

**THE REVOLUTIONARY
GOVERNMENT OF ZANZIBAR**



MINISTRY OF AGRICULTURE, LIVESTOCK AND ENVIRONMENT

**DEPARTMENT OF COMMERCIAL CROPS, FRUITS AND
FORESTRY**

Zanzibar National Forest Resources Management Plan 2008 – 2020



2008

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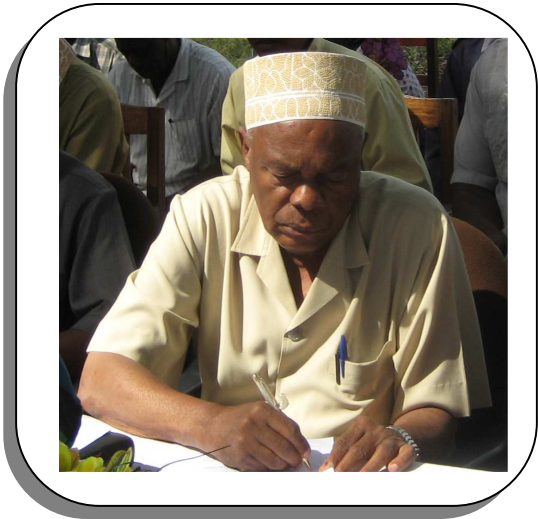
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Message from the Minister



The Zanzibar National Forest Policy set forth goal to protect, conserve and develop forest resources for the social, economic and environmental benefit of present and future generations of the people of Zanzibar. This plan translates the goal into a series of systematic objectives that together strive to enhance the physical, social and economic environments of Zanzibar.

A major strength of this plan is that it develops connections between other sectors, such as fisheries, tourism, land, water and local administration, and encourages these groups to develop a collaborative, productive spirit. We believe that this effort will result in a strong foundation from which the plan can be implemented. In the end, we hope this spirit will be the driving force and result in successful achievement of project objectives and goals, and ultimately more benefits for the people of Zanzibar.



Hon. Burhan Saadat Haji
Minister of Agriculture, Livestock and Environment
Zanzibar

Message from the Forest Administrator

The National Forest Resources Management Plan 2008-2020 has been developed to meet the legislative requirements of the Zanzibar Forest Resources Management and Conservation Act no. 10 of 1996, as well as addressing the commitments made to the Eastern Africa Coastal Forests Eco-region Strategic Framework for Conservation 2005-2025. The goal of this plan is to enhance the national forest resource base and its contribution to local economic development without compromising the natural environment. We believe that this is an ambitious plan, but achievable as long as the national and the district land use plans recognise and support the forest conservation and development objectives as outlined in this plan.



In the process of developing the plan, a clear set of priority targets, strategies for implementation and monitoring were developed. Through intensive collaboration with stakeholders, operating principles for the plan were established with each stakeholder group, and these efforts are expected to play an important role in the implementation of the plan.



Bakari S. Asseid (Ph.D)
Forest Administrator

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Abbreviations and Acronyms

CEPF	Critical Ecosystem Partnership Fund
DCCFF	Department of Commercial Crops, Fruits and Forestry, Zanzibar
EMSDA	Environment Management for Sustainable Development Act
FAO	Food and Agricultural Organization of United Nations
FinnIDA	Finnish International Development Agency
FNPP	FAO Netherlands Partnership Programme
FRMCA	Forest Resources Management & Conservation Act
GDP	Gross Domestic Product
JCBNP	Jozani-Chwaka Bay National Park
JOCDO	Jozani Credit Development Organisation
MACEMP	Marine and Coastal Environment Management Programme
MAI	Mean Annual Increment
MDGs	Millennium Development Goals
MICA	Misali Island Conservation Area
SONARECOD	Society for Conservation of Natural Resources and Development
UNDP	United Nations Development Programme
URT	United Republic of Tanzania
USAID	United State Agency for International Development
WWF	World Wide Fund for Nature
ZAZOSO	Zanzibar Zoological Society
ZSGRP	Zanzibar Strategy for Growth and Reduction of Poverty

THE PLAN (2008 – 2020)

This plan seeks to undertake three programmes which address six operational targets and their corresponding goals, objectives, strategies and activities. The purpose is to meet the demand of the Zanzibar national forest policy frameworks, contribute to the realization of the Vision 2020, ZGPRP, MDGs and ongoing policy reform affecting forestry development in Zanzibar.

VISION OF THE PLAN

“Strengthen the forest sector and its contribution to peoples’ living standard ”

MISSION FOR THE PLAN

“Increase resources capacity and effective delivery”

PROGRAMMES

The nature of this plan is a comprehensive one. For the purpose of implementation, the plan has been separated into three major programmes; Capacity development, Biodiversity and Integrated Conservation and Sustainable Production and Utilization. Each programme comprises operational target of which addresses goals, objectives, strategies and activities (Figure 14). The contents of each programme are fundamentally overlapping, interlinked and interrelated.

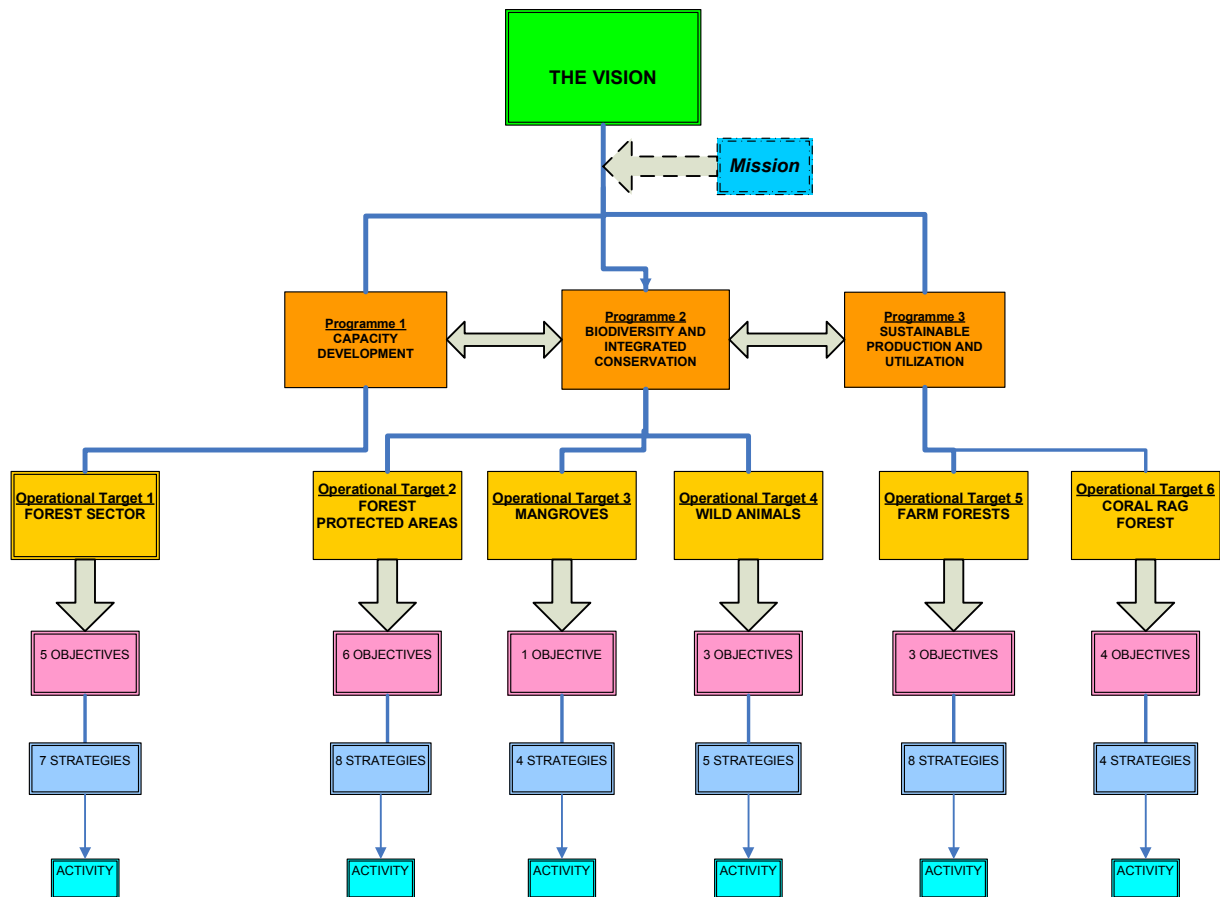


Figure 14. The Plan Framework

Programme 1: Capacity Development

Key players in forest sector development are constrained with several issues and challenges that lead to ineffective services delivery and weak coordination. This particular target addresses one goal, five objectives, seven strategies and a number of activities to overcome issues and constraints related to capacity development in the forest sector of Zanzibar.

Operational Target 1: Forest Sector

The increasing need for effective forest services delivery and production prompted the development of this particular operational target. The target takes into account capacity development, resources mobilization, planning, monitoring & evaluation, research & development, facilitation and compliance of forestry policy frameworks (Figure 15 and Table 2).

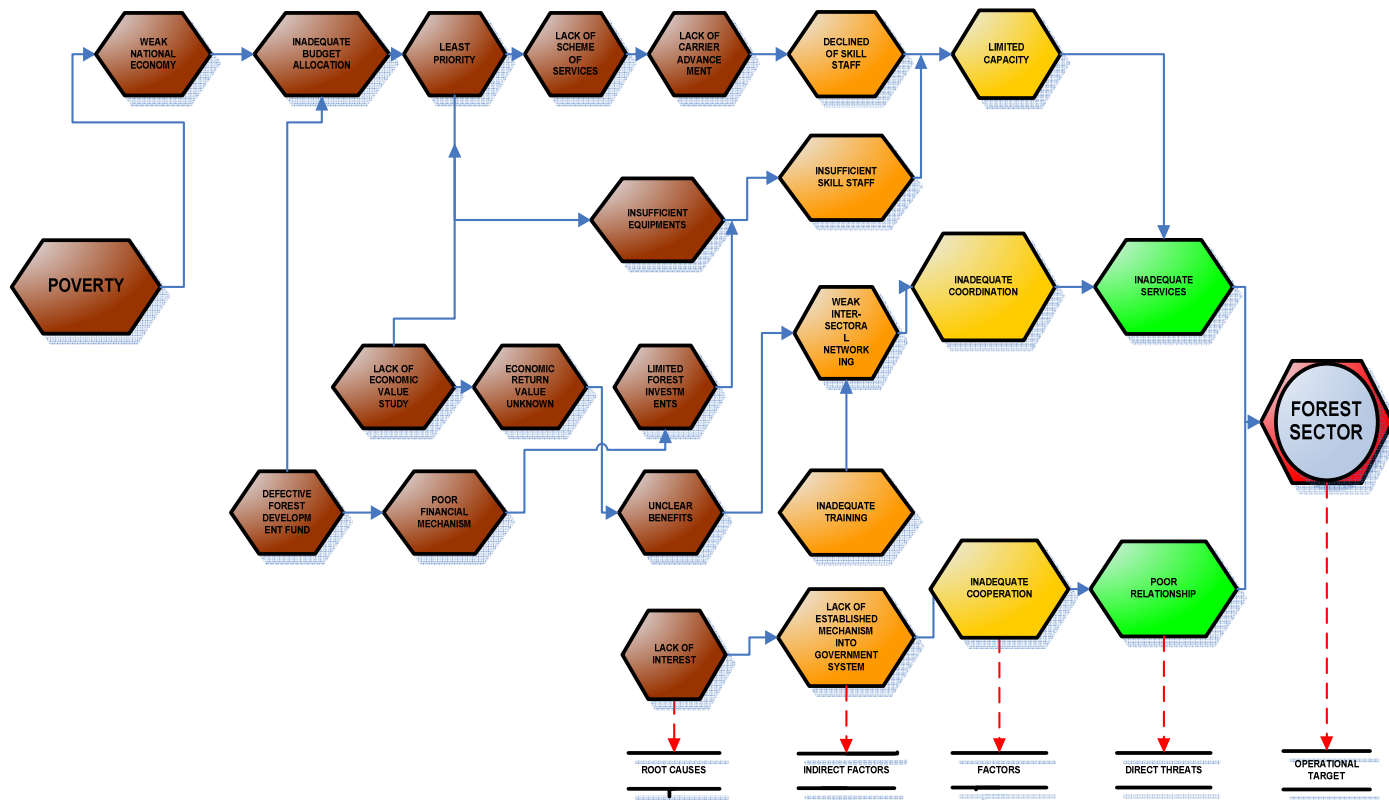


Figure 15. Result Chain for Forest Sector Development

Table 6: Operational Target - Forest Sector

Goal 1: By 2020, capacity of forest sector is strengthened and delivery of products and services improved by at least 50%.		
Objective	Strategy	Activity
1. By 2015, working facilities for forest sector are improved.	Diversification of sources of funding.	<ul style="list-style-type: none"> • Conduct needs assessments • Diversify sources of revenues • Solicit funds from government and development partners. • Advocate for costs and benefits sharing arrangements
	Contractual procurement	<ul style="list-style-type: none"> • Procure equipments and tools • Develop infrastructure • Maintain infrastructure and assets regularly
2. From 2010, number (level) of investments in forest programmes and projects increased by 10% each year.	Public-Private Partnership	<ul style="list-style-type: none"> • Study the feasibility for forest service payments • Update legal and regulatory frameworks of the forest sector • Establish and advocate for payment of forest services • Negotiate and fulfil roles and responsibilities for public-private sector engagement • Promote investment opportunities in forestry
3. By 2010, enabling environment for the intra and inter-sectoral networking is improved.	Communication enhancement	<ul style="list-style-type: none"> • Establish and enhance baseline data • Develop a system of effective use of Information and Communication Technology (ICT) • Develop an effective system for documentation and interpretation • Establish appropriate collaboration linkages with key actors • Fulfil international obligations on forestry related agendas
4. From 2010 each year, the number and quality of forestry related research increased by 10%.	Promoting demand driven research	<ul style="list-style-type: none"> • Conduct research needs assessment • Develop and implement research programmes and proposals/profiles • Raise funds for research • Disseminate, share and use research results
	Stimulation and motivation of research engagements	<ul style="list-style-type: none"> • Establish motivation schemes for researchers • Improve technical paper series and website • Publish research findings in referenced journals • Encourage foreign-local research partnerships
5. By 2015, the number of forestry and related professionals and supporting staff increased by 5%.	Human resources development	<ul style="list-style-type: none"> • Conduct training needs assessment • Develop and implement training programmes • Develop and implement motivation scheme • Recruit and retain professional staff

Programme 2: Biodiversity and Integrated Conservation

This programme intends to improve the livelihoods of Zanzibaris through sustainable management of wild animals and protected areas network, focusing on wetlands, soil, water and floral resources. The nature of intervention under this programme will reflect the national and global agendas on biodiversity and integrated conservation.

Operational Target 2: Protected Areas

The Forest Protected Areas (FPAs) of Zanzibar are endowed with quality ecosystems of high and unique biodiversity values illustrating the natural and cultural heritage of Zanzibar. These include endemic species and subspecies such as red colobus monkey, Ader’s duicker, *Cassina jozani*, *Graphium parthao mackiei*, *Crysalidocarpus pembanus*, *Ensete spp*, and unique ecosystems such as coral rag thickets and mash lands. There are six FPAs, covering a total area of 11,960ha. This particular target addresses six objectives, eight strategies and a number of activities (Figure 16 and Table 6).

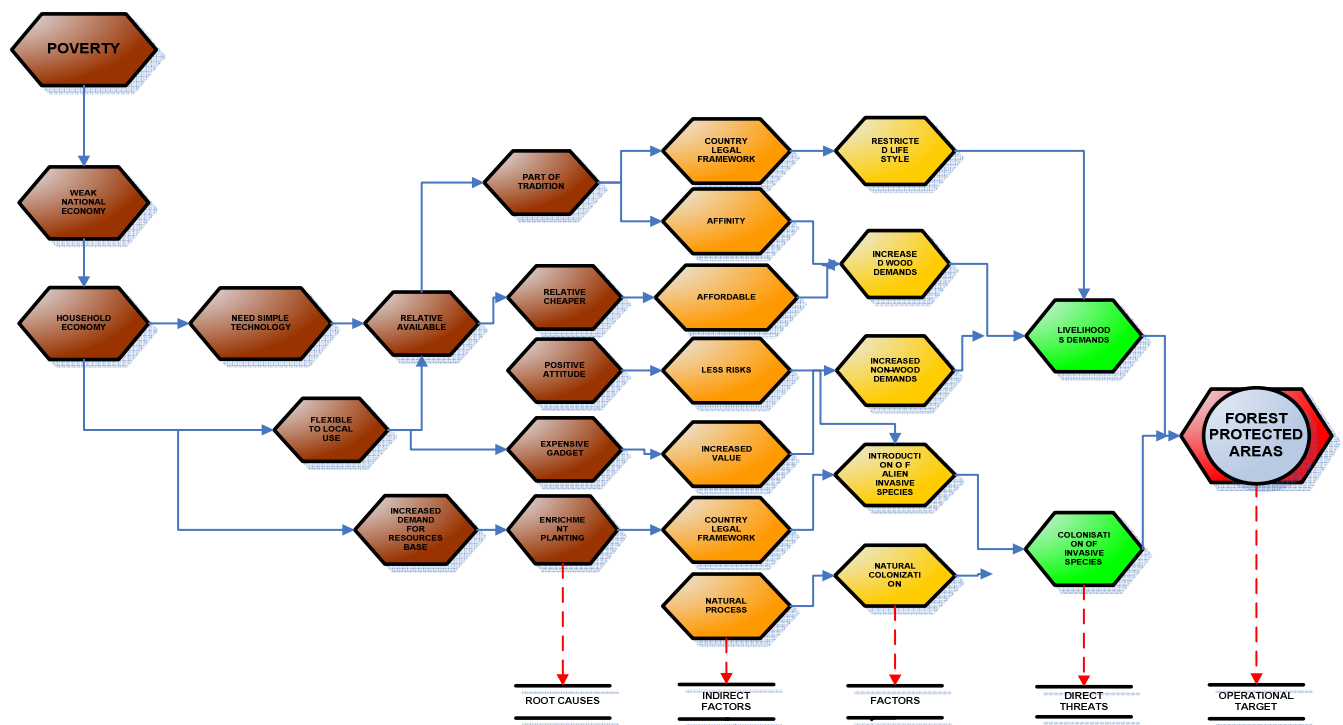


Figure 16. Result Chain Analysis for Forest Protected Areas

Table 7: Operational Target – Protected Areas

Goal: By 2020, all forest protected areas of Zanzibar are sustainably managed and increase their current contribution to the community livelihoods by 10%.		
Objective	Strategy	Activity
1. By 2012, Forest Protected Areas System is effectively functioning.	Networking forest protected areas	<ul style="list-style-type: none"> • Identify forest areas and corridors for the system • Develop and enforce legal frameworks for forest protected areas system • Develop capacity for FPAs system management, including forest management information system • Formulate and implement management arrangements • Design and implement monitoring systems • Advocate for operationalization of the Zanzibar unified protected areas system
2. By 2018, key species in protected areas are protected and glades covered	Protecting key species	<ul style="list-style-type: none"> • Conduct biodiversity surveys in forest protected areas to determine key species • Conduct species mapping • Prepare and implement protection plan • Monitor key species performance
	Promoting regeneration	<ul style="list-style-type: none"> • Enrichment planting of native species • Aid natural regeneration
3. By 2020, at least 60% of each invasive alien species in protected areas eradicated or controlled.	Adopting appropriate technologies	<ul style="list-style-type: none"> • Survey and document distribution and abundance of invasive alien species • Pilot and adopt innovations • Prepare and implement eradication plans
4. By 2015, all forest protected areas are functioning as ecotourism sites.	Developing and promoting attractions.	<ul style="list-style-type: none"> • Identify potential attractions for ecotourism in and around protected areas • Develop FPAs business plans • Promote ecotourism attractions • Build necessary capacity i.e., infrastructure, interpretation materials and tour guiding

<p>5. By 2020, the management of protected areas have incorporated all non-consumptive communities' rights.</p>	<p>Participatory management planning</p>	<ul style="list-style-type: none"> • Facilitate the formation, strengthening and participation of community forest conservation groups • Identify and grant access of non-consumptive rights • Prepare and implement guidelines on non-consumptive rights • Develop and implement system to enforce guidelines
<p>6. By 2015, at least 60% of households around protected areas get their consumptive/extractive forest products outside protected areas.</p>	<p>Creating buffer system</p>	<ul style="list-style-type: none"> • Undertake studies on livelihoods for communities around forest protected areas • Develop and promote IGAs for communities around protected areas • Increase supply of forest produces from forest plantations, farm forests and woodlots • Encourage and facilitate households and major users to adopt efficient use of wood energy and switch to alternative sources • Raise awareness on alternative to energy sources • Provide suitable planting materials
	<p>Sustainable harvesting of non-wood forest produce</p>	<ul style="list-style-type: none"> • Conduct regular inventories, set and enforce quotas • Monitor quota system

Operational Target 3: Mangroves

Despite their economical, social and ecological importance, mangroves are under enormous utilisation pressures that threaten their existence. Exploitation for woodfuel, building materials, fish farming, settlements and salt making are downgrading the size and quality of mangrove forests. This particular target addresses three objectives, four strategies and a number of activities (Figure 17 and Table 7).

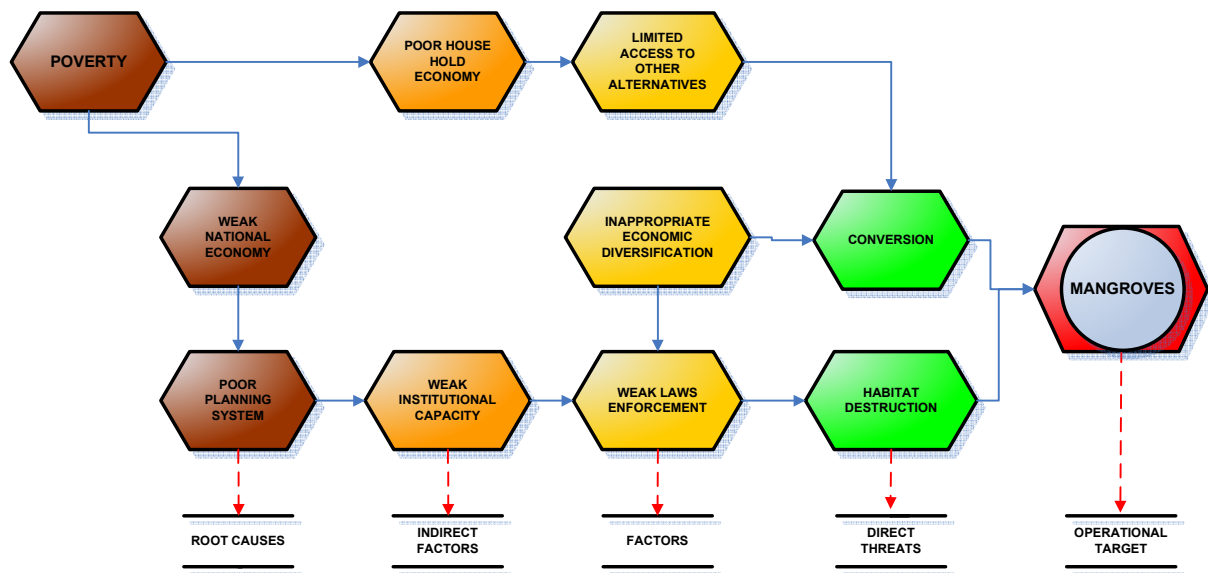


Figure 17: Result Chain for Mangroves

Table 8: Operational Target - Mangroves

Goal: By 2020, at least half of the mangrove ecosystems on Zanzibar are under effective and sustainable management		
Objective	Strategy	Activity
1. By 2015, at least 50% of mangrove areas effectively managed and open areas rehabilitated.	Promoting regeneration	<ul style="list-style-type: none"> • Conduct country-wide mangrove resources and socio-economic surveys • Conduct research, disseminate information and adopt best management practices • Monitor and map open and succession areas • Raise awareness on opportunities and related IGAs • Set and implement motivation scheme for best practices • Establish mangrove resources data base • Develop, update and implement mangrove management plans
2. By 2015, at least 50% of mangrove forests outside designated protected areas are under effective community management.	Strengthening and broadening community forest management agreements (CoFMAS)	<ul style="list-style-type: none"> • Advocate for CoFMAs in national land use planning • Facilitate the establishment, implementation, monitoring and review of CoFMAs • Building capacity of VCCs
3. From 2012, wood demand from the mangroves of Zanzibar is reduced by at least 10% annually.	Adopting substitutes and alternatives	<ul style="list-style-type: none"> • Conduct study and adopt alternatives and substitutes to mangrove wood • Advocate for removal of taxes on implements and accessories related to alternative sources of wood energy • Increase production of wood from woodlots and plantations • Encourage importation of mangroves wood products
	Integrated Coastal Zone Management	<ul style="list-style-type: none"> • Advocate for development and implementation of ICZM plans emphasizing eco-friendly enterprises, control pollution, and beach erosion • Raise the profile of coastal forests as integral part of ICZM and Climate Change frameworks.

Operational Target 4: Wild Animals

In spite of its size, Zanzibar harbours a significant variety of small wild animals (carnivorous and herbivorous), amphibians, reptiles, insects and birds which are endemic and under severe threats due to indiscriminating hunting and habitat destruction. Interventions related to habitats destruction are addressed under the operational targets of protected areas, coral rag forests, mangroves and farm forests. This target therefore, addresses three objectives, four strategies and an array of activities related to wild animals (Figure 18 and Table 8).

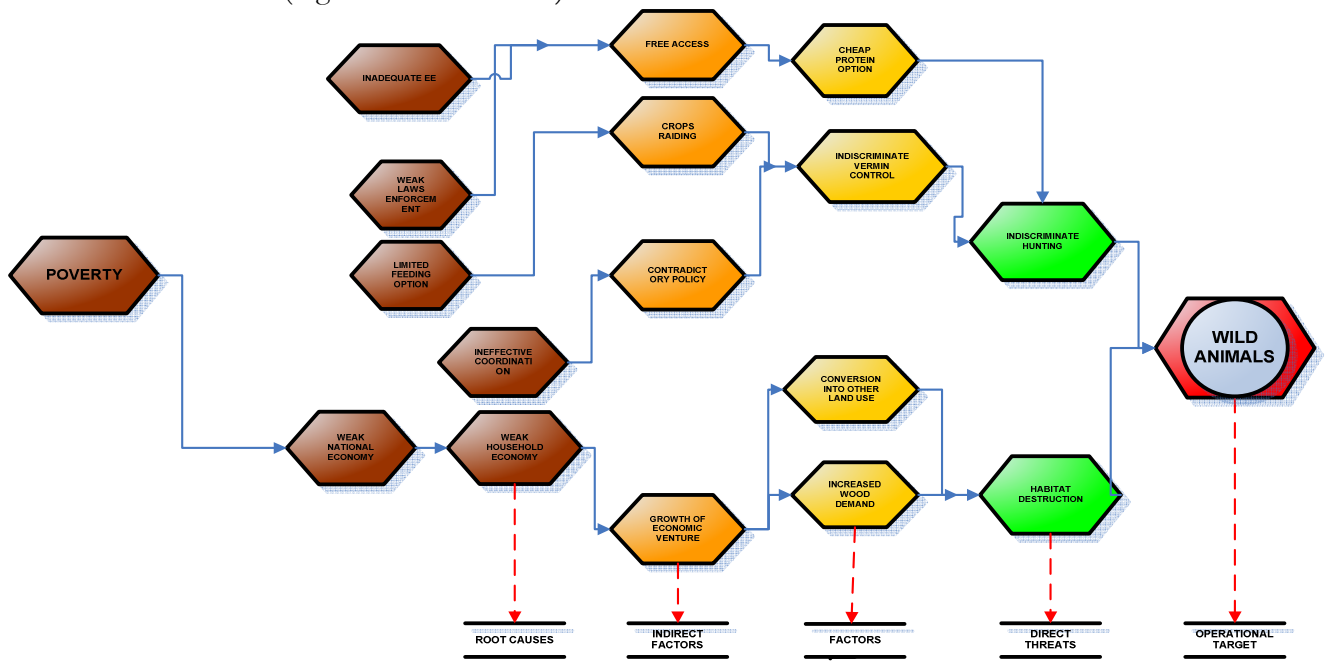


Figure 18: Result Chain for Wild Animals

Table 9: Operational Target – Wild Animals

Goal: By 2020, the management of wild animals and their habitats is improved and the population of each flagship species at least stabilises at the current level of population.		
Objective	Strategy	Activity
1. By 2015, the declining population trend of each flagship species stopped.	Recovery programme for each flagship species	<ul style="list-style-type: none"> • Conduct studies on demographics and behavioural changes on flagship species • Draw up and implement recovery plan for each flagship species • Formulate and review policy frameworks on wild animals • Build necessary capacity on wildlife management • Raise public awareness on flagship species and the values of wildlife
2. From 2010, incidences of indiscriminate hunting are reduced by at least 10% each year.	Cultivating compliance of enforcement systems	<ul style="list-style-type: none"> • Study the population status, demand and supply of bush meat species • Design, implement and enforce harvesting system for each bush meat species • Set incentive system for informers on habitat destruction and illegal hunting • Incorporate issues of wild animals in the development and enforcement of CoFMAs
	Wild meat sourcing alternatives	<ul style="list-style-type: none"> • Raise awareness on conservation values of wild animals and birds • Advocate for alternatives for wild meat • Propagate potential wild meat species for consumption • Build necessary capacity on protection of wild animals
3. From 2010, killings in the pretext of vermin control reduced by at least 5% annually.	Coordinating nation-wide vermin control	<ul style="list-style-type: none"> • Study and document the ecological values of vermin species • Train and raise awareness on the values of wild animals • Formulate, implement and review guidelines on vermin control • Put appropriate vermin control setup • Monitor vermin control

Programme 3. Sustainable Forest Production and Utilization

This programme aims at meeting the market demand and efficient utilisation of forest products, including non-wood. Much of these products are expected to be sourced from sustainably managed mangroves, forest plantations, woodlots, farm and natural forests. Consideration is made on wood energy and nutritious food supply as a contribution towards the attainment of Zanzibar’s energy and food security.

Operational Target 5: Coral Rag Forests

This particular target aims at addressing threats towards coral rag forests. These include an increasing demand for woodfuel, materials for building and handcrafting, medicinal plants, indiscriminate hunting, fire, land for agriculture, road network, settlements and tourist hotels. The target has four objectives, four strategies and a number of activities (Figure 19 and Table 9).

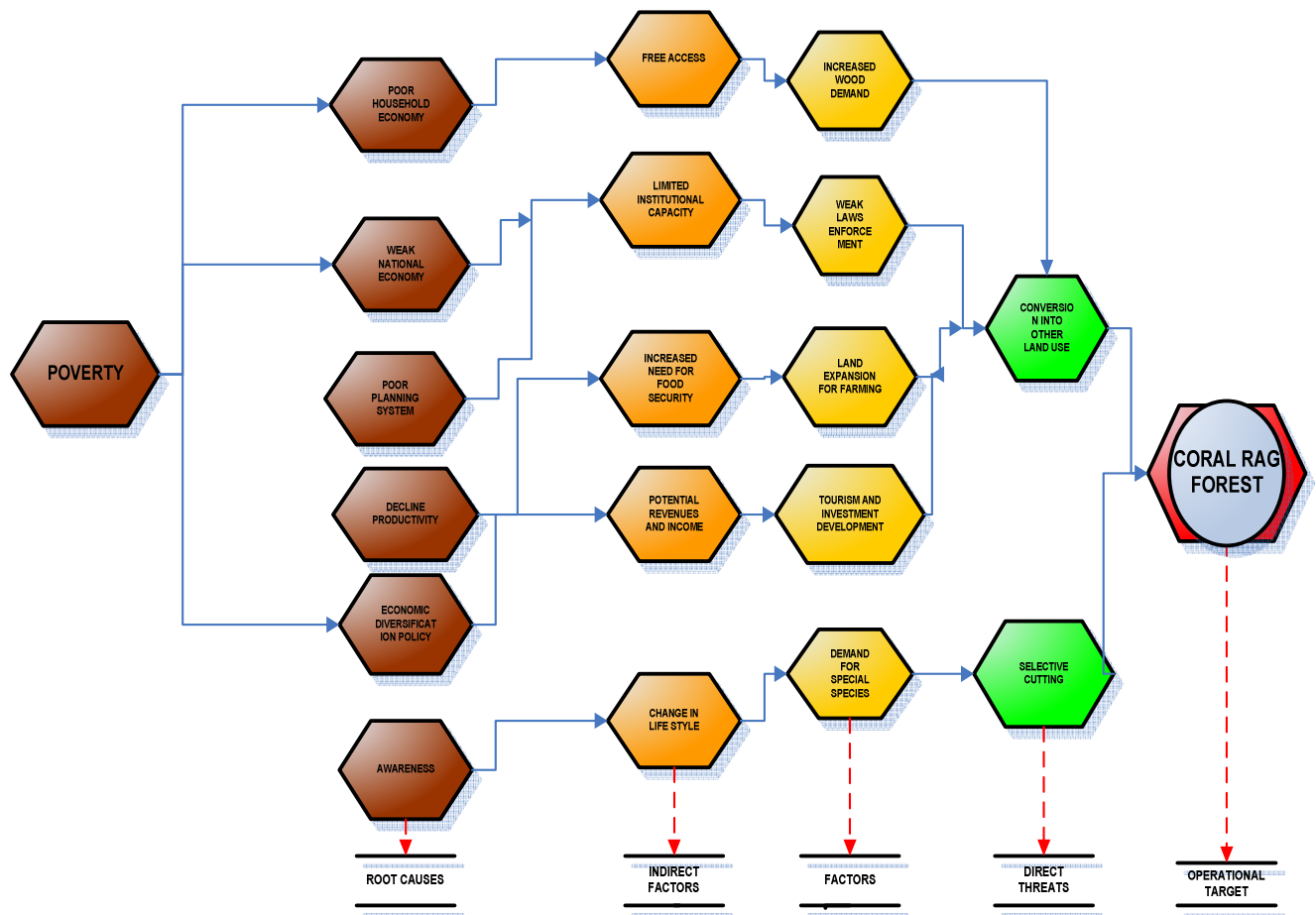


Figure 19. Result Chain for Coral Rag Forest

Table 10: Operational Target – Coral rag forest

Goal: By 2020, at least 50% of the existing coral rag forests in Zanzibar are sustainably managed.		
Objective	Strategy	Activity
1. By 2015, the proportion of wood dependency by major users (bakeries, hospital, hotels, barracks, restaurants, boarding schools and urban households) as a source of energy is reduced at least by 50%.	Adopting alternative sources to wood energy	<ul style="list-style-type: none"> • Advocate for favourable energy policy actions • Adopt wood energy saving programmes • Conduct inventory and establish data base on the features of coral rag forests • Develop, update and implement coral rag management plans. • Conduct research on alternatives and substitutes to woodfuel. • Raise awareness on the alternatives to wood energy, opportunities and threats facing coral rag forests
2. By 2015, at least 50% of the unplanted designated plantation areas are planted with trees and effectively managed.	Adopting forest concession	<ul style="list-style-type: none"> • Raise awareness on private sector investment in forest plantations • Prepare, update and implement forest management plans • Improve nursery and plantation infrastructure including roads and buildings • Produce adequate and quality planting materials. • Develop and conduct a special tree-planting campaign
3. By 2015, at least 50% of open areas in coral rag forests are rehabilitated and effectively managed.	Promoting natural regeneration	<ul style="list-style-type: none"> • Conduct research, disseminate information and adopt best management practices. • Map and Monitor open and successions areas • Control shifting cultivation • Intensify agriculture and conservation farming • Promote appropriate IGAs. • Set and implement motivation scheme for best practices
4. By 2017, conversion of coral rag forest into other land uses is reduced by 50%.	Broadening CoFMAs	<ul style="list-style-type: none"> • Advocate for CoFMAs in national land use planning • Facilitate the establishment, implementation, monitoring and review of CoFMAs • Building capacity of VCCs on CoFMAs

Operational Target 6: Farm Forests

Farm forestry is mainly practiced for food security, supply of building materials, woodfuel and commercial cropping. Due to its complexity, farm forestry involves outstanding exotic and indigenous genetic materials. These genetic materials, however, are under threats due to land mining and over-cutting resulting in narrowing down of germplasm. This particular target addresses three objectives, eight strategies and a number of activities (Figure 20 and Table 10).

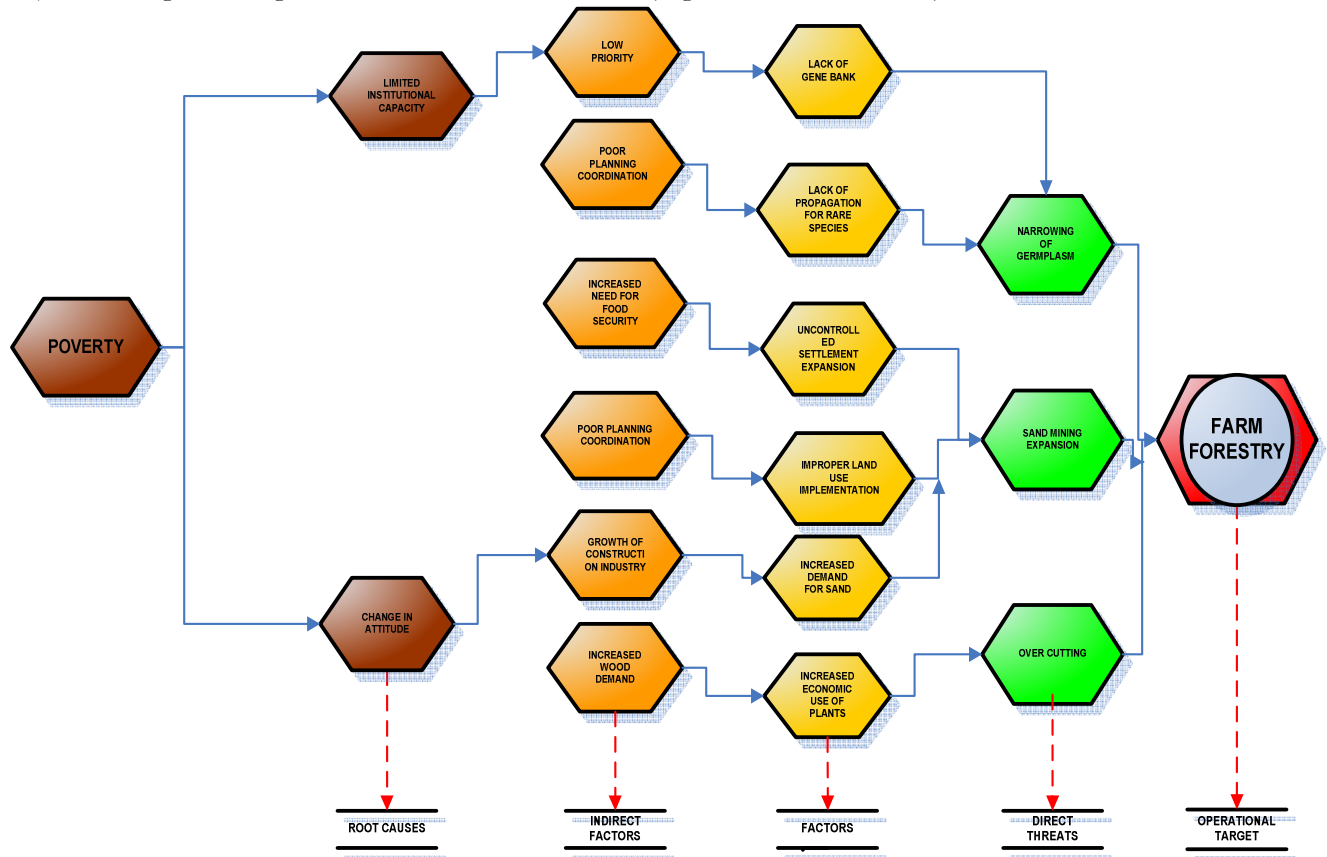


Figure 20. Result Chain for Farm Forestry

Table 11: Operational Target – Farm Forests

Goal: By 2020, all 10 districts of Zanzibar established and adopted integrated land use plans that incorporate conservation of soil, water and germplasm issues.		
Objective	Strategy	Activity
1. From 2015, germplasm base in farm forests broadened by at least 1% annually.	Enhancing breeding, propagation and conservation	<ul style="list-style-type: none"> • Conduct germplasm survey on farm forests • Establish and improve gene banks • Raise public awareness on the significance of broadened germplasm base • Multiply and restore threatened species • Improve capacity on breeding and propagation
	Increasing multicultural farming	<ul style="list-style-type: none"> • Practice organic farming and agroforestry • Promote integrated pest and crop management • Raise awareness on multicultural farming • Improve capacity on multicultural farming
2. By 2015, sites for sand extraction are part of land use planning in districts and 50% of extracted sites restored.	Supporting districts participatory land use planning	<ul style="list-style-type: none"> • Advocate for integrated land use planning • Initiate effective planning coordination • Identify potential sites for sand extraction considering restoration feasibilities
	Strategic district restoration planning	<ul style="list-style-type: none"> • Develop and execute participatory land restoration plans • Enforce laws on soil and water conservation and land reclamation • Develop guidelines for restoration of extracted sites • Raise awareness on restoration programme, watershed and soil conservation • Develop restoration monitoring plan • Advocate for Payment of Environmental Services (PES)
	Shifting from the traditional use of sands	<ul style="list-style-type: none"> • Conduct researches on substitutes and efficiency use of sand • Raise awareness on improved techniques on the use of sand for construction • Adapt substitutes to sand
3. By 2016, efficiency in use of wood resources from farm forests is improved by 20%.	Increasing wood conversion rates	<ul style="list-style-type: none"> • Search, promote and adopt improved technologies for wood conversion • Build capacity in wood conversion technologies
	Promoting appropriate use of wood resource	<ul style="list-style-type: none"> • Raise awareness on efficient utilisation of wood resources • Develop guidelines on appropriate uses of wood species
	Promoting wood based products importation	<ul style="list-style-type: none"> • Inspire for timber importation • Adopt alternatives to wood materials • Encourage public-private partnerships

STAKEHOLDER ANALYSIS

Stakeholder analysis takes into account roles and responsibilities of all organizations, agencies and firms that exist in Zanzibar and overseas which are directly or indirectly involved in the utilization and management of forest resources in Zanzibar. The stakeholders and their roles are summarized in the table below (Table 11).

Table 12: Stakeholder Analysis

RESPONSIBILITY	STAKEHOLDERS					
	Government agencies	Local authorities	Local Communities	Civil societies	Private sectors	International agencies /communities
1. Policy frameworks						
Formulation of policy, legislation and regulation						
Laws enforcement						
Revenue collection						
Sectoral planning and budgeting						
2. Core management activities						
Establishment						
Protection						
Harvesting and utilization						
3. Facilitation and monitoring						
Research and coordination						
Information system						
Extension and education services						
Human resources development						
Funding						

Roles of Different Stakeholders

The Zanzibar Government, civic organizations, international agencies, academic and research institutions were identified as major stakeholders in the forest sector development. Planning, decision making and implementation of their policies and programs have direct effects on forest sector development.

Policy Framework

- **Formulation of policy, legislation and regulation**

The central government is the key agent in the formulation of forestry related policies, legislation and regulations. The House of Representatives, Attorneys General, Director of Public Prosecution and Government printers are responsible for setting, approval, publishing and execution of forest legislation. Ministers responsible for the forestry and local authorities are also responsible for setting regulations, bylaws and agreements to manage local forest resources sustainably. International communities such as United Nation agencies are responsible for setting out conventions, treaties, and protocols to guide countries in the management of national and regional forestry related resources. Individual countries are then obliged to ratify and internalize these international agendas.

- **Laws enforcement**

The police force, judiciary, Director of public prosecution, civil societies, local authorities and communities are responsible for enforcement and general execution of the forest laws.

- **Revenue collection**

The Zanzibar Revenue Board, the treasury, local authorities and communities are responsible for creating sources, setting rates, collection and allocation of the public funds.

- **Sectoral planning and budgeting**

The House of Representatives, Ministry of Finance and Economic Affairs, and the Ministry of Agriculture, Livestock and Environment are responsible for planning and budgeting for forest sector development. The international community supports the government in development issues related to forestry management. Furthermore, there is community support in participatory planning and management of forest resources.

Core Management Activities

- **Establishment**

The Ministry of Agriculture, Livestock and Environment; Attorneys General Chamber; Local Government Authorities; and Department of Land and Survey are responsible for allocating land for forest development programmes through gazettement procedures. Local communities are responsible for creating forest related development activities such as woodlots, tree nurseries and community forestry areas.

- **Protection**

The fire brigades, armies, government institutions and general public are obliged to participate in fire prevention and fighting, illegal activities of forest resources in the natural forests, plantations and community woodlots. The Plant Protection department is responsible for identifying and controlling pathogenic diseases in tree nurseries and plantations. The Department of environment is responsible for setting guidelines in, non-renewable resources, beach erosion control and environment impact assessment (EIA) for newly established projects or investments. The International Community is responsible for setting guidelines and funding for the protection and conservation of ecosystems and species.

- **Harvesting and utilization**

Barracks, boarding schools, hospitals, hotels, bakeries and local communities are involved in the harvesting and utilization of forest resources for domestic and commercial use. Wood fuel, building materials and non-wood forest resources are the main products harvested from the natural forests and plantations. The private sector is also responsible for importation of forest products from outside Zanzibar.

Facilitation and Monitoring

- **Research and coordination**

The Chief Minister's Office; and the Zanzibar Agricultural Research Council are responsible for approval of research activities. Universities, Colleges, NGOs, Research Institutions and International Agencies are responsible for facilitation, coordination, dissemination and implementation of research related to forest resources. Local communities are also involved in participatory research activities.

- **Information system**

Dissemination and sharing of information relating to forest resources management is an obligation of all stakeholders. However, Central Government particularly national media holds primary responsibilities to ensure proper flow of reliable news and information to all parties.

- **Human resources development**

The Central Government particularly Department of civil services; NGOs and the International Community are responsible for facilitation, coordination, recruitment, training and improvement of workers' welfare in forestry resources management.

- **Extension and education services**

The Ministry of Agriculture, Livestock and Environment; the Ministry of Information culture and sport, Public and Private Media; the Commission of Tourism, ZIPA, NGOs, Local Communities and the Private Sector are responsible for public awareness raising and promotion of forest activities. International Agencies and Media support extension and educational services and publication of educational materials.

- **Financing**

All stakeholders are responsible for securing funding. However, the Central Government and international development partners play a major role in supporting forest related interventions.

RISK ASSESSMENT

This National Forest Resources Management Plan is expected to be implemented between 2008 and 2020. However unforeseen circumstances may emerge in the course of implementation of this particular plan. The assumptions and limitations built-in and take into account include continuous reforms on Political, Environmental, Socioeconomic and Technological sphere within the country and overseas. Nevertheless the roles and responsibilities of different stakeholders were carefully considered to mitigate the risks:-

- It is foreseen by this plan that, the Government will heavily invest in the infrastructure related to alternative energy such as a liquidified petroleum gas (LPG)/LNG storage tanks to reduce the demand for wood energy. Free taxation of LPG and Natural gas and the appliances will be affordable so that households and major users will quickly adopt this alternative energy.
- Foreign investment in the coastal zone of Zanzibar has steadily grown; however, the coastal vegetation cover should remain intact. Roles and responsibilities of key actors within the coastal zone will be accountable and transparent. Investors along the beaches, coral rag thickets, rivers and other critical ecosystems will comply with state rules and regulations. Moreover the public will realize the importance of developing sewage treatment plants adjacent to mangroves and other wetland ecosystems.
- The tourism sector is expected to growth in the country and carefully planned infrastructure development will continue to take place; this will guarantee considerable collection of revenue from the FPAs. Successful tourism will add value to the FPAs and increase support to community development and livelihood.
- Zoning in the FPAs enhances effective resources management. However the success of zoning is largely dependent on the public appreciation. An enabling policy environment, and support from the government and international agencies are central drivers for the development of a FPAs system.
- The Government will continue providing a favourable working environment and motivation package, including a promising scheme of service, in-services training, and recruitment and terminal benefits. These will guarantee retention of qualified and efficient human resources and sustenance of the forest sector.
- The Policy of decentralization will continue to have an effect on the process of planning and management of locally available natural resources. This will continue to enhance community participation, sense of ownership, responsibility, democratic processes and good governance.
- Eradication of invasive species will continue and greatly benefit the ecological processes and succession desirable to sustain Zanzibar's indigenous species and ecosystems.
- Successful implementation of income generating forest-related activities will improve the household economy which in turn will reduce household reliance on forest resources and environmentally detrimental activities.
- The need for advanced technology in forest development is inevitable; however, excessive use of technologies can have an adverse effect. The use of Power saws, chemicals, hybrid innovation, etc will be under close monitoring to ensure sustainable environmental management.

Assumptions

Population

By the end of this plan (2020), the population of Zanzibar is expected to grow up to 1,416,142 inhabitants; based on this projection, the following assumptions are drawn (Table 10 and Graph 1).

Table 13: Population size by years.

Year	Population size
2008	981,754
2009	1,012,188
2010	1,043,566
2011	1,075,917
2012	1,109,270
2013	1,143,658
2014	1,179,111
2015	1,215,663
2016	1,253,349
2017	1,292,203
2018	1,332,261
2019	1,373,561
2020	1,416,142

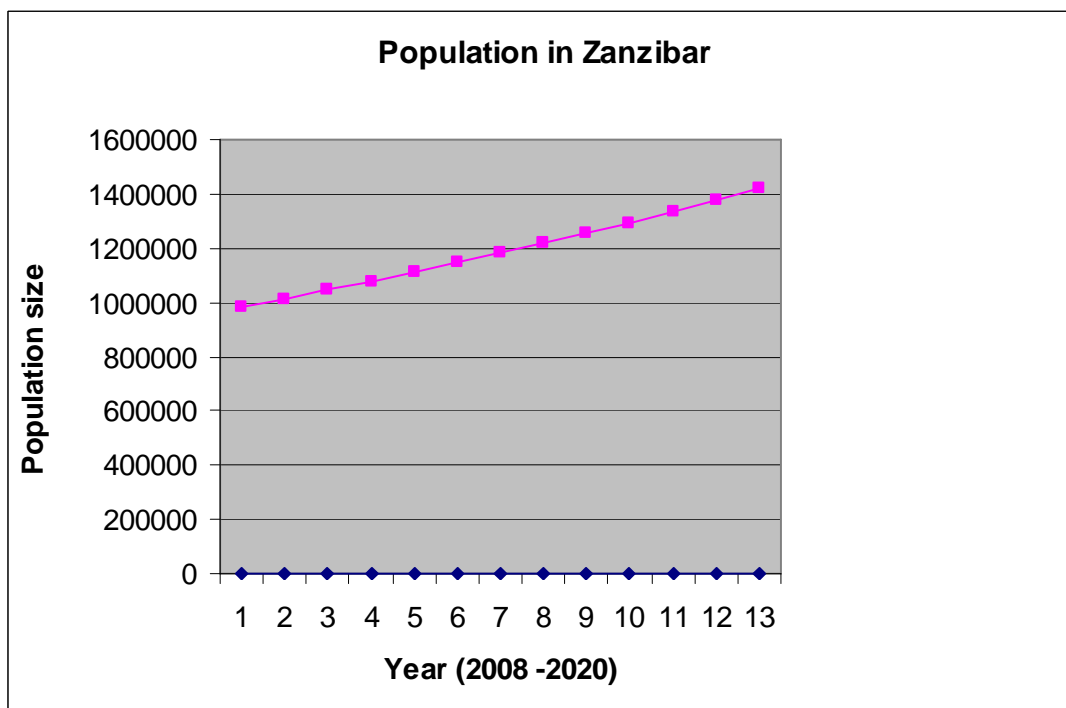


Figure 21: Population size by years

Forest

Zanzibar forest covers now estimated to reach 26% of the total land area, If the rate of clear cutting the forest of 1000 ha per annum continues (Table 11). Zanzibar should annually grow or establish new FPAs of approximately 2,450 ha.

Table 14: Forest Cover by Year.

Years	Vegetation covers in ha.	Planting/expansion of FPAs in ha.
2008	65,952.50	2,044.50
2009	67,997.03	2,044.53
2010	70,104.94	2,107.91
2011	72,278.19	2,173.25
2012	74,518.81	2,240.62
2013	76,828.90	2,310.08
2014	79,210.59	2,381.70
2015	81,666.12	2,455.53
2016	84,197.77	2,531.65
2017	86,807.90	2,610.13
2018	89,498.95	2,691.04
2019	92,273.42	2,774.47
2020	95,133.89	2,860.48

Wood Supplies

Increasing in wood demand; if appropriate substitutes to wood would not be in place, by 2020 the domestic wood demand is expected to grow up to 3.6 million m³ (Table 12 and Graph 2).

Table 15: Wood demand by Year.

Year	Population size	Wood domestic demand in million m ³
2008	981,754	2.5
2009	1,012,188	2.6
2010	1,043,566	2.7
2011	1,075,917	2.7
2012	1,109,270	2.8
2013	1,143,658	2.9
2014	1,179,111	3.0
2015	1,215,663	3.1
2016	1,253,349	3.2
2017	1,292,203	3.3
2018	1,332,261	3.4
2019	1,373,561	3.5
2020	1,416,142	3.6

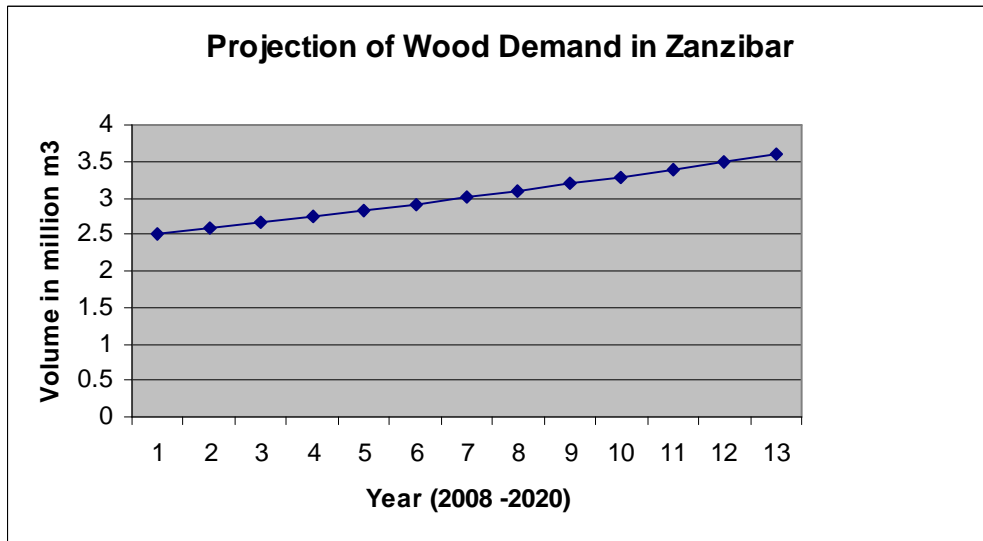


Figure 22. Wood Demand Projection

Wood Energy

Increasing dependency on wood energy; if appropriate alternative would not be in place, by 2020 the consumption per capita is expected to grow up to 1.88 m³ (Table 13 and Graph 3)

Table 16: Population Size and Wood Energy by Year.

Year	Population size	Wood energy per capita in m ³
2008	981,754	1.3
2009	1,012,188	1.34
2010	1,043,566	1.38
2011	1,075,917	1.42
2012	1,109,270	1.47
2013	1,143,658	1.51
2014	1,179,111	1.56
2015	1,215,663	1.61
2016	1,253,349	1.66
2017	1,292,203	1.71
2018	1,332,261	1.76
2019	1,373,561	1.82
2020	1,416,142	1.88

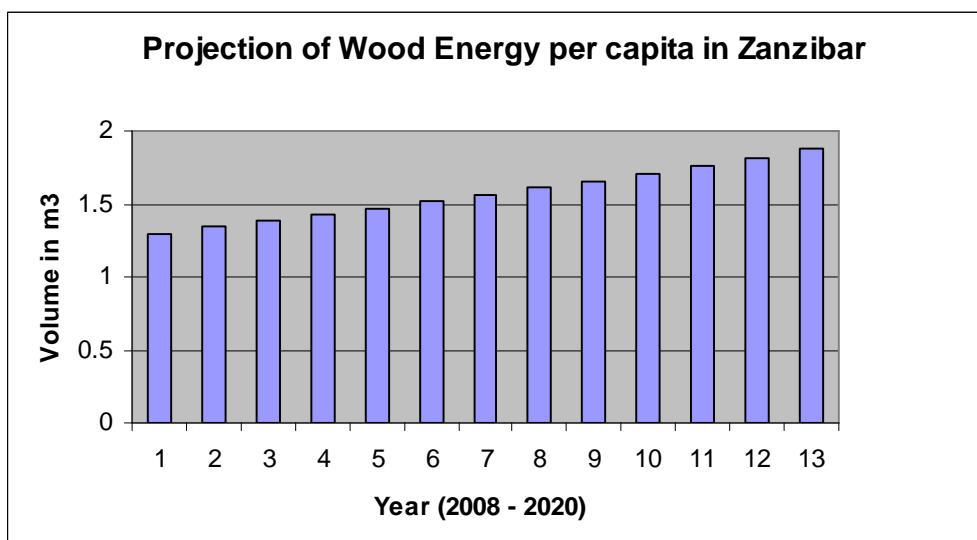


Figure 23: Volume of Wood Energy Projection.

National Economy

Increasing cash contribution to the national economy; creation of FPAs, improve taxation system for wood and non wood products is expected to improve forestry contribution towards GDP up to the value of Tsh.29.5 billions (Table 14).

Table 17: Forested Area and Value by Year.

Year	Forested area in hectare	Present value Tsh. billions	Future value Tsh. billions
2008	65,952.50	1.86	
2009	67,997.03	1.92	21.07
2010	70,104.94	1.97	21.72
2011	72,278.19	2.04	22.39
2012	74,518.81	2.10	23.09
2013	76,828.90	2.16	23.80
2014	79,210.59	2.23	24.54
2015	81,666.12	2.30	25.30
2016	84,197.77	2.37	26.09
2017	86,807.90	2.44	26.89
2018	89,498.95	2.52	27.73
2019	92,273.42	2.60	28.59
2020	95,133.89	2.68	29.47

MONITORING PLAN 2008 – 2020

Forest Sector

Goal/Objective/Activity	Indicators	Means of verification	Risk & Assumption	Time frame	Responsible	Target
Goal 1: By 2020, capacity of forest sector is strengthened and delivery of products and services improved by at least 50%.	Percentage of competent personnel Percentage of products and services	Human resources performance appraisal Beneficiary survey	Brain drain/circulation Maintenance of status quo	Annually; After every 3 years	Personnel manager, Development partners, Civil service department	
Objective 1: By 2015, working facilities for forest sector are improved	Proportion of working facilities	Stock verification	Fund raising	Annually	Stock verifier/Estate manager, Private sector, NGO, Ministry of finance and Development partners	
Conduct needs assessments	Number of assessments	Needs assessment reports		Biannually	Planning officer, Civil services department, Ministry of finance, Community	Country wide
Diversify sources of revenues	Number of sources	Financial reports		Annually	Forestry Director, Principal Secretary, Ministry of finance, Communities and Development partners	
Solicit funds from government and development partners.	Number of proposal	Amount of fund raised		Annually	Forestry Director, Principal Secretary, Ministry of finance, Communities and Development partner	
Advocate for costs and benefits sharing arrangements.	Number of new arrangements	Financial reports		Every 5 years	Forestry Director, Principal Secretary, Ministry of finance, Communities and Development partner	
Procure equipments and tools	Number and kinds of tools & equipments	Inventories		Annually	Tender committee and Suppliers	
Develop infrastructure	Number/type of structures	Inventories		Annually	Estate manager, Private sector, Community and Planners	
Maintain infrastructure and assets regularly	Frequency of maintenance	Maintenance report		Annually	Estate manager, Private sector, Community and Planners	
Objective 2: From 2010, number (level) of investments in forest programmes and projects increased by 10% each year	Number/amount capital of investments	Investments agreements		Annually	Planning officer, Estate manager, Private sector, Community, ZIPA	
Study the feasibility for forest service payments	A feasibility study	Feasibility study report		2009	Director/PS, Private sector	
Update legal and regulatory frameworks of the forest sector	Number of legal supplements	Proposed bills		Annually	Forest administrator Legal officer, the Minister Attorney General, and House of Representative and Government Printer	

Goal/Objective/Activity	Indicators	Means of verification	Risk & Assumption	Time frame	Responsible	Target
Establish and advocate for payment of forest services	Area cover Number of agreements Type of services	Agreements in operation		Biannually	Estate manager, Private sector, Community , NGO	
Negotiate and fulfil roles and responsibilities for public-private sector engagement.	Number of agreements Number of engagements	Annual Reports		Annually	Planning officer, the Minister, Legal officer, Attorney General, Community , NGO	
Promote investment opportunities in forestry	Number of contacts	Investment report		Annually	Planning officer, Estate manager, Private sector, Community , ZIPA, and Ambassadors	
Objective 3: By 2010, enabling environment for the intra and inter-sectoral networking is improved.	Number of networks	Agreements and reports		Annually	Forestry Director, Principal Secretary, NGOs, Communities and Research organisations.	
Establish and enhance baseline data	Number of baseline data sets.	Forest information system report		Annually	Research and development officers, ICT officer, NGOs, Communities, Development partners, Chief statistician, and National Archive	
Develop a system for effective use of Information and Communication Technology (ICT).	A system	ICT report		Annually	Research and development officers, ICT officer, NGOs	
Develop an effective system for documentation and interpretations	A system	Documentation and interpretation report		Annually	Research and development officers, Documentation officer ICT officer, NGOs.	
Establish appropriate collaboration linkages with key actors	Number of linkages	Collaboration report		Annually	Research and development officers, P/S, Development partners, NGOs	
Fulfil international obligations on forestry related agendas	Number of treaties Number of bills	Reports	Effective communication among stakeholders	Annually	P/S, Development officer, The Minister, Department of Environment, Division of forest and beekeeping, Vice president office, Foreign affairs, Attorney General and Department of wildlife	
Objective 4: From 2010, each year the number and quality of forest related research increased by 10%.	Number of researches	Reports		Annually	Development & research officer.	
Conduct research needs assessment	An assessment	Assessment report		2010	Research and development officers, Estate office, Communities, NGOs	
Develop and implement research programmes and proposals/profiles.	Number of Research Projects	Research programme reports		Year 2010	Research and development officers, Communities, NGOs, Researchers.	
Raise funds for research	Amount raised Number of events	Financial reports		Annually	Forestry Director, Principal Secretary, Ministry of finance, Communities and Development partner,	
Disseminate, share and use research results	Number of publications	Research reports		Annually	Research and development officers, Communities, farmers, NGOs, Researchers	

Goal/Objective/Activity	Indicators	Means of verification	Risk & Assumption	Time frame	Responsible	Target
	Number of Institutions received report Number of findings practiced					
Establish motivation schemes for researchers	Number of schemes	Research reports	Other schemes in place and continuity	Annually	Research and development officers, Communities, farmers, NGOs, Researchers	
Improve technical paper series and website	Number of series Number of updates	Published reports Website pages	Motivation scheme is effective	Annually	Research and development officers	
Publish research findings in referenced journals.	Number of articles	Journals and books	Good quality research	Annually	Research and development officers	
Encourage foreign-local research partnerships	Number of joint research	Memoranda of Understanding		Annually	Research and development officers	
Objective 5: By 2015, the number of forestry-related professionals and support staff increased by 5%.	Number of professionals	Nominal roll	Civil Service Department grant permits	Annually	Administrative manager	HQ
Conduct training needs assessment	Training need assessment	Training report		Annually	Training Officer	HQ
Develop and implement training programmes	Number of staff trained	Training report		Annually	Training Officer	HQ
Develop and implement motivation scheme	Number of recognitions	Manpower report		Annually	Administrative manager	
Recruit and retain professional staff	Number of recruits	Nominal roll		Annually		HQ

Protected Areas

Goal/Objective/Activity	Indicators	Means of verification	Risks / Assumptions	Time frame	Responsible	Target
GOAL: By 2020, all forest protected areas of Zanzibar are sustainably managed, and increase their current contribution to the community livelihoods by 10%.	Species and ecosystem processes, Socio economic welfares	Baseline report, End line report	Fragmentation would be stopped IGAs success	Pre and post programme	Programme and Section Managers	Protected areas, Communities around protected areas
Objective 1: By 2012, Forest Protected Areas System is effectively functioning.	Number of FPAs in the system	PAs Progress report	Cooperation of stakeholders	Annually	FPAs Managers	PAs
Identify forest areas and corridors for the system	Number of FPAs and respective corridors	Studies and maps			Section Managers; VCCs	
Develop and enforce legal frameworks for forest protected area system	A regulation Number of Agreements	Minister's approval	Cooperation of stakeholders	Year 2010	Director of Forestry; Section Managers; VCCs Minister; Departments of Lands, AG Chambers	Protected areas CoFMAs
Develop capacity for FPAs system management, including forest management information system	Number of trained people in place	PAs Progress report		Annually	Programme Managers on Capacity Development and Conservation	Staff VCCs Members
Formulate and implement management arrangements	A Management Plan Number of CoFMAs	PAs Progress report		Annually	Programme Managers; VCCS	PAs
Design and implement monitoring systems	A monitoring system	Monitoring plan and report		Pre programme and annually	Programme Managers; VCCs	
Advocate for operationalization of the Zanzibar unified protected areas system	Unified system in place	Proceedings of the ZNPAB meetings	Implementation will	Year 2013	Directors of Forestry; Programme Managers; Development partners	Departments and the Ministries
Objective 2: By 2018, key species in protected areas are protected and glades covered	Hectare of glades covered Number of key species/area	Biodiversity report	Forest fires	After every three years	Programme and Section Managers and VCCs	FPAs; corridors
Conduct biodiversity surveys in forest protected areas to determine key species	Biodiversity survey	Survey report		Base line and end line surveys	Programme and Section Managers; VCCs	Key species
Conduct species mapping	Species Mosaic	Species maps		Base line and end line surveys	Programme and Section Managers; VCCs	Species

Goal/Objective/Activity	Indicators	Means of verification	Risks / Assumptions	Time frame	Responsible	Target
Prepare and implement protection plan	Protection plan	Planned outputs		Year 2013	Programme and Section Managers; VCCs	FPAs; corridors
Monitor key species performance	Regeneration of key species	Permanent Sampling Plots		Annually	Programme and Section Managers; VCCs	Key species
Enrichment planting of native species	Numbers of plants/species	Monitoring report		Annually	Programme and Section Managers; VCCs	FPAs
Aid natural regeneration	Numbers of plants/species	Regeneration report		Annually	Programme and Section Managers; VCCs	FPAs; corridors
Objective 3: By 2020, at least 60% of each invasive alien species in protected areas eradicated or controlled	Percentage decrease; Number of species controlled	Permanent Sampling Plots	Ecological processes; adapted technologies	Annually	Programme and Section Managers; VCCs	FPAs
Survey and document distribution and abundance of invasive alien species	A survey	Survey report		Year 2011	Programme and Section Managers; VCCs	FPAs; corridors
Pilot and adopt innovations	Numbers and types of technologies adopted	Innovation report	Appropriateness technologies	Year 2012	Programme and Section Managers; VCCs	FPAs; corridors
Prepare and implement eradication plans	Number of plans	Eradication plans		Year 2013	Programme and Section Managers; VCCs	FPAs; corridors
Objective 4: By 2015, all forest protected areas are functioning as ecotourism sites.	Number of visitors	Visitors' register		Seasonally	Protected areas' managers	In and around Protected areas
Identify potential attractions for ecotourism in and around protected areas.	Number of attractions	Field report		Year 2010	Programme and Section Managers; VCCs; Commission for Tourism	In and around Protected areas
Develop FPAs business plans	Number of business plans	Plan report		Year 2010	Programme and Section Managers; VCCs	In and around Protected areas
Promote ecotourism attractions	Number of mission Number and types of promotion materials	Progress report		Year 2011	Programme and Section Managers; VCCs; Commission for Tourism; ZIPA; Tour operators	Tourists sources
Build necessary capacity i.e., infrastructure, interpretation materials and tour guiding	Number and kind of capacities	Progress report		Year 2011	Programme and Section Managers; VCCs	In and around PAs

Goal/Objective/Activity	Indicators	Means of verification	Risks / Assumptions	Time frame	Responsible	Target
Objective 5: By 2020, the management of protected areas have incorporated all non-consumptive community's' rights.	Number of rights	Progress report	Codes of conduct	Year 2011	Programme and Section Managers; VCCs	In and around Protected areas
Facilitate the formation, strengthening and participation of community forest conservation groups.	Number of groups	Progress report		Year 2010	Programme and Section Managers; VCCs	In and around Protected areas
Identify and grant access of non-consumptive rights.	Number of access	Progress report	Codes of conduct	Year 2010	Programme and Section Managers; VCCs	In and around Protected areas
Prepare and implement guidelines on non-consumptive rights	Number of guidelines	Progress report	Codes of conduct	Year 2010	Programme and Section Managers; VCCs	In and around Protected areas
Develop and implement system to enforce guidelines.	A system to enforce guidelines	Progress report	Collusion	Year 2010	Programme and Section Managers; VCCs	In and around Protected areas
Objective 6: By 2015, at least 60% of households around protected areas get their consumptive/extractive forest products outside protected areas.	Number of households	Progress report	Supply from Forest plantations and Woodlots; Behavioural changes	Year 2014	Programme and Section Managers; VCCs; farmers	Households; Forest plantation; Woodlots; public lands
Undertake studies on livelihoods for communities around forest protected areas.	Number of studies	Study reports		Year 2010	Programme and Section Managers; NGOs; VCCs; Household heads; OCGS; MKUZA Secretariat; Dept. of Community Development; Development partners	Communities
Develop and promote IGAs for communities around protected areas.	Number of IGAs	Progress report		Annually	Programme and Section Managers; NGOs; VCCs; Household heads; OCGS; MKUZA Secretariat; Dept. of Community Development; Development partners	Communities
Increase supply of forest produces from forest plantations, farm forests and woodlots.	Volume of produces	Study reports	Lost of indigenous forest	Annually	Programme and Section Managers; VCCs; farmers	Country-wide
Encourage and facilitate households and other users of woodfuel to adopt efficient use of wood energy and switch to alternative sources	Number of households and major users switched	Study reports	Behavioural change; Initial capital investment; bulk storage	Annually	Ministry responsible for Finance, Special Departments; Energy; Forestry; NGOs; Development partners	Country-wide
Raise awareness on alternative to energy sources	Number of awareness programmes	Progress report	Behavioural change	Annually	Media; Programme and Section Managers; Household and Major users	Country-wide

Goal/Objective/Activity	Indicators	Means of verification	Risks / Assumptions	Time frame	Responsible	Target
Provide suitable planting material	Number and types of planting materials	Progress report	Material planted and survived	Annually	Programme and Section Managers; Communities	Country-wide
Conduct regular inventories, set and enforce quotas	Number of inventories and quotas	Inventory report		Annually	Programme and Section Managers; VCCs	Country-wide
Monitor quota system	A quota system	Inventory report		Annually	Programme and Section Managers; VCCs	Country-wide

Mangroves

Goal/Objective/Activity	Indicators	Means of verification	Risk/ Assumptions	Time frame	Responsible	Target area
Goal: By 2020, at least half of the mangrove ecosystems on Zanzibar are under effective and sustainable management.	Number of hectares, Species and ecosystem processes, Socio economic welfare	Baseline report End line report	Encroachment stopped; IGAs success; Behavioural changes	Pre and post programme	Programme and Section Managers; VCCs; Households, MACEMP	Mangrove areas
Objective 1: By 2015, at least 50% of mangrove areas effectively managed and open areas rehabilitated.	Number of hectares Species and ecosystem processes	Surveys reports Physical observation Progress reports		Every three years	Programme and Section Managers; VCCs; SMOLE; MACEMP, NGOs	
Conduct country-wide mangrove resources and socio-economic surveys	Number and types of surveys	Survey reports		Year 2009	Programme and Section Managers; VCCs; SMOLE; MACEMP	Mangrove areas
Conduct research, disseminate information and adopt best management practices	Number of researches disseminated Number of practices adopted	Progress reports Publications		Year 2009	Programme and Section Managers; MACEMP; Development partners; NGOs; VCCs	Mangrove areas
Monitor and map open and succession areas	Hectares of succession areas	Vegetation maps		Year 2010	Programme and Section Managers; VCCs; SMOLE; MACEMP; NGOs; Development partners	Mangrove areas
Raise awareness on opportunities and related IGAs	Number and types of awareness programmes	Progress reports		Annually	Programme and Section Managers; VCCs; SMOLE; MACEMP; NGOs; Development partners	Nation wide
Set and implement motivation for best practices	Number and types of motivation set	Research reports Field observation Interviews		As from 2010	Programme and Section Managers;	Nation wide
Establish mangrove resources data base	A data base	Information Communication System		As from 2010	Programme and Section Managers;	Mangrove areas
Develop, update and implement mangrove management plans	Number of plans	Progress reports		Annually	Programme and Section Managers; Communities	Nation wide
Objective 2: By 2015, at least 50% of mangrove forests outside designated protected areas are under effective community management	Number of hectares Species and ecosystem processes	Surveys reports Physical observation Progress reports	COFMAs adhered to	After every three years	Programme and Section Managers; Communities; VCCs	Mangrove areas outside designated FPAs
Advocate for CoFMAs in national land use planning.	Number of CoFMAs in National Land Use Plan	Land Use Plan		Year 2015	Programme and Section Managers; VCCs; SMOLE	CoFMAs
Facilitate the establishment, implementation, monitoring and review of CoFMAs.	Number established	Progress report of CoFMAs	COFMAs adhered to	After every five years	Programme and Section Managers; VCCs; SMOLE	CoFMAs

Goal/Objective/Activity	Indicators	Means of verification	Risk/ Assumptions	Time frame	Responsible	Target area
	and review					
Building capacity of VCCs	Number VCCs Number of issues covered	Progress reports Community records		Annually	Programme and Section Managers; VCCs; NGOs; Development partners; Departments of Cooperatives and Community Development	
Objective 3: From 2012, wood demand from the mangroves of Zanzibar is reduced by at least 10% annually.	Demand volume	Survey reports		From 2012	Programme and Section Managers; VCCs; SMOLE; MACEMP; NGOs; Development partners; OCGS; Department of Energy	Mangrove areas
Conduct study and adopt alternatives and substitutes to mangrove wood	Number of Studies Number and types of alternatives and substitutes adopted	Study reports		From 2010	Programme and Section Managers; VCCs; NGOs; Development partners; Department of Energy; ZRB; MACEMP	Country wide
Advocate for removal of taxes on implements and accessories related to alternative sources of wood energy	Number and types of Tax removed	Progress report Tax regimes		Annually	Ministry responsible for Finance, Energy, Forestry; Development partners; NGOs; Private Sector	Country wide
Increase production of wood from woodlots and plantations	Volume of produces	Study reports	Lost of indigenous forest	Annually	Programme and Section Managers; VCCs; farmers	Country-wide
Encourage importation of mangrove wood products	Volume imported	Importation reports	Market trends	Annually	DCCFF; Private sector	Country-wide
Advocate for development and implementation of ICZM plans - emphasising eco-friendly enterprises, control pollution, and beach erosion	Number of eco-friendly enterprises	ICZM plans		Annually	Programme and Section Managers; VCCs; SMOLE; MACEMP; NGOs; Development partners; Departments of Energy, Environment, Lands, Fisheries, Local Government; NGOs, RECOMAP	Country-wide
Raise the profile of coastal forests as integral part of ICZM and Climate Change frameworks	Number of forest programmes in ICZM and Climate Change	Reports on ICZM and Climate Change	Willingness of partners on ICZM and Climate Change	From 2009	Programme and Section Managers; VCCs; SMOLE; MACEMP; NGOs; Development partners; Departments of Energy, Environment, Lands, Fisheries, Local Government; NGOs	Country-wide

Wild Animals

Goal/Objective/Activity	Indicators	Means of verification	Risk/ Assumptions	Time frame	Responsible	Target area
Goal: By 2020, the management of wild animals and their habitats is improved and the population of each flagship species at least stabilises at the current level of population.	Species and ecosystem processes	Survey reports		Pre and end of the programme	Programme and Target managers, VCCs, Development Partners, Researchers, National Hunting Committee and NGOs	Country wide
Objective 1: By 2015, the declining population trend of each flagship species stopped.	Species population	Survey reports		Every three year	Programme and Target managers, VCCs, Development Partners, Researchers and NGOs	Country wide
Conduct studies on demographics and behavioural changes on flagship species	Number of researches	Research reports		Annually	National Hunting Committee, Target managers, VCCs, Development Partners, Researchers and NGOs	Country wide
Draw up and implement recovery plan for each flagship species	Number of recovering plans	Progress reports	Disease outbreak	Every after five years	National Hunting Committee, Target managers, VCCs, Development Partners, Researchers and NGOs, Vets and Livestock	Country wide
Formulate and review policy frameworks on wild animals	Number of Frameworks	Official Gazette		Every after five years	Ministry responsible for wild animals and AG Chamber, Programme and Target managers, VCCs, National Hunting Committee and NGOs	Country wide
Build necessary capacity on wildlife management	Number of personnel, level of funding and facilities	Annual report		Annually	Ministry of Finance and Civil Service Department, Programme and Target managers, VCCs, Development Partners and NGOs	Country wide
Raise public awareness on values of wildlife and flagship species	Number and types of awareness programmes	Awareness reports		Annually	Programme and Target managers, VCCs, Development Partners, Researchers, National Hunting Committee and NGOs	Country wide
Objective 2: From 2010, incidences of indiscriminate hunting are reduced by at least 10% each year.	Number of incidences	Progress Reports		Annually	Target and Landscape Managers, VCCs, Researchers, National Hunting Committee and NGOs	Country wide
Study the population status, demand and supply of bush meat species	Number of studies and reports	Survey reports		Every after three years	National Hunting Committee, Target managers, VCCs, Development Partners, Researchers and NGOs	Country wide
Design, implement and enforce harvesting system for each bush meat species	Number of harvesting systems Number of offenders	Progress Reports		Annually	Target and Landscape Managers, VCCs, NGOs, National Hunting Committee and Police forces	Country wide
Set an incentive system for informers on habitat destruction and illegal hunting	Incentive system	Progress Reports		Every after three years	Target and Landscape Managers, VCCs, NGOs, National Hunting Committee and Police forces	Country wide
Incorporate issues of wild animals in development and enforcement of CoFMAs	Number of CoFMAs incorporate issues	CoFMAs		From 2008	Target Managers, and VCCs, DCCFF	Country wide

Goal/Objective/Activity	Indicators	Means of verification	Risk/Assumptions	Time frame	Responsible	Target area
	of wild animals					
Raise awareness on conservation values of wild animals and birds	Number and types of awareness programmes	Awareness reports		Annually	Programme and Target managers, VCCs, Researchers, National Hunting Committee and NGOs	Country wide
Advocate alternatives for wild meat	Number of alternatives	Progress reports		Annually	Target managers, Forest Support services, VCCs, Researchers, National Hunting Committee and NGOs	Country wide
Propagate potential wild meat species for consumption	Number and types of species Propagation programmes	Programme and progress reports		Annually	Programme and Target managers, VCCs, Researchers, National Hunting Committee and NGOs	Country wide
Build necessary capacity on protection of animals	Number of personnel, level of funding and facilities	Annual report		Annually	Ministry of Finance and Civil Service Department, Programme and Target managers, VCCs, Development Partners and NGOs	Country wide
Objective3: From 2010, killings in the pretext of vermin control reduced by at least 5% annually.	Killing incidences	Annual report		Annually	Programme and Target managers, Members of Forest Support and Services, VCCs, Researchers, National Hunting Committee and NGOs	Country wide
Study and document the ecological values of vermin species	Number of studies	Study reports		Year 2010	Target managers, Members of Forest Support and Services, VCCs, Researchers, National Hunting Committee and NGOs	Country wide
Train and raise awareness on the values of wild animals	Number of personnel trained	Progress reports		Annually	Target managers, VCCs, NGOs	Country wide
Formulate, implement and review guidelines on vermin control	Number of guidelines	Official Gazette		Every after five years	Target managers, VCCs, NGOs, DCCFF, Minister responsible for Forestry and Local Administration, AG Chambers office	Country wide
Put appropriate vermin control setup	Vermin control setup	Progress reports		Year 2010	Target managers, VCCs, NGOs, DCCFF, Minister responsible for Forestry and Local Administration, AG Chambers office	Country wide
Monitor vermin control	Monitoring plan	Progress reports		Annually	Target managers, VCCs, Researchers, National Hunting Committee, Agric Officers and Local government, NGOs	Country wide

Coral Rag Forest

Goal/Objective/Activity	Indicators	Means of verification	Risk/ Assumptions	Time frame	Responsible	Target area
Goal: By 2020, at least 50% of the existing coral rag forests in Zanzibar are sustainably managed.	Number of hectares Species and ecosystem processes	Survey reports	Behavioural change	Pre and end of the programme	Programme and Target managers, VCCs, Development Partners and NGOs	Coral rag areas
Objective 1: By 2015, the proportion of wood dependency by major users (bakeries, hospital, hotels, barracks, restaurants, boarding schools and urban households) as a source of energy is reduced at least by 50%.	Number of major users Percentage level of wood consumption	Household budget survey	Behavioural change	Annually	OCCS, Director of Forestry and Energy, Private Entrepreneurs and NGO	Coral rag areas
Advocate for favourable energy policy actions	Energy policy	Official gazette	Behavioural change	From 2008	Director DCCFF	Coral rag areas
Adopt wood energy saving programmes	Number of programmes Number of adopters	Progress reports	Behavioural change	From 2008	OCCS, Director of Forestry and Energy, Private Entrepreneurs and NGO	Coral rag areas
Conduct inventory and establish database on the features of coral rag forests.	Number of inventories Database	Progress reports		Year 2009	Programme and Target managers, VCCs, Development Partners, researchers and NGOs	Coral rag areas
Develop, update and implement coral rag management plans.	Number of plans under implementation	Progress reports		Year 2010	Programme, Target and Landscape Managers, VCCs, and NGOs	Coral rag areas
Conduct research on alternatives and substitutes to woodfuel.	Number of researches	Research report		Year 2009	Researchers, Programme and Target, Households, Entrepreneurs and NGOs	Country wide
Raise awareness on the alternatives to wood energy, opportunities and threats facing coral rag forests	Number and types of awareness programme	Progress reports		From 2009	Researchers, Programme and Target, Media Entrepreneurs and NGOs	Country wide
Objective 2: By 2015, at least 50% of the unplanted designated plantations areas are planted with trees and effectively managed.	Number of hectares	Survey report		Year 2010	Target managers	Forest plantations
Raise awareness for private sector investment in forest plantations	Number and types of awareness programme	Progress report		Year 2009	Target managers, Media, Entrepreneurs	Country wide
Prepare, update and implement forest management plans.	Number of plans	Progress report		Year 2009	Target managers, Major users	

Goal/Objective/Activity	Indicators	Means of verification	Risk/ Assumptions	Time frame	Responsible	Target area
Improve nursery and plantation infrastructure including roads and buildings.	Number of structures	- Progress report - Physical observation		From 2009	Target Managers, Director DCCFF	Nursery and plantation sites
Produce adequate and quality planting materials	Number and types of planting materials	Progress report		From 2009	Programme and Target Managers, Director DCCFF	Nursery sites
Develop and conduct a special tree-planting campaign	A Campaign	Progress report		Annually	Programme and Target Managers	Country wide
Objective 3: By 2015, at least 50% of open areas in coral rag forests are rehabilitated and effectively managed.	Number of hectares	Progress report Survey and maps Monitoring system		After every three years	Programme and Target Managers and VCCs	Coral rag forest areas
Conduct research, disseminate information and adopt best management practices.	Number of practices	Research report		Annually	Programme and Target Managers, researchers, NGOs and VCCs	Coral rag forest areas
Map and monitor open and succession areas	Number of hectares	Survey and maps Monitoring reports		Annually	Programme and Target Managers, researchers, NGOs and VCCs	Coral rag forest areas
Control shifting cultivation	Number of hectares	Survey reports		Annually	Programme and Target Managers, researchers, NGOs, farmers, SMSs and VCCs	Coral rag forest areas
Intensify agriculture and conservation farming	Number of hectares	Survey reports		Annually	Programme and Target Managers, researchers, NGOs, farmers, SMSs and VCCs	Coral rag forest areas
Promote appropriate IGAs.	Number and types of IGAs		Progress report	Annually	Programme and Target Managers, researchers, NGOs, farmers, SMSs and VCCs	Country wide
Set and implement motivation scheme for best practices	A Motivation Scheme	Progress report	Willingness to cooperate	Annually	Programme and Target Managers, NGOs, public, and VCCs	Country wide
Objective 4: By 2017, conversion of coral rag forests into other land uses is reduced by 50%.	Number of hectares	Progress report		Annually	Programme and Target Managers, researchers, NGOs, farmers, SMSs, VCCs, Dept of Lands	Country wide
Advocate for CoFMAs in national land use planning	Number of CoFMAs in Land use plan	Land use plans		From 2010	Programme and Target Managers, researchers, NGOs, farmers, SMSs, VCCs, Dept of Lands	Country wide
Facilitate the establishment, implementation, monitoring and review of CoFMAs	Number of CoFMAs	Official gazette		Annually	Programme and Target Managers, VCCs, Dept of Lands and AG Chambers, Director DCCFF	Country wide
Build capacity of VCCs on CoFMAs	Number of personnel, level of funding	Annual report		Annually	Programme and Target managers, VCCs, Development Partners and NGOs	Country wide

Farm Forests

Goal/Objective/Activity	Indicators	Means of verification	Risk/ Assumptions	Time Frame	Responsible	Target area
Goal: By 2020, all 10 districts of Zanzibar established and adopted integrated land use plans that incorporate conservation of soil, water and germplasm issues.	Number of Plans	Progress report		From 2010	SMOLE, Programme and Target managers, VCCs, Development Partners, Local Gov'ts, Depts of Lands and NGOs	Country wide
Objective 1: From 2015, germplasm base in farm forests broadened by at least 1% annually.	Number and types of germplasm	Progress report		From 2015	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Development Partners, Local Gov'ts, Depts of Lands and NGOs.	Country wide
Conduct germplasm survey on farm forests	A Survey	Survey reports		From 2015 annually	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Local Gov'ts, Depts of Lands and NGOs.	Country wide
Establish and improve gene banks	Number of gene banks and species	Progress report		From 2017 annually	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Local Gov'ts, Depts of Lands and NGOs.	Country wide
Raise public awareness on the significance of broadened germplasm base	Number and types of awareness programme	Progress report		From Year 2009 annually	Target managers, Media and NGOs	Country wide
Multiply and restore threatened species	Number and types of species	Progress report		From Year 2010 annually	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Local Gov'ts and NGOs	Country wide
Improve capacity on breeding and propagation	Number of personnel, level of funding and facilities	Annual report		Annually	Programme and Target managers, VCCs, Development Partners and NGOs	Country wide
Practice organic farming	Number of farmers	Survey report		Bi- Annually	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Local Gov'ts and NGOs	Country wide
Practice agroforestry	Number of farmers	Survey report		Bi- Annually	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Local Gov'ts and NGOs	Country wide
Promote integrated pest and crop management	Number of farmers	Survey report		Bi- Annually	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Local Gov'ts and NGOs	Country wide
Raise awareness on multicultural farming	Number of farmers	Survey report		Bi- Annually	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Local Gov'ts and NGOs	Country wide

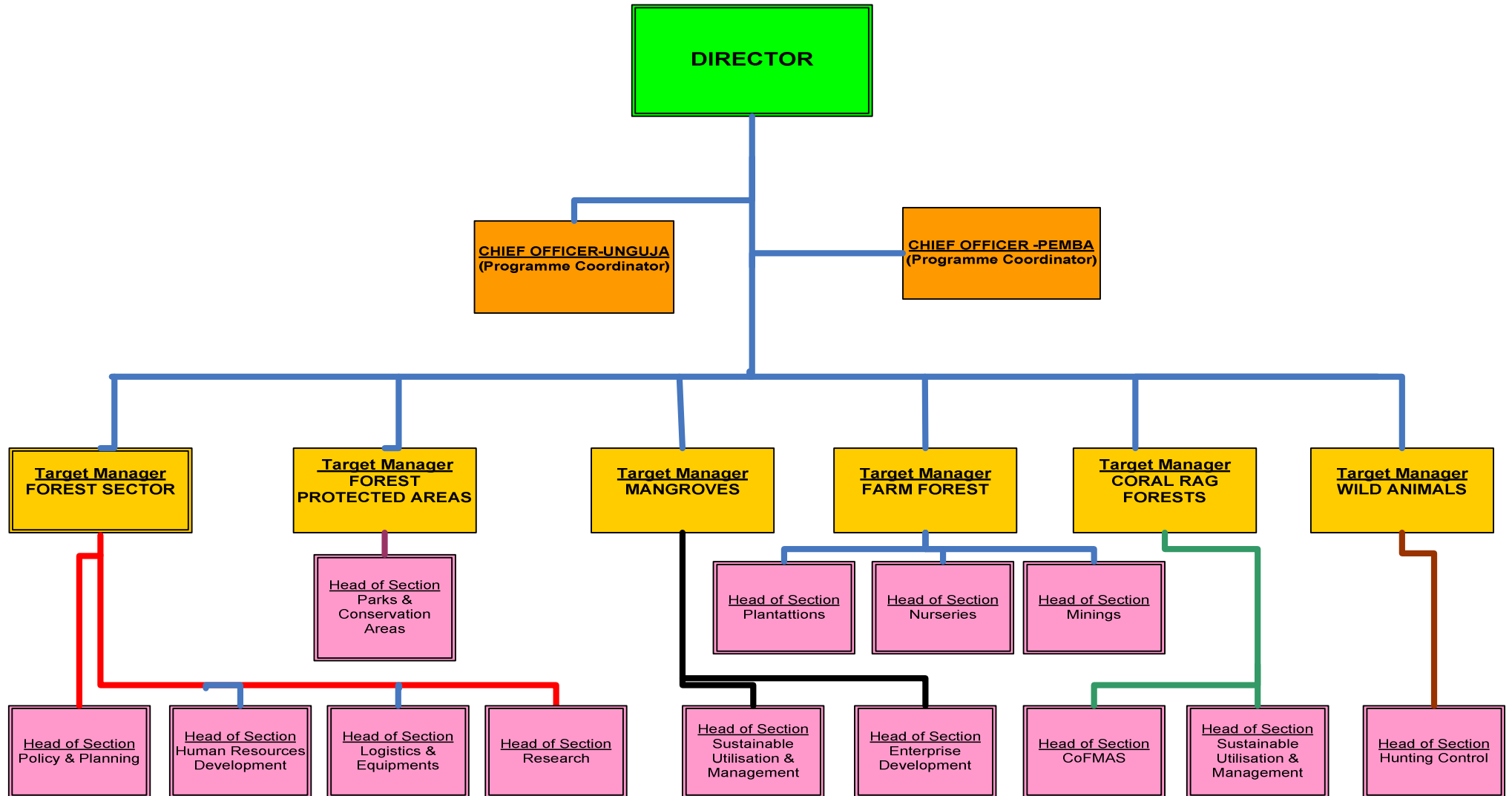
Goal/Objective/Activity	Indicators	Means of verification	Risk/Assumptions	Time Frame	Responsible	Target area
Improve capacity on multicultural farming	Number of farmers	Survey report		Bi- Annually	Programme and Target managers, Researchers, SMSs, farmers, VCCs, Local Gov'ts and NGOs	Country wide
Objective 2: By 2015, sites for sand extraction are part of land use planning in districts and 50% of extracted sites restored	Number of sites Areas restored	Survey report Field observation		Annually	Programme and Target managers, Researchers, VCCs, Depts of Lands and Local Gov'ts	Country wide
Advocate for integrated land use planning	Numbers of Advocacy meetings	Progress report		From 2009	Target Managers, NGOs,, VCCs, Dept of Lands, Local Gov'ts and Director DCCFF	Country wide
Initiate effective planning coordination	Coordination mechanism	Progress report		From 2009	Target Managers, NGOs,, VCCs, Dept of Lands, Local Gov'ts and Director DCCFF	Country wide
Identify potential sites for sand extraction considering restoration feasibilities	Number of sites Areas restored	Survey report Field observation		Annually	Programme and Target managers, Researchers, VCCs, Depts of Lands and Local Gov'ts	Country wide
Develop and execute participatory land restoration plans	Number of plans	Survey report Field observation	Willingness to participate	Annually	Programme and Target managers, Researchers, VCCs, Depts of Lands and Local Gov'ts	Country wide
Enforce laws on soil and water conservation and land reclamation	Number of offences	Progress report		Annually	Programme and Target managers, VCCs, Depts of Lands, Water Authority, DPP, Police force, Local Gov'ts and SMS.	Country wide
Develop guidelines for restoration of extracted sites	Guidelines for restoration	Progress report		From 2009	Programme and Target managers, VCCs, Depts of Lands, Environment and DCCFF and Local Gov'ts, SMOLE	Country wide
Raise awareness on restoration programme, watershed and soil conservation	Number and types of awareness programmes	Awareness reports		Annually	Programme and Target managers, VCCs, NGOs, SMOLE	Country wide
Develop restoration monitoring plan	A monitoring plan	Progress report		From 2009 annually	Programme and Target managers, VCCs, Depts of Lands, Environment and DCCFF and Local Gov'ts.	
Advocate for Payment of Environmental Services (PES)	Number of advocacy meetings	Progress report		From 2010	Programme and Target managers, VCCs, Depts of Environment and DCCFF and	Country wide

Goal/Objective/Activity	Indicators	Means of verification	Risk/Assumptions	Time Frame	Responsible	Target area
	Numbers of PES				Local Gov'ts, NGOs, Water authority	
Conduct researches on substitutes and efficient use of sand	Number of researches projects	Research report		From 2010	Programme and Target managers, VCCs, Depts of Environment and DCCFF and Local Gov'ts and Water authority, NGOs and researchers.	Country wide
Raise awareness on improved techniques on the use of sand for construction	Number and types of awareness programmes	Awareness reports		Annually	Programme and Target managers, VCCs, NGOs, Dev't partners, Researchers	Country wide
Adapt substitutes to and efficient of sand	Number adapters	Progress report		Annually	Programme and Target managers, VCCs, NGOs, Dev't partners, Researchers, Entrepreneurs	Country wide
Objective 3: By 2016, efficiency in use of wood resources from farm forests is improved by 20%	Number of adopt efficient use	Household budget survey report		From 2016 Annually	Target managers, VCCs, NGOs, Dev't partners, OCGS, Researchers, Entrepreneurs and Households	Country wide
Search, promote and adopt improved technologies for wood conversion	Number and types of improved technologies	Progress reports		Annually	Target managers, NGOs, Dev't partners, Researchers, Entrepreneurs and Households	Country wide
Build capacity in wood conversion technologies	Number of personnel, level of funding and facilities	Annual report		Annually	Programme and Target managers, VCCs, Development Partners and NGOs	Country wide
Raise awareness on efficient utilisation of wood resources	Number and types of awareness programmes	Awareness reports		Annually	Programme and Target managers, VCCs, NGOs, Dev't partners, Researchers	Country wide
Develop guidelines on appropriate uses of wood species	Number of Guidelines	Progress report		From 2015	Programme and Target managers.	Country wide
Inspire for timber importation	Volume and types of imports	Annual report		Annually	Entrepreneurs, Ministry of Finance, Director DCCFF	Country wide
Adopt alternative to wood materials	Number adopters and type of alternatives	Progress report		Annually	Programme and Target managers, VCCs, NGOs, Dev't partners, Researchers, household, Entrepreneurs	Country wide
Encourage public private partnership	Number of partnerships	Progress report		Annually	Programme and Target managers, Dev't partners, Researchers, Financial Institutions, Entrepreneurs	Country wide

Annex 1: OUTPUT PLAN 2008 – 2020

Outputs	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1. Forest Sector													
1.1. Increased number (level) of investments programmes and projects													
1.2. Improved working enabling environment													
1.3. Increased number and quality of forestry related research													
1.4. Improved working facilities													
1.5. Increased number of forestry and related professionals and supporting staff.													
2. Protected Areas													
2.2. Effective functioning of Forest Protected Areas System.													
2.3. Functioning of FPA as ecotourism sites.													
2.4. Availed households all consumptive/extractive forest products outside protected													
2.5. Protected key species and glades covered													
2.6. Eradicated or controlled invasive alien species in protected areas													
2.7. Incorporated all non-consumptive community's rights in FPA													

Outputs	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
3. Mangroves													
3.1. Reduced mangroves wood demand													
3.2. Rehabilitated and managed mangrove open areas.													
3.3. Designated mangroves outside FPA, under effective community management.													
4. Wildlife													
4.1. Reduced an incidences of indiscriminate hunting													
4.2. Reduced killings in the pretext of vermin control													
4.3. Stopped declining population trend of flagship species													
5. Coral Rag													
5.1. Reduced wood dependency as a source of energy													
5.2. Planted and effectively managed unplanted designated plantation areas													
5.3. Rehabilitated and effectively managed open areas in coral rag forests													
5.4. Reduced conversion of coral rag forest													
6. Farm Forests													
6.1. Broadened germplasm base in farm forests.													
6.2. Restored sites for sand extraction													
6.3. Improved wood resources efficiency from farm forests													



Annex 2: ORGANIZATION CHART, 2008-2020