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The Historical Context for Sacredness, Title, and Decision Making in Hawai'i: Implications for TMT on Maunakea

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ABSTRACT

This analysis describes the historical background on sacredness, title, and land use decision making in Hawai'i and implications for TMT on Maunakea based on reliable probative evidence, peer-reviewed publications, and binding legal decisions. TMT is sited well away from summit regions where traditional cultural practices occur. Excavation and industrial use of Maunakea occurred under the *kapu* system prior to arrival of Europeans in 1778. The Kingdom of Hawai'i abolished the *kapu* in 1819 and codified separation of church and state. Decision making relevant to the TMT issue before and after the overthrow of the monarchy was ancestry/background-neutral. Title for Maunakea has always rested with the government for the benefit of all citizens. Land use disputes were adjudicated by a government entity; the legal process in the State of Hawaii continues this policy and enshrines further protections for traditional and customary Hawaiian practices.

This record informs recent statements by the Canada Long-Range Plan 2020 (LRP) and the Canadian Astronomical Society (CASCA). When applied to TMT on Maunakea and taken purely at face value, the framework identified in the LRP and recently stated by CASCA is ahistorical, unconstitutional, and does not seem to consider steps taken to achieve free, prior, and informed consent through the process mandated by Hawaii state law which protects traditional and customary rights of Hawaiians. *However*, a request for actions addressing broader issues animating protests against TMT would be more feasible. The LRP's current formulation and CASCA's statement should thus be clarified. The US Decadal Survey 2020 should likewise avoid misunderstandings.

1. INTRODUCTION

The *Thirty Meter Telescope* (TMT) is an optical/infrared telescope planned for construction on Maunakea, an inactive shield volcano on Hawai'i island, supported by the University of Hawai'i and an international consortium that includes partners in the United States and Canada [1]. Plans for a construction start in 2019 were disrupted by protesters, many of whom believe that Maunakea's sacredness precludes any construction. Understandably, the astronomy community seeks support for transformative science that *also* obtains the support of local communities and clearly follows legal procedures for approval [see 2; 3].

Drawing from their interpretation of the United Nation's *Declaration of the Rights of Indigenous Peoples* [4], especially Articles 19 and 26, the *Canada Long-Range Plan 2020* (LRP) describes this support and an appropriate process as "... centering on consent from Indigenous Peoples and traditional title holders" [5]. While perspectives could vary, one possible interpretation could be that Native Hawaiians as a group would have to provide a special and separate legal approval to TMT construction before it could proceed. Another could be that that telescope opponents themselves would have to agree to construction before it could proceed. Yet another could question whether the process in Hawai'i did not carefully weigh traditional and customary rights for Hawaiians at all.

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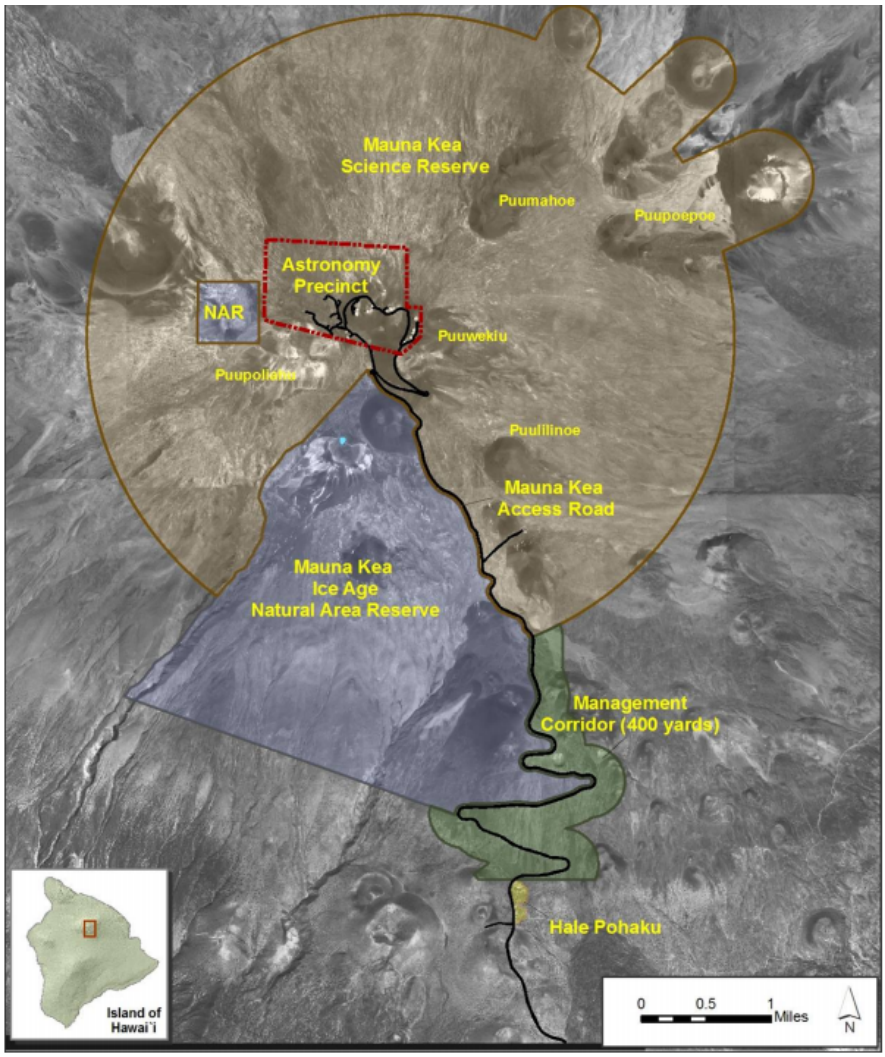

Figure 1. Map of Maunakea from official State of Hawaii government documents (https://dlnr.hawaii.gov/mk/files/2016/10/Ex.-A-009.pdf) . The adze quarries cover much of the area outside the Astronomy Precinct shaded in brown. The TMT site is located near and slightly smaller than the first 'c' in Precinct.

We describe the historical background to these issues in Hawai'i – sacredness, title, and decision making on land use – and their implications for TMT on Maunakea based on reliable probative evidence, peer-reviewed publications, and binding legal opinions in Hawai'i. In particular, we center sources that were written by Hawaiians, in the Hawaiian language, and/or by the government during the Hawaiian Kingdom era.

The record informs aspects of the LRP's formulation and, especially, recent public statement on this issue by the *Canadian Astronomical Society* [6] relevant to 1) their factual accuracy and historical basis, 2) their constitutionality according to US law, 3) the nature of their envisioned decision making framework for Hawai'i, and 4) their consideration of steps taken to achieve free, prior, and informed consent versus the process mandated by Hawaii state law[1].

2. SACREDNESS IN HAWAI'I BEFORE, DURING, AND AFTER THE HAWAIIAN KINGDOM ERA

In ancient Hawai'i (prior to contact with Captain James Cook in 1778), the only well documented system governing personal and religious practices, laws, and regulations was the *kapu* system, a widespread system of Polynesian religious beliefs and practices. Hawai'i's version may have been directly influenced by priest, chief (*ali'i*), and navigator Pa'oa who is said to have arrived in Hawai'i from Tahiti sometime in the 12th or 13th century CE [7]. All activities were

[1] We emphasize that the implications of this article do **not** necessarily compel CASCA to endorse a simple resumption to a full construction schedule irrespective of any other steps. Should TMT –as a part of the US ELT Program – be considered for federal funding through the National Science Foundation, additional consultation will be required before project completion as a part of the *National Environmental Protection Act* (NEPA) process. Additional measures – including those only within the power of the federal government – may be helpful. Rather, the article simply requests that foreign institutions not impose an ahistorical, artificial framework for resolving this matter.

governed by the *kapu* religion [7, Chapters 1, 11, 18, 21, 23-24, 25-33, 35]. Thus, any historically-grounded verifiable claims of sacredness prior to 1778, as a solely Hawaiian matter, derive from the *kapu* system.

Archaeological evidence demonstrates that, *while the kapu system was in effect*, Hawaiians utilized Maunakea as a valuable resource for industrial activities for over 500 years until the time of western contact [8; 9]. Hawaiians excavated the upper slopes of Maunakea for stone of exceptional quality to make tools. As described by Hawaiian cultural practitioner and master navigator Kalepa Baybayan during the TMT contested case hearing, "[t]hey ... shaped the environment by quarrying rock, left behind evidence of their work, and took materials off the mountain to serve their communities, within the presence and with full consent of their gods." [9; 10]. This adze quarry complex covers an area over 900 times the size of the permitted TMT site, which itself is small compared to the entire astronomy precinct [Figure 1; 9].

Hawaiians overthrew the *kapu* system in 1819 by themselves, *before* the arrival of American missionaries and without the support of western powers like Great Britain, France, or the United States. On October 4, 1819, Kamehameha II, who became king after the death of his father Kamehameha I (the founder of the Hawaiian Kingdom), ate dinner with Queen Kaʻahumanu, Kamehameha I's favored wife, and Queen Keōpūolani, the mother of Kamehameha II. The prohibition on men and women eating together, the *ʻai kapu*, was one of the most ancient kapus or prohibitions: the penalty for its violation was death. Violating the *ʻai kapu* at a public dinner, as Kamehameha II did, was a clear signal that the kapu system was abolished given Kamehameha II's status as King, Kahamumanu's status as Queen Regent, and Keōpūolani's status as Queen. The guests at the dinner cried out "*ʻai noa!*" (free eating). Afterwards, Kamehameha II – with the support of his high priest Hewahewa – ordered the destruction of the ancient *heiau* temples [7, Chapter 11][11, Chapter 10] [12].

After the breaking of the *kapu*, a brief civil war then broke out, with Kamehameha I's nephew, Kekuaokalani, opposing. Kekuaokalani's forces were defeated by Kamehameha II's at Kuamoʻo [12]. The victory by Kamehameha II's forces established, as a matter of Hawaiian political history, that no Hawaiian could impose *kapu* prohibitions on another ever again.

The Hawaiian Kingdom issued binding Constitutions in 1840, 1852, 1864, and 1887. Each constitution explicitly granted all citizens freedom of religion "according to the dictates of their own consciences", not according to an official state-authorized religious organization [13; 14; 15; 16]. The 1852, 1864, and 1887 constitutions further clarified that religious freedoms are protected, so long as they do not interfere with "the peace and safety of [the Hawaiian] Kingdom".

The public-facing beliefs of the *moʻi* (monarchs) of the Hawaiian Kingdom from Kamehameha II onwards provided no evidence that the *kapu* system or corpus of traditional (i.e. pre-western contact) religious beliefs were considered normative, including any surrounding Maunakea. Successors to Kamehameha II were either members of the Congregational Church or Church of Hawaiʻi (Anglican). The last monarch of Hawaiʻi, Queen Liliʻoukalani, was a particularly devout Protestant Christian whose autobiography contains a vivid description of and affinity with Mauna Loa and the crater lake of Kilauea but no similar focus on (or even mention of) Maunakea [17, Chapter 11].

Irrespective of the *kapu* system governing personal conduct, actual beliefs and practices of the *makaʻainana* (i.e. commoners) and *aliʻi* (nobles) prior to European contact regarding deities varied wildly [e.g. see 7, Chapter 23]: individual beliefs and practices were not necessarily representative of Hawaiians as a whole. Major deities common to Hawaiians regardless of class were *Kanaloa* (ocean), *Kāne* (sky), *Kū* (war), and *Lono* (fertility); *Lau-huki* and *Laʻa-hana* were worshipped only by women. As detailed by Hawaiian historian David Malo in *Hawaiian Antiquities*, some of the gods one idolized and worshipped depended on one's occupation (e.g. those who made canoes vs. fisherman); some gods were worshipped by the *makaʻainana* but not the *aliʻi* and vice versa. Some had no god at all (atheists or *aia*). Scattered pre-western religious practices of the *makaʻainana* remaining after the *kapu* system was overthrown were almost exclusively localized, focusing on *ʻaumākua* (personal, family gods), not public religious ceremonies devoted to gods idolized prior to western contact [18].

Despite the non-uniformity of beliefs and practices across Hawaiʻi prior to and after the *kapu*'s abolition, the historical record does provide ample evidence that *some* parts of the Maunakea summit were used for traditional and customary practices, many of which continue today, supporting the view that at least parts of Maunakea were considered by some individuals to be a sacred landscape [19; 20]. The record shows that Hawaiians have traditionally brought *piko* (umbilical cord) to Lake Waiau (southwest portion of summit) or buried on top of various *puʻu* (cinder cones). Organizations such as the *Royal Order of Kamehameha I* have constructed *lele* (sacrificial alter or stand) on the

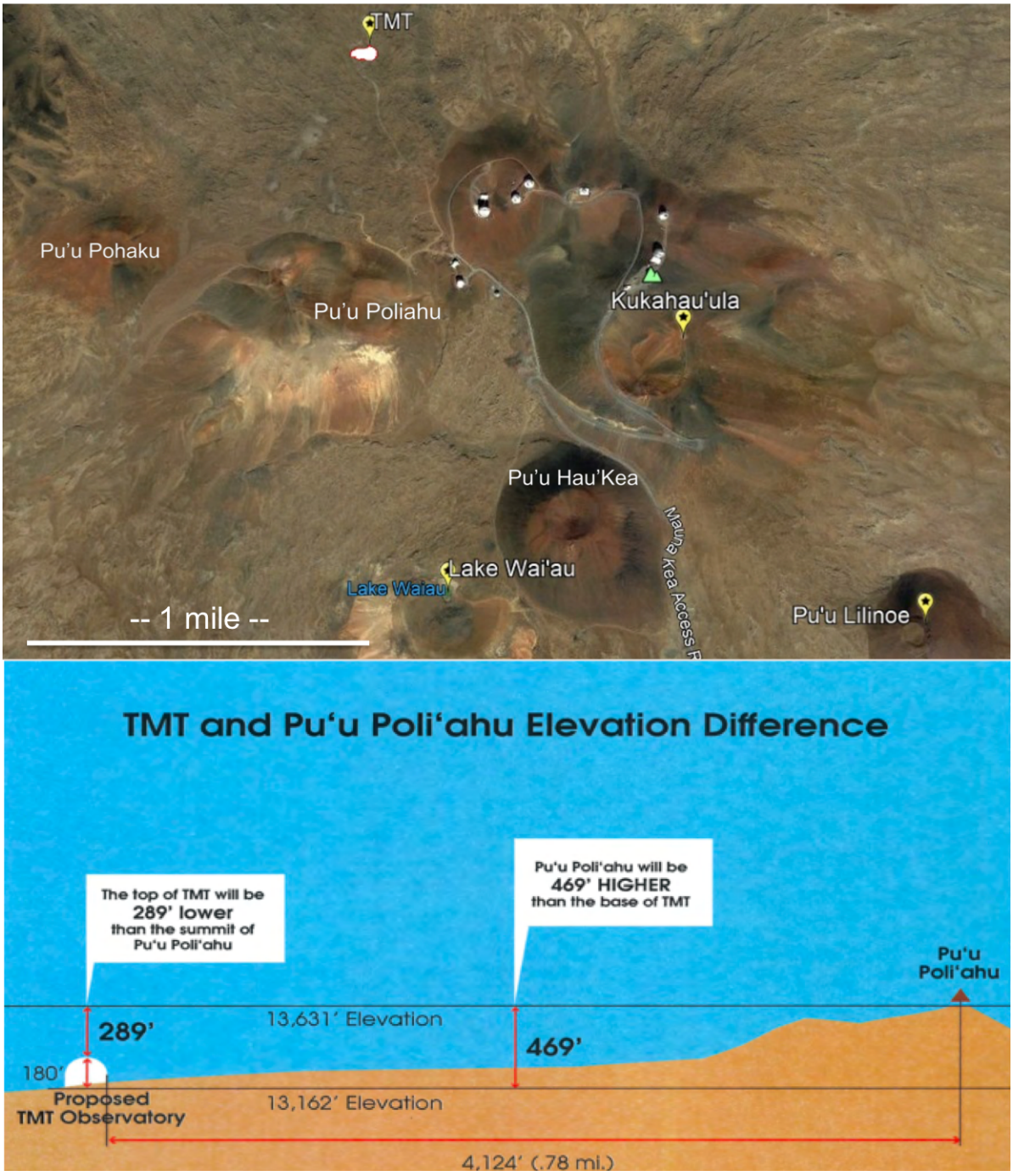

Figure 2. (Top) Satellite image of the Maunakea summit area focused on the Astronomy Precinct (source: Google Earth. TMT is well away from cultural practice areas on Maunakea: Pu'u Poli'ahu (0.78 mi), Lake Waiau (1.42 mi), Pu'u Weiku (1.16 mi), and Pu'u Lilinoe (2.02 mi). TMT will not be visible from culturally sensitive sites the summit of Kukahau'ula, Pu'u Lilinoe, and Lake Waiau. (Bottom) TMT cannot interfere with the viewplane to Haleakalā or the setting of the sun at Pu'u Poli'ahu. (from Exhibit C-20) in the TMT contested case hearing.

summit near the current telescopes. Others have constructed *ahu* (altar or shrine for ceremonial purposes) at various places on the summit. Practices devoted to snow goddess *Poli'ahu* have been longstanding [20; 21][2].

However, the record shows that TMT itself will not impact these long-standing practices (Figure 2) [9]. The TMT site has not historically been used for traditional or customary practices – e.g. building of ahus, depositing of *piko* – and has not been used by current practitioners for such practices. Furthermore, TMT cannot block viewplanes associated with cultural practices elsewhere and is not visible from the most culturally sensitive sites such as Lake Waiau. As a result of its consultation with cultural practitioners, TMT incorporated other steps, including being a zero-waste facility and selecting the observatory's appearance to blend in with its surroundings as much as possible.

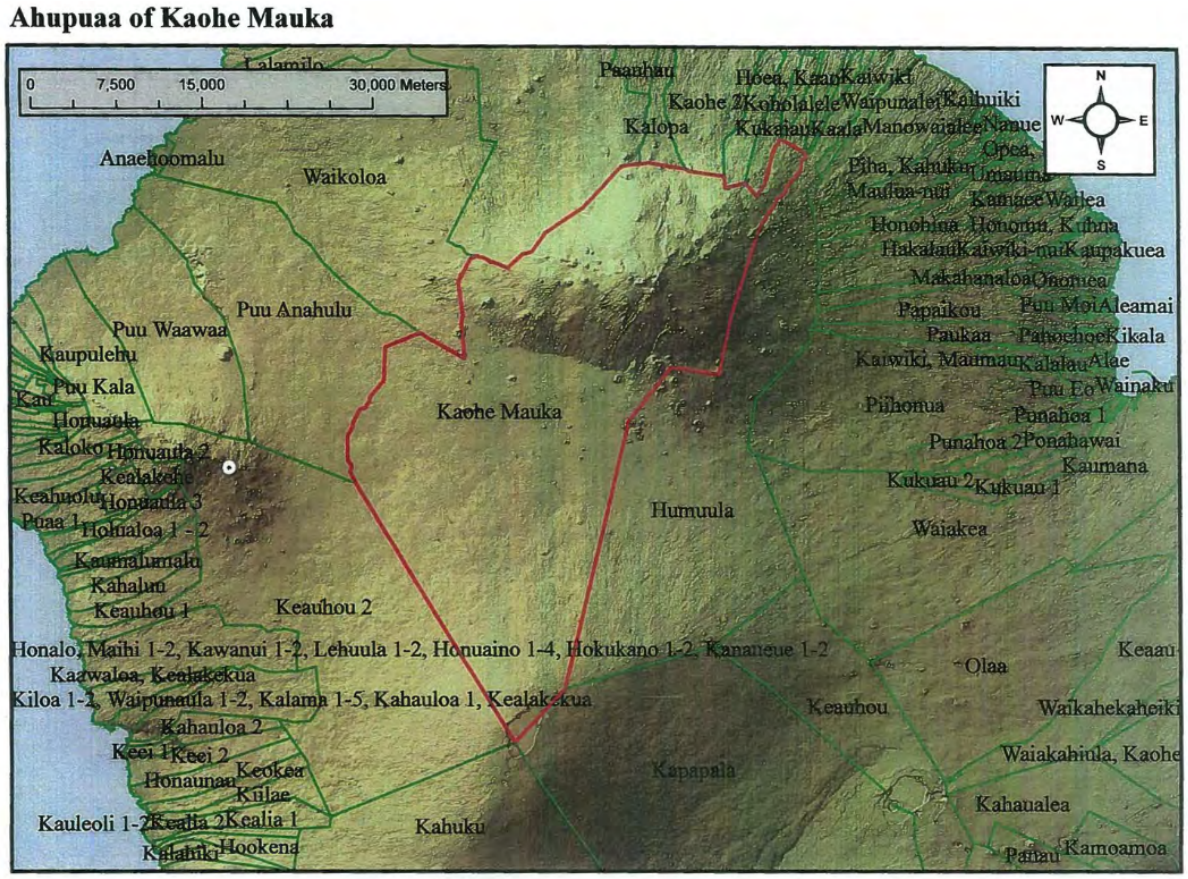

Figure 3. Land division map from the Office of Conservation and Coastal Lands for the State of Hawaii as listed as page 1 of Exhibit A-008 in the *Thirty Meter Telescope* contested case hearing. The Maunakea summit lies within the Kaohe Mauka (mountain) land division, which is Government Land.

3. HISTORICAL OWNERSHIP OF MAUNAKEA

Pre-western contact Hawai'i followed a feudal system of land tenure, where the *mo'i* (kings) were supreme owners of all the land. In different divisions such as *ahupua'a*, the chiefs and *konohiki* managed and the *maka'ainana* tended this land [7; 23]. The 1840 Constitution affirmed that all the land in Hawai'i belongs to the reigning monarch[13]. However, in 1848, the *Great Mahele* (great land division) abolished this system, dividing the land into three categories: that reserved for the monarchy (Crown Lands)[3], that reserved for the government itself to support public works

[2] Some traditions hold that the name of the mountain itself confers cultural/religious symbolism. The name "Maunakea" is usually translated as "white mountain". An alternate rendering of the name associated with some *mo'olelo* (stories) and *mele* (songs) is "*Ka Mauna A Wākea*" (*lit.* The Mountain of Wākea). Malo describes *Wākea* and spouse *Papahānaumoku* (or *Papa*) as the literal progenitors of the Hawaiian people [7]; *Wākea* is listed first in the geneaology of *mo'i* and described as a man or demi-god [see also 22]. In the *Kumulipo* (Hawaiian chant of creation), *Wākea* and *Papa* are instead described as the Sky Father and Earth Mother, respectively, who are responsible for creating the Hawaiian islands although some scholars (e.g. Beckwith) question their overall centrality in the chant and Maunakea itself is not directly mentioned. The *mele hanau* (birth chant) of Kamehameha III, composed in 1814 (prior to the *kapu*'s abolishment), does give *Wākea* divine attributes and tie him to Maunakea. Otherwise, the earliest written accounts described in Maly (Section III) list the name of mountain simply as "Mauna Kea" or "Mouna Kea", consistent with the "white mountain" interpretation.

[3] Originally, the Crown Lands were considered to be the personal property of the monarch. However, in 1864 the Supreme Court of the Kingdom of Hawai'i clarified that they belong to the office of monarchy [31].

and government interests (Government Lands), and Konohiki lands reserved for the *ali'i* and *konohiki* (who were administrators for the *ahupua'a*)[4].

The responsibilities of the government and intent of use differed with respect to the Crown and Government Lands. The Crown Lands were owned by the monarchy. Since only Hawaiians were *mo'i* and the Crown Lands were seen as held in trust for the *maka'ainana*, some scholars argue that *kanaka maoli* (indigenous Hawaiians) have a "particular linkage" to the Crown Lands. Government Lands were different, "utilized as general Public Lands to support the Government and the *general* population" [23]. Thus even some scholars such as van Dyke who interpret Crown lands as reserved primarily for Native Hawaiians[5] nevertheless concede that "it can be argued that [Government Lands] should continue to be used by successor governments for the same purpose of serving the entire population" (pg. 382).

During the Kingdom era from the *Great Mahele* onwards, the summit of Maunakea was designated as Government lands whose disposition was overseen by the Minister of the Interior [23; 19]. Maly affirms that the Maunakea summit regions above 9,000 ft elevation – where the current observatories and TMT's site are located – are within the Kaohe *ahupua'a* categorized as Government Land, whereas (eastern) parts of the Maunakea upper slopes sit on Crown Lands (pg. 280). The current land division roughly follows these boundaries (Figure 2).

Prior to 1850, the *maka'ainana* could cultivate land on which they lived while paying tribute to the *konohiki*. Through the Kuleana Act of 1850, *maka'ainana* could gain fee simple titles to land they occupied and improved. The amended version of the Kuleana Act ensured that *maka'ainana* living on land owned by the chiefs after the Mahele have access for "traditional and customary gathering rights, rights to drinking water and running water, and the right of way" on land in which they live [24]. By 1850, the Government could offer/sell land to others (including citizens and foreigners). This radical re-envisioning of land use claims was adjudicated by the Land Commission, a government entity. The process of gaining title then required personal testimonies regarding an applicant's residencies and land use practices and a hearing before the Land Commission. Maly transcribes hundreds of pages of testimony from residents to define prior use of and boundaries for different land divisions. Over a nine year period, the Commission heard nearly 12,000 individual claims and the *Indices of Awards Made By the Board of Commissioners to Quiet Land Titles in the Hawaiian Islands* (hereafter, *Indices*) lists these awards in ten volumes [26].

The historical record thoroughly detailed in the Indices and Maly provides numerous examples of *maka'ainana* seeking to claim title to lands throughout Hawai'i. However, it **provides no evidence during the Kingdom era of one group defined purely by ethnicity or religious group as traditional title holders of the Maunakea summit**. Ownership remained with the government. The only traditional lessees on record were ranchers whose focus was grazing land at elevations well below the summit[19, at 370-372,420-421][6]; the *Indices* shows only one *maka'ainana* title within Kaohe *ahupua'a*, which focused on a 7-acre plot at low elevations for crop cultivation (e.g. coffee, taro). Maly reports no other lessees to the summit of Maunakea prior to 1893. It remained unsold Government Lands.

After the overthrow of the monarchy in 1893, Crown and Government lands were incorporated into "Public Lands" by the Republic of Hawai'i [23, at 192]. Title to Maunakea was transferred to the US federal government after annexation in 1898 under the Newlands Resolution, which stated that Public Lands (the former Crown and Government Lands) shall be used "for the benefit of the inhabitants of the Hawaiian Islands for educational and other public purposes". Ownership of the former Crown and Government Lands were then transferred to the state of Hawaii in 1959 under the Admissions Act "as a public trust to promote various public purposes"[32]. Article XII, Section 4 of the Hawaii State Constitution clarifies that the beneficiaries of this trust includes the general public.

In all cases, the traditional title holders of the Maunakea summit were successive governments who were mandated to use this land for the benefit of the *general* public. The unanimous United States Supreme Court decision in *State of Hawaii v. Office of Hawaiian Affairs* (2009) tacitly upheld this interpretation, affirming that the State holds an unclouded title to these lands [32] (see also acknowledgement of this position cited in van Dyke, referencing *Delima*

[4] We acknowledge that the *Great Mahele* itself is controversial. Kamehameha III likely advocated for it as an insurance policy against *maka'ainana* completely losing land rights in case of conquest from Western powers. This outcome was considered a possibility by the 1840s: e.g. see the Paulet Affair in 1843, where the British Navy occupied Hawai'i, briefly coercing a cessation of Hawai'i and creating a new government, until military and diplomatic intervention by the United States helped restore sovereignty. Its practical consequence is that non-Hawaiians owned a significantly greater proportion of land in the Kingdom of Hawai'i than Hawaiians by 1890[23]. However, even from this skeptical stance, Maunakea cannot be seen as yet another land tract wrested away from the *maka'ainana* by foreigners due to new land use rules since the land title always remained with the government.

[5] This interpretation may conflict with the 1900 Organic Act and, more importantly, Hawaiian Kingdom law, which by the mid 1840s clearly allowed non-Hawaiians to be considered as native subjects with equal rights. Early statute laws stated that "all persons born within the jurisdiction of this kingdom, whether of alien foreigners of naturalized or of native parents ... shall be deemed to owe native allegiance to His Majesty ..." and "... shall be amenable to the laws of this kingdom as *native subjects*"[27; 25]. The Kingdom of Hawai'i Supreme Court upheld this interpretation in *Naone v. Thurston* (1856)[28]. The 1859 civil code further clarifies: "Every foreigner so naturalized, shall be deemed to all intents and purposes a native of the Hawaiian Islands ..." and "...shall be entitled to all the rights, privileges and immunities of an Hawaiian subject."[29]. Regardless of interpretation, the intent of the Crown Lands is less relevant for the Maunakea summit, since the summit was designated as Government Lands.

[6] An Australian rancher (Francis Spencer) acquiring leased land between Maunakea and Mauna Loa. In 1891, The Humuula Sheep Station Company and Samuel Parker (of Parker Ranch) both leased land on Maunakea partially overlapping with the summit regions.

v. Bidwell[33] *Texas v. White*[34]). The Supreme Court of the State of Hawaii in *State v. Kaulia* "reaffirms that '[w]hatever may be said of the lawfulness' of its origins, 'the State of Hawaii ... is now a lawful government"[35][7][8].

4. DECISION MAKING DURING THE HAWAIIAN KINGDOM ERA

The united political entity known as "Hawai'i" began life taking key steps to being a multi-ethnic society. Prior to conquest by King Kamehameha I, Hawai'i was a collection of separate Kingdoms[11]. Two of Kamehameha's non-native advisors who aided in his conquest[11], John Young and Isaac Davis, were made into *ali'i* before the archipelago was united as the Kingdom of Hawaii. They married Hawaiian chiefesses and they were subject to the Kapu religions strictures. They remained *ali'i* after the kingdom's establishment and were given power as governors of various islands when Kamehameha was traveling [36; 37]. Young was made governor of the island of Hawai'i. Davis acted as Governor of Oahu. An American, Oliver Holmes, was also made governor of the island of O'ahu in 1810 after Davis' death [25]. Despite not having been born in Hawai'i prior to 1778, these residents were integrated into the Hawaiian political and religious system.

By 1840, the Kingdom of Hawai'i transformed into a constitutional monarchy modeled after Great Britain, granting voting rights and citizenship regardless of background [25], and instituting a popularly-elected legislature (the House of Commons) to pass laws. Hawaiian Kingdom statute law promulgated in 1846 and then in 1859 as well as Hawai'i Supreme Court decisions clearly considered anyone born in Hawai'i as well as foreign, naturalized citizens to be *native* subjects [27; 28; 29].

Non-Hawaiians were allowed to hold positions of power and decision making as equals (e.g. judicial appointments, elected members of the legislature). For instance, many justices appointed by the reigning Kings to the Hawai'i Supreme Court were in whole or in part from American or European background. Aside from a brief interval where those of Asian ancestry were disenfranchised through discriminatory language and treaty requirements (1887-1894)[9], a race-neutral system of governance defined the Kingdom era from the mid 1840's onward.

Successive Hawaiian Kingdom constitutions codified a background-neutral approach for decision making [25]. The first (1840) constitution had no racial restrictions on voting or representation [13]. The second (1850) constitution likewise had no racial requirements for voting, election to the house of representatives, or requirements for Hawaiian-only consent for laws passed [14] (see articles 73, 76, 77, and 78). The Government itself owned Government Lands. Government Lands could be sold, but otherwise decisions about how such land was to be used rested in the government – the monarchy, the legislature, or another government agency like the Land Commission – and not in an individual or specific group [25; 31]. While the reigning monarch historically was always full Hawaiian, John Young's half-Hawaiian son Keoni Ana acted as the first Kuhina Nui, a special counselor who could veto the actions of the King. Members of the legislature and the Land Commission included both Hawaiians and non Hawaiians. Even the history of the monarchy could have turned out differently. Queen Emma, widow of Kamehameha IV, was the granddaughter of John Young (Englishman and advisor to Kamehameha I). After Kamehameha IV died (1874), she ran for royal election but was defeated by King David Kalākaua.

5. CONTEMPORARY LAND USE LAW, DECISION MAKING IN THE STATE OF HAWAII, AND FEDERAL GUIDELINES

TMT faced and successfully completed a drawn out, legal steeplechase in order to obtain a permit to construct an observatory on Maunakea. In order to obtain a permit, TMT had to demonstrate that rights outlined for Native Hawaiians in the State of Hawaii Constitution and subsequent Hawaii Supreme Court cases would not be violated and that it would not cause a substantial adverse impact to traditional and customary practices. We focus separately on the mechanics of the process followed, including approval/consent obtained from various organizations, the specific legal standards used to evaluate the observatory's permit, and federal guidelines on decision making.

5.1. *The Process*

[7] Contemporary debates on land rights in Hawai'i for Native Hawaiians are often cast within the context of sovereignty and self determination. Some recent scholars – van Dyke, for example – argue passionately that the Crown lands are tracts that should form the basis for a future Hawaiian Nation, a federally-recognized entity separate from the state of Hawaii with a government-to-government relationship with the United States. The authors of this work represent diverse perspectives on this matter, from preservation of the status quo to federal recognition to possible secession and independence from the United States. However, they agree on the historical basis for title for the Maunakea summit rests with whichever government holding title to the summit is in power, currently the State of Hawaii. Thus, the facts presented in this work describing *past* title are independent of each author's preferred *future* political arrangement for Hawai'i.

[8] These conclusions do **not** in any way provide an excuse or justification for the overthrow of the Hawaiian monarchy in 1893 or the annexation of Hawaii by the United States on moral grounds. As evidenced by the Ku'e petitions, annexation faced significant public opposition from many Hawaiians [30]: some non-Hawaiians were also in opposition [23].

[9] This disenfranchisement resulted from the 1887 Constitution, also known as the "Bayonet Constitution" signed by King Kalākaua. As it was signed under coercion, the Bayonet Constitution is viewed as suspect and its disenfranchisement of those from Asian ancestry – who were by 1893 the majority group in Hawaii – is an aberration [25].

Land use decisions in the State of Hawaii relevant to TMT require a Conservation District Use Permit application (CDUA) to the State's *Board of Land and Natural Resources* (BLNR). To help evaluate the CDUA and render an informed land board decision, TMT was required by State law to obtain an Environmental Impact Statement (EIS). Key community components of the EIS process included public scoping meetings through Hawai'i island to freely inform community members of the project specifics prior to a permit application and solicit input on the project. Hawaiians with cultural practices on Maunakea, including those who had publicly opposed astronomy development in the past, were deliberately sought out for consultation. The project was required to respond to *every single* written public comment obtained as a consequence of the EIS process [38](Volume 2); it identified mitigation measures to address community concerns. The 2000+ page EIS found that TMT would cause *no significant impact* to Maunakea's natural and cultural resources [38].

Prior to submitting a CDUA, various governmental and Hawai'i community entities voiced consent for TMT. The governor of Hawai'i reviewed and approved the findings of TMT's EIS [39]. Concurrently, the *Maunakea Management Board* (MKMB) comprised of local community leaders who advise the University of Hawai'i on management of Maunakea approved the TMT project [40]. During the MKMB discussion on TMT, *Kahu Kū Mauna* – the community based council drawn from the Hawaiian community – had the opportunity to object to the TMT project but declined to do so. In not objecting to TMT, *Kahu Kū Mauna* noted that TMT "has demonstrated intentions of responsible tenancy"[10]. One month later, the University of Hawai'i Board of Regents gave official approval for TMT [41]. The *Office of Hawaiian Affairs* (OHA) unanimously voiced support for TMT in 2009.[11].

Under Hawaii State Law, residents wishing to challenge the potential issuance of a Conservation District Use Permit (CDUP) on the state's conservation district land may request a contested case hearing, a quasi-judicial proceeding consisting of presented evidence and cross-examination and overseen by a hearing's officer (usually a judge) who then recommends a permit decision to BLNR. Residents can further appeal the issuance of a CDUP to the State of Hawaii Circuit Court, Intermediate Court of Appeals, and then the Supreme Court.

TMT went through the CDUP application and appeal process twice. Both times, BLNR issued TMT a CDUP after considering the full contested case hearing record and recommendation of the hearing's officer. Its original permit (issued in 2013) was struck down in 2015 due entirely to a procedural error made by BLNR [42]. TMT regained its permit in 2017 [9], and its permit was upheld by the Hawaii Supreme Court in 2018 [43].

5.2. *The Legal Standard for TMT in Hawai'i*

The Constitution of the State of Hawaii (1978), statute law, and subsequent Hawaii Supreme Court decisions enshrine protection for traditional and customary rights for Hawaiians and define the strict criteria under which TMT gained an approved construction permit.

Article XII, Section 7 of the Hawaii State Constitution declares that the "[s]tate reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by *ahupua'a* tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights." The 1992 *Pele Defense Fund* Hawaii Supreme Court decision held that these rights may extend beyond the *ahupua'a* where a Native Hawaiian resides to regions outside "where they have been customarily and traditionally exercised"[24; 44]. The Court's decision in Public Access Shoreline Hawai'i (commonly known as *PASH*) affirmed that all government agencies undertaking or approving development of undeveloped land are required to determine if native Hawaiian gathering rights have been customarily and traditionally practiced on the land in question and explore the possibilities for preserving them [45].

The Court's *Ka Pa'aki* decision provided a stringent framework "to help ensure the enforcement of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development interests" [46]. Specifically, it imposed an affirmative duty on BLNR to determine the following with respect to the TMT project:

1. the identity and scope of valued cultural, historical, or natural resources ... including the extent to which traditional and customary Native Hawaiian rights are exercised in the [TMT project] area,
2. the extent to which those resources - including traditional and customary Native Hawaiian rights - will be affected or impaired,

[10] At the time, *Kahu Kū Mauna* was chaired by Kumu Ed Stevens, a well-known Hawaiian cultural practitioner who had spoken out publicly against astronomy development on Maunakea in the past https://www.latimes.com/archives/la-xpm-2001-mar-18-mn-39418-story.html. Kumu Stevens' support for the *Thirty Meter Telescope is documented in Volume 3 of the TMT EIS.*

[11] OHA changed to "no position" (i.e. effectively neutral) in 2015 after a pressure campaign from TMT opponents.

3. and the feasible action to be taken by the agency to reasonably protect Native Hawaiian rights if they are found to exist.

Article XI, Section 1 of the Hawaii State Constitution holds that all public natural resources, including Maunakea summit land, are held in trust for the state, for the benefit of the people. This section requires a "balancing between the requirements of conservation and protection of public natural resources, on the one hand, and the development and utilization of these resources on the other in a manner consistent with their conservation" [43, pg. 48].

Finally, Hawaii Administrative Rule 13-5-30(c) lists the eight criteria for evaluating the merits of TMT's permit application. For instance, criterion 4 states that the "proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community, or region" [47].

The BLNR decision approving TMT's permit and Hawaii Supreme Court decision upholding the permit issuance describe in depth how TMT's permit is consistent with state constitutional law, properly addresses the *Ka Pa'aki* analysis, is consistent with the Public Trust Doctrine, and satisfies the eight criteria [9; 43][12]. For example, in satisfying *Ka Pa'aki*, BLNR found no Native Hawaiian cultural resources or traditional or customary practices within the TMT project area and found that TMT will not adversely impact cultural resources elsewhere. During the contested case hearing, TMT opponents themselves did not claim any traditional and customary practices on the TMT site.

5.3. *Federal Restrictions on Decision Making in Hawai'i*

An amendment to the Hawaii State Constitution in 1978 created the *Office of Hawaiian Affairs* (OHA), a state agency tasks with administering state resources for the benefit of Hawaiians. Originally, the right to vote in OHA elections was restricted to Native Hawaiians or Hawaiians[13].

However, in *Rice v. Cayetano*[48], the US Supreme Court struck down the race-based voting requirement for OHA because it violated the Fifteenth Amendment to the United States Constitution[14]. Furthermore, in *Arakaki v. State of Hawaii*, the 9th Circuit Court of Appeals affirmed the US District Court's holding held that state laws denying the right of non-Hawaiians to run for office of OHA trustee were unconstitutional racial discrimination violating the Fifteenth Amendments and the Voting Rights Act [49; 25]. The key argument underlying these decisions is under US law that neither OHA (and no other organization focused on Hawaiians) nor Hawaiians as-such function as a *tribe*, which can impose an ancestral restriction on decision making. The US Supreme Court has explained that because tribes on the mainland United States retained some elements of quasi-sovereign authorityrelated to self-governance, a non-indigenous person can lack voting rights in a tribal election because such elections are the internal affair of a quasi-sovereign government predating outside contact and not created by the US federal government or a state government"[48, as quoted in 21]. Hawaii is also different as by design and in practice it was a multi-ethnic, secular nation.

Citing the 1993 Apology Resolution[50], in 2008 the Hawaii Supreme Court held that the state was restricted from transferring publicly held land – Crown land – for private development until the claims of Native Hawaiians had been resolved as a result of a federal reconciliation process[51]. However, in *State of Hawaii v. OHA* the US Supreme Court unanimously overruled the state court's decision, returning decision making power to the state [52].

In summary, there is currently no Hawaiian government that could possibly be granted legally enforceable decision making power with respect to TMT, any other observatory on Maunakea, or any other structure elsewhere on public lands[15]. Such a government would have to be created by the United States. The US Supreme Court further affirms that decision making power for land use rests with the State of Hawaii.

6. IMPLICATIONS FOR TMT ON MAUNAKEA

The record described above corrects what is a skewed understanding of Maunakea's cultural significance and land title and the decision-making process for land use held by some on the mainland. Whether or not Maunakea is/was deemed sacred, excavation and industrial use on Maunakea was historically permitted alongside the *kapu* system. Very early in the Hawaiian Kingdom's history, the *kapu* system was abolished and freedom of religion established,

[12] For instance, these topics are covered in the Hawaii Supreme Court decision on pages 32-42 and 47-62.

[13] Here, Native Hawaiians were defined as "any descendant of not less than one-half part of the races inhabiting the Hawaiian Islands previous to 1778". Hawaiians were defined as any descendant[s] of the aboriginal peoples inhabiting the Hawaiian islands ... in 1778, and which peoples thereafter have continued to reside in Hawaii"

[14] The plaintiff in this case, Harold Rice, was a rancher of European descent whose family had lived in Hawaii since the mid 1800s. The Fifteenth Amendment states that the right to vote "shall not be denied or abridged by the United States or by any State on account of race, color or previous condition of servitude".

[15] See Section V.A in Hanifin [25] for a detailed discussion of significant legal and logistical challenges in creating a Hawaiian government independent of the State of Hawaii that has a government-to-government relationship with the United States.

eliminating the ability of the government or any group within Hawai‘i to impose religious land-use prohibitions on others. The public-facing beliefs of the Hawaiian Kingdom's monarchs provide no evidence of religious beliefs centered around Maunakea that could be considered historically normative for Kingdom subjects. While traditional cultural practices do occur on Maunakea, they do not occur on or near the TMT site. TMT would not interfere with practices elsewhere.

The record described above also clearly shows that the concept of decision making implied in referenced sources contained in the *Canada Long Range Plan 2020* is ahistorical and the sources' implicit identification of Maunakea's traditional title holders is factually incorrect. With one brief exception, voting rights and decision making in the legislature and judiciary were race-neutral. An arm of the government – who represented *all* of the Kingdom of Hawai‘i's citizens, regardless of background – adjudicated land use disputes. The title holders of Maunakea were/are the reigning government itself.

Furthermore, the LRP and CASCA statements does not appear to consider significant steps taken by the State of Hawaii to 1) achieve free, prior, and informed consent through the process mandated by Hawaii state law and 2) safeguard traditional and customary rights for Hawaiians. Going further than what was required during the Kingdom era, the State of Hawaii's approach for land use decisions confers significant deference to traditional practices. In order to obtain approval for a construction permit on Maunakea, TMT had to undergo a decade long legal process, including community consultation and development of mitigation measures. It had to be consistent with enumerated rights in the Hawaii State Constitution. It had an affirmative duty to demonstrate that it did not adversely impact traditional and customary practices. TMT met all of these requirements.

Perhaps most importantly, the LRP and CASCA's statements taken at face value are unworkable. There is no system for obtaining consent from Native Hawaiians as-such, especially one carrying legal force, in the same way Canada or the United States obtains consent for projects from First Nations groups on traditional tribal lands. Whatever the intrinsic merits of a Hawaiian-only decision making process, the US Supreme Court precludes the kind suggested by these statements. Leaders in Hawai‘i representing governmental agencies are elected by popular vote by residents without regard to background, including those whose focus relates to Hawaiians. Exceptions to this framework have been swiftly and decisively struck down by the US Supreme Court.

Hawaiians themselves have diverse and passionate opinions on TMT. OHA, the state agency charged with addressing the concerns of Native Hawaiians, currently has no position on TMT, and supported the project until they were subject to a pressure campaign from telescope opponents based on many factually incorrect statements popular on social media [53; 54; 55]. *Kahu Kū Mauna*, the group of Native Hawaiians established by the University of Hawai‘i to advise on Native Hawaiian cultural matters, did not object to the project. Some non-Hawai‘i residents following media coverage of this issue may believe that proceeding with TMT violates the rights of Hawaiians opposing the project. However, Hawaiian supporters of TMT rightly feel that their rights are violated when opponents are given effective veto power to overturn the results of a free and fair legal process.

The mechanism for Hawaii residents to express their approval/disapproval of TMT or any other similar land use is through the Environmental Impact Statement consultation and contested case hearing processes. Island residents were given extensive opportunities to comment on and object to the project [38]. They were given a full opportunity to challenge the issuance of a permit for TMT before the land board and then appeal a permit before the Hawaii Supreme Court, twice. Residents also elected leaders – Mitch Roth as Hawai‘i County mayor in 2020 and David Ige as governor in 2018 – who expressed support for TMT during the campaign vs. rivals who voiced opposition to the project. In this sense, Hawai‘i's legitimate legal and political systems consented to the TMT project.

Finally, words matter. Besides putting forth an ahistorical and unworkable framework, the LRP and CASCA's statements have an unintended chilling effect, as they effectively contribute to the further marginalization of the voices of the numerous Hawaiian supporters of TMT and astronomy on Maunakea[16],[17]. The social pressure on Hawaiians with respect to TMT is *highly asymmetrical*. For the past decade, supporters of the Thirty Meter Telescope on Hawai‘i, Hawaiian and non Hawaiian alike, have been the targets of violent threats and intimidation by telescope opponents [56; 54]. Residents of Hawai‘i have sat by while the state's leaders fail to prosecute some opponents who block a public highway, desecrate burial sites – placing bones on the TMT site in an attempt to "block" the project – and have left the protest site strewn with trash while damaging rare plants[57; 58; 59]. Former Mayor Harry Kim was found guilty

[16] See, for example, here: https://twitter.com/KalunaHeather/status/1390793841460977666

[17] These statements are particularly difficult for the many *kama‘aina* who work for the observatories and on Maunakea, relying on them for a livelihood

of ethics violations for non-enforcement of the law and TMT's safe, legal access [60; 61]. Hawaiians who support TMT – even including those who are cultural practitioners – are nevertheless frequently harassed as "not real Hawaiians".

Some individual mainland astronomers have unfortunately joined in this marginalization of Hawaiian TMT supporters[18]. Their erasure of Hawaiian viewpoints favoring TMT is offensive. Statements of this kind should be denounced just as an email describing TMT opponents as "hordes" were rightly denounced[62].

The statement from the LRP and CASCA – whose leadership contains no individuals who are Hawaiian or from Hawai'i – can be easily read to imply that the Hawaiian TMT supporters stand "against human rights" (as quoted by the LRP co-chair). The LRP does not provide any documented evidence that they consulted any Hawaiian astronomers or Hawaiian TMT supporters prior to formulating their statements. These statements complicate efforts from within Hawai'i to chart an equitable path forward. The LRP/CASCA statements have already been weaponized by hardline opponents within Hawai'i disinterested in compromise.

However, an alternate reading of these statements leads to far more feasible actions: i.e. if the LRP and CASCA *intended* to mean that they support additional community-informed consultation and a *settlement* or similar actions, addressing broader issues for which TMT has become a symbol for some Hawaiians. As demonstrated in the groundbreaking work by Swanner[63], public opposition to astronomy from the Hawaiian community is a rather modern development. Open cultural claims on Maunakea were largely not made until the 1990s, brought to light as a byproduct of astronomy's consultation with the local community for its management structure (e.g. the 2000 Mauna Kea Science Reserve Master Plan) [63, at 180-203, in particular 187-188]. Any early, prior public concerns about astronomy developement on Maunakea drew from hunters and conservationists primarily worried about land management.

In Hawai'i, the strong perception – supported overwhelmingly in Hawai'i public opinion polls – is that **most opposition to TMT has little to do with the telescope itself or astronomy as such**, and far more to do with socioeconomic injustices and issues such as **land rights (especially Hawaiian homelands), the overthrow of the Hawaiian Kingdom in 1893, and land management on Maunakea and elsewhere** [64]. Land on which the TMT protest encampment has figured heavily into protests on these other issues in the recent past [65]. Stymied by lack of progress on these issues and historical injustices, a segment of the Hawaiian community has an opportunity to be better heard due to media awareness from the TMT protests.

The previous CASCA statement on TMT from 2019 [66] and letter on conflict resolution hosted on the CASCA webpage [67] provides a thoughtful, nuanced discussion of various viewpoints on Maunakea from within Hawaii and discussions of what might be included in an equitable path forward. Instead of imposing a framework from outside, these sources acknowledge that the process moving forward in Hawai'i must be determined by people in Hawai'i and signal a commitment to playing a constructive role in an outcome that is a win-win as much as possible[19].

Considering the above, statements relating to TMT in the LRP and from CASCA should be clarified. Future statements from other organizations such as the US Decadal Survey 2020 should avoid similar misunderstandings.

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[18] For example, mainland astronomers have publicly described Hawaiian TMT supporters as similar to African Americans who appear on conservative media outlets to criticize protests against police brutality https://mahalo136.rssing.com/chan-52129232/all_p1.html. Others – who are not Hawaiian nor have ever lived in Hawai'i – nevertheless have described Hawaiian TMT supporters as "infused with settler-colonialist logics", apparently oblivious to the irony of their statement. Erasure of the Hawaiian community supporting astronomy on Maunakea – including TMT – extends to official documents. For instance, the *Planetary Science and Astrobiology Decadal Survey* paper on "Ethical Exploration and the Role of Planetary Protection in Disrupting Colonial Practices" shoehorns a factually skewed mention of TMT into a discussion on space exploration that erases Hawaiian TMT supporters. This paper's text was retained despite multiple requests that the authors omit or substantially modify these statements due to their marginalizing language.

[19] We reiterate that the implications of this article do **not** necessarily compel CASCA to endorse a simple resumption to a full construction schedule irrespective of any other steps. Should TMT –as a part of the US ELT Program – be considered for federal funding through the National Science Foundation, additional consultation will be required before project completion as a part of the *National Environmental Protection Act* (NEPA) process. Additional measures to achieve some sort of resolution – including those available only within the power of the US federal government – may be helpful. Rather, the article simply requests that foreign institutions not impose an ahistorical, artificial framework for resolving this matter. Colloquially, "let Hawai'i lead".

Honolulu. Mr. King graduated cum laude from University of Hawai'i School of Law in 2013 and clerked for Hawaii Supreme Court Justice Richard Pollack (2013-2014). Mr. King is the Executive Director of Imua TMT, a Native Hawaiian organization advocating for the construction of TMT on Maunakea.

King's sixth great-grandfather, Kalaniho'oulumokuikekai, was killed by Kamehameha I's forces at the Battle of Nu'uanu (1795); his daughter, Mahi, married Oliver Holmes who was appointed by Kamehameha I as Governor of O'ahu. Mr. King's namesake and great-grandfather Samuel Wilder King was first Native Hawaiian appointed as governor of Hawaii and successfully fought against the creation of Japanese internment camps in Hawai'i during World War II. The family of his great-grandmother, Pauline Nāwahineokalai'i Evans, served in the court of Queen Lili'uokalani. Mr. King's grandfather, Samuel Pailthorpe King, was a legendary federal judge who co-authored Broken Trust, a book exposing corruption at the largest Ali'i Trust, Bishop Estate.

Wallace A. Ishibashi Jr. – is a *kānaka maoli* community member from Keaukaha, member of the Royal Order of Kamehameha I, and former East Hawaii commissioner for the Department of Hawaiian Homelands. He is also the cultural monitor on Maunakea, where he is tasked to literally "protect Maunakea". He is a member of *Perpetuating Unique Educational Opportunities* (PUEO), a Hawaiian community organization supportive of science and education on Hawai'i, including astronomy on Maunakea. A cultural practitioner from the lineage of Poli'ahu on Maunakea, Mr. Ishibashi has conducted practices related to his family *'aumakua* on Maunakea.

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All authors sign on to this document in their personal capacity alone.

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