

4. The Sacred Mijikenda Kaya Forests of Coastal Kenya and Biodiversity Conservation

by Anthony N. Githitho

1. BIODIVERSITY CONSERVATION AT SACRED SITES ———

The *Convention on Biological Diversity*, adopted at the 1992 Earth Summit in Rio de Janeiro, acknowledged the need to protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements (Article 10). A number of international gatherings have since been held in relation to this issue, such as the 1998 UNESCO symposium on “Sacred sites, Cultural Diversity and Biological Diversity”. They reflect a growing realization of the importance of sacred sites as a component of protected area networks.

A commonly asked question is whether environmental conservation can be based effectively on cultural values and traditional belief systems. Studies on this theme have been carried out by various organizations. Though the field is comparatively new, it is possible to make some general observations about natural-resource conservation at sacred sites from the experiences of individuals and organizations working in this area. One such organization is the Coastal Forest Conservation Unit of National Museums of Kenya, involved in the conservation of Kenya’s Mijikenda Kaya forests.

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2. THE MIJIKENDA KAYA FORESTS —————

The sacred Kaya Forests are situated on the coastal plains and hills of Kenya, East Africa. They are residual patches (from ten to two hundred hectares) of once-extensive diverse lowland forest of Eastern Africa occurring within the Zanzibar-Inhambane Regional Mosaic (UNESCO classification). The Kaya forests are botanically diverse and have a high conservation value, as determined by a number of surveys; two surveys worth mentioning were undertaken by the National Museums of Kenya (NMK), both funded by World Wide Fund for Nature (WWF). More than half of Kenya’s rare plants are found in the coastal region, many in the Kayas.

Working in conjunction with the local communities of those areas, over fifty Kaya forest patches have been identified in the contiguous Kenyan coastal districts of Kwale, Mombasa, Kilifi, and Malindi.

2.1 Mythical / Historical Origins

The Kayas would seem to owe their existence to the beliefs, culture, and history of the nine coastal Mijikenda ethnic groups. These are: the Giriama, Digo, Duruma, Rabai, Kauma, Ribe, Jibana, Kambe,

and Chonyi. According to their oral traditions the forests historically sheltered small fortified villages of the various groups when they first appeared in the region ten generations or more ago ('Kaya' means homestead). They took refuge in the forest settlements from the onslaught of nomadic tribes such as the Orma or Galla, who had driven them from their former settlements north of Tana, in what today is Somalia. The Mijikenda maintain that as conditions became more secure, particularly since the late nineteenth century, the villagers began to leave their forest stockades and clear and cultivate away from them. They spread and occupied many of their current locations, which usually include a Kaya, or historical settlement, as a nucleus or focal point.

This traditional account of local history appears to be a blending of myth and probable fact, as the individual Kaya sites can be clearly identified by local communities, often marked by forest clearings with paths and other signs of historical usage. Records from the early twentieth century indicate that some Kayas were settled at that time, and the ravages of the Galla along the East African coast are well documented. Archaeological excavations of some localities, however, seem to point to even longer continued occupation of the sites than the legends suggest; hence the question of their origins may be more complex. In any case, many Kayas were preserved as sacred places and burial grounds by the Mijikenda, led by their ritual Elders. Cutting of trees and destruction of vegetation around these sites was prohibited in an attempt to preserve the surrounding "Kaya forest" as a screen or buffering environment for the Kaya clearings. While the surrounding areas were gradually converted to farmland, the Kaya sites remained on the coastal landscape as forest patches of varying size and ritual significance.

2.2 Traditional Protection Systems Used in the Kayas

The concept of "sacred" in most societies implies something set apart, holy or revered. It is often associated with the secret or forbidden. The main objective of the traditional management of sacred sites is to maintain their separateness or sanctity by controlling access to them. This is achieved largely through the strength of spiritual beliefs and social rules and norms. Active physical policing of sacred places by custodians has tended to be more the exception than the rule. More commonly, taboos and other religious observations have been applied, regulating access and conduct at the sites, threatening dire punishment from the spirit world for those who flouted the rules. These have proven fairly effective in reinforcing self-restraint among individual members of the group. If a breach does occur, purposely or not, intervention or intercession by spiritual leaders would be required to ward off harm to the trespasser. The Kaya communities conform to this pattern.

The most important part of the Kaya forest traditionally was the *Kaya* itself, the central clearing; in a metaphorical and literal historical sense, the "home" of the community. This tended to be set at the centre of the forest. The *Kaya* was approached from only a few well-trodden and defined paths. It was unlucky to use any other route. Historically, use of any other trail but these paths and gates signified bad faith and enmity, and was met with hostility from the inhabitants of the Kaya. At a secret spot near the central clearing the *Fingo* is buried, a powerful protective talisman of the

tribe which came from their original home in the north. Burial sites were also associated with the central clearing, where generations of villagers were buried: their spirits still reside here. The graves of great leaders were kept somewhat apart and are also treated as shrines. Certain old trees and unusual landforms such as caves also have ritual importance.

As mentioned earlier, the cutting of trees and other activities that could potentially cause damage to the forest around the Kaya and sacred spots was strictly forbidden by the Kaya Elders. This included collecting or removing dead logs or twigs or any other forest material. One kept to the traditional paths and avoided wandering freely in the forest — trampling vegetation and disturbing secret sites — and grazing livestock in the forest was forbidden. Uncommon animals, particularly large snakes, were to be left alone if encountered. Any structures built for ritual purposes used materials from the Kaya forest. In addition to these restrictions on physical interactions at the site, there were behavioural controls as well; designed to maintain the tranquillity of the Kaya. They emphasized decorum and respect as well as control of physical and emotional passions. Blood was not to be shed within the Kaya under any circumstances. However, all members of the Kaya community, including women, were entitled to visit the site if they so wished, as well as using the site under the Elders' guidance for ritual and ceremonial purposes

The penalty for infringement varied depending on the magnitude of the transgression, but it usually consisted of fines of livestock or fowl, which were then sacrificed to appease offended spirits. If the offence was committed secretly, it was believed it would come to light sooner or later when attempts were made by healers to investigate the root cause of an illness or other misfortune which would surely befall the culprit. In such a case, he or she might, out of guilt, be persuaded to make a full confession.

These “spiritually policed” regulations regarding acceptable and profane behaviour within the Kaya sanctuary relating to physical disturbance of the sites, including cutting and removal of forest material, have proven valuable in terms of conservation, as they preserved the forest vegetation of these sites. However, traditional systems of protection of sacred sites rely heavily on the presence of a homogenous ethnic or cultural community sharing similar values and experiences, on a strong shared belief in the spirit world and its pervasive influence in people's lives, and on a common acceptance of religious and cultural authority figures associated with the sites.

2.3 Biodiversity Value and Threats to the Kayas

That sacred sites have been important for biodiversity conservation all over the world is a demonstrated fact. Botanical surveys of coastal forests in Kenya over a number of years now have provided and continue to unearth rare and interesting plant species in the Kaya forests. These sacred forests are the only known location of certain plant species. This is because the Kayas form part of the complex mosaic of rich Eastern African coastal forests.

The Eastern African coastal forests have been described as a heterogeneous group of isolated evergreen or semi-evergreen closed-canopy forests within sixty kilometres of the Indian Ocean

and usually on low hills rising to not more than six hundred metres. They stretch from Southern Somalia in the north through Kenya and Tanzania to Northern Mozambique in the south, and are part of White's "Zanzibar Inhambane Regional Mosaic" (White 1983). They are regarded as important for biodiversity conservation globally, a conclusion drawn from the accumulated findings of scientific surveys and research in the region over many years.

According to Burgess et al. (1998), the proportion of endemic species in these forests is consistently high for all species groups. Examples are: millipedes (around 80 percent of those found in the Kayas are endemic), molluscs (68 percent are endemic, or 86 species), forest reptiles (51 percent endemic, 24 species), Vascular plants (37 percent endemic, 554 species), and birds (10.5 percent endemic, 9 species). In total, 782 species in eight biological groups are strictly endemic to the coastal forests. The significance of these figures increases when the comparatively small area encompassed by these forests is considered. Some would rank the Eastern African coastal forests among the ten top-priority ecosystems on the African continent in terms of biodiversity conservation; together with the eastern arc forests they have been included among the two hundred global priority "ecoregions".

Most coastal forests present at least one endemic species. However, there are areas where species endemism occurs in much higher concentrations, such as the Lindi local centre in Tanzania and the "Usambara-Kwale" local centre of endemism — which includes the Kaya forests.

Table 1: *The seven Kayas included on Robertson and Luke's list of the twenty coastal forests with the highest conservation value in Kenya (source: Robertson and Luke 1993)*

Kaya	Forested area (app)	No. of species	% Rare species
Jibana/ Pangan	250 ha	354	19.8
Kinondo	30 ha	112	14.3
Dzombo	295 ha	361	10.0
Kivara	130 ha	170	3.5
Muhaka	130 ha	278	9.0
Mrima	290 ha	271	9.2
Rabai	850 ha	425	4.7

Note: "Rare" species include those that are rare in a world sense (found in fewer than five localities, all in CFS areas), and those that are rare in Kenya (found in fewer than five localities in Kenya but may occur elsewhere).

As part of this system, the Kayas present a high diversity of species: this has particularly been documented for plants. Among the outputs of the National Museums of Kenya, WWF-supported, Coast Forest Survey (CFS), undertaken from 1988 to 1991, was a checklist of all known vascular plants of the coastal districts, including forest flora. An analysis of the data underlined the conservation importance of the Kayas despite their comparatively small area. Using a measure of relative conservation value 'vt' developed by the CFS, combining the known geographic range of a species and its rarity values, seven out of the twenty sites with the highest 'vt' in coastal Kenya were Kaya forests (Robertson and Luke 1993).

According to latest estimates, the total area covered by Kayas and related forests is roughly six thousand hectares, or about 10 percent of Kenya's remaining coastal forest. The disproportionately large number of rare plants recorded for the Kayas may, among other things, be a reflection of ecological variation, as Kaya forests cover a very broad range of habitat and micro-climatic conditions: increasing the number of species likely to be represented within these fragments.:

2.4 Loss of Kaya Forests and Biodiversity

Over the past three or four decades there has been a decline in knowledge about and respect for traditional values in these areas, due to economic, social, cultural, and other changes in society. This has been combined with a rising demand for forest products and land for agriculture, mining, and other activities due to the increased population. One result has been the destruction and loss of the small Kaya forests and groves. By the time an active conservation programme began to be implemented for the Kayas in the early 1990s, the sacred forests had suffered considerably.

As an extreme example, local agricultural encroachment has reduced forest cover in Kaya Chonyi, the sacred forest of the Chonyi Mijikenda group, to a fifth of its original area. Encroachment has also diminished other Kayas in size to varying degrees, particularly along Kenya's north coast (such as Kaya Jibana, Kaya Rabai, and Kaya Kambe). These sites are in fairly fertile areas with relatively dense populations. They have also been logged for valuable hardwood timber, and some species of these trees have disappeared altogether. Along the south coast, the Digo Kayas, which occur along beach areas, have fallen prey to intensive hotel development and planned settlement schemes.

2.5 State Protection of the Kaya Forests

In response to this situation, from 1992 the Kenyan government began to recognise a number of these forests as national monuments under Kenya's Antiquities and Monuments Act. To date, a total of forty of forty-seven proposed sites have been officially recognised under this act. National Museums of Kenya (NMK) is the state authority responsible for the conservation and management of national heritage. The Coastal Forest Conservation Unit (CFCU) was formed in 1992 within the NMK, with the task of caring for the Kayas in collaboration with local communities. CFCU undertakes conservation activities for the Kayas with support from donors, particularly the World Wide Fund for Nature (WWF).

2.6 Conservation Strategies Applied to the Kayas

For conservation of the Kayas to be successful, an attempt must be made to address the problems and destructive trends mentioned above as far as possible. Below are cited some activities undertaken by NMK/CFCU and other partners to protect the Kaya forests, as well as some of the issues and lessons learned.

PARTNERSHIP

Partnership between local communities and external bodies seems to be important for Kaya conservation. An example is collaboration between communities and NMK. This partnership, with the additional resources that it often brings, has helped to compensate significantly for the weakening of traditional protection systems due to social, cultural, and demographic changes in local communities. Through this collaboration it has become possible, for example, to provide for the deployment of local volunteer guards for sacred sites in some instances where the traditional religious and cultural systems no longer hold sway. Such a system requires at least a modest amount of money, which those involved in the partnership must be able to raise.

Partnerships with the state and other agencies are also important to protect the sites from destruction and interference that may originate at some distance from the Kaya. Often the commercial agents involved in damaging forest sites are too politically powerful and well equipped with resources for local community groups to resist, thus a strong conservation partner provides a significant advantage.

EDUCATION AND AWARENESS

As noted earlier, protection of sacred sites is heavily dependent on the status of social and cultural values and cohesion. It is neither possible nor indeed desirable to turn the clock back and reconstitute local community composition and population patterns as they were many years ago. The approach that has been adopted in various conservation programmes, including the Kayas, is to conduct educational and awareness activities both among the local communities and further afield, using various media. While this will not completely restore cultural traditions associated with the Kayas, it serves to revive interest in the Kayas within various groups of people. It is important to include new values in the information package, such as the importance of the Kayas in terms of their biological diversity, to broaden the stakeholder or constituency base beyond local communities.

LEGAL RECOGNITION

Kenya's official designation of the Kayas as national monuments and forest reserves has provided an element of state protection to bolster the traditional systems whose influence today is variable. A condition for such nomination is that the boundaries of the forests be clearly defined and demarcated. Forest boundaries are determined in consultation with local communities. Conferring official status, however, is not enough on its own, as the relevant acts tend to be weak. This is also true of the enforcement capacity of state organizations, due to lack of resources and poor morale. The continuing involvement of community groups and conservation organizations is essential in monitoring sites and preventing destruction.

INSTITUTIONAL DEVELOPMENT

To conserve the Kayas will require institutional development and capacity building from the national to the local level (Githitho, 1998) including:

- *A legal review to strengthen relevant Kenyan national laws by increasing penalties and making the laws more clearly applicable to sites like the Kaya Forests. This process is being pursued by NMK, who have prepared a bill currently pending enactment into law.*

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- *Strengthening links and partnerships among law enforcement agencies to handle cases of forest destruction in Kaya areas.*
 - *Strengthening and supporting institutions at the local level — for example, giving the Kaya Elders' committees and conservation groups legal status.*
 - *Developing management and coordination bodies at local and regional levels.*
 - *Establishing sustainable funding mechanisms to pursue various activities beyond the life of the donor-supported projects that are currently promoting Kaya conservation. There is an urgent need to explore different funding options, including, for example, trusts. The funds available to state organizations in Kenya, such as National Museums of Kenya, are fairly limited.*

PROMOTING BIOLOGICAL, SOCIOLOGICAL, AND CULTURAL RESEARCH

By increasing our knowledge of the Kayas and of coastal forest biodiversity in general, biological, sociological, and cultural research enables us to plan more effectively for their management and conservation. Continued botanical surveys have permitted us to update and improve on the records established by previous studies. Other kingdoms are, however, not as well covered. Research in areas such as rare-species ecology and specific-site ecology is relatively undeveloped and presents interesting opportunities in the Kayas and coastal forests. But there does appear to be adequate data already available with which to develop a general strategy for the conservation of the Kayas, incorporating local community values and priorities — especially regarding the traditional and spiritual dimension of the Kayas. Development of this conservation strategy is a priority output for the CFCU in the coming months.

IMPROVING LIVELIHOODS AND PROVIDING ALTERNATIVES TO EXPLOITATION OF THE KAYA FORESTS

A classic strategy in forest conservation is the promotion of alternatives to potentially damaging utilization of the natural resources of key biodiversity areas. In the case of the Kayas, the CFCU, in conjunction with donors, has supported such an initiative for some years. Local farmers' groups have been provided with potting materials, seeds, and seedlings to assist them in setting up small tree nurseries to raise seedlings to plant on their farms. The species most favoured by farmers are exotic fast-growing trees like *Casuarina equisetifolia*, rather than local species, perceived to be slow growers. Certain tree and shrub species of the Kaya sites, however, are more popular with local people, and proposals are being developed for a domestication project to target the most promising of these. Such a project would establish the ecological, sociological, cultural, and economic feasibility of local farmers growing these forest species on their farms.

Through this forestry programme we have learnt that the semi-arid environment is not always conducive to maintaining nurseries or raising woodlots efficiently and economically. In some areas efforts were made instead to support beekeeping activities, with the aim of producing honey as a source of disposable income. While beekeeping was initially taken up enthusiastically, market issues became prominent, as the sites were in fairly remote areas with poor infrastructure.

Another non-consumptive economic activity that NMK/CFCU is supporting is culturally sensitive tourism at selected Kaya forest sites. An ecotourism pilot project is being undertaken at a

south coast Kaya (Kinondo) in conjunction with local community groups. This will provide some insights into how to proceed with this approach. Local people have accepted a certain level of visits at the Kayas, providing strict controls are in place. But it is unrealistic to expect very high levels of income from visits, even at the best of times. The associated craft trade, in artefacts and curios, is just as important as tourism itself to local groups — if not more so, and especially to women — and should be promoted. There is a continuing need to market the site as an attraction and to work towards its inclusion in local tourist circuits, and promotion and marketing have taken up a large proportion of the project's time. At the same time, care must be taken not to give in to inappropriate demands by tour operators to overlook site regulations, which could compromise the cultural and religious values of the site

What NMK/CFCU's experience is demonstrating about the process of providing alternatives to unsustainable use of the Kaya forests and improving livelihoods is that the success of these activities relies very heavily on management capacity. This has been the case whether the activity is growing seedlings, beekeeping, or community-based tourism. As enterprise skills are usually underdeveloped in these local groups, the need to provide training is immense and the importance of partnership with other institutions and bodies cannot be over-emphasized.

Finally, local economic development is linked very closely to national economic growth, and this has suffered almost continuous decline in Kenya since the early 1990s. The tourism industry, which has been the mainstay of the coastal economy and the primary source of both formal and informal employment, has been particularly hard hit by various factors. Ultimately, the conservation of the Kayas and other important sites is linked to these wider problems and their resolution.

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