The Southern Mount Kenya Forest Since Independence: A Social Analysis of Resource Competition

ALFONSO PETER CASTRO*
Syracuse University, New York

Summary. — Large forest reserves represent a long-standing state response to tropical forest destruction. There are, however, growing doubts about their effectiveness as sustainable resource management regimes. This case study uses a social and historical perspective to examine conflicts about the use and management of the Mount Kenya Reserve in Kirinyaga District, Kenya since independence in 1963. Official policies and practices have treated local households and small-scale forest enterprises as the most serious threat to the reserve. In contrast, the paper argues that forest degradation has long been associated with official mismanagement and government-sanctioned development activities. In addition, it suggests that planned and spontaneous conversion of woodlands accelerated in the mid-1980s largely because of the implementation of government plans to establish extensive forest plantations. The paper also discusses proposals by the local and national government to convert forest reserves into tea revenue farms.

1. INTRODUCTION

A long-standing response by states to tropical forest destruction has been to establish large reserves managed by one or more bureaucratic agencies (FAO, 1985; Richards and Tucker, 1988). In many countries such reserves were originally established by colonial governments (Troup, 1940). The term "reserve" sometimes denotes a protected forest, where trees are maintained to ensure environmental stability through watershed protection and other functions. It also refers to production forests, where strictly supervised exploitation is permitted on a sustained-yield basis. Production forest regimes often include provisions for multiple types of forest use, especially cutting timber and harvesting so-called minor forest produce. Setting aside land as a reserve is not necessarily synonymous with the preservation of biologically diverse indigenous woodland. Other types of forest ecosystems, particularly monoculture plantations, are often included in such management regimes.

There are growing doubts about the effectiveness of large state-run forest reserves as sustainable resource management regimes. The practicality of keeping extensive tracts of land under forest cover can be questioned, given recent population increases and coinciding food and resource needs. Indeed, accounts of forest degradation commonly mention encroachment by impoverished farmers, herders, fuelwood gatherers, and small-scale loggers.

The role, however, of subsistence needs and encroachment by rural families in the destruction of forest reserves is sometimes exaggerated, overshadowing the importance of other key variables. There is a growing literature indicating that the degradation of forest reserves often derives from bureaucratic mismanagement and officially sanctioned "development" activities (for example, see FAO, 1985; Richards and Tucker, 1988; Gradwohl and Greenberg, 1988; Anderson and Huber, 1988; Hecht and Cockburn, 1989). Thus, the threat to official forest reserves is not only from without, but also from within.

This case study uses a social and historical perspective to examine conflicts about the management and use of the Mount Kenya Forest...
Reserve in Kirinyaga District, Kenya. Its focus is the period between independence in 1963 and the mid-1980s, but recent events are also discussed. Official policies have treated local households and small-scale forest enterprises as the most serious threat to sustained management of the reserve. This paper, however, argues that official mismanagement and government-sanctioned development activities generated or instigated substantial forest degradation. It shows that the Forest Department has long encountered difficulties in managing fuelwood production for local tea factories and, to a lesser extent, timber harvesting on a sustained-yield basis. The paper suggests that both planned and spontaneous conversion of woodlands accelerated in the mid-1980s largely because of the muddled implementation of government plans to establish extensive forest plantations. Proposals by the local and national government to convert part of the reserve into tea revenue farms are also discussed. Although local tea-growing households, pit-sawyers, and sawmills often benefited from, or participated in, forest clearance, government policies and programs strongly influenced their actions.

This analysis is based on ethnographic field work carried out in Kirinyaga and the southern Mount Kenya Forest during parts of 1982 and 1983, with a brief revisit in 1988. Formal and informal interviews were carried out with government officials and staff, owners and employees of several small-scale forest-based enterprises, forest users such as groups of women collecting fuelwood, and local households. Fieldwork included numerous trips on paths, trails, and roads inside the forest bordering Ndia and Gichugu Divisions in Kirinyaga. Available reports and archives, were consulted, including the minutes of the Kirinyaga County Council, a district-wide legislative body, and colonial records in Embu and Nairobi. The paper thus utilizes a social and historical perspective to understand the nature of, and changes in, conflicts about the use and management of the forest reserve.

2. SETTING AND HISTORICAL BACKGROUND

Kirinyaga District is located in Central Province. Nearly one-fourth of the district consists of government forest (308 sq. km) and national parkland (46 sq. km) in the Mount Kenya Reserve. Its afro-alpine moorland, bamboo, and moist montane forest serve as watershed for streams flowing into Kirinyaga's densely populated areas. The district has over 300,000 residents, mainly Ndia and Gichugu Kikuyu (KDDP, 1984; Davison, 1989). The streams not only provide water for their domestic use, but also feed irrigation canals. Included in the district is the Mwea-Tebere Irrigation Settlement, with over 3,000 tenant families (Chambers and Moris, 1973; KDDP, 1984). A smaller irrigation scheme is located at Kibirigwe, and some individual households use furrows to irrigate their fields. Most agriculture in the district, however, is rainfed.

The Mount Kenya Reserve consists of over 200,000 hectares (ha) of gazetted government forest. The present analysis focuses mainly on Kamweti Forest, a management unit totaling about 20,000 ha on the southern slopes in Kirinyaga. Valuable indigenous timber trees in this area include podo (Podocarpus sp.) and camphor (Ocotea usambarensis). Exotic species such as pine and eucalyptus are grown in over 500 ha of plantations. The government of Kenya, through the Ministry of Environment and Natural Resources and its Forest Department, manages the reserve.

The forest reserve is a relic of the colonial era. The southern portion of the Mount Kenya Reserve was demarcated in 1910, six years after Kirinyaga was brought under government rule (see Castro, 1988). There were four major reasons for establishing it: to protect the forest from supposedly destructive indigenous land use practices; to prevent white land speculators and sawmills from obtaining private ownership of it; to permit management of the forest in a scientific manner; and to generate revenue for the Forest Department by licensed multiple-use exploitation, including sale of timber and "minor" forest produce. The goal was thus to develop the area on a sustained-yield basis, balancing the use and replenishing of forest resources. The protection offered through gazettement as a government reserve has allowed a substantial portion of indigenous forest to remain intact.

3. DISTRICT HOUSEHOLDS AND THE FOREST RESERVE

The belief that "man" is the "most dangerous" threat to the reserve remains the central tenet of contemporary forest policies (KDAR, 1978, p. 31). "Man" largely refers to local people, whose access to and use of the reserve is controlled by Forest Department personnel and policies. The department relies on the administrative structure set up during colonial rule, with forest officers supported by guards posted along the edge of the reserve. In 1983 the district forester commanded
considerable economic and demographic growth. It was especially noteworthy because most forest cleared land. Wire fencing was used near the trees planted along a three-meter wide strip of moats spanned by logs, or a line of eucalyptus between the reserve and adjacent homesteads. It was widely believed in colonial times that the whites land in Kirinyaga. There was a striking contrast surprising given the pressing demand for farm-

boundary markers were intended as symbols instead of barriers: wooden rail fences, game guards patrolled "beats" whose boundaries were defined by rivers. They kept ledgers with the names of monthly fuel ticket and grazing permit holders. Violators of forest regulations were subject to fines or imprisonment. Forest officers could "compound" offenses, charging up to five times the value of damage inflicted or produce taken. The accused could appeal such decisions in court.

Forest Department staff members claimed that the ambiguity of administration changed after independence. An official said, "In the time of the mzungu [white man], people were beaten. There was a fear of entering the forest. Today, people don't worry about this." Several district residents agreed with this assessment. It was widely believed in colonial times that the whites had usurped the forest. Independence eliminated racial competition as a source of tension. Africanization of the bureaucracy further reduced the sociocultural distance between forest officers and district inhabitants. Despite these changes, small-scale forest users often continued to be viewed by administrators as the most serious threat to the reserve.

Archival documents dealing with Kirinyaga indicated that relatively few violations of forest rules occurred during the colonial era (Embū District Archives, file FOR 13/3/1, "Forest Offenses"; Castro, 1988). This pattern continued in the years immediately after independence, extending into the 1970s and early 1980s. Only six cases were compounded at Kamweti in 1978, yielding KSh. 1,020 in fines (KDAR, 1978, p. 29). In 1981, 19 offenders were assessed KSh. 2,599 (KDER, 1981, p. 2). Illicit cultivation, grazing, or fires sometimes occurred in the reserve (KDDP, 1976, p. 14; KDDP, 1980, p. 31). Once again, the incidence of encroachment by local households was quite low. For example, only one case was handled in 1981 (KDER, 1981). The lack of encroachment along the forest line and in the interior of the reserve in 1983 was surprising given the pressing demand for farmland in Kirinyaga. There was a striking contrast between the reserve and adjacent homesteads. It was especially noteworthy because most forest boundary markers were intended as symbols instead of barriers: wooden rail fences, game moats spanned by logs, or a line of eucalyptus trees planted along a three-meter wide strip of cleared land. Wire fencing was used near the Kangaita Tea Factory, but seldom elsewhere.

The land adjacent to the reserve underwent considerable economic and demographic growth after independence. In 1961, the area was described as largely undeveloped (EDFR, 1961, p. 2). It was regarded as "possibly the poorest" part of the district (EAAR, 1962, p. 2). Two decades later this area was thickly populated and generally prosperous. Population densities in sublocations along the forest often exceeded 400 persons per sq. km in 1979 (KPC, 1979). Tea, which flourished in the cool, moist climate and slightly acidic soils immediately adjacent to the forest, propelled this transformation. The crop was introduced on a small-scale and closely supervised basis in 1955. Production increased ten-fold after independence, with 8,270 licensed growers having over 3,000 ha in 1982 (KDAR, 1978; KDDP, 1984). Local smallholders earned KSh. 44,465,000 during the 1980–81 agricultural season (KDAR, 1981). The "tea zone" was known locally as "a land of stone and timber houses," a reference to widespread (although by no means ubiquitous) material indicators of local prosperity.

Several factors contributed to the low level of recorded offences. Importantly, many forest products, such as firewood (the main household fuel) was available to the public at reasonable prices. In 1983 a monthly fuel ticket, which allowed a women to collect 30 head loads of firewood a month, usually cost KSh. 4. The fuel ticket was a bargain compared to the price of fuelwood elsewhere in the district, where a single head load might sell for KSh. 4 (Brokensha et al., 1983). Hence, a landless family that earned KSh. 10 a day in wages could afford to buy a permit. A monthly grazing permit cost KSh. 1 per head per head of cattle and KSh 0.20 per sheep (goats were excluded). Other forest products were also available, including poles, posts, withies, and bookings at a fishing camp near Kamweti. Total revenue from minor forest products was KSh. 117,300 in 1981 (KDER, 1981, p. 7).

Access rules, the presence of guards, and fear of prosecution also fostered voluntary compliance among forest users. Only women could purchase monthly fuel tickets. They were allowed to take more than one head load per day as long as they did not exceed their monthly total. Women often accumulated several loads at a time, stacking them outside the reserve boundary. Ox-carts were not allowed into the reserve to haul loads belonging to fuel ticket holders, but carts waited at the forest line to be hired by them. Teamsters sometimes asked women to show their fuel ticket before carting wood. As an oxcart driver told a women near the Kiringa River, "I won't go to jail for you." That is, he faced penalties if caught hauling wood taken illegally. Men could buy firewood by the stack, with an annual limit of 50 m³ per person.
The level of vigilance among Forest Department staff, including guards, varied widely. In general, guards did not check every person leaving the forest. Record keeping at some guard posts was very casual. For example, there were poorly maintained monthly ledgers of fuelwood permit holders. Interviews with guards indicated that some illicit activities, such as unauthorized cutting or game poaching to obtain trophies for sale, took place. There was undoubtedly underreporting of violations among staff who pocketed payments for ignoring violations. Nevertheless, the impression gained from observations and interviews with local forest users and forestry staff in 1982–83 was that the incidence of violations by district households was not serious.

Many forestry staff members felt confident that their performance maintained the integrity of the reserve. A guard stated, “Tell the people in Nairobi the Mount Kenya Forest is safe.” Yet there have been questions whether government forest management adequately protects the reserve.

4. TIMBER

Although the Mount Kenya Forest may have been “safe” from local households, it was under considerable pressure from commercial users. Officials noted in 1980 that the high demand for timber, woodfuel, other materials depleted supplies faster than they could be replenished (KDDP, 1980, p. 103). The Forest Department was thus unable to operate under sustained-yield guidelines in the reserve. An official confirmed in December 1982, “We do not have enough raw materials to supply demand.” Such shortfalls, however, seemed minor compared to the controversies about forest degradation that erupted later in the decade.

Sharp conflict arose about logging and deforestation in the southern Mount Kenya Forest during the 1980s. A small-scale woodfuel and timber contractor said in October 1982, “Last year some people said we [license holders with small-scale operations] were spoiling the forest.” He disputed these charges, arguing that “big contractors” — sawmills and the tea factories — were responsible for deforestation. Complaints in Kirinyaga about loggers “wantonly destroying trees” made national headlines in July 1984 (Daily Nation, July 23, 1984, p. 16). Mwea tenants blamed deforestation for decreased water flow in the streams feeding their canals. The provincial commissioner intervened, ordering district officials to evict the loggers. More drastic measures were eventually introduced. The government closed much of the reserve to exploitation, and a presidential ban was placed on harvesting indigenous trees. Thus, by the late 1980s, an unprecedented number of restrictions on forest use had been introduced.

Reports of overcutting in the mid 1980s seemed incongruous with official statistics on wood supply and timber production in Kamweti Forest during the 1970s and early 1980s. It should be noted that the figures discussed below represented the “best available” information in Kirinyaga, and that their limitations were indicative of shortcomings in government forest management. An interviewed official admitted that the statistics were essentially approximations, that no recent inventory had been done of standing timber or plantation forests. Timber harvesting figures probably underreported the amount of cutting, given the lax supervision in some areas. It is impossible, however, to estimate with any precision the extent to which they varied with reality. The interviewed official claimed that the statistics were reasonably accurate. Nevertheless, it must be emphasized that the figures should be treated with caution and regarded as artifacts of a particular style of resource management.

In 1971 the Forest Department reported about 800,000 m³ of “potential commercial species” available between the Thiba and Rupingazi Rivers, covering only the eastern half of Kirinyaga's share of the reserve (KDAR, 1971, p. 47). It is unclear whether this figure included nearly 450 ha of plantation forests, mainly pines and cypress for timber and eucalyptus for fuel (KDDP 1980, p. 32). Almost half of the plantations were established before 1962, and trees were ready for harvesting by the late 1970s. Available Kamweti timber production statistics revealed a downward trend during this period: 5,123 m³ in 1976; 3,516 m³ in 1978; and 1,416 m³ in 1981 (KDAR, 1976, p. 34; KDAR, 1978, p. 30; KDER, 1981, p. 6). This decline, however, preceded the ban on the harvest of indigenous timber. Until the mid-1980s, exploitation of native trees occurred on a selection basis. The decline in recorded timber production at Kamweti coincided with a time of increased local demand for building material. High coffee prices in the mid-1970s set off a construction boom, causing a short supply of timber (KDAR, 1977, p. 42). Increased incomes in the tea zone also fueled the demand for timber. People often grumbled about the higher price of sawed wood in the early 1980s. Thus, ample incentives existed for timber suppliers during this period to exploit the Forest.

A combination of situational and structural
factors can be identified to explain the pattern of declining timber exploitation at Kamweti during the late 1970s and early 1980s. Very wet conditions obstructed logging in 1978, 1979, and possibly other years (KDAR, 1979). Prolonged wet and misty periods ruined roads and tracks, often making them impassable for days. The owner of a local sawmill stated, “You can never say how many days until the roads dry.” The relatively large timber harvest in 1976 coincided with an exceptionally dry year in the forest (KDAR, 1976). But weather alone did not explain Kamweti timber trends. Conditions for logging were more favorable in 1981 than in 1978 (KDAR, 1981), yet timber extraction dropped.

The felling of easily accessible indigenous timber trees in earlier years probably contributed to the decline in production. Available historical information suggests, however, that timber exploitation in the southern Mount Kenya Forest was not very extensive during colonial times (Castro, 1988). Few sawmills operated in the area prior to 1950, and Kikuyu pitsawyers worked only on a tightly supervised basis.

Competition from other supply sources often reduced the demand for Kamweti timber. Njukini Forest, which is managed for the County Council by the Forest Department, emerged as a major supplier of exotic wood. Located on the border with Embu District, Njukini is easily accessible by road, and its distinctly drier climate makes forest tracks less prone to closure during the wet season. Nearly all of its native forest had been replaced by exotics for timber and fuel purposes. By 1979, 570 ha of exotic plantations were established at Njukini (KDDP, 1980). Local records showed that most sawmills abandoned operations at Kamweti during 1981 to take advantage of cypress being offered at Njukini (KDER, 1981, p. 6). Local sawmills and sawyers also sought out trees from local farms, as well as from plantation forests near Nyeri and Naro Moru.

Many production constraints were encountered by very small-scale timber contractors. They obtained wood on a salvage basis, working deadwood and trees rejected by sawmills. Their operations were seasonal and labor intensive, usually relying on axes and handsaws. Few figures were available on their output. During 1978 they harvested 864 m³ of timber at Kamweti, a larger amount than some local sawmills harvested (KDAR, 1980, p. 30). Still, the small-scale contractors only removed one-fourth of the logs reportedly taken from Kamweti that year. In general, they lacked the equipment, transport, and operating capital necessary to engage in timber production and marketing on a substantial basis. Some felt hard pressed to meet royalty fees for trees and local business permits. There was some unlicensed production, but not all contractors or pitsawyers engaged in illegal harvesting.

The district’s timber industry also suffered from the lackluster performance of many local sawmills. Kirinyaga’s mills were small-scale operations. None of the three sawmills licensed to exploit Kamweti forest in 1975 were prospering at the end of the decade. Nyamindi Sawmill, which harvested 467 m³ of logs in 1975 and 175 m³ in 1977, closed in 1979 (KDAR, 1975, pp. 33-34; KDAR, 1979, p. 24). It had experienced chronic management and transport problems. Kamugi Sawmill, the leading harvester at Kamweti during the mid-1970s, severely curtailed operations by the end of the decade. In 1978 it had removed nearly 1,200 m³ of indigenous logs (KDAR 1978: 30). Despite taking 633 m³ in 1975, Irangi Sawmill “did not do well” (KDAR, 1975, pp. 33-34). It closed two years later. Kutus Sawmill became a Kamweti license holder in the late 1970s. It harvested 238 m³ from Kamweti in 1977 and 445 m³ in 1978 (KDAR, 1975, pp. 33-34; KDAR, 1979, p. 24). Recent figures on timber extraction by individual sawmills were unavailable.

Kirinyaga’s sawmills were generally undercapitalized. Sawmillers often lacked money for necessary fixed investments: power saws, vehicles, business premises, electrical hook-ups, and so on. Chronic shortages of working capital also undermined productivity. The mills often had trouble meeting basic obligations: equipment maintenance, timber royalties, utility bills, business licenses, labor, and other requirements. Rough roads and poorly maintained lumber trucks led to numerous problems. Lorries incapacitated by flat tires, mechanical breakdowns, or punctured sumps were common sights along forest roads. Inadequate or insufficient training in sawmill practices and business management were serious obstacles in some cases.

Not every sawmill was on the brink of collapse. A sawmill owned by a Kenyan citizen of Asian descent seemed well equipped and prosperous by local standards. According to its owner, the mill could handle up to eight lorry loads of logs a day, although the actual amount handled by the mill fluctuated. Besides planks and boards, the sawmill sold wood scraps and shavings, offering them in KSh. 2 and KSh. 10 piles. Sawdust was given freely to whomever wanted it, and the owner pointed out, “Many come to get it.” Both sawdust and wood scraps were used as fuel. This sawmill also had a posho (grain) mill on its premises.
5. THE KIRINYAGA TIMBER COOPERATIVE SOCIETY

A case study of the Kirinyaga Timber Cooperative Society (KTCS) illustrates problems faced by a significant number of small-scale timber producers. KTCS was organized by the government in 1967 to coordinate and improve production by pitsawyers (FDMR, March 1967, p. 2). Similar societies were established in Fmbu and Meru. Like the small-scale fuel contractors, the sawyers cleared worked-out sawmill concessions, taking logs which could not be profitably removed by the mills. They also worked in areas regarded as inaccessible by the mills.

A local timber shortage in 1966, which officials blamed largely on “the bad management” of pitsawyers, prompted the effort to organize the cooperative (KDAR, 1966, p. 27). To encourage membership in the society, forest officers selected trees only for KTCS members. Pitsawyers who refused to join the society were forced to abandon the reserve. By 1977 the cooperative reportedly had 463 members and 15 staff members (KDAR, 1977, p. 39).

The new cooperative was quickly immersed in political factionalism. Financial and management disputes led to new elections for society officers in August 1967, only months after the first ones had been selected (FDMR, August 1967). The struggle for leadership was split along Gichugu-Ndia territorial lines. By 1970, the cooperative was in a crisis (KDAR, 1970, p. 55). Its license had not been renewed, nor had its officers discussed logging needs with foresters (FDMR, January 1970, p. 1). The government intervened in an effort to unite the factions, and an investigation uncovered some misappropriation of funds (KDAR, 1970, p. 55).

In spite of these difficulties, the Forest Department encouraged the society to expand its operations. The KTCS had been allowed to harvest up to 1,000 m³ of wood, but the government offered to triple this if the cooperative set up a sawmill (KDAR, 1971). As part of the arrangement, the Forest Department would have managerial control of the sawmill. The KTCS approved, requesting “a foreign expert” to assist it in planning the new unit (KDAR, 1971, p. 47). The mill was eventually built near Kianyaga Township in Gichugu. The KTCS also applied for a KSh. 30,000 loan to provide members with working capital.

It appeared that the society failed to achieve its intended production goals. For example, recorded harvests at Kamweti were 323 m³ in 1977 and 739 m³ in 1978 (KDAR, 1977, p. 80; KDAR, 1978, p. 30). The cooperative experienced chronic financial problems (KDDP, 1976, p. 14). In 1980 the KTCS had accumulated nearly KSh. 500,000 in unpaid commissions and fees to the District Cooperative Union (KDAR, 1980, p. 65). This debt represented a considerable sum, especially compared to the society’s reported yearly turnover: KSh. 120,000 in 1976; KSh. 635,000 in 1977, and KSh. 750,975 in 1978 (KDAR, 1977, p. 37; KDAR, 1978, p. 35). Low payouts were said to be a problem, but figures were unavailable for most years. Members, however, received KSh. 281,260 in 1977, only 44% of gross sales (KDAR, 1977, p. 39).

The problems experienced by the KTCS, many sawmills, and the small-scale wood and fuel contractors during the 1970s and early 1980s contrasted with the account of heavy logging in 1984. It appeared likely that most of the deforestation reported that year was related to accelerated conversion of indigenous woodland into plantation forests, particularly for fuelwood purposes. According to informants, such plans had existed since early in the decade. This wood was to be used primarily by two of the district’s four tea factories.

6. TEA FACTORIES

In many ways tea, through its consumption of woodfuel in processing and its potential as an alternative land use, posed the most serious threat to the Mount Kenya Forest. Access to processing facilities or “factories” strongly influence a tea’s commercial quality, and a high priority was attached to their operation and efficiency. Each factory was set up as a separate firm, and local growers were encouraged to purchase shares in them, although the parastatal Kenya Tea Development Authority (KTDA) was responsible for management. Two of the factories — Kangaita (opened in 1965) and Thumaita (1975) — were the largest single consumers of fuelwood in Kirinyaga. A KTDA official estimated in 1983 that Kangaita burned an estimated 12,000 stacked m³ of firewood annually, while Thumaita consumed 9,000 stacked m³. Both factories used fuelwood to dry already processed tea, but plans were underway to substitute wood for furnace oil in withering green leaf. Thus, fuelwood consumption was to increase substantially.

According to informants interviewed at Thumaita and Kangaita factories, firewood greatly reduced energy costs. Wood was also regarded as a more convenient fuel. Tea is processed year-round, placing a premium on continuity in supply. Furnace oil deliveries were
sometimes delayed, particularly when tankers broke down or wet weather made roads impassable. In contrast, Kangaita and Thumaita had large stockpiles of wood. Two other tea factories in the district were constrained from using wood in the early 1980s because of the already substantial demand on supplies.

Eucalyptus plantations near Kangaita and elsewhere in the reserve provided a large share of the factories' needs. The shamba (taungya) system of reforestation was used, with Forest Department laborers combining tree planting with food crops grown in cleared areas. There were clusters of shamba laborer settlements near long-established plantation sites such as Chehe and Castle, while other workers lived in recently cleared areas.

An official admitted in 1982, “We don't have enough exotics, so we are cutting indigenous trees.” Clear-cutting was practiced, with biologically diverse ecosystems replaced by monoculture forest plantations. It is beyond the scope of this article to examine the ecological and economic impact of this change, although a few observations bear mentioning. Many potential consequences of the forest conversion had been considered in government planning and were found to be either negligible, as in the case of stream flow, or otherwise acceptable, such as the loss of some wildlife habitats (KMER, 1981). Unfortunately, there was no ongoing monitoring of how the components and processes of the forest ecosystem in southern Mount Kenya were affected. The compatibility of conversion with diverse local uses of the forest, such as watershed or collection of medicinal plants, was apparently not discussed with district residents.

Several informants mentioned plans in 1983 to accelerate and expand the planting of exotics, particularly eucalyptus for fuel plantations. Large areas adjacent to the forest edge were already selected for conversion. This activity was connected to a national plan for converting up to one-fifth of the country’s gazetted woodland into plantation forests (KMER, 1981, p. 210). Much of the forest degradation in the southern Mount Kenya Reserve during the mid-1980s was related to this ambitious program. When clearing began, Forest Department employees often were unable, or at times unwilling, to maintain control over the reserve. Loggers and pitsawyers took advantage of the situation, and parts of the forest reportedly suffered heavy encroachment. Meanwhile, the shamba system apparently unraveled to some extent. There were accounts of cleared areas not being replanted, and that laborers were more interested in growing food crops than protecting existing tree seedlings.

7. TEA REVENUE FARMS

There have been numerous proposals since independence for converting part of the reserve into tea estates. The Kirinyaga County Council, a local governing body composed of elected and appointed members from different parts of the district, served as the local forum for discussing such ideas. Its first request came in 1967, when a councillor asked that “a strip” of forest be handed over to the local landless for growing tea (KALF, November 10, 1967, p. 4). Another councillor added that undeveloped forest land should be made to serve “a useful purpose” (p. 4). The council soon reconsidered the request. Two councillors emphasized the watershed value of the forest, stating that the flow of several rivers had decreased “due to lack of trees” (KALF, February 28, 1968, p. 1). The council not only withdrew its request, it called on local families to plant more trees around their homesteads.

The tea farm idea was revived a year later (KCCM, June 26, 1969, p. 13). Once again, the council asked for forest land from the Ministry of Natural Resources. This time the central government explicitly rejected the request. The Permanent Secretary told them the forest was needed to maintain the country’s water supply. He advised the council to seek room for its landless in the resettlement schemes scattered throughout the nation. Councilors noted the contents of letter with “regret.” The Forest Department, however, eventually returned roughly 100 ha of woodland adjacent to the Mount Kenya Reserve that it had managed on the council’s behalf since the 1950s (KALF, May 18, 1973). The land was used to resettle families displaced by the expansion of schools.

Another proposal for a forest tea farm was made in 1981 (KTPM, February 16, 1982, pp. 14–15). The council offered half of its share of Njukiine Forest in exchange for land in the Mount Kenya Reserve. Proponents of the trade wanted to establish a tea farm, “...so the Council could generate more revenue” (KTPM, February 16, 1982, p. 14). The Kirinyaga County Council was in financial trouble, having ended 1980 with a deficit of KSh. 1,250,000 (KDCR, 1980, p. 27). It had been forced to withdraw KSh. 1,750,000 held in reserve in order to meet its obligations. At the time tea was the most successful cash crop in the district, offering councillors a strong financial incentive. The landless were not mentioned in the council minutes describing the exchange. Presumably they were to benefit by serving as employees of the council. The central government apparently rejected the offer.
A brief visit to Kirinyaga in 1988 revealed that a tea farm has been established within the Mount Kenya Reserve. The farm, however, is unlike the County Council's 1983 proposal. It is part of the Office of the President's Tea Belt or Nyayo Tea Scheme. It is nominally set up to protect the forest from local encroachment by creating a 100-meter buffer zone of government-owned tea along the perimeter of the reserve. The tea itself is on gazetted land, and managed by the central government, which is to receive the revenue from the sale of green leaf. Local people are to benefit through employment generation. Unfortunately, information was unavailable on the extent of the scheme, although a visit to the area revealed that a strip of land along a sizable length of reserve boundary had been converted. Whether the Nyayo Scheme is the harbinger for future agricultural expansion into the reserve is unclear.

8. THE SOUTHERN MOUNT KENYA FOREST IN PERSPECTIVE

Despite independence and the Africanization of government administration, there has been much continuity in the state management of the Mount Kenya Forest Reserve. Forest policies and practices assumed that district households and small-scale entrepreneurs posed the greatest threat to the reserve. Yet, in the first two decades after independence, observations, interviews, and official records indicated that the incidence of forest offenses in Kirinyaga was relatively minor. It should be pointed out that the situation in the district between the 1960s and early 1980s differed from that occurring in some other parts of the country, especially Western Kenya, where local encroachment in forest reserves was often endemic. Indeed, officials with experience elsewhere in Kenya commented on this during interviews in 1982 and early 1983.

Although local encroachment was not a serious problem in the early 1980s, the district forestry staff already reported the reserve was not managed on a sustained-yield basis. Two tea factories, which were operated by a parastatal and partially owned by local tea-growing households, were the largest consumers of wood. In contrast, timber harvesting in the reserve appeared to be on the decline, at least according to official records. Sawmills, rather than pit sawyers, cut the largest amount of timber, although both small- and medium-scale producers often encountered difficulties remaining in business.

A major turning point was reached in the mid-1980s, associated with the implementation of government plans to convert large tracts of indigenous woodland into forest plantations. The system of forest supervision and reforestation broke down. Much uncontrolled cutting and cultivation occurred. Some groups within the district, including county councillors and Mwea-Tebere irrigation tenants who depended on the reserve for watershed, protested the situation. There was significant intervention by the central government and provincial administration, with severe restrictions placed on forest use. In addition, a narrow belt of government tea (the Nyayo Scheme) was planted along the reserve boundary as a buffer zone.

A paucity of data prevents any firm conclusions from being drawn about the Nyayo Tea Scheme or the recent restrictions placed on forest use. The government's emphasis, however, on creating better barriers to protect the reserve is questionable. It has been argued throughout this paper that much of the forest degradation experienced in southern Mount Kenya during the 1980s was attributable to government policies and officially sanctioned development activities. This conclusion is not to minimize the ever-increasing subsistence pressures in the country and region, or the role that local people have played in damaging the reserve. The pattern of forest degradation should not be seen simply as the outcome of population growth in a resource-scarce economy, or the result of short-sighted land use practices by impoverished rural dwellers. Rather, the situation in the southern Mount Kenya Reserve must be understood in the context of state resource-management policies and practices, including forestry and agricultural development activities.

The question of whether the present system of government forest reserve management in Kenya is adequate to meet the country's present and future resource requirements needs urgent consideration. Events during the nearly three decades since independence indicate that innovative policies are needed which balance competing demands between large- and small-scale forest users and between forestry and non-forestry uses of land in the reserve. It is beyond the scope of the present study to examine what possibilities exist, but a starting point can be suggested — Gradwohl and Greenberg's (1988) analysis of several promising tropical forest reserves which, to varying extents, are "carefully woven into the overall pattern of rural life."
SOUTHERN MOUNT KENYA FOREST

NOTES

1. It should be noted that investigations by colonial officers during the 1932 Kenya Land Commission indicated that indigenous management of the southern Mount Kenya forest had been more complex and effective in terms of environmental preservation than previously assumed (see Castro, 1988).

2. Administration and forestry records between 1910 and 1952 the onset of the State of Emergency, and during 1958–63 revealed brief “crime waves” or times when enforcement temporarily lagged in the reserve (Castro, 1988: EDFR, 1961). For the most part, however, the forest was closely supervised.

3. The exchange rate for Kenyan shillings to US dollars for this period varied from: US$1.00 = KSh. 8.25 (1975) to US$1.00 = KSh. 13.00 (1983).

4. Tea planting in Kirinyaga was an extension of the smallholder program initiated in Mathira Division, Nyeri, and the tea was processed at Ragati Factory (CAAR, 1955; DAAR, 1958, p. 6).

5. In a few areas along the forest edge in 1982–83 women reported that fuel tickets were “discounted” to KSh. 1 or KSh. 2, because the Forest Department wanted deadwood removed from areas newly cleared for plantations.

6. Collection of forest produce for medicinal purposes was not officially recorded, although it took place. In the colonial era forestry officials refused local requests to gather ngaita (Rupanea rhododendroides) seeds and muthura (Ocotea kenyensis) bark, which were used for treating respiratory ailments and other diseases (Castro, 1988, p. 41). For a general account of medicinal plants from Mount Kenya, see Myers (1984, pp. 208 209).

7. The notion that deforestation affects rainfall is long-standing among the Kikuyu (see Routledge and Routledge, 1910). Concern that deforestation might severely affect water supplies was one the major justifications for reserving the forest in the colonial era (Hutchins, 1907).

8. Castro (forthcoming) provides an historical analysis of forest development in this gazetted County Council forest.

9. Accounts of the shamba system are given in FAO (1978) and Castro (1988).

10. See Myers (1984) for an informative account of the value of maintaining biologically diverse tropical forests.

REFERENCES


CAAR, Central Province, Department of Agriculture, Annual Report (1955).


DAAR, Kenya Colony, Department of Agriculture, Annual Report (1938).

Daily Nation (various issues).

Davison, Jean, Voices from Mutira (Boulder: Lynne Rienner, 1989).

EAAR, Embu District, Department of Agriculture, Annual Report (1962).

EDFR, Embu District, Forest Department, Annual Report (1961).

Emb District Archives, File FO 13/3/1, “Forest Offenses” (various dates).


FDMR, Embu District, Forest Department, Monthly Reports (various issues).


KCCM, Kirinyaga County Council, “Minutes” (June 26, 1969).

KDAR, Kirinyaga District, Annual Report (various years).


KTPM, Kirinyaga County Council, "Minutes of the town, planning, markets and housing committee" (February 16, 1982).
Troup, Robert, Colonial Forest Administration (Oxford: Oxford University Press, 1940).