining infrastructure. Their downed power lines likely caused the 2023 Maui fires.
	Mark Zuckerberg	Billionaire chairman and CEO of Meta who almost purchased Molokai Ranch. Instead, he purchased several thousand acres on Kauai with the intent to build an underground bunker.
	McAfee Family	John McAfee (former Lockheed Martin engineer) founded McAfee Associates Inc., an antivirus software
		company that made him tens of millions of dollars. He purchased a large parcel of oceanfront land on Moloka'i in the early 2000s. He auctioned the land off in 2005, but residents protested the sale due to concerns that a new developer would cause even more harm.
	Prudential Locations	A real estate company selling luxury condos, homes, and land throughout Hawai'i. Founded in 1969.

	Entity	Description
Maui County Entities	Mayor of Maui County	Establishes and directs basic management guidelines for all executive departments of the County and serves as a liaison between the County Council and executive departments and agencies. The seat is currently held by Richard T. Bissen, Jr.
	Maui County Council	A nine-member legislative body of officials who are elected on at-large basis (i.e., all County voters can cast votes for all nine seats), one each from nine residency areas. Each Council member is elected for a two-year term. Has the power to legislate appropriations for County purposes subject to the limitations provided by the Charter of the County of Maui
HI State Entities	HI Land Use Commission	Primary role is to ensure that areas of state concern are addressed and considered in the land use decision-making process. The Commission establishes the district boundaries for the entire State, and acts on petitions for boundary changes submitted by private landowners, developers and State and county agencies. The Commission also acts on requests for special use permits within the Agricultural and Rural Districts. Made up of nine members, who are appointed by the Governor and confirmed by the State Senate. One member is appointed from each of the four counties; five members are appointed at-large.
	HI Governor Josh Green	Hawai'i's Democratic Governor, elected in 2022. Was accused of removing Kānaka 'Ōiwi input when he removed environmental assessment protections in the wake of the Lahaina fires. Also recently waived cultural assessment requirements for development projects, according to an interview participant.
	HI State Historic Preservation Office	Housed within the HI Department of Land and Natural Resources, with a goal to preserve HI's historic identity; architecture, archeology, history & culture.
	HI Department of Land and Natural Resources (DLNR)	Mission is to enhance, protect, conserve and manage Hawaii's unique and limited natural, cultural and historic resources held in public trust for current and future generations. The department's jurisdiction encompasses nearly 1.3 million acres of State lands, beaches, and coastal waters as well as 750 miles of coastline (the fourth longest in the country).
	HI Commission on Water Resource Management	Established in 1987, State entity housed within the DLNR, administers State water code, mission is to protect & manage waters in HI for present and future generations.
U.S. Federal Entities	US Department of Interior	Stated mission is to protect and manage the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, Native Hawaiians, and affiliated Island Communities. Oversees the National Park Service, which operates at Kalaupapa National Historical Park on Moloka'i.
	U.S. Military	Also known as the U.S. Armed Forces. Consists of six service branches: the Army, Marine Corps, Navy, Air Force, Space Force, and Coast Guard. All six branches operate in Hawai'i, on 12 key installations and bases across the state.
Private Interests	Molokai Ranch	Comprises approximately 55,000 acres on Moloka'i, and is owned by GuocoLeisure, a Hong Kong-based international investment company. Molokai Ranch was listed for sale in 2017 at the price of $260 million. Until it shuttered operations in 2008, Molokai Ranch was one of the largest employers on the island.
	Monsanto	A agrochemical and agricultural biotechnology corporation with a location on Moloka'i. Monsanto has been implicated in several environmental protection violations. The company has also pleaded guilty to illegally storing pesticides on Moloka'i, using banned pesticides on Maui, and using mislabeled pesticides on O'ahu.
	Hawaii Executive Collaborative	An exclusive group of Hawai'i-based CEOs and business executives aiming to boost Hawai'i's economic resilience.

Documenting Traditional Cultural Properties: Completing Registration Forms

The following discussion is organized with reference to the National Register of Historic Places Registration Form (NPS 10–900), which must be used in nominating properties to the National Register. To the extent feasible, documentation supporting a request for a determination of eligibility should be organized with reference to, and if possible using, the Registration Form as well. Where the instructions given in National Register Bulletin 16, *Guidelines for Completing National Register of Historic Places Forms*, are sufficient without further discussion, this is indicated.

1. Name of Property

The name given a traditional cultural property by its traditional users should be entered as its **historic name.** Names, inventory reference numbers, and other designations ascribed to the property by others should be entered under **other names/site number.**

2. Location

Follow Bulletin 16, but note discussion of the problem of confidentiality above.

3. Classification

Follow Bulletin 16.

4. State/Federal Agency Certification

Follow Bulletin 16.

5. National Park Service Certification

To be completed by National Register.

6. Function or Use

Follow Bulletin 16.

7. Description

Follow Bulletin 16 as applicable. It may be appropriate to address both visible and non-visible aspects of the property here, as discussed under **General Considerations** above; alternatively, non-visible aspects of the property may be discussed in the statement of significance.

8. Statement of Significance

Follow Bulletin 16, being careful to address significance with sensitivity for the viewpoints of those who ascribe traditional cultural significance to the property.

9. Major Bibliographical References

Follow Bulletin 16. Where oral sources have been employed, append a list of those consulted and identify the locations where field notes, audio or video tapes, or other records of interviews are housed, unless consultants have required that this information be kept confidential; if this is the case, it should be so indicated in the documentation.

10. Geographical Data

Follow Bulletin 16 as applicable, but note the discussion of boundaries and setting under **General Considerations** above. If it is necessary to discuss the setting of the property in detail, this discussion should be appended as accompanying documentation and referenced in this section.

11. Form Prepared By

Follow Bulletin 16.

Accompanying Documentation

Follow Bulletin 16, except that if the group that ascribes cultural significance to the property objects to the inclusion of photographs, photographs need not be included. If photographs are not included, provide a statement explaining the reason for their exclusion.

APPENDIX K: LAND BACK STRATEGIES

Land Back Strategies	Frequency of Theme	Number of Interviewees	Description	Quotes
Building Infrastructure	9	4	Includes engaging young people, creating a land back fund and education for other communities, building internal decision making infrastructure, trade-building skills for residents to be self-reliant, creating energy efficiency/sovereignty, developing partnerships with outside institutions, creating inclusive community organizing engagement, and building facilities to deal with sea-level rise. The most frequent example was creating energy efficiency/ sovereignty (2).	"There's a vacuum, right? And a vacuum is that, oh, okay, well, we're not going through all of this activist stuff, we're not fighting things, not pushing against things, but at the same time, Molokai ranch is for sale. And there's this idle peaceful time on Molokai. That vacuum....It creates a vacuum, and vacuums tend to be filled, right? And so I say precarious because you know in my mind it was just a matter of time before all of these power struggles just keep repeating themselves over and over again. We might be...right now we're kind of on the brink of something totally new, right? And that's creating an internal infrastructure...Growing capacity, growing leadership that can fill that vacuum in time."
Legal Approaches	5	3	Includes eminent domain, making Molokai its own county, and strategically operating under American law to build power. The most frequent example was strategically operating under American law to build power (3).	"If we are going to take a stand for something and we are going to say that we want indigenous rights to be the primary focus, then we are gonna be unafraid of what American law means to us. We are just going to do whatever we need to do and we are going to face the consequences. Or we're going to creatively navigate through this and we're going to figure out how to strategically get our point across while functioning within a colonized system. That's dangerous, but it's practical and it's something that we can actually do with minimal casualties, right?"
Buyback	5	2	Includes community purchase (3), county purchase, DHHL purchase. The most frequent example was community purchase (3).	"Well they are in talks with the county to see what they can purchase or swap, or you know, they are negotiating because some of the lands around the town areas are managed, or leased by the county, but still owned by the ranch. And so those gotta be like kind of my focus, because some of them are already like our parks, our baseball field, you know. So it's already been managed by the county so some of that is in negotiation where the ranch wants them to take ownership but how would that ownership look like."
Special Land Designations	4	3	Includes designating kuleana lands, establishing Molokai as "Traditional Cultural Property" for protection, Homestead area designations. The most frequent example was Homestead area designations (2).	"All of Molokai should be established as "Traditional Cultural Property" (TCP) so it can be protected."

APPENDIX L: NECESSARY VALUES FOR LAND BACK

Necessary Values for Land Back	Frequency of Theme	Number of Interviewees	Description	Quotes
Community Care	12	3	Includes subsistence training to help the other islands, unifying the community to care for the land, creating land back funds for other communities. The most frequent examples were unifying the community to care for the land (9) and subsistence training to help the other islands (2).	"We're gonna send out ripples that's gonna affect the entire globe. It's first gonna ripple throughout the islands, and then you're gonna see, this is how you get land back. This is how you get governance. This is the template you have to use. I said, "Then we gotta help finance that." We gotta create a huge, multi-billion-dollar fund that is gonna continue to grow and give capacity to other indigenous communities to get their land back."
Collaborative Decision-Making	8	7	Includes deliberate & intentional decision making to organize, hand picking the Molokai Land Trust board, building decision-making templates, Molokai Heritage Trust ensuring that remaining Ranch workers still have jobs following land back, housing committee creation following purchase of land, Native Hawaiian Gathering Rights Association weighing in on land use decisions, and arranging a core group of trusted decision makers. The most frequent example was building decision-making templates (2)	"I think it needs to start with a core group that the community trusts. I think it needs to be a group that is fearless in their, you know, we Sustainable is helping to organize what the intent of the group is. What does community purchasing look like? Who gets to make those decisions?"
Cultural Focuses	7	4	Includes reviving Hawaiian food systems, building structures, knowledge, and decision making practices; healing colonial trauma, and Molokai as cultural kipuka. The most frequent example was positioning Molokai as cultural kipuka (2).	"I guess in closing I would just say that, I always sit back and pray that this process is always focused on healing. Because all of us are touched by some kind of trauma. Generational trauma. Immediate everyday trauma, trauma of colonization, like you know just colonial trauma and so in everything that we do and say I always hope that this process will focus on the healing aspects of that. If and when or if it falls apart if it doesn't, however it turns out we're already ahead of the game because every time we operate in everything we do there's always an element of life that we're giving, the aloha."
Land Stewardship	3	2	Includes restoration of Maunaloa, building family gardens, preserving and protecting Molokai Ranch lands	"I dreamed that. You know? We can be that breadbasket of Hawaii. Because we have the land up there that can do it. Maunaloa you have all the pineapple area can be used for farming. There's other things need to be taken care of, but I think when the community come together we can figure that out."

APPENDIX M: INTERNAL LAND BACK BARRIERS

Internal Land Back Barriers	Frequency of Theme	Number of Interviewees	Description	Quotes
Leadership Issues	3	2	Includes lack of small committee leadership for housing after land return, leadership burnout, and lack of leadership training.	""They still haven't—they still don't have a director. Right? Ali, my friend with Shake Energy, she has taken on majority, maybe 50 percent of the work that our director would be doing right now. Liliana, who does our workforce she's probably taking on the other 50 percent. Right? But if that's slowing us down, how are you gonna have a team big enough to manage and operate something as big as the ranch? Right? Regardless of how it is that we do it, the first step is having enough people trained in the right way to take it on."

APPENDIX N: EXTERNAL LAND BACK BARRIERS

External Land Back Barriers	Frequency of Theme	Number of Interviewees	Description	Quotes
Political Disempowerment	6	2	Includes Gov. Green emergency housing order, US military occupation of Hawaiʻi, corrupt military leadership, Molokai being categorized under Maui county, Office of Hawaiian Affairs stalling conservation negotiations, and government restrictions on gathering rights.	Recent Gov. Green emergency "protection" excluded Kānaka from decision making power. Lori believes this ended the most important institutional tool used by Native Hawaiians to protect the land. Green also waved cultural assessments. Normally, the Advisory Council on Historic Preservation would choose whether or not to review a case.
Outside Interests	4	4	Includes developers buying up Lahaina land, developer interest in buying Molokai Ranch, Molokai Ranch being under foreign ownership, Molokai Ranch making decisions without community consent. The most frequent example was developers buying up Lahaina land (2).	"It's the same repetitious thing that they're doing to Hawaii. It's what they say what might happen in Lahaina. The people with the money's gonna buy up that land that was just cleared out for some strange reason, guess who's gonna come in and take over Lahaina?"
Financial Barriers	3	2	Includes the prohibitive cost of caring for road maintenance after land return, and lack of community funds to buy the Ranch. The most frequent example was lack of funds to buy the Ranch (2).	"Yeah, the community has power, but they don't have money."
Cultural Disrespect	2	1	Includes developers not understanding Native Hawaiian cultural values (2).	"The decisions made by people who didn't or did not want to understand the importance of aloha aina and indigenous prioritization of our traditions and what we're doing and were more concerned on economics or financial gain made some really junk decisions that turned this place and the business into something that the community hasn't always been able to stand behind."

APPENDIX O: AGENTS OF DECISION-MAKING

Qualities of Decision Makers	Frequency of Theme	Number of Interviewees	Description	Quotes
Commitment	6	3	Includes a deep commitment to the island, deep roots, knowledge of its ins and outs, and sharing this level of commitment among leaders.	"If you're not willing to die for what you believe in, then get out of the way. How deep are your beliefs? You want to be with people that have that same level of commitment. "
Deep Ties to Molokai	3	3	Three participants discussed how having deep ties to Molokai was important for making decisions that impact the community.	"Yeah, so to me, it's like we're thinking at least three to five generations on Molokai, but there's also people who recently moved to Moloka'i, but they give their whole heart and soul because they fully embrace these principles. What place do we give them? Yeah. How can everybody—is it like an oath? You can kinda feel if a guy has good na'au or not. You wanna be able to use that, allow them to make certain important contributions. [Wind noise 44:32] decision, is these traditional principles and values. "
Hawaiian Values	2	2	Two participants discussed how decision-making is tied to Hawaiian values.	"Moloka'i makes—the majority is Hawaiians. It's not like we're totally oppressed, so how do you make decisions as a community that is multi-ethnic? It's looking at—we gotta think about membership. It's really about how are you contributing to the island. Do you—are you willing to adapt these Hawaiian principles and values? 'Cause that's what drives decision-making on our island. It's not like, can you please follow our Indigenous principles. It's like, "You better, or you're out." That's how people are here.
Multigenerational	1	1	One participant directly discussed the importance of the process incorporating intergenerational leadership.	"Twenty-five, younger. Not younger, but 18, young adults and then from 30s to, I don't know, 50, 40. Yeah, so that you have people that are—yeah. 'Cause I do believe there's a huge generational bias here regardless of which pocket you pick from."

Process Qualities	Frequency of Theme	Number of Interviewees	Description	Quotes
Includes the community	16	10	Includes active listening, and decision-making as a technologically inclusive process.	"Not all of the ideas might be right, but listen to them. Just give them a chance to live. Bring the community in."
Transparent	3	2	Includes transparency as a successful decision making process for many interviewees.	"It has to be absolutely transparent. It has to have—if you put X amount of money into planning, your outreach should be as much or even more, because unless you're doing everything possible to include as many people as possible, as often as possible, the outcomes won't be equitable."
Future-Forward	3	3	This includes looking to the future and future generations when making a decision.	"I work with the future. What are my grandchildren going to do? How are they going to live? What are they going to eat? Will they be involved? My children have to be involved."
Incorporates Hawaiian Values	3	3	Includes the importance of making decisions in alignment with traditional Hawaiian values and incorporating a spiritual component.	If you look at Hawaii and Hawaiian culture, it's values-oriented. I told you certain things we cannot do over here, right? We cannot do something that damages the land permanently or as little as possible or not at all, if at all possible. You know what I mean? That is an inalienable value, that we all share—that we all abide by. I think if you look at this—I mean, if you really wanna get deep, like if somebody says, "Oh, values, that sounds like religion, whatever," just based on survival. You know what I mean? If you want the planet to survive, we need to start becoming aligned to what is healthy for the planet.
Healing	1	1	Includes a healing-based process.	"I always sit back and pray that this process is always focused on healing. Because all of us are touched by some kind of trauma. Generational trauma. Immediate everyday trauma, trauma of colonization, like you know just colonial trauma and so in everything that we do and say I always hope that this process will focus on the healing aspects of that."

Process Component	Frequency of Theme	Number of Interviewees	Description	Quotes
Unity	12	3	The idea of community-wide concerns and "coming together as one" was a theme in multiple interviews.	"We gotta take care of the land, so the land can take care of us. I think that's our number one goal to come together as a community, to find that portal. I think we can. I really think we can. We should be able to."
Governance	8	6	Includes mentions of a core leadership group, governing bodies, area-cased councils, and past configurations of community decision-making leadership, with many connections to the governance of decision-making for ranch lands.	"I think the first thing is we need to have a core group of leadership that the community agrees and puts their trust in. How, why, what the criteria is. You know, I think that takes some conversation, but I think it needs to start with a council or a group of people that the community trusts to make good decisions for them. "
Trust-based relationships	8	4	This includes the need to find a shared vision, work together, rely on strong bonds of helping each other, deal with the issue rather than the individual, and find common ground in a shared enemy. One participant discussed Hoʻoponopono as a process to resolve conflict in relationships.	"That's going to be the success of relationships. Not politically inclined relationships but relationships every day with our people."
Consensus Building	5	3	Participants brought up consensus building in different ways. Two were in favor of a more group consensus-based decision-making process, and one was in favor of voting. Another was in favor of leadership being able to make a decision without a voting mechanism.	"That's kinda how we make decisions anyway. I've rarely seen a vote. People gotta feel good about it."
Small groups	4	2	Includes subcommittees, small conversations, and focus groups within decision-making structures as mechanisms for community engagement.	"In my eyes, it means we are constantly telling stories with the community in small groups and small focus groups."
Decision Making Structure	8	7	Includes accountability structures (2), solid foundational guidelines for how decisions will be made, policies, procedures, and safeguards.	"There has to be a structure, a plan, and a way to make decisions, especially when considering community ownership."
FPIC	7	5	Two participants directly referred to FPIC in their responses, one highlighting the specialized version of FPIC on Molokai, and another discussing the traditional understanding of FPIC. Four other participants alluded to FPIC when discussing decisions made with outsiders.	"It's not like your typical FPIC. You gotta take Hawaiians from an empowered standpoint, and then how do you have inclusion of those who are truly contributing."

Barriers/Threats	Frequency of Theme	Number of Interviewees	Description	Quotes
Colonialism	6	2	Colonization came up in multiple interviews, often in discussions of colonized systems that can impact community decision-making.	"Then the second thing is to decide not to straddle the line. You either are gonna operate in this colonized system to create a plan that works so that we can coexist or even decide to take up arms and operate outside of the system. And that's the only way it's going to work. And if we decide to stay within the confines of this system, then we have to know that we're never going to achieve our 100% goal of getting back everything that we need and want. "
External Interests	2	2	Includes discussion of instances where external interests obstructed community decision making,	"You have to build in safeguards in your structure that nobody can just walk in and say, "I'm takin' it over."
Burnout	2	2	Two participants noted that burnout can be a barrier to decision-making processes.	"The other thing I've learned is that that process can only be sustained for so long. There's true burnout in the community. I burned out. I'm not the president anymore after two years for Oahu. And it's because it was a halftime job, like 20 hours a week of meeting planning."
Logistics	2	2	One interview discussed how community decision-making can be a difficult process. Another discussed the complexity of working across the community.	"The planning process, getting everybody together, also adds a layer of difficulty for everybody"
Molokai as part of Maui County	1	1	One interviewee mentioned that decisions made for Molokai by Maui County change the community decision making process.	"I just keep comin' back to Maui County. That's the whole—I think it would be very different if we were our own county."
Cultural Degradation	1	1	One participant discussed degradation of cultural values as a threat.	" I see a lot of—I see a degradation of cultural values. I see people overfishing or not so much wanting to protect ʻāina. They seem to be some people that—they're willing to lose it all for the immediate gain. For me, it's—sometimes people don't wanna be in your face, they just like to be nice."

APPENDIX Q: BARRIERS TO DECISION-MAKING

FPIC	Frequency of Theme	Number of Interviewees	Description	Quotes
Community FPIC Process	2	2	Includes community FPIC as a specialized version of decision making that already exists within the community.	"It's not like your typical FPIC. You gotta take Hawaiians from an empowered standpoint, and then how do you have inclusion of those who are truly contributing. "
Traditional FPIC Process	3	3	Includes a direct discussion of FPIC by one participant, as well as guidelines for FPIC for outsiders.	"We gotta negotiate some terms in how you work with us. That's where the FPIC is more important, I think, or conventionally, how FPIC is understood. There has to be some kind of reciprocity"
Breach of FPIC	2	2	Includes the discussion of instances where FPIC was breached.	"The government set parameters and protocol, but did not consider people as an important part of the process. This may have been avoided if developers were transparent about what they wanted from the beginning. Developers also wanted to add a small nuclear plant to the area"