



Customary Rights and Freshwater Ecology in Pluralistic Societies on the Monsoonal Island of Sumba (Eastern Indonesia)

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This article evaluates the ways water is made and unmade on Sumba Island when subjected to tensions between Indigenous and off-island political ecologies. Located in the eastern Indian Ocean, Sumba has a semi-arid, monsoonal climate with an uplifted coral reef geological structure where a spatially and temporally dynamic hydrological system shapes people's access to freshwater. Customary adat societies on the island have histories of struggling to maintain the integrity of their own political ecologies, further increasing the precarity of their access to freshwater. The topic of the research reported on in this paper was determined through collaboration with members of the Kodi community in western Sumba who urged the author to study the problem of water. This article highlights ongoing threats to the further degradation of local societies' rights to control their customary territories and freshwater within them by summarizing the phenomena of water grabbing in Indonesia. Zooming in on three projects that manifest as water grabs, this article finds, respectively, that water grabbing occurs under the guise of forest protection and production, behind the veil of philanthropy, and for economic development with military backing. In all three cases, water grabs take place in the context of a decentralizing nation-state where the ways adat is understood and the ways laws regarding it have been interpreted and enacted have changed through time and have varied between communities, partly in relation to the societies' proximity to centers of colonial and postcolonial power as well as the development of activities in their territories. On Sumba the content of adat and relationships among distinct adat societies evolves on a bioculturally diverse island that is home to numerous Indigenous ethnolinguistic communities. Consequently, people's responses to interventions into their political ecologies vary. More broadly, the context for this study is the intersections of water grabbing and social change during the Reformasi, the post-Suharto era of decentralization in Indonesia.

Keywords: freshwater ecology, water grabbing, adat (customary practices), traditional ecological knowledge, Sumba, decentralization, political ecology



INTRODUCTION: THE GOVERNANCE OF WATER IN PLURAL LEGAL CONTEXTS

Freshwater is made and remade through everyday practices and multiscale processes. Similarly, legitimate and illegitimate authority relative to freshwater are biosocially constructed by multiscale, complex, and sometimes problematic processes. Being socially constructed indicates that legitimacy in the governance, management, and use of freshwater is both collective and subjective. Within every social collective, the existence of multiple subjectivities creates variability in views about authority and power. In today's world, the governance of water is pluralistic at the global scale (Franco et al, 2013) and in the case of Indonesia, also at the national scale (von Benda-Beckmann, 2007). Scaling down, numerous governance regimes impact freshwater tenure and use in regional and local post/neocolonial settings such as on Sumba Island in the Indo-Australian monsoon zone. (Map 1) Interactions within a pluralistic context of water tenure, use, and management impact both the freshwater resources and the people who live closest to them.

Governance at all levels has changed radically in Indonesia since the end of the 20th century as the nation moved out of the 31-year-long (1967–1998) Suharto rulership to the post-Suharto *Reformasi* era (1999–now). As relationships between governmental and nongovernmental entities change, the landscape literally changes as well (cf. Prato, 2018). Encounters between customary governments, the Indonesian state, and international organizations create ecological and social ripple effects in freshwater reservoirs. Of particular interest in this paper are those freshwater sites where distinct types (i.e., regimes) of legitimacy intersect. These specific freshwater reservoirs and creeks are medleys of ideas about and practices related to legitimacy in the governance, management, tenure, and use of water.

One transformation in the governance of freshwater resources that has accompanied Indonesia's 23-year long transition from the New Order guided democracy to the Reformasi presidential republic has been an increase in water grabbing through the transfer of ownership and use rights from *adat*¹ customary communities to more powerful persons or entities who are not the multigenerational owners. Thus, whilst governance and tenure² related to water have been transforming, the role and status of *adat* has also been changing.

Adat is a topic of national-level conversation in Indonesia. In discussions about biodiversity and conservation, the

¹The term “*adat*” refers to many aspects of Indonesia’s “customary” societies including governance, laws, and tenure as well as economics and exchange, internal political organization, intra- and inter-group relations, conflict resolution, ethnoecologies, religion, rituals, ethics, rules, norms, and more. “Customary” in the context of discussion about *adat* refers to “locally rooted systems...devised through time in response to local conditions” (Bettinger et al., 2014, page 200). The ways *adat* is understood as well as the ways it has operated and changed through time have varied between communities, partly in relation to the societies’ proximity to centers of colonial and postcolonial power as well as the development of activities in their territories. The history of *adat* for Meratus Dayaks (Tsing, 2004), for example, differs from its trajectory in Togeana Sama communities (Lowe, 2007). The diversity of *adat* appears in the social context and changes in it on Sumatra (Fisher et al., 2017), which differ from the multiple *adat* communities on Seram (Ellen, 2017) and Sumba (Fowler, 2013) and the ways they have changed over time.

²Tenure here is understood as the social relations and practices associated with access to and use of resources. Tenure often includes combinations of collective and individual rights that people acquire by way of belonging to kin groups and alliance networks, the latter of which cohere through marriage and exchange practices. For *adat* communities on Sumba, similar to many other Indonesian *adat* communities, tenure regulations and practices often include combinations of collective and individual rights that people acquire by way of belonging to kin groups and alliance networks, the latter of which cohere through marriage and exchange practices. Many of Sumba’s *adat* tenure systems are unwritten and verbally transmitted and negotiated.

environment and the economy, development and sustainability, culture and history, and other poignant issues, adat is politicized. The ways this politicization of adat occurs has shifted from an early start in the Dutch colonial period through the Reformasi era. In pre-colonial times, adat was the default—the given, widespread social system. In the colonial period, Dutch colonizers sanctioned customary social systems because they viewed them as conduits through which they could exert their own control over the widely dispersed Indigenous communities living in their East Indies colony (Li, 2001). During the New Order and early Reformasi eras, adat was displaced and invisibilized, but then subsequently revitalized and legitimized (Henley and Davidson, 2008). In the second decade of the twenty-first century, adat has become the subject of advocacy and honor (Bettinger et al., 2014). Now, adat is not only being promoted but also sometimes romanticized by conservationists, developers, aid agencies, scholars, activists, and journalists, in the 21st century.

Why Water Security is a Priority of Scholarship

The critical work of adat activists on Sumba directly involves customary communities' rights related to water and many additional crosscutting elements as we can see in cases from North Kodi, Nihiwatu, and Marosi discussed in this paper. Vel and Makambombu (2019) recommend defending Indigenous Peoples against the appropriation of their resources and advocating for the repatriation of their customary territories (Vel and Makambombu, 2019). I suggest that scholars stand with Indigenous Peoples and take cues from them and their activism in order to recognize which issues are most important points of advocacy in their specific communities.

Water grabbing involves the appropriation by outsiders of Indigenous People's water and land (Rulli, Savioli, D'Ordorico, 2013). Water grabbing potentially restricts local people's access to freshwater and coastal resources and thus threatens water security, particularly in environments where freshwater is already limited, such as in Sumba's semi-arid and arid climate. Moreover, the ways water is managed after it has been grabbed on Sumba and elsewhere has resulted in its overharvesting and pollution (Vel and Makambombu, 2019). Water grabbing frequently is associated with land grabbing (de Bont et al., 2016; Rulli, Savioli, D'Ordorico, 2013) and is an intended or unintended consequence of land grabbing. Land grabbing often leads to both water and food insecurity (Rulli, Savioli, D'Ordorico, 2013; Vel and Makambombu, 2019), especially for subsistence farmers, fishers, and agropastoralists—as most Sumbanese are.

Water grabbing often includes human rights violations when it deprives people of water for bathing and sanitation and the means of producing and processing food. Access to clean water and sanitation are recognized as human rights since the United Nations General Assembly, who governs water-related rights at the global level, and the UN Human Rights Council

formalized this in 2010. In addition, the UN has ratified several water treaties among member nations, including the UN Watercourses Convention of 2014, Convention on the Law of the Non-Navigational Uses of International Watercourses, and the Protocol on Water and Health of 1999. Indonesia is not a signatory on any of these three treaties.

The magnitude of water grabbing is tremendous in Indonesia. Indonesia is the country with the highest amount of grabbed rainwater (also known as green water) in the world at 117.40 billion m³ (Rulli, Savioli, D'Ordorico, 2013). Another 1.19 billion m³ of irrigation water (also known as blue water³) is grabbed in Indonesia. The total amount of grabbed rainwater and irrigation water (118.59 billion m³) accounts for 39% of the total amount of rainwater (292.35 billion m³) and irrigation water (11.94 billion m³) used for food production in Indonesia, which is 304.29 billion m³.

Within this troubling context, Sumba is in a monsoonal climate where access to water is limited and variable across specific sites depending on micro-level social and ecological conditions. Since water is always entangled in political ecologies that may be transitory, its availability for multispecies' survival is increasingly precarious. Amidst the many entangled political ecological processes that affect freshwater on Sumba is water grabbing, which is the transfer of ownership and use rights (or *de facto* use rights) from Indigenous communities to more powerful persons or entities who are not the customary owners. For many people living on Sumba, water grabbing has the potential to further reduce access to freshwater as well as the quality of existing resources. The already insecure situation with freshwater is being aggravated by water grabbing.

The availability and quality of freshwater in any particular village or region of Sumba, while extremely variable across space and through time due to the island's hydrology and geology as well as weather and climate, limits the wellbeing of the island's residents. Major drainages are dispersed, some are small in size, and some have seasonal flows. Freshwater lakes in western Sumba are scarce and mostly occur in the island's interior with only a few outliers on the northern and southern coastal plains. Some of the lakes in western Sumba are saltwater rather than freshwater.

The types of naturally-occurring sites where Sumba's residents collect freshwater include springs, creeks, small ponds, and micro-reservoirs such as banana plant trunks and tree cavities. People also capture water using rainwater collection systems, dammed streams, cement pools, and wells. Water can be purchased from tanker trucks, but many Sumbanese rely on naturally occurring sources of water. For those who do not live adjacent to a source or purchase their water, accessing water requires walking distances from their homes that vary from less than a kilometer up to 20 km roundtrip.

³Anthropologists writing about Sumba define *kabisu* as an exogamous patrilineal clan associated with a particular *tana* (territory) (Omvlee, 1980).

In Nusa Tenggara Timur Province (NTT) where Sumba is situated, 56% of households have to travel more than 1 km to access clean water and 33% of households lack access to clean drinking water altogether. NTT ranks 32nd out of 33 provinces in Indonesia on the Human Development Index, which is the next to worst. Twenty-three percent of NTT Province's residents are impoverished. The western sector of Sumba Island has the highest rate of water insecurity in NTT with more than 40% of households lacking sufficient clean drinking water (Ashmad et al., 2012). South West Sumba District is the second poorest district in NTT. This high degree of poverty is linked to access to clean water, which in turn is a proximal determinant of human health and overall wellbeing (Reading and Wien, 2009) as evident in a study village in South West Sumba where 95% of residents ages 2 months to 80 years suffer from intestinal parasitic infections due to unclean water and lack of sanitary facilities (Sungkar et al., 2015).

Water for Forests in North Kodi

Since the Indonesian government claims ownership of sizeable portions of South West Sumba District, they simultaneously exert dominion over freshwater sources. Water is variably figured in state claims—sometimes as the primary target, other times as a secondary or tertiary object, as an incidental component, or an altogether unmentioned element. As we can see by looking further into the management of state-owned units in the North Kodi Subdistrict, the Indonesian government recognizes (or does not recognize) the freshwater dimension to their operations in South West Sumba in assorted ways. One project in which the state exerts control was inventorying national forests to prepare for reforestation of the landscape. Another space within which the national government exerts control over adat territories is the Rokoraka Forest, which is also known as the Southwest Sumba Protection Forest Management Unit.

The West Sumba District Forestry and Soil Conservation Service (Dinas Perhutanan dan Konservasi Tanah, DPKT) demarcated and categorized the lands in Kodi⁴ as part of a regreening/reforestation plan for 1998–1999. The DPKT plan has two layers (*Peta Rencana Penyebaran Kegiatan Penghijauan Tahun Anggaran 1998–1999*). One of the layers partitions North Kodi's lands into Critical Forest (*Hutan Kritis*, K) and Non-Critical Forest (*Hutan Tidak Kritis*, TK).

The second layer divides lands into Permanent Production Forest (*Hutan Produksi Tetap*, HP), Limited Production Forest (*Hutan Produksi Terbatas*, HT), and Protection Forest (*Hutan Lindung*, HL). Protection Forests are treed areas maintained for the purposes of water management, flood control, prevention of seawater intrusion, and soil conservation (Head of KPHL for the South West Sumba District, 2015). Permanent Production Forests are timber plantations. Limited Production Forests are managed for multiple goals including timber production but also protection and conservation. The Indonesian Government claims ownership of all of these designated forests.

The forests whose boundaries had already been demarcated (*kawasan hutan yang sudah ditata batasnya*) by 1998 cover a large portion of the area that is now called the North Kodi Subdistrict. This demarcated land in North Kodi includes Critical Forest (K) and Non-Critical Forest (TK) as well as Production Forest (HP). The Critical Forest areas are typified as being covered by the invasive *Imperata cylindrica* grass and affected by erosion. These areas are targeted for soil conservation and reforestation. Additional Non-Critical Forests were outlined for future demarcation in North Kodi. Additional Critical Forests in North Kodi, especially along the coastal margins were not slated for demarcation. This particular way of mapping Sumba performed by the Forestry and Soil Conservation Service was driven by the national government's Basic Long-Term Development Plans (*Pola Dasar Pembangunan Jangka Panjang*), with its first iteration from 1968 to 1993 and its second iteration from 1994 to 2019.

Notable is the absence of Protected Forest and Limited Production Forest in the North Kodi Subdistrict in the 1998–1999 management plan, which was put together at the end of the New Order. A decade-and-a-half into the Reformasi, the 20,646.64-hectare South West Sumba Protection Forest Management Unit (KPHL) was established through a series of decrees from the Indonesian Ministry of Forestry and Plantations (Decree Number 3911 of 2014), the South West Sumba District (a Regulation in 2014), and the Indonesian Ministry of the Environment and Forestry (Decree Number 633 of 2015). KPHL consists of 12,028.41 hectares (58%) of Protection Forest and 8,618.23 hectares (42%) of Permanent Production Forests (Head of KPHL for the Southwest Sumba District, 2015). Landcover in the KPHL is primary dry forests (55%), secondary dry forests (11%), shrublands (27%), savanna (3%), mixed rainfed gardens (2%), and vacant land (0.006%). KPHL crosses the boundaries of the North Kodi, South Wewewa, and East Wewewa Subdistricts within the South West Sumba District. A sector of the KPHL overlaps with a portion of the area of focus in my ethnographic research, that is Bukambero Village in the North Kodi Subdistrict. (My research area also extends into other Villages beyond Bukambero.) Portions of Bukambero Village are located within Rokoraka Matalumbu Forest, which is the name given to a group of forest patches in years prior when the Indonesian Ministry of the Environment and Forestry set up the land unit. Parts of

⁴An older system of mapping and naming the districts and sub-districts of Sumba existed in 1997–98. At that time, Sumba was divided into two Districts/Regencies: West Sumba District/Regency (Kabupaten Sumba Barat) and East Sumba District/Regency. Following the implementation of regional autonomy in 2001, the island was divided into four Districts/Regencies: Sumba Barat Daya (South West Sumba), Sumba Barat (West Sumba), Sumba Tengah (Central Sumba), and Sumba Timur (East Sumba). Redistricting also resulted in the division of the Kodi Sub-district (Kecamatan Kodi) into four subdistricts: Kodi Utara (North Kodi), Kodi Bangedo, Kodi Balaghar, and Kodi. Kodi Utara in South West Sumba, where the author has conducted ethnographic research, has a land area of 245.4 km² and a population of 53,345 people according to the 2015 census.

Bukambero Village are located within the Rokoraka's boundaries and part lie just outside of the borders.

The Ministry of the Environment and Forestry identifies customary forms of tenure as a “high threat” (KPHL, 2015, page 91) to the forest because, the KPHL managers write, tenure is based on heritage and also because communities' territories cross into the government's land. The KPHL managers call Bukambero's tenure system “kabisu.”⁴ Among the 3,626 residents of Bukambero in 2015, 98% are farmers. According to KPHL managers, Bukambero's people identify Wenamaya as the largest kinship group in Bukambero with Watupakadu, Umbu Tanda, and Umbu Tedda as the three subgroups within Wenamaya. Belonging to Wenamaya qualifies descendants to inherit land after they marry. The average landholding in Bukambero is 0.5–1 hectare, according to the KPHL managers, and they worry that economic needs will drive people to encroach upon the forest.

On the one hand, forest managers view tenure and encroachment as threats to the protection of their forest and the production of commodities. On the other hand, they see adat as an asset to forest protection and production. KPHL managers recommend supporting adat because of its “large role in the lives of the people of Bukambero Village [who] highly respect the role of adat institutions and Rato Marapu (i.e., the elders who govern the Indigenous religion)” (KPHL, 2015, page 41). Forest managers appreciate that adat causes people to avoid taboo places, refrain from degrading sacred places within the forest, conserve specific trees such as banyans, and not hunt special birds such as crows and owls. However, managers also worry about adat's limits when people are economically stressed and when traditional seasonal prohibitions on entering the forest and extracting its resources are not enforced. Managers are concerned about the inadequacies of customary forms of conflict resolution and the potential for conflict in the future if Bukambero's residents have differences of opinions among themselves or if they violate the government's regulations related to the state-owned forest. This line of reasoning positions the Indonesian government to take control of monitoring natural resources within the forest's boundaries: in order to avoid conflict or mediate it if and when it arises. It also justifies state agencies' efforts towards claiming the authority to make decisions: in order to regulate people's interactions with places and resources within forest boundaries. These moves are part of the process of water (and land) grabbing, which Franco, Mehta, and Veldwisch (Franco et al, 2013, page 1654) define as “the capturing of control not just of the water itself, but also of the power to decide how this will be used—by whom, when, for how long and for what purposes—in order to control the benefits of use.”

While the 2015 management plan for KPHL lists numerous management goals, it clearly highlights the precarity of water resources when it states, “Protected Forests in this area are generally more intended as a buffer for water systems” (KPHL, 2015, page 8). Secondarily, the KPHL managers value the native

flora and fauna in the designated area.⁵ Additional management goals for the KPHL are to provide ecosystem services, improve community welfare, optimize the production of non-timber forest products, develop ecotourism, ensure forest protection and security, empower communities to protect the forest while they access non-timber forest products, promote other industries, partner with stakeholders, and protect and conserve forests (Head of KPHL for the Southwest Sumba District, 2015). With regard to water resources, forest managers recognize the important functions of the KPHL as a catchment for water emanating from springs and creeks and as a carbon capture site. Forest managers acknowledge the local residents who rely upon water within KPHL for their drinking needs as well as for agricultural activities. Forest managers matter-of-factly describe water scarcity for people living in the area by noting the total absence of constructed reservoirs and wells and by pointing to residents' three options for obtaining water: 1) walking about 3–4 km each way to reach natural springs, 2) capturing rain water, and 3) purchasing tank water (*air tangki*) for Rp200,000 (US\$14.00) per 5,000 L. North Kodi offers a case of water grabbing that involves smaller and dispersed volumes of water that vary over time and space in comparison to the more commonly documented cases of water grabbing where powerful entities appropriate large volumes of water (Franco et al., 2013).

⁵The KPHL provides the following selective, shortened list of tree species in its Long Term Forest Management Plan (KPHL, 2015, page 20–21): “Cendana (*Santalum album*), usapi/kesambi (*Schleichera oleosa*), gaharu (*Aquilaria malaccensis*), Hue (*Eucalyptus alba*), Kabesak/Pilang (*Acacia leucophloeae*), Kleo/Laban (*Vitex pubescens*), Matani/Kayu Merah (*Pterocarpus indicus*), Kolaka/Besi (*Parinarium corimbosum*), Ampupu (*Eucalyptus urophylla*), Ajaob/Kasuari/Cemara (*Casuarina junghuhniana*), Kolo (*Erithrena littosperma*), Kelumpang (*Sterculia foetida*), Mbuhung (*Schoutenia ovata*), Munting/Bungur (*Langerstonia speciosa*), Kawak/Jabon (*Anthocephalu cadamba*), Kodal/Eboni (*Diospiros maritima*), Nera/Mindi (*Melia acederachta*), Worak/Kasai (*Pometia tomentosa*), Nunuh/Beringin (*Ficus benjamina*), Lontar (*Borassus flabilifer*); *Rhizophora mucronata*, *Rhizophora appiculata*, *Ceriops tagal*, *Xylocarpus granatum*, *Barringtonia speciosa*, *Avicenia amarina*, and *Bruguera gimnorhyza*.” Medicinal plants occurring in the KPHL include: “pulai (*Alstonia scholaris*); kunjur (*Cassia fistula*); nggai (*Timonius flavescens*); bila (*Clerodendrum speciosum*); hekul/ genoak (*Acorus calamus*); guava (*Psidium guajava*); padamu dima (*Jatropha curcas*); mawona/marungga/moringa (*Moringa oleifera*); kuta kalara/sirih hutan (*Piper amboinensis*); winnu/winno (*Arecha pinnata*); tada linnu (*Dysoxylon arborescens*); nittu/hadana/sandalwood (*Santalum album* Linn. Kerr.); turmeric (*Curcuma domestica*); tai kabala (*Chromolaena odorata*); tada kaninggu (*Cinnamomum burmanii*); cat's whiskers (*Orthosiphon stamineus*); waru (*Hibiscus tiliacus*); kadabu/noni (*Morinda sp.*)” (Njurumana and Dwi Prasetyo 2010 cited in KPHL, 2015, page 21).

Gouramy (*Osphronemus gouramy*), swamp eel (*Monopterus albus*), and crayfish (*Cambarus virilis*) are three among many animals living in the creeks within the KPHL (KPHL, 2015, page 21).

Among the non-timber forest products harvested by people who live in and around the KPHL area are: fern fronds (*sayur paku*) from *Diplazium esculentum*, *Sternoclaena palustris*, and *Neprolepis bisserata*; wood ear mushrooms (*jamur kuping*, *Auricularia auricula*), and oyster mushrooms (*jamur payung/tiram*, *Pleurotus ostreatus*), mango (*Mango indica*), jackfruit (*Artocarpus integra*), coconut (*Cocos nucifera*), kesambi (*Schleichera oleosa*), *Eugenia* sp., ginger (*Zingiber* sp.), candlenut (*Aleurites moluccana*), and more (KPHL, 2015).

Forest managers also acknowledge the value of water in the KPHL and the surrounding region for industries and for ecotourism. Forest managers specifically point to Waibuku, Watu Maladong, and Tangung Bulir beaches as attractions in the adjacent Kodi Balaghar Subdistrict and Pabeti Lakira and Dikira waterfalls in East Wewewa Subdistrict. They also mention Weekuri Lake and Mandorak Beach—both of which are in the North Kodi Subdistrict but outside of the KPHL boundaries. KPHL's managers describe the steep cliffs of Mandorak Beach as “exotic” and its white sands as “beautiful.” As proof of the potential for North Kodi's bodies of water to drive economic prosperity, KPHL's managers mention that “there is already one investor from France who develops ecotourism,” referring to the developer of Mandorak Beach (KPHL, 2015, page 25). Romanticizing freshwater and saltwater resources and celebrating foreign investment encourages tourists to visit and foreigners to claim resources, which could potentially degrade water quality and increase water grabbing. By casting water in this way, KPHL's managers and others who engage in similar discursive practices signal a specific yet widespread morality in which “market value supersedes... cultural and social values” (Franco et al, 2013, page 1663). Elsewhere in the world, water grabbing has resulted from similar processes as Franco et al. (2013) point out for Mozambique when they write, “discourses and policies that favour foreign direct investment over investing in smallholder agriculture encourage local water grabbing processes.”

Water (and Land) Grabbing in the Global and National Context

Water grabbing is a worldwide phenomenon that exhibits both global patterns and local specificities. While on Sumba water grabbing takes on its own situated character, it exhibits some of the patterns seen in water grabbing across societies and incidents (Mehta, Veldwisch, and Franco, 2012; Franco et al, 2013). One pattern is the link between water grabbing and land grabbing. A second pattern is that water grabbing is a form of structural violence occurring in the context of structurally inequitable systems, where immensely wealthy people's activities impact the lives of deeply impoverished people. Another pattern is that many water acquiring parties come from places where water resources are limited, exhausted, or impaired (von Braun and Meinzen-Dick, 2009). The water acquirers' places of origin are often in arid or desert regions or where pollution and overpopulation are problems causing parties to seek land and water outside of their borders. Perhaps, because of the patterns mentioned so far, this next pattern is inevitable: water grabbing is often contentious and produces conflict.

Indonesia is both a subject and object of water and land grabbing. As subject, Indonesian parties acquire large tracts in foreign countries. As object, foreign entities acquire land within Indonesia. These parties who acquire land are governments or state-owned entities, private persons or businesses, and also public and private entities in partnership with each other. The parties who acquire land internationally may be motivated by profiting from harvesting resources, such as minerals, oil, and

timber, and also by producing agricultural and biofuel commodities to supplement insufficient production in home countries and to profit from trading in marketplaces. Pressures from within the acquirers' countries that influence international purchases are limited land and water supplies, population increases, food security and food crises, and increasing land and water values (von Braun and Meinzen-Dick, 2009). One problem with the acquirers' approach is that the communities who live in the places where land acquisitions are made often face challenges of their own related to water and food security, insufficient production, increasing populations, and changing valuations in addition to social and environmental changes.

In the larger land acquisitions of the 21st century, the land-acquiring agents in Indonesia include both domestic and foreign entities, or partnerships between these two types. Large scale acquisitions of waters and lands within the country of Indonesia are not uncommon. Agribusiness has been on the rise in Indonesia during the 21st century as the demand for globally traded commodities such as oil palm, sugar, and rubber has grown. By 2018, oil palms already covered 11 million hectares and another 20–30 million hectares were planned (Li, 2018). Most oil palms are planted as single-species stands in rural areas where subsistence farmers, fishers, pastoralists, hunters, and collectors live. The development of these oil palm plantations “takes away: customary land, resilient ecologies and diverse rural livelihoods” (Li, 2018, page 328).

Immense inequities are an inherent to the global social structures within which water and land grabs occur. The inequities between the local communities and the land acquirers are evident in the costs of land. Members of the Moi community were paid US \$2.50/hectare when Henrison Inti Persada acquired 32,000 hectares of their land in Sorong District of West Papua. Henrison Inti Persada is a subsidiary of the Kayu Lapis Indonesia Group, a securities holding company. In 2010, the Hong Kong-based Noble Group Ltd., which manages supply chains for energy, metal, and mineral commodities, purchased a majority 51% share in Henrison Inti Persada. The Noble Group was listed on the Singapore Stock Exchange in 1997 and in Fortune 500 in 2000. In 2015, the company was valued at US \$6 billion, but suffered financial collapse after accounting and debt fraud were revealed, which caused its value to drop to US \$80 million. It was delisted from the Singapore Stock Exchange in 2018 and, since then, has been restructuring under the name Noble Group Holdings Ltd. The wealth gap between the Noble Group executives and the Moi community members is vast. Other transactions similarly represent the structure of global society, although the numbers vary widely. A case example is Nih Sumba, a resort in which an American hotelier invested US \$30 million in a district where 29% of the Indigenous People earn less than US \$22.00 per month.

Water for Tourists Looking for Waves

“Behind every land grab is a water grab,” according to the international nonprofit GRAIN (2012a). On Sumba, where land is the main target in some acquisitions and water in others, the inverse may also be true: behind every water grab is a land grab. Some land purchasers are motivated by the water

itself, such as developers who work in the tourism industry. Saltwater and freshwater are both vulnerable in a tourism economy. Agents from the tourism industry seek to establish water-based tourist attractions on the seashore, in front of surf breaks, in sight of waterfalls, and on a saltwater lake. Water draws tourists who wish to recreate and sightsee on Indonesia's outer islands. The tourist industry also consumes water to supply the needs of visitors and to fuel its operations.

The most powerful, monied agents in Sumba's tourist economy who have executed water grabs on Sumba are not Indigenous to the island. Sumba is being promoted as "the next Bali" by proponents for the development of tourism on the island (e.g., McCall, 2015). Bali, in these promoters' materials, has been overrun by tourists and is suffering from the negative effects of its popularity in the form of polluted beaches in overcrowded resorts run by jaded locals. In these narratives, Sumba's "untouched beaches" (Travel and Leisure, 2020) and "magnificently preserved ancient cultures" (Nihi Sumba, 2020b under "Sumba Culture," no page number) promise to fulfill tourists' fantasies about exotic tropical islands and noble savages (Kahn, 2011). A highly lauded success story is Nihi Sumba. Located on a "protected white sandy beachfront" with "superlative waves" that "blend harmoniously with authentic local experiences" (Wonderful Indonesia, 2018), Nihi Sumba has won multiple awards, including Travel and Leisure's Best Hotel in the World for 2016 and 2017. Nihi Sumba attributes much of its success to its location landward of the world's best surf break and to the surrounding "unspoiled natural beauty, and pristine wilderness." This luxury resort appeals to high-end travelers with accommodations ranging from US \$895/night for a one-bedroom villa to US \$17,445/night for a five-bedroom compound. The entire 27-villa estate can be reserved for US \$250,000 per night. In response to the coronavirus pandemic, guests can reserve the whole place for 1 month for US \$1 million. This price includes an all-inclusive stay for up to 80 people as well as a 5% donation to The Sumba Foundation and a tour of the Foundation's project sites. Nihi Sumba is an aspirational model for many who wish to develop the tourism industry on Sumba.

The Australian couple Claude and Petra Graves built Nihi Sumba (then called Nihiwatu, which they translate as "Stone"). In 2012, Chris Burch, an American, and James McBride, a South African purchased the resort from the Graves. The original owners of Nihiwatu were "Sumba's ancestors, the 'Marapu,' [who] landed on its secluded beach centuries ago" according to Nihi Sumba's website (Nihi Sumba, 2020a under "About," no page number). On their "About" webpage, Nihi Sumba presents this line of ownership as seamless: the Indigenous People's ancestors were the first to land on the beach. The romantic Australian tourists were the first to have legal title to it.⁶ The heroic American and South African hoteliers unproblematically acquired it. Another, different version of the Nihi Sumba story is of its conversion from a historically significant site belonging to

the area's customary community to one grabbed and settled (i.e., colonized) by foreigners.

Nihi Sumba has its critics among locals and foreigners. The anthropologists Janet Hoskins (2002), Vel (2008) write about the great inequities in wealth brought to light by Nihi Sumba's luxury. They point to the tremendous gap between the wealth of Indigenous Sumbanese and the wealth of Nihi Sumba's guests as evident in comparisons of the costs of staying at Nihi Sumba compared with the wealth of West Sumba's residents whose average annual income in 2011 was US\$424.⁷ Twenty-nine percent of people in West Sumba District, where Nihi Sumba is located, live below the poverty line, meaning they earn less than US\$22.00 per month.

When Hoskins frames tourism as a manifestation of colonialism and social inequities, she specifically names Nihi Sumba as an actor in Sumba's burgeoning tourism economy (Hoskins, 2002). Hoskins' theorization focuses on cultural tourism and Sumbanese People's interpretation of the tourists' gaze as violent. The association of tourism with violence is logical when viewed within a historical context that extends back to the 18th century when Sumbanese leaders began selling slaves to Dutch East Indies traders and continues through the immigration of Muslim merchants from neighboring islands. From the perspective of Sumbanese witnessing tourists' behaviors, their "attraction to sandy beaches places them in the company of slave raiders, Muslim merchants, surfers, and the violators of many important taboos" (Hoskins, 2002, page 806). One arena where taboos govern people's behaviors is along coastal sites associated with the ancestors' activities. Watu Malondo (Hoskins, 2002) and Halete (Fowler, 2016) are two coastal locations where, when Sumbanese People visit, they follow numerous taboos in alignment with their belief that ancestral spirits reside there. When residents in the area of the resort tell a story about their ancient ancestors coming ashore on Nihiwatu upon their initial migration to the island, they express a feeling that this beach is also a place with heightened significance and special meaning for the people who descend from those early founders. Dispossessing the ancestors' descendants from this special place is a form of colonial violence.

The resort's owners are the legitimate occupiers of Nihiwatu even while being wealthy colonizers. What does Nihi Sumba say to convince people of its legitimacy? Most prominent among the ways Nihi Sumba attempts to earn legitimacy are its economic contributions and its philanthropy. Nihi Sumba's owners cite their contributions to the local economy through hiring local people to staff the resort and to entertain tourists during activities on the hotel's grounds (e.g., surfing, turtle releases) as well as off-site excursions (e.g., on waterfall tours, cultural activities). To complement the resort's operations, Nihi Sumba's first owners created The Sumba Foundation as a private, non-profit, nongovernmental organization. Nihi Sumba funds The Sumba Foundation and raises money from private contributors. The

⁷The average annual per capita income in South West Sumba District for 2011 was US\$209 (Manek et al., 2013). South West Sumba District has the highest poverty rate in East Nusa Tenggara Province.

⁶I do not know the specific type of legal title that Nihi Sumba's owners possess.

resort connects its business to the Sumba Foundation's philanthropy to justify the wealth of its owners and clients: "The resort was founded on the trust and cooperation of the local community and today they remain the heart and soul of the experience. Ninety percent of the staff (including those in senior positions) are from the local area and the resort supports local initiatives and enterprise through our continued partnership and collaboration with the Sumba Foundation" (Nihi Sumba, 2020c, no page number).

The Sumba Foundation aims to reduce poverty through investing in health, nutrition, education, housing, farming, and drinking water. One of the Sumba Foundation's projects is developing freshwater infrastructure in the region of Hoba Wawi Village in the Wanokaka Subdistrict of West Sumba District where the resort is located. They have built at least 65 wells that deliver water through gravity and electric pump systems; 250 faucet stations; 76 water tanks; and toilet facilities (Knickerbocker, 2017 and 2018). They have also installed electrical equipment, power lines, and more than 15,000 m of pipelines. These systems provide water for health clinics, schools, and householders. By 2018, The Sumba Foundation was providing water to 6,576 people.

In the Nihi Sumba situation, a foreign-owned business holds title to 270 hectares (667 acres) of former space formerly controlled by adat communities. Demonstrating how water grabs often include land grabs, Nihi Sumba's holdings include a 2.5-km-long beach as well as the land fronting the beach. Most of the resort's villas have private swimming pools as well, which is notable because it increases the volume of water consumed by the hotel and its guests. Maintaining swimming pools requires grabbing more water than if fewer or no swimming pools were located in Hoba Wawi Village. Two nearby waterfalls are enclosed within Nihi Sumba's holdings (Nihi Sumba, 2020d), but whether these are within its resort's boundaries or beyond is unclear. Nevertheless, the resort's physical footprint illustrates that tourists are drawn to places where they have options to indulge in saltwater and/or freshwater.

To complement the water grab that generates additional wealth for the wealthy, the colonizers created a nongovernmental organization that conducts development work in island communities. Does associating a for-profit business with philanthropy legitimize a grab? For off-island sources, it does seem to be effective in boosting a luxury hotel's status among journalists. Many media reports praise the resort for engaging in charity as illustrated by the headline from a Harper's Bazaar Singapore report: "Book Into These Socially-Conscious Luxe Hotels Around the World" with the byline "Get a Tan and Do Some Good" (Rey, 2019, no page number). Among budget-conscious traveling surfers who find their way to Sumba's waves and resent the resort from preventing their access to the infamous Occy's Left break, charity work is no excuse for privatizing a beach and then excluding the locals from it. Yet, for hoteliers and journalists in the travel industry, this business model remains not only unproblematic but highly lauded. Nihi Sumba's "recipe of sustainable luxury, responsibility, philanthropy and community engagement, in a wild seaside setting" (Barker, 2019, no page number) is celebrated. Having

acquired land in Costa Rica, Mexico, and Iceland, Burch and McBride are applying the Nihi model to other sites beyond Indonesia. In stark contrast to the ways foreigners view tourism and development, many locals think of tourists as violent predators who use the bodies of kidnapped, enslaved, and murdered Sumbanese as construction materials for their development projects (Hoskins, 2002). Community engagement, philanthropy, and charity are not legitimate in this context where multiple generations of Sumbanese have endured colonialism and where neocolonialism continues to impose itself.

Water (and Land) Grabbing at the Island Level of Sumba

Cases from across Sumba illustrate how water grabbing is part and parcel of land acquisitions. The cases highlighted in this article are a reforestation scheme managed by federal and regional government agencies and two highly expensive resorts financed by private developers. More cases from Sumba could have been featured here; specifically, sugar plantations designed by multinational corporations and renewable energy projects undertaken through partnerships between the Indonesian government and multinational corporations. The water, land, labor, additional construction materials, food for workers, and so forth that are required to produce trees, tourists, sugar, and electricity have driven bureaucrats, designers, investors, and profiteers to acquire resources belonging to Sumba's customary communities. Orchestrating these assets in order to grab water could only occur under certain conditions. Further along in this analysis, I point out connections between water grabbing incidents on Sumba for the purpose of identifying the aspects, forms, and machinations of legitimacy that allow, enable, facilitate, or promote the transfer in ownership of critical amounts of water.

On Sumba, legitimacy is determined within a creolized society (Fowler, 1999) consisting of elements amalgamated from internal and external influences (Kirch, 2000). Disassembling the creole society reveals pre-Austronesian, Austronesian, Dutch colonial, Indonesian, and globalized constituents that are being assembled in collectives that are called by names identifying particular ethnolinguistic terms, such as Umalulu, Lamboya, Kodi, Bukambero, and Wanukaka (AKA Wanokaka). Moreover, components of activities related to development and aid in response to environmental limitations and socioeconomic marginalization are integrated into the creolized society. Freshwater—with all of its tangible and intangible characteristics—is one manifestation of the *mélange* of political ecological processes that constitute Sumbanese societies.

Looking at multi-scale political economies in relation to rural water grabbing incidents is an "opportunity," as Atalay (2018) writes about urban areas, "to observe better the interaction between micro and macro processes." The conditions under which people interact with freshwater on Sumba Island are impacted by machinations of four types of social actors: Indigenous agropastoralists, resource managers working for Indonesian government agencies, non-Sumbanese investors seeking to capitalize from Sumba's resources, and the staff of

nongovernmental organizations and corporations whose operations involve Sumba. Similarities and differences exist in the ways each of these social groups interact with water. The members of these groups are often moving along on separate paths, but they also frequently converge in watered sites or over watery issues. A brief comparison of these groups reveals the following key characteristics. Sumbanese agropastoralists have long historical relationships with water around which they have shaped their customary forms of social organization, religion, tenure, and ecological interactions. Sumbanese agropastoralists engage with water for survival in the course of everyday activities related to subsistence as well as for special occasions related to beliefs and rituals all of which are influenced by internal and external sociopolitical dynamics. Resource managers who work for the Indonesian government engage with water in the process of carrying out their job duties and are directed by the explicit and implicit goals of the Sumbanese and non-Sumbanese Indonesians who legislate, implement, and enforce policies. The resource managers who appear in this study are mostly working for federal agencies who have operations on Sumba related to forests, including forests designated for resource production and protection. Private investors seek to intervene in Sumba's economy for the purpose of generating profit. The ones who are described in this article are people whose interventions affect fresh water, especially those who seek to buy or sell, own or use water and land where water is located. Workers from nongovernmental agencies and corporations aim to develop aspects of Sumbanese people's lives or components of the island's landscape. Their work may be directly focused on water (e.g., well boring, hydropower) or it may be focused on something other than water but that nevertheless impacts water resources (e.g., energy production). An example is the UNDP who partnered with the Indonesian Ministry of Environment and the Development Planning Agency of Eastern Nusa Tenggara Province (BAPPEDA) to develop training manuals for managing water in the context of climate change. In another project, UNDP built micro-hydropower plants in East Sumba in a partnership with Bank NTT. This paper provides details about these social groups' interactions with water and with each other as they occur in specific instances of water grabbing.

Legal Structure for Tenure in Indonesia

Since freshwater resources on Sumba are surrounded by and embedded within land, the legitimacy in claims to use, own, manage, and govern freshwater resources is taken to operate within the same legalistic structure as land does. Land rights in Indonesia derive from the two prevailing systems of national law (*hukum*) and customary law (*adat*). The Indonesian Constitution of 1945 (amended in 2002) and the Basic Agrarian Law of 1960 (BAL) are two foundational national laws that define points related to the use and ownership of water (and land). Article 33 (3) of the Constitution as well as Article 2 of the BAL claims that the Indonesian State has power over land, water, and natural resources. Article 5 of the Constitution states that adat law governs water, land, and air with the caveat that "it is not in conflict with the State's interests based on the unity of the Nation, and with Indonesian Socialism as well as with the regulations

stipulated in this Act and with other legislative regulations, all with due regard to the elements based on the Religious Law" (Indonesian Constitution, 1945, no page number).

The BAL established a system of certifying titles to land and registering ownership certificates in local land offices (FAO, 2020) and launched the project to convert all customary land to certified land, a process which is still underway 60 years after the establishment of the policy. Four types of land tenure are made available to Indonesian citizens by the BAL. These are land ownership (*hak milik*); cultivation and exploitation rights on no fewer than 5 hectares of state-owned land for no longer than 25 years (*hak guna usaha*); building rights for no longer than 30 years (*hak guna bangunan*); use and collection rights on state-owned land or land owned by individuals (*hak pakai*). Additional rights recognized by the BAL are the right to clear (*hak membuka tanah*); the right to collect forest products (*hak memungut hasil hutani*); and customary tenure (*adat*) (FAO, 2020). Rent or lease rights (*hak sewa*) are available to citizens as well as non-citizens.

The BAL recognizes adat communities as the legitimate authority to oversee land use and tenure, to administer transfers of land tenure, and to settle conflicts over land. Article 2 of the BAL grants authority to implement the state's policies on state-owned land to adat communities and regional governments. Article 5 of the BAL gives customary tenure rights (*hak ulayat*) to adat communities. However, the Indonesian government retains greater authority over transfers of ownership and rights for developmental purposes. Only Indonesian citizens can possess land ownership rights (*hak milik*). Indonesian citizens can sell, transfer, inherit, and hypothecate *hak milik* lands. Only citizens and approved corporate entities can possess cultivation rights (*hak guna usaha*) and building rights (*hak guna bangunan*). Citizens and resident foreigners or foreigners with in-country representation can rent or lease land (*hak pakai*). Possessors of use rights cannot sell, transfer, or exchange the land. Rent and lease rights (*hak sewa*) are available to citizens, foreigners, Indonesian businesses, and foreign corporate entities. Adat communities govern rights to collect forest products (*hak memungut hasil hutani*) and ownership of customary lands both of which are rights only available to citizens.

The Development of Postcolonial Indonesia

Using the Constitution and the BAL as well as subsequent legislative acts that further elaborated land tenure and rights in Indonesia, the Sukarno (Indonesia's first president after decolonization from 1945 until 1967) and Suharto governments established a system in which national law superseded customary law. Whereas the opening 53 years of the Indonesian nation were characterized by the centralization of power in the Jakarta-based national government, decentralization has been an aim of the subsequent 23 years known as the Reformasi. Much of the Reformasi era legislation related to tenure directs governance to the provincial, regency, district, and local levels. While Article 14(e) of the BAL assigned responsibility to regional governments for water, land, and air (FAO, 2020), Reformasi era legislation has further specified regional responsibilities and

thereby officially bolstered the power of provincial agencies. Presidential Decree Number 34 of 2003 assigned the following tasks to regency governments: land use planning; managing land redistribution and compensation for maximum excess land and absentee land; managing neglected lands; managing compensation for lands allocated for development; mediating disputes over cultivated land; mediating communal land conflicts; issuing location permits and land clearing permits; and provisioning land for public interest (FAO, 2020). At the district level, district governments, through their Offices of Land and Property Taxes, have the authority to manage the conversion of collective land ownership to individual land ownership, a process promoted by the BAL. Law 23/2014 outlines the jurisdictions of the central, regional, and local governments in the realms of “marine and fisheries, tourism, agriculture, forestry, trade, and industry” (UU No. 23 Tahun 2014 Ayat 6 Huruf B). The law can, in some ways, be read as granting autonomy to regions in managing governmental affairs. Regional (meaning, provincial) governments have authority within state forest lands (KPH) over harvesting timber and processing non-timber forest products; environmental services; forest protection; watershed management; and rehabilitation of areas outside of forest boundaries; counseling with partner agencies; and “community empowerment.” Law 23/2014 also authorizes the co-management of natural resources by the central (federal), regional (provincial), and local (district) governments. However, uncertainties about governance and management are present due to the transitional status of governmental structures. In Nusa Tenggara Timur, the province where Sumba is located, the problems are compounded by “ineffective coordination and lack of capacity development being implemented at the subnational level” (UNDP Indonesia, no date, no page number).

The National Land Agency Regulation Number 5 of 1999 defines the relationships between district governments (*kabupaten*) and adat tenure systems. With this legislation we see how, alongside efforts to decentralize authority and responsibility, legislative acts from the Reformasi era also reinforce the legitimacy of adat. Another prime illustration is the Local Government Act Number 22 of 1999 that supports the authority of adat communities and empowers adat governance in issues related to natural resources (FAO, 2020). In the Reformasi era, governmental entities continue to possess the right to acquire land as provided by the Land Procurement for Development in the Public Interest (or Land Acquisition Act) of 2012. Article 2 of the Land Acquisition Act places these conditions on governmental procurement of land: “Acquisition of land in the public interest must follow the principles of humanity (protection of human dignity), justice (compensation), benefit (to the public), certainty (legal certainty on the availability of land), transparency (access to information), agreement (negotiation between parties), participation (public participation throughout the process), welfare (added value), sustainability and harmony (development can be balanced and aligned with the interests of the public and the state)” (Land Procurement for Development in the Public Interest Article 2 2012, no page number). To address the reality that some land procurements do not conform to these principles, legislation also exists that assigns regional

governments as mediators in land conflicts involving adat land owners. Indeed, tensions have occurred between Indonesia’s customary communities and agents external to their territories. Such tensions are apparent in the research literature about, for example, agrarian livelihoods (Peluso, Affif, and Rachman, 2008), fire ecologies (Fowler, 2013), forest management (Boedhihartono, 2017), and ocean-based livelihoods (Ramenzoni, 2013).

Generational Shift in Opinions About Relinquishing a Sacred Site

The appropriation of a community’s water often causes social conflicts (Dell’Angelo et al., 2018; Rodríguez-Labajos and Martínez-Alier, 2015). To identify a few specific causes of conflicts when tenure over water resources changes, we may consider the case of Marosi Beach where a violent clash occurred between the customary rights bearers and a newer, non-Native permit holder. Marosi Beach is located within Patiala Bawa Village in the Lamboya District of West Sumba. The sandy strand of Marosi Beach is approximately three to 4 km long and is bordered by a biologically rich tidal flat/coral reef, which leads out to abundant ocean fisheries. A small estuary forms where the mouth of a river empties onto the beach.

Lamboya District is home to the group of people who call themselves “Lamboya” and speak the Lamboya language, which belongs to the Central-Eastern Malayo-Polynesian subgroup of Austronesian languages. The Lamboya People are considered to be the first settlers of this area and have lived there for many generations—long enough to have developed their own distinct Lamboya language and identity. Marosi Beach has heightened value for Lamboya People for multiple reasons, and coopting their access to it threatens these values. Marosi is important for religious reasons as it serves as the site for the annual Pasola ritual, which is a key community event (Geirnaert-Martin, 1992). Marosi also holds economic and practical values for Lamboya People and their neighbors deriving from the resources available on the beach, on the coral reefs, and in the fisheries. Lamboya villagers participate in a tourism industry that centers around the notoriety of Marosi Beach especially for surfing and Pasola, and also for swimming and sightseeing. Villagers earn incomes that contribute to their livelihoods by providing homestays for tourists and guiding them around the beach. Children also earn cash by selling coconuts and other novelties to tourists.

In 1994, the company Sutera Marosi Kharisma obtained building rights permits (*hak guna bangunan*) from the Indonesian government that gave them permission to build and operate a business on 50 hectares around and including Marosi Beach for 30 years. Constructing a resort on this site could lead to the exclusion of Lamboya People from the estuary, the beach, and adjacent offshore areas. This means that whatever values the land, the freshwater, and the saltwater at the site have for Lamboya could be reduced or eliminated. Their access to water and land could be restricted. Economically, local small businesses may have difficulty surviving alongside this large company. Ecologically, the resort’s construction and the operation of tourism at Marosi has the potential of damaging biodiverse habitats, polluting the water and soil, and creating light

and noise pollution. The development of Sutera Marosi Kharisma's resort threatens to physically displace the Indigenous People themselves from their customary lands and waters. Dispossessing the Lamboya of their lands and waters, would desecrate sacred spaces, damage the spiritual system, degrade livelihoods, and violate human rights (Saraswati, 2018).

Sutera Marosi Kharisma's permit grants them the rights to control an area containing land as well as freshwater and saltwater resources. Even though Sutera Marosi Kharisma obtained their permits in 1994, they did not begin construction for another 12 years and this delay in their plans caused major problems once they finally decided to move forward. In 2016, Sutera Marosi Kharisma began establishing their presence in Patiala Bawa Village and reminding the locals that they had permits to create a resort on Marosi Beach. Once Sutera Marosi Kharisma launched their construction project, the necessity for negotiations between the company and the Lamboya emerged. Sutera Marosi Kharisma claimed they had obtained agreement from not only the Indonesian government but also the Lamboya People when they requested the original building permits. The villagers who were politically active in 2016–2018 said that, while back in the early-1990s their parents may have acquiesced to the company's desire to build a resort, they themselves had never agreed to sell the land and did not want the resort to be built on their ancestral territory. By 2018, the negotiations were failing and the relationship between company officials and local villagers had fallen apart.

In 2016, Sutera Marosi Kharisma attempted to acculturate the younger generation of villagers—to change their minds—so they would be in favor of the development of the tourist economy. Company spokespersons said their goal was "...to develop the economy of the region" (Hindarto, 2018, no page number). Sutera Marosi Kharisma promised to share the wealth with villagers by hiring them as construction workers. Villagers posted no construction signs and built fences to keep out the company. The size of the permitted concession, in Sutera Marosi Kharisma's records, was 50 hectares. Residents of Patiala Bawa Village said the company was actually operating in multiple fields across a 200-hectare expanse. Villagers questioned the legality of the company's building permits and demanded that the BPN (*Badan Pertahanan Nasional Republik Indonesia*, Indonesian Land Office) conduct a new survey of the concession. When BPN and employees of Sutera Marosi Kharisma began marking the boundaries, they were confronted by weapon-wielding villagers who protested, threw stones, and prevented company workers from leaving by blocking the exit road. Consequently, the surveyors began taking security guards with them from the police and military. According to news sources, the guards were members of the Indonesian National Armed Forces (CNN Indonesia, 2018) and/or the Mobile Brigade Corps, which is a paramilitary branch of the National Police charged with internal security control (Saraswati, 2018). The guards responded to the Lamboya protestors by throwing tear gas at them and confiscating the mobile phones they were using to videotape and photograph the surveyors and security forces. On 25 April 2018, Poro Duka, a local man in his early 40s, was shot and killed, allegedly by the police and/or security forces, as he protested the company's activities (Saraswati, 2018).

The Marosi case illustrates a situation in which contact between two distinct types of legitimacy—Lamboyan adat and the Indonesian government's—gave rise to serious social conflict. In addition to the friction generated by divergent political ecologies, an additive cause of conflict was the reversal in political sentiment among the Lamboya between 1994 and 2016. Community leaders in the 1990s were willing to consent to non-Native businesses to profit from tourism on their beach, but the subsequent generation of community leaders no longer wanted to authorize that model of tourism. Whereas the older Lamboya regime ceded their territory, the newer one attempted to reclaim their property. The determinants of legitimacy had changed in the transition from the late-New Order to the early-Reformasi era as Lamboya People asserted their customary rights and took action to decolonize.

Communities are sometimes willing to grant permits to outsiders. In some cases, the communities reach consensus about transferring their rights. Yet, the community's sentiment can change over time, as in the situation at Marosi Beach. In tenure dealings, differences in opinions exist within communities, the relative power of the actors involved may influence decisions. For individuals and subgroups within communities who are less powerful, their wishes to consent or not consent to changes in tenurial relations may lead to their loss of access to vital resources and meaningful spaces. This experience with changes in tenure can be a source of stress. In yet other cases, communities, segments of communities, or even individuals within them change their minds.

Local residents prioritize historical and genealogical connections to place and believe that, as descendants of the original settlers to the area, they are the rightful authorities. They believe that, even when they have given a company the right to use water and land, that they should be able to rescind the agreement. More specifically on that point, Lamboya believe that if a permit holder does not use the property for a significant amount of time, then they forfeit their rights and control returns to the previous owners. The Lamboya People considered themselves to be the legitimate rights holders to Marosi because they were actively using the property. Lamboya People's continuous use legitimizes them. Sutera Marosi Kharisma is delegitimized because of its non-use in addition to its non-local identity. To the contrary, the water grabbers and their enablers in the government, military, and police believe that legal documents and federal laws justify their activities. The case of Marosi Beach illustrates that one characteristic of legitimacy is that it has different parameters when looked at from differing perspectives (Pardo and Prato, 2018); specifically at Marosi, from point of view of local community members who live in the sites where water grabs occur versus from the point of view of the people who are acquiring water.

DISCUSSION: MAKING AND REMAKING FRESHWATER IN A CHANGING CONTEXT

When are claims of water grabbing considered to be legitimate or illegitimate, by whom and why? The characteristics of water

itself—its ephemerality, changing volumes, movement through landscapes, sources and sinks, mobility—can make it difficult for claims of unjustifiably grabbing it to be seen as legitimate. As Franco et al. (2013) put it, “The fluidity of water (and dislocated effects of water grabbing) and the “invisibility” of customary water rights systems can complicate the task of “framing” water grabbing as really happening and as an injustice warranting a serious and systematic political response.” To water’s character, these authors add the status of customary water rights as a systemic cause of water grabbing.

In Indonesia customary land rights (*hak ulayat*) are not only visible, they are also guaranteed by the Constitution and subsequent legislation. Moreover, the visibility of customary rights has increased during the Reform Era. Thus, even when customary rights are visible they are not always considered legitimate. And even when customary rights are deemed legitimate in legal documents, the rights holders are not always treated justly. Indeed, national governments might formally recognize customary rights, and yet still the system does not always work in the favor of the rights holders (Franco et al, 2013) partly because absentee national governments cannot properly manage rights that operate at the local level within traditional systems. Exacerbating the problem, systems such as Indonesia’s endorse alienation by providing land tenure permitting for non-customary owners in ways that ease the transfer of ownership away from customary communities (Franco et al, 2013). Government’s take-over of tenure arrangements may look past local tenure systems and complicate traditional tenure by causing disfunctions within the traditional culture, such as eroding women’s rights.

The legal structure within which water grabbing occurs on Sumba is connected to the legal framework for land tenure and rights in Indonesia. Many of the situations where transfers of tenure and access to freshwater occur are plural-legal ones that are “characterised by the coexistence of varied and diverse regulatory frameworks and processes shaping who gets what kind of access to which water resources and for what purposes” (Franco et al, 2013, page 1656). In each of the constituent legal systems, legitimacy and illegitimacy are differentially defined, determined, contested, and negotiated.

When regimes of legitimacy change, freshwater resources also change. Since pre-colonial times, Sumbanese communities have engaged with their neighboring on-island communities as well as with external political ecological entities and forces by responding

and adjusting to them, accommodating and resisting, including and excluding, and adopting and rejecting particular components of them. On Sumba, as elsewhere in Indonesia, the environment is a playing field where people work through the legitimacy of the co-existing adat, colonial, postcolonial, and developmentalist political ecologies. This peculiar but not unique set of regimes of legitimacy that operate on Sumba has tangible and intangible effects on customary communities’ sovereignty as well as rights and access related to natural resources, including freshwater as has been the subject here in this paper. The political context surrounding freshwater resources influences the barriers to and affordances available for the equitable and sustainable management of water, the protection of water quality, and the conservation of freshwater biota.

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