

## 研究資料 (Research Material)

# Sustainable Management of Sacred Forests and Their Potential for Eco-Tourism in Zanzibar

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### Abstract

Sacred forests have been integral parts of human life in many parts of the world since ancient times. The local communities have respected and protected them, through a sacredness associated with taboos. Sacred forests and groves are very important reservoirs of biological diversity, preserving unique floral and faunal species. Their existence has been threatened in many places of the world recently. Zanzibar has not been spared from such threats to its sacred forests. Local communities no longer honor the traditional and cultural respect for these forests as economic hardship continues to bite. Alternative means of livelihood could offer a protection to these forests. Development of Eco-tourism in the sacred forests of Zanzibar could be one of the alternative options that may attract local communities to save these remaining patches of forest. Local communities could engage in eco-tourism activities within their areas. Income from such activities may help to offset economic hardships, and therefore may dissuade them from destroying such prestigious resources. Some of the profit generated from eco-tourism may also be used for conservation and management of the sacred forests. Policies to support such endeavor are already in place. What is needed now is for the government of Zanzibar to take this idea into the local communities in order for them to discuss it thoroughly and then agree on it. But before embarking on this program, initial groundwork needs to be done. This includes identifying, surveying, zoning, marking and mapping of all sacred forests in Zanzibar. Comprehensive studies of the ecology of these patches should be done to facilitate planning work. In the planning process, deliberate efforts should be made to make sure that all stakeholders are brought together under one umbrella. Training of the guides and preparation of interpretative materials is very crucial for any eco-tourism business to succeed.

**Keywords:** Sacred forests and groves, Eco-tourism, Biodiversity, Conservation, Local communities, Forest policy, Zanzibar

### 1. Background and Objectives of the Study

The practice of protecting patches of forest as sacred is ancient. Groves of trees dedicated to the worship of the gods have been mentioned in many literatures. The ancient societies of Greece, Rome, Asia and Africa had long preserved sections of the natural environment as forests sacred to traditional religions (Chandrashekara and Sankar, 1998). Sacred forests have been associated with the cultural and religious beliefs of the indigenous peoples. Sacred forests and groves have served as an important reservoir of biodiversity, preserving unique species of plants and animals. Sacred and taboo associations attached to particular species of plants, forests, groves, mountains, rivers, caves, burial places and other holy sites continue to play an important role in the protection of ecosystems by the local community. Sacred forests or groves are known by different names in different countries. For example, in coastal areas of

Kenya they are called *Kaya* forests (Githiro, 1998). In India they are known as '*Dev*' in Madhya Pradesh, '*Deorais* or '*Deovani*' in Maharashtra, '*Sarnas*' in Bihar, '*Oran*' in Rajasthan, '*Devarakadu*' in Karnataka, '*Sarpa* or '*Kavu*' in Tamil Nadu and Kerala, and '*Kaans*' in Uttara Kannada (Chandrashekara and Sankar, 1998; Chandran and Hughes, 2000; Gadgil, 1998). They are known as '*Chinju-no-mori*' in Japan. In some places, the cultural ties are still strong and intact (Boakye, 1998), while in other places they have eroded and led to serious degradation of biodiversity (Ramanujan and Kadamban, 2001).

The sacred forests are called '*Misitu ya Jadi*' or '*Misitu ya Mizimu*' in Zanzibar in Swahili language. The area of the sacred forest is not clearly defined in administrative documents. However, it is apparent that the sacred forests are seriously declining in both the size and quality of their resources in Zanzibar, Tanzania, as

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in other parts of the tropics. These patches of forest have been subject to overwhelming exploitation pressure from local communities. Once they are seriously degraded, their conservation value would also be degraded. They should urgently be protected for their environmental and cultural values. If these patches of forest were left unprotected, the consequences in terms of biodiversity losses will be extremely high for the future welfare of the local people, who mostly depend on the forest resources for their livelihoods.

Sacred forests (groves) are integral parts of human society. The forests are the source of food, fruits, bush meats, traditional medicines, honey, flowers, timber, fuelwood, construction materials, fibers, grasses, thatching materials, dye, basketry materials, etc. Also they play a very crucial role in the conservation of water and soil. These patches of forest are very important refuges for many plant and animal species whose habitats have been largely destroyed. The reservoir nature of sacred forests in Zanzibar deserves a strong inclination toward their protection.

As economic hardship continues to affect the local communities in Zanzibar, the destruction of sacred forests will also continue until alternative means of livelihood is secured. The potential of eco-tourism and the economic benefits of it can be the main incentive to protect the sacred forests and provide income to local communities. Decher (1997) explained that where eco-tourism is being developed, for example in the sacred forests at Boabeng Fiema Monkey Sanctuary in central Ghana, revenue from eco-tourism could be used to develop further conservation, re-afforestation, and education projects. These activities in turn might strengthen the continued existence of the sacred forests.

Growing environmental concern coupled with an emerging dissatisfaction with mass tourism has led to increased demand for nature-based experiences of an alternative kind. At the same time, less developed countries are beginning to realize that nature-based tourism offers a means of earning foreign exchange and providing a less destructive use of resources than alternatives such as logging and agriculture (Blamey, 2001). A large part of the eco-tourism experience and of recreational landscapes depends on the maintenance of the forests, which are crucial pockets of biodiversity conservation (Font and Tribe, 2001). Eco-tourism can represent an extraordinary and sometimes unexpected source of development for the local communities. Eco-tourism can create new jobs, stimulate migration flow, and introduce new social dynamics within a local system. However, nature-based tourism itself might sometimes have negative impacts on the resources and environment of the local community. At the same time, if

properly developed, eco-tourism is capable of supporting a new awareness and new representation of the local culture that can be revitalized by the interest of tourists.

Therefore, the importance of developing sustainable eco-tourism in Zanzibar cannot be over-emphasized because of its potential for diversifying the economy while protecting its still formidable environmental heritage. Despite the tradition of tourism and the richness and variety of natural assets, these resources are very much under-utilized for eco-tourism in Zanzibar.

The objective of this study is therefore:

1. To identify issues, policies and threats that face the sacred forests of Zanzibar.
2. To learn from the experience of other parts of the world in sacred forest management and eco-tourism.
3. To explore the potential of sacred forests for eco-tourism in Zanzibar.
4. To suggest the adoption of eco-tourism in sacred forests in Zanzibar, based on the experience gained from other countries.

## 2. Materials and Methods

### 2.1 Study Area

Zanzibar is an archipelago, made up of Zanzibar and Pemba Islands plus a number of islets. It is located in the Indian Ocean approximately between 4° and 6.5° south of the equator, about 60 km off the coast of mainland Tanzania. The total land area is about 2,332 square kilometers. According to the 1988 census, the population of Zanzibar is estimated to have been 870,000 in the year 2001, with a density of 373 persons per square kilometer. The climate is tropical maritime with two distinct rainy seasons: the Long Rains from March to early June, during which the rainfall is between 90 and 100 cm, and the Short Rains from October to December, during which the rainfall is typically between 40 and 50 cm. According to the land use classification, forestland covers about 51.1% (137,087 ha) of the total land area, while the agroforestry system covers about 32.1% (85,084 ha). Mixed woody vegetation covers approximately 7.0% (19,733 ha) of the land; agriculture covers about 9.4% (25,034 ha), and settlement land covers about 3.0% (7,858 ha) of the total land area. The forests of Zanzibar are among the 16 hotspots of biological diversity of East Africa. Besides agriculture, which is the mainstay of the Zanzibar economy, tourism and trade are regarded as being the second most important contributors to it.

### 2.2 Methodology

This study is mainly based on a literature review, the observations and empirical knowledge of the first author, and official documents. Case studies on the management

of sacred forests and the implementation of tourism development have been reviewed. The current status and its problems of the sacred forests in Zanzibar are overviewed, based on experience and on literature about biodiversity. The national forest policy and tourism policy of Zanzibar are described, based on official documents. Based upon discussions of the potential, expectations, and conditions for the development of eco-tourism, which would make use of sacred forests, some recommendations for the management of sacred forests are then laid out.

### **3. Status of the Sacred Forests and Its Problems in Zanzibar**

The size of sacred forests varies from one place to another. For example, in Kenya they range from 10 – 200 hectares (Githiro, 1998) while in Zanzibar they are from 0.5 – 20 hectares. Though the exact number of the sacred forests is not known, it is believed that most families or clans in the rural areas are connected to certain sacred forests or sacred trees in their areas. Sacred forests can be recognized either by the presence of small huts in the middle of the forests, big stones, huge buttressed trees, caves, water streams or ruins of ancient construction where local people pray for their wishes.

The sacred forests of Zanzibar have been facing serious problems. The depletion of resources from these patches of forest is threatening their sustainable utilization, and therefore raises serious concerns that call for immediate action by forest authorities. The status of the sacred forests and the problems facing these forests are summarized in the following sections.

#### **3.1 Land Tenure Systems and Sacred Forest Ownership**

Land in Zanzibar is under state ownership, as in many other African countries. The Land Nationalization Act of 1964 gave each landless peasant family the right to occupy three acres of land. By 1974 about 22,262 families had been provided with three-acre plots under this policy. According to the law, the government is not obliged to compensate for the taking of any land intended for public use or development; instead, compensation is considered only for the property (e.g. trees, crops, buildings, etc.) on that particular land.

Other land tenure systems include the temporarily occupied lands that are mostly used in shifting cultivation. Private lands are owned permanently by the farmers or families. In the case of public lands, they are mainly under the custodianship of local communities on behalf of the government.

Ownership of the sacred forests in Zanzibar differs from one place to another. In some places, they are owned and managed by the families or clans, while in other areas the ownership lies in the community and therefore

local leaders (mainly traditional leaders) have a vested role in managing them through traditional and cultural principles. In the regions where traditional ownership still exists and is respected, the local people are supposed to seek permission for the use or extraction of resources in the forests. In such cases, the local people living close to the sacred forests have ample knowledge and expertise in the forest flora and fauna, to the extent that they are proud of protecting plants and animals that they regard as being of special value to their livelihoods. But in the areas where the traditional systems for the use of sacred forest resources are on the verge of disintegration, people no longer honor and respect them.

This land tenure system is a complexity of pre-Revolution rules, tradition, and government-controlled arrangements. The allocation and transfer of land has continued to be controlled by traditional rules and community institutions, but in recent years these traditions have come under increasing pressure, leading to their breakdown in some areas. Uncertainty over land tenure has to some extent negatively affected community forest activities. If a farmer or community owns woodlots or a piece of forest land, he can sell only the trees and not the land to others, because all the land remains the property of the government. At the same time, no one is assured of compensation if the government takes the land. It is difficult for the owner to obtain loans from banks. Normal banks don't accept land as security for loans because of such an ambiguous ownership system. In some cases, the government only issues the right of occupancy, whereby the community is only allowed to use that particular land and not to sell it. Since all the land remains public property, many local people are reluctant to develop such land for fear that one day the government will take it back without reasonable compensation. Therefore community management initiatives for common property have been weakened by a lack of clarity over issues of tenure, and this affects forest ownership (including sacred forests) in communal areas. The new Land Tenure Act of 1992, and related legislation, addresses the problem of insecurity of tenure for individual farmers and communities, but the process takes quite a long time.

#### **3.2 Taboos and the Regulation of Resource Usage in Sacred Forests**

The local communities assume responsibility for protecting the sacred forests and enforcing rules. In the sacred forest, the use of resources is regulated by taboos. The local people are not allowed to collect certain types of products, or cut certain tree species. In Zanzibar, for example, *Ficus* and *Adansonia* spp. are regarded as sacred trees in the groves and are said to be the home of deities or spirits, while *Euphorbia* spp. is planted at

burial places or cemeteries just after someone is buried. In some places, collection of forest products is reserved for specific days of the week, while in others people are completely barred from entering the sacred forests on certain days. In other sacred forests, women are not allowed to enter while they are menstruating or just after childbirth. The local communities believe that the deities or spirits will become angry if these rules are broken, and may bring down punishments such as droughts, floods, epidemics of diseases or unexpected deaths, etc. People must purify themselves before they are allowed to enter sacred forests or groves.

The local elders administer the penalties for miscreants after they have been caught by the local patrols. Severe fines are imposed on those who misuse or intrude upon the sacred forests. These fines include cash, or an animal to be sacrificed to the god. The problems of these traditional rules are that they are unwritten and have no legal backing by judicial institutions. If the culprit resists the ruling, it might be difficult to enforce or to refer to higher legal institutions.

Another discrepancy is that the local communities have no scientific expertise with which to monitor and evaluate the rate of exploitation and the severity of such exploitation. In some cases they are not able to control the consumption of resources at a sustainable level.

### 3.3 Biodiversity of Sacred Forests in Zanzibar

The uniqueness of the lowland coastal forests of Zanzibar is that they are remnants of former areas of extensive forest cover belonging to the Zanzibar – Inhambane section of the Guinea-Congolian Phytogeographical Region (White, 1983). They contain high plant species diversity of the lowland coastal vegetation type. They are the remaining large terrestrial natural stands representing the remnants of biological resources that once covered the whole of the islands of Zanzibar and the coastal areas of Tanzania. Despite their limited size, the coastal forests of Zanzibar are recognized as a center of species diversity and endemism, and are therefore very important in conservation priorities (Archer, 1991; FAO, 1997; Masoud, 2001; Pakenham, 1984).

The long-term isolation of the coastal habitats of Tanzania as discrete areas of forest has allowed the independent evolution of faunal and floral species. The Indian Ocean has maintained an exceptionally stable temperature over the last 40 million years (Sumbi, 2000). This has led to consistency in the coastal climate which is significant in the context of the greater changes wrought elsewhere in the last ice-age and more recently by increases in the aridity of much of the African lowlands (Hamilton, 1982). Thus the coastal forests

may have provided a refuge for species that died out elsewhere, and their climatic stability has allowed the steady development of communities with a high degree of specialization and adaptation (Hawthorn, 1984).

Although not many detailed studies have been done to explore the full biodiversity value of the sacred forests in Zanzibar, the existing information indicates the uniqueness of these forests and the significance of their protection. These forests contain a considerable number of plant and animal species of significant importance. According to the Zanzibar Long Term Forestry Plan (ZLTFP, 1997), apart from government-protected areas these forests are the only remaining relatively less disturbed patches of natural forest. The forests also serve as the ancestral homes and burial grounds of local communities. Many local people maintain the code of secrecy, and for years they have been protected and respected as holy places into which nobody rashly ventures.

Masoud (2001) explained that in the sacred groves of the Jozani forest area (600 ha) in the Southern and Central districts of Zanzibar, there exist over 98 plant species and 26 endemic shrubs. Pakenham (1979) has recorded 36 species of birds occurring in the forests of Zanzibar. He found that the degree of endemism is quite low on Zanzibar itself, but that 3 sub-species – *Tauraco*, *Anderopardus* and *Nectarinia* -- were endemic on Unguja Island and one endemic species and 5 endemic sub-species was found on Pemba – *Zosterops*, plus *Accipiter*, *Treron*, *Otus*, *Nectarinia* and *Lamprolaima*. Studies of butterflies by Archer (1991) have shown a maximum record of 95 species on Zanzibar Island and 89 species on Pemba Island. These studies reported 9 endemic taxa of butterfly on Zanzibar Island and 10 on Pemba Island.

The Forestry Authority has emphasized conservation of wild animals. Due to the degradation and depletion of high forests and coral rag areas the only remaining refugia for these animals is the sacred forests. The most important species found in these forests include *Colobus badius kirki* (Zanzibar Red colobus monkey), *Panthera pardus ardersii* (Zanzibar leopard - Konge), *Panthera pardus ardersii* (Zanzibar leopard - Kisutu) *Cephalophus ardersii* (Ader's duiker), *Pteropus voeltzkowii* (Pemba flying fox), etc. These animals are endemic and endangered, and the population is vulnerable. The Zanzibar leopards have been associated with traditional beliefs and are said to be kept in captivity for magic making (Pakenham, 1984). Therefore the above-mentioned studies have showed that the uniqueness of wildlife species deserves particular conservation attention in Zanzibar.

### 3.4 Uncontrolled Extraction of Forest Resources

Though sacred forests are protected by taboos and traditional self-imposed rules, still there is a serious level of extraction of forest products. Firewood is the main source of energy in Zanzibar, and accounts for 90% of the total energy consumption. The demand for construction materials, especially building poles, is also very high. According to ZLTFP (1997), the rate of fuelwood consumption is higher in towns (per capita consumption of 0.6-0.8 m<sup>3</sup>/yr) than the rural areas (per capita consumption of 0.40 m<sup>3</sup>/yr). Some of the reasons for this difference include the variation in cooking habits between the urban and rural populations. In urban areas, many households are able to cook three times or more per day, while in the rural areas food is cooked not more than twice a day. Income difference between the urban and rural areas also determines the type and the frequency of cooking. In urban areas, the household income is relatively high compared to the rural areas, mainly due to the availability of more employment opportunities, both formal and informal.

ZLTFP (1997) estimated that the total consumption of fuelwood and building poles for the year 2002 would be about 638,839 m<sup>3</sup> (6.2% of the total standing volume in Zanzibar, or equivalent to 4.7 m<sup>3</sup>/ha/yr). As the demand for fuelwood and construction poles increases while the availability of wood in the public lands (coral rag forests and mangroves) diminishes, local people are forced to enter the sacred forests. Local communities have begun to extract buildings poles from sacred forests for their local use and for selling to town markets. Even though not all of the increased amount of fuelwood and building poles would come from sacred forests, there is nevertheless a potential danger if higher amounts of wood were to be extracted from such small sized forests.

Medicines, foods, fruits, and bush meat are other important forest products extracted from sacred forests. It is difficult to suggest the sustainability of their use without detailed studies to evaluate their potential. However, based on the current rate of exploitation, it is obvious that there will be a severe degradation of the resource base. Local communities use herbs, twigs, roots and barks from the trees as traditional medicines. The species, which are commonly extracted, include *Macphernia gracilis* (Mjoma), *Euclea racemosa* (Msiliza), *Suregada zanzibarensis* (Mdimi msitu), *Blighia unijuga* (Mkuukilemba), *Drypetes natalensis* (Mjaafari), *Olea carpensia* (Mjaafari dume), *Pittosporum viridiflorum* (Mpande), *Flueggea virosa* (Mkwamba), *Tarenna pavettoides* (Mlashore), etc. Bush meat, especially from small duikers such as *Nesotragus moschatus* (suni), *Cephalophus adersi* (Ader's duiker), *Cephalophus caeruleus pembae* (Pemba duiker), and

*Cephalophus monticola* (blue duiker), is commonly used, while *Potamochoerus pocus* (bush pigs) are being hunted as pests and only few people use the meat. Ader's duikers are an endangered species, which is protected under Zanzibar law.

### 3.5 Agricultural Expansion

Agriculture is the backbone of the Zanzibar economy, and subsistence farming is common practice all over the islands. Shifting cultivation is widely practiced and is the main cause of deforestation. As the population grows at the rate of 3% per year, the demand for agricultural land to feed this growing population is increasing at an alarming rate. According to the land use classification, the agricultural land of Zanzibar is only 9.4% of the total land area, and with such poor agriculture practices these lands are subjected to rapid deterioration in such a way that demand for new land is gradually rising. Despite the additional agroforestry lands, which account for 32.1% of the total land, about 500 ha of forests are still being cleared every year for agricultural purposes (Lesikinen and Silima, 1993). Since most of the public forests are becoming exhausted, the local communities are switching to the use of the resources of the sacred forests.

## 4. National Policies of Zanzibar

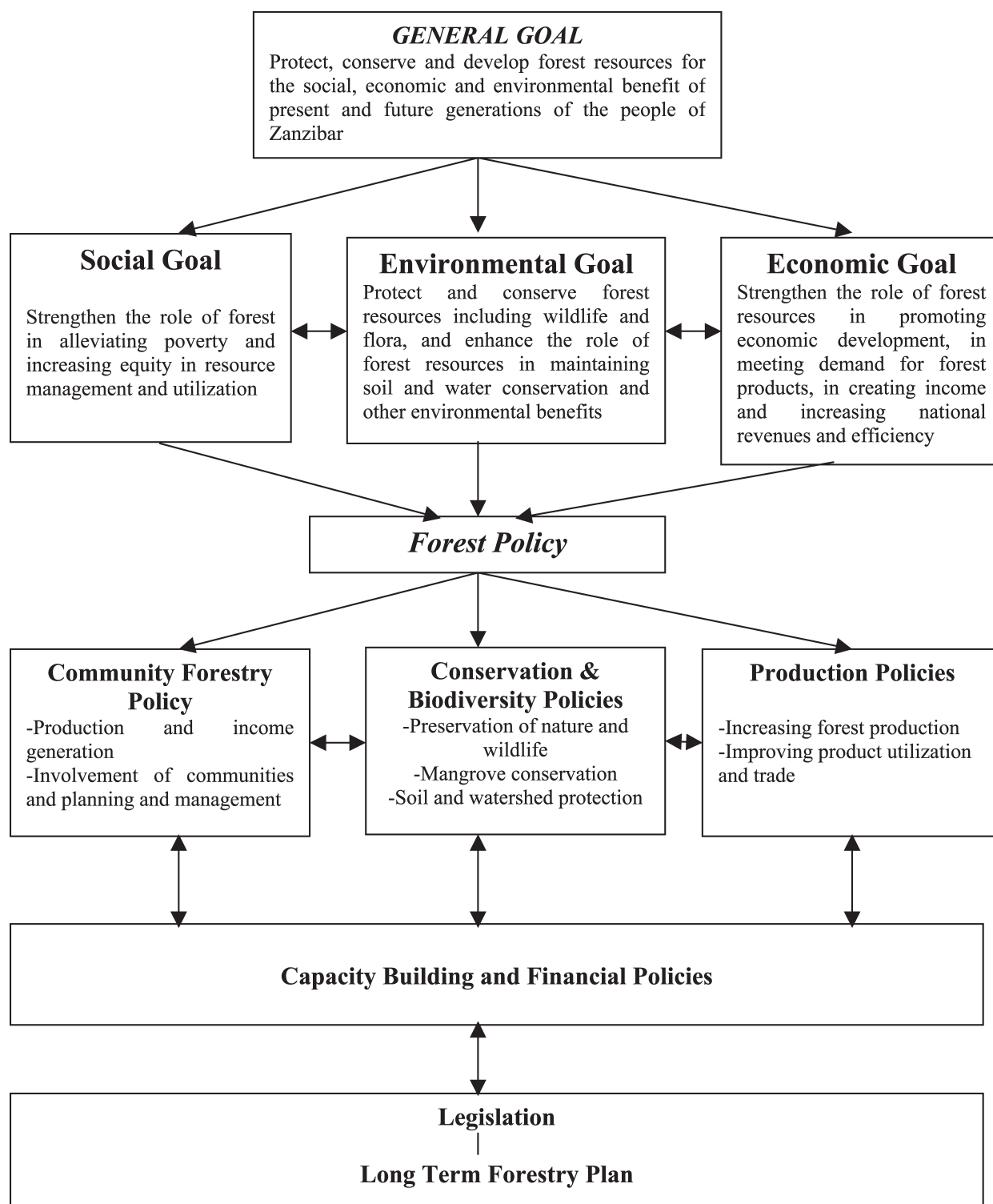
### 4.1 National Forest Policy

There is a worldwide recognition that proper management and conservation of forests and other natural resources must depend on the participation of local communities. Based on such recognition, local forest management programs have been encouraged in Zanzibar.

The National Forest Policy of Zanzibar was officially adopted in 1996. The increased pressure on forest resources due to rapid population growth necessitates community participation in the management and conservation of local community forest resources, in order to protect rural incomes, forest resources, water tables and biodiversity and so maintain the contribution of forests to rural living standards. Therefore the main social goal of the Forest Policy is to strengthen the role of forests in alleviating poverty and increasing equity in resource management and utilization. Within this broader objective, the policy is stressing production and income generation, with involvement of communities as stakeholders in planning and management of the local community forest resources including sacred forests (See Fig.1). Eco-tourism in these forests may have the potential to give considerable support to the livelihood of the local communities.

### 4.2 Tourism Policy

Tourism has growing importance in the national



Excerpt from ZLTFP, 1997

Fig. 1. Summary of Zanzibar National Forestry Policy

economy of Zanzibar. The government aims to create the necessary infrastructure, and encourages investment in tourism while maintaining the environmental integrity of the country as a basis for attracting tourists. The tourism policy should indicate the preferred type of tourism and the direction of spontaneous development for official

commitment to the development. The policy provides a legal basis for guiding the general type and extent of tourism to be developed. Despite the fact that Zanzibar has not yet officially adopted a new Tourism Policy, the draft policy has been under discussion at various levels of the government and stakeholders. It is expected to

be approved soon. According to the Zanzibar Tourism Development Plan (UNDP and WTO, 1983 cit. WTO, 1994), among the recommendations of the Tourism Policy Statement were:

- International tourism should be developed as an important means of achieving greater understanding and appreciation of the Zanzibar history, culture, and natural environment by foreigners, and of residents' developing some understanding of other people's customs and cultures.
- International tourism should be developed to provide additional employment, income and foreign exchange for Zanzibar, and to help diversify the islands' economy.
- Domestic tourism should be developed as an important means of teaching the historical, cultural and environmental heritage, and establishing understanding by mainland Tanzanians of Zanzibar's rich historical and cultural heritage.
- Domestic tourism should also be developed as a means of redistributing income within Zanzibar, especially from urban to rural areas and from mainland Tanzania to Zanzibar.
- Tourism should be developed and operated so that it promotes conservation of archaeological sites and historic places, conservation and revitalization of the desirable aspects of traditional cultural patterns, arts and handicrafts, and maintenance of the essence of religious beliefs and practices, all of which represent the historic and cultural heritage of Zanzibar. Tourism should be planned, developed and organized so that it does not result in serious social or cultural problems.
- Tourism should be developed in a carefully planned, controlled and organized manner so that it promotes conservation of the natural environment, especially places of scenic beauty, indigenous flora and fauna, important natural ecological systems, beaches and underwater environments, and places with outdoor recreation potential. Tourism development should not result in any type of serious air, water, noise and visual pollution.
- The general public should be educated to understand tourism and its role in Zanzibar's development policy, and be given all possible opportunities to use and enjoy tourist facilities and attractions while still respecting and maintaining suitable standards at and of these facilities and services.

Generally, the policy should be used as a technique for environmental and cultural conservation and should not generate socio-economic or environmental problems. Socio-economic considerations about the interests of local

communities in developing tourism and local economic development needs are strongly emphasized.

### 5. Potential for Eco-tourism Development in Zanzibar

Eco-tourism is an act of traveling to relatively undisturbed or uncontaminated natural areas with the specific objectives of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in that area (Ceballos-Lescurain, 1987. cit. Blamey 2001). Tanzania is one of the potential eco-tourism spots in Africa. In terms of its competitive eco-tourism advantages, Tanzania has a wide variety of environmental resources, and its wildlife resources are unmatched in Africa beyond South Africa (Dieke, 2001). Examples of the eco-tourism icons of Tanzania are the unspoiled islands and the beaches of Zanzibar, Mt. Kilimanjaro, and national parks such as Ngorongoro and Serengeti. These last two are located within the so-called Northern Circuit wildlife area of Tanzania. Historically, Tanzania's eco-tourism has focused on these areas, though considerable potential is found along the coast and within the undeveloped southern wildlife sanctuaries.

Zanzibar is one of the few island and coastal eco-tourism destinations in the Indian Ocean Region (Halpenny, 2001). The eco-tourism industry is growing very fast as a sector of the economy. The government determined to develop high-class tourism that attracts tourists who are not only capable of high spending, but also appreciate the history, culture, environment and the way of life of the residents. The development should be compatible with the islands' ecosystem and culture, and be fully integrated in the overall development policy and strategies (COLE and CoT, 1994). It discourages low spending tourists (mass tourism) who come to the islands for a cheap price provided by tour operators. Zanzibar aims at developing small-scale tourism, in which a relatively limited land area would be needed. By controlling the growth of tourism, the number of tourists will be within the limit of the carrying capacity of the land and other resources. To meet these objectives, a tourism-zoning plan was established in 1993, which includes designation of areas having a potential for tourism development, a framework for the regulatory mechanisms for this development, guidelines for all tourism areas, a framework for coordination of infrastructure development and a framework for physical planning. It also takes into consideration the design and capacity, as well as specific conditions of use.

By 1997 there were about 80 hotels in operation and another 54 hotel projects were in different phases of development. The total capacity of the hotels was projected to be 15,000 beds by the year 2015, a tenfold

increase over two decades. The number of tourists who visit Zanzibar has also increased dramatically since 1990. For example, in 1990 tourists entering Zanzibar numbered 42,141, and by the year 2000 the annual number had reached 98,000. In 2001 about 78,000 tourists visited the country (see fig. 2). The main reason for this downturn is presumed to be the 11 September 2001 terrorist attacks in the U.S.A. According to forecasts, it is expected that in 2002 about 100,000 tourists will visit Zanzibar (Zanzibar Net, 2002).

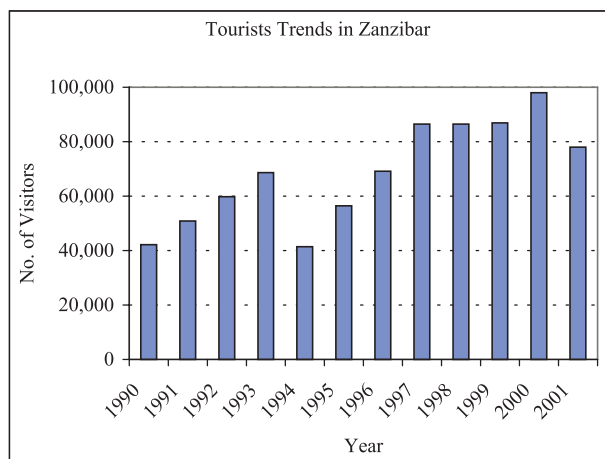


Fig. 2. Tourist Trends in Zanzibar

Source: *Commission for Tourism: Adopted by Zanzibar Net (2002).*

### 5.1 Attractiveness of the Sacred Forests and Tourism in Zanzibar

The uniqueness of the lowland coastal forests of Zanzibar which are the remnants of former areas of extensive forest cover (White, 1983), the rich composition of the floral and faunal species, the traditional management systems of the forest resources, and the cultural diversity of the local communities, are among the factors that attract eco-tourism to Zanzibar. Sacred forests, being part of the local traditions and culture, together with their richness of biodiversity, stand a good chance of attracting many visitors by virtue of being areas where they can explore new experiences of the local people of Zanzibar.

Historically, Zanzibar was an important Arab trading center for East Africa. It was a sultanate for many years prior to independence. Zanzibar also became the focus of a Swahili culture development. The Stone Town area of Zanzibar city is the largest and best example of Southern Arabian architectural styles and urban layout in East Africa (WTO, 1994). Stone Town, and some palace and other ruins in the country, are important historical attractions for tourists. Other attractions are the pleasant tropical climate, unspoiled beaches, marine areas for diving and sport fishing, scenic beauty, traditional Swahili

villages and spice farms.

Prior to the mid 1980s, tourism development was very limited with only a modest level of facilities and services available for tourists. Only a limited number of holiday tourists visited the islands. Since then, there has been a considerable development of beach resorts and other tourism improvement.

### 5.2 The Economic Impact of Eco-tourism

The tourism industry arose from the ruins of a dying export in cloves; the spice gave Zanzibar its world fame, as well as its serious economic disaster resulting from excessive dependence on a single export crop. Little is known about the contribution of tourism to the Zanzibar economy. However, according to the budget speech of the Minister of Finance and Economic Affairs of Zanzibar (2002), tourism and trade contributed about 21% of the National Income in 2001 compared to 18% in 1998. Tourism revenue is expected to be about US\$72 million in the year 2002.

Eco-tourism development depends on efficient infrastructure. To meet these demands from tourism, roads and electricity have been supplied to major tourism areas. In places to which services have not yet reached, the government is putting in more effort to provide such development. Improvement of such services also benefits the local communities.

Indeed, some villagers in the islands are already engaged in tourism, either in the informal or formal sectors. Experience, skills and education are highly desirable in high-class tourist hotels, for which reason such manpower is extremely rare in the local communities. However, the hotels also offer jobs that do not require high levels of skills and experience. Women are employed mostly in the housekeeping jobs that require fewer skills, while men are mostly self-employed in activities such as the selling of souvenirs, canoeing, or lending sport-fishing gear, which provide more income than employment by the hotels for unskilled labor.

### 5.3 Social, Cultural and Environmental Impacts of Tourism

Despite the fact that tourism provides income to the local community in the form of employment, sales of touristic goods such as fabrics, handicrafts, souvenirs, spices, traditional foods and drinks, etc., and provision of services such as transport, accommodation, and so on, the tourist hotels occupy the coastal zones and control access to beaches and water with the aim of securing privacy and leisure activities for tourists. The needs of tourism and tourists were put in focus while the needs of the local population were left in the shade. The local population is becoming increasingly marginalized with

regard to access and control over coastal resources necessary for their basic survival (Larsen, 1998). In the coastal zones, the expansion of tourism has led to larger scale infrastructure development appreciated by people in the local communities, but this has taken place without environmental assessment.

It has been noticed that there has been a general decline in access to the main marine resources traditionally used as staple food. Water is another resource for which there is high competition as a consequence of tourism development, especially along the coasts.

Despite recent impacts on food security and natural resources, the health of biodiversity and ecosystems still persists, together with reasonable social and political stability. The conservation and welfare measures of the government should be deliberately developed to keep social stability, biodiversity and ecosystem health.

## 6. Discussion

### 6.1 Eco-tourism

Effective management of sacred forests can offer more benefits to the local communities without involving severe extraction of forest biomass. Chandrashekara and Sankar (1998) observed in Uttara Kannada that several stakeholders, temple trustees, priests, the Devaswan Board and shop owners agreed in one way or another to get direct benefits from their involvement with sacred groves. The economic or material benefits come through the tourists, devotees and visitors. The use of sacred forests in tourism has also been practiced in Zimbabwe – the Muzambarani sacred Forests (1,400 ha). Byers et. al. (2001), explained that the Muzambarani Rural District has participated in the CAMPFIRE program (Community Areas Management for Indigenous Resources) by means of which, between 1993 and 1996, the council earned about US\$20,000 per year from sport hunting activities. They further explained that about 70% of the money collected in 1995 was used to carry out community projects in the area where hunting took place. These activities include the building of schools and clinics. The community forests of Nepal, where most of the sacred groves are situated, have been used for eco-tourism for many years. Sofield (2001) explained that eco-tourism is encouraged in community forests as a means by which local people can generate income. In and around the Sauraha buffer zones, for example, there are more privately owned elephant safaris conducted in the Royal Chitwan National Park than by the park itself. Annual earnings for an elephant safari are about US\$15,000 per animal, which is equivalent to the price of an elephant. On the other hand, private lodges have been built adjacent to community forests in the buffer zones, which also provide sustainable incomes to the local communities.

Despite the fact that Zanzibar has not yet practiced eco-tourism in sacred forests, there is a potential for such an undertaking, considering that the tourists who visit Zanzibar are in one way or another connected to cultural or eco-touristic travel. If the Zanzibar government decides to promote eco-tourism in sacred forests, there may be a great potential to tap the existing market and improve the livelihoods of the local people, rather than engaging in unsustainable exploitation of these very important patches of forest. Great attractions in these forests include the forest environment, forest trailing or trekking, scenery, culture and traditions, and diversity of floral and faunal species. The growing international interest in eco-tourism and tropical forests indicates that there is a growing potential for forest tourism to explore the values of sacred forests.

Eco-tourism, as we have seen earlier, can promote awareness among both residents and non-residents of sacred forest conservation issues, and raise revenue for local communities. The development of sustainable eco-tourism in sacred forests should be based on strategies that protect and strengthen both natural and cultural diversities, as was highlighted in the Forestry and Tourism Policies. It should avoid clashes between conservation and the people - which have been common in Africa.

Eco-tourism has the potential to help preserve and enrich local indigenous cultures, not only in the short term, but also from a trans-generational long-term perspective. Indeed, the development of a sustainable tourism model could play a valuable role in the development of more sustainable societies in Zanzibar. When developing eco-tourism, the vulnerability of the natural or cultural resources being promoted must be carefully assessed to ensure that any planned activities do not threaten or undermine it. Furthermore, it is absolutely crucial that local communities, in their struggle for a sustainable livelihood, be involved in integrating eco-tourism activities into self-reliance programs that benefit the community and natural environment. It needs to integrate the rights of local communities to use and manage natural resources. It should ensure that any profit from tourism is used by the local populations as well as for the conservation of natural resources. These efforts may in turn strengthen the continued existence of the sacred forests in Zanzibar.

### 6.2 The Need for Legal Protection

To halt the degradation of sacred forests, there is a strong need to institute their legal protection through government agencies in order to compensate for the weakened traditional protection systems. However, it is here suggested that the system should be decentralized.

Communities seeking to protect their sacred sites should be recognized and officially empowered by the government to restrict activities that threaten their sacred forests or groves, and to take legal action against those who encroach on sacred natural sites. The sacred forests could be gazetted as 'sanctuaries', or any other system that is agreed upon by the community, to enhance their protection and improve sustainable utilization of the resources. This can be implemented by local government by-laws, either at the regional, district or village levels. Any change in the legal status of sacred groves should be aimed at reinforcing, rather than undermining, traditional religious beliefs and functions. Land tenure systems and the ownership of sacred forests should be improved to accommodate the community need for the management of their local resources, and to remove all barriers that hinder smooth ownership of the resources. Boundary demarcations of the sacred groves should be posted to clearly separate them from other land use in the villages. This approach will prevent them from further encroachment caused by agricultural and settlement expansion.

### 6.3 The Role of Non-Government Organizations (NGOs)

The traditional role of sacred groves will inevitably fade away in Zanzibar and have to be replaced by a new set of reasons for protection. This is a concern shared by many people, because the younger generation is becoming more interested in modern cultural values and habits (molded by nearby urban centers and through television and radio programs) than traditional customs and taboos. Therefore, more efforts should be made to develop non-religious incentives for local people to protect sacred forests. For example, community members should be educated in the ecological values, functions, and needs of intact forests. Such knowledge might also encourage local people to safeguard remaining pockets of natural forest other than sacred forest on their lands, and to become more involved in tree planting by convincing farmers to plant forest buffer zones around sacred forests to reduce the peripheral effects on the groves. The buffers could be used on a sustainable basis as firewood plantations, and for other non-timber forest products. Conservation education needs to be stressed in the schools and by non-government organizations (NGOs).

Islam, the most influential religion in Zanzibar, may have an essential role to play in the 'conversion' of traditional reasons for protecting sacred forests to new ecological reasons as well as spiritual reasons. This is particularly possible in Zanzibar because there is a typical example of conservation on Misali Island in Pemba (a sister island of Zanzibar) through religious ethics, which

is working very well (Abdulla, et. al., 2000). This is a 222-acre island designated recently as a conservation area specifically for eco-tourism. The island is managed through Islamic religious principles whereby the local community (about 1500 fishermen) has agreed not to fish along the island's coral reef and in other breeding areas, and should not use any destructive fishing methods such as dynamite, poisons or tightly woven nets. Instead the community gets 40% of the revenue raised from eco-tourism, while the remaining 60% goes toward conservation of the island.

### 6.4 Zoning Approaches

Traditional approaches to forest reserves or conservation areas have mostly been unsympathetic to the needs of local people who live in and around such areas, and have been characterized by a preservationist, or heavy patrols and fines, approach. This approach, however, has slowly started to change with a growing awareness of the dependence of the successful long-term management of the forest resources on the cooperation and support of the local people in Zanzibar.

Considering the condition of sacred forests in Zanzibar, zoning approaches should be carefully introduced. Various approaches to zoning have been introduced in many parts of the world to reconcile the management of the areas with the social and economic needs of the people. Based on the natural, historical, social and economic resources of the areas, zoning approaches, based on UNESCO Man and Biosphere Program's concept, classify them into several zones such as a core zone for protection, a buffer zone where activities compatible with conservation objectives, such as research, education, and tourism can take place, and a transition zone where local communities can sustainably use resources. Each zone is given its own objectives and regimes for appropriate management, and each area is managed on the basis of such objectives and regimes. The zoning approach can resolve the various problems described above, and can show obvious objectives and regimes for the management of each area, not only to forest managers but also to local people. Therefore, the zoning approach would be suitable for management of those sacred forests focusing on eco-tourism.

For the first step toward the implementation of zoning, we should consider and specify the appropriate level of administrative unit to be responsible for it. Then, the needs of the local population for land resources, food, fodder, and fuel should be carefully investigated by a participatory approach. The needs should allow both for the present and the future. It is also necessary to specify the size and allocation of each land use, including that of the sacred forest to effectively function as a habitat for

wildlife and to preserve its sacredness and touristy value.

### 6.5 Training of Guides and Preparation of Interpretative Materials

Eco-tourists are often specialized and knowledgeable. Besides enjoying leisure in foreign countries, they are also interested in learning about the natural environment of the area and the local community that they visit. Therefore, for successful eco-tourism in the sacred forests of Zanzibar, the guides should be highly trained in natural resources management, environmental education, ecology, communication, and the cultural aspects of the area. Also it is very crucial that these guides have the capacity to market, interpret and deliver ecologically, culturally, socially and financially sustainable products to the visitors.

Interpretation is an educational activity aimed at revealing the meanings and relationships of the places visited and the things that are seen and done there. The interpretation as tourist information can be printed materials, signs, exhibits, self-guided walks, pre-recorded tour commentaries on cassettes or video, virtual tours, etc. Many of these interpretative media can be effective in enhancing visitors' understanding and appreciation of the environments being visited and the various natural and cultural phenomena experienced. By providing such high quality information, the quality of the guests' experiences can be improved, and will increase repeat visitors and occupancy rates, providing unique marketing opportunities and improving the eco-tourism business (Weiler and Ham, 2001).

## 7. Conclusion

Sacred forests and groves have survived for many hundreds of years and today act as a treasure store of much local biodiversity. The forest structure is also unique, representing the least disturbed islands of old growth. They serve multiple functions: they contribute to the conservation of threatened forest ecosystems; they protect a large number of endemic or relict plant and animal species; they preserve the culture and traditional beliefs of the local communities. As traditional systems gradually break down due to a number of reasons mentioned earlier, the integrity of these patches of forests is threatened. It is worth trying the introduction of the eco-tourism approach in the sacred forests in order to provide opportunities for alternative incomes for the local communities living within and around them, and at the same time to conserve their biological resources, cultures and traditions. The important thing to note here is the education of the local community about eco-tourism. The tourists also should be educated about the local cultures and the traditional values of the local

communities. It should be noted that emphasis must be placed upon the involvement of all stakeholders, such as local communities, NGOs, and government institutions (Tourism, Forestry, Regional Authority, Land, Environment) in the planning of eco-tourism projects in sacred forests.

Several important items are derived from this study.

1. Preservation of the existing sacred forests is highly recommended due to their importance as reservoirs of unique plants and animal species, and as part of the traditional cultures and beliefs of the local people of Zanzibar. Groves that are deteriorating should receive renewed protection and restoration if necessary. A buffer system of multiple-use forest, tree plantation, and firebreaks could be developed around the forests.
2. The management and protection of sacred forests should remain in the hands of the local people but could be legally supported and encouraged by local government authorities. Many non-governmental organizations (development agencies, political groups, religious groups, and youth clubs) should be aware of the ecological and cultural benefits of the sacred forests, and develop agendas that include their protection, study and stewardship.
3. Basic research is needed locally to assess the biodiversity of sacred forests. Research results and their implications should be made accessible to the local community and should be taught in public and in schools.
4. The cost of protecting crucial habitats such as sacred forests should not be borne by the local villages alone, even if income from tourists can be generated. The government, local or international NGOs and other organizations, could help in protecting these important patches of forest.
5. Surveying and mapping of the sacred forests is very important. These patches of forest should be clearly identified, mapped, and documented through legal institutions.
6. For sustainable eco-tourism, a zoning system should be introduced in order to undertake social and livelihood development activities, tourism and conservation activities. Studies should be conducted to determine the sensitiveness of each zone and how best it can be managed through a zoning approach. Through such an approach, there may be strictly protected core zone, buffer zone and transitional area designations, and it becomes possible for the system to integrate ecological, social and culture values. Care must be taken of these ecologically sensitive areas by providing extra protection, e.g.

the construction of board walks in marshlands or rivers to avoid disturbance of fragile ecosystems. The government should make it possible for all stakeholders of sacred forests to come together under one umbrella for such planning.

7. Emphasis should be put on the training of tour guides, preparation of interpretative materials, and all relevant information that will help eco-tourists to better understand both the special characteristics of the area they visit and the local people and their culture.
8. In the planning process of sacred forest management for eco-tourism, criteria and indicators to evaluate and monitor the sustainable management of these resources should be introduced and carefully monitored.

#### Note:

##### List of Abbreviations

CAMPFIRE	Communal Areas Management Programme for Indigenous People - Zimbabwe
FAO	Food and Agriculture Organization of the United Nations
COLE	Commission of Land and Environment – Zanzibar
CoT	Commission of Tourism – Zanzibar
WTO	World Tourism Organization
ZLTFP	Zanzibar Long Term Forestry Plan

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## ザンジバルにおける「鎮守の森」の管理とエコツーリズム利用の可能性

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### 要 旨

聖なる森（「鎮守の森」）は世界各地において、古くから生活の重要な一部だった。住民はそれを敬い、守り、その森との関わりにおいては、冒してはならない禁忌が存在していた。聖なる森はまた、生物多様性の貴重な宝庫でもあり、希少動植物種を守る役割を果たしている。近年、多くの地域では聖なる森が存亡の危機にあり、ザンジバルもその例外ではない。とくに若い世代の住民は、経済的困難に直面する中で、森に対する伝統的・文化的崇敬の念を失いかけている。こうした森を保護するためには、新たな生活手段の開発が望まれるが、ザンジバルでは聖なる森を活用したエコツーリズムが、その手段の1つになるかもしれない。エコツーリズムによる所得は、地域の経済を改善し、森林破壊をやめさせるだけでなく、利益の一部は聖なる森の保護管理のためにも使われうる。これを支援する政策もすでにある。ザンジバル政府にとって今、必要なことは、この考え方を地域におろし、包括的な話し合いを行って合意を得ることである。その前提となる基礎調査として、まず聖なる森の同定、計測調査、ゾーニング、マーキングおよびマッピングが必要である。また利用計画策定を進めるためには、その生態に関する包括的な研究も必要である。計画策定過程ではすべての利害関係者が一堂に会して話し合うことが求められる。またエコツーリズムが成功するためには案内人の研修や、優れた説明資料の作成が重要である。

キーワード：聖なる森、鎮守の森、エコツーリズム、生物多様性、森林政策、ザンジバル

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Photo 1. Ngogozo Sacred Forest – Pete Village

This forest grove is situated at Pete village, close to the fringes of the core area of the Jozani Conservation Area. It is owned by a family in the village. There is a cave in the sacred area, which the members of the family visit annually for worship. Only purified persons may visit the area. It is forbidden to cut the trees or even to take soil from the area. People can harvest medicinal plants after seeking permission from the owners. The area being close to Jozani Conservation area, which is famous for eco-tourism, the local community intends to use it for eco-tourism too, and they are preparing for that.



Photo 2. Kuumbi Sacred Forest – Jambiani Village

The Kuumbi sacred forest is situated about 3 km west of Jambiani Village, and is owned by the villagers. It is believed that local people lived in the area many years ago. The area is about 5 ha. It has been affected by shifting cultivation, which has taken place around the forest. Within the grove, there is a very beautiful cave with cool water. The local community uses the water for drinking while they work in the fields, as well as for their cattle. The area being close to the popular Jambiani Tourism Zone, it may be very strategic to tap into the existing market. The local community has started to take tourists into the area on bicycles. In order to attract the tourists, its access road should be improved. The local community has agreed among themselves to protect the area and use it for eco-tourism activities. Important local species include owls, tree hyrax, small deer, Mkole (*Grewia* sp.) etc. Although no harvesting is allowed, local people do use the area.