

Uprooting the *Mosalaki*: Changing institutions and livelihood impacts at Kelimutu National Park

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ABSTRACT

Studies on interactions between national parks and Indigenous Peoples in Indonesia have gained much attention in recent years, which mainly examine eviction, boundary disputes, and remediation. This research focuses on changing institutions since the establishment of Kelimutu National Park, foregrounding socio-cultural and livelihood impacts over time. This study involves in-depth interviews, FGDs, and observations from April to May 2019 and revisiting in November 2021. Findings highlight changing traditional institutions (*Mosalaki*) uprooted by the formal National Park governing authority. Such transitions also shift governing authority over natural resources access and control in ways that negatively affect the livelihoods of the Lio people of Kelimutu.

KEYWORDS

Kelimutu National Park; *Mosalaki*; Traditional institutions; Local authority; Livelihood.

1. INTRODUCTION

“I sometimes wonder whether the existence of the national park is the reason behind the loss of the local seed. We have to be honest and have to see it objectively. I often say this, if we don’t wear this green uniform and stand in their position, I might also choose to fight. We would definitely protect what we consider belonging to us.” (Interview Senior Officer of Kelimutu National Park)

A multitude of studies have sought to explain the relationship between national parks as a conservation area with local/indigenous communities that live in and around national parks in Indonesia (Acciaioli, 2008, 2009; Afiff & Lowe, 2007; Lund & Rachman, 2018; Roslinda, 2018). Many of the studies focus on conflicts as they flare up, usually the kindling and outbursts of violence and dispossession (Bakker & Moniaga, 2010; Clifton & Majors, 2012; Fatimah & Sahide, 2019; Ping, 2007; Yusran et al., 2017). These studies tend to focus on the most symbolic or material dimensions such as tenurial or boundary conflicts and governance disputes that create grievances to local/indigenous communities. Other more normative approaches set out to examine and propose approaches for conflict resolution through forums such as collaborative management, community-based protected area management and others (Anugrah Sari et al., 2020; Dhiaulhaq et al., 2015; Fisher et al., 1999; Indrawan et al., 2014; Nistyantara, 2011; Wood et al., 2014; Yamauchi, 2005). Another strand of studies also delve into the struggles of authority over access and control on natural resources in conservation areas, particularly between traditional authorities (adat) with state authorities (Afiff & Lowe, 2007; Myers et al., 2017; Myers & Muhajir, 2015). This research seeks to examine the longer-term changes over local authority that have taken place in a National Park,

particularly around the erosion of local authority relative to state claims of protection. We argue that doing so provides better ways for understanding conflict in conservation areas, particularly by highlighting how institutions have changed over time as precursors to understanding conflict. The empirical approach herein allows us to identify the different ways that new trajectories of authority have positioned a given conflict long before contentious situations occur in the present.

This research will explain how the process of changing authority over control and access to natural resources has changed the cultural, social, and livelihood institutions of local/indigenous customary communities in Kelimutu National Park. Our research focuses on how the traditional authority over resource management has been challenged and redefined by state governing authorities, and highlights the extent to which this change has affected the lives and livelihoods of local people in and around the National Park.

2. NATIONAL PARKS IN INDONESIA AND THE ESTABLISHMENT OF KELIMUTU

In the formal hierarchies of protected areas in Indonesia, the National Park is the forest management type that holds the highest form of state authority over an area. It is not only believed to be an effective apparatus in attaining conservation outcomes, National Parks also hold deep connections of value to a nation's identity. However, the establishment of National Parks around the world have also been fraught with conflicts between state authority/national park managers with local communities, in both latent and manifest forms (Hecht & Cockburn, 2010). Currently, there are 54 national parks in Indonesia located in all the major islands (Sumatra, Java, Bali & Nusa Tenggara, Kalimantan, Sulawesi, Maluku & Papua), with varying scales and sizes, as well as types (terrestrial and marine) (Direktorat Jenderal Konservasi Sumber Daya Alam dan Ekosistem, 2017).

Many Indonesian National Parks also have long standing generational forms of authority established by local/Indigenous communities as common pool resources (CPR). These CPRs are governed under traditional authorities of peoples that have lived in and around these areas and continue to depend on them. Since state authorities introduced resource management forms like the National Parks system, conflicts have regularly occurred over the terms of authority and allowable practices at these sites. The causes of the conflict typically relate to different approaches to managing resources and border disputes (Anshari, 2006; Eghenter et al., 2006; Putri, 2017; Yasmi et al., 2007). In several Parks/protected area, studies have shown that when the state authority claims and manages resources that were previously managed as CPR, it always comes with state authority appropriating traditional authority, which among others takes away authority over resource governance from traditional institutions and further sets in motion pathways of exclusion for local communities (Hall et al., 2011; van der Muur, 2018). Studies also show that the shifts in authority through appropriation over a resource over a longer period of time has changed how communities relate to a given resource, particularly governing the ways and extent that communities can make use of them (Batiran & Salim, 2020; Sirimorok & Asfriyanto, 2020).

Kelimutu National Park provides a unique case study in this light. The Park was established in 1997 based on Minister of Forestry decree No. 679/kpts-11/1997, in 1997. The park stretches over 5,356.5 ha, which covers 24 villages in 4 sub-districts within the District of Ende. Before the establishment of the national park, the area was designated as a Nature Reserve of Sokoria and Kelimutu tourist Park. Since the beginning, the determination of the boundary establishment for nature reserves and natural tourist parks, which later became the Kelimutu National Park, has drawn local

polemics among the community, especially the surrounding communities whose plantation lands were included within the Kelimutu National Park boundaries. The Park's establishment led to state-driven appropriations over areas that were essential to local livelihoods and served as sites of ritual among Indigenous communities. Such traditional authority has for generations managed access and control over the forest, land, and water within customary territories (*ulayat*). Kelimutu National Park is also one of the National Parks with a long history of conflict between Park managers and surrounding local communities. Our historicized framing of claims and contestations over authority seeks to better contextualize these conflicts.

Until now, there are still many conflicts between the National Park Office and Indigenous Peoples. Indeed, one National Park officer expressed that there are still farming activities carried out by villagers in the area. These activities were usually then followed up by the National Park Office with security action against encroachment by farmers, such as what took place in the villages of Saga and Woloara, and the Toba hamlet, where farmer huts were dismantled and destroyed. Today, in the Village of Saga, villagers claimed they have approximately 100 hectares of coffee groves that are still included within the Kelimutu National Park area. The land is cultivated by around 70 families.

3. SHIFTING AUTHORITY, SHIFTING LIVELIHOODS

We examine the appropriation over forest and land in Kelimutu through a lens of local livelihoods, which we adapted from a framework of sustainable livelihoods analysis (SLA) (Scoones, 2015). The approach is particularly relevant to the context in Kelimutu because it is able to capture (1) the institutional changes stemming from the appropriation of authority; (2) the effects of changes governing the terms of access and control over resources; which in turn affects (3) the livelihood strategies undertaken by villagers. In this way, we also set out to explain (4) the resulting outcomes of the various strategies employed, and (5) the wider contexts of various conditions, trends, and policies affecting the analysis as a whole. We are especially focused around key moments that established precedence over terms of authority, which set in motion new trajectories over what was acceptable, and thus what evolves to become possible in governing the landscape.

The appropriation of CPR governance authority by the state often brings about institutional change. Institution here is understood as the “rules of the game” while the organization refers to the collective actors; in this context traditional rules are replaced by formal state ones, or converge to shape polycentric new ones (Schlager & Ostrom, 1992). Such new forms of governance are especially observable in the way new (formal) organizations replace the informal ones via legitimated force, territoriality, (Sikor & Lund, 2009), or through banal everyday bureaucratic administration systems (Lund, 2021). The institutional change in CPR governance changes the way local people are able to access and control the CPR, particularly in this context of customary land (Ribot & Peluso, 2009). When a formal management system replaces the informal one, it may lead to an outright expulsion out of the land, partial access, or partnership access (McCarthy & Robinson, 2016). Even when customary systems are recognized, formal systems of authority can supersede local authority (Fisher & van der Muur, 2020).

The shifting authority toward the state demands that local people adapt to the new access system of the CPR. Enclosures have also been a central feature of National Park establishment around the world, transitioning local abundance into forced acceptance of the local people to make do with remaining and oftentimes limited resources (Adams & Mulligan, 2012; Adams & Hutton, 2007; Mendoza et al., 2020). This results in formulation of new subsistence and livelihood strategies, which communities may

pursue intensification, diversification, or elect for outmigration among part or all of household members. Cultivators may change their farming systems, or relocate farms to other places. The SLA approach selected for this research, as we will show, added in the key dimensions of livelihoods, situated within crucial political economic questions around: who does what? Who owns what? Who gets what? (Scoones, 2015), what do they do with these benefits, and how are ecologies reshaped as a result (Hall et al., 2015).

4. METHOD

The study was conducted among 34 key informants through interviews and 9 FGDs with local villagers (men, women, and youth), traditional institution chiefs, village government, NGO staff, and National Park officers. We collected data from three villages surrounding the Kelimutu National Parks, namely Village of Saga and Niowula in the Subdistrict of Detuseko, and the Village of Pemo in the Subdistrict of Kelimutu, all within the District of Ende, East Nusa Tenggara province, Indonesia. Along with the in-depth interviews and FGDs, we also carried out observations in the three villages and other areas around Kelimutu National Park. Fieldwork was conducted in April and May 2019 and revisit in November 2021. Informants were selected through a snowball approach based on the previously interviewed informants. The semi-structured interviews were applied around the topics of change in land governance and institutions, informants' views on the change, the extent and effect of the change on the local villagers, all situated within a political economy and livelihoods framing. Interviews ran from approximately 60 to 120 minutes for each informant.

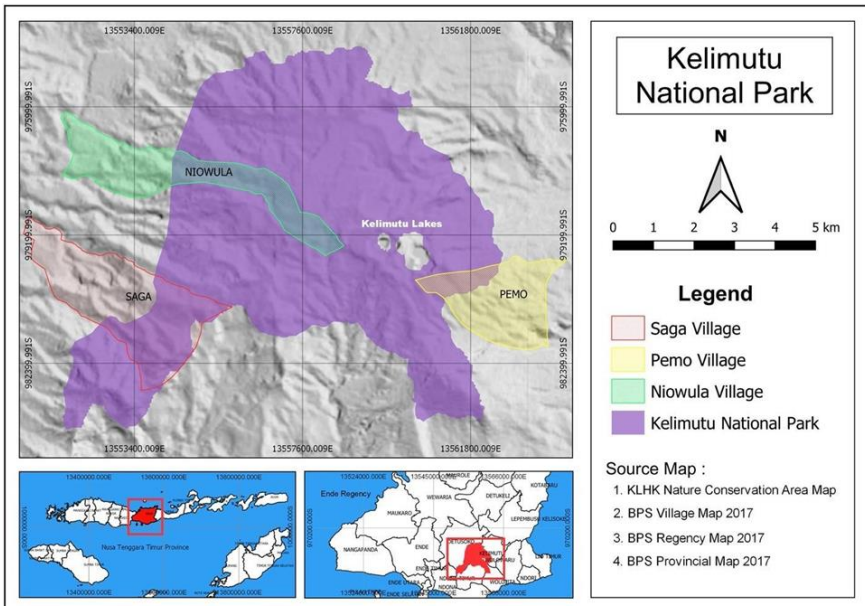


Figure 1. Map of the Kelimutu National Park and three research villages

The villages of Saga, Niowula, and Pemo are among 24 villages situated within and surrounding the Kelimutu National Park. The customary village of Saga is a settlement of the Lio-Ende people. Covering an area of 11.06 km square the village is part of the Detusoko subdistrict, in the District of Ende. Saga is located around 13 km from the central town of Detusoko subdistrict and 25 km from the central district town of Ende.

The village comprises of three hamlets (sub-village) with 668 inhabitants (Badan Pusat Statistik Kabupaten Ende, 2020). The Village of Niowula is also located in the Subdistrict of Detusoko, with a size of 6.25 km square and a population of 518 people. It is situated around 7 km from the subdistrict town and 28 km from the central district town of Ende (Badan Pusat Statistik Kabupaten Ende, 2020). Meanwhile, the Village of Pemo is the location of the famous three-colored calderas of the Kelimutu mountain top, which draw 91,219 tourists a year (2018 numbers) (Badan Pusat Statistik Kabupaten Ende, 2019a). The village size is 9.38 km square and inhabited by 375 people dominated by farmers, comprising three hamlets: Nua Ria, Wolomuku, and Sigo. Pemo is situated 14 km to the west of the central town of the Subdistrict of Kelimutu, and 64 km from the central town of Ende. With an approximate elevation of 960 meters above mean sea level, the village is dominated by hills and slopes (Badan Pusat Statistik Kabupaten Ende, 2019b).

The Lio Ende peoples, a group of communities that live around the Kelimutu mountain, have long been governed by a traditional institution, the *mosalaki*. The *mosalaki* is a council of customary institutions (adat) composed of representatives responsible for certain affairs for the community. Each customary community in Ende has their own *mosalaki* council.

We analyse the data by first looking at differing perspectives among the local people and the government on the National Park, followed by further explanation on how the local institution governed the CPR prior to the arrival of the park. In the next sections we will discuss the institutional change that occurred around the establishment of the park, which include the loss of the *mosalaki's* authority and the resulting change in access and control of resources. Each of these sections will present relevant quotations from stories told by informants, some are rather lengthy, to capture the nuance of their perspectives. The final section will explain the impacts of the park management to local livelihoods, namely the livelihood strategies that the local people are forced to choose and the outcome of such strategies.

5. RESULTS AND DISCUSSION

5.1 Perspectives on standing of the Kelimutu National Park

Despite the National Park Office claiming that they have conducted consultation with the local people before the designation of the park, the villagers said that the consultation was only done with the village elites, the village head, and certain *mosalaki*. After the consultation, the park establishment was then claimed to be supported by the local people, and the 5,356.5 ha of forest was thereafter fully under the authority of the national park office. The following perspectives characterize the establishment and processes of exclusion from three key perspectives:

"[Park] establishment did involve the mosalaki, but there was never a public meeting held in defining the boundaries, and no information was disseminated about the plans and extent of the park. But because it occurred during the New Order [authoritarian] era and the people staking the boundary posts received incentives through payment, they were willing to stake the posts as they were told. The policy then still allowed us to move through the area freely, but after it became a National Park, they began banning people from entering. Finally, we did protest by planting onions within the park area, but our struggles to free our land have failed, over and over." (FGD Saga village male participants)

"From discussion with the people, they said that even the Dutch colonial government came to meet the adat (customary institution) representative in the adat hall with a goat [as present] to discuss forest boundaries, and at the time

the Dutch and adat representatives agreed on areas where people were allowed to enter and where we were not. There are boundaries between the forest area with areas designated to belonging to the people. When the New Order government came in, this kind of process was abandoned, but [when] we tried to meet and discuss with the park authorities, they said that they have done [the consultation] with local customary people. Their claim was strengthened with signatures of meeting participants, but we don't know how they obtained those signatures [...] Then when the posts were staked, people's croplands were still within the park area, which created a protracted case of conflict. The park office continues to hold on to their regulations, the [consultation] agreements, and national laws, and the people continue to claim their adat law because they have lived in the area for generations.” (Interview an NGO staff).

“When they talk, time and again, they say they have never been involved in the boundary establishment. When we talk, we are always backed by data. [And the data says] there was a process that involved the elders, involving their mosalaki. But how did the process exactly take place? We also don't really know. All we have now are these written documents to work from. And in no way can we say that the procedures were incomplete.” (Interview with Balai Taman Nasional Kelimutu (Interview the Kelimutu National Park Management)

5.2 The roots of *Mosalaki* traditional authority on natural resource management

The *mosalaki* not only manage adat rituals but also rule over and manage the access to a customary territory (ulayat). Therefore, in general, the *mosalaki* governed the public affairs of the Lio people. The *mosalaki* typically consist of several people (the number varies across communities), and each member of the *mosalaki* has different functions. For instance, in the Village of Saga, they are: 1) *mosalaki pu'u*, the chief of *mosalaki*, responsible for several functions/roles: act as *koe kolu* (litt. break the soil, and put the seed into it or place the first stone of a new house; *tedo uma*: *mosalaki's* fields should be planted first with food crops; *kema sa'o*, constructing a building especially the wooden adat hall building, the main post should be touched first by the *mosalaki*; and lead several other rituals such as *poka au*: cut bamboo poles for the election process new *mosalakis*; *sewu api*: a rite for recovery from fires that burned houses or croplands; and *sumba una*: rites to avoid epidemic for human and crops. 2) *Mosalaki ria bewa*, acting as a judge. 3) *Mosalaki koe kolu* functions as supporting the other *mosalakis*. 4) *Mosalaki loge bote*, distributing food and liquor (*moke*) to the *mosalaki* during the construction of the adat hall. 5) *Mosalaki wunu koli*, cutting trees for the adat hall construction, killing the animal for the banquet, cooking and distributing the meat to other *mosalakis* and all the *ana kalo fai walu* (the people) who work on the construction of adat hall. 6) *Mosalaki kebe sani*, lead the preparation of the sacrificed pigs when the wall of adat hall is broken. Finally, each of these *mosalaki* members have rights and responsibilities over their own area within the adat community.

For a long time, *Mosalaki* had traditionally managed the Sokoria forest, which was later designated as the national park area. *Mosalaki* play a major role in the lives of indigenous peoples, from the distribution of cultivation land for people to traditional ceremonial matters, all are arranged by the *Mosalaki*. Important activities related to land, water and forests carried out by people must be known by *Mosalaki*, otherwise, the activities will be considered a violation of adat rule (such as prohibition of cutting trees around the spring) and subject to customary sanctions. The plots of land cultivated by the villagers are “given” by the *mosalaki*. Long before, the *mosalaki* had divided the forest and the surrounding areas for various needs of adat and Indigenous peoples. The traditional adat land use is divided into several parts, each indicate

different function.

Table 1. Traditional land use parts

Parts	Description
<i>Keli</i>	Forest where big trees grow, that produce timbers used for houses and adat hall
<i>Uma Kolo</i>	The sacral site to present offers for the ancestors' spirit. The sites usually contain big trees, sugar palm trees, and bamboo. Except for bamboo, tree cutting is banned on this site.
<i>Uma</i>	Cropland
<i>Nua</i>	Settlement areas
<i>Bhoa</i>	The area where rope plants grow.
<i>Muru</i>	Slope areas where water runs, unselective tree cutting is also banned in these sites
<i>Ri'e</i>	Flat areas at the brink of ravines, where trees and bushes grow.
<i>Biri</i>	Slopes that are deemed unsuitable for cultivation.

The adat land use was governed by the *mosalaki*. The people only have the rights to cultivate and occupy the land, and not to sell. The traditional land use rights dictated that one's land can only be directly handed over by passing it down to one's children. However, the use rights can only be passed down to the sons, while the daughters can cultivate the land as long as they are not married, otherwise they would join their husband's family. Thus, if a daughter is not married, she can continue to cultivate the land.

The *mosalaki* have several adat rules for the use of common pool resources, such as:

- The construction of adat hall has to use *mai keli dua ngara* wood that can only be cut from specific spots and have to be discussed through a public meeting.
- Pire* is the prohibition for the villagers to do certain activities for certain days (vary across communities) such as doing activities at the farm, weaving, drying clothes outside the house, sweeping house yard, touching and picking leaves, cooking or burning outside the house, etc. Violations of these rules are subject to different amounts of fine of pigs, based on the degree of the violation.
- The prohibition to cut trees in water spring areas or in the forest area prone to landslides.
- Not allowed to cross the boundaries of other people's land. If a violation occurs, deliberations will be held to resolve the problem. The sanctions are following the results of deliberation.

5.3 The *Mosalakis* The National Park Management

People in Saga can remember how the conflict over Kelimutu's forest started in 1984, when the forestry authority staked poles to mark the nature reserve and tourist park in Kelimutu. Since then, the people are formally barred from accessing the land that was their adat land. But the people were still able to cultivate within the protected area secretly, where they planted garlic, corn, rice, and pumpkin. In 1987 the people were effectively excluded from accessing the land due to strict enforcement by the Natural Resource Conservation Office. The conflict continued when the area shifted from the nature reserve and tourist park to Kelimutu National Park. As a conservation area, it is closed for the local people, although they had been using the area for generations. And the conflict escalated.

"In 1997-98, we rallied in front of the district house of representatives and the head of the district office. Although the rangers told us [not to cultivate within

the area], at those early years we still cultivated our croplands as we used to, covertly. In the 2000s, one of the farmers from our village was captured by the rangers after a quarrel because he was caught while harvesting his coffee. The ranger told him to stop, and because the farmer was upset, he threatened the ranger with his machete. On this allegation, he was sent to jail.” (Interview, elder, Village of Saga).

“Here, since 1998 up to the 2000s conflicts continue to happen between the local people and the national park management.” (FGD, male participant, Village of Saga).

“Well, I think it does not only happen in the Kelimutu area. The forest management is roughly similar all over Indonesia. So, during the New Order era, the approach was different from what it is now. So, they (i.e., local people) think it is still similar to what happened in the past. Especially the elderlies, they still think that when they get in [to the park] they will certainly be caught.” (Interview Kelimutu National Park Service Office Staff)

5.4 The National Park undermining *Mosalaki’s* authority

Since the establishment of the Kelimutu National Park, and the Balai Taman Nasional Kelimutu/BTNK (Kelimutu National Park Service Office) as the manager of the park; the forest, land, and water within the park has been under the BTNK authority. Many parts of the area are the *ulayat* (customary land) or the local people’s land, whose access rights was distributed to the people by the *mosalaki*. The process to replace the authority in governing the CPR access and control in Kelimutu started. This authority dismantling is followed by conflicts as explained above. Since the authority in governing land use of the Kelimutu area was held by the BTNK, the *mosalaki’s* authority effectively vanished.

“Each time the TNK built something in Kelimutu, they never asked permission to the mosalaki, although they did it within the adat area of the Pemo. What is correct is that anything built by the TNK within the park should call upon the mosalaki to lay the first stone. Pig or chicken blood should be spilled before the construction.” (Interview, villagers of Pemo Village).

“The management, land distribution, and prohibition to cut trees in a random place, especially around the springs, ruled by the customary (adat) chief [mosalaki]. But now the adat institution only takes care of adat ceremonies. The Adat [institution] was able to distribute a plot of land for each family, but now, they cannot. We were also able to organize rituals in certain spots within the park, such as rituals to ask for rain. Now it is prohibited, we are no longer able to hold the rituals there.” (FGDs, female of the Village of Saga).

The appropriation of the *mosalaki’s* authorities in governing the forest and land went even further with delegitimation of *mosalaki* in several aspects of the life of the Lio Ende people, such as land distribution, rituals, etc. This will be our focus in the next section. One of the reasons was the absence of adat rituals and rules related to use of land and water in which the *mosalaki* formerly played central roles.

5.5 Further weakening *mosalaki’s* authority

Among the effects of the deprivation of the *mosalaki’s* authority are sociocultural effects. The *mosalaki* lost their role and relevance in the community. The strongest relevance of the *mosalaki* to the local peoples was the management of the CPRs use. When the *mosalaki* no longer held the authority, they lost the legitimacy among their

people.

"The impact to the current life of the people is that most of the ancestors' legacy is vanishing. One of the most observable one is that now only a small part of the people is still listening to what the mosalaki say and are willing to follow. The custom that is missing now is regarding the mosalaki decision. In the past, whenever the mosalaki made a decision, all people would obey. When the mosalaki say A, it should be A. It was different from what it is today, [where people often say] "excuse me, I want to speak." It wasn't like that. There are forums where people can say something, and the forums where anything said by the mosalaki should be listened to and obeyed, so there were no more comments. Today, since the establishment of the national park, the mosalaki have lost some degree of respect from the people." (Interview, village office staff, Saga).

"When we talk about adat today, many of its governing values are gone, one of which being regarding the rice, the rice then should be acquired from the forest, [but] it is no longer allowed, whereas it was one of our obligatory acts because the spot in the forest is home to our ancestors, and the rice is a gift from him/her. Every nine months we would do a big adat ceremony there, and now what would the ceremony be held for? Our elders did the harvest ceremony because the rice harvest was plenty, so was the corn. The unhusked rice which was tied together in bundles of different shapes, and are now disappearing, were made for that [ritual]. The ceremony was held as gratitude for successful harvests. And today, what is left for us to be grateful for? The land and forest are no longer open for us. For a month the people would enjoy the harvest. In that one month, we stay home to relish the harvest from the forest, we are not allowed to go to the field, and burning is prohibited. Today, the old types of rice we planted are gone, extinct, and we have to buy rice from outside [of the village], but even if they are available where would we plant them? The land that is now a stretch of bushes was our rice fields. During the rice planting season, people plant rice or corn, after that we planted onion, and after the onion, if we go there, all we can step on was cucumber and pumpkin. If we go there today, all we can see are the remains of our huts, where we had lived. There is wooden mortar there, where we pound the unhusked rice. In the afternoon we would all go home there; several men would stay behind to look out for the boars. There was a sound collective action. All are gone now, and it looks like that is what the government wants." (Interview, male, Saga)

Along with the reinforcement of the national park management regulations, *Mosalaki's* position as a traditional authority is increasingly being uprooted. These new dynamics stir the people away from the *mosalaki* rules and power. Many of the adat rules and their sanctions are no longer obeyed. The adat rituals are increasingly difficult to be held because their needs, such as foodstuff (rice, corn, pumpkin), and timber (for adat hall) can no longer be acquired. Adat ceremonies that are held today, according to the people, are not as sacred as it was because all the ritual needs are bought at the marketplace, whereas the meaning behind this ceremony is a gratitude for successful harvests. The designation of the Sokoria forest as part of the national park, for instance, changes the social outlook of the Lio communities. Interview with the *mosalaki* of the wolomoni community in the village of Niowula shows that wolomoni people, since 1992, have stopped to carry out the *patika* ritual (the ritual of feeding the ancestor, the prime ritual of Lio community). All their adat halls have been ruined and they are unable to rebuild them due to the park regulation. Following the adat rules, in the construction of the *sa'o ria* (adat hall), they have to use timber from a predetermined site in the forest.

And they are given hints through a dream by their ancestor spirits to select the wood. According to the national park management, they have helped to rebuild the adat hall, but the local people consider it not sacred for it is mostly constructed using bamboo.

These instances led a *mosalaki* in one of the adat communities to say that since the national park was established, the *mosalaki* lost their authority over the forest, for they are no longer able to build adat hall using the timber from the forest because the national park bans them from cutting trees in the park. Today, the *mosalaki* only hold authority over limited types of traditional ceremonies. The national park that comes with the state legitimation has taken away the *mosalaki's* authority.

5.6 New rules of the National Park vs. local livelihoods

The forest was the main source of livelihood for the Lio communities. For them, to exclude them from accessing the area is “similar to a deliberate killing”. Traditionally they have strong ties to the forest and surrounding areas, as well as the famous Lake Kelimutu: the forest is their source of life, and Lake Kelimutu is believed to be the place where all the Lio's dead spirits are living.

“Our adat land projects our bodies. There is a head and legs. If they cut our head [adat], we are finished. If they ban us from cultivating our land, our adat is vanished. Maybe after me (i.e., my generation), all the adat [rules] are totally gone. That is our life now, the land represents our bodies. Look at us, our adat settlement looks like this and we cannot improve. The economy involves food, cloth, and house. Those timbers are bought from the outside, even the coconut trees. The types of plants that the adat protect are diminishing. The area where they grew, the people have cleared them to be cropland. The tall grasses and palm trees for traditional houses have increasingly become rare. People have cleared the area for permanent cropland (because their previous lands where they can do rotating cultivation have been included in the park). When we left the fields and moved to the new ones, many plants grew on the old fields, including krinyuh [Rumput minjangan/Chromolaena odorata]. The tall grasses would also grow there, become a savanna and we protect them. We did not put our buffalo there, instead, we put them in other spots. Now the savanna is gone, but the factor is not only that, there are many factors [for the lost].” (FGD, male participants, Village of Niowula).

The establishment of the park service office as the authority that manages the forest and lake Kelimutu made a huge impact on the Lio people. An informant said that there are positive effects but the negative ones are also significant, one of which is that many park regulations are violating the adat of the Lio. The park regulation is mainly understood by the people as merely prohibition, and it is considered unfriendly to the local traditional rules. The Park regulation range from the prohibition of boar hunting, prohibition to cut trees [to build adat hall], fetching fuelwood, to cultivating the customary land in the park. These park regulations create a range of problems to the local livelihoods.

The boar hunting tradition is done for at least two reasons: first, the boars are considered as a pest for the crops so the hunting was done to minimize the risk of harvest failure; second, hunting is a part of rituals where the boar killed would be consumed collectively during rituals. This tradition can no longer be carried out and the people are overwhelmed with controlling the boars' population that often becomes the main reason for their harvest failure.

The prohibition to cut trees [to build adat hall], to collect fuelwood, and cultivate the customary land in the park, also spark grievances among the people. For instance, the people lament that they should be allowed to cut trees to repair the adat hall which

would only be done once in 6-9 years, with only a small amount of wood.

“But the hunting prohibition for me is unsuitable because it will bring difficulties to the farmers. Even when we need cassava, we have to buy them because if we plant them in the field, the boars will eat them all even before they are mature enough. It was not that difficult when we were still allowed to hunt, the boars were afraid to come near our fields. The last time I was hunting was when I saw the village head captured by the TNK rangers, the village head shot a ranger with an arrow. Luckily, he missed, and the village head was not detained by the police.” (Interview, male villager, Pemo).

A female informant said that many of the park regulations bring complications to the local peoples' life.

“I still remember when I was only a girl, my parents had a field in the area that is now the national park. My parents planted rice, followed by corn, and vegetables. The ranger patrol post, the road to Kelimutu, [both] were not there yet. The location where the ticketing post is now was our fields, where we planted rice, corn, cassava. In the 1990s, we could still collect firewood from the forest, but now it is forbidden. When we are no longer allowed to cultivate in the park, we only cultivate on the remaining fields within this village which are not part of the park. Before the PPA [Perlindungan dan Pengawetan Alam/Nature Protection and Conservation Office] and the National Park came, I could still plant coffee, corn, rice, cassava, and potatoes. One time the ranger came to us and said, “This land has become the government's land, you can no longer cultivate here.” (FGD, female villagers, Pemo)

Since the park regulations are enforced, the people face difficulties in collecting fuelwood for their own needs, especially when they prepare a party or ceremonies that need fuelwood in larger amounts than daily needs. The fuelwood availability in the village outside the park area is inadequate so they have to secretly come into the forest to collect the wood. A female informant stated that the prohibition to collect fuelwood in the park has created unnecessary problems.

“They forbid us from collecting firewood, where else could we look for firewood around here? For example, if we are arranging a wedding party, we try looking for the wood around here, but there are no more, so we have to collect them from the forest. But we do it secretly.” (Interview, female villagers, Saga).

The regulation that the people consider to have the most significant impact on the local condition is the prohibition to cultivate their own lands in the park. It became an important factor that pushed the local people to migrate because their remaining fields outside the park are insufficient to meet their needs. An informant from the Village of Saga said that his brother has to migrate to meet their basic needs because they cannot depend on the potentially small plots they inherited from their parents. He stated that they may end up killing each other, among brothers, for a fraction of the inherited land, so the best solution is one of them has to seek other and better livelihoods than counting on the inherited land.

“The people are no longer able to cultivate their land inside the park, only on small fields outside the park. Therefore, if for instance, a family has five sons, if their lands inside the park can be cultivated it will be enough for all of them. But now, we brothers have to bargain with each other on who would have to go out to migrate. If the five brothers rely on the already small field, from which each son cannot inherit one hectare, they might end up killing each other. So, the

solution is that us, the young people, have to migrate. In my case, I have two brothers, if we fight over the small field, we may be killing each other. And if we do distribute the land evenly, and I will have kids, and the divided plots have to be further divided for them, they also may end up killing each other over a plot that may only have 5-10 clove trees on it. Where else can they cultivate [while] our land has been claimed by the national park? With this condition, the people have to think about leaving Saga, because the fields have shrunk. We better go somewhere else to look for better livelihoods. The case resembles the government's transmigration program.” (Interview male villager Saga village).

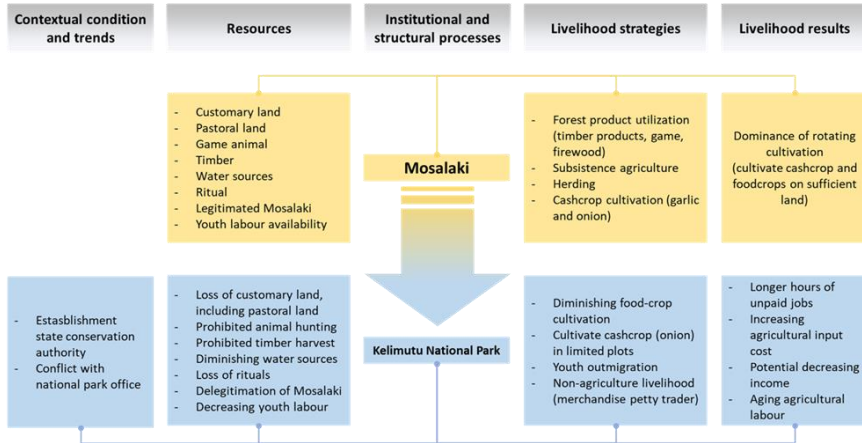


Figure 2. Shifting authority and local livelihoods in Kelimutu.

The loss of the traditional ceremony was also caused by the inability to plant rice and corn that should be offered during the ceremony. The land that used to be used to plant the crops has been claimed by the park, and the ceremony cannot be held using crops other than those harvested in the adat land. Several informants stated that besides the loss of traditional practices and rules related to land use, cause the loss of local cultigens, that diminish their food production and potentially loss of incomes¹, as well as create dependency on food crops.

“We can no longer get timber, cultivate the land, plant onion, carrot, potatoes. The local onion and garlic seed have disappeared, only the neighboring sub-district can maintain theirs, so we have to buy onion from Bima (neighboring island), and in the future, we may also have to buy corn. Our fields are now planted with perennial trees such as coffee, cloves, nutmegs, we can only plant in lower areas, even limited to our yards. Where else can we plant that cassava, corn, we don't have land.” (Interview, female youth, Village of Saga)

“The local tradition is closely related to subsistence agriculture, so they have rituals from the land clearing up to the newly harvested rice consumption. When they stopped subsistence agriculture, the food crop cultivations slowly eroded. some rituals must be done inside the park [...] people cannot access it for a long time. When they can access it now, it already becomes cultural ruins and the sites already disappear or are being moved closer to the settlements, it also changes the customary sites.” (Interview, NGO staff)

¹ This loss needs to be counted in further research.

6. CONCLUSION

The appropriation of the *mosalaki's* authority over the forest and land use has several impacts. These include social-cultural effects: (1) the loss of the *Mosalaki* legitimation in the eye of the local people, which means the people can easily violate traditional rules. (2) The loss of authority to govern the land use, translated into the loss of the local people's croplands, the loss of specific areas to do traditional ceremonies and acquire timber for traditional ritual use, and the loss of authority to sanction violations such as cutting in traditionally protected areas. Erik Olin Wright (2011) suggests that such loss of periodical meetings, and/or rituals around the protection and use of CPR can disrupt the life of the endogenous institutions by eliminating the occasions where the local institutions undergo reaffirmation and socialization of norms and values related to the CPR.

The institutional change also brings about changes in livelihood strategies the loss of access and control of the adat land means that the local people are no longer able to control the boar population, to collect firewood, and are banned from cultivating their land within the park. The result of these is changing livelihood strategies, where the villages see the youth out migration becoming more prevalent, the decrease in both food and cash crop cultivation, and part of the cultivators moving out of the land to work for non-agricultural jobs. Such conditions lead to multiple problems ranging from aging agricultural labor, the depletion of local income and cultivators, to longer hours of unpaid job to look after their remaining cropland, and difficulties in collecting fuelwood.

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