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## **TRADITIONALLY PROTECTED FORESTS AND NATURE CONSERVATION IN THE NORTH PARE MOUNTAINS AND HANDENI DISTRICT, TANZANIA**

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### **ABSTRACT**

A total of 920 traditionally protected forests have been found in sample areas in Handeni District (23 villages) and Mwanga District (Usangi and Ugweno Divisions). The size of the forests is between 0.125 and 200 ha. In earlier times sacred forests (one of the seven different types of traditionally protected forests in Handeni) were never abused, and as a result the biodiversity of whole forest ecosystems has been protected. In many parts they are the last remaining natural forests. About 40 % of the forests are severely degraded, partly because a rapid process of change in the villages. The abuse of the traditionally protected forests should be discussed publicly. The total area of forested land requiring protection could be over 4,000 ha in Handeni District and 400 ha in the North Pare Mountains. These forests are effective way to save locally the best areas for biodiversity.

### **INTRODUCTION**

The aim of this research was firstly to find and document traditionally managed and protected forests in the North Pare Mountains and Handeni District, Tanga Region. Another aim was to define their significance to the local communities and the condition of the forests. It was assumed that the forests are richer in biodiversity than the surrounding areas, and this was studied by making botanical surveys. The research ultimately aims at assisting communities to continue forest protection in a situation in which people's beliefs, values, attitudes, needs and the land ownership are in a rapid process of change. The ultimate idea is to create ways to

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involve local communities in process of forest protection, with possible support from the government bodies.

Juridically the forests are common land, owned by the state at the moment (Oppen, 1992), but according to customary law the sacred forests have their local owners or caretakers, and they have the power to decide who is allowed to enter the forest. Some forests in the North Pare Mountains are owned by village councils.

In the African traditional society there is no open access to resources (for example Giblin, 1995, Kjekshus, 1996 and Mbiti, 1990). The rules governing the use and protection of the sacred forests vary from one ethnic group to another. The rules and practices also vary between the Zigua in Handeni (Beidelman, 1967) and the Pare in Mwangi (Kimambo, 1969). Activities of individuals and groups are regulated by a host of norms, practices and beliefs (Kjekshus, 1996; Koponen, 1988). Most of the communities in East Africa had formal or informal mechanisms for managing such critical natural resources as forests (Brokensha *et al.*, 1983; Little, 1984; Sandford, 1983), although conservation of resources may not have been the primary goal. It is well known that there are sacred forests all over Sub-Saharan Africa, but very little even basic information, especially from Tanzania, such as on their quantity, size and conservation value, is available (see also Gerdén & Mtallo, 1990; Wilson, 1993; Gadgil & Vartak, 1994; Matose & Wiley, 1996). According to Niamir (1990) and Castro (1995), in Kenya the Kikuyus have sacred sites sized 0.1–1.3 ha and the Mbeeres 0.25–3 ha. In Kenya's coastal area there are also sacred forests, which are surrounded by *Kaya* forests. The total area of these sacred forests is about 2,000 ha. In Babati District, Tanzania, four ethnic groups have sacred forests ranging from 0.04–100 ha (Gerdén & Mtallo, 1990). In Burkina Faso the Lowillis have sacred forests as large as 12 km<sup>2</sup> (Niamir, 1990). A useful way of identifying the sacred forests is using participatory methods (Chambers, 1994, 1997), as has been shown by several studies in Eastern Africa (for example Bhatia & Ringia, 1996; Castro, 1995; Dorm-Adzobu *et al.*, 1991; Gerdén & Mtallo, 1990; Hatton, 1995; Hughes, 1995; Matose & Mukamuri, 1992; Mukamuri, 1995; Oppen, 1992).

There are only a few studies on sacred forests but all of them underline the high number of rare or previously unknown species, and the value of the forests to the communities and the surrounding fauna (for example Aiah & Guries, 1995; Gerdén & Mtallo, 1990; Khiewtam & Ramakrishnan, 1993; Okafor & Ladipo, 1992; Robertson, 1984; Sinha, 1995).

According to Mshana (1992) the colonial governments and missionaries had a strongly negative attitude towards sacred forests. As a result many of the *mpungi*, worshipping forests and burial groves, were destroyed, and the trees in the sacred forests were often cut to provide building timber for the missionary churches. In the Southern Pare Mountains (outside the research area) people go to worship in the North Pare Mountains because most of the *mpungis* in the Southern Pare Mountains have been destroyed and the government has also been against initiation ceremonies. Those who became Christians have been forbidden to engage in ceremonies in sacred forests and the traditionalists' values are not appreciated by the converts. This has divided many communities into two camps with different attitudes towards the protection of the sacred forests.

According to Mshana (1992) the younger generation in Pare are no longer entering the forests as their fathers and grandfathers used to do (also Niamir, 1990), but still one third of the population is practising the traditional beliefs and, for example, in Babati District traditional beliefs and traditions are still operating (Gerdén & Mtallo, 1990). The modernisation of the way of communicating to god, invasion of the western style of life coupled with rapid change in the way of life driven by fast population growth, rural-urban migration and need for development, do not give room for traditions and culture to be

practiced. This has resulted in the low application of traditional laws (also Niamir, 1990; Shepherd, 1991).

In the North Pare Mountains the increased population pressure (about 60 % in 20 years) has also increased tremendously the demand for forest products and use of the forest land. Also, the demand for cultivated land has increased. The average farm size in 1960 was two hectares (Kimambo, 1969) and in 1995 less than one hectare (TFAP, 1995).

The person who damaged a *mshitu* (worshipping and training forest) or *mpungi* was fined, customarily with a black bull and a black ram both to apologise to the ancestors, otherwise the person was practically equal to death (Mshana, 1992). Equating this with the current monetary value in Tanzanian shillings the fine would not be less than 170,000 TSh. Nowadays, according to Forest Ordinance Cap. 389, a defaulter is sent to court where he may only be fined a maximum of 10,000 TSh (about 15 USD). The government organisations haven't given any support to sacred societies, which are looking after the traditionally protected forests. On the contrary, according to persons interviewed, the forestry officers have sold cutting licenses to loggers and collected money from the illegal loggers even if the caretakers have asked for help to stop illegal cutting (see also Mshana, 1992; Sibanda, 1997).

There is a need to involve the traditionally protected forest interest groups in coming up with proposals for protection and management of these forests (*e.g.* in the way Okafor & Lapido (1992) have presented). The protection of traditional forests can also be a struggle between traditionalists and non-traditionalists (Mshana, 1992), or in some areas the problem can be with the former noble class and the other villagers (*e.g.* according to Mukamuri, 1995 in Zimbabwe).

According Aiah & Guries (1995) and Mesaki (1993) the sacred forests are also important for the national economy and the health services, especially in the countryside where there is little money and few commercial medicines, and distances to hospitals are long.

In the context of the Pare Tropical Forestry Action Plan, 15 village meetings have been conducted involving all clan forest 'owners or caretakers', village governments and land use planning committee members to make management plans for the protection of sacred forests (see also Clarke, 1994; Clarke *et al.*, 1996; Sibanda, 1997). These meetings are planned to start soon also in Handeni with all villagers.

## MATERIALS AND METHODS

### The study sites

The field studies were conducted in Handeni District in Tanga Region and in Mwnaga District in Kilimanjaro Region. The Zigua ethnic group lives in one area, the centre of which is Handeni town. In this area the rains vary from 700 mm to 1,000 mm per annum. The majority of the land is ridges or gently undulating in topography, with a few hills rising over 500 m above sea level. There are two main types of natural forest vegetation: semi-deciduous miombo of the Zambezi centre of endemism and the undifferentiated forests of the Zanzibar-Inhambane regional mosaic.

In the North Pare Mountains, Mount Kindoroko is 2,113 m high and the highest mountain in this range. The North Pare Mountain range covers a length of 40 km. The western edge of the mountain rises sharply while the eastern side has a gradual slope. The eastern part receives a reliable rainfall of 600–1,000 mm per annum. The western part has less rain, with the annual total being 300–600 mm.

A total of 23 villages (39 %) were selected for the case study in the Handeni study area in Handeni District. In the North Pare all villages were studied in Usangi and Ugweno Divisions; the Lembeni Division is still unstudied.

Only one botanical survey was made in November 1997 in the biggest sacred forest Kwedivikilo in Handeni, aiming to assess the biodiversity value. Kwedivikilo Forest is located in Mkata Village.

### Methods

In Handeni the village governments organised the meetings by inviting key informants knowledgeable about the traditionally protected forests. The majority of them were clan leaders, other respected village elders and village council leaders. The participants of the village meetings were asked about the following issues: 1) the names of the traditionally protected forests in their village, 2) an estimate of their size, 3) the names of the main trees, 4) the caretakers of the forests, 5) topography, 6) habitats, 7) condition in the particular forests, and 8) traditional use of the forest.

The villages were clustered into three categories according to accessibility to all weather roads, rail-line, and to the sawmills: 1) easy, 2) medium and 3) remote. The forests were divided into four categories according to their condition: 1) intact, 2) slightly disturbed, 3) severely damaged and 4) damaged. The results are presented only in two categories because of the low reliability of the collected data.

In the North Pare Mountains data was collected only on the forests by name, the caretaker, and the size of the forest. In addition, data were collected in informal discussions on the traditional habits of the Pare ethnic group.

### RESULTS

A total of 920 traditionally protected forests have been found in the sample villages of the research areas, covering about 6,000 km<sup>2</sup>. The size of the conserved forests in these villages varies from 0.125 hectare to 200 hectares. A rough estimate is that there is one traditionally protected forest per square kilometre, but these forests are normally concentrated around the settlements and not in the large unoccupied areas.

In the studied 23 villages in Handeni District a total of 660 forests were recorded. The majority of the villages have 25–30 sacred forests. This means that in the whole of Handeni district there are possibly more than 1400 units of traditionally protected forest. Their size varies from less than one hectare to more than 200 ha (figure 1). Forests under two hectares in size constitute only 26 % of the all forests. Almost 40 % of the forests in Handeni are between 2 and 5 ha in size. About 20 % of the forests are 5.1–10 ha in size, and 17 % are over 10 ha in their size. Altogether it was possible to record the size of 499 forests in Handeni. Their total land area is 2,337 ha. Forests are rather large compared with those in the North Pare Mountains, see below.

In the other research area, the North Pare mountains, 230 forests were identified in two out of three administrative divisions (Usangi 103 and Ugweno 127 forests) (figure 2). They have a total land area of 370 ha. The size of the forests ranges from 0.125 ha to 50 ha. The average size of the forests is rather small, 1 ha in Usangi and 2 ha in Ugweno. More than 75 % of the forests are under 2 ha in size, and every second traditionally protected forest is under 1 ha. In Usangi there is only one big forest (10 ha) and in Ugweno there are two big forests with a size of 50 and 20 ha respectively. If these two biggest forests are excluded, the

average size of the forests in Ugweno drops to only 1.5 ha. The traditionally protected forests are almost the only remaining natural forests in the North Pare Mountains.

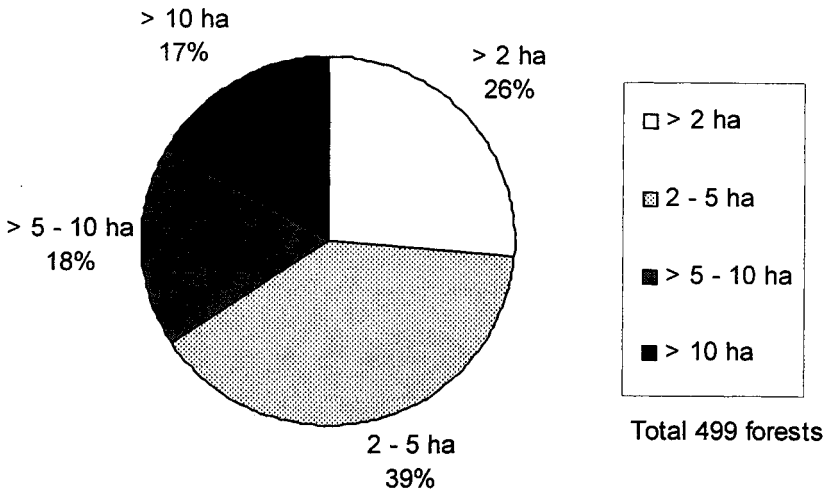


Figure 1. The proportion of the different sized traditionally protected forests among the Zigua ethnic group.

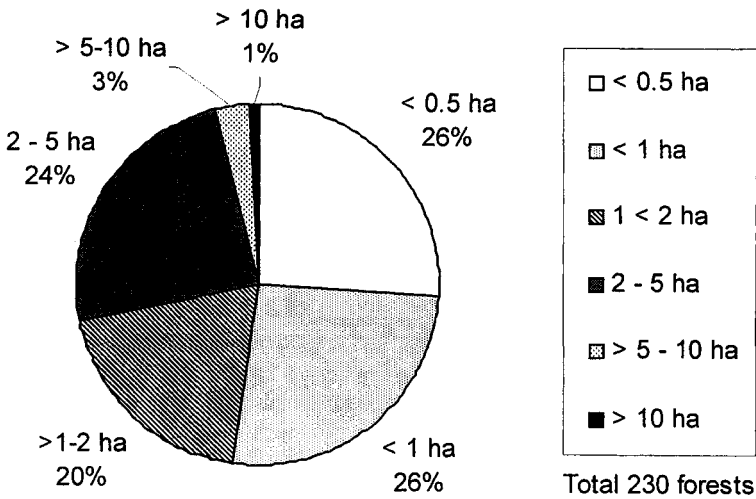


Figure 2. The proportion of the different sized traditionally protected forests among the Pare ethnic group.

### Different kinds of traditionally protected forests

In North Pare there are two kinds of so-called clan forests or sacred forests (*mshitu wa ngasu* and *mpungi*). *Mshitu wa ngasu* is used for teaching about the culture and nature for male youths. The training in the forest lasts for six months. It is strictly forbidden to tell anybody about the contents of the training. It is believed that one dies if he reveals the secrets of the forest. Education includes mens' duties to protect the lineage, the clan, the cattle and the land. The youth are taught how to take care of a family. Above all, obedience and respect to elders are strictly underlined (see also Lebulu, 1979).

*Mpungi* is a burial grove and reserved for communication with ancestral spirits. *Mpungi* is smaller than *mshitu* and is used for sacrifices (*mtaso*). The head of the family has a duty to his unit to preside over the ritual and all the kinsmen are obliged to participate in the sacrificial performance. According to tradition, a chief is the owner of *mpungi* or *mshitu*. Even the 'owners' of the forests are not allowed to enter their own forest without a permission of the head of the *mpungi* or *mshitu*. Traditional healers are not allowed to collect medicinal plants from the clan forests either. There are special places for appeal, and making promises. In extreme weather conditions like drought or floods people visit special places. When epidemic diseases or pests like locusts occur, such places are utilised to talk to the ancestors to ask them to stop such diseases. In some places the forests around springs and rivers are protected.

In the Pare Mountains women are strictly not allowed to enter the clan forests for any purpose. It is believed that they are not able to withstand hard conditions of the forests, for example the wild animals. A man who has a pregnant wife is also not allowed to enter the forest, and men have to be in celibacy before entering a sacred forest. One similarity between the Zigua and the Pare people is that they have separate forests for men and for women for training. Some clans have their training activities for girls inside a house.

In the Handeni research area the following seven types and uses of traditionally protected forests (figure 3) have been distinguished. 1) Burial groves (*tongo* in Zigua), where people of the clan are buried. They are also often places to go to pray for the ancestors. 2) Places used for worshipping rain, and asking the gods to solve problems related to human and livestock diseases, crop failures, conflicts with other clans or tribes etc. 3) Clan forest reserves set aside for emergency uses, e.g. it has been possible to give a part of the forest as compensation payment for damages done to another clan. These forests are dense, and rich in plant and animal species for food. They have also been used as hide-out areas during wars. 4) Places to protect important water sources. The majority of these forests are on limestone rocks or on flat lands around deep water-holes. 5) Some forests are used as a boundary between clans and chiefdoms. These places are also used for meetings and for recreation. 6) *Koluhombwa* forests, which are places used as throw-away sites, where people with incurable diseases or with strange body abnormalities are left alone to die. 7) The forests for performing traditional ceremonies and education programmes for youths. Ceremonies include activities such as teaching girls good manners in marriage, or celebration after good performances in war. In some of these places highly secret objects are hidden, e.g. the 'Luchinjili', a drum made out of human skin. Many forests have multiple uses.

The size and the number of the forests vary depending on the purpose of use of the forest. The forests for worshipping are bigger than burial grove forests in general, but their number is much smaller. For example, in Usangi Division in Pare, there are 98 *mpungis* but only 5 *mshitus*. In Handeni, half of the number of all traditionally protected forests are burial grounds, *tongo*. They are the smallest of the traditionally protected forests. The second most common type (25 %) is the forest for worshipping. The forest around water is the third common type of protected forests. The rest of the four different use types of traditionally

protected forests consist of one to three forests in every village. These include training forests, meeting places, and boundary forests. Villages (older than *ujamaa*) always have only one *koluhombwa* forest each. Some are multipurpose forests.

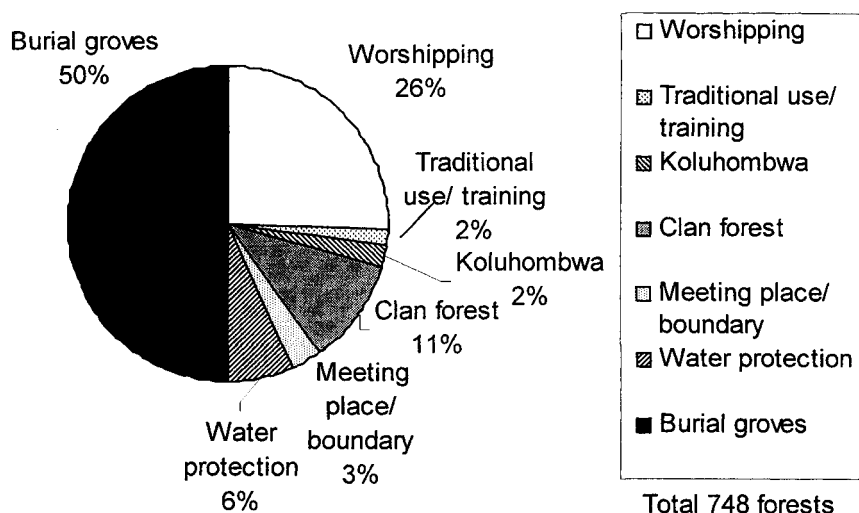


Figure 3. Types of use of the traditionally protected forests of Zigua ethnic group (by forests).

Almost 50 % of the traditionally protected forests in Handeni are located on a hill or hill slope and about in 30 % on flat land. The rest of the forests are around rivers (10 %) or in rocky and cave sites (almost 10 %). On the average, all main habitats exist in every village (figure 4). This is important, because it means that living forest refuges exist also in the most cultivated flatlands, where soils are fertile and moist. On average, 60 % of the traditionally protected forests in Handeni are intact or slightly disturbed. The remaining 40 % are severely or completely degraded (see also Mwihomeke *et al.*, 1997a, b). The highest amount of destruction is found in villages with high human population and easy accessibility (all weather roads, rail-line or closeness to the sawmills). In Handeni there is a large amount of immigration from the neighbouring Usambara and Pare Mountains and from other parts of the Kilimanjaro Region. Immigration is especially problematic because these people do not have either historical or spiritual roots to the traditionally protected forests in their new living areas, which is said to be the main reason for lower respect of traditional laws. Violation of rules and the abuse of natural resources has increased to an extent of hampering the ecological stability.

The main causes of destruction (figure 5), according to villagers, are farming, cutting of building poles, firewood and timber. Forest fires, charcoal making and grazing were mentioned very rarely. The botanical surveys have started but the data is still unanalysed, but the draft results seem to be very promising on the richness of the botanical diversity in the sacred forests.



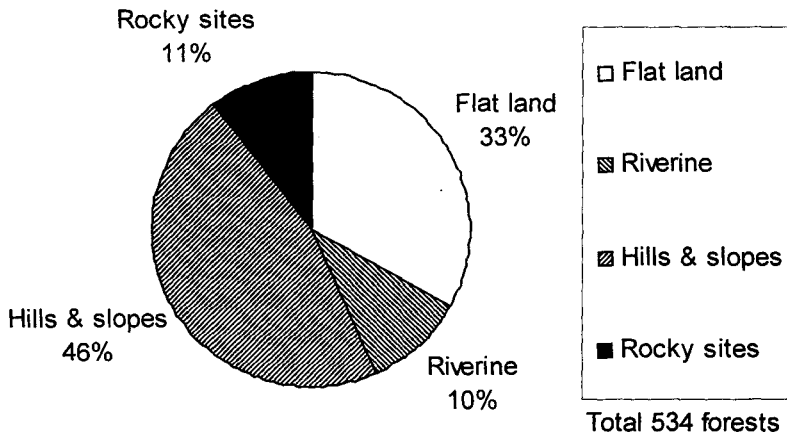


Figure 4. Location of the traditionally protected forests of Zigua ethnic group.

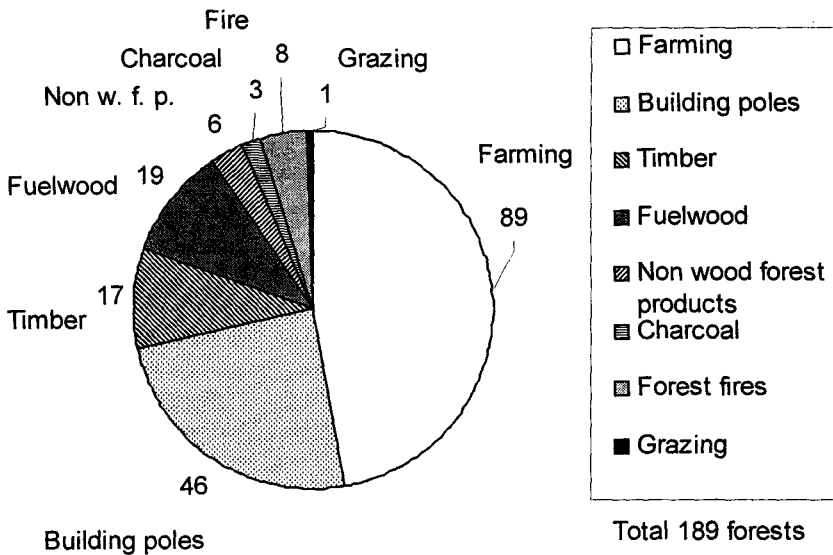


Figure 5. The number of the traditionally protected forests by the main causes of destruction in Handeni.

**DISCUSSION**

In Handeni some old men walked 10 kilometres from the sub-villages to our meetings in the village centres. Altogether 293 persons participated in the meetings. The discussions in the meetings were informal, but the participants were first very reserved about our research. After the meetings some of the old men came to thank us several times about our concern about the traditionally protected forests. It seems to us that the abuse of the traditionally

protected forests has not been publicly discussed. This issue should be studied more deeply in further research.

In North Pare, the traditionally protected forests are the only available areas for the expansion of settlements and for fuelwood collection. In Handeni the situation seems to differ from Pare in a way that the demand for timber and good land for shifting cultivation, is still possible to satisfy. In Handeni the demand is more about the good quality of land for agriculture, which is good in some sacred forests.

The reason that fire damage is not often mentioned could be the soil and forest type in these forests. In some places the border between miombo woodland and the forests is like a wall. It seems that fires cannot enter these forests easily. If this is correct, it means that the forests are rather small, but stable fire refugia so long as people are kept outside of the forests. Because there is quite a number of them, they are not only refuges for the vegetation but also for the fauna, especially in miombo areas where there are frequent grass and bush fires. This phenomenon should be researched further. The collection of non-timber products from the forests as a problem was mentioned sometimes; maybe the reason for this is more aesthetically related to the original purpose of the forests.

Zigua people are mainly Muslims and for them the local beliefs seem to be more accepted than in Christian societies. In Pare the population pressure is so high that people have started to cultivate the traditionally protected forests and the sacred societies have not been able to punish them, because there are too many violations and the people concerned are often too close relatives. For example in the biggest sacred forest in Usangi Division, a beautiful hill top *mshitu* Kena has lost two-thirds of its forest coverage. This *mshitu* is still used for training and worshipping. (Our research team could not enter this forest, because spirits were not ready to meet us. They were ready to let us in after four days, but unfortunately at that time we were not able to enter the forest.)

Many indigenous tropical tree species occur only in the sacred forests, especially in the Pare Mountains. These forests, which are also small in size, should be seen as *in situ* conservation sites as well as monuments of historical Tanzania. They are part of the history of Tanzanian people. The national heritage should be kept for future generations. The biodiversity is already an adequate reason to keep this national heritage. There is a need for concern by the decision-makers, because the status of the sacred forests is no more a taboo. Altogether 40 % of these forests are already damaged because of farming and timber cutting.

In the whole of Handeni district there are possibly more than 1,400 units of traditionally protected forests and in the Mwanga District about 340 units. Their total area could be over 7,000 ha and if 60 % of the forests are still almost untouched, the total need for protection of the forest land could be over 4,000 ha in Handeni District and 400 ha in the North Pare Mountains. These forests are therefore an effective way to save areas in rich biodiversity.

Traditionally protected forests should be a special case in the land bill, which is being prepared by the government of Tanzania. It would be a loss both culturally and environmentally, if they were not considered in the law.

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