Journal of Eastern African Studies

Deforestation and democratization: patronage, politics and forests in Kenya

Jacqueline M. Klopp [a]

[a] Associate Research Scholar, Earth Institute, Columbia University,
New York, USA

PLEASE SCROLL DOWN FOR ARTICLE

Routledge
Taylor & Francis Group

Deforestation and democratization: patronage, politics and forests in Kenya

Jacqueline M. Klopp*

Associate Research Scholar, Earth Institute, Columbia University, New York, USA

Current approaches for halting and reversing deforestation centrally involve better "environmental governance" over forests. Better public oversight and regulation of the forest commons is thus linked to democratization. Yet evidence suggests that in a number of important cases, democratization can accelerate deforestation. Using the cases of South Nandi and Karura Forests in Kenya, this article argues that to understand why requires more careful examination of how forests are incorporated into patronage networks and how these networks are impacted by democratization struggles. Specifically, this article argues that accelerated deforestation occurs when institutional configurations allow abuse and create opportunity for forests to become incorporated into patronage networks. Democratization can then exacerbate deforestation when, as in Kenya, more competitive elections produce stresses on these patronage networks and hence create incentives for state actors to increase accumulation of forest resources for political purposes. Further, the overall volatility of democratization struggles, which makes changes in government more likely, creates incentives for those with privileged access to forests to accumulate more rapidly with no concern for sustainability in the long run. However, such forest encroachments may also generate resistance and movements aimed at re-imposing regulation on the use of the forest. When successful, these struggles over forests can both deepen democratization and transform institutional configurations to better protect forests.

Keywords: deforestation; democratization; Kenya; Karura Forest; South Nandi Forest; patronage

Introduction

Linked to concerns about global climate change, biodiversity loss, and livelihoods of vulnerable populations, tropical deforestation is an urgent global problem. While difficult to calculate, the tropical deforestation rate is likely around 160,000 square km per year, or about 5% a decade.[1] If this trend continues, even without factoring in the impacts of climate change, we may expect deepening ecological and hence human devastation, particularly in some of the world's poorest regions. For example, a recent Task Force report on the destruction of the Mau Forest complex in Kenya estimates that in the tea sector alone, approximately 35,000 jobs and the livelihoods of 50,000 small farmers with some 430,000 dependants rely on the eco-services of this

important group of East African forests.[2] East Africa as a whole shows high overall rates of deforestation.[3]

A key question then becomes: what and who causes deforestation? Much scholarly work trying to answer this question either points to a single dominant factor (most often population pressures or human encroachment through shifting cultivation) or to an "irreducible complexity".[4] In either approach the link between deforestation and politics often gets lost.

While deforestation, defined as the complete loss of forest cover, is complex, recent work suggests that it is not simply caused by "encroachment by smallholders but illegal logging controlled by regional elites and corrupt government officials".[5] In part as a response to this growing recognition of the role of power and politics on forests, local and global environmental organizations, as well as the aid agencies, now focus on good "environmental governance" as a check on deforestation.[6] In this view, the global movement towards democratization offers hope. It may lead to better public awareness of the problems of deforestation and better oversight and regulation of tropical forests for the benefit of local communities as well for the broader global public good.

Despite increasing policy interest in democratization as a means to curb deforestation, we are just beginning to more systematically explore the link between these two important processes. A review of current work in this area reveals seemingly contradictory views on democratization and deforestation. A number of scholars join activists to argue that democratization of state institutions will be one key way to help control deforestation.[7] According to this view, democratization is key to better "environmental governance" defined as more participatory, equitable and transparent decision-making over natural resources. It does so by increasing the accountability of state institutions and by giving voice and influence to local stakeholders and environmentalists who have a stake in better management of natural resources. Ideally, this ultimately leads to improved policy and practice. Yet evidence also suggests that dynamics triggered by democratic transitions can accelerate damage to forests.[8]

Using Kenya as a case study, this article explores some key political mechanisms linking deforestation and democratization. Specifically, it examines how access to forests is mediated by a patronage politics. Further, the article suggests that electoral competition characterizing political liberalization of authoritarian regimes often exacerbates a patronage politics leading to greater forest loss. To illustrate this dynamic, the article goes into the political histories of South Nandi and Karura Forests in some detail. During the 1990s when the state was contested by emerging opposition parties, deforestation in these places accelerated visibly and dramatically. The article shows that many of the state sanctioned forest excisions during this period can be traced to the patronage politics of key actors in the Kenya African National Union (KANU) the dominant political party struggling to hold on to power. As protest movements involving the media, civil society and parliamentarians emerged, forests became a key locus of struggle over unaccountable state power. These movements and the ultimate change in government in 2002 helped transform the process of how forests are managed, culminating in a new law (Forest Act 2005)[9] that opened up forest management to public oversight and involvement. In the cases of Karura and South Nandi Forests this creates hope for regeneration. Thus, this article will show that while deforestation can occur within democratization struggles in the short term, in the long term, with appropriate

institutional change, democratization does offer some opportunity for halting and reversing deforestation.

Some theoretical issues

The politics of deforestation are complex and vary from place to place. However, some preliminary evidence suggests that in a number of key cases, deforestation can accelerate within democratization struggles.[10] The work by Deacon on the connection between political instability and deforestation provides one useful explanation for why this might be the case. Increased deforestation occurs in times of political volatility because as government's ability to enforce the rule of law over property declines and as land tenure becomes less secure, local people invest less intensively in agriculture. To meet subsistence needs, they instead encroach on forests.

This approach captures some of the dynamics of deforestation linked to instability triggered by democratization struggles. However, it assumes that access to forest is mediated by market-driven incentives, that is, the cost of investment in agriculture.[11] Yet, the central and local state play key roles in mediating access to forests even within struggles over democratization. Further, in many important cases such as Kenya, Indonesia, Nepal and Malaysia where the central state owns national forests and ostensibly manages them for the public good, access to forests is fundamentally linked to institutional structures and politics. One critical dimension of this politics involves patronage networks linked to powerful figures in the state. These networks often generate preferential access to forest resources for supporters.[12]

Patronage refers to the use of resources to reward clients, often for political purposes. Patronage generates privileged groups within the state that undermine the legal order and state capacity to operate in a broader public interest (note that while corruption, the abuse of public office for private gain, may provide the material, including trees and land, for patronage, corruption and patronage are conceptually distinct). In cases where state oversight over forests is highly concentrated and opaque, opportunity and indeed incentive exists to use forests as political resources. In such cases, forest resources get embedded in patron–client networks linked to maintaining political power and privilege. Forests then become subject to different pressures depending on processes impinging on patronage networks.

Increased political competition associated with political liberalization and democratization in places where politics is heavily patronage based can actually generate a greater scramble for resources, including forests. This is because 1) electoral competition generates higher demand for patronage and for resources to pay for campaigns and 2) those in power and their clients, threatened with a potential loss of privileged access to forest resources, engage in a last ditch effort to accumulate while their party is still in power. Demands for patronage increase because competition means that voters can hold politicians more accountable in terms of fulfilling promises of "development". This creates "increased pressures on regimes for the downward distribution of tangible benefits".[13] Further, as elections become more competitive, more "money is necessary to hire and train political thugs, to buy votes at national conventions, to bribe electoral officers, the police and other security personnel and to organize a 'campaign' around the country".[14] In practice this means politicians have need for political resources to maintain patronage networks, which help them stay in power. During such times of patronage stress linked to

democratization struggles, increased rates of deforestation may be linked to irregular accumulation of land and trees as a means to generate funds to win elections through the ballot box and/or through violence.

Patronage dynamics in turn impact local encroachment. If community members who are excluded from benefits see the patronage-based allocation of local forest resources as unjust, they may try to encroach on forests to get their share. Alternatively some may mobilize against unfair expropriations, increasing the cost of illegal expropriation. If the forest is being depleted rapidly, then a scramble often ensues which approximates a classic "tragedy of the commons" scenario. Thus, theorizing of why deforestation might accelerate within contestation over democratization requires more detailed historical and political ecological studies that must take into account institutional structures of the state including those that help produce patronage dynamics.

This article argues and strives to show via case studies that in patronage-based political systems like Kenya, an acceleration of politically induced deforestation occurs within the instability created by democratization struggles when:

1) Specific institutional configurations allow abuse and create opportunity for forests to become incorporated into patronage networks.
2) More competitive elections put stresses on these patronage networks creating incentives for state actors to accelerate accumulation of forest resources in an attempt to solidify networks of support.
3) Given that access is linked to political connections, added incentives exist to log at high speed, since a change in government may deny access.[15]
4) As a result, local encroachment may increase as those excluded from the patronage benefits try to get their "fair share" or as the resource faces depletion and a tragedy of the commons scenario ensues.

In sum, it is not just retraction of a general rule of law that accelerates deforestation as Deacon suggests,[16] but the use of the state power to irregularly accumulate and concentrate forest resources in the hands of political supporters. In this way, democratization struggles often get fundamentally linked to reasserting control and transforming systems of regulation over forests as well as other natural resources. When successful, these struggles over forests can both deepen democratization and transform institutional configurations to generate more public and local oversight over forests more in line with "optimal design principles" in forest management. In other cases, such as Indonesia, democratization can lead to the break-up of old patronage networks and increased pressures for access by local politicians and supporters, leading to less regulation and protection and in fact increased deforestation.[17] In either case, we need to understand the politics of patronage to get a deeper look at the link between deforestation and democratization.

Evidence from the Kenyan case

The Kenyan case allows a remarkable view into the role of patronage politics in deforestation within the context of national level democratization struggles. With the advent of multi-party competition in 1991, high level state actors with access to the institutions that centralize control over land, increasingly used forests, both land and trees, as valuable patronage resources to buy support and fund campaigns.

One top-level Kenyan government official suggested that "if there were an election ever year, there would be no forest left".[18] On the other end of the political pole, an activist from within a forest-dwelling community noted "because trees acquired free of charge fetch millions once made into timber, this free money, is to be used in financing elections besides buying political support".[19]

This attack on forests was part of a more general spate of irregular appropriation of land or what Kenyans called "land grabbing".[20] Editorials in the press throughout the 1990s argued that the situation seemed to be getting "uglier by the day".[21] Parliamentarians similarly noted the change, with Cabinet Minister Maalim Mohammed claiming that "land grabbing is on the increase".[22] Finally, two government commissions looking into Kenya's "land questions" pointed to the "politically motivated appropriation" of forests during this time and noted the spikes in land grabbing prior to the 1992, 1997 and 2002 elections.[23]

Figures for how much forest cover exists in Kenya vary from 1.7 to 3% of the country's land mass.[24] Numbers suggest this degradation does appear to have accelerated dramatically in the 1990s. To actually determine acceleration rates of forest excisions is a difficult task. Many of Kenya's main forests are "owned" by the central government and any excision requires legal notice, but in fact, given the illicit nature of these excisions, many are not recorded in this way. Government statistics are also problematic and likely to over-estimate remaining reserves.[25] The deforestation rate for protected forests in the 1980s and early 1990s came from Kenya's 1994 Master Forestry Plan, which, in turn, was taken from a British funded survey as 5000 ha per year.[26] A more recent government figure based on a 1999 survey found that 55,700 ha of forest in the Rift Valley alone had either been excised or proposed for excision between 1994 and 1999, indicating an average rate of deforestation in this region of more than 11,000 ha per year, a clear acceleration.[27] One new approach to the deforestation rate problem would be to factor in remote sensing data from satellites, which can help show the decline in various kinds of forest cover over time, but while data exist for a number of regions in Kenya, the country as a whole has not yet been mapped out in this way.[28] While we do not necessarily have good data for the entire country, we do, however, have better data for specific forests, which in fact, have their own histories as we shall see.

Institutional context: land-grabbing

Before we examine actual forests, it is important to briefly review the state institutions that mediate access to Kenya's main forests. Interestingly, in the 1990s the basic structures of state forestry in Kenya retained much of their colonial form. In 1902, large swathes of Kenya's forests were appropriated by the colonial state and converted into government land. By 1910, the government established the position of Chief Conservator of Forests to oversee forest management. In this way, forests originally managed by local communities became the locus of a struggle between the colonial government attempting to mediate access, local people who did not recognize the colonial state's authority, companies and other external actors eager to gain logging concessions. As early as 1907, concern was raised about "irregular exploitation of forests".[29] In part, this was because the central government had the power to approve timber concessions and excise parts of forests for alternative use such as extensions of towns and settlements. In theory, the government was expected

to consult with the forestry officials. In practice, forestry officials often discovered the terms of concessions and excisions after the governor's office made a decision.[30]

By the post-colonial period, Kenya's forest cover had dwindled from about 30% of the total land mass in 1895 to approximately 3% today, and the central government continued to legally control forest boundaries. In the 1990s, the Forestry Department came under the Ministry of the Environment and Natural Resources. Under the Forest Act at the time, the minister had the powers to alter boundaries but was required to publish the intention in the Kenya Gazette. The ministry was also required to survey the excision area and draw up a boundary plan. The Chief Conservator of Forests would then grant or deny approval. The area was only then considered legally excised after 28 days and if in accordance with other, including environmental, law. With the Minister of the Environment a political appointee of the President, what this meant in practice was that the President and his associates could alter legal boundaries of forests. In continuity with colonial times, they often did this without informing the relevant forestry officials. As we shall see, this made decisions over forest excisions susceptible to the politics of patronage and rendered foresters "helpless when a logger comes armed with a letter from the provincial administration or a high political office".[31]

Another factor that has played into this politics of deforestation was the 1983 decentralization plan of the central government called the "District Focus on Rural Development". While the plan professed to transfer more decision-making powers to the district level, in actuality as Ongugo and Njuguna observe:

> The local members of parliament (MP) in collaboration with the District Commissioners (who are the designated chair of the District Development Committees) make decisions on local development and resource allocation routinely on the basis of political patronage and access to centrally controlled networks .... Representation of local communities is weak ...[32]

When responsibility for implementing the Non-Resident Cultivation (NRC) or "shamba" system for conducting reforestation was transferred to these committees as part of decentralization, forests were even more closely entwined into patronage networks involving local politicians and the provincial administration.

In theory in the NRC system, local community members – often the poorer members who have no or little land – are given short-term leases to clear forest. On this land they are allowed to plant food crops and in return plant and care for seedlings at the same time. When the trees grow too big, usually after three years, cultivators shift location. Besides generating new trees, this system provides an important social welfare function in Kenyan society and also creates added incentive for local communities to protect forests.

When done properly NRC is considered by many within the Forestry Department, local communities, and conservation groups to be an effective way to do reforestation. However, once politicians were given control over this system, many used it to allocate forest to themselves and their supporters; the result was "harvested plantation areas in some places were not replanted, while in others the planted trees were destroyed to make way for food production".[33] In these ways, potentially sustainable forestry dynamics were undermined by the structure of state institutions and the patronage dynamics they helped produce.

South Nandi Forest and the Nyayo Tea Zones

The South Nandi Forest case concretely illustrates some of the links between patronage, forests and struggles over democratization. It also vividly illustrates the ways in which the common conceptualization of "forest encroachment" by small-hold farmers can generate perverse outcomes when it collides with the reality of Kenyan patronage politics within the framework of an internationally funded "tea zones" project. This forest is one fragment of what was once a larger forest in western Kenya. It also happens to be located just west of Kapsabet town in the Rift Valley in a region that was closely linked to key central actors in the state and KANU. According to recent remote sensing data, following the "land grabbing" trend, forest encroachment appears to have accelerated in the 1990s.[34] What is clear is that, with some fluctuations, the area covering older forest or old growth forest (30–50 years) and mid-aged forest (20–30 years) has generally been decreasing over time. As Lung and Schaab point out, there is tremendous forest loss over the entire time period. In 1972, 15,000 ha of this older forest existed. By 2001, this was down to 7200 ha. Nevertheless, we observe what looks like an acceleration of older forest loss from 1989 to 2001– from approximately 12,000 ha in 1989 to 7200 ha in 2001 (a loss of 4800 ha over 12 years or an average loss of 400 ha/year) compared to a loss of about 3000 ha between 1972 and 1989 (an average loss of 200 ha/year). We also see a noticeable trend towards increasing agricultural use since 1989.

Electoral politics and patronage played a role in this observed degradation. In 1984, South Nandi Forest became one of seven forests selected by the government of Kenya to be part of the World Bank funded Nyayo Tea Zones project. The idea behind the project was to create a 100m buffer zone around the forests where tea would be planted "in a simple but effective strategy to create buffers between the local communities that encroach on the government forests".[35] The idea was that the thick tea plants would prevent local farmers from entering the forest. In 1985, the state-owned Nyayo Tea Zones Development Corporation (NTZDC) was created and given the task of managing the tea zone and a year later the government established the zones officially on land designated as forest. The land for the zones was never excised from the forest reserves since ostensibly they were part of conservation efforts. Eventually, the corporation would have control over 17 such tea zones.

The project was largely seen within Kenya as a patronage scheme for the president's political backers and as a way to decrease the economic power of political opponents who had a base among tea farmers in other parts of the country. Indeed, five out of the seven forests that hosted such tea zones were in key KANU constituencies and in some cases, like the Kakamega forest, conditions were unsuitable for tea. Further, the report of the Commission of Inquiry into the Illegal/Irregular Allocation of Public Land noted generally that "Nyayo Tea Zones were another conduit through which forestland was illegally allocated ... extra acreages were hived from forests under the guise of Tea Zones and later allocated to individuals."[36] In some cases, the process involved excision of forest for a "project", which then never happened. One such case was of a supposed tea processing facility as part of the Nyayo Tea Zone near Kakamega forest. "Provincial administrators and powerful politicians scrambled for the permits to harvest the trees that were felled 'to clear ground for the factory,' while small charcoal burners were arrested and charged for destroying the forest" if they tried to take a share of what was once a community resource.[37]
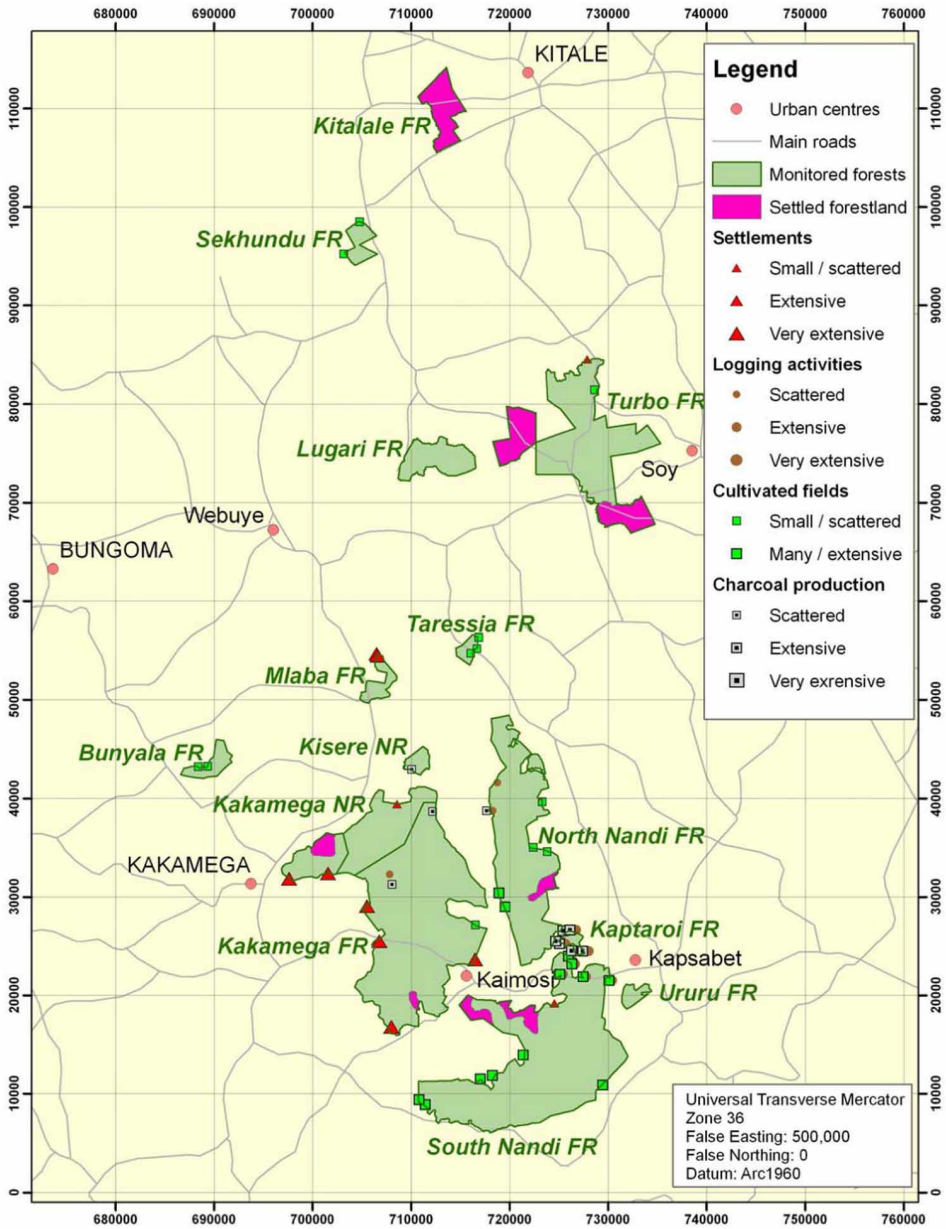
Figure 1.   South Nandi Forest Location (Kenya Wildlife Service and UNEP, 2007).

The South Nandi Forest became a target for "land grabbing" through the tea zones. Under pressure for resources to win the newly competitive elections in 1992 and 1997, Moi's clients in the NTZDC made the decision to excise parts of the South Nandi Forest. Between 1990 and 1994 when the "land grabbing mania" was in full swing, a ring around South Nandi Forest was cut down and planted with tea by the NTZDC. However, instead of a 100m buffer around the forest, much more forest land was hived off and some of it sold illegally. This accounts for some of the decline

in forest cover between 1989 and 1994/95 in the remote sensing data. According to separate accounts from local activists, the individuals who were allocated excised forest land were politically connected civil servants and politicians who made money by selling or leasing this land, which then was used for agriculture. Further, the buffer zone had a hole, and this encouraged further felling of trees.[38] Yet more allocations in 2001 were for political purposes ahead of the 2002 General Election.[39] One report by the Kenya Forest Working Group (2003) noted:

> South Nandi is mostly threatened by allocations by the former provincial administration and politicians. In the last two years [2001–03] a school was allocated 34 ha and over 2000 acres [809 ha] were allocated to local leaders and councilors .... Another factor is the Nyayo Tea Zones which have opened up the forest instead of protected it as was intended .... Senior government officials pass orders without consulting the FD [Forestry Dept], especially where land exchanges are being used to give out forest land.[40]

The 34.5 ha of South Nandi Forest was allocated to a top paramilitary police unit boss ostensibly for settling people "displaced by the new Kapkolei Girls Secondary School".[41] This showed up in an infamous gazette notice of 12 February 2001, which attempted to legalize 67,000 ha worth of de facto excisions right before an election year. Another 800 ha scheme was supposed to be part of a land swap program, where people located in remote areas would get forest land closer to amenities and their old land would then be replanted with trees. In reality, according to one local activist, local administrators and councilors, key campaign managers of the local member of parliament (MP) were allocated large chunks of land as a form of payment for their services.[42] The Commission of Inquiry into the Illegal/Irregular Allocation of Public Land further notes that 1170 ha was excised and confirms that the chief beneficiaries were in fact a local MP (Henry Kosgey) and other high level KANU civil servants who could then make this available to their supporters.[43] Thus, what this case study illustrates is that although deforestation can at times be linked to "encroachment by local farmers", a more complex politics – in this case involving patronage – surrounds who benefits and loses from irregular access to forests through blatant excisions, "land swaps" or large donor-funded projects such as the Nyayo Tea Zones. Further, this case study has shown that the destruction of the forest that results from this dynamics is substantial and, as we shall see below, the political history of South Nandi Forest is not unique.

Karura Forest and the 1997 election fund

Located on the northern edge of Kenya's capital, Nairobi, Karura Forest became the site of some of the most intense mobilization in the 1990s against politically motivated excisions in Kenya. It is also perhaps the clearest and best documented case of a forest being used as patronage linked to multi-party elections. Karura Forest is a water catchment area for local rivers, a home to rare local trees and a source of rich biodiversity. It was officially legislated as a national forest in 1932 at which time it covered 1062.7 ha. Starting in 1993 up to 1996, a year before the 1997 general election, a remarkable series of allocations occurred.[44] According to the Report of the Illegal/Irregular Allocation of Public Land which got access to records in the Ministry of Lands, 157 allocations of portions of Karura Forest were made.

On 21 August 1996, a freehold title covering 564.1 ha – over 56% of the forest – was issued in an attempt to legalize these excisions.[45]

It took some time for the Kenyan public to notice that vast chunks of Karura had been irregularly allocated to these "private developers". After KANU returned to power, through elections that were marred by fraud and violence, the "private developers" started clearing parts of the forest. By September 1998, Kenya Television Network journalist Linus Kaikai broke the story that a large part of the forest had been "grabbed". Further investigation revealed that the Forest Department officials working at Karura were issued with "quit" notices by "private developers". A team of reporters from Kenya's most widely read newspaper, the *Daily Nation*, chartered a helicopter and reported back to their readers that:

> Huge swathes have been cut out of the virgin forest – believed by environmentalists to be a national asset – to create access roads and drainage systems for an upmarket housing estate. More land had been cleared for a site office area from where the development of each plot will be controlled.[46]

The daring of this enormous "grab" which took place in the capital, the heart of the opposition and NGO community, provoked an unusually strong response from within Kenyan society. On 7 October 1998, the first large demonstration took place. Activists drawn from the Green Belt Movement,[47] Release Political Prisoners and the Kenya Human Rights Commission, as well as from the neighboring Huruma slums, approached the part of the forest that was surrounded by fencing. By planting trees they symbolically reclaimed the land as a national forest. They asked the contractors to remove their equipment and started planting trees on the feeder roads cut through the forest. Stephen Mwangi, a sub-contractor for the "private developers", confronted the protesters, shouting "We have been here for three years, this is private property and you should move away!"[48] However, the 50 armed guards hired to protect the plot had not been paid and, when confronted with protesters, opted to lock up Mwangi in protest. The demonstrators proceeded to pull down the gate and set fire to construction equipment estimated to be worth 40 to 80 million K. sh. (about US $1 million). The activists were later joined by 12 opposition MPs drawn from a number of different parties and ethnic communities, as well as hundreds of youths who, armed with crude weapons, destroyed the drainage channels and made away with corrugated iron sheets. Demonstrators sang songs urging God to protect them "from the hands of the corrupt and greedy".[49] This marked the beginning of a protracted struggle.

The National Council of Churches of Kenya, the Law Society of Kenya, the Architectural Association of Kenya and the Kenya Human Rights Association joined a clamor of voices demanding to know who had been allocated the forest. Under pressure by opposition MPs, who vociferously demanded that the Minister of Lands and the Attorney General reveal the names of the companies that had been allocated the land, the Minister of Lands tabled an initial list of 67 companies. He further claimed that less than half the forest, according to the government, remained public land. Following questioning, the minister admitted in parliament that he "did not have the list of purchasers, as the ministry is normally not consulted in these transactions".[50]

This served to underscore the illicit nature of the land allocation.[51] Under the laws at the time (Forests Act Cap 385), when forest land is excised for development,

the land legally reverted to the Ministry of Lands and Settlement for allocation. Commenting on the minister's statement for the *Daily Nation*, Mutegi Njau noted that, "for those firms to be allocated land, someone must have signed a letter of application to him, and all companies have directors listed with the Registrar of Companies".[52] However, an attempt by *Daily Nation* reporters to investigate those behind the companies at the Registrar General's office revealed that many files were unavailable and only 10 of the firms listed were traceable through the Registry or the Kenya Gazette.[53] Those firms listed in the Kenya gazette showed that they were all created between 1995 and 1996.[54] Further, when 34 more files eventually surfaced at the Registry, it became apparent that a number of companies were created on the same day, shared an office and directors, and had their articles of association drawn up by the same lawyer, Tom Okundi of a prominent Nairobi law firm, Oraro, Rachier and Associates. The nominal share capital for Aspen Development Company was only K. sh. 2000 (US $30) and for Ikanawa, Epsom, Ballistic Missile Investment Ltd and Fired Earth Company Ltd, K. sh. 100,000 (US $1700).[55] Twenty-one files from the registrar remained "missing". Even the subsequent Commission on Irregular Land Allocation would not be able to find them all.

Later, the press discovered that the list of companies passed to the minister contained fictitious directors. *Daily Nation* reporters, with cooperation from sympathetic bureaucrats, discovered that Karura land was allocated to 21 companies associated with high powered Moi appointee, nominated KANU MP Rashid Sajjad and his Mombasa-based company M.S. Bawazir and Co (1993) Ltd.[56] Sajjad, in turn, was identified by as a key financer of the 1997 KANU election campaign. In particular, he organized and funded youth militias terrorizing migrant voters around Mombasa. Forest resources in this case indirectly subsidized state-instigated electoral violence.[57]

As evidence of wrongdoing accumulated the pressure on the government as well as the "private developers" intensified. The Architectural Society of Kenya, the Accountants Association, and the Kenya Valuers and Estate Agents Association issued warnings that any member involved in Karura would be disciplined. Similarly, the Law Society of Kenya demanded that the Attorney General investigate the physical existence of directors of companies. If the directors did not exist, then the allocations were obviously null and void. Further, they threatened to de-register any lawyer found to have breached professional ethics in the Karura controversy. Indeed, despite his claims to have been "duped", Tom Okundi, the lawyer at Oraro, Rachier and Associates who drew up the incorporation papers for the Karura companies, was dismissed.[58]

On 8 January 1999, activists, including Dr Wangari Maathai and a group of opposition MPs, once again went to plant trees at Karura. They were confronted by 200 security guards and badly beaten.[59] The attack on Dr Maathai, who was well known at the United Nations, raised the concern of the UN Secretary General Kofi Annan who publicly condemned the violence. This intervention by the UN, an important supplier of humanitarian aid to Kenya, prompted a quick response from the Attorney General who met with and apologized to Dr Maathai.[60] While this struggle was raging, President Moi was initially silent. However, a number of top officials continued to emphasize that the Karura plots were private property and, therefore, as Police Chief Wachira reiterated, must be protected from the protesters.[61]

On 28 January 1999, the Student's Organization of Nairobi University (SONU) issued an "ultimatum" to the government demanding the arrest of Dr Maathai's

attackers, the revocation of the Karura plots, and the dismissal of Minister for Natural Resources and the Environment Francis Lotodo, Attorney General Amos Wako, and Police Chief Wachira. Two days later, a crowd of around 2000 students marched to Karura to plant seedlings and were confronted by police in full anti-riot gear. A violent struggle ensued that started a three-day riot in the capital. In a fit of anger, students attacked a number of bystanders, including members of the UN and the Japanese embassy, and destroyed passing vehicles. The police violently beat the students, and a number of officers were hurt when students fought back. A reporter noted, "One girl student was clobbered senseless with blows to the head and bled profusely as she repeatedly shouted 'Karura is public land!'"[62] At least two people died in the official count and over 200 people were injured. A day later, the University of Nairobi was closed, but defiant SONU members claimed that "they had succeeded in showing the world that the grabbing of Karura had political backing due to the huge presence of anti-riot police officers who denied them entry into the forest".[63]

Pressure on the government continued. The Kenya National Union of Teachers Secretary General announced his opposition to the allocation. Anglican Church of Kenya Archbishop David Gitari announced the organization of an inter-denominational mass and tree planting ceremony at Karura Forest on 31 March 1999 and representatives from the National Convention Executive Council, the umbrella group of organizations and opposition activists, told the press that the government "was using force under the guise of protecting private property, but the truth of the matter is that through these allocations the government is killing the nation".[64] The image implied both ecological death and the end of the national commons. By the end of August 1999, the developers quietly ceased their construction in the forest but continued to relentlessly log the forest to extract what they could take out before a change of government.[65]

In the Karura case, besides the high level of mobilization, it is striking that the *Daily Nation* attempted to formulate a genuinely national public opinion through one of its first polls since early independence. The paper asked a random sample of Kenyans what should be done about the Karura allocation.[66] Of respondents from all over the country, 72% wanted the government to revoke the allocation.[67] Activists stressed both the environmental consequences of deforestation that would affect Kenya as a whole and the particular private interests which were set to benefit. In this way, the struggle over the illicit allocation of Karura Forest to close associates and financers of the President prior to the 1997 election merged with the broader democratization struggle, which ultimately helped bring a change of government in 2002.

After the historic December 2002 election in Kenya, which saw a peaceful transfer of power to the National Rainbow Coalition (NaRC) government, excisions of Kenya's forests appeared to decline. Indeed, as investigations on "land grabbing" started through a presidential commission, a few politicians quietly returned title deeds to Karura Forest back to the Ministry of Lands.[68] However, shortly after the change of government, a group of Cabinet members around the Vice-President's office eagerly announced plans to assist an American investor to build a 200 room high-class hotel right in Karura on illegally allocated land. After tremendous outcry and resistance from the Ministry of Environment (where Dr Maathai was at the time the Assistant Minister), the group backed down. The Kenya Forest Service fully took over management of the forest and with support from civil society organizations they

have replanted indigenous trees and are starting a new education facility in what is a remarkably successful struggle to protect a large fragment of indigenous forest within urban boundaries for the broader public. However, as Njeru notes, the poor from Huruma who helped protest the destruction of the forest are now excluded from the use of the forest.[69] As for the less known and visible South Nandi Forest, local groups and the Kenya Forests Working Group continue to struggle to reclaim forest, as those allocated parts of the 800 ha have continued to plant maize and push deeper into the forest and other challenges have arisen.[70] The post-election violence in 2007 and 2008 facilitated illegal logging in South Nandi as some used the lack of government surveillance to take down trees. More recently, a dam project threatens around 1185 ha of the forest once again. Local community activists are arguing that the consultations and environmental impact assessments are inadequate and are gearing up for a new struggle,[71] illustrating how forests face continual pressures from "below" and "above" and their fate hinges on the outcome of broader political struggles.

If Kenya continues to democratize and move towards local involvement and monitoring in forest management, it is highly unlikely that majorities in local communities would condone appropriation of forest land by the powerful that further deepens Kenya's already inequitable land distribution and accelerates ongoing forest loss. Indeed, a poll on Karura Forest by the *Daily Nation* newspaper supports more recent survey results that suggest a strong majority of local farmers, who get some firewood and medicines from the forest, believe in conservation.[72] Unlike wealthy grabbers or the bureaucrats involved in projects like the Nyayo Tea Zones or the new proposed Nandi dam, local people typically experience some of the most direct costs of the environmental damage. Thus, with new political space and also a new forest management framework, some local community groups are already organizing to help manage forests on which they so centrally depend; they are also planting trees on their farms and preparing committees because under a new hard fought for Forestry Bill which came out of the struggles for change in the 1990s, they have the chance to finally be more involved in managing their local forests. Depending on how well these new more locally democratic, institutional structures operate, it is quite possible that this may help stem the rapid deforestation in the country.[73]

Conclusions

Tropical deforestation is extremely complex and challenging to halt and reverse. Many different human and ecological processes impinge on the fate and well-being of these forests that hold so many of the earth's species, play so many local and global ecological functions and help millions of rural poor survive. These forests are embedded in global markets populated with timber companies that place high economic value on many of the trees these forests generate. Forests are embedded in rural societies that are often under stress and turn to forests for medicines, food, land and income. However, forests are also embedded in political systems, which structure access to the forests and benefits from its trees, land and biodiversity.

While much of the literature has focused on economic and technical factors including population, poverty and macro-economic policies behind deforestation, much less work has focused on the deep politics that surround and affect forests, what Matter has called "political forestry".[74] In places like Kenya and Indonesia,

this politics is frequently linked to patron–client ties that flourish when institutions centralize unaccountable power, including power over resources such as forests. This is in part why decentralization of resource management including forests is considered one key way forward; it diffuses this central and unaccountable power. Yet the evidence on local forest management within many decentralization schemes is mixed.[75] As pointed out in Judith Tender's classic *Good Government in the Tropics*, one reason for this is that successful decentralization, which dismantles particularistic access to resources and generates more transparent and equitable decision-making, requires an important role for the central government.[76] Similarly, the participation of countries in accountable global environmental governance ultimately depends on cooperation of central states, especially for implementation of global forestry agreements, research and new policies. In brief, we cannot avoid the necessity of deeper democratization and greening of the central state if we are to better protect forests upon which many species including humans so centrally depend.

Yet the fight for political space at the national level may trigger contradictory and dialectical processes that may profoundly impact forests. Struggles over democratization of the state can lead to deforestation in patronage-based systems like Kenya. This form of encroachment in turn can provoke significant counter-mobilizations based on the recognition that "responsible governance of the environment is impossible without democratic space".[77] Democratic transition periods are thus potentially precarious moments for forests and people alike, offering opportunity within crisis. Indeed, if democratization succeeds, as it has so far in Kenya, albeit with serious post-election violence in 2007 and 2008 then the voices of the less powerful and those who speak for forests the late Wangari Maathai will also be heard in forestry policy and help transform it.[78] Struggles over access to forests will continue but within newly created "deliberative spaces".[79] These new spaces may hold out hope for the future of forests, for all the lives depending on them and for democracy too. However, as our case studies also suggest, new conservation strategies that protect forests can also generate new exclusions (Karura)[80] and new projects based on modernizing and purely economic rationales within democracies pose continued threats to the small bits of remaining forest fragments (South Nandi). Democratization is thus not a panacea for the complex problem of rapid deforestation, but it does provide new spaces to deliberate, negotiate, and devise new policies and institutional arrangements that could just help slow or reverse the disturbing trend towards rapid deforestation of the small amount of remaining forest in the region, forests on which so much depends.

Notes

1. Pimm, *The World According to Pimm*; World Bank, *At Loggerheads?*
2. Republic of Kenya (henceforth RoK), *Report of the Government's Task Force on the Conservation of the Mau Forests Complex*, 15–16. These ecosystem services include river flow regulation, flood mitigation, water storage, reduced soil erosion, biodiversity, carbon sequestration, carbon reservoir, and microclimate regulation.
3. Klein Goldewijk, "Estimating Global Land Use Change over the Past 300 Years"; Lung and Schaab, "A Comparative Assessment of Land Cover Dynamics." In East Africa tropical forest areas show a deforestation rate for 1990 to 2000 four times higher than the world average. FAO, *State of the World's Forests*.

4. Geist and Lambin, "Proximate Causes and Underlying Driving Forces of Tropical Deforestation."

5. Barr and McGrew, "Landscape-Level Tree Management in Meru Central District, Kenya," 17; see also Brown et al., "Forest Law Enforcement and Governance"; Dauvergne, *Shadows in the Forest*.

6. See for example, World Bank, *At Loggerheads?*; World Resources Institute, *Decisions for the Earth*.

7. Anderson, *Nature, Wealth and Power*; de Campos, "Global Change and the Political Economy of Sustainable Development in Brazil"; Grainger, "Bringing Tropical Deforestation Under Control"; Ribot, *Waiting for Democracy*.

8. Deacon, "Deforestation, Investment and Political Instability"; Klopp, "Pilfering the Public."

9. The Forest Act 2005 requires parliamentary approval for excision of national forests and also allows for more local participation in forest management.

10. Geist and Lambin, "Proximate Causes and Underlying Driving Forces of Tropical Deforestation"; Deacon, "Deforestation, Investment and Political Instability"; Klopp "Pilfering the Public"; Seymour and Mugabe, "Kenya"; Le Billon, "The Political Ecology of Transition in Cambodia 1989–1999"; Smith et al., "Illegal Logging, Collusive Corruption and Fragmented Governments"; Laurance, "The Perils of Payoff"; Njeru, "'Donor-Driven' Neoliberal Reform Processes, 'Democratization' and the Production of Deforestation in Kenya"; Jeremia Njeru, "'Defying' Democratization and Environmental Protection in Kenya." I use the term "democratization struggles" to emphasize the contested nature of change. I understand democratization to mean much more than competitive elections but to involve un-coerced participation, political space and transparency in policy-making including critically over natural resources.

11. Other economics driven models focus on value of rents from agriculture versus forest rents (see, for example, Angelsen, "Forest Cover Change in Space and Time.")

12. Klopp, "Pilfering the Public"; Dauvergne, *Shadows in the Forest*; Malla, "Changing Policies and the Persistence of Patron–Client Relations in Nepal." The World Conservation Union notes that "logs continue to be the preferred currency of political patronage in many countries with old growth forests." Rietbergen, *Forests – A Century of Destruction*, 1. Similarly, a Greenpeace study of logging concessions to the Malaysian conglomerate Rimbunan Hijua, argues that such companies "cultivate a network of political patronage that breeds off political systems that are under immense stress." Greenpeace, *The Untouchables*, 3.

13. Scott, "Patron–Client Politics and Political Change in South-East Asia," 111–12.

14. Ihonvbere, "Nigeria: Militarization and Perpetual Transition."

15. This dynamic is also present in Indonesia. Dauvergne, "The Politics of Deforestation in Indonesia," 512.

16. Deacon, "Deforestation, Investment and Political Instability."

17. Buergin and Kessler, "Intrusions and Exclusions"; Maathai, *Unbowed: A Memoir*; Cox, Arnold, and Villamayor-Tomás, "A Review and Reassessment of Design Principles for Community-Based Natural Resource Management"; Smith et al., "Illegal Logging, Collusive Corruption and Fragmented Governments."

18. Seymour and Mugabe, "Kenya."

19. Kimaiyo, *Ogiek Land Cases and Historical Injustices 1902–2004*, 88.

20. Klopp "Pilfering the Public"; RoK, *Report of the Commission of Inquiry into the Law System of Kenya*; RoK, *Report on the Commission of Inquiry into the Illegal/Irregular Allocation of Public Land*.

21. *Daily Nation*, March 1, 1999.

22. *Daily Nation*, April 25, 1997.

23. RoK, *Report of the Commission of Inquiry into the Law System of Kenya*, 59; RoK, *Report on the Commission of Inquiry into the Illegal/Irregular Allocation of Public Land*, 150–9. On spikes in land grabbing prior to elections, see RoK *Report on the Commission of Inquiry into the Illegal/Irregular Allocation of Public Land*, 83.

24. The 1.7% figure comes from UNEP, *An Assessment of the Status of the World's Remaining Closed Forests*. The 2–3% estimate is most widely used.

25. Matiru, *Forest Cover and Forest Reserves in Kenya*, 19; RoK, *Report on the Commission of Inquiry into the Illegal/Irregular Allocation of Public Land*. In the early 1990s Forestry Department statistics suggested 2.2 million ha of forest cover, but earlier satellite data suggested less than 1.3 million ha. KIFCON, *Kenya Indigenous Forest Conservation Programme*, 5. Indeed, according to the Government's Statistical Abstracts forest cover did not change between 1990 and 1998, even though a record of legalized excisions shows change. See RoK, Statistical Abstracts 1991 and 1998, and for a list of gazetted excisions see Matiru, *Forest Cover and Forest Reserves in Kenya*.

26. This is the same figure cited in the KIFCON report which came out of the DFID funded survey.

27. Njuguna, Mbegera, and Mbithi, *Reconnaissance Survey of Forest Blocks in the West and East Rift Valley*, cited in Gachanja, "Public Perception of Forests as a Motor for Change," 60.

28. I am grateful to Dr Gertrud Schaab for her communications on this point. Of course, limitations exist to remote sensing data, for example, satellite photos may not catch the change in biodiversity caused by planting commercial trees within forests and the vegetation that covers deforested land can give the same reading as trees. See Pimm, *The World According to Pimm*, 64.

29. Castro, *Facing Kirinyaga*, 1.

30. See, for example, the case of Lembus Forest and the concession granted to Ewart Grogan; Anderson, "Managing the Forest."

31. A. Ochola, "Rescuing a Forest Plundered by its Custodians," *East African Standard*, July 10, 2006, 2.

32. Ongugo and Njuguna, "Effects of Decentralization Policies on Forest Management," 14.

33. Barr and McGrew, "Landscape-Level Tree Management in Meru Central District, Kenya," 29; Okowa-Bennun and Mwangi, "Land Tenure and Forest Resource Management," 188–9; Kagombe and Gitonga, *Plantation Establishment in Kenya*, 11.

34. Lung and Schaab, "Change Detection in Western Kenya"; T. Lung *Landbedeckungsänderungen im Gebiet "Kakamega Forest und assoziierte Waldgebiete" (Westkenia)*, 89.

35. African Development Bank, "Kenya – Evaluation of Bank Assistance," 11.

36. Widner, *The Rise of the Party-State in Kenya*, 180; Gachanga, "Public Perception of Forests as a Motor for Change," 8; RoK, *Report on the Commission of Inquiry into the Illegal/Irregular Allocation of Public Land*, 158–9.

37. A. Ochola, "Rescuing a Forest Plundered by its Custodians," *East African Standard*, July 10, 2006, 2. I personally witnessed the same process in Kakamega in 1998 where the "project" was an agricultural showground even though one already existed although it too would be "grabbed." A visit would suggest that peasant farmers had encroached on the forest since the place was planted with maize. However, on closer examination it became clear that the new owner of the land was in fact leasing it out to earn rent.

38. Personal communication with Kiprotich Siele, November 8, 2004; A. Ochola, "Rescuing a Forest Plundered by its Custodians," *East African Standard*, July 10, 2006.

39. See Peter Ng'etich, "Kenya: Outcry Over 'Political Allocation' of Forest land," *Daily Nation*, February 8, 2002.

40. Kenya Forest Working Group, minutes on monthly meetings, January 24, 2003. Available online at www.kenyaforests.org/minutes/minutes_charcoal.pdf.

41. J. Mbaria, "Kenya's Plot to Legalise Forest Excisions," *East African*, January 14, 2002. The 2004 Commission of Inquiry noted the same excision but put it at 23.66 ha. RoK, *Report of the Commission of Inquiry into Illegal/Irregular Land*, Annex 2, 22.

42. Anonymous interview, 2001. Contrast this with a recent African Development Fund Appraisal linked to more funding for the NTZDC which "successfully implemented a Bank financed project between 1992 and 2001 that was aimed at protecting Kenya's forest reserves from encroachment through the establishment of forest plantations and tea belts as physical buffers to forests." African Development Bank, "Kenya – Evaluation of Bank Assistance," 7.

43. RoK, *Report of the Commission of Inquiry into the Law System of Kenya*, vol. 2, 22.

44. In 1989, Hon. J.J. Kamotho, Secretary General of KANU, was allocated 2.7 ha, purportedly as part of a land exchange.

45. RoK, *Report of the Commission of Inquiry into Illegal/Irregular Land*, vol. 1, 225, vol. 2, Annex 3.
46. *Daily Nation*, October 9, 1998.
47. For Wangari Maathai's firsthand account see her memoir *Unbowed*, 261–72.
48. *Daily Nation*, October 8, 1998.
49. Ibid.
50. *Daily Nation*, November 13, 1998.
51. To underscore the illicit nature of this excision and unreliability of the public record of such excisions, the Kenya Forest Working Group found when they investigated the matter legal procedures had not been followed. For example, legal Notice No. 43 of the Kenya Gazette which announced excisions of Karura Forest used a boundary plan for East Mau forest (*Daily Nation*, February 7, 1999). See also Greenbelt Movement, "Forest Policy and Practice in Conflict in Kenya."
52. *Daily Nation*, November 13, 1998.
53. *Daily Nation*, November 14, 1998; *Daily Nation*, November 16, 1998.
54. This was later confirmed in Rok, *Report of the Commission of Inquiry into Illegal/Irregular Land*.
55. For more details including a full list of the companies see *Daily Nation*, November 15–18, 1998.
56. *Daily Nation*, February 11, 1998. The report *Unjust Enrichment* found that one acre of Karura land was worth 6.8million K. sh. at the time [approximately $100, 000]. The value of the excised land thus exceeds 8 billion K. sh. [approximately $100 million]. Kenya National Commission on Human Rights and the Kenya Land Alliance, *Unjust Enrichment*, 9.
57. Kenya Human Rights Commission Quarterly Report, 2003; RoK, *Report of the Judicial Commission Appointed to Inquire into the Tribal Clashes in Kenya*, 277. Forests also got burned down in this violence – both as attackers tried to smoke out people sheltering in forests and as local people tried to prevent attackers from using local forests as bases. For example, in the first week of March 1992, one official suggested that 1700 ha of forest had been burned down this way (*Daily Nation*, July 12, 1992).
58. *Daily Nation*, November 18, 1998.
59. *Daily Nation*, January 9, 1999.
60. The Attorney General himself has many connections to the UN and was once appointed as the Special Rapporteur on Torture. Hence, it was likely that he was attempting to defend his personal position as well as the government from attack.
61. *Weekly Review*, January 15, 1999.
62. *Standard*, January 31, 1999.
63. *The People*, February 1, 1999.
64. *The People*, February 3, 1999.
65. Maathai, *Unbowed: A Memoir*, 271.
66. A team of trained pollsters conducted interviews in streets, market centers, and other public places. They polled 5000 Kenyans, with the geographical distribution weighted according to the adult population registered to vote in the 1997 election, using the most recent statistics available at the time (which, if biased, would be in favor of pro-KANU areas). For further details see *Daily Nation*, March 23, 1999.
67. *Daily Nation*, March 23, 1999.
68. Kenya Human Rights Commission, Quarterly Report.
69. Njeru, "'Defying' Democratization and Environmental Protection in Kenya," 340; Duncan Ndotono, "Friends of Karura Forest Triumph As Park Opens to Public," *Nairobi Star*, March 3, 2011. Current charges to enter the park for Kenyans are 100 K. sh. (adult) and 20 K. sh. (child) which while very little for middle-class Kenyans is still outside the reach of the very poor including those in neighboring slums.
70. Kenya Forests Working Group, Minutes of meetings for 2004, http://www.kenyaforests. org/index.php?option = com_remository&Itemid = 79&func = fileinfo&id = 25&date = 2017-10-01; Lambrechts et al., "Aerial Monitoring of Forest Boundaries."
71. See Mathews Ndanyi, "Rift MPs Oppose Nandi World Bank Dam," *Nairobi Star*, May 3, 2011; Tom Matoke, "Leaders Oppose Planned Dam in Nandi Forest," *Business Daily*, February 16, 2011.

72. Githiga and Mburu, "Local Communities' Incentives for Forest Conservation."
73. Agrawal, "Common Property Institutions and Sustainable Governance of Resources"; Ribot, *Waiting for Democracy.*
74. Matter, "Clashing Claims"; Matter, "Struggles over Belonging."
75. Agrawal and Ostrom, "Collective Action, Property Rights and Decentralization in Resource Use in India and Nepal"; Ribot, *Waiting for Democracy.*
76. Tendler, *Good Government in the Tropics.*
77. Maathai, Nobel Peace Prize Lecture.
78. Buergin and Kessler, "Intrusions and Exclusions"; Rosser, Roesad, and Edwin, "Indonesia: The Politics of Inclusion."
79. Sivaramakrishnan, "Crafting the Public Sphere in the Forests of West Bengal."
80. See also the cases of the Mau Forest (Klopp and Sang, "Maps, Power, and the Destruction of the Mau Forest in Kenya") and Enoosupukia (Matter, "Clashing Claims" and "Struggles over Belonging.")

References

African Development Bank. "Kenya-Evaluation of Bank Assistance to the Agriculture and Rural Development." Sector Memo, ADF/BD/IF2005/211, 2005.

Agrawal, Arun. "Common Property Institutions and Sustainable Governance of Resources." *World Development* 29, no. 10 (2001): 1649–72.

Agrawal, Arun, and Ostrom. Elinor. "Collective Action, Property Rights and Decentralization in Resource Use in India and Nepal." *Politics and Society* 29, no. 4 (2001): 485–514.

Anderson, David. "Managing the Forest: The Conservation History of Lembus, Kenya, 1904–63." In *Conservation in Africa: People, Policies and Practice*, ed. D. Anderson, and R. Grove, 249–68. Cambridge: Cambridge University Press, 1987.

Anderson, J. *Nature, Wealth and Power.* Washington, DC: United States Agency for International Development, 2002.

Angelsen, A. "Forest Cover Change in Space and Time: Combining the von Thunen and Forest Transition Theories." *World Bank Policy Research Working Paper*, no. 4117, 2007.

Barr, R., and J. McGrew. "Landscape-Level Tree Management in Meru Central District, Kenya." *Agroforestry in Landscape Mosaics Working Paper Series.* World Agroforestry Center, Tropical Resources Institute of Yale University and the University of Georgia, 2004.

Brown, D., C. Luttrell, A. Casson, R. Cruz, and T. Fomete "Forest Law Enforcement and Governance: The Role of Independent Monitors in the Control of Forest Crime." *ODI Forestry Briefing* no. 5, 2004.

Buergin, R., and C. Kessler. "Intrusions and Exclusions: Democratization in Thailand in the Context of Environmental Discourses and Resource Conflicts." *GeoJournal* 52 (2000): 71–80.

Castro, A. *Facing Kirinyaga: A Social History of Forest Commons in Southern Mount Kenya.* London: Intermediate Technology Publications, 1995.

Cox, M., G. Arnold, and S. Villamayor-Tomás. "A Review and Reassessment of Design Principles for Community-Based Natural Resource Management." Workshop in Political Theory and Policy Analysis series paper, 2010.

Dauvergne, P. "The Politics of Deforestation in Indonesia." *Pacific* 66, no. 4 (1994): 497–518.

Dauvergne, P. *Shadows in the Forest: Japan and the Politics of Timber in Southeast Asia.* Cambridge, MA: MIT Press, 1997.

Deacon, R. "Deforestation, Investment and Political instability." In *The Political Economy of Conflict and Appropriation*, ed. M. Garfinkel, and S. Skaperdas, 131–56. Cambridge: Cambridge University Press, 1996.

De Campos, Mello. "Global Change and the Political Economy of Sustainable Development in Brazil." Paper presented to the International Studies Association conference, Washington, DC, February 16–20, 1999.

FAO. *State of the World's Forests 2005.* Rome: FAO, 2005.

Gachanja, M.K. "Public Perception of Forests as a Motor for Change: The Case of Kenya." *Unasylva* 213, no. 55 (2003): 59–62.

Geist, H., and Lambin. Eric. "Proximate Causes and Underlying Driving Forces of Tropical Deforestation." *Bioscience* 52, no. 2 (2002): 143–50.

Githiga, P., and J. Mburu "Local Communities' Incentives for Forest Conservation: Case of Kakamega Forest in Kenya." Paper presented to the International Association for the Study of Common Property Conference, Indonesia, June 19–23, 2006.

Grainger, A. "Bringing Tropical Deforestation under Control." *Global Environmental Change Briefings* 16 (November, 1997).

Greenbelt Movement "Forest Policy and Practice in Conflict in Kenya: The Case of Karura Forest." Unpublished manuscript, 1999.

Greenpeace. *The Untouchables*. Amsterdam: Greenpeace, 2004.

Ihonvbere, J. "Nigeria: Militarization and Perpetual Transition." In *Democratization in Late 20th Century Africa*, ed. Jean-Germain Gros, 59–76. Westport, CT: Greenwood Press, 1998.

Kagombe, J., and J. Gitonga. *Plantation Establishment in Kenya: The Shamba System Case Study*. Nairobi: Kenya Forests Working Group, 2005.

Kenya Forests Working Group. Minutes of meetings for 2004. http://www.kenyaforests.org/index.php?option=com_remository&Itemid=79&func=fileinfo&id=25&date=2017-10-01.

Kenya Human Rights Commission. Quarterly Report, 2003.

Kenya National Commission on Human Rights and the Kenya Land Alliance. *Unjust Enrichment*. Nairobi 2006.

Kenya Wildlife Service and UNEP. *Aerial Monitoring of Forest Boundaries*. 2007.

KIFCON. *Kenya Indigenous Forest Conservation Programme*. 1994.

Kimaiyo, T. *Ogiek Land Cases and Historical Injustices 1902–2004*. Nakuru: Ogiek Welfare Council, 2004.

Klein Goldewijk, K. "Estimating Global Land Use Change over the Past 300 Years: The HYDE Database." *Global Biogeochemical Cycles* 15, no. 2 (2001): 417–33.

Klopp, J. "Pilfering the Public: The Problem of Land-Grabbing in Contemporary Kenya." *Africa Today* 47, no. 1 (2000): 7–26.

Klopp, J., and K. Sang "Maps, Power, and the Destruction of the Mau Forest in Kenya." *Georgetown Journal of International Affairs* (Winter/Spring) 2011: 125–34.

Lambrechts, C., D. Woodley, M. Litoroh, and P. Kamwara. "Aerial Monitoring of Forest Boundaries." Nairobi: Kenya Wildlife Service, July 2007. www.unep.org/dewa/Portals/67/pdf/Aerial_Monitoring_Report-1-final.pdf

Laurance, W. "The Perils of Payoff: Corruption as a Threat to Global Biodiversity." *Trends in Ecology and Evolution* 19, no. 8 (2004): 399–401.

Le Billon P. "The Political Ecology of Transition in Cambodia 1989–1999: War, Peace and Forest Exploitation." *Development and Change* 31(4). 2000. 785–805.

Lung, T. *Landbedeckungsänderungen im Gebiet "Kakamega Forest und assoziierte Waldgebiete" (Westkenia)*. Karlsruhe: Karlsruher Geowissenschaftliche Schriften, 2004.

Lung, T., and G. Schaab "Change Detection in Western Kenya – The Documentation of Fragmentation and Disturbance for Kakamega Forest and Associated Forest Areas by Means of Remotely Sensed Imagery." ISPRS Archives, 2004.

Lung, T., and G. Schaab. "A Comparative Assessment of Land Cover Dynamics of Three Protected Forest Areas in Tropical Eastern Africa." *Environmental Monitoring Assessment* 161 (2010): 531–48.

Maathai, W. Nobel Peace Prize Lecture. Nobel Foundation, 2004.

Maathai, W. *Unbowed: A Memoir*. New York: Knopf, 2006.

Malla, Y.B. "Changing Policies and the Persistence of Patron–Client Relations in Nepal: Stakeholders' Responses to Changes in Forest Policies." *Environmental History* 6, no. 2 (2001): 287–303.

Matiru, V. *Forest Cover and Forest Reserves in Kenya: Policy and Practice*. Nairobi: IUCN, 1999.

Matter, Scott. "Clashing Claims: Neopatrimonial Governance, Land Tenure Transformation, and Violence in Enoosupukia, Kenya." *Political and Legal Anthropology Review* 33, no. 1 (2010): 67–88.

Matter, Scott. "Struggles over belonging: insecurity, inequality and the cultural politics of property at Enoosupukia, Kenya." PhD diss, McGill University 2010.

Njeru, Jeremia. "'Defying' Democratization and Environmental Protection in Kenya: The Case of Karura Forest Reserve in Nairobi." *Political Geography* 29 (2010): 333–42.

Njeru, Jeremia. "'Donor-Driven' Neoliberal Reform Processes, 'Democratization' and the Production of Deforestation in Kenya: The Case of Karura and Oloolua Forests in Nairobi." PhD diss, University of Wisconsin – Milwaukee, August 2008.

Njuguna, P., M. Mbegera, and D. Mbithi. *Reconnaissance Survey of Forest Blocks in the West and East Rift Valley*. Nairobi: Permanent Presidential Commission on Soil Conservation and Afforestation, 1999.

Okowa-Bennun, P., and A.M. Mwangi. "Land Tenure and Forest Resource Management." In *In Land We Trust: Environmental, Private Property and Constitutional Change*, ed. C. Juma, and J.B. Ojwana, 175–98. Nairobi: Initiatives Publishers, 1996.

Ongugo, P., and Njuguna, J. "Effects of Decentralization Policies on Forest Management: Experience from Seven Forests in Kenya." Paper presented to the Conference of the International Association for the Study of Common Property, Oaxaca, Mexico, 2004.

Pimm, S. *The World According to Pimm: A Scientist Audits the Earth*. New York: McGraw Hill, 2001.

Republic of Kenya. *Report of the Commission of Inquiry into the Law System of Kenya*. Nairobi: Government Printer, 2002.

Republic of Kenya. *Report of the Government's Task Force on the Conservation of the Mau Forests Complex*. Nairobi: Government Printer, 2009.

Republic of Kenya. *Report of the Judicial Commission Appointed to Inquire into the Tribal Clashes in Kenya*. Nairobi: Government Printer, 1999.

Republic of Kenya. *Report on the Commission of Inquiry into the Illegal/Irregular Allocation of Public Land*. Nairobi: Government Printer, 2004.

Republic of Kenya. 1991. Statistical Abstract. Nairobi: Central Bureau of Statistics.

Republic of Kenya. 1998. Statistical Abstract. Nairobi: Central Bureau of Statistics.

Ribot, J. *Waiting for Democracy: The Politics of Choice in Natural Resource Decentralization*. Washington, DC: World Resources Institute, 2004.

Rietbergen, S. *Forests – A Century of Destruction*. Gland: IUCN, 2000.

Rosser, A., K. Roesad, and D. Edwin. "Indonesia: The Politics of Inclusion." *Journal of Contemporary Asia* 35, no. 1 (2005): 53–77.

Scott, J. "Patron–Client Politics and Political Change in South-East Asia." *American Political Science Review* 67, no. 1 (1972): 91–113.

Seymour, F., and J. Mugabe. "Kenya." In *The Right Conditions: The World Bank, Structural Adjustment and Forest Policy Reform*, ed. F. Seymour, and N. Dubash, 113–27. Washington, DC: World Resources Institute, 2000.

Sivaramakrishnan, K. "Crafting the Public Sphere in the Forests of West Bengal: Democracy, Development, and Political Action." *American Ethnologist* 27, no. 2 (2000): 431–61.

Smith, J., K. Obidzinski, S. Subarudi, and I. Suramenggala. "Illegal Logging, Collusive Corruption and Fragmented Governments in Kalimantan, Indonesia." *International Forestry Review* 5, no. 3 (2003): 293–302.

Tendler, Judith. *Good Government in the Tropics*. Baltimore, MD: Johns Hopkins University Press, 1997.

United National Environmental Programme (UNEP). *An Assessment of the Status of the World's Remaining Closed Forests*. UNEP, 2001.

Widner, J. *The Rise of the Party-State in Kenya: From Harambee to Nyayo*. Berkeley: University of California Press, 1992.

World Bank. *At Loggerheads?* Washington, DC: World Bank, 2007.

World Resources Institute. *Decisions for the Earth: Balance, Voice and Power*. Washington, DC: World Resources Institute, 2003.