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CHANGING ROLES IN NATURAL FOREST MANAGEMENT: A CASE STUDY FROM THE UDZUNGWA MOUNTAINS

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ABSTRACT

The new Tanzanian forest policy was cleared in early 1998, and empowers community groups to own and manage forest resources. The Tanzania Forest Conservation Group (TFCG), a local NGO, is now in a position to rethink its role and move towards facilitating the balancing of local peoples' rights, responsibilities, returns from forest resources and relationship to forest maintenance. This article tracks changes in Lulanda Forest, in the Udzungwa, Eastern Arc Mountains, and analyses the evolution of local control over forest management.

INTRODUCTION

Approaches to forest management in Africa have evolved in recent decades. Consequently, stakeholders' roles have changed. Stakeholders' roles can be defined via their respective rights, responsibilities, returns from forest resources and relationship to forest maintenance (*i.e.* "their four R's", Dubois, 1997). Using the case of Lulanda Forest, this paper tracks the evolution of forest management and discusses the changing balance of local peoples "four R's" through time, and the consequential effect on the forest. The work was undertaken whilst the author was working with the Tanzania Forest Conservation Group (TFCG), a local NGO.

Lulanda Forest and village are situated in Mufindi District, Iringa Region, Tanzania. Lulanda Forest is regarded as a District Forest Reserve (District Forest Officer, 1994, pers. comm.), although it is apparently not officially gazetted (Lovett & Pócs, 1992). The forest is situated at the southwestern end of the Udzungwa Scarp. The forest is in three patches (Figure 1), Magwilwa, Ihili, and Fufu: 89.3, 24.8, and 82.6 ha respectively, making a total of 196.7 ha (approximately 2 km²). Its vegetation comprises Eastern Arc montane forest type, with swampy open areas in valley bottoms (Lovett & Pócs, 1992). For such a small forest, a large number of endemic species have been recorded, one in particular being an endemic species of wild coffee (*Coffea mufindiensis*) (Lovett & Pócs, 1992).

METHOD

This research was based on three years fieldwork in the Eastern Arc Mountains, undertaken by the author as doctoral research. Research into local forest management in Lulanda was

conducted between October and December 1997. The methodology uses a multidisciplinary, case study approach. The process of landscape change was studied using historical and 'time-series' data sets of various types, combining photographic with official written records and oral history, documenting environmental history rather than inferring it. The changing balance of stakeholders' roles was analysed using social science methods of ethnography (participant observation and oral history) and participatory techniques (group semi-structured interviewing and participatory diagramming). The use of a variety of complementary methods enabled cross-checking of data.

Participatory techniques utilised in this research were semi-structured interviews (SSI), used in combination with participatory mapping. Initially, a group of villagers were asked to draw a map of their village, Lulanda, including the surrounding natural resources. From the map, questions arose about the size and shape of the three forest patches and how they had changed over time. This led to the drawing of sketch maps (figure 1), showing the size and shape of forest patches in key years chosen by the villagers, namely 1997, 1974, 1955, and 1945, and discussion over actions which led to changes in the forest cover.

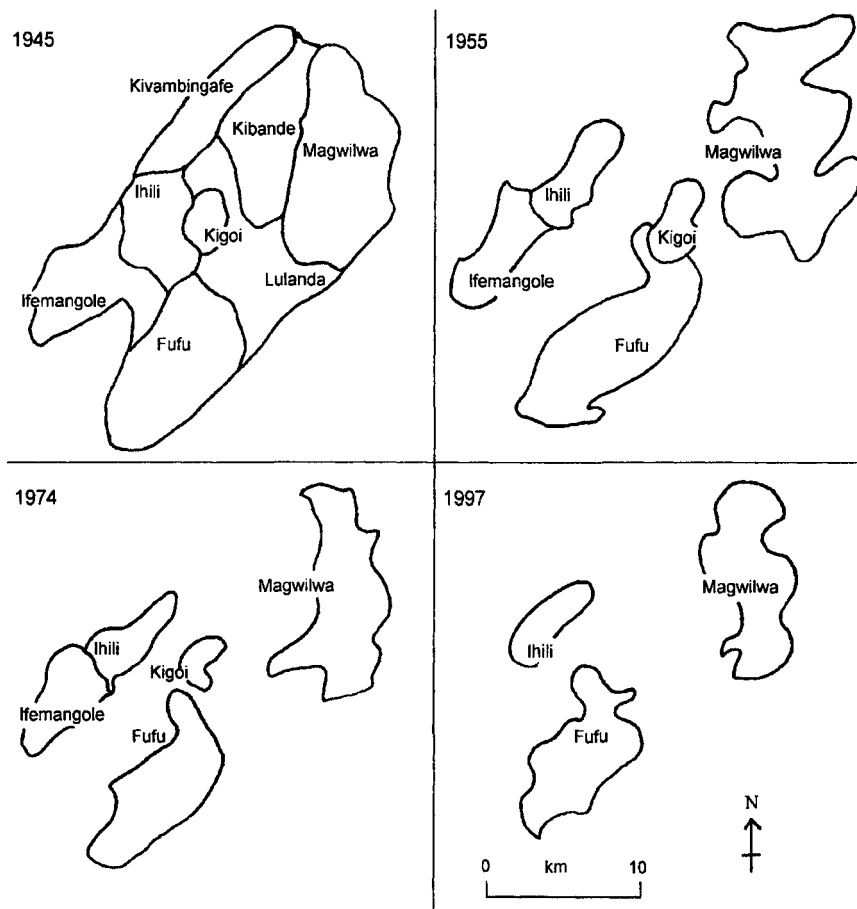
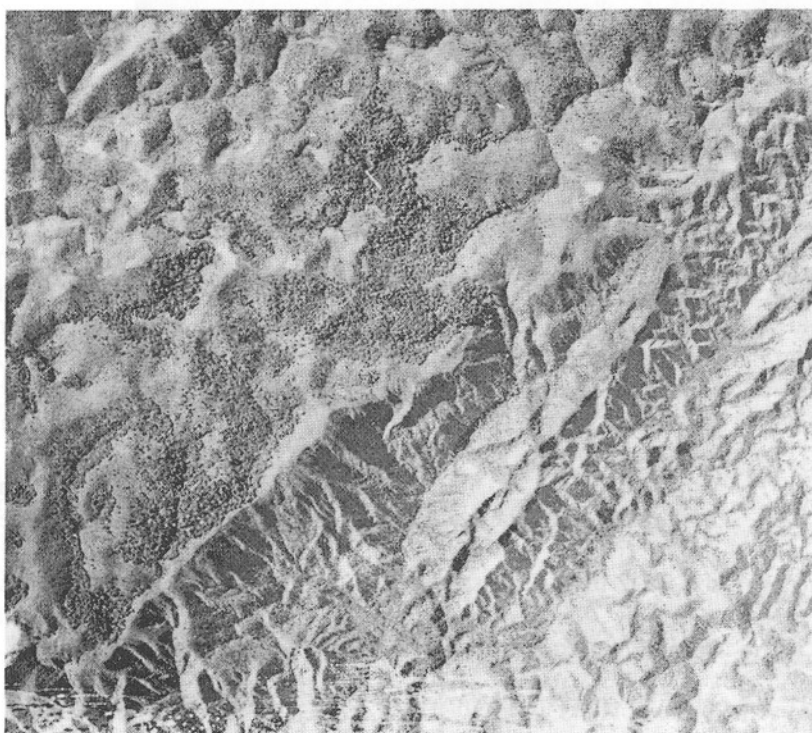


Figure 1. Sketch maps showing the size and shape of forest patches in key years, 1945, 1955, 1974 and 1997, chosen by the villagers.

Ethnography is a complementary approach to participatory research. Ethnography aims “to examine ordinary, common sense, mundane living remaining faithful to procedures and practices that members use to construct and make sense of the social world” (Benson & Hughes, 1983). In other words, it examines activities and both the external and internal causes and conditions, enabling a representation of social phenomena. This may be achieved through participant observation, which draws on a wide range of sources of information to build up a picture of people’s lives and to allow an understanding of the circumstances and the basis for the decisions they make.

As part of TFCG’s Environmental Education Programme, traditional forest stories and tales from Lulanda elders were listened to, recorded and compiled in a book to be used in primary schools (Meshack & Woodcock, 1998). Some of these stories and tales tell the history and beliefs surrounding Lulanda Forest. These stories allow an insight into how the forest was perceived and managed in the past. Collecting the stories and co-ordinating their formal production for local schools was a direct output from the participatory research that was a resource for local people; leaving resources behind after participatory field inquiry goes a little way to redress the balance between the researcher and the researched.

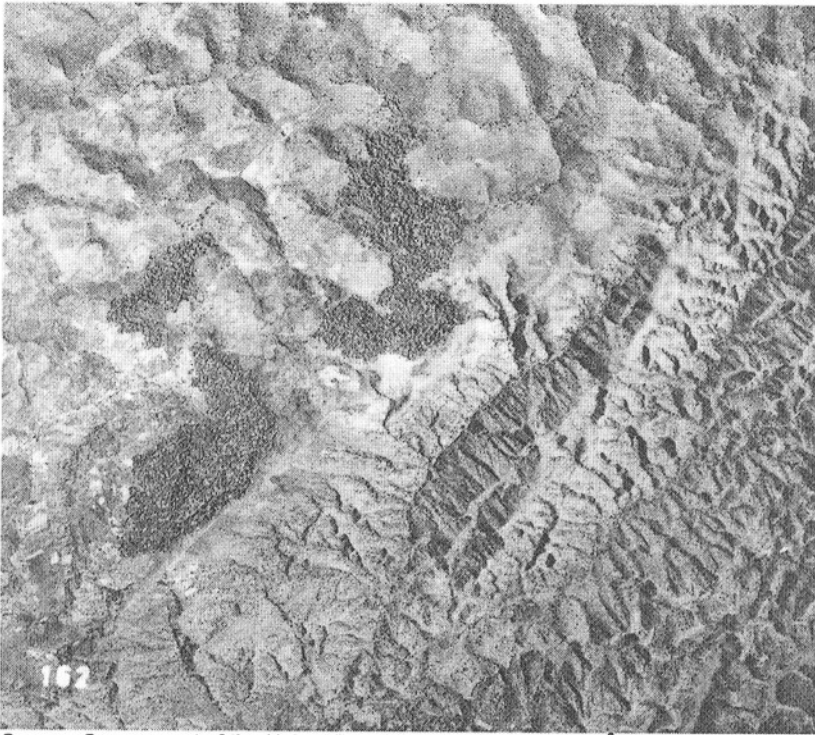
In order to crosscheck data collected in the village through participatory approaches and ethnography, aerial photographs (Government of the United Republic of Tanzania, 1955, Figure 2, and 1978, Figure 3) and maps (Government of the United Republic of Tanzania, 1983) were analysed against the maps produced by the participatory exercise.



Source: Government of the United Republic of Tanzania (1955).¹

Figure 2. 1955 aerial photograph of Lulanda Local Government Forest Reserve.

¹ Image processing by Gary Park of University of Northumbria at Newcastle.



Source: Government of the United Republic of Tanzania (1978).²

Figure 3. 1978 aerial photograph of Lulanda Local Government Forest Reserve.

Local Customary Practice

In the late 1800s and early 1900s, the three forest patches Magwilwa, Fufu and Ihili which are now collectively known as Lulanda Forest were one larger, continuous forest area. The forest had eight parts named Magwilwa, Fufu, Lulanda, Itemang'ole, Kigoi, Ihili, Kibande and Kivamingafu (figure 1). Each part of the forest was named after a traditional leader of the Hehe tribe who lived in that area, or from spiritual religious experiences that may have occurred there. Hehe leaders had control over the forest. There were some reserved areas inside the forest where only leaders were allowed, areas that had spiritual meaning. These areas were called 'Pakane' or 'Pa Mutwa'—'for leaders only'.

Fufu Forest has two explanations for its name in oral history. One is that it was named after the grass called 'Fufu', which grew in abundance around the steep slopes and valleys, and which was used by local people for thatch. The second explanation is that Chief Mkwawa, the leader of the Hehe tribe, used to rest in that part of the forest when he was coming from or preparing for war. He used to rest under a very large tree, which was then named 'Kisupo cha Mkwawa' and no one else was allowed to use that tree for shade or any other use. It was believed that, one day Chief Mkwawa and his soldiers went to war with the Ngoni people, and some of his soldiers were killed. He decided to sacrifice the dead body of one of his soldiers to the god Kilufi, and hung him on the tree. The body was left to rot and only the skull remained. People decided to call that place 'Kibanga cha Mtwa', which means 'Skull of a ruler'. 'Kibanga' is the name for 'Skull' in the Hehe language, but 'Fuvu' is the

² Image processing by Gary Park of University of Northumbria at Newcastle.

name for 'Skull' in Kiswahili. Some people think the name Fufu is a mispronunciation of Fuvu. The place was regarded as a site of traditional worship, which if needed, would stop the Ngoni people attacking again (Meshack & Woodcock, 1998).

Another part of the forest was named after a very big tree called 'Kigoi', under which there was a cave. It was believed that, inside the cave, there lived a giant. Elders and witch doctors would go to pray and give thanks for rain, good health, peace and good harvests. Later the cave was used as a place to hide from warring tribes and from the Germans in the First World War. From then on 'Kigoi' meant 'hiding place'. Traditional weapons, such as spears, axes, bows and bush knives were hidden there. It was also believed that the tree could talk and give orders for peace or war and advise the soldiers whether to fight against their enemies or not. The place was respected and preserved by all, but only elders, traditional herbalists and leaders were allowed to enter the cave (Meshack & Woodcock, 1998).

British administration

Around the mid 1940s, the officers from the British administration visited the forest and demarcated the boundaries of the forest. People living inside and adjacent to the forest were ordered to relocate to other areas. The forest was never officially declared a reserve (Lovett & Pócs, 1992). No boundary maps have been found. Most people moved to areas some five and ten kilometres from the present-day village of Lulanda, between the villages of Ibwanzi and Iyegea, in new settlements they called Kidutwi and Wesamio.

In the 1950s the British administration encouraged local farmers to return to the forest area on the condition that they cultivate coffee. Villagers suspected that the British used this as an experiment to see if coffee production in the area was feasible; if feasible, expatriate coffee production would be possible. In fact, the British did not develop coffee estates. Farmers returned to the area and cleared patches of forest for coffee and subsistence agriculture. The aerial photograph of 1955 shows fields cleared inside forest areas. The gradual break up of the forest into patches through deforestation had begun (figure 1). The aerial photographs of 1955 and 1978 show clearly that gradual encroachment made the once continuous forest into three discrete forest patches with clear forest-field interfaces.

District government

In 1974 with Villagisation, a Forest Attendant (FA) was placed in Lulanda Village. Rather than protecting the forest, he illegally authorised pitsawing for timber and allowed villagers to obtain other woody and non-woody biomass on payment of money. Villagers recall that this went unquestioned by the senior government official, since he used the FA as his middle man in the illegal trade of ivory (illegal because he did not go through government procedures). The degradation of the forest patches had begun, tied to a rent-gathering practice from local officials.

In the early 1990s, Lulanda Forest was visited by a number of biologists who highlighted its high biodiversity value (Lovett & Congdon, 1990; Lovett & Pócs, 1992). The three forest patches, with a canopy to 30 metres, were found to be intact in parts but generally much disturbed following extraction of timber species. African mahogany/Mkangazi (*Khaya nyasica*) and *Vitex amaniensis* had been extracted for timber in the past but stocks were exhausted. There was encroachment for cultivation along the edges of the forest and building poles, firewood and medicines were taken without control (Lovett & Pócs, 1992). The Ward Forest Attendant lived 12 kilometres from Lulanda and the District Forest Officer had not visited for 12 years because of lack of funds and transport within the Forestry Department.

Concern over the lack of control, and potential degradation of the forest resource, led to the formation of a TFCG project based in Lulanda village.

District government-NGO assisted

With increased awareness of the high biodiversity value of Lulanda Forest, TFCG started discussions with Lulanda Village government and Mufindi District officials about the possibility of starting a community-based forest conservation project in Lulanda. In September 1993, TFCG started the Lulanda Forest Conservation Project (LFCP), which assists the District to manage Lulanda Forest. Since 1993, TFCG activities have included the demarcation of new forest boundaries, planting of boundaries with *Hakea saligna*, making and maintaining firelines, planting and managing a forest corridor between two of the three forest blocks (Fufu and Magwilwa), environmental education in Lulanda and Mungeta (Isipii) primary schools, assisting village development by advising a women's group in development projects, and advising villagers on the management of a community woodlot.

In March 1996, Magwilwa was heavily burnt from field-clearing fires. In May 1996, a plot of tobacco was found growing inside Magwilwa. In September 1996, field staff reported illegal timber extraction inside Magwilwa forest patch. On investigation eight pitsawing sites and over 50 timber boards were found. The FA was illegally authorising pitsawing. The Ward Executive Officer and Village Chairman confiscated the timbers and the District Forest Officer (DFO) warned the FA about his unacceptable performance. Since these events in 1996, no major incidences of degradation have been known or recorded (TFCG, 1998).

In September 1997, TFCG started a training programme in participatory approaches for development, to increase and improve the capacity of staff in the use and application of participatory approaches in their daily work, both with their work colleagues and local people. TFCG has also used this as a time for project staff and villagers to assess the project and redefine project aims, objectives and activities. Initial work in the community has led to more open discussion between TFCG staff and local people and greater participation of local people in assisting the planning of project activities (Meshack, 1998). In one meeting, attitudes towards the forest were discussed. The overwhelming response was that "the forest is for the Forest Guard and his Forest Officer." Villagers argued that the 'right' for concern over the forest had been taken away from them.

By October 1997, a group of elders argued that since TFCG managed the forest, the TFCG could permit them to collect medicines, honey and 'ulanzi' (bamboo liquor) from the forest. TFCG had become the forest 'authority' in the absence of other government agencies. TFCG, as an NGO, needs to now rethink its role in forest management, not least how it ensures the sustainability of forest management.

DISCUSSION

Documenting the management history of Lulanda Forest highlights the changing roles of the various stakeholders: local people, government and NGOs. More specifically, the changing balance of their respective rights, responsibilities, returns from forest resources and relationship to the forest can be drawn out. This is detailed in table 1.

In general, local peoples' roles have changed from being the local managers and users of the forest, to having the rights for managing the forest taken away from them by British and Tanzanian governments and given to the 'experts' (Government Forest Attendant and NGO staff). At the same time, the forest has changed from a larger continuous forest area, to

Table 1. Management history of Lulanda Forest.

Management era	Local customary 1900–1944	Technocratic 1945–1990	"Participatory" 1991–1997	Political negotiation 1997–1998
Rights	Elders and community leaders control entry and use of certain parts of the forest. Local people not allowed to enter or use certain parts of the forest.	British government, followed by Tanzania District government hold authority. Local people not allowed to enter or use forest at all.	District government have authority over forest. Local people allowed to use footpath through forest, but have no other rights.	Elders request NGO to facilitate negotiation with District, to enable the collection of medicines, honey and ulanzi (bamboo liquor).
Responsibilities	Elders responsible for management of forest.	Forest Attendant responsible for guarding and managing forest.	NGO staff responsible for managing forest with assistance from villagers in planting corridors, clearing firelines, reporting illegal activities and helping control and put out bush fires.	To be negotiated.
Returns from forest resources	Subsistence products collected from forest.	No returns allowed from forest. However, local people illegally cleared forest for cultivation and illegally collect subsistence products. Forest Attendant also illegally pit-saws for personal economic gain.	No returns allowed. However, local people illegally collect medicines, honey and ulanzi (bamboo liquor).	To be negotiated.
Relationships	Forest feared and respected.	Local people put at a physical and mental distance from forest. Forest out of their concern. Local people thieves of forest resources.	Assistants in forest management, but still thieves of forest resources.	Carers, managers, owners of forest?
Effect on forest	Sustainable forest management?	Deforestation and degradation. Forest fragmented into three discrete patches.	Forest patches conserved, but is it sustainable?	?

that of three small discrete forest patches. This suggests an evolution of forest management approaches from local customary, through technocratic and participatory approaches to a new frame for political negotiation of resource conservation and use. It is worth exploring these approaches in more detail.

Before the 1940s, elders and community leaders controlled rights over entry and use of forest resources. Only leaders and elders were allowed to enter certain parts of the forest and use certain trees, but most areas were for general subsistence use. The forest was respected; occasionally a place to fear, but its management embodied local customary law.

The priority of the technocratic era was tree maintenance at the expense of local production systems—management for the forest and against the people. With the initial boundary marking, local people lost their management responsibilities and rights to enter and use forest resources.

By the 1950s, local people were encouraged to return to the area to cultivate coffee. Local people had no rights to the forest, but within the forest area, had to find agricultural land without encroaching on the forest. Without rights, responsibilities or returns from the forest, the forest became an area of lost potential. Therefore, local people cleared forest for agricultural land in order to regain lost potential.

By the 1970s, the District government held all rights to the forest and appointed staff for its protection and management. Local people, without rights or official responsibilities, found government staff to be involved in illegal forestry efforts. Not surprisingly, local people obtained timber and subsistence resources illegally from the forest as well. The degradation of the forest continued.

The flaws of the technocratic approach have led to a more participatory approach to ensure that local people's interests and needs are taken into account. Participation has proven difficult to implement when it means more than consultation; participation often seen as increasing local responsibility, but without a corresponding increase in rights and access to benefits (Dubois, 1997). The identity of the NGO—a participatory vehicle—as 'controller' of the forest now raises difficult political issues.

Politics is where TFCG is at present. Since 1993 the TFCG has been assisting the Forestry Department to manage Lulanda Forest. The villagers still have few rights, but have taken on the following responsibilities with the assistance of the TFCG: clearing firelines, assisting in putting out any fires that may occur and reporting any illegal activities within the forest. Under past forest policies, collection would be illegal. To date, local people have few rights, or returns from the forest, but have more responsibilities (albeit willingly) than ever before.

Tanzanian forest policy has been under revision for ten years or more, and is now finally approved. As a forest policy, it breaks new ground in its acceptance of meaningful people's participation (Rodgers, 1997). The policy empowers community groups to own and manage forest resources (Government of the United Republic of Tanzania, 1997). This requires TFCG to rethink its role: from assisting the District to manage Lulanda Forest to facilitating institutional participation, *i.e.* collaboration between all the interest groups—the emergence of political negotiation. It is political negotiation that is the key to ending forest degradation, as negotiation that accepts local people must have rights, responsibility and returns from local resources in order to maintain a sustainable relationship to the forest.

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