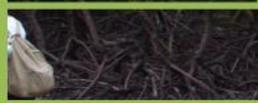


# *GOGONI-GAZI PARTICIPATORY FOREST MANAGEMENT PLAN*

*2013-2017*



*GOGONI GAZI  
COMMUNITY FOREST  
ASSOCIATION*



**APPROVAL PAGE**

This participatory forest management plan for Gogoni-Gazi Forest is approved for implementation and will be amended as need arises

**DK Mbugua.....**

**DIRECTOR, KENYA FOREST SERVICE,**

Date.....

## **ACKNOWLEDGEMENTS**

The preparation of this management plan relied on a participatory and concerted effort by the various stakeholders of the Gogoni-Gazi forests ecosystem. They included lead government agencies, including; Kenya Forest Service (KFS), Kenya Marine and Fisheries Research Institute (KMFRI), Non Governmental Organizations such as the World Wide Fund for Nature (WWF) and community conservation groups that form the Gogoni-Gazi community forest association (GOGACFA)

The core planning team that comprised of people from these institutions, provided information on forestry, wildlife, tourism, biophysical characteristics, socio-economic, land tenure and infrastructure that was used to input the document. The plan further relied on initial drafts prepared by the stakeholders.

Several other institutions, individuals and private sector establishments contributed to the planning process through data and information sharing and participating in workshops and consultative meetings.

The funding for the planning process and preparation of this participatory forest management plan for Gogoni-Gazi forest ecosystem was provided by Swahili Seas Project; a UK's NERC/ESPA funded project through the Kenya Marine and Fisheries Research Institute.

## Executive summary

This management plan for the Gogoni-Gazi forests (**1439.3ha**) ecosystem has been achieved through collaboration between the communities neighboring the forests, government agencies, and strategic partners. During the process of developing the plan, a number of stakeholder consultative meetings were held. A major concern for the stakeholders has been the need to have a management plan that responds to the specific challenges associated with conservation efforts aimed at retaining the current spatial extent, ecological role and socio-economic functions of the Gogoni-Gazi Ecosystem. It is envisaged that this management plan will lead to a management agreement that will give the forest adjacent community tenure ship rights and at the same time promote biodiversity conservation.

The plan covers an area with rich biodiversity, both terrestrial coastal forest and mangroves. Gogoni forest reserve is a mosaic of forest, woodland and grassland housing several endemic plants and animal species, among them being globally threatened. The forest is surrounded by rich agricultural landscape. Mangroves of Gazi are a fringing forest bordering Gogoni; and plays critical economic, ecological and environmental value to the people of the area. Root cause of deforestation and degradation of both Gogoni forest and Gazi mangroves have been identified as poor governance, population growth, and poverty levels among the local community.

This plan, therefore, seeks to develop conservation and utilization programs that can be implemented to mitigate against the threats to ecosystem and at the same time contribute to social-economic development. Overall, the focus of the management goal is to ensure that the current spatial extent and functions (ecological and socio-economic) of the Gogoni-Gazi forests ecosystem are maintained through strategies that enhance equitable use of natural resources by present and future generations. The planning timeframe is 5 years, between 2013 to 2017.

The approach to the development of the plan adopted the Kenya Forest Service Participatory Management plan mechanism in line with the Forest Act 2005. The development was thus highly participatory, incorporating and building on ideas from several previous initiatives. It is organized into six major chapters i.e.:

- Introduction
- Description and value of the ecosystem
- Planning considerations
- Ecosystem management programmes
- Plan implementation and development
- Plan monitoring and evaluation

**Chapter I** provides details on the planning process, management goals and the purpose of the management plan. Different stakeholders involved in the development of this participatory management plan for Gogoni-Gazi forest ecosystem are also introduced in this chapter.

**Chapter II** deals with the spatial extent and biophysical setting of Gogoni-Gazi forest ecosystem, ecosystem value, socio-economic characteristics, land tenure, and land use issues, livelihoods and threats to the ecosystem which have been listed as follows:

- Overharvesting of mangroves
- Sedimentation that lead to death of mangroves
- Charcoal burning in and outside protected areas
- Uncontrolled bush fires
- Poaching of small mammals
- Illegal fuel wood collection
- Poaching of forest products
- Illegal grazing
- illegal logging
- Other minor threats e.g. invasive species (*Lantana camara*)

**Chapter III** deals with the planning considerations as well as how the plan will be implemented. It examines the policy and legislative framework relevant to the management of the ecosystem and the linkages between the plan and other local, national and international planning processes. Based on different user groups operating in the pilot area, the following management zones are identified:

- Tourism use zone
- Biodiversity conservation zone (indigenous forest)
- Afforestation zone
- Utilization zone
- Rehabilitation zone
- Intervention zone

With these broad management zones, several management programmes are proposed in **Chapter IV**; targeting the following categories of resources

- Natural Forest Management
- Wildlife Management
- Fisheries Resource Management
- Apiculture
- Tourism Management
- Plantation Management
- Law Enforcement and Protection Programme
- Socio-economic Development Programme
- Programme on Infrastructure
- Human Resource Management Programme
- Research and Monitoring Programme

Each sub-section on the management programme has a preamble, objectives to be attained by the management, strategy and tabulated management actions that will need to be implemented to attain the objectives. The tables include the lists of lead agencies to spearhead or mobilize stakeholders in the implementation of management actions.

**Chapter V** deals with implementation plan, resource mobilization, and the revenue projections for 2013-2017. Besides tourism and donor funding, the plan proposes alternative actions to fund conservation and secure the livelihoods of the local community. These will include trading in carbon credits, thus shifting community dependency from activities that degrade the ecosystem to sustainable socio-economic programmes.

The efficacy of the management plan will be tested through a monitoring and evaluation process which is provided under Chapter VI. This includes the methods and approaches to be used in monitoring, responsibilities for monitoring, strategic plan indicators and the guiding principles for the implementation of the plan. By providing guidance on what needs to be assessed during the period evaluation on plan success, the plan monitoring framework helps ensure that the overall benefits from the plan implementation are maximized and any negative impacts are mitigated. A key requirement for the monitoring and evaluation process is the involvement of all the stakeholders in implementation of management decisions. Environmental Impact Assessment (EIA) and Environmental Audits are proposed for use as tools in determining the impact of development programmes on the ecosystem.

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## **Acronyms**

CBD	Convention on Biological Diversity
CFCU	Coastal Forests Conservation Unit
GFP	Global Forest Principles
GOGACOFA	Gogoni-Gazi Community Forest Association
IBA	Important Bird Area
IGAs	Income generating activities
KCNRN	Kwale County Natural Resource Network
KEFRI	Kenya Forestry Research Institute
KFS	Kenya Forest Service
KMFRI	Kenya Marine and Fisheries Research Institute
KWS	Kenya Wildlife Service
MDG	Millennium Development Goals
MEMR	Ministry of Environment and Mineral Resources
NEAP	National Environment Action Plan
NEMA	National Environment and Management Authority
NGO	Non-governmental organization
NMK	National Museums of Kenya
PFM	Participatory Forest Management
UNFCC	United Nations Framework Convention on Climate Change
WWF	World Wide Fund for Nature

# **CHAPTER I**

## **1.0 Introduction**

International concern in the conservation of endangered and threatened species; and improvement of communities' livelihoods within and adjacent to areas of biodiversity has elicited a lot of work through governments in collaboration with other organizations. With the realization of the threats posed by climate change and knowledge that forests help regulate climate by adding and removing greenhouse gases (GHGs), such as Carbon dioxide (CO<sub>2</sub>), from the atmosphere, a lot of efforts have been geared towards conservation. The focus aims at ensuring sustainable utilization of resources as well as poverty alleviation. Need to raise forest cover to internationally accepted levels means that concerted efforts must be made towards this end through proper management of the forest resources. Such intervention measures would reduce the threats to those ecosystems occasioned by over-exploitation of resources, transformation of forest land for agriculture and illegal settlement, mining activities, fuelwood extraction, fire outbreaks, and illegal logging among others. The Forest Act, (2005) saw the adoption of a participatory approach aimed at achieving sustainable forest management by involving the local communities in the management of the ecosystems. This participatory management plan for Gogoni-Gazi Forest Ecosystem is therefore in line with Forest Act (2005); and other legal instruments that promote sustainable natural resources management.

### **1.1 Vision**

A well conserved and sustainably managed Gogoni-Gazi forest ecosystems; for human well being and ecosystem health.

### **1.3 Our Mission**

To ensure protection and wise use of the Gogoni-Gazi ecosystem, through education, research and sustainable utilization of marine and coastal resources for the benefit of present and future generations.

### **1.4 Purpose**

The purpose of the Gogoni-Gazi forest management plan is to provide direction for participatory and sustainable forest management as stipulated in the laws of Kenya (Forests Act 2005). A key requirement for the plan is, therefore, to embrace the need for collaborative and participatory approaches in the conservation of natural resources in the ecosystem. The envisioned outcome is that it will provide for a mechanism to conserve the ecosystem as a single management and ecological unit by bringing together the actions of all stakeholders in the various ecosystem sections.

## **1.5 Overall Goal for the management plan**

The overall goal for this participatory forest management plan is to promote the protection, restoration and sustainable use of Gogoni-Gazi forest ecosystems so that their goods and services are enhanced for socio-economic development and environmental conservation.

### **1.5.1 Specific objectives**

- i. To promote the effectiveness of the ecosystem protection, rehabilitation and development of Gogoni forest reserve and Gazi mangrove forests
- ii. To enhance public understanding of the values of Gogoni forest reserve and Gazi mangrove forests ecosystem
- iii. To contribute to the improvement of the livelihoods of the people living adjacent to these forest ecosystems
- iv. 4 To promote research, monitoring and education for better understanding of the ecosystem attributes and values

## **1.6 Planning approach**

The development of this plan adopted KFS Participatory Forest Management plan (PFMP) development process (Table 1). It was therefore highly interactive and participatory as well as incorporating and building on ideas from several previous studies and conservation initiatives undertaken in the area. Several meetings were held with the relevant stakeholders (Appendix 1- 6 : list of meeting organized during the preparation of Gogoni-Gazi PFM plan). These included government institutions, the communities around Gogoni and Gazi area, NGOs, the private sector, and donor community among others. A task force team was formed to spearhead the process. Thematic areas were identified and working groups formed to develop position papers for each identified theme. Discussion workshops took place involving various interest groups. The Draft management plan was presented to the stakeholders for ratification before the final approval by KFS.

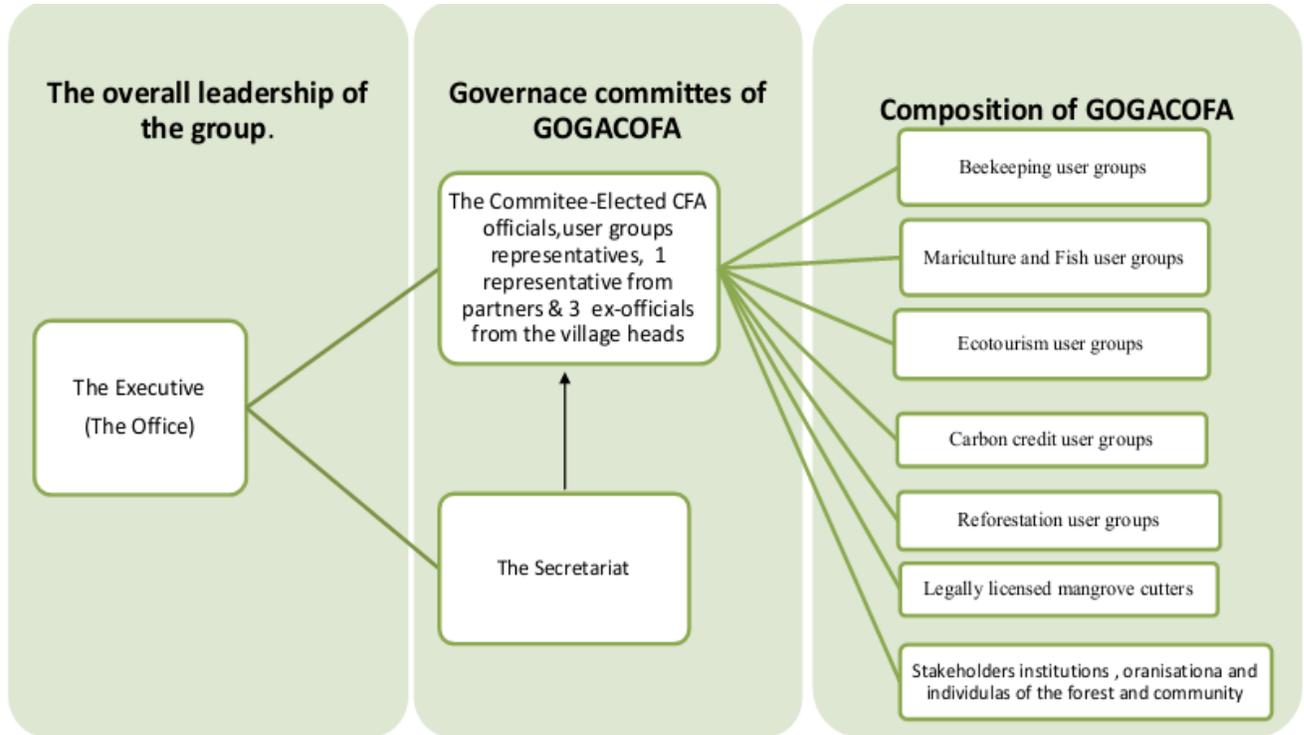
**Table 1: Summary of planning mechanisms used in building a participatory mechanism into the Gogoni – Gazi Forest Management Plan**

Mechanism	Functions and membership
Core planning team	<ul style="list-style-type: none"> <li>• Providing overall guidance and oversight to the planning process</li> <li>• Members included KWS, KFS, KMFRI, GOGACOFA, WWF, Base titanium</li> <li>• The team met at intervals throughout the process and also kept in frequent contacts through emails and phone communications</li> </ul>
Stakeholder workshops	<ul style="list-style-type: none"> <li>• Stakeholder workshops were held throughout the process and culminated in the recommendations agreement on the format to be adopted in the preparation of the management plan</li> <li>• During the workshops stakeholders identified the key problems and opportunities that the plan needed to address to enhance the management of the Gogoni – Gazi Ecosystem</li> <li>• Stakeholder presentation workshops were held at the end of the plan development process to enable stakeholders to review, provide comments and suggestions and endorse the final contents of the draft management plan</li> </ul>
Working groups	<ul style="list-style-type: none"> <li>• Working groups were important in the provision of information on the current status of different management programmes and their desired future conditions.</li> </ul>

### 1.7 Implementation of the plan

The benefits of conservation planning management for the ecosystem can only be realized with the implementation of the proposed programmes and activities. To ensure effective implementation, a joint management team comprising of KFS, Gogoni-Gazi CFA in partnership with government institutions (namely, KMFRI, Fisheries Department and KEFRI) NGOs such as (WWF, Rafiki Kenya, etc), and the Private Sector (including Base Titanium, Asilia Water bottling KISCO Companies etc.) will be formed. The joint management team will co-opt representative of other interested parties as need arises.

This team will take a lead role in mobilizing resources and other stakeholders to implement the plan through annual work plans. Plan implementation effectiveness shall be evaluated at timeframes to be determined by the experiences of stakeholders or in the light of new data and information obtained from research in line with adaptive management principles.



**Fig. 1: Governance structure of the CFA**

- **The office-** is comprised of five (5) democratically elected officials, here referred as executive mandated to deliver governance and administration duties to the association for a minimum of one term (2years) and a maximum of two terms (4years). The office is led by the chairperson of the CFA.
- The **Committee-** is the highest decision making organ of the association. It consists of the five officials of the CFA, one representative from the community user group, one representative from partner institutions, 3 ex-official members nominated during the AGM who include a representative from the KFS and the two village heads.
- **The Secretariat-** appointed people to run the office affairs.

### 1.8 Plan period

The plan is intended to guide and coordinate conservation management actions targeting the Gogoni-Gazi ecosystem for a period of 5 years in the period (2013-2017).

### **1.8.1 Funding for the management plan Implementation**

The major sources of income to implement the plan are expected from community contributions, ecotourism activities, PES projects, KFS contribution, donor funding and philanthropists. Currently funding for conservation and management of the Gogoni- Gazi forests ecosystems is derived from the following sources:

- Government budgetary allocation through Kenya Forest Service, Kenya Marine and Fisheries Research Institute, and Kenya Forestry Research Institute
- Mangrove Eco-tourism at Gazi
- NGOs - WWF
- Donor projects – Swahili Seas, UNDP-GEF/SGP
- Base Titanium Company Ltd

These efforts should however be enhanced to fund the implementation of this management plan. A relatively new strategy for funding conservation involves PES especially carbon trading. In addition, neighboring communities to the ecosystem area have the potential to contribute to non-monetary requirements in the implementation of activities for the management plan.

### **1.9 Key thematic areas of focus**

To achieve the above objectives, the following key thematic areas were identified

- Conservation of biodiversity programme
- Promotion of sustainable use and livelihood initiatives
- Promotion of research and education for effective management
- Protection and control of illegal activities
- Development of conservation supportive infrastructure

## CHAPTER II

### 2.0 Description and value of the ecosystem

#### 2.1 History of the forest reserves

The history of all mangroves in Kenya is related and dates back over several centuries. Mangrove forests have been in exploitation since the 9<sup>th</sup> century for poles that were exported to Arabia and other countries in the Persian Gulf. These forests were considered as ownerless by the coastal people and thus free for the taking. At the beginning of the nineteenth century, the colonial government declared all mangrove swamps as crown land so that they could be well managed and profitable. However local people were allowed to collect firewood from the forests and carry out other activities that did not threaten the survival of the forest. In 1907, some private firms were granted concessions but had to follow approved forest practices of exploitation. Later the concessions were replaced by regulations by the Forest Department. In the 1950s the Forest Department developed a general conservation plan. Exploitation of mangroves continued through the 1970s albeit with controversies until 1978 when the Forest Department banned the export of mangroves. This caused disaffection and a review was made leading to lifting of the ban on exploitation for local utilization in 1981. Overexploitation of forests necessitated a countrywide ban on forests exploitation in 1997. This almost crippled the socio-cultural and economic activities of Kenya's coastal communities, who rely on mangrove wood for construction of houses and their fishing boats. Review was done and the coastal people were allowed to exploit the mangroves sustainably through issuance of licenses to the cutters by KFS. At present, one person is licensed to harvest the Gazi mangrove forest through a license for Buda KFS office.

Gogoni Forest Reserve is a remnant of the East African coastal forests. Little is documented about this forest. However the forest has a long history of rich biodiversity. Originally it was continuous with the Shimba Hills forest ecosystem and animals would move freely. Adjacent communities would hunt these animals for food. At the same time they would use the forest for removal of firewood and building materials. Subsistence farming was taking place around the forest and thus human wildlife conflict was common. In the 1970s, the forest department initiated control measures on patrol and regulated the removal of wood products.

#### 2.2 Legal and administrative status

The Gogoni –Gazi forest ecosystem consist of two forest types – Gogoni forest reserve (**824.3 ha**-(Fig 1) and Gazi mangrove forest (**615 ha**-Fig 2), both of which are gazetted forests. Gogoni forest reserve and Gazi mangrove forest together with other mangrove forests of Kenya were gazetted as forests under proclamation number 44 of 1932. These forests are managed by Forester Buda and are under the KFS's Kwale County Coordinator's Office within the Coast conservancy.

### 2.3 Geographical location

The Gogoni–Gazi forests ecosystem is located in Msambweni district of Kwale County in the southern part of Kwale County in Msambweni District (04°286 and 04°289 S, and 39°466 and 39°467 E). Gogoni forest is part of Buda Forest Complex; that also include Buda, Mrima, Marenje, Gonja and Dzombo Forest Reserves. Gazi mangroves are classified under Diani-Chale marine protected area (MPA). The two forests are located about 55 km from Mombasa city off the Mombasa-Lunga-Lunga road. Gazi mangrove forest is to the South of this highway though the forest crosses the road, extending a small section at R. Kidogoweni Bridge. Several murrum roads lead to the forest less than a kilometre at Gazi and Makongeni villages. Gogoni forest Reserve is to the North West direction of the highway also less than a kilometre off the road. Several motorable tracks lead to the forest at Gazi and also through Magaoni and Fioni villages. The newly constructed tarmac road by base titanium can also be used to access the forest as it is close to the forest with some murrum roads branching from it. The two forests forming this ecosystem are heterogeneous in that Gogoni is a terrestrial forest while the Gazi Bay is a mangrove forest. As a result, the biophysical approach will cover them separately. The altitude ranges from about 10 to 70m and the area falls within the 1300 to 1400mm rainfall per year zone. The NW part of the forest reserve lies on Pliocene Magarini sands and the SE part on Mkurumuji river valleys and is generally low lying with seasonal swamps and some grassy glades.

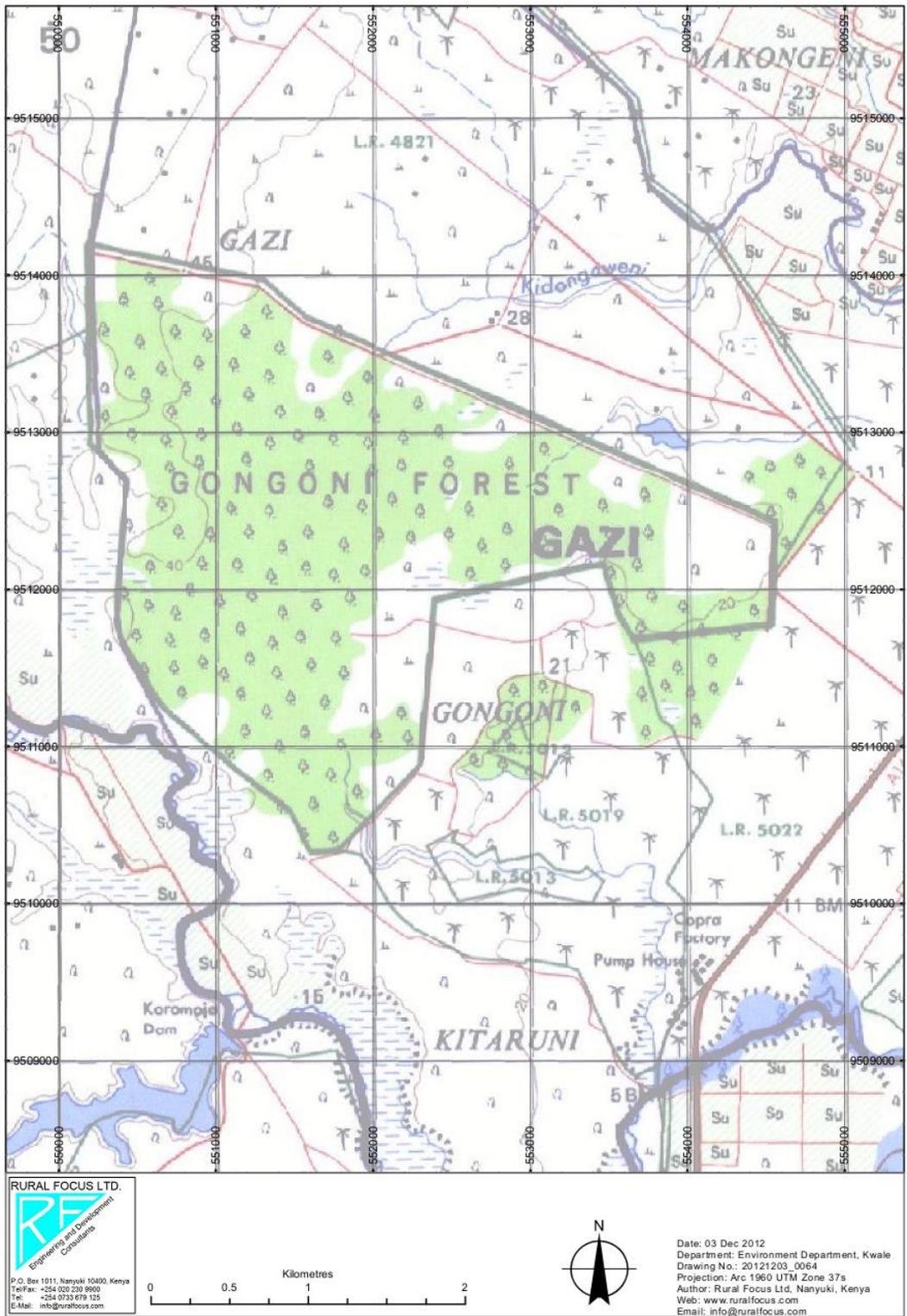


Fig. 2: Map of Gogoni Forest Reserve

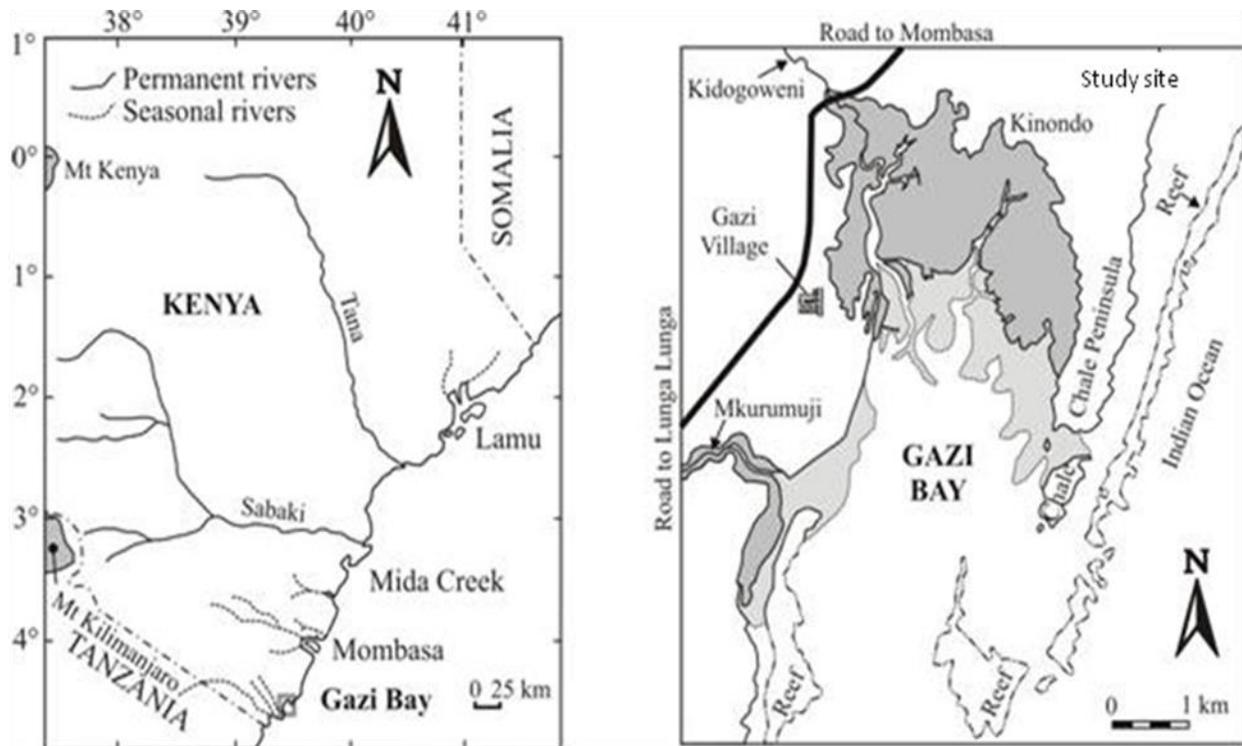


Fig. 3: Map of Kenya showing location of Gazi mangrove forest

## 2.4 Biophysical characteristics

### (a) Gogoni forest reserve

Gogoni forest is a moist semi-deciduous forest rising to an altitude of 40 m above the sea level and covering an estimated area of **824.3 ha**. The coastal plateau in which the Gogoni forest is situated has a fairly flat terrain. The climate of Gogoni forest, like in most parts of the Kenya coast is highly influenced by the Indian Ocean and the Monsoon winds. Mean annual rainfall in Gogoni ranges from 900 -1300 mm per year. Rainfall occurs during two distinct periods; the long rains between April and June, and the short rains usually between October and December. Mean minimum and maximum temperatures range between 24°C and 30°C. The soils of Gogoni forest are typical of coastal forests of Kenya, characterized by poor soils (Burgess and Clark 2000). However, these soils are classified as well-drained sandy type, owing to it once being an extension of the Buda forest, which is classified as wetter coastal forests (Githitho 2004). The forest is dominated by two types of vegetation namely: Open wooded grassland dotted with mostly Palm (*Hyphaene sp.*) vegetation and closed forest canopy consisting of *Cynometra-Julbernadia* associations (Njihia *et al.*, 2012). The forest is a mosaic of tree stands with evidence of selective logging. The reserve is listed as a Key Biodiversity Area (KBA) that is important for the conservation of biodiversity in Africa. The forest has a high species richness and diversity with close to 523 plant species consisting of cryptogams and vascular plants. The soils of Gogoni forest are generally of low nutrient status since key soil nutrients that determine soil fertility

(NPK), C and organic matter are in low quantities (Njihia *et al.*, 2012). Thirteen invasive species have been identified in Gogoni Forest Reserve (Odeny *et al.* 2009 (Njihia *et al.*, 2012). Majority of these invasive species have been domesticated and have a lot of value in food production. Among the invasive species are, *Achyranthes apera*, *Agave sisalana*, *Azadirachta indica*, *Cocos nucifera*, *Ricinus communis*, etc.

### **(b) Gazi mangrove forest (615 ha)**

The climate in Gazi Bay is typical of that of the Kenyan coast and is principally influenced by monsoon winds. The topographic gradient of the Gazi mangroves is fairly small, particularly to the north of the bay, resulting in a wide intertidal area typical for basin mangrove settings. As a result the mangrove forests experience high tidal flushing rates, albeit with short residence times (3–4 h), which are a function of wide shallow entrance, lack of topographic controls and the orientation of the bay with respect to dominant water circulation patterns. Total annual precipitation varies between 1000 mm and 1600 mm with a bimodal pattern of distribution. The long rains fall from April to August under the influence of the southeast monsoon winds, while the short rains fall between October and November under the influence of the northeast monsoon winds. It is normally hot and humid with an average annual air temperature of about 28°C with little seasonal variation. Air temperature in Gazi Bay varies between 24°C and 39°C. Relative humidity is about 95% due to the close proximity to the sea. The mangrove forest is not continuously under the direct influence of freshwater because the two rivers, Kidogoweni in the north and Mkurumji in the south draining into the bay are seasonal and dependent on the amount of rainfall inland. Groundwater seepage is also restricted to a few points. Sediment characteristics vary with respect to topographic gradient. The landward sites are characterized by hyper saline compact sediment substrates, whereas the seafront sediments consist mainly of loose sandy substratum owing to movement of sand by waves. Most sites in the intermediate regions are composed of deep muddy substrates rich in organic matter. However, in most mangrove sediments, essential nutrients like nitrates and phosphates are limiting.

Gazi Bay mangrove community closely resembles other mangrove forests of Kenya in terms of species distribution and structure. There are a total of nine mangrove species in Gazi Bay. The dominant species are *Rhizophora mucronata* (Lam), *Ceriops tagal* (Perr.) C.B.Robinson, *Avicennia marina* (Forsk.) Vierh, *Bruguiera gymnorrhiza* (Lam), *Sonneratia alba* (Sm); which contributes more than 80% of the Gazi mangrove formation. Other species are *Xylocarpus granatum* (Koen), *Xylocarpus mollucensis* (Koen), *Heritiera littoralis* (Dryand ex H.Ait) and *Lumnitzera racemosa* Willd (Kairo *et al.*, 2008).

Like in most parts of Kenya, mangrove in Gazi display horizontal distribution of species. *S.alba* forms the outermost zone towards the open water followed by pure or mixed stands of *R .mucronata* or mixed stands of *R .mucronata* and *B. gymnorrhiza* and in turn these stands are followed by pure stands of *C.tagal* and *A. marina*. Along the creeks, *A. marina* usually replaces

*S. alba* and these *A. marina* trees are much taller (12-18m) than those on the elevated areas (2-3m, shrub type).

## **2.5 Ecosystem value of Gogoni Forest**

Gogoni forest reserve is part of the coastal Forests in Kenya, a transboundary forest in the East Africa Coastal Forest Ecoregion that stretch from northern part of Mozambique to the Southern part of Somalia. The ecoregion is ranked as among the top 200 out of the worlds 850 ecoregion that are most important for biodiversity conservation (Myers *et al.*, 2000). The forest is important for the preservation of biodiversity and tourism industry, support endemic species, including globally threatened fauna and flora. Almost 50% of Kenya's threatened woody plant species occur in Coastal forests (Wass, 1995). The number of globally threatened plants and animals in Kenya's coastal forests is estimated to exceed 105 (CEPF, 2003). Most diverse families in Gogoni forest reserve are *Rubiaceae*, *Euphobiceae*, *Papilionaceae*, *Moraceae*, *Anonaceae* and *Caesalpinaceae*.

An avian survey which was conducted from November 2007 to February 2008 recorded a total of bird 140 species belonging to 50 families. Out of these, 57 species are categorized as forest dependent birds (i.e. bird species characteristic of the forest interior and birds that are regularly found on forest edge, gaps and strips) while the rest were birds that are less dependent on forests and include forest visitors, wetland dependent species and species characteristic of savanna or woodland habitats. The five most dominant bird families in Gogoni are Accipitridae (Eagles, Hawks, e.t.c), Turdidae (Thrushes and relatives), Capitonidae (Barbets and Tinkerbirds, ploceidae (Weavers and relatives) and Pycnonotidae (Bulbuls).

Two IUCN red list bird species, Fischer's Turaco *Turaco* and Southern-banded Snake Eagle *Circaetus fasciolatus* have been recorded in Gogoni. Both of these birds are classified as nearly threatened. Previously, the globally threatened *Zoothera Guttata* had been recorded in Gogoni during its non-breeding season, between April and August. On the basis of the presence of the globally threatened and East Africa Coast Biome species, and owing to the comparatively large area of Gogoni forest, it should qualify for inclusion as an Important Bird Area (IBA).

Gogoni Forest Reserve is rich in medicinal plants and thus used by the adjacent communities for herbs collection. At the same time, locals use the forest for firewood collection.

## **2.6 Ecosystem value of Gazi Bay mangrove forests**

Mangroves are amongst the most valuable of tropical habitats, providing goods and services that are of economic, ecological and environmental value to the people. Mangroves provide habitat for fish and other wildlife (FAO, 1994; Saenger, 2002). Nearly 75% of commercial fish species in the tropics spend part of their lifecycle in mangroves environment (Mumby *et al.*, 2008). Mangroves are also important in climate regulation, nutrient cycling, habitat provisioning, shoreline protection and the provision of building materials and fuel wood. In Kenya, it has been estimated that over 70% of the wood requirement along the coast is met by

mangroves (Wass, 1995). This provision of goods and services can be priced using standard market-based approaches. However the value of these services is usually small compared with the regulating, supporting and cultural services that are provided by healthy mangroves. Most of the mangroves in Kenya are in degraded state, mainly because of harvesting of wood productions and conversion pressure. Trial planting has been initiated along the coast with mixed successes. In Gazi pilot area, the value of a 12 years mangrove plantation has been estimated at US\$3000/ha/yr. More than 50% of this value has been associated with the protective functions of mangroves; with the support to fishery accounting for a net income of US\$113.09 ha<sup>-1</sup> yr<sup>-1</sup>, ecotourism (US\$6500 ha<sup>-1</sup> yr<sup>-1</sup>), education and awareness (US\$770.23 ha<sup>-1</sup> yr<sup>-1</sup>). With the emerging carbon market, the value of mangroves to climate change mitigation will increase. For example, Mikoko Pamoja is proposing to sequester 3000 t CO<sub>2</sub> e/yr from the initial 117ha of mangrove forests of Gazi. Sale of the carbon will generate approximately US\$15,000 yr<sup>-1</sup> (Kairo *et al.*, 2009).

## **2.7 Socio-economic and livelihood activities in the pilot area**

Gogoni-Gazi Ecosystem is surrounded by seven villages namely, Gazi, Makongeni, Magaoni, Chale, Fioni, Vumbu, and Gogoni. These villages have an estimated resident population of 23,260 according to the 2009 Kenya population census. The villages are predominantly Muslim, as are most surrounding villages, although there are also Christians and animists living harmoniously in the area. The main ethnic groups are the Mijikenda. The area has a long history of peaceful integration and of welcoming visitors. The economy of the local communities is mainly fishing and agriculture. Nevertheless, tourism, livestock keeping, beekeeping, cooperatives and small scale businesses contribute significantly to the economy of the local communities. However, many families live outside the formal economy or on poor wages. The area has some of the lowest educational attainments in Kenya. About 25% of households receive remittances from next of kin outside the area. In Gazi village close to one third of people are recent immigrants, mainly from Pemba Island in the United Republic of Tanzania, who have come mostly to exploit the reef based fisheries. Women are predominantly engaged in small scale businesses, mainly on foodstuffs and making Makuti (thatch materials from palm leaves). Men are involved in diverse activities such as fishing, small scale businesses, small scale agriculture, mangrove cutting, casual labor and a few in salaried employments. The relatively good infrastructure, including the proximity of the main Mombasa-Lunga Lunga road, mains electricity in Gazi and Makongeni villages' good provision of potable water, and the fertile soils and favorable climate help most people to avoid extreme poverty (people do not suffer from starvation in the area). Recent development activities in the area, such as the mineral sands mining by Base Titanium LTD, establishment of sugarcane plantation by Kwale International Sugar Company Limited (KISCOL) and packaging of mineral water by Asili Enterprises Ltd is expected to significantly improve the livelihood activities through employment creation and the provision of social amenities.



**Bee keeping in Gazi mangrove forest**



**Tourist visit Gazi women boardwalk**

## **2.8 Land tenure and land use**

Gazi mangrove forest and Gogoni forest reserve are gazetted forests reserves located in Kwale County managed by the Forester Buda station and under the jurisdiction of KFS County coordinators office at Kwale town. These two forests are surrounded by seven administrative villages. Gazi, Makongeni and Chale villages neighbor the Gazi mangrove forest; whereas, Fioni, Magaoni, Vumbu and Gogoni villages neighbor Gogoni forest reserve. Administratively, Gazi, Fioni, Vumbu, Magaoni and Gogoni are in Gazi Sub location while Makongeni and Chale are located in Makongeni sub location. The two sub locations are in Kinondo location. Gazi village started as a Swahili settlement with historic connections to the Mazrui family. With the ongoing process of land adjudication, the residents have been given allotment letters by the government. Recently, Ramisi settlement scheme was created and the land has been surveyed. Settlement around Gogoni Forest Reserve is under Ramisi phase I while that surrounding Gazi mangrove forest fall under either Ramisi phase II or phase III. Over 680 allotment letters have been issued. There are plans to formalize the acquisition of the land through issuance of title deeds.

## **2.9 Threats to ecosystems and land use**

Major threats facing Gogoni forest reserve are, fuelwood extraction, fire outbreaks, and illegal logging. Trends in climate change have exacerbated the problems with projections revealing more worrying situations as population increases. Loss of this forest would mean extinction of already threatened species and loss of livelihood activities to the adjacent communities dependent on the forest.



**Threat of fire in forest replanted and forest adjacent areas**



**Mangrove loss through sedimentation**

Like most mangrove areas in Kenya, mangroves of Gazi are not pristine. The forest has been degraded principally through human induced stresses, ranging from over-cutting of mangrove wood products, poor land use on the hinterland that has brought in sediments, to encroachment of mangrove areas by private developers (Bosire *et al.*, 2003; Dahdouh-Guebas *et al.*, 2004). Natural processes such as sedimentation, which may also be accelerated by human activities, have heavily impacted on the *Sonneratia* mangroves fringing the coastline in the southern part of the bay leading to the dieback of both natural and replanted forests. Losses of mangroves have affected local and national economies as witnessed by shortage of firewood and building poles, reduction in fishery, and increased shoreline erosion (Kairo, 2001). In order to combat over-exploitation and degradation of mangrove forests, a number of initiatives have been fostered. Notable among these, include reforestation of degraded areas, education and awareness on the true value of mangroves, as well as introduction of livelihood project in mangrove areas such as ecotourism, integrated fish farming, and apiculture (Kairo, 1995). In order to benefit from the emerging carbon market, the KMFRI and other partners has initiated a carbon feasibility project whose aim is to market mangrove carbon. The project will be coordinated by the community with technical support from KMFRI, KFS, and WWF among other partners. A participatory forest management plan is therefore required so as to accommodate different users of mangrove areas with minimal conflicts.



**Agroforestry practise in intervention zones**



**Community plant mangroves in degraded sites**

## **2.10 Constraints to conservation**

The major conservation challenge facing Gogoni forest and its biodiversity is the constant drawing of forest resources by the local inhabitants. The forest faces threats emanating from selective logging targeting mature timber trees. Other forms of disturbance that have been noted include tree debarking (for rope making and local use as shampoo for bathing) and forest fires. Similarly, conservation in Gazi mangrove forest as well as in other mangrove areas along the Kenyan coast have been hampered by inadequate knowledge; of silviculture of mangroves species, of multiple use potentials of resources, and of the techniques of natural regeneration and reforestation (Kairo *et al.*, 2001). Gazi and Gogoni forests have experienced numerous challenges related to overharvesting especially on mangrove since the ban was lifted. Population increase in the respective villages surrounding the forest has put more pressure onto the forest as the need for resources and income increases. Illegal cutting as well as the harvesting of the mangrove poles by the licensed individual in the forest is at times a constraint to conservation.

## **CHAPTER III**

### **3.0 Planning considerations**

### **3.1 Policies and Legal Framework**

#### **3.1.1 Introduction**

Like most developing countries, Kenya is a resource based economy. More than 80% of the country area is classified as arid and semi-arid (ASALS) where the population density is low and the livelihood are mainly based on livestock. The vegetation of ASAL region is sparse scrub forest with low biomass. Most of the national population lives in the remaining 20% where rainfall is high and soils are suitable for agriculture. This is also the area where most canopy forests are found. Only about 12% of the land area in Kenya is climatically suited for close canopy forest; with current closed forest occupying less than 2% of the land due to historical land conversion for agriculture. Much of this forest is protected either as Forest Reserve managed by Kenya Forest Service, as National Parks managed by Kenya Wildlife Service or as trust land managed by County Governments.

At the Kenyan coast, there are three major forest types. First, we have the montane forests found in the eastern arc mountains stretching from Udzungwa Mountains in Tanzania to Taita hills in Kenya. Secondly, are the terrestrial coastal forests that occur as mosaic relics of once continuous forests from central Mozambique to southern part of Somalia. Lastly, are the mangroves forests that border the land and the sea, and stretching from Vanga at the Tanzanian border to Kiunga at the Somalia border. Overriding characteristics of these forests is their uniqueness in terms of biodiversity richness, restricted distribution, as well as high subsistence value to the adjacent communities. The current participatory forest management plan aims to sustainably manage the Gazi-Gogoni forest ecosystems through joint partnership with the KFS and other partners. Communities living adjacent to the ecosystems will be sensitized on their roles and responsibilities in participatory natural resource management within the context of this management plan.

#### **3.1.2 Forest policy and legislation**

The draft Forest Policy, resulting from reviews and revision of previous forest policy over the years, laid the foundation for the preparation and adoption of the current forest legislation, the Forest Act No.7 of 2005. The revised policy is intended to integrate the forestry sector with other sectors, as well as address new concerns and realities in forest and natural resource management (NRM).

The objectives of the new forest policy are to;

- Contribute to poverty reduction through improved land use, water, soil and conservation of biological diversity

- Promote participation of private sector, NGOs and communities in sustainable forestry
- Promote farm forestry & dry land forestry
- Promote forest extension, forestry research, training and education to ensure a vibrant forest sector in Kenya

The Forest Act (2005) strongly supports the participation of stakeholders in the conservation and management of the forest resources through collaborative management. The recognition of the communities adjacent to forests as key stakeholders and users of natural resources is considered vital if successful management is to be attained. It is on this basis that communities living adjacent to the Gogoni Forest Reserve and Gazi mangrove forest wish to enter into management agreements with the Kenya Forest Service in order to sustainably manage the Gazi-Gogoni forest ecosystems. The landscape comprises both mangroves and terrestrial coastal forests. The management plan will give the communities tenure ship rights to utilize the forest in beekeeping, ecotourism, carbon trade, aquaculture among others.

### **3.1.3 The wildlife Policy and Legislation**

Under Sessional Paper No. 3 of 1975, the Wildlife Policy governs conservation of wildlife within and outside protected areas in Kenya. It also supports community initiatives towards conservation and plays an advisory role to the local communities by providing regulations that enable the generation of optimum returns from wildlife. The policy however, does not allow consumptive utilization of wildlife resources within the parks, only non-consumptive use such as recreation and tourism.

Wildlife (Conservation and Management) Act Cap. 376 was enacted in 1977 and revised in 1985. The Act provides for the protection, management and conservation of wildlife as a vital national and global heritage, which also makes a great contribution to sustainable development. This is achieved through the maintenance of a system of National Parks, National Reserves and sanctuaries. The Act specifically provides for the protection and regulation of protected animals, game animals and game birds as defined in three schedules.

The Kenya Wildlife Service was established as the lead government agency in implementing the Act. Under section 3A, the functions of KWS shall be among others to prepare and implement management plans for National Parks and Reserves and the display of fauna and flora in their natural state. The Act authorizes KWS to enter into agreements with other competent authorities for the protection of wildlife and their habitats. The Act and the corresponding policy are now under review, with a view to bringing them in line with the latest thinking and approaches to conservation. They will also provide for greater community/ stakeholder participation in the planning and management of these resources countrywide. This should in particular enhance the conservation of resources within and outside protected areas of the Gogoni Forest Reserve and Gazi mangrove forest.

Some of the animals that have been identified in Gogoni forest and occasionally stray into people's farm in the neighborhood include: Buffaloes, wild pigs, antelopes, baboons among

others. This often creates human-wildlife conflicts as crops are damaged while at the same time the life of neighboring community is put to risk. This management plan will ensure that KWS partners with the CFA to ensure that the life of animals and people is protected through regular surveillance and tracking of the stray animals and redirecting them into their habitats.

### **3.1.4 Environmental Management Policy and Legislation**

The Environmental Management and Co-ordination Act (EMCA), 1999 provides a framework for environmental and social development. It also harmonizes the various sector specific legislation impacting on environment and the management of natural resources.

The National Environment Policy (draft 2012) has the following objectives:

- a) Provide a framework for an integrated approach to planning and sustainable management of Kenya's environment and its natural resources.
- b) Strengthen the legal and institutional framework for effective coordination and management of the environment and natural resources.
- c) Ensure sustainable management of the environment and natural resources, such as unique terrestrial and aquatic ecosystems, for national economic growth and improved people's livelihood and well-being.
- d) Promote and support the use of innovative environmental management tools – such as incentives, disincentives, total economic valuation, indicators of sustainable development, SEA, EIA, Environmental Audit, and payment of environmental services – in environmental management.
- e) Promote and enhance cooperation, collaboration, synergy, partnerships and participation in the protection, conservation, better management of the environment by all the stakeholders.
- f) Ensure inclusion of cross-cutting issues – such as poverty reduction, gender, disability and HIV/AIDS – in national and sectoral planning processes.

This management plan will be geared to uphold and ensure the achievements of these objectives.

### **3.1.5 Trust Land Act**

The Trust Land Act, Cap. 288 of 1962 (revised 1970), sets out regulations for all land that is trust land (land held by local authorities on behalf of the people resident in that area). The Act sets rules for setting a part of land for utilization of timber and other forest products and for other forms of utilization. Section 65 of the Act deals with forests and forest produce. This section stipulates that the Minister for Local Government may, with the approval of the council concerned, make rules for the protection of trees and forest produce on land not within a forest area within the meaning of the Forest Act and for regulating the felling or removal of

such trees or forest produce. These forests being gazetted forests will be mainly for conservation and sustainable utilization for community development.

### **3.1.6 Water Policy and Legislation**

The management of water resources in Kenya is managed both by National Water Policy (1999) and Water Act Cap. 372. (2003). The policy places emphasis on the value of water towards the attainment of national development aspirations and millennium development goals. The country's vision is to achieve sustainable management and the development of the water resources as a basis for poverty alleviation and promotion of social economic development. The policy direction includes;

- Treat water for social-economic good
- Preservation, conservation and protection of the available water resources
- Sustainable, rational and economic allocation of water resources
- Supplying adequate amount of water meeting acceptable standards for various needs
- Ensuring safe waste disposal for environmental processes
- Developing sound and sustainable financial system for effective and efficient, WRMA, W/S and water borne sewage collection, treatment and disposal

The legal framework under the Water Act 2002 provides for regulation of river line forests, catchment forests, and protection of wells and springs in the forest and supports the user pays principle (for water benefits) and therefore opens opportunities for catchment forest management and conservation by forest communities, and revenue generation through payments for ecosystem services. The planned mining activity by Base Titanium Ltd, farming activity by KISCOL and water purification and packaging by Asilia Company will have a significant impact on the ground and surface water as dams will be constructed as well as digging the boreholes in Gogoni forest. With the emerging new trends on Payments for Ecosystem Services (PES) the CFA can partner with these private developers to generate an income that will improve the community's livelihoods. At the same time, the CFA can enter into an agreement to ensure availability of reliable and clean drinking water.

### **3.1.7 Agriculture/National Food Policy and Legislation**

The Strategy for Revitalizing Agriculture (SRA; 2004-2014) presents strategic interventions which will transform agriculture into a competitive and commercially oriented enterprise. The Ministry of Agriculture's Strategic Plan (2006-2010) is an implementation tool for the Strategy for Revitalizing Agriculture. The Agriculture Act, Cap 318 relevance for forests is that it regulates destruction of vegetation for agricultural expansion that is one of the main drivers of forest degradation and destruction, and therefore can complement the forests act. This management plan takes into cognizance the need for focused farming by the local communities and supports practices such as agro forestry in order to reduce pressure on forests products and at the same time ensure food security.

### **3.1.8 National Energy Policy**

The Energy Act (2006) provides the framework on energy management in Kenya and hopes to ensure that the relevant ministries, NGOs and other organizations address environmental problems associated with the supply and use of energy. Part V of the Act deals with renewable energy, energy efficiency and conservation. Biomass is the largest form of primary energy consumed in Kenya, accounting for 68% of the total national primary energy supply. The principal drivers of biomass energy demand are population growth, lack of access to biomass energy substitutes and the growing incidence of poverty among the Kenyans. The biomass energy supply and demand imbalance is exerting considerable pressure on the remaining forest and vegetation stocks, thereby accelerating the processes of land degradation. In addition, the production of biomass energy poses a threat to competing land use systems such as agriculture, forestry and human settlements among others. The CFA will use the goodwill of the private companies coming into the area such as Base Titanium Ltd, KISCOL and Asilia to enter into an agreement on electrification as part of the fridge benefits that trickles to the community. This will have far reaching implications on conservation as the overdependence on wood fuel from the forest will be reduced. These private companies can also support the development of other renewable forms of energy. In the case of Gogoni Forest Reserve and Gazi mangrove forest, it would provide for the promotion, development and use of renewable energy technologies, including but not limited to biomass, bio-diesel, bio ethanol, charcoal, fuel wood, solar, wind, hydropower, biogas and organic wastes.

### **3.1.9 Grass Fire Act**

The grass fire Act, Cap 327 provides for protection of vegetation by regulating burning of bushes, shrubs, grass, crops and stubble through issuance of permits to carry out planned burning processes within protected areas, trust land and in private lands. Burning as a natural resource conservation measure helps in controlling pests and invasive plant species. Incidences of fire spread into Gogoni forest reserve have been witnessed in the past as the neighboring community use the slash and burn method for their farming endeavors. However, this has not been a problem to the mangrove forest of Gazi due to the intertidal location. The CFA will need to include the tracks around Gogoni forest in the management programs to act as buffer zones against forest fires. Regular surveillance of the forest will be necessary especially during the dry season when the forests are prone to fire incidences.

### **3.1.10 The National Museums and Heritage Act**

The main objectives of the National Museums and Heritage Act, Cap 215 that have implications on this management plan include:

- a) Promote research and dissemination of knowledge in all fields of scientific, cultural, technological and human interest;

- b) Identify, protect, conserve and transmit the cultural and natural heritage of Kenya; and
- c) Promote cultural resources in the context of social and economic development. It has implications for coastal Kaya forests and mangroves whose importance is captured by this management plan.

### **3.1.11 The Environmental Management and Co-ordination Act (EMCA), 1999**

This act provides a framework for environmental and social development. It also harmonizes the various sector specific legislations impacting on environment and the management of natural resources.

### **3.1.12 The Fisheries Act**

The Fisheries act, Cap 378, regulates, among others, the amount, size, age and species that could be caught, as well as management of landing areas. The Act has implications for coastal mangrove forests, which act as breeding and feeding ground for a number of marine fish species.

## **3.2 Links to other Planning Processes**

### **3.2.1 Links to vision 2030**

Vision 2030 is Kenya's development blueprint aiming at making the country a newly industrialized middle income nation, providing high quality of life for all citizens. The vision is based on three pillars i.e. the economic, social and political pillars. The economic pillar aims at providing prosperity for all Kenyans through an Economic Development Programme focused on achieving an average Gross Domestic Product (GDP) growth rate of 10% per annum over the next 25 years. Environmental management is captured under social pillar that seeks to build a just and cohesive society with social equity in a clean and secure environment. This pillar is to be driven by the following sectors:

- Education and training: providing a globally competitive quality education, training and research for development.
- Health: providing an efficient and high quality health care system to global standards.
- Water and Sanitation: ensuring that improved water and sanitation are available and accessible to all through conservation of water sources and starting ways of harvesting and using rain and underground water
- The Environment: having Kenya as a nation, living in a clean, secure and sustainable environment.
- Housing and Urbanization: having an adequately and decent housed nation in a sustainable environment.

- Gender, Youth and Vulnerable Group: ensuring gender equity, improved livelihoods for vulnerable groups and a responsible, competitive and prosperous youth.
- Equity and poverty elimination: reducing the number of people living in poverty to a tiny proportion of the local population.
- Science, Technology and Innovation (STI): creation of international competitiveness through more efficient productivity at the firm and household level.

Forestry development cuts across components of the social pillar and is likely to get central position in driving the country to achieve the vision. Issues of environmental conservation, clean water and sanitation, research and poverty reduction addressed by this management plan are therefore in line with the country's vision 2030.

### **3.2.2 Links to the Poverty Reduction Strategy Process**

The current Management Plan directly addresses poverty alleviation through a number of its components; community mobilization, awareness creation and participation in the management of the ecosystem, improvement on their livelihood by improving food security and income levels. This will be achieved by promoting more effective use of natural resources and supporting the development of alternative livelihood and renewable energy sources. Extension services in agriculture could further ease the problem of poaching as long as the issue of human-wildlife conflicts is effectively mitigated. The envisaged carbon offset project in this management plan and the potential for a similar one in Gogoni in future will reduce the pressure on the forest resources while at the same time providing a livelihood option for the communities.

### **3.2.3 Links to County Planning**

The overall responsibility for County planning lies with the County Development Committees (CDCs), comprised of all the Government Departments, NGOs, political leaders and parastatal agencies working in each of the Counties. The relevant departments, agencies, communities and other stakeholders were contacted during the development of this plan and therefore understand their roles in its implementation.

The former Kwale District Development Plan (2008-2012) recognized the role of the mangroves and terrestrial coastal forests in socio-economic development and conservation of natural resources of the area. This mandate will be pursued by the incoming Kwale County Development plan. Analysis of environmental issues identifies the following measures to conserve and sustainably manage natural resources in Kwale County:

- Gazettement of forests in the county
- Agro-forestry
- Promotion of forest conservation activities

- Establishment of tree nurseries
- Development of a sustainable community based environmental management strategies such as social forestry
- Use of bio-degradable packaging as opposed to plastic bags to address solid waste pollution
- Establishment of environmental clubs in learning institutions
- Conducting Environmental Impact Assessments (EIAs) and Environmental Audits (EAs) for development projects

It is expected that this management plan for Gazi- Gogoni will contribute to the realization of County Development goals.

### **3.2.4 Links to Millennium Development Goals (MDGs)**

The Millennium Development Goals (MDG's) are aimed at reducing global development challenges. These were established in the year 2000 by 147 heads of states & governments and 189 UN member states. The first goal is to 'Eradicate extreme poverty and hunger' and its targets include reducing by half the percentage of people living in poverty. In Kenya 82% of those living under the poverty reside in the rural areas. The MDG's main objective is to improve livelihoods of women and youth in rural areas since they are largely disadvantaged and hence poor.

Goal 7 of the MDGs calls for ensuring environmental sustainability for the benefit of all. Target 9 has two components: to integrate principles of sustainable development into country policies and programmes, and to reverse the loss of environmental resources. The first component can be addressed by an intervention on root causes. For example, two broad root causes responsible for loss of environmental resources are those related to population and its over-exploitation of resources; and those related to irresponsible behavior that result in discharge of pollutants into the environment. In order to address the root causes responsible for loss of environmental resources, Target 9 must be implemented in concert to existing synergies with the other MDG Goals and Targets.

In Kenya interventions and their targets to attain sustainable development under the MDGs are organized around five thematic problem areas: developing a participatory national environment framework, fisheries and other aquatic ecosystems, forests and other terrestrial ecosystems, wildlife, and community actions in market-based development. This management plan contributes to both the first goal through promoting sustainable livelihoods and goal seven on management of natural resources of the Gogoni Forest Reserve and Gazi mangrove forest.

### **3.3 Global and Regional Perspectives**

#### **3.3.1 The Global Forest Principles**

The forest principles are a non-legally binding authoritative statement of principles for a global consensus on management, conservation and sustainable development of all types of forests in the world. The forest principles arose from the realization of the importance of forest resources and concern over the threats to these resources worldwide. The principles apply to all types of forests, natural and re-established, in all geographic regions and climate as follows:

- Encourage forestry development by promoting participation of local communities, indigenous people, industries, labor, NGOs, forest dwellers and women in the development, implementation and planning of national forest policies
- Advocate the national policies and strategies in order to provide a framework for increased efforts in management, conservation and sustainable development of forests and forests lands
- Stress that decisions on management, conservation and sustainable development should be based on a comprehensive assessment of economic and non-economic values and
- Develop policies and legislation that will ensure that unique vegetation types are conserved for cultural, spiritual, historical and religious needs as well as for biodiversity value
- Incorporate the process of Environmental Impact Assessment into national policies especially where actions are likely to have significant adverse impacts on critical resources

Kenya still has much to do in terms of involving local communities, NGOs, and other stakeholders' in the planning, development and implementation of forestry activities. Although some politicians may be aware of the forest principles because of the publicity at UNCED, this awareness needs to extend to all levels of stakeholders involved in forestry in Kenya consistent with the Forest Act No. 7 of 2005. This management plan has captured these global principles and had appraisals at the several stakeholders' workshops.

#### **3.3.2 The East African Community (EAC)**

The East African Treaty established the East African Community (EAC) and was signed in Arusha on November 30, 1999, by the three Heads of State for Kenya, Uganda and Tanzania. The treaty has been in force since July 7, 2000. Currently the number of participating states has been increased to include Rwanda and Burundi. The Treaty establishes the political, economic and legal framework for establishing and maintaining co-operation that allows for optimal utilization of scarce resources. The Treaty provides a legal and institutional framework under

which the regional management of the transboundary ecosystems can be addressed, through the community's policy organs, such as the committee on environment and natural resources.

The EAC recognizes the importance of biodiversity conservation and ecosystem management and at the same time meeting the livelihood needs of the peoples that depend upon these ecosystems. The framework established by the treaty provides a forum for harmonizing policies in the management of shared ecosystems within the signatory states.

The EAC is mandated to coordinate the conservation of trans-border ecosystems and resources as contained in the EAC Treaty. Greater emphasis is accorded to areas of common interest such as Lake Victoria and its basin and other shared ecosystems and major watershed and catchment area within the region. The same is true of other sectors including protection of the environment and management of wildlife corridors that astride across common borders. The cross border migration of wildlife (such as the world famous Serengeti Migrations) also require joint protection and management to achieve environmental and development objectives. A regional tourism strategy that has been developed will create a larger market and increased tourist arrivals. Of importance here is the Gogoni coastal forest which is part of Usambara – Kwale transboundary landscape as well as the Gazi mangroves that also trans border with Tanga mangrove system.

### **3.4 Multi-lateral Environmental Agreements (MEAs)**

The development of this management plan has taken in to consideration the existence of regional and international agreements to which Kenya is a party. Biodiversity-related conventions include most of the key global conventions; the Convention concerning the Protection of the World Cultural and Natural Heritage (1972), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES-1973), Convention on Migratory Species (CMS-1979) and its associated Agreements and the Convention on Biological Diversity (CBD-1992).

#### **3.4.1 Convention concerning the World Cultural and Natural Heritage**

The Convention on World Cultural and Natural Heritage was agreed upon during the seventeenth session General Conference of the United Nations Education, Scientific and Cultural Organization (UNESCO) meeting in Paris from 17 October to 21 November 1972. The convention promotes programs that are aimed at reversing the deterioration and destruction of the cultural and natural heritage sites of the world.

Article four obligates party states to the convention to recognize that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain. The coastal forests

and the mangroves in the Kenyan coast play significant role in the culture of the coastal communities adjacent to them. The Kaya forests are central to the cultural aspects of the Mijikenda and hence their protection should be enhanced. Similarly, mangrove forests are also used by these communities for traditional religious purposes. The preservation of these cultural sites will also ensure enhancement of other ecosystem services. This management plan recognizes these crucial heritage issues and will endeavor to incorporate them in its conservation programs.

### **3.4.2 The Conservation on International Trade in Endangered Species of Wild Fauna and Flora**

CITES is an international agreement between governments signed in Washington since 1973. It is aimed at ensuring that international trade in specimens of wild animals and plant does not threaten their survival. Although CITES is legally binding on the Parties – in other words they have to implement the Convention – it does not take the place of national laws. Rather, it provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES, is implemented at the national level. Kenya is a party to CITES having ratified the convention on 13<sup>th</sup> Dec, 1978, and bringing it in to force as from 13<sup>th</sup> March 1979. The Kenya Wildlife Service was appointed as the management authority that grants permits related to CITES. It also serves together with National Museums of Kenya, as the scientific authorities meant to advise the government and monitor export permits. Coastal Forests in Kenya are part of the East Africa Coastal Forest Ecoregion that stretches from northern part of Mozambique to the Southern part of Somalia. The ecoregion is ranked as among the top 200 out of the worlds 850 ecoregion that are most important for biodiversity conservation (Myers *et al.*, 2000). These forests exist as a mosaic of fragmented forest stands, woodland, bushlands, and thickets spread all along the coast (Burgess and Clarke, 2000). Though fragmented and small, Kenya's coastal forests are of great importance for the preservation of biodiversity and tourism industry, they replenish water catchment areas for the rivers and streams on which the local people in the coastal areas depend and they support endemic species, including globally threatened fauna and flora. Almost 50% of Kenya's threatened woody plant species occur in Coastal forests (Wass, 1995). The number of globally threatened plants and animals in Kenya's coastal forests is estimated to exceed 105 (CEPF, 2003).

### **3.4.3 Convention on Biological Diversity (CBD)**

Article 14 of the CBD calls on signatory states to take measures to prevent the degradation of systems that support biodiversity such as forests and river systems. The coastal forests of Kenya are recognized for their rich biodiversity. A number of patches of the Kenyan coastal forests, including the Gogoni forest have been categorized as biological diversity hotspots sites and thus on this regard, this management plan will uphold the goals and requirements of the CBD.

#### **3.4.4 The Nairobi Convention**

The Nairobi Convention, among other aspects, encompasses an ecosystems approach to manage marine and coastal resources while addressing the interconnectedness between land-based activities, fresh water systems and coastal and marine environments. The approach recognizes the effect of the environment on the resource being exploited and the effect of resource exploitation on the environment. This approach ensures that there is a balance between sustainable use and the fair and equitable sharing of the benefits arising out of the utilization of marine and coastal resources over time. The pilot sites covered by this management plan fit in to the framework of the Nairobi Convention and as such the programs postulated in this management plan are aligned to conform to the Convention.

#### **3.4.5 The United Nations Framework Convention on Climate Change (UNFCCC)**

The Convention on Climate Change sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. Under the Kyoto Protocol of the UNFCCC, the parties to the convention are expected to initiate strategies that aim to enhance carbon sinks as one of the climate change mitigation strategies. Evidence from research studies worldwide (e.g. Donato et al. 2011), have shown that mangrove forests are efficient carbon sinks and hence their protection and conservation is vital for climate change mitigation.

### **3.5 Zonation**

#### **3.5.1 Rationale for Zoning**

Zonation is a powerful tool for use in the management of an area. It allows managers to achieve different management aims in different parts of the area, in particular defining the specific activities and developments that are permitted in the different zones. In this way zonation enables spatial management of the protected area to facilitate both the protection of the area's key ecological features and sensitive habitats, and the sustainable utilization of the natural resources in the area.

In Gogoni-Gazi forests ecosystem, there are two major goals which underpin the design of the zonation scheme: the sustainable utilization of the marine protected areas and maintainance of the biodiversity in both forests that form the ecosystem. Like other protected areas in Kenya, the current zoning strategy is based on the collaboration of the different institutional management regimes that are mandated to conserve and manage the different categories of protected areas and resources therein. Management purposes adopted by these institutions are pursuant to the set conservation goals and legislative mandates. This results into various management zones. For instance the forest reserves have been zoned using the multiple-use classification criteria, which consider the application of primary use along with secondary uses of the zoned areas. Broadly the zones provide the application of specific policies and objectives

to specific areas in conservation of biodiversity which have been considered in this management plan.

### **3.6 The management zones**

The zonation scheme provides a framework for the management of the ecosystem. The importance of zoning in any particular ecosystem is critical as it guides the different management strategies and future planning taking into consideration particular areas that can be sustainably utilized without adverse conflicts with adjacent areas. Zones refer to areas where the achievement of one or more management objectives take priority over the others and generally provides direction for daily management as well as long term decision making. Consideration has been given to the capability, suitability and feasible opportunities available that can be supported in different zones with respect to the land use/cover patterns in the ecosystem.

- Afforestation zone
- Ecotourism zone
- Biodiversity conservation zone (indigenous forest)
- Area for allowable harvesting and firewood collection
- Intervention zone
- Rehabilitation zone

#### **3.6.1 Productive forest zone**

This zone refers to the areas where young trees have been planted or will continue to be planted. This zone lies to the east and southern part of the Gogoni Forest reserve. Combination of both exotic and indigenous trees will be planted through collaboration between KFS, WWF and the CFA (Fig. 3).

#### **3.6.2 Ecotourism zone**

Ecotourism zone within the Gazi forest ecosystem will be carried mainly in areas with the boardwalks such as the Gazi women boardwalk, Baraka women boardwalk and Chale conservation group boardwalk (Fig. 3). Similarly there will be ecotourism sites within the Gogoni Forest Reserve. The characteristics of the areas earmarked for ecotourism are such that the areas are easily accessed through constructed tourism infrastructure including roads, trails, canopy walks, picnic shelters, educational facilities and campsites. This zone will be the focus of management efforts to enhance the budget tourism product that the ecosystem has traditionally offered. The aim of this zone will be to provide a high quality, proactively managed biodiversity and scenic viewing experience for visitors. There are plans to establish a snake park in Gogoni Forest Reserve owing to the large number and diversity of snakes. This will promote tourism activities, thus providing more livelihood activities to the youth.

### **3.6.3 Biodiversity conservation zone**

The primary focus of management in this zone is the conservation of forests, bush land and grassland habitats. A secondary focus of the zone is on tourism. Limited consumptive utilization of the biodiversity will be allowed in these areas such as herbs collection. Currently, the local people have the right to use forest resources for domestic purposes only. They obtain honey and medicinal plants from forest reserves. Within Gazi mangrove forest, part of the area will be delineated for use in carbon trade by Mikoko Pamoja. This will be in several sites within the forest and will also serve as an area for biodiversity conservation. In the middle of Gogoni Forest Reserve, there will be an area for biodiversity conservation where no activity will be allowed except for ecotourism. A watch tower will be erected in each forest to monitor illegal activities such as logging and fire outbreak (Fig. 3). The same tower will serve as an ecotourism facility thus helping to generate revenue to the community.

### **3.6.4 Area for allowable harvesting, firewood collection and beekeeping**

Outside the delineated zone for Mikoko Pamoja in the mangrove forest will be an area for the allowable harvesting of mangrove poles and firewood collection. Similarly in Gogoni Forest Reserve, communities will be allowed to collect firewood in areas lying in the periphery of the forest (Fig. 3). Site specific plans for exploitation of wood products in the designated areas will be developed at subsequent stages of the implementation of the participatory forest management plan.

Apiculture is one of the activities earmarked to generate income to the communities surrounding the ecosystem. Since different user groups under the CFA are involved in this livelihood option, several sites have been selected that provide suitable sites for apiculture (Fig. 3). However, it is important to note that these beekeeping sites will not be restricted to particular zones but will occur in all areas of the forests where the groups find it fit.

### **3.6.5 Intervention zone**

This zone lies around the forests in areas under settlements (Fig. 3). Communities will be actively involved in agro forestry especially by use of quick growing trees such as *Casuarina* spp and *Acacia* spp through support by government and private institutions nongovernmental organizations. Subsistence agriculture will be practiced to provide food requirements to the population.

### **3.6.6 Rehabilitation zone**

These are sites in both forests that have been identified as degraded. This is a temporary zone earmarked for remediation and will be phased out once this is achieved. In Gazi mangrove forest, sites have been identified e.g along the shoreline near Gazi village where Mikoko Pamoja

project plans to plant 0.4 ha of *Sonneratia alba*. Similarly, within the Gogoni Forest Reserve, there are degraded areas where the CFA will carry out reforestation (Fig. 3). Along the water catchment areas such as along River Mkurumji and R. Kidogoweni, there are plans to rehabilitate the forests to curb erosion and increased water loss. The community will participate in reforestation activities by use of species suitable for particular zones.

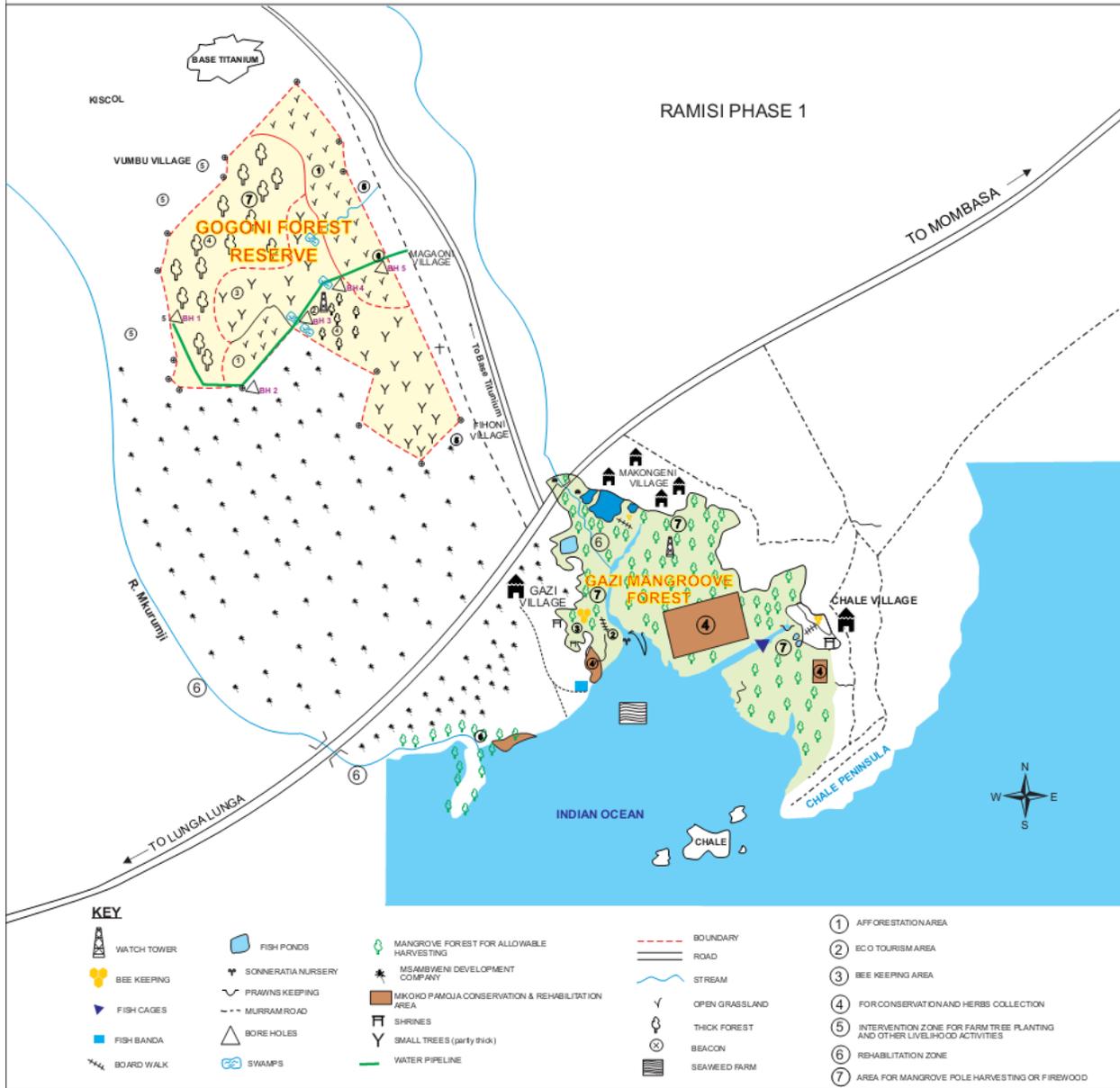


**Community participate in zonation exercise**



**Stakeholders go through the participatory management draft**

**Zonation map for  
Gogoni-Gazi forests ecosystem**



**Fig. 4: Zonation map for the Gogoni-Gazi forests ecosystem**

## **CHAPTER IV**

### **4.0 Gogoni forest reserve and Gazi mangrove forest management programmes**

To achieve the objectives of this management plan as outlined in Chapter 1, the following programmes will be implemented;

- 1) Enhance conservation and protection of biodiversity
- 2) Promote sustainable forest use and livelihood initiatives
- 3) Promote research, education and awareness for effective management
- 4) Resource mobilization

#### **4.1 Enhance conservation and protection of biodiversity**

Gogoni-Gazi ecosystem rank high as important sites for conservation. Gogoni forest Reserve has a high concentration of endemic, threatened and rare flora and fauna. Similarly, Gazi mangrove forest has a total of nine species of mangroves that provide a habitat of numerous micro and macro fauna such as fish, crustaceans, gastropods and the bivalves. This heterogeneity in species diversity in both forests places them high amongst the important sites for species and genetic conservation globally. The biggest challenge that conservation faces in both forest reserves is meeting the needs of the local communities and their right to access the forest resources. Population increase in the respective villages surrounding the forest has put more pressure onto the forest as the need for resources and income increases.

**Table 2: Objective: Conserve and enhance the unique biodiversity of Gazi mangrove and Gogoni forest reserves**

Strategy	Activities	Lead Institution (s)	Priority (High-1, Medium-2, Low - 3.)
1. Improve community education and awareness on biodiversity	<ul style="list-style-type: none"> <li>Establish guidelines and mechanisms for conducting research and monitoring of consumptive use of forest resources utilizing the Natural Resources Assessment (NRA) strategy</li> </ul>	KFS KMFRI, NMK, KEFRI	1
	<ul style="list-style-type: none"> <li>Actively involve local communities in biodiversity research both as direct beneficiaries (employment) and raise local levels of awareness and expertise</li> </ul>	KFS, KMFRI, NMK, KEFRI, CFA	
	<ul style="list-style-type: none"> <li>Disseminate research findings to the local community using extension and communication centres, identified resource persons, and social and religious groups in forest adjacent villages</li> </ul>	KFS, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Pact Kenya International	1
2 Strengthen institutional framework for effective forest management	1. Strengthen the capacity of the CFAs for effective participation in protection and conservation matters	KFS, KMFRI, NMK, KEFRI, Base Titanium Ltd, KISCOL, Asilia Water Ltd	1
	2. Carry out a boundary survey and community forest patrols of the forest to ascertain the forest size	KFS, CFA	1

	3. Strengthen publicity, lobby groups and individuals to ensure use of relevant policies that favors conservation, to respond to external threats	KFS, KMFRI, KEFRI, WWF, CORDIO, Base Titanium Ltd, Eco Ethics, Pact Kenya International	1
3. Restore degraded habitats	1. Undertake site specific interventions aimed at rehabilitating degraded forest areas	KFS, CFA, KMFRI, NMK, KEFRI, Base Titanium Ltd, KISCOL, Asilia Water Ltd	1
	2. Seek alternatives and on-farm substitutes for forest products through agro forestry, mariculture, tree planting and other appropriate technologies to alleviate biotic pressure on the forest	KFS, KMFRI, KEFRI, KWS, WWF, CORDIO, Base Titanium Ltd, Eco Ethics, Pact Kenya International, Fisheries Department	1
4. Develop effective partnerships among the key stakeholders for better management of the forest.	1. Initiate MOUs that will spell out relationships, responsibilities and rights of each stakeholder	KMFRI, NMK, KEFRI, KFS, Base Titanium Ltd, KISCOL, Asilia Water Ltd	2
	2. Involve the local community in decision making and implementation processes	KFS, CFA, KMFRI, NMK, KEFRI	1
	3. Encourage sharing of information by holding joint workshops, seminars and also through community barazas	CFA ,KFS,KMFRI, NMK, KEFRI, County government	1

#### 4.2 Promote research, education and awareness for effective management

In order to enhance an informed participatory management of a forest, research, education and awareness initiatives which are expected to improve the livelihoods of communities neighboring the forest are important. It will be important to train communities on participatory forest management (PFM) and community development (Table 3).

A deliberate attempt will be made to disseminate research finding to the community and other stakeholders. Research activities shall cut across the objectives to establish information necessary to support better management of the forests.

**Table 3: Objective: Support research, education and awareness initiatives to provide information necessary for management interventions**

Strategy	Activities	Lead Institution (s)	Priority (High-1, Medium-2, Low - 3)
1. Establish research and monitoring needs for effective management	1. Identify research gaps in management of the forest	KFS, KMFRI, NMK, KEFRI	1
	2. Develop forest and management monitoring plans	KFS, KMFRI, NMK, KEFRI, Base Titanium Ltd, Asilia Water Ltd, KISCOL	1
	3. Disseminate research findings through sustainable and effective awareness and education approaches	KFS, KMFRI, KEFRI, KWS, WWF, CORDIO, Base Titanium Ltd, Eco Ethics, Pact Kenya International	1
2. Increase understanding and knowledge of the eco-system	1. Conduct research which identifies and utilizes the cultural knowledge of the communities adjacent forest	KFS, KMFRI, KEFRI, NMK, KWS WWF, Eco Ethics International, Pact Kenya International	2
	2. Prioritize and co-ordinate effort and resources towards issue driven research rather than researcher-driven agenda	KFS, KMFRI, KEFRI, NMK, KWS WWF, Eco Ethics International, Pact Kenya International	2

	3. Initiate long-term monitoring to ensure that changes and impacts can be identified and tackled before becoming critical	KFS, CFA KMFRI, NMK, KEFRI, NMK	1
	4. Enhance research into appropriate and indigenous technologies for more efficient utilization of forest resources	KFS, KMFRI, KEFRI, WWF, Eco Ethics International, Pact Kenya International, NMK, KWS	2
3. Training and education	1. Carry out a training need assessment for identified community groups	KFS, KMFRI, KEFRI, WWF, Eco Ethics International, Pact Kenya International, NMK, KWS	1
	2. Train local communities on resource assessment	KFS, KMFRI, KEFRI, WWF, CORDIO, Base Titanium Ltd, Eco Ethics, Pact Kenya International, KWS	1
	3. Develop training programmes for learning institutions at different level (local, national and international) Support implementation of the training programme	KMFRI, NMK, KEFRI, KFS, NMK	2

#### 4.3 Promote Sustainable use and livelihoods initiatives

Gazi mangrove and Gogoni forests are endowed with rich resources and opportunities that adjacent villages can benefit from; of which they have depended on for their livelihoods. Besides this, there is potential to diversify and improve on livelihoods that do not directly depend on the forest. While exploring new opportunities that can create alternative livelihoods and reduce poverty, it is important to create the capacity among the surrounding communities about the effects of degradation and the opportunities that payment for ecosystem services

(PES) can offer through sustainable management of this ecosystem. At the same time, it will be important to build community capacity in rural investment programmes for better business enterprises.

New innovative approaches and initiatives such as PES through Carbon trades among others will be piloted (Table 4). PES schemes may present an important new mechanism to conserve and enhance forests and to protect the livelihoods of the local people who rely on them.

**Table 4: Objective: Promotion of forestry related livelihoods activities**

<b>Strategy</b>	<b>Activities</b>	<b>Lead Institution (s)</b>	<b>Priority (High-1, Medium-2, Low - 3.)</b>
1) Aid the communities to identify sustainable and appropriate Income Generating Initiatives.	1. Assess for viable Income generating initiatives to support their livelihoods.	KFS, KMFRI, KEFRI, WWF, Eco Ethics International, Pact Kenya International, NMK, KWS.	1
	2. Promote diversification of activities and initiatives especially that will ensure reduced pressure on forest resources.	KFS, KMFRI, KEFRI, WWF, Eco Ethics International, Pact Kenya International, NMK, KWS.	1
	3. Encourage non extractive uses e.g. eco tourism, bee keeping, mariculture and carbon trade	KFS, KMFRI, KEFRI, WWF, Eco Ethics International, Pact Kenya International, NMK, KWS.	1
2) Support capacity of the community and supporting staff and	1. Promote PFM approaches amongst user groups.	KFS, KMFRI, KEFRI, WWF, CORDIO, Base Titanium Ltd Eco Ethics, Pact Kenya International, KWS.	1

<p>organizations to effectively manage the existing IGAs</p>	<p>2. Promote skills for frontline staff to enable them work more effectively with local communities</p>	<p>KFS, KMFRI, KEFRI, WWF, CORDIO, Base Titanium Ltd Eco Ethics, Pact Kenya International, KWS.</p>	<p>2</p>
	<p>3. Train communities on various leadership and management skills required to manage IGAs.</p>	<p>KFS, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Pact Kenya International, KWS.</p>	<p>1</p>
	<p>4. Train community on sustainable harvesting of forest products</p>	<p>KFS, KMFRI, KEFRI, WWF, Eco Ethics, Pact Kenya International, KWS.</p>	<p>1</p>
	<p>5. Train communities on business management skills</p>	<p>KFS, KMFRI, KEFRI, WWF, CORDIO, Base Titanium Ltd, Eco Ethics, Pact Kenya International, KWS.</p>	<p>1</p>
<p>3) Promote community to access financial capital for nature based enterprise</p>	<p>1. Link the community groups to the available funding such as youth fund, women fund, CDF, CDTF for potential financial support</p>	<p>KFS, KMFRI, KEFRI, WWF, Eco Ethics, Pact Kenya International, KWS.</p>	<p>1</p>
<p>4) Develop ecotourism plan</p>	<p>1. Survey on attractive sites</p>	<p>KFS, KMFRI, KEFRI, WWF, CORDIO, Base Titanium Ltd, Eco Ethics, Pact Kenya International, KWS.</p>	<p>2</p>
	<p>2. Develop management guidelines for ecotourism</p>	<p>KFS, WWF, KWS, NMK</p>	<p>2</p>

	3. Develop marketing strategy	KFS, KMFRI, KEFRI, WWF, CORDIO, Base Titanium Ltd Eco Ethics, Pact Kenya International, KWS.	2
	4. Develop supporting structures for ecotourism development	KFS, WWF, KWS, NMK	2
	5. Strengthen community capacity to manage ecotourism ventures effectively	KFS, KMFRI, KEFRI, WWF, CORDIO, Base Titanium Ltd, Eco Ethics, Pact Kenya International, KWS.	2
5) Develop mariculture plan for Gazi Mangrove forests	6. Survey suitable sites for aquaculture within the mangrove forest	KFS, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Fisheries Department.	2
	2. Develop and enhance ponds in the mangroves areas near Makongeni and Gazi villages	KFS, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Fisheries Department.	2
	3. Develop the marketing strategies	KFS, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Fisheries Department.	2
6) Develop Apiculture plan	1) Survey on suitable places for setting up apiaries	KFS, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Livestock and Agriculture Department.	2

	2) Development of business and management guidelines of apiculture	KFS, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Livestock and Agriculture Department.	2
	3) Develop strategies of value addition and marketing	KFS, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Livestock and Agriculture Department.	2
7) To establish initiatives that shall pursue participatory forest carbon investment geared towards community development	1. Undertake Carbon estimations in forests	KFS, WWF ,NMK, KMFRI,KEFRI	2
	2. Undertake community Trainings on carbon biomass estimations	KFS,WWF,NMK, KMFRI,KEFRI	2
	3. Undertake Mapping of the areas for carbon investment	KFS, WWF, KWS, NMK,	1
	4. Community education on carbon trade	KFS, WWF, KWS, NMK, KMFRI,KEFRI	1
	5. Initiate community awareness on the importance on carbon investment	KFS, WWF, KWS, NMK, KMFRI,KEFRI	1

#### 4.4 Infrastructure, equipments and human capital

Proper forests management is necessary in the sustainable utilization of the resources. CFA will provide community scouts that will work with the forest rangers in forest patrols. Infrastructure is required to support the management of the Gogoni-Gazi forest ecosystem. The infrastructure range from feeder roads, telecommunication systems, nature trails, boardwalks, bridges, campsites, bandas, picnic sites, residential and non-residential buildings, outposts, vehicles, machinery, fire fighting equipment and fire towers, electricity, solar, water flow measuring devises, weather stations, communication equipments, etc. Some of these infrastructural facilities are available but will require regular maintenance through one-time and regular rehabilitation. Other will require installation or establishment. The CFA will liaise with KFS and other strategic partners and especially with the county government to ensure that they in good working condition.

**Table 5: Objectives: To mobilize resources for effective implementation of the management plan**

Strategy	Action	Lead Institution (s)	Priority <i>(High-1, Medium-2, Low – 3.)</i>
1. Open and maintain the necessary communication network	1. Secure financial resources needed to open and maintain necessary communication network to improve patrolling	KFS, CFA, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Livestock and Agriculture Department.	1
	2. Initiate a system and procedure for planning the maintenance of communication network such as roads taking into account the need to maintain public access and for effective patrolling at the least cost	KFS, CFA, KMFRI, KEFRI, WWF	1
2. Maintain surveillance services and equipment and establish a fire watch tower which would also serve as an ecotourism facility	1. Secure financial resources for improving patrolling of the forests by the community scouts and putting on required facilities/equipments.	KFS, CFA, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Livestock and Agriculture Department.	1
	2. Secure resources for provision of services for staff working in the forest particularly in the most remote forest areas	KFS, CFA, KMFRI, KEFRI, WWF	1
	3. Provide training to the staff on the use of new communication technologies such as GPS and other tracking devices	KFS, CFA, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Livestock and Agriculture Department.	1

3. Develop and work with new institutional arrangement to maximize on the impact and utility of infrastructure	1. Devolve responsibilities for protection and management of identified forest areas to local communities under PFM arrangement	KFS, CFA, KMFRI, KEFRI, WWF	1
	Seek to bring non-governmental partners into the forest for the development of facilities for eco-tourism and recreation	KFS, CFA, KMFRI, KEFRI, WWF, CORDIO, Eco Ethics, Livestock and Agriculture Department.	1

## **CHAPTER V**

### **5.0 Plan implementation and development**

#### **5.1 Financial Management**

Financial management will involve appropriate regulation of recurrent and development budget while expenditure will follow budget allocations for prescribed activities. Revenue collection will be in accordance with the Kenya Forest Service regulations and procedures to reduce loss or misappropriation of funds by those responsible for its custody. Budget reviews will be done annually in order to prioritize the operations in accordance with available funds and prevailing inflation rates at the time of review. An annual inflation rate should be provided for in the development budget in this management plan. Similarly annual financial allocations will need to be increased by this percentage during the plan period. The policy of retaining part of the revenues generated in the ecosystem should be highly emphasized. This will enable KFS to plough back some of the revenues it generates to support conservation efforts within the ecosystem. Revenue generation and expenditure by CBOs should be consistent with those of KFS and the Society's Act. The current status of revenue generation in both forest reserves are estimates as some of the group activities have no clear records. However in Gazi mangrove forest, KFS generates revenue from royalty to the licensed of about Sh 10,000 per annum plus the revenue from the volume of harvested mangrove poles estimated at Sh 240,000 per annum. In addition, the community groups such as the Gazi women boardwalk pay an annual license fee of Sh 2000 to KFS. The community group earns close to Sh 90,000 annually as collection from tourists. There are also small earnings from the fisheries, through the Beach Management Unit (BMU), and from beekeeping. While there is no accurate data on these revenue, economic analysis on the revenue that can be generated by this forest done in 2009 pointed to a figure of \$ 379/ha/yr from wood harvesting, \$ 3.9/ha/yr from ecotourism, \$ 113.09/ha/yr from fisheries and close to \$ 44.42/ha/yr from carbon. For many years no revenue was earned from Gogoni forest reserve as removal of forest product is not allowed. However, with the entry of Base Titanium sand mining company, KFS earns about Sh 250,000 per annum from the licensed boreholes and about Sh 100,830 as way leave of the water pipeline. The CFA will liaise with the company as well as initiating programmes that will generate revenue from this forest.

#### **5.2 Resource mobilization**

Substantial funds will be needed for infrastructure development. Resources requirement for capital development may not be met by the revenue that the CFA collects and KFS allocation. As a result, this management plan has identified ways in which more financial support could be sought. Among the methods proposed for resource mobilization include;

- Developing a resource mobilization strategy for the ecosystem
- Government budgetary allocations (central and county governments)

- Partnering with similar interest groups in implementation of annual work plans as developed from this management plan
- Working with CFA to venture into the global carbon trading market and payment for environmental services
- Development of proposals to donor agencies
- Organization education and awareness events to enlighten the public on the importance of mangroves and terrestrial coastal forests

### 5.3 Institutional arrangements for plan implementation

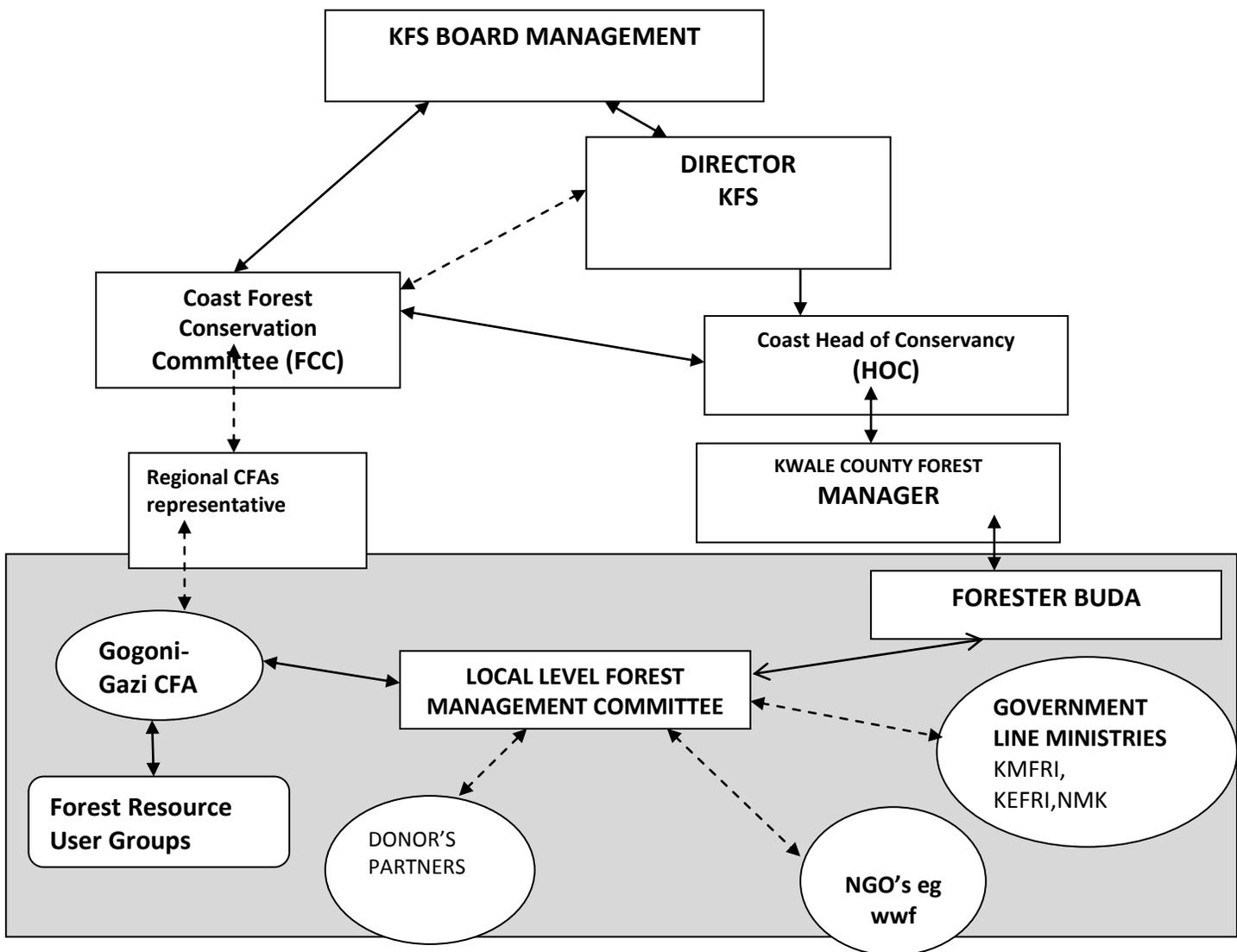


Fig. 5: Institutional arrangement for plan implementation

## **CHAPTER VI**

### **6.0 Plan Monitoring and Evaluation**

#### **6.1 Purpose of monitoring**

Monitoring and evaluation of the management plan is essential since it provides a basis for correction, adjustment, and improvements attained. The overall purpose of a monitoring and evaluation system should therefore aim to document performance to help the ecosystem stakeholders achieve the following:

- Monitor if the long term conservation objectives are being met and evaluate whether the management course prescribed is achieving its planned conservation impact and socio-economic goal
- Determine how stakeholders should adapt to challenges in implementing the plan and modify efforts to ensure the programme continues to achieve positive impacts
- Ensure that all stakeholders including Government organizations, partners, local communities and private sector learn from the experience of programme implementation and thus can improve implementation of conservation efforts in the future

#### **6.2 Monitoring methods**

A five year monitoring and evaluation plan will be formulated and reviewed regularly during the plan implementation period. A mid and end term evaluation will be carried out to assess progress in the implementation of planned activities, achievement of objectives, and analyze and address constraints encountered in the process. It will also provide essential information that can be used in revision of the management plan. Continuous monitoring during the implementation period will be maintained through preparation and submission of monthly, quarterly, half year and annual progress reports from the implementing departments. The monitoring reports will contain the following information.

- Review time frame
- Indicator protocols (details of how exactly each indicator is defined and exact methods and calendars for collecting data)
- Inventory results (baseline information collected on the indicators)
- Standards (A quantifiable measure that dictates at what point change becomes unacceptable. Indicators, by themselves, do not tell managers whether an observed change is acceptable or unacceptable, standards define threshold or levels at which the amount of change occurring is deemed acceptable or unacceptable).
- Management actions (When a standard is exceeded, a specific management actions may be initiated to maintain the desired conditions. In general the least restrictive action necessary to reasonably resolve the problem selected. After the selected action is implemented, monitoring continue to evaluate its effectiveness).

### **6.3 Responsibilities**

The key management plan implementing agencies KFS and CFA with the support of other stakeholders like KMFRI, KWS, NMK, and NGO's such as WWF and Rafiki Kenya plus private companies e.g Base titanium and KISCO LTD will undertake monitoring and evaluation activities. Field officers will be responsible for submitting monthly, quarterly, half year and annual progress reports to the heads of their institutions. It is noted that for each action in the management plan, responsibilities have been assigned to particular institutions or stakeholders to assess the progress made by the implementing department/ stakeholder. The Monitoring and Evaluation Teams of, KFS, KMFRI, KWS and other ecosystem stakeholders' forum will conduct periodical monitoring and evaluation.

### **6.4 Strategic plan indicators**

Success indicators provide a measure of assessing whether set targets are being achieved. Indicators can be viewed as a means to reduce large amount of data down to its simplest form while still retaining the essential information needed to make decisions. Indicators provide quantitative (and in some cases qualitative) documentation on how much conditions have changed, serve as a tool to examine trends and highlight problems, and can act as a early warning sign to predict future conditions. It is important to note, that there is no requirement to develop an indicator for every possible concern (many don't lend themselves to being easily monitored with available resources, and can be addressed in different manner). The elements that have been selected are the most important for monitoring the overall status of the ecological, social and administrative conditions sought.

#### **6.4.1 Ecological indicators**

The ecological indicators refer to the natural or physical setting of the ecosystem, they are

- Habitat Heterogeneity/ Vegetation Change
- Incidence of Illegal logging (combined with vegetation change)
- Incidence of poaching (combined with key stone counts)
- Keystone species counts (Mammals, Reptiles Birds, Insects, Plants)
- Occurrence of invasive species. Ecological indicators for mangroves?

#### **6.4.2 Social indicators**

The social indicator refers to the visitor/ tourist experience as well as living conditions in and impacts the protected area has on surrounding community e.g.

- Number of development projects undertaken
- The number of bursaries issued
- The amount of earnings per share

- Incidence of Human Wildlife Conflicts (HWCs) and compensation paid
- Number of cases compensated

### **6.4.3 Administrative Indicators**

The administrative indicators refer to the managerial aspects of the ecosystem management. These include;

- Number of patrols undertaken
- Number of stakeholder meetings held
- Adequate number of staff
- Percentage of roads fully accessible year round
- Institutional arrangements for plan implementation

The successful implementation of the management plan necessitates the use of appropriate and integrated institutional and organizational structures that exist in the relevant institutions including KFS, KMFRI, KWS and Gazi/Gogoni community Association. The CFA will represent community groups while civil society organizations and NGOs will be involved depending in their interest.

## **6.5 Guiding Principles for the implementation of the Plan**

### **6.5.1 Gender equity**

Both men and women and youth will be actively involved in the conservation process of the ecosystem and sharing of the benefits will be on an equitable basis.

### **6.5.2 An integrated ecosystem approach**

An integrated ecosystem approach to conserving the ecosystem resources will be adopted and enhanced to ensure that conservation of the ecosystem is based on large geographical scales.

### **6.5.3 Transparency**

In all decision-making processes, transparency will be maintained to ensure that key stakeholders are involved in the process and are kept informed on the on-going activities and of future envisaged plans. This approach is essential towards developing, maintaining and improving rapport between the institutions/ organizations that will be involved in the implementation of the ecosystem management plan.

### **6.5.4 Benefit sharing**

Benefits of the ecosystem will be shared equitably among stakeholders especially paying due regard to the communities living within and around the ecosystem.

### **6.5.5 Sustainable management**

The conservation and management of the ecosystem will be used on a long term view where present generations make choices that will benefit future generations, in accordance with the principles of inter and intra generation equity.

### **6.5.6 Scientific knowledge and expertise**

Research will form a cornerstone of the ecosystem conservation and management planning, implementation and decision making process.

### **6.5.7 Multilateral Environmental Agreements**

Multilateral Environmental Agreements (MEAs) and regional conservation instruments will be domesticated and implemented for better ecosystem conservation and management planning, implementation and decision making process.

### **6.5.8 A coordinated and participatory approach**

A coordinated and participatory approach to ecosystem conservation and management will be enhanced to ensure that the relevant government agencies, local authorities, private sector and community are involved in planning, implementation and decision making process, while respecting the jurisdiction and responsibilities of the various government agencies, private investments, the rights of communities and individual landowners.

### **6.5.9 Community Representation in project Management**

Forest Adjacent Communities (FAC) will be represented in committees responsible for the implementation and management of projects or programmes that may be funded from time to time.

### **6.5.10 Roles and responsibilities of Gazi-Gogoni stakeholders in plan implementation**

Table 6 summarizes the institutions to implement the management plan and their envisioned roles and responsibilities.

**Table 6: Plan implementing institutions and their corresponding roles and responsibilities in ecosystem management**

Institution	Roles and Responsibilities
Kenya Forest Service (KFS)	<ul style="list-style-type: none"> <li>• Protection and law enforcement</li> <li>• Tourists security</li> <li>• Marketing of the ecosystem</li> <li>• Capacity building</li> <li>• Conduct boundary clearing &amp; adjustment in protected forests</li> <li>• Support</li> <li>• Conduct enrichment plantings in forest degraded areas</li> <li>• Research and monitoring</li> <li>• Revenue collection</li> <li>• Resource mobilization</li> <li>• Ecotourism development</li> </ul>
Kenya Marine and Fisheries Research Institute (KMFRI)	<ul style="list-style-type: none"> <li>• Research and Monitoring</li> <li>• Capacity building</li> <li>• Provide technical capacity</li> </ul>
Kenya Wildlife Service (KWS)	<ul style="list-style-type: none"> <li>• Protection and law enforcement</li> <li>• Tourists security</li> <li>• Human Wildlife conflict management</li> <li>• Capacity building of local communities</li> <li>• Wildlife management</li> <li>• Support community</li> <li>• Marketing of the ecosystem</li> <li>• Networking and promoting the ecosystem as a tourism destination at both local and international levels</li> <li>• Research and monitoring of vegetation and wildlife species</li> <li>• Resource mobilization</li> <li>• Development and maintenance of infrastructure</li> </ul>
Kenya Forestry Research Institute (KEFRI)	<ul style="list-style-type: none"> <li>• Restore degraded habitats</li> <li>• Identify research and monitoring needs for effective management</li> <li>• Training and education programmes</li> <li>• Support the communities to implement viable and</li> </ul>

	appropriate IGAs
National Museums of Kenya	<ul style="list-style-type: none"> <li>• Strengthen institutional framework for effective management</li> <li>• Research and monitoring</li> <li>• Support restoration of degraded habitats</li> <li>• Support environmental conservation activities</li> <li>• Marketing of the ecosystem</li> </ul>
GOGACOFA	<ul style="list-style-type: none"> <li>• Support human-wildlife conflict management</li> <li>• Support law enforcement/Forest protection</li> <li>• Participating in environmental conservation activities</li> <li>• Implementation of IGAs that are environmental friendly</li> <li>• Resource mobilization</li> <li>• Lobbying and advocacy</li> <li>• Marketing of the ecosystem</li> </ul>
WWF	<ul style="list-style-type: none"> <li>• Capacity building</li> <li>• Community mobilization</li> <li>• Support KFS, NMK and KWS in law enforcement</li> <li>• Supporting environmental programmes</li> <li>• Support research and monitoring activities</li> <li>• Marketing of the ecosystem</li> <li>• Improve local awareness of biodiversity</li> <li>• Identify research and monitoring needs for effective management</li> <li>• Support the communities to implement viable and appropriate income generating activities</li> </ul>
Base Titanium Company Ltd	<ul style="list-style-type: none"> <li>• Capacity building</li> <li>• Supporting environmental programmes</li> <li>• Support CFA, KFS, NMK and KWS in law enforcement</li> <li>• Support research and monitoring activities</li> <li>• Offering employment opportunities to local people</li> <li>• Assist in infrastructure development</li> </ul>
Kwale International Sugar Company Limited	<ul style="list-style-type: none"> <li>• Capacity building</li> <li>• Maintenance of roads</li> <li>• Supporting environmental programmes</li> <li>• Support CFA, KFS, NMK and KWS in law enforcement</li> <li>• Support research and monitoring activities</li> </ul>

	<ul style="list-style-type: none"> <li>• Offering employment opportunities to local people</li> </ul>
Asilia Water Company limited	<ul style="list-style-type: none"> <li>• Revenue generation through payment of levies to CFA</li> <li>• Provide employment opportunities</li> <li>• May support community projects with funds when invited</li> </ul>
Rafiki Kenya	<ul style="list-style-type: none"> <li>• Training local people on alternative sources of livelihood</li> <li>• Provision of social amenities</li> </ul>
Hoteliers and other investors	<ul style="list-style-type: none"> <li>• Maintenance of tourist facilities</li> <li>• Participate in monitoring activities</li> <li>• Support ecosystem protection</li> <li>• Revenue generation</li> <li>• Marketing of the ecosystem</li> </ul>
County government	<ul style="list-style-type: none"> <li>• Support law enforcement and protection</li> <li>• Marketing of the ecosystem services</li> <li>• Environmental conservation</li> <li>• Maintenance of infrastructure within the ecosystem</li> <li>• Resource mobilization</li> <li>• Revenue collection</li> </ul>

## 6.6 Environmental Impact Assessment

Environmental Impact Assessment (EIA) is a powerful tool for informed decision-making. It contributes to more environmentally sensitive decisions and the integration of environmental and social considerations in development planning. The EIA process in Kenya is conducted in line with the Environmental Management and Coordination Act). The second schedule of the Act identifies development activities that are required to undergo an EIA process before they commence. They include:

- Establishment and expansion of tourist facilities (lodges, camps and picnic sites)
- Reforestation and afforestation activities
- Commercial exploitation (bio-prospecting) of fauna and flora in indigenous forests and other conservation areas
- Establishment of buffer zones and barriers to manage wildlife
- Road constructions
- Timber harvesting in plantation forests
- Land use change
- Water abstraction
- Forest and wildlife conservation policies

## 6.7 Environmental Auditing

Existing development projects/activities within the precincts of the ecosystem are required to undergo annual environmental audits to determine their compliance with environmental regulations as follows.

**Table 7: NEMA regulations to be complied with in the implementation of environmental audits for projects and conservation policies within the ecosystem**

<b>Legal Notice Number</b>	<b>Year</b>	<b>Description</b>
<i>101</i>	2003	Environmental Impact Assessment and Audit Regulations
<i>120</i>	2006	Water Quality Regulations-Provides for standards effluent discharge into the environment
<i>121</i>	2006	Waste Management Regulations
<i>160</i>	2006	Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing, Regulations
<i>60</i>	2009	Air Quality Regulations
<i>61</i>	2009	Noise Regulations

The preparation of annual environmental audits should be undertaken by experts duly registered with NEMA and in collaboration with the lead agencies. The results of these audits should form an integral part of the process of monitoring and evaluation of the success of this management plan. Thereafter investors/developments within the ecosystem should submit to NEMA internal self audits.

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## APPENDICES

## Appendix 1: Chronology of major meetings for the development of the Participatory Management Plan

<b>Date</b>	<b>Agenda</b>	<b>Stakeholders</b>	<b>Venue</b>
24/05/2012	Gogoni-Gazi PFM Visionary Stage	CFA, KFS, KMFRI, WWF, KWS, DGSDO	Gazi women boardwalk
27/07/2012	Appreciation to Director KFS & plan of action	CFA	KMFRI, Gazi
24/10/2012	Drawing of zonation map	CFA, WWF, Base titanium, KMFR, KFS ,Provincial administration	Ukunda
29/11/2012	Appraisal of the draft management plan	CFA, WWF, KFS, KMFRI, Livestock development, Agriculture & Extension, Provincial administration	Ukunda
13/12/2012	Referendum	All	Gazi village

## Appendix 2: Gogoni-Gazi CFA meeting with KFS and KMFRI

### Gogoni Gazi CFA meeting on Participatory Forest Management held at Gazi Women Boardwalk on 24/5/2012

#### Brief of the Meeting

The KMFRI – KFS- Community and other stakeholders meeting was held to discuss on the activities of the Gogoni Gazi CFA user groups as they engage the KFS in participatory forest management appraisal of Gazi Mangrove and Gogoni forest. This one day meeting at Gazi Women Ecotourism boardwalk as attended by various user groups from Makongeni, Gazi and Fioni villages. The main participants were the KFS and the community.

#### **Attendance List; Annex 1**

#### **Session 1**

#### **Minute 01/05/2012 Opening Remarks**

Meeting started at 10:40 am with a word of prayer from Sheikh Salim. The Master of ceremony (MC) was Mr. Noel Mbaru from the KMFRI. The MC welcomed all participants and elaborated on the main agenda of the day and the expected results of the meeting. The Gazi village chairman welcomed the guests from the different organizations and areas to Gazi village.

## **Minute 02/05/2012; Presentations from Gogoni and Gazi User groups**

The master of ceremony introduced the Community Forest Association (CFA) chair, Mr. Athumani, to guide through the introductions of the user groups. Mr. Athumani introduced the CFA office bearers and the user groups comprising the Gogoni-Gazi CFA.

A total of 12 user groups were represented in the meeting. The representatives gave brief particulars of their respective user groups: membership composition, main objectives, activities and year of registration. Briefly the groups mainly utilized the Gogoni and Gazi bay forest reserves for various livelihood activities which ranged from mariculture, ecotourism and apiculture. In addition, some groups engage forest patrolling, and mangrove reforestation activities.

The Social Service representative, Mr Rashid Waziri appraised the user group formation and the membership composition which was gender sensitive. He emphasized the importance of a Memorandum of Understanding for the amalgamation of the groups into a CFA and that each group should know its role.

The meeting went for a 15 minutes tea break.

## **Session 2**

### **Minute 03/05/2012; CFA engagement with the KFS**

The KFS Kwale Zonal Manager, Madam Nafasi Mfahaya introduced the guest from KFS: Messrs Mr. Gatiki Nderitu (Head of Conservancy, Coast Region), Daniel Mbithi and Mr.Samson Njehia from the headquarters, Nairobi.

Mr. Ndiritu positively acknowledged the activities the communities were undertaking and informed them that it was important to pursue participatory forest management in the proper legal way.

Mr. Mbithi elaborated on the history of forest management in Kenya starting from the colonial period, for instance Forest Act Cap 385 of which did not involve community participation hence reviewed laws to more friendly legislations. He further highlighted that the draft forest policy which will provide for more community participation is on the process of formulation. More community participation avenues were highlighted through the Forest Act 2005 Section IV.

He also stated as with the Act, the requirements needed for a CFA to register with the KFS and the other stages in PFM which include the management plan and the management agreement.

Madam Nafasi took questions from the audience of which mainly articulated on the stages of the PFM process and particularly on the launch and user rights of the Mikoko Pamoja.

**Minute 04/05/2012 Way forward**

At this juncture, the Zonal manager lead the audience towards deliberations of way forwards on the agenda of the meeting. The following way forwards were listed;

- 1) Assist in the Pre launch of Mikoko Pamoja within the law- Action by the CFA
- 2) Support in the development of a management plan – Action by government and respective stakeholders, the lead agency to be KMFRI.
- 3) Fast track the registration of a CFA to the KFS , Action by CFA
- 4) Creating awareness issues on governance in the CFA- action by KFS and CFA

**Minute 05/05 /2012 Adjournment**

Having no other business the meeting was adjourned at 2.30 P.M

Chair \_\_\_\_\_ Signature \_\_\_\_\_

Secretary \_\_\_\_\_ Signature \_\_\_\_\_

## Attendance Annex 1

### NAME

Omar K. Mwachikoi  
Rama Z. Mwakirenje  
Fatuma H. Mwandawa  
Pashua S. Pashua  
Salim Sadik  
Juma M. Mwarandani  
Iddi B. Nyiro  
Abdallah B. Mwarima  
Athumani S. Bombori  
Juma K. Juma  
Salim J. Kisasi  
Fadhili M. Rashid  
Ramadhani Rashid  
Joseph Lang'at  
Okenyo D. Mogaka  
Dalla E. Juma  
Bakari Edward  
Tauhida Salim  
Hamisi M.Mwarandani  
Mohamed S. Mwarandani  
Sudi B. Mwatsumo  
Benzi Karisa  
Noel N. Mbaru  
Mwanakombo O. Kilalo  
Ann I. Mbogo  
Phylus K. Cheruiyot  
Bernad Ocheng  
James Mulinge  
Edward K. Kenyatta  
Omar R. Mwang'ombe  
Omari M. Waziri  
James G. Kairo  
M. K Mwakidimi  
Daniel M. Mbithi  
Samson N. Njehia  
D. G. Ndiritu  
Nafasi Mfahaya  
Alex M. Kilawa

### GROUP/ORGANIZATION

Mwangaza Farmers Group  
Kinondo Marine Conservation  
Gogoni Forest Conservation  
Gazi Youth Bunge  
Gazi B. M .U  
Baraka Conservation  
Gazi Village c/man  
Chale Marine Conservation  
Gogagofa C. F. A  
Mikoko Pamoja  
Mikoko Pamoja  
Gazi Youth  
Gazi Environmental Youth Group  
KMFRI  
DLPO-Msambweni  
Gazi Environmental youth Group  
Makongeni Youth Bunge  
Gazi Women Boardwalk  
Makongeni village c/man  
Mikoko Pamoja  
Kinondo Mangrove Conservation  
Gogagofa CFA  
KMFRI  
KMFRI  
K. W. S Kwale  
Chale Jeza B. M. U  
D. G. S. D. O  
KMFRI  
D. L. P. O  
K. F. S. Nairobi  
K. F. S –HQs  
K. F. S- HOC  
K. F. S –Zonal manager  
Shauri Moyo Makongeni

**Appendix 3: KFS Directors letter to the CFA**



**Appendix 4: GOGOCOFA CFA appreciation letter to kfs**

**TO:**

**THE ZONAL MANAGER,**

**THE KENYA FOREST SERVICE- KWALE COUNTY,**

**P.O. BOX, 5**

**KWALE,**

**27/07/2012**

**REF; DEVELOPMENT OF A GOGONI – GAZI MANAGEMENT PLAN.**

We sincerely appreciate the response towards the registration request of the CFA by the KFS in a letter dated 9<sup>th</sup> July 2012.

With regard to the development of the Gogoni Gazi Participatory Forest Management Plan (PFMP), we will be taking initial steps in a meeting scheduled for the 3<sup>rd</sup> of August 2012. It is for this reason; we cordially invite your office to the meeting which be held at KMFRI – Gazi Station.

Kindly note we request you to make available with information on (1) the ecosystem value of Gogoni forest and (2) an outline that describes the format of a PFMP.

Sincerely

Athumani Suleiman

*CFA Chairperson*

*0712262579*

Cc The Kenya Forest Service, Buda Forest Station

Cc The Kenya Marine and Fisheries Research Institute

Cc World Wildlife Fund – Kwale

**Appendix 5: Consultative zoning meeting for Gogoni Gazi Forest Ecosystem, held at Ukunda, 24/10/2012**

**Attendance list – Annex 1**

## **Overview of the meeting**

The meeting started at 9.40 am with a word of prayer led by Mr Mohamed Mwarandani. The CFA Treasurer Mr Abdallah Mwarima thanked members for the attendance and welcomed them for an introduction session. He then welcomed the assistant chairman of the community Forest Association (CFA) Mr. to make a welcoming speech and to set the agenda of the meeting. In his speech, the assistant chairperson started by giving the apology of the CFA chairman who was held up in another meeting in Kilifi. On his behalf, he thanked the members for the support and enumerated the steps that have been made in the process of developing this management plan. On this note he thanked the taskforce spearheading the development of the participatory management plan and the institutions that were facilitating the exercise. He told the members that the purpose of the meeting was for the forest user groups to engage in a zoning exercise which was a prerequisite in the development of the participatory forest management plan. He then hoped that the meeting would achieve the targets at the end of the end of the day.

## **Min 06/11/2012: Induction on PFM by KFS**

The acting forester Buda forest station, Mr Silas Tsuma on behalf of the zonal manager Madam Nafasi highlighted the process of developing the participatory management plan and the need for community involvement in order to attain the forests tenure ship. He emphasized the need for the participation of all forest user groups, stressing that any group that failed to participate in the exercise may find it hard to acquire the user rights.

## **Min 07/11/2012: Zoning exercise**

Mr Kimaru took members through the process of drawing the map using an illustration from another map. Upon assurance that they would be able to draw, they were then divided into two groups according to the forests (Gogoni and Gazi) and were asked to draw. He told them to ensure that they capture all the details. He explained to the members that there was need to indicate how they use the forest.

## **Min 08/11/2012: Map interrogation**

The activity involved presentation of the maps by the groups. Upon completion, each team made a presentation of its sketch map. Corrections were made and few people among the groups were selected to do the final drawing.

**Min 09/11/2012: Way forward**

The acting forester, Buda forest station, Mr Tsuma, thanked the members for the exercise and assured them that the drawings will help to make the final map to be included in the management plan. He also assured the members that KFS, will continue providing the necessary support in their endeavor to develop the management plan.

**Min 10/11/2012: A.O.B and closing remarks**

One member wanted to know whether all the groups will be captured in the map. Same member also wanted to know when the CFA will visit all the groups to see where they do their activities. He expressed that they have waited for long for the CFA to visit them. In response the CFA treasurer said that the question came at the right time because from the mapping that was done, it will now be easy for CFA to visit the sites and see what the groups were doing. He also said that there will be a meeting of CFA on 22nd for the purpose of streamlining the CFA activities and most of the issues would be addressed.

**Min 11/11/2012: Adjournment**

There being no other business, the meeting ended at 2.30 p.m with the organizers and the appointed members to draw the final maps being left for the exercise.

**Signature**

Acting CFA Chairperson: Mr Ramadhani Rashid

Signature \_\_\_\_\_ Date \_\_\_\_\_

Acting secretary: Mr. Michael Njoroge

Signature \_\_\_\_\_ Date \_\_\_\_\_

**Members Present**

No.	Name	Group/Organization
-----	------	--------------------

1	Juma Mkuu	Gazi Fishermen C.B.O
2	Malcolm Mkutano	Gogoni Forest.Conservation
3	Athumani Maina	Vice Chairman Fioni village
4	Hamisi Mwarandani	Chairman Makongeni village
5	Omar Mwachikoi	Mwangaza Forest.Conservation
6	Ramadhani Rashid	Assistant Chair GogaCofa CFA
7	Hassan Rashid	Gazi Environmental Group
8	Salim Sadik	Gazi Beach Management Unit
9	Salim Abdallah	Makongeni Youth
10	Geofrey Ngure	Gogoni Conservation Group
11	Feduand Mwanyala	Forest Ranger Kenya Forest Service
12	Kassim Chondo	Kinondo Mangrove Conservation Group
13	Alex Kilawa	Shauri Moyo Group
14	Omari Mwang'ombe	Chale Jeza Beach Management Unit
15	Abdallah Mwarima	Kinondo Chale Marine Conservation
16	Noel Mbaru	Mikoko Pamoja
17	Michael Njoroge	KMFRI/Swahili Seas
18	Samuel Benzi	GogaCofa Community Forest Association
19	Tauhida Salim	Gazi Women Boardwalk
20	Mwanakombo Omar	Mikoko Pamoja
21	Sada Masudi	GogaCofa Community Forest Associations
22	Silas Tsuma	Acting Forester- Buda forest station
23	Eric Muloki	WWF- Driver

24	Juma Harry	Kaya Kinondo
25	Elias Kimaru	WWF
26	Idd Bomani	Chairman- Gazi Village
27	Moh'd Mwarandani	Mikoko Pamoja- Chairman
28	Juma Mwarandani	Baraka Conservation Group
29	Salim Shikeli	Licensee for mangrove harvesting
30	Alex Maina	Base Titanium
31	Micah Muema	Base Titanium

### **Absent with Apology**

Madam Nafasi	KFS -Zonal manager, Kwale
Athumani Suleiman	Chairman- Gogoni-Gazi Community Forest Association

### **Appendix 6: Gogoni Gazi Participatory stakeholders Forest Management Plan (PFMP) for the meeting held on the 29/11/2012 at Red cross Ukunda**

#### **Min 12/11/2012: Preliminary**

The meeting started at 10.0 am with a word of prayer led by sheikh Salim. The Chairperson Mr Athumani Suleimani thanked members for the attendance and welcomed them for an introduction session. In his welcoming speech, he enumerated the journey the CFA and other stakeholders have gone in their endeavor to develop a management plan. On this note he thanked the taskforce spearheading the development of the participatory management plan and the institutions that were facilitating the exercise. He informed the members that the purpose of the meeting was to go through the draft prepared by the team in order to decide if everything expected was captured and to compliment the document with information they so wished.

#### **Min 13/11/2012: Reading of management draft**

Mr Kimaru from WWF Kwale took the participants through the draft chapter by chapter putting emphasis on key areas in each chapter. Members were in agreement that the document had captured their intentions.

#### **Min 14/11/2012: Group discussion**

Participants were divided into groups and assigned the tasks of discussing and ranking the actions in the management programmes.

#### **Min 15/11/2012: Group presentations**

One person from each group made presentation of the outcome of their discussions. These were captured and upon agreement were included in the draft.

#### **Min 16/11/2012: KFS speech**

The acting forester Buda forest station, Mr Silas Tsuma thanked the members for their commitment in the exercise and welcomed the zonal manager Madam Nafasi to give her speech. In her address, she thanked the CFA for their work and remarked that they should always consider themselves the major stakeholder. She thanked all the stakeholders for the efforts they had shown and told them that from her assessment the draft was in very good progress and requested that whatever was remaining should be completed so that the draft could be sent to KFS headquarters. She then asked the CFA and other stakeholders to consider the following:

- Need to include a fire watch tower in Gogoni Forest Reserve as the forest had a history of experiencing damage by fire. She further said that the same would act as an ecotourism facility and thus help to generate income to the community. In response, members expressed interest with the idea and agreed to include the forest watchtowers.
- Indicating clearly the collaboration the CFA will require with the ministry of Agriculture and Extension since activities such as agro forestry in the intervention zone are important and mainly coordinated by KFS and the ministry of Agriculture and Extension.
- Draft should be open so that any NGOs is able to work with the community instead of limiting to one.

#### **Min 17/11/2012: Area chief speech**

The area chief Mr, Rigga expressed satisfaction for the co-operation between the stakeholders which had contributed to the progress witnessed in the development of the draft. He asked the community representatives to be good ambassadors and role models in CFA affairs. He assured them that his office will continue working with them to ensure that the life of the community is uplifted. He asked the community groups to continue supporting other institutions that were sacrificing so as to improve the people's welfare.

### Min 17/11/2012: A.O.B and closing remarks

- One member who is an village elder from Gazi, Mr Khamisi Dargube who had attended the meeting as an observer, expressed gratitude at how the meeting was conducted. He said that he was happy to see that members discussed freely and expressed their interests which were captured in the draft. He said that he was happy to see that the plans were really focused and would ensure that the living standards of the communities were uplifted. He asked the community groups to always work with both government and non governmental institutions as they were in good position to provide the necessary leadership and connections with other support institutions.
- One member from the group asked why no area for firewood collection was set aside during the zoning exercise. In response, the zonal manager said this was an important concern since the community depended heavily on wood fuel. She asked the CFA to consider the issue and include in the programme.

### Min 19/11/2012: Adjournment

There being no other business, the meeting ended at 4.45 p.m with a word of prayer led by sheikh Salim

### Signature

CFA Chairperson: Mr Athumani Suleimani

Signature\_\_\_\_\_Date\_\_\_\_\_

Acting secretary: Mr. Michael Njoroge

Signature\_\_\_\_\_Date\_\_\_\_\_

### Attendance list

	<b>NAME</b>	<b>ORGANIZATION</b>
1.	Nafasi Mfahaya	KFS- Zonal Manager
2.	Silas Tsuma	KFS- Area Forest Extension Officer
3.	Michael Njoroge	KMFRI-Swahili Seas Project
4.	Elias Kimaru	WWF
5.	Noel Mbaru	KMFRI- Project Coordinator
6.	Forcus Mutua	Agriculture Officer
7.	Kisaka Mwakidimi	Livestock development
8.	Ali Rigga	Area Chief
9.	Benz Karisa	CFA-Secretary
10.	Saidi Mwatsumbu	Kinondo Mangrove Group
11.	Omari Mwang'ombe	Chale Jeza Group

12.	Fatuma Hamisi	Gogoni Forest Conservation
13.	Fatuma Hamisi	Baraka Conservation Group
14.	Ramadhan Rashidi	Gazi Einv. Group
15.	Geoffrey Njure	Gogoni Forest Conservation Group
16.	Zaitun Abdallah Lali	Gazi Women Mangrove Boardwalk
17.	Abdallah Bakari	CFA-Treasurer; Kinondo chale Marine Conservation
18.	Khamisi Dargube	Gazi Land Committee
19.	Omari Mwachikoi	Mwangaza Group
20.	Juma Saidi Mkuu	Gazi Fishermen CBO
21.	Alex Kilawa	Shauri Moyo S.H.G
22.	Mwanatumu Abdallah	BMU-Gazi
23.	Idd Bomani	Village Chair Gazi
24.	Dala Enea	Gazi Environmental Youth Group
25.	Salim Juma	Mikoko Pamoja
26.	Athumani Bombori	CFA Chairman
27.	Hafsa Mohammed	Mikoko Pamoja- Treasurer
28.	Moh'd Mwarandani	Mikoko Pamoja- Chairperson
29.	Riziki Salim	Mikoko Pamoja-Secretary

#### **Absent with Apology**

1.	Hamisi Mwarandani	Chairman Makongeni village
2.	Omari Waziri	DGSDO

#### **Appendix 7: List of people involved in writing the management plan**

<b>Name</b>	<b>Institution</b>	<b>Designation</b>
Dr. James G. Kairo	KMFRI	Principal Research Officer
Nafasi Mfahya	KFS	Zonal manager, Kwale
Dr. Joseph K. Langat	KMFRI /Edinburgh Napier	Research officer
Michael N. Githaiga	KMFRI/Swahili Seas Project	Assistant Research officer
Caroline Wanjiru	KMFRI	Assistant Research officer
Noel Mbaru	KMFRI	Coordinator Mikoko Pamoja
Elias Kimaru	WWF	WWF- Representative, Kwale
Vitalis Osodo	KFS	Forester, Buda Forest Station
Silas Tsuma	KFS	Forester, Msambweni, Rural

**Appendix 8: Minutes of the Gogoni Gazi CFA meeting held on 22nd January 2013 at Kenya red cross offices, Kwale**

**PARTICIPANT LIST**

<b>NAME</b>	<b>GROUP</b>
1. Samuel Benzi Karisa	Gogoni Forest Conservation
2. Ramadhani Rashid	Gazi Environmental Youth Group
3. Athumani Suleiman	CFA Chairman
4. Noel Mbaru	Mikoko Pamoja
5. Micheal Njoroge	KEMFRI-Gazi
6. Mariam Bakari	Mwangaza Farmers Group
7. Hamisi Mwarandani	Makongeni Village Head
8. Athumani Maina	Fioni Village Head
9. Juma Mwarandani	Makongeni
10. Khamisi Jumanne	Gazi
11. Vitalis Osodo	KFS
12. Mohammed Mwarandani	Mikoko Pamoja
13. Idd Bomani	Gazi Village Head
14. Ibrahim Malaya	Gazi village elder
15. Neema Suyu	WWF

**Min 1/1/2013: Preliminaries**

The meeting started at 10.40 am with a word of prayer led by Mr Ibrahim Maraya. The meeting moderator Mr Noel Mbaru CFA thanked the members for the attendance and welcomed them for an introduction session. The moderator took the participants through the day's programme. He further noted that the invitations were drawn from the CFA, KFS, WWF, OOP and KMFRI and then welcomed the CFA chairman to give an opening speech.

**Min 2/1/2013: CFA CHAIRMAN'S SPEECH**

The chairman of the community Forest Association (CFA) Mr. Athumani Suleimani thanked the members for the attendance and on behalf of the CFA thanked everybody and the institutions that have contributed in the preparation of the Gogoni-Gazi participatory management plan.

He outlined the agenda of the meeting as follows

- a. Role of CFA in drafting PFMP & the Forest Act 2005 requirements
- b. Current status of the Draft Gogoni-Gazi Forest Management Plan & what is needed
- c. Discussions to rectify the draft document & designing a CFA logo
- d. How far has the community known about role of CFA and the PFMP
- e. Preparations for the launching of management plan and preparations for the signing of management agreement
- f. Discussion on what has to be done to educate the community on the importance & implementation of the draft participatory management plan
- g. A.O.B

**Min 3/1/2013: Presentation from KFS (Mr. Osodo): Roles of CFA on PFMP, regulations**

Mr. Osodo started by informing the members that there was need to review the whole PFM process so that all members could know how it started and the current status. He then took the members through the whole PFM process.

- PFM process
- Factors to consider in the PFM process

**Min 4/1/2013: Current status of the Draft Gogoni-Gazi Forest Management Plan & what is needed**

Mr Njoroge who has been the chair in the task team working on the management draft gave a chronology of the major activities in the development of the current draft of the participatory management plan. He informed the members that the first consultative meeting on the PFMP was held in May 2012. This was followed by another meeting in July where the members had not yet started the process. This was because of lack of funds and the technical capacity required by the process. Actual work started in earnest in Sept 2012 when the CFA wrote to KMFRI and other partners seeking assistance to help them draft the MP. He informed them that the CFA letter was accepted and the appointed team hit the ground. He underscored the fact that that Gogoni–Gazi document writing near record breaking when compared to that of other groups due to a wide range of challenges. He told the members that financial support for the preparation of the draft was from the Swahili Seas project through Kenya Marine and Fisheries Research Institute. Other institutions that had been on the lead included KFS and WWF. He told the participants that the draft MP after endorsement by the community on 13<sup>th</sup> Dec 2012 was sent to KFS in Nairobi where it was reviewed and returned with some few corrections to be made before the final draft is sent back for approval. Upon this, KFS will then plan launching of the document with community. He emphasized the need for the CFA to own the document at every stage and to keep on updating the community members. He then took the members through the Drafted plan.

The Key issues to be reviewed were as follows

- Insertion of the CFA logo on the cover page
- Project duration is 2013-2017 and not 2013-2018 as indicated in the document
- History of the forest reserve to be included
- Indicate gazette notice no. and the year it was done (Gogoni Forest Reserve)
- Biophysical characteristics (geology, soil types and topography for both forests)
- Resource mobilization
- Institutional arrangements for plan implementation to be included
- Status of revenue generation from Gogoni and Gazi forests
- Define roles and responsibilities of the stakeholders (mentioned in the plan) who will be working with the CFA

In the discussions that followed members worked on the other sections but key areas notably, History of Gogoni Forest, gazettement of both forests and revenue generation were identified as problematic due to lack of reliable data. However it was agreed that the forester will make a follow up and try to obtain this information.

**Min 5/1/2013: How far does the community know about the operations of the CFA and the PFMP?**

Mr Benzi Karisa the CFA secretary said that several consultative meetings have been held through the user groups which have enlightened the members on the whole process of PFMP. HE also said that they are conversant of the contents of the management plan. He however said that the CFA has been facing a lot of challenges. Among them were that some members of the user groups do not attend the meetings hence decision is reached by just the representatives of these groups. He stressed that public participation is essential in the PFMP process. In reaction the following concerns arose

- Which measures are the Gogoni adjacent communities taking to ensure that there are no illegal activities taking place in the forest? The area forester responded that his office was vigilant and had made several arrests in the past. He however told the gathering to hasten the completion of the draft so that the CFA can have the legal mandate for policing and prosecuting the violators.
- Logging of coconut trees in Gazi area has become a big problem as the loggers obtain permits from CDA which is not in line with the KFS rules. The forester again responded by saying that this issue was also a big problem since coconut forests were within the agricultural department while KFS has the permit to issue movement permits for timber. He expressed concern that another institution sic (CDA) had made a permit almost similar to that of the KFS and was issuing people with permits which had created confusion that had ended at the courts. Members agreed that this problem need to be sorted out with the agricultural department.

- How does the secretariat deal with some of the members who do not attend meetings regularly? Are there penalties for this? Mr Benz responded that so far, they had not had a mechanism of solving that but

**Min 6/1/2013: Presentation from KFS (Mr. Osodo): Launching of the Management Plan and preparations for the signing of the Management Agreement**

Mr Osodo in his presentation said that the management plan will be signed during the launching by the Director KFS and the community (CFA). In this regard community sensitization is crucial to ensure that all the CFA members are aware of its content. After the launching what will follow is the drafting of the management agreement which (defined roles of the CFA and KFS). Management plan is the one which will be used in drafting the MA. The MA stipulates how the community will be sourcing the forest products sustainably.

**Min 7/1/2013: What need to be done for successful launching?**

- Community awareness (Gogoni and Gazi) on the launching of the MP.
- Venue selection
- Involve the OOP and the user groups in the community awareness
- Entertainment and refreshment

**Way forward:**

- Community sensitization – CFA in collaboration with the chief’s office will organize sensitization meeting
- The task team should finalize the draft management plan and submit to KFS before 25/1/2013
- Plan for launching of the management plan when accepted by KFS will be coordinated by CFA office

**Min 7/1/2013: Conclusion**

**Chairman CFA:** Thanked the members for attending the meeting and urged the village chairmen to help in the sensitization of the communities on the MP. He further welcomed **Mr Ibrahim Malaya** the following members to give a concluding remark. Mr Maraya said that instead of laying the blame on the community, we should blame the leaders because they attend meetings but they do not go back and share the information back home. He also added that the leaders should work closely with the community and if possible give them incentives if need be.

**Min 7/1/2013: Vote of thanks**

This was moved by the village chairman for Makongeni Mr Hamisi Mwaradani He started by thanking the partners who have struggled to draft the MP which would have been a very heavy load to the community. He urged the members to continue collaborating with the stakeholders to reach for success. Village elders should also join hands during their sensitization meetings.

**Min 7/1/2013: Adjournment**

Having no other business, the meeting was adjourned at 3.45pm with closing prayers from Mr Ibrahim Maraya