



## Tropical deforestation and the state: Settlement schemes in the Mau forest of Kenya (1991–2001)

Stefania Albertazzi<sup>\*</sup> , Valerio Bini

*University of Milan, Department of Cultural Heritage and Environment, via Festa del Perdono 7, 20122, Milan, Italy*

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### ABSTRACT

Combining interpretive perspectives from political ecology and political science, the article aims to explore the connection between tropical deforestation and the state in sub-Saharan Africa, based on the case study of the Mau forest in Kenya during 1991–2001.

With a high level of detail and resorting to data from documentary analysis, interviews, archives and remote sensing, the article will explain how the loss of forest in the Mau protected area originated in a foreign environmental conservation program, which was later embedded into the political dynamics of the ruling government, through the clientelist distribution of land in settlement schemes.

Questioning the assumptions that see deforestation in the sub-Saharan African region peculiarly driven by small-scale livelihood activities (agriculture, logging), the case study explores state leadership in deforestation, as implemented in close connection with the private sector. The article shows the specific political logic of this type of deforestation, which could be immediately translated into electoral advantages for the ruling government.

The conclusions reached are relevant since the region has seen net growth of forest loss in the past decades and as they offer a contribution to the debate around the ramifications between the state and private entities in deforestation.

### 1. Introduction

The latest report on global forest status stresses the continuously increasing net loss of forested areas in Africa over the last three decades (FAO, UNEP, 2020), with losses being concentrated in Eastern and Southern Africa (FAO, 2020). This article contributes to the debate on African tropical deforestation and on how African post-colonial states used deforestation for political purposes. The period of study—the 1990s—coincides with Western ‘good governance’ reforms (such as multipartyism) in sub-Saharan Africa that, together with pushes from national civil society, induced the Kenyan government of the day to preserve and strengthen its power using forests. Secondly, this paper explores what we call ‘political deforestation’ echoing various meanings of ‘political forest’ (Peluso, Vandergheest, 2001; 2020). Our concept refers to forest loss that brings a direct and immediate political benefit to the ruling government and adds detailed field-based explanations for policy and institutional drivers of deforestation in the tropics (e.g., formal programs, governance, legislations, land tenure arrangements or political regimes; see Geist, Lambin, 2001; McCarthy, Tacconi, 2011;

Mwangi, Cerutti, & Nasi, 2018).

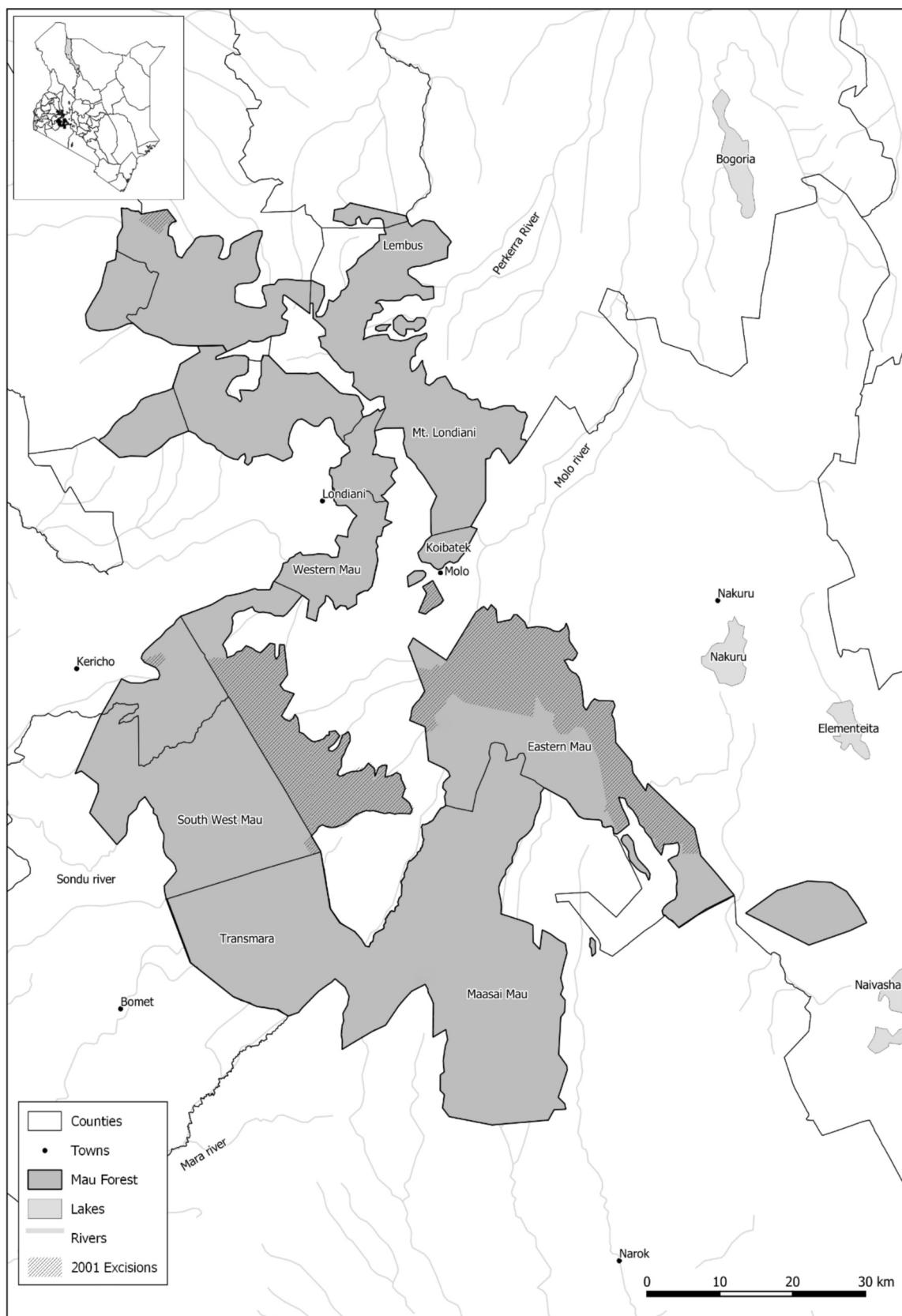
Third, the article addresses the relationship between this state deforestation and other foreign profit (multinational corporations) and nonprofit (international cooperation programs) actors.

As Contreras-Hermosilla (2000) argues, forest loss is not merely land cover change, but a complex socio-economic, cultural, and political event. Deforestation in the Mau forest resulted in the conversion of 60,000 hectares (ha) of protected forest into agrarian settlements schemes. The most affected areas were in the East Mau sectors (ca. 35,000 ha of forest loss) and in the South West Mau (ca. 25,000 ha of forest loss and the topic of this paper) (Fig. 1).

The South West forest sector initially covered ca. 85,000 ha but, in 2001, was formally reduced to 60,000 ha after a government forest excision. The forest currently spans Kericho and Bomet counties and is characterized by montane forest vegetation (below 2,300 m) that gives way to highland bamboo groves (*Arundinaria alpina*), woodland and grassland, and sclerophyllous montane forest (*Olea capensis*, *Podocarpus latifolius*, *Dombeya goetzenii*). The 2001 excision converted the eastern section of the forest into agrarian settlements that are now part of

\* Corresponding author.

E-mail addresses: [stefania.albertazzi@unimi.it](mailto:stefania.albertazzi@unimi.it) (S. Albertazzi), [valerio.bini@unimi.it](mailto:valerio.bini@unimi.it) (V. Bini).



**Fig. 1.** The entire Mau Forest Protected Area showing the sections of South West Mau and East Mau designated for settlement schemes and then excised by the government in 2001 (created by the authors using GoK, UNEP, 2008). Inset: the Mau forest within Kenya.

Kiptororo and Tinet locations (Nakuru county). These newly established settlements are characterized by small farms (0.5–2 ha), mostly inhabited by Kalenjin people, who operate an agro-pastoral system that is strictly dependent on the adjacent forest for livestock grazing and firewood collection. In the last census, the population totaled ca. 72,000 units, a sharp increase from ca. 21,000 in 1999 (CBS, 1999; KNBS, 2019a).

The case of Mau forest in Kenya illustrates how a state project of forest land distribution (1991–2001), assisted by a foreigner forest conservation project, led to deforestation within the country's largest 'water tower.' We draw from political ecology and political science, with a geo-historical approach to contribute to the tropical deforestation debate in illustrating the link between forest loss and direct political gain. In Mau, forest loss was a political tool to bolster consent and strengthen the ruling party of the then president Daniel Toroitich arap Moi (Kenya African National Union Party, KANU) through land distribution to peasants and to the national elite, which was supported by the actions of a development cooperation project that operated in Mau for a specific economic interest.

This article is structured as follows: the next section (2) reviews relevant theory and the study methods. Subsequently, we introduce the research area and the status of the forest sector before the 1990 s (3). Section 4 delves into the creation of settlement schemes in Mau Forest, showing from different perspectives the intertwining of the state and private sector. The remaining section (5) concludes the article.

## 2. Theory and methods

### 2.1. Theory

This paper draws from both political ecology and political science to examine tropical deforestation in sub-Saharan Africa, specifically in Kenya.

Rudel's periodization of historical and global tropical deforestation identifies a first period (from World War II to ca. 1985) during which forest loss was strictly connected to state projects of land distribution or agrarian colonization meant to address rural poverty and potential insurgency (Rudel, 2007; Rudel et al., 2009). In the second period (from ca. 1985 to 2000), companies became the main agents of forest loss, due to conversions to biofuel productions, cattle ranches, and plantations. In the 2000s, global markets, urbanization dynamics, and Structural Adjustment Programs shifted attention away from rural demands, cut public spending, and reshaped state engagement, paving the way for the emergence of new forces to drive tropical forest loss. Tropical deforestation generally follows Rudel's proposed pattern in South America, Central America, and Asia. However, there are divergences in Africa. Subsistence agriculture and fuelwood extraction remain the most prevalent drivers of tropical deforestation in Africa (DeFries et al., 2010; Hosonuma et al., 2012; Mayaux et al., 2013; see also De Sy et al., 2019 on the 1990s), even in light of the global geo-economic processes described above. Some authors use terms like 'exceptionalism' (Fisher, 2010; Rudel, 2013) to denote the peculiar dynamics in this region, where loss still appears to be mainly driven by subsistence activities.

The critical literature has considered links between the state and tropical deforestation in Africa, in particular related to agrarian development and forest policy; important findings emerged also on the links with oil rents and state macroeconomic choices (Wunder, 2003). In the first field, scholars focused on colonial commercial agriculture and timber extraction and their long-term effects on forests (Jarosz, 1993; Scales, 2011). Other studies stress the colonial-to-post-colonial continuities in framing forests as a resource to exploit (Sunseri, 2005) and illustrate Western donors' influence on African state development decisions (Horning, 2018). The forest policy researchers question the 'policy failure explanation' that has been attributed to the environmental management of African states (von Hellerman, 2007) and they investigate the embeddedness of forest policy in power negotiations

between various social groups (Grainger, Konteh, 2007). Therefore, this paper aimed to fill the gap about a tighter and more direct link between tropical deforestation and the state in Africa.

A first element of connection between tropical forests and the state is sovereignty: forest management (forest conservation, forestry and deforestation) is in fact an important tool through which colonial and postcolonial governments assert their control of the territory, as part of what Agrawal called "environmentality" (Agrawal, 2005). The studies on the creation of protected areas are often framed by the territorialization perspective (Vandergeest, Peluso, 1995; Holmes, 2014) and evoke the 'seeing like a state' approach (Scott, 1998). The major role of the state is due to the fact that the creation of protected areas was largely a state prerogative before the current neo-liberal political phase (Brockington et al., 2008). It began with the enclosure and delimitation of a circumscribed space, and the nature and resources contained within it (McCarthy, Prudham, 2004). From the last decades of the 19th century, the state had demarcated certain areas of land for specific uses (e.g., nature or wildlife protection and management) and claimed its sole authority over such spaces. Boundaries, laws and regulations restricted people's access and use (Neumann, 1998; 2004; Adams, 2004; Brockington, Igoe, 2006). Enforcement and surveillance devices allowed the state to extend its apparatus over valuable resources and recalcitrant groups (Peluso, 1993). However, the last decade has increasingly turned toward militarization in conservation marked by the public and private partnership (Duffy, 2016).

The state, however, is a less linear and homogeneous actor than might appear at first glance: different forms of governmental power act at different scales in various fields (Gupta, 2012) and over time evolve in relation to the changing international political and economic environment.

It is therefore necessary to articulate in more detail the analysis of the relationship between the state and deforestation in order to read its specific characteristics and in particular the negotiations between subjects acting at different scales. In this article, we have focused on three layers that played a particular role in the case of the Mau forest, but which invoke broader theories: development policies, with their corollary of electoral consensus; neo-patrimonial strategies of national elites; and relations between nation-states and global capital.

A first element of connection between tropical forest and the state is development, in the forms of projects framed in broader geo-political strategies. De Marchi (2004) sees the assertion of state control through forest removal for economic development in Brazil's Amazonia (1970s-2000s) as 'deforesting territorialization' (eng. transl.). This occurred largely through forest colonization programs, meaning the state distribution of forest land to poor peasants (Kohlhepp, 2001; Peres, Schneider, 2012; Schneider, Peres, 2015; Assunção, Rocha, 2016) and the occupation of what was seen as an 'unprotected and vulnerable' region (Fearnside, 1984; Hurrel, 1991). In another case, state-sponsored ethnic migration into forested spaces was accompanied by specific agrarian and forestry development initiatives (Dauvergne, 1993; Sunderlin, Resosudarmo, 1996; Fearnside, 1997). In Indonesia (1970s-2000s), the relocation of ruling class and military Javanese elite into forested outer islands was meant to foster cultural integration and reinforce state control in the periphery (Elmhirst, 1999).

A second point concerns the relationship between African governments and natural resources. The debate on the role of rent from the exploitation of natural resources in African states (Magrin, 2013) has been greatly influenced by the notion of 'neo-patrimonial' state, underlying the intermingling of the public and private spheres (Médard, 1990; Bratton, Van de Walle, 1994). This trait was particularly demonized by the Bretton Woods organizations in the 1990 s (Mkandawire, 2001). However, scholars have outlined the nuances and means of state resource appropriation (Bach, 2011), which can follow specific norms of behavior or cultural and social logics (Olivier de Sardan, 2008; Beekers, van Gool, 2012). Critical literatures on the African state underline the importance of clientelism as a fundamental political

dynamic (Bayart, 1989; Médard, 2007). The political exchange between actors possessing unequal resources is bounded by reciprocity and ethnic identity (Berman, 1998). One of the means used as a part of this relationship is land, often imbued with political, economic, and cultural dimensions (Shipton, Goheen, 1992), as well as intricate historical interpretations of past and present claims (Berry, 2002). Land's importance reflects the stakes of sovereignty and ownership (Lund 2011). Indeed, institutional control over land produces sovereignty—when people accept land from an institution, they recognize the institution's power to allocate it and thereby also recognize the institutional entitlement to protect the land.

The third theoretical dimension we want to introduce concerns the relationship between states and supranational actors in what Ferguson and Gupta have called “transnational governmentality” (Ferguson and Gupta, 2002).

Since the 1980s and 1990s, as a result of the processes of globalization and the spread of neo-liberalist doctrine, new configurations of government have emerged in Africa, as elsewhere. They are marked by the increasingly close involvement of the private sector. We can recall the ‘privatization of the state’ (Hibou, 2004) or the ‘indirect private government’ (Mbembe, 2005) to indicate the extensive use of private intermediaries for functions that were once exercised by the state in Africa (i.e., tax collection, law and order, natural resources management).

In this context, therefore, the state seems to be subjected to the projects of supranational actors, not only in terms of International Financial Institutions, but also large international cooperation programs or even private for-profit or non-profit entities that play an increasingly relevant role in the forestry sector. However, this relationship, as Mezzadra and Neilson (2019) have highlighted, is far from linear, and within a context dominated by international capital, states find themselves playing an essential role in “grounding” the operations of capital. In this sense, Mezzadra and Neilson evoke both the theme of the “infrastructural power of the state” (Mann, 1984) and the “gatekeeper” role of states in allowing capital to act on the ground (Cooper, 2002). At a more general level, Harvey's (2003) analysis has highlighted how the dispossession strategies that characterize capital accumulation in the global South necessitate an active role on the part of local governments.

In the case of forests, the state acts by controlling access to protected areas, by allowing some actors and not others to deforest legally, by tolerating illegal forms of deforestation, or even by selectively distributing the “ecosystem services” provided by forests, directing them to the actors most capable of remunerating capital, to the detriment of actors more outside the circuits of accumulation, such as small farmers or, even more so, hunter-gatherers groups.

## 2.2. Methods

This study used mainly qualitative methods, including document analysis and semi-structured interviews. The document analysis included available grey literature reports on deforestation, land allocation and conservation measures in the Mau forest (e.g., Mau Task Force, United Nations Environmental Programme [UNEP], Ministry of Environment, Kenya Forest Service [KFS], Commission of Inquiry into the Illegal/Irregular Allocation of Public Land). We also consulted archival documents at the National Archives of Kenya in Nairobi, the Rift Valley Province Archives in Nakuru, the Daily Nation Archive in Nairobi, and the KFS library at Karura Forest in Nairobi. The data were analyzed using ATLAS.ti.

We conducted 105 semi-structured interviews with local community members from Kiptororo and Tinet locations (Nakuru County). Another 20 semi-structured interviews were conducted with administrators, local KFS rangers, non-governmental organizations (NGOs), researchers, consultants, and enterprises. The community members and KFS rangers also took us on seven hikes in the Ndoinet forest section of the South West Mau (the area closest to the settlement schemes described in this

paper) to better understand the environmental history of the forest. Access to the forest-adjacent villages was mediated by two NGOs and the local Community Forest Association (CFA) based in Ndoinet village (Ndoinet Ogiek CFA). We visited government offices in Nairobi, Nakuru, Bomet and Kericho to collect secondary data on forestry, surveys, land, water, and demographics. Finally, a remote sensing analysis was conducted to study the evolution of deforestation in the area through a land cover classification of the South West Mau (1986, 1995, 2000, 2003, 2008, 2014, and 2019) using Erdas Image, Qgis, and Excel (though the main results are presented elsewhere).

## 3. The South West Mau before the 1990s

The Mau forest is one of the few tropical rainforests in East Africa and the largest closed canopy forest and water tower in Kenya (GoK, UNEP, 2008). More precisely, the forest consists of 22 blocks, occupying approximately 380,000 ha in Kenya's (former) Rift Valley Province. It is the heart of an extended water network that connects western Kenya's major rivers to five lakes (including Victoria), national parks (e.g., Masai Mara and Serengeti) and semi-arid lowlands. The Mau also has social and historical significance, as the indigenous Ogiek groups claim it as their ancestral territory (Sang, 2001; Kimaiyo Towett, 2004).<sup>1</sup>

During British rule (1895–1963), the Mau forest was part of the *White Highlands* (Morgan, 1963), a macro-area reserved for exclusive settlement by British colonizers. The *White Highlands* offer fertile volcanic soil and an annual rainfall of 1800–2000 mm/y, which is suitable for large-scale agriculture and settlements (valuable in a ‘chronically water scarce’ country; NEMA, 2011). Colonial tea (*Camellia sinensis*) plantations and companies such as Finlays Kenya and what would become Unilever Kenya were established around the Mau forests for the suitable climatic and rainfall conditions found in the surroundings of this environment and indispensable to the plant (KHRC, 2008; Karlsson, 2022). Today, these plantations sprawl over 20,000 ha in Bomet and Kericho counties and the multinational tea companies play an important role in the broad public-private partnership working for forest conservation.

The South West Mau was gazetted as a forest reserve in 1932 and became a natural reserve for the preservation of the fauna in the 1960s (Davies et al., 1993). Both colonial and post-colonial administrations over the last century have attempted to limit human presence within the boundaries of the natural protected area. Therefore, the oldest written data on the study area often comes from the correspondence of administrators who organized or reported the evictions of forest dwellers.

In the first half of the 20th century, the South West Mau was known as the Tinet forest<sup>2</sup> and was inhabited by a few thousand ‘Dorobo people’, a term used to identify forest hunter-gatherers groups, including the Ogiek of Mau. The population reportedly ranged from 1,300 to 1,800 and practiced agriculture and husbandry (PC/NZA/2/1/107; PC/NZA/3/1/555). One of the most important evictions of the Ogiek

<sup>1</sup> The Ogiek currently number about 52,000 throughout Kenya (KNBS, 2019b). They are considered by the state as part of the Kalenjin ethnic macro-family (composed of Kipsigis, Tugen, Keiyo, Marakwet, Nandi, Pokot, Sabaot groups), an entity built in the middle of the last century, thus recent, but one that plays an important link in mobilizing people, e.g., at the political level (Lynch, 2011). The Ogiek of Mau claim to have been living in the Mau forest for centuries. Their semi-nomadic lifestyle involves hunting game and collecting wild fruits, roots and honey. From 1940 to 1970, they adopted more agropastoralist subsistence strategies (PC/NZA/2/1/107, PC/NZA/3/1/555; see also Kratz, 1980). During the colonial and post-colonial periods, the Ogiek groups of Mau were repeatedly evicted from the forest and accused of being squatters in a state natural protected area. The African Court on Human and Peoples' Rights recognized the Kenyan state's violations and history of dispossession of the Ogiek in 2017 (African Court on Human and Peoples' Rights, 2017).

<sup>2</sup> *Tinet* is an Ogiek name for a tree.

communities occurred between 1937–1941. However, a sparse population of agro-pastoralists continued to inhabit the forest into the post-independence period. Interviewees described evictions of Ogiek groups and squatters (probably from other communities) in 1975 and 1977. In the early 1980s, the South West Mau received migratory inflows from neighboring districts in the Rift Valley Province. Rumors spread about a forest excision to allocate land to peasants (EC 1/6/11; EC/1/6/13), so the administrative authorities grew concerned about the migrations from Kericho, Belgut, Uasin Gishu, Nandi, and Baringo neighboring districts.

In 1985, the long-expected forest excision finally occurred. The Korao Settlement Scheme (2,733 ha) was implemented at the eastern edge of the South West Mau, and 732 families of forest dwellers were settled from the adjacent forest villages of Kiptororo, Chepkaburot, Ndoinet, Karenteit, Kabongoi and Mariashoni (Bateson, 1993; EC 1/6/14).

#### 4. Settlement schemes in the Mau forest: Layers of analysis

This section analyses the settlement schemes in the Mau forest presenting three different layers of analysis of the state's role in the deforestation process that correspond to the three themes we highlighted in the theoretical section (par. 2.1). The focus of this discussion is the relationship of mutual influence between the state and private actors: first (par. 4.1), we will analyze how an international cooperation program (KIFCON) that reflected the interests of some large foreign tea companies has gained portions of sovereignty normally attributed to the state; then (par. 4.2), we will show how the state has captured this process, turning it to purposes of political legitimacy (par. 4.2.2) and clientelistic power (par. 4.2.3).

From this perspective, the state and the private sector, rather than as alternative actors, appear as poles in a feedback process where the two subjects fuel and capture their actions and outcomes, sometimes leading to the prevalence of internal logic, sometimes to the dominance of external strategies. In this process the state never disappears and it is always in a dialectical relationship with the private sector.

##### 4.1. Pushing for conservation, proposing deforestation: The development cooperation project KIFCON

The Kenya Indigenous Forest Conservation Programme (KIFCON, 1990–1994) was a British development cooperation project implemented with the official objective of the “conservation of Kenya's indigenous forests [...] consistent with maintaining the welfare of the forest-dependent population” (KIFCON, 1991, p. 2). The project was part of a larger macro-family of interventions known as *Forestry IV*, financed by the World Bank, Finnish, Swiss, Swedish cooperation agencies and the European Community. It relied on a £4.86 million grant from the Overseas Development Administration (ODA), part of the British Foreign and Commonwealth Office, and a small amount from the Kenyan Government (KIFCON, 1991; KIFCON, n.d.).

The intervention was conceived on two levels. At the national level, KIFCON organized extensive data collection, forest mapping, planning, and policy development. At the pilot projects level, KIFCON directly intervened in three areas, including the South West Mau, a block whose protection was necessary for the survival of the tea plantations of the multinational companies Finlays and the later Unilever. The project can thus be partly framed within the logics of development that continue to bind former metropoles and colonies and partly as an intervention to protect British commercial interests in the tea plantations bordering the forest.

KIFCON was a complex, innovative, multi-institutional initiative involving the then Forest Department, the Kenya Wildlife Service, the provincial administration, NGOs, local communities and research institutes. It created legislation and policy frameworks to replace those KIFCON considered outdated, confused, and disorganized (KIFCON, n.

d., p. 4–5; KIFCON, 1993; KIFCON, 1993b; KIFCON, 1994). It considered the population to be the most significant pressure factor in South West Mau and conservation plan was proposed after a comprehensive study phase on forest dweller populations and forest uses, biodiversity, and natural resources (producing at least 13 research reports on South West Mau).

KIFCON's core activities in the South West Mau included defining a resettlement zone for all the eligible squatters currently living within the protected area (KIFCON, n.d.). The plan considered resettlement into the eastern section of the forest sector (about 25,000 ha) to be critical to “a lasting solution to the problems of the Mau Forest” (Bateson, n.d., p. 1). The eastern section was targeted since KIFCON considered it to be a disposable, ‘degraded’ area with low-value vegetation cover (conflicting views about the vegetation composition exist, see Davies, 1993; Jackson, McCarter, 1994; Blackett, 1994). Thousands of Ogiek people who had been living illegally and informally within the forest reserve were to be resettled on 5 ha of land per household (Moorehead, 1993). This is an important point: it is an environmental conservation project that identifies a protected part of the forest as a place to resettle squatters, and therefore legitimises the settlement destination of such forest spaces because they are considered degraded and therefore of lesser value.

In 1991, KIFCON took a more active role in the resettlement preparation and was charged with registering forest dwellers (KIFCON, 1991), with the assistance of a few elders in each locality. KIFCON's 1993 census counted 3,793 households corresponding to 18,044 individuals living within the South West Mau forest, of which only 15 % identified as belonging to Ogiek communities (KIFCON, 1995). In the end, the project was concluded in June 1994 and no concrete settlement of individuals took place under his intervention.

Proposing resettlement, defining forest management and censusing the inhabitants are all classically state prerogatives that in the 1990s were transferred by the Kenyan state to an international cooperation project. This aimed at environmental conservation, also aimed at protecting the economic interests linked to the tea business downstream from the forest, but in an ambiguous and short-sighted way, that is, by proposing to allocate part of the protected forest to the settlement. KIFCON operates in the field, works at a policy level and its intervention is repeatedly intertwined with the Kenyan state. The state opens to the arrival of the cooperation project and establishes it at its own central offices (Karura Forest, the headquarters of the current Kenya Forest Service in Nairobi). And it is still the state that validates the work of the project, for example by arranging administrative steps following the census, such as the verification of the people registered – and therefore eligible to receive land and be resettled – by the local Assistant Chiefs, the Provincial Commissioner of the Rift Valley Province and, finally, the Office of President Moi.

On the other hand, village mapping, biodiversity assessments, and touristic and timber estimate studies made available an unprecedented amount of data to the Kenyan state, which until the KIFCON coming was only present through sporadic evictions in the South West Mau.

##### 4.2. The development state in action: The settlement schemes

The first settlement schemes plan in Kenya date back to the last decade of colonial rule. The terms ‘settlement scheme’ denoted an agrarian development intervention where a significant amount of land was allocated to specific beneficiaries (Wayumba, 2019). At that time, the schemes extended tribal reserves into the areas previously allocated to the colonizers. The Swynnerton Plan of 1954 first introduced this practice by granting private land titles formerly owned by the colonizers in large properties to Kenyan farmers (Belshaw, 1964). However, post-independence Kenyan land distribution programs, such as the ‘One Million Acre Settlement Schemes’ (Shaffer, 1967; Leo, 1981), became to be marked by ethnicity and political affiliation in terms of the beneficiaries reached (Cavanagh, 2018), allowing the members of the Kikuyu ethnic group to obtain large amount of land.

The country's second president, Daniel arap Moi (KANU, 1978–2002), proposed the same clientelist logic for the settlement schemes planned under his presidency. He favored members of the Kalenjin ethnic community in the Rift Valley Province, who had been overlooked by the previous Kenyatta presidency (1964–1978) (Boone, 2011). The 1980s and 1990s were a peculiar historical period, marked by a long economic crisis and a transition to democracy (1991–2002) after thirty years of *de facto* one-party rule (Khadiagala, 2005). Moi's state was a severely authoritarian and repressive organization. Resources and power were diverted from the previously dominant centers of Kikuyu ethnic group and redistributed to Kalenjin members and allied communities of that time (e.g., Luo and coastal groups, Asian businessmen) (Throup, 2020). As with past and future presidencies, the Moi state governed through the Provincial Administration, a prefectoral bureaucratic structure that directly linked the government to rural people (Oyugi, Ochieng, 2020).

Faced with scarce financial resources for cultivating patronage networks and increased scrutiny from donors, the president turned to state forests (Klopp, 2000; 2012; Boone, 2012). The Commission of Inquiry into the Illegal/Irregular Allocation of Public Land (2005) (known as the Ndung'u Commission) highlighted how public lands were used by the ruling class as a political reward and consensus-building tool to leverage patronage networks. State forests were seen as 'virgin areas' that could easily be converted into other uses (and, conveniently, were classified as government lands). Moreover, the president had direct command over the Forest Department through his appointed Minister of Environment and could order deforestation (Morjaria, 2012). Settlement schemes were the tool to organize the conversion of forest land at the national level and, as shows by a review from 1962 to 2012, they were most prevalent in the Rift Valley Province and the Molo area, corresponding to the South West and East sectors of Mau forest (Lukalo, Odari, 2016).

#### 4.2.1. Settlement schemes in the Mau forest

After the KIFCON project ended, the population resettlement in the Mau forest reserve began to take shape through what was labeled 'Dorobo Resettlement Programme' as its official purpose was to resettle Ogiek people living in the forest (Mau Forest Task Force, 2009).

This exercise lasted from 1996 to 2001. It was managed by a Government Settlement Committee and led by the District Commissioner (DC) of Nakuru (FP 8/7 C3/NE/SU/GE; FOR 13/5/1 vol 2; FOR 13/5/1 vol 3; FP 8/27 LA/RVP/122). The Government Settlement Committee resolved disputes, vetted proposed names, and ultimately authorized allocations by issuing an allotment card. The members of the Government Settlement Committee did not reside on site; they were employed in Nakuru and their work was conducted remotely with occasional site visits. There were regular briefings and correspondence, but there was no direct management by the government committee. The DC in Nakuru also communicated with his superior, the Provincial Commissioner (PC) of the Rift Valley Province, but the archival records and interviews suggest this was a distant figure who was not personally involved.

The government representatives in the field were administration officers: District Officers (DOs), Chiefs, and Assistant Chiefs.<sup>3</sup> Their official duties were vaguely defined, but the Chiefs were very active in local affairs. Importantly, in the 1990s, the Provincial Administration acted as an arm of the Presidency in rural areas; there was no separation between administration and government (Hornsby, 2012). The program was carried out with the involvement of a few local committees in each settlement scheme (FP 8/7 C3/NE/SU/GE; FP 8/27 LA/RVP/122; FOR 13/5/1 vol 3; interviews). The local committees consulted elders in each village and registered the individuals to be settled (i.e., to be allocated a

plot of land) according to their clan. Each local committee was composed of several members, including local elders, and led by a chairman. No information exists on how the committee was chosen, except in the village of Chepkoburot (it was founded in 1996 by the local Chief). Presumably, in the other committees, the chairman position was held by someone like a local politician or councilor with a prestigious role (e.g., the Ndoinet committee or the Tinet committee) (FP 8/7 C3/NE/SU/GE; FP 8/27 LA/RVP/122; FOR 13/5/1 vol 3; interviews).

Four settlement schemes (SS) were established in the South West Mau: Saino, Ndoinet, Tinet, and Kiptagich Extension (see Fig. 2): Saino SS covered the village of Kiptororo; Ndoinet SS comprised Ndoinet and Chepkoburot villages; Tinet SS consisted of the villages of Sotik and Kabongoi; Kiptagich Extension SS covered a small portion along the southern border of the forest sector. The first three are discussed below because they are peculiarly distinct from the fourth (Kitagich Extension SS), to which a specific paragraph is dedicated.

#### 4.2.2. Building political legitimacy through land allocation: Saino, Ndoinet, and Tinet settlement schemes

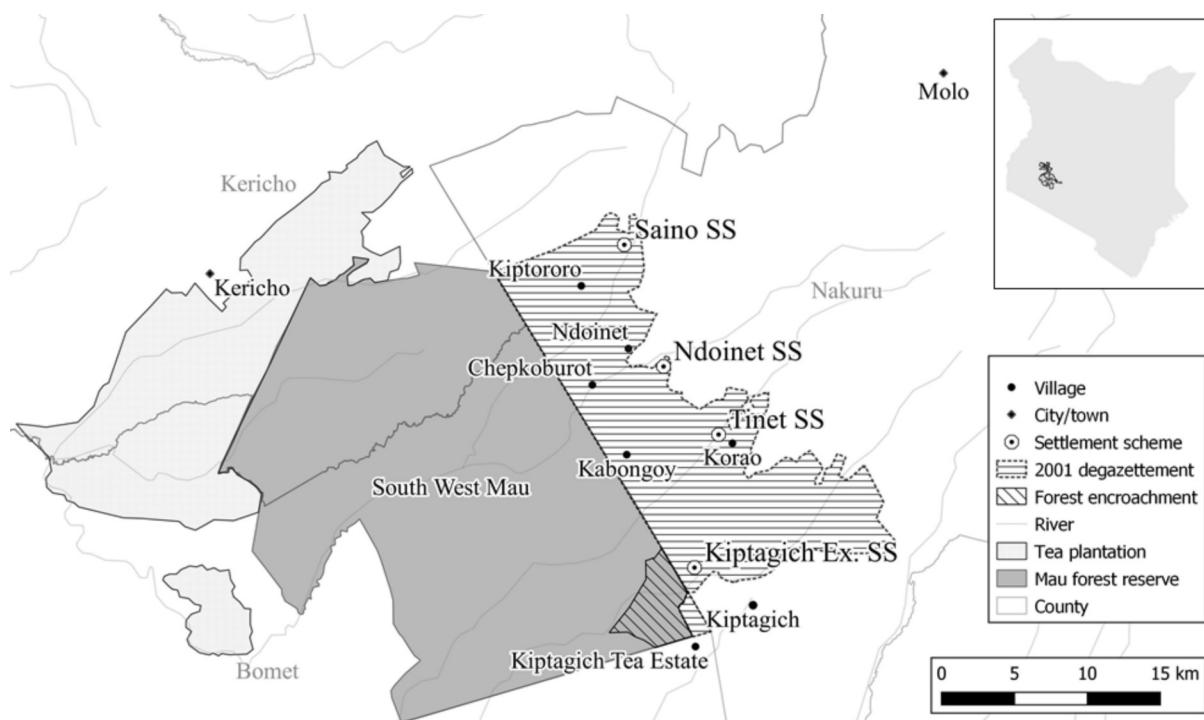
The first demarcation of land started in April 1996 in Saino and Ndoinet, where two Forest Stations were already present. In that period, Forest Stations worked as gathering points (the interviewees use the terms "temporary villages" or "concentration camps") for previously evicted people who were waiting for resettlement. The Tinet settlement scheme started later, at the beginning of 1997.

In the Saino, Ndoinet, and Tinet settlement schemes, 2.02 ha parcels of forest land were generally allocated to ordinary people. These beneficiaries included people who were already established in the temporary villages along the forest boundary and people who migrated spontaneously from neighboring Kalenjin districts (e.g., Kericho, Belgut, Uasin Gishu, Nandi, Baringo) looking for land. The program did not have a unique standardized procedure for registering individuals, determining the parcels to be occupied, or moving the allocatees to plots. Therefore, parcel allocation was subject to interference, obstruction, and manipulation from many sides making the distribution of forest land, thus the amount of forest lost, difficult to manage.

For example, the first operation to list resettlement beneficiaries was challenged by continuous migration to temporary villages and the existence of multiple lists (i.e., the 'green book', 'blue book', 'yellow book' and 'pink book') (FP 8/7 C3/NE/SU/GE; FOR 13/5/1 vol 3; EA 1/7/23). According to the Ogiek communities, this situation was aggravated by the fact that administration officers, surveyors, and politicians (e.g., members of parliament and councilors) could easily intervene in the allocations and push for the settlement of their own people or the exclusion of others.<sup>4</sup> The total number of planned allocations for each scheme is not fully certain. However, some quantities were frequently reported: Tinet SS would have been the largest, with about 5,000 plots planned; Ndoinet SS would have included 3,000 plots; Saino SS would have included between 1,400 and 2,000 plots (FP 8/7 C3/NE/SU/GE; FOR 13/5/1 vol 3). The number of plots and people waiting for resettlement frequently varied in the archival documents over the years.

Between 1996 and mid-1998, land allocation continued unabated, leading to the massive conversion of the eastern section of South West Mau (Nakuru District). This also affected large zones west of the administrative boundary (EA; interviews) in the current Ndoinet forest section.

<sup>3</sup> During that time, the Provincial Commissioner was the head of the province, the District Commissioner of the district, the District Officer of the division, the Chief of the location, and the Assistant Chief of the sublocation.



**Fig. 2.** The extension of South West Mau and the settlement schemes within the degazetted (2001) forest section (created by the authors using GoK, UNEP, 2008; Google Earth, 2020). Inset: the Mau forest within Kenya.

After a sudden policy change in 1999, the District Commissioner of Nakuru ordered the eviction of the thousands of people settled west of the administrative boundary ('cutline', see Fig. 3) (FOR 13/5/1 vol 3) that was reasserted in the early 2001 to demarcate the separation between the forest reserve (on the west) and the settlements (on the east). In October 2001, the government issued a legal notice about the degazettement as a forest reserve of the eastern section of the South-West Mau (25,000 ha), together with sections of the East Mau (35,000 ha) and Molo forest sectors (900 ha) (Kwewu et al., 2020; Di Matteo, 2021). This formalized a change that had already taken place on the ground. The legal transformation also concluded the government project, regularized the legal and administrative sections status, and allowed for the possible acquisition of plot title deeds by the people allocated. In another process of consensus building through land, President Kibaki's government (2002–2012) issued 9,135 title deeds in Saino, Ndoinet, and Tinet settlement schemes in 2005.<sup>5</sup>

Compared with the figure of 3,793 households present in the South West Mau forest in the early 1990s and surveyed by the KIFCON, we can estimate that an excess of 5,300 households settled in the forest land settlement schemes, highlighting the political-client aspect that has driven deforestation. Furthermore, the size of the plot to be allocated was halved (from 5 ha to 2.02) during the transition from KIFCON's resettlement proposal to the Kenyan state's implementation. This shift exemplified the capture of KIFCON's resettlement initiative by the Kenyan state (Klopp, Sang, 2011). The state program set out to resettle as many people as possible in settlements that could support a subsistence agro-pastoral system (i.e., the adjacent forest could serve daily grazing and firewood harvesting needs).

During the program, the government did not provide mechanical means for soil tillage or tree felling or services (education, health, infrastructure, agricultural development) in the new villages. In the end, the program was simple to realize, cheap, and convenient for the

government that integrated forest land into patronage networks at different scales (village, district, province). The program was also convenient for the people allocated who got free fertile land, the later acquisition of the title deed would have been their only expense. The redistribution of forest land to build consensus was widely demanded from so-called 'common beneficiaries' (not including the country's elite). When asked about their motivations for migrating from Rift Valley Province districts into the forest settlement schemes, respondents explained, "I was looking for my own land". Instead, people originally from the area described the land allocation as a moment that ended prolonged years of uncertain living in the forest reserve.

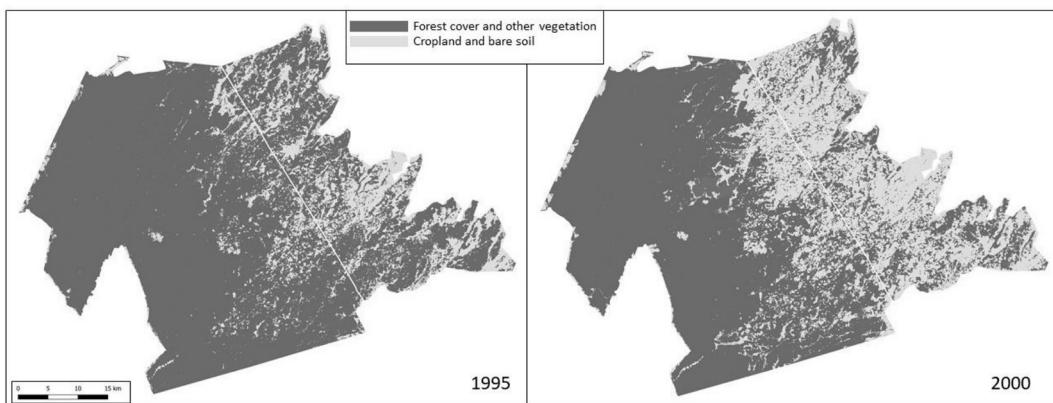
The Moi government's land redistribution policy was ethnically selective and favored Kalenjin communities. Significantly, the patronage use of forest land coincided with the national elections. The settlement schemes program started just before the 1997 elections and the degazettement of allocated forest sections occurred in 2001, a year before the 2002 elections. They helped President Moi consolidate his political base and form new electoral constituencies in spaces previously occupied by forests. The Nakuru district was especially significant since the main antagonistic political force in the area (Mwai Kibaki's Democratic Party [DP]) was particularly strong and widely supported by the Kikuyu ethnic community. Only two KANU parliamentarians were elected from Nakuru's six constituencies in the 1997 elections. One of them (J. C. Koske) was elected in the newly created Kuresoi constituency, which encompasses the South West Mau settlement schemes<sup>6</sup> (EA 1/12/14).

#### 4.2.3. The neo-patrimonial state in the Kiptagich Extension settlement scheme

The Kiptagich Extension settlement scheme started in April 1997 and

<sup>5</sup> Data collected at the Settlement Schemes Office of the Ministry of Lands in Nairobi (2019).

<sup>6</sup> The Democratic Party won in the constituencies of Nakuru Municipality (David Manyara), Bahati/Subukia (Joseph M. Kuria), Molo (Kihika Kimani), Naivasha (Paul Kihara). KANU won in Rongai (Eric Morogo) and Kuresoi (James Cheruyot Koske) (EA 1/12/14).



**Fig. 3.** The progression of deforestation from east to west, beyond the administrative boundary line or ‘cutline’ (in white) between districts (resulted from a land cover classification using Landsat satellite images of 1995 and 2000).

was unique among the settlement schemes in terms of beneficiary allocations. While in the previous settlement schemes, generally, ordinary citizens of the Rift Valley Province received a 2.02 ha plot, in the case of Kiptagich Ex., the allocations were mainly (but not exclusively) directed to the country’s elite: President Moi’s family, KANU politicians, administration officers, members of the army, and companies linked to the establishment (The Commission of Inquiry into the Illegal/Irregular Allocation of Public Land, 2005; Rugene, Wafula, 2009; Mureithi, 2009; Daily Nation, 2009; 2009b; 2009c; Sayagie, 2018). Such dynamics of forest land appropriation fit squarely within the definition of neo-patrimonial state. Unfortunately, the information accessible for this settlement scheme was limited. However, a 1995 map<sup>7</sup> already indicated premeditated land allocation to specific beneficiaries. On this map, half of the plots have an extension of 15–20 ha. Other documents confirmed this, illustrating the demarcation and allocation of tens of plots of 10–22 ha each (FP 8/11). Both areas are significantly larger than the amount set for joint beneficiaries, a value that makes us realize that the land was intended for someone specific and predetermined.

It is no coincidence that this mode of action of the neo-patrimonial state occurred in Kiptagich. At that time, in the area was located the factory and the tea plantations owned by President Moi (Asis Premium Tea). The factory’s land was illegally appropriated as forest land in 1988, and it is currently located within the Transmara Reserve of the Mau complex over an area of 900 ha (The Commission of Inquiry into the Illegal/Irregular Allocation of Public Land, 2005) that extended further north within the South West Mau protected forest boundary (see Fig. 2).

Letters consulted at the archive (2002) alluded to the probable role of a high-ranking person at the Kiptagich Tea Factory, who colluded with politicians and local administration officers to guide the land allocation in this settlement scheme. The presidential leadership is evident in state action in Kiptagich, while in the settlement schemes of Saino, Ndoinet and Tinet remained more in the background. Instead, the program was constructed at the district and the village level (often through confused and interfered management of administration officers, local politicians, surveyors, and elders). In this phase, the governmental design of deforestation was found in the forest land distribution supervision and validation by the District administration; again, the granting of forest land allotment cards to people bearing the letterhead of the Office of the President and the signature of the District Commissioner.

For all the settlement schemes, the government design was found specifically in the formal acts that sanctioned forest land distribution: in particular, in the President Moi’s directive to the Provincial Administration to create the settlement schemes within a protected forest; and

finally, in the excision of the settlement section by legal notice in 2001, the act that most legitimizes the settlement policy and that paves the way to the acquisition of title deeds of previous protected forest land.

## 5. Conclusion

This paper explored the relationship between tropical deforestation and the state in Kenya’s Mau forest. Firstly, it explored the role of the state as a driver of deforestation in the sub-Saharan region (for a similar Kenyan case, see Petursson et al., 2013). The existing literature on tropical deforestation underlines the ‘exceptionalism’ of African forest loss due to subsistence activities (Fisher, 2010; Rudel, 2013). However, this case study demonstrates state-sponsored deforestation in the form of agricultural settlement schemes. A situation that may outwardly seem like small-scale agriculture (i.e., not large-scale plantation conversion) actually originates from a specific governmental plan. The ecological issues stemming from the deforestation of Mau, including impacts on water bodies in the Sondu, Mara and Molo basins (GoK, UNEP, 2008), are still relevant today and shaped by political design. This retracing of Mau deforestation and the politicization of deforestation has important implications for the conservation initiatives implemented in the last years. The ISLA-IDH conservation program in the South West Mau (ISLA-IDH, 2018) – a kind of successor to the KIFCON project, co-financed by Unilever and Finlays – implicitly blame farmers for forest degradation, neglecting the closely intertwined social, ecological and political processes that made the Mau forest. This case confirms the close relationship between forest management, international conservation projects and multinational companies.

This paper also presented the concept of ‘political deforestation,’ which we define as a forest cover loss that brings direct and immediate benefits to the ruling government. Tropical deforestation is frequently framed within broader geo-political strategy yet, this study demonstrated how deforestation can be immediately translated into electoral gains. A sort of forest rent—to borrow an economic term—is activated through forest land patronage distribution to ensure electoral consensus. The state deploys itself as a guarantor of land allocation through constituency creation, forest de-gazetttement, and changes in forest boundaries. President Moi’s use of public nature as a personal asset resulted in capital and consensus accumulation (for himself and intermediaries like local elites or administration personnel who appropriated plots or money during the allocations). This process involved dispossession since the forest reserve was public property and Ogiek members claim to have been left without land (which partly went to migrants instead).

The case of the South West Mau forest block thus allows us to problematize the nexus between the private sector (small farmers and multinational companies) and local government. This is not a zero-sum game in which either the private or the government wins, but a feedback

<sup>7</sup> Collected at the Department of Survey in Nairobi (2019).

loop in which each of the two poles seeks to benefit from the other's strategies.

In the events recounted, state and private sector operate in continuous relationship for years, characterized by the proposals of the private sector (KIFCON), by the appropriation for electoral purposes (state) or by the need for land (peasants), the latter representing a 'private part' that operates on a different scale but still capable of influencing the other actors. State and private actor move in a continuous dance, with steps of advancement and retreat, as the forest itself in the last decades. In this dance, neither party disappears, but each is useful to allow the other to access the field, to implement its proposals, and then perhaps overturn its initial logic. In the end, Mau's deforestation highlights the points of contact between a state-led deforestation and corporate/private-led deforestation and the importance of state-private ramifications in multiple layers for understanding deforestation.

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### CRedit authorship contribution statement

**Stefania Albertazzi:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Valerio Bini:** Conceptualization, Funding acquisition, Investigation, Writing – review & editing.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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