Publication Draft

REPUBLIC OF ZAMBIA

MINISTRY OF GREEN ECONOMY AND ENVIRONMENT

MZEWE SOUTH NATIONAL FOREST: P164 MANAGEMENT PLAN 2025-2035

APPROVAL PAGE

MZEWE SOUTH NATIONAL FOREST No. P164 - FOREST MANAGEMENT PLAN

Notice of completion

This Forest Management Plan has been prepared in accordance with the requirements of section 40, Part IV of the Forests Act, 2015. National and local enquiries were conducted as required to obtain representation from the local community, Chief and other stakeholders in the prescribed manner. Further, consultations were conducted with holders of rights and the local community in the area and account taken of their submissions.

In accordance with section 43 of the Forests Act 2015. I therefore, cause notice of completion to be published in the Gazette.

Director of Forestry

Date:_____

Registration of the Forest Management Plan

Following receipt of notification from the Director of Forestry, that the Forest Management Plan has been notified in the Government Gazette in accordance with the provisions of section 43 of the Forests Act, 2015, I therefore cause this Forest Management Plan to be registered and approve a notice of registration to be published in the Government Gazette.

Minister for Green Economy and Environment

Date:_____

FORESTRY DEPARTMENT

FOREWORD

Forest resources are important because they provide essential functions and services to local communities and the country at large, for conservation of biodiversity, and supporting social and livelihood wellbeing. Natural resources management trends in all the corners of the global are moving away from the predominantly earlier practiced protective 'plan and control' management approach to more collaborative and participatory management approaches. Zambia has adopted Participatory Forest Management (PFM), and Community Forest (CF) approaches to forest management allowing for co-management of forest resources between the Zambia Forestry Department (ZFD) as custodian of Zambia's forest resources and communities, partnering organizations and institutions. The change in forest management approach is driven by the need to promote sustainable use and management of forest resources in the country. The high demand for forest products and services has rendered the present use and management of forest resources unsustainable, this is because of increase in human population, and the ever-changing socio-economic and environmental conditions around the country. It is for this reason that the Mzewe South Forest Management Plan (MSFMP) has been formulated.

Signature:

Director of Forestry

Date:

ACKNOWLEDGEMENTS

The development of this Forest Management Plan was made possible through support from the Zambia Integrated Forest Landscape Project (ZIFLP). The Forestry Department would like to recognize and appreciate the efforts of their Royal Highnesses, Headmen and the community around for the commitment to support this plan and importantly the sustainable management of Mzewe South National Forest. In addition, the Forestry Department, Eastern Province, would like to recognize and appreciate the efforts of the participants in the consultation workshop for their valuable contribution to the development of the Forest Management Plan.

The production of the Plan would not have been possible without the input from ZAMSTATS and present and past officers of the Forestry Department. The contribution of the members of the forestry inventory, livelihood data collection, analysis and reporting teams who made it possible to generate the needed information to develop this forest management plan is acknowledged. Local community contribution was vital in both the livelihood and biodiversity surveys as well as in the participatory discussion. Their Royal Highness' contributions during the awareness meetings leading to livelihood survey for the development of the FMP are also highly appreciated.

The Forestry Department acknowledge the financial support of the World Bank and its partners through the Zambia Integrated Forest Landscape Project (ZIFLP) in the development of the draft FMP. Finally, since it is not possible to mention each person engaged in the development of the FMP, the contribution of all persons who participated directly or indirectly in the preparation and completion of this document is appreciated.

EXECUTIVE SUMMARY

Forest Management Planning is a requirement of Sustainable Forest Management (SFM) and is provided under the provisions of the Forest Act No.4 of 2015. Forests, provide for the conservation and use of forests and trees for the sustainable management of forests ecosystems and biological diversity were woodlands and trees are among the nation's most important natural heritage resources. The vision of the National Forestry Policy, 2014 is to attain sustainable forest management at all types of forests to enhance forest products and services, that will contribute significantly to mitigation of climate change, poverty reduction, increased income generation, , job creation and protection and maintenance of biodiversity. The Policy encourages participatory forest management anchored on the active participation of local communities, traditional institutions, private sector and other stakeholders in the management and utilisation of forest resources at all levels of decision making, implementation, monitoring and evaluation.

This Forest Management Plan has been prepared for Mzewe South National Forest with the aim of equipping the management team and other interested stakeholders with a capable tool of directing the approach to be followed, guiding the process of partnerships with key stakeholders and addressing the challenges facing the management of the forest at present. These in the case of Mzewe South National Forest are extreme and if not addressed immediately may result in the loss of the forest and the functions it was reserved to protect. Adjacent communities can play an important role in the rational utilisation of the existing forest through participation in decision making, active management, protection and benefit sharing. Thus; community collaboration is imperative to protect the remaining forest cover of Mzewe South National Forest from degradation in order for it to fully contribute to local and national development as well as for the benefit of the future generations of Zambia.

Translating Policy into practice

This management plan translates national policies into a well thought-out strategic framework to guide the preparation of annual operational programmes for effective and efficient management of this National Forest. The management plan will regulate forestry activities for a period of 10 years through the application of prescriptions that specify targets, actions and control arrangements. In this respect this plan will form part of the general forest management system that regulates protection, silviculture practices, conservation, monitoring and other relevant operations to ensure sustainable management of the forest.

Community based natural resource management is core to this Forest Management Plan. Through promoting community involvement in the management of Mzewe South National Forest, rights to forest products and uses of the forest will be negotiated whilst agreeing obligations and other responsibilities for protection and management activities with local communities. This is intended to achieve the parallel goals of ending open access, promoting enhanced forest management, whilst unlocking the full potential of sustainable forest use for economic development in the local communities. Surrounding communities have both the most to lose from its destruction and most to gain from its good management. The Community Forestry approach followed in Zambia provides an incentive mechanism and capacity development process to make this a reality.

To ensure effective implementation, including monitoring, this plan has been prepared using up to date and accurate information on the reserve covering: location and extent; ownership and rights; topography, climate and soils; flora and fauna; potential income and other benefits; challenges and opportunities for sustainable management. This forest management plan has the purpose not only of setting out approved management objectives and specified actions, but equally important, communicating these to the resource users and other stakeholders who are concerned with the implementation of the plan.

The Forest Management Plan was prepared through a consultative, interactive and participatory strategic planning process involving all key stakeholders. The data collection and consultation process was financed through the Zambia Integrated Forest Landscape Project (ZIFLP) a Zambian Government initiative in the Ministry of Green Economy and Environment.

Forest resource & community well being assessment

During 2021, the Forestry Department undertook forest resource assessments, engaging surrounding local communities and their traditional leaders as part of the enquiries for the purpose of preparing this forest management plan in accordance with the Forests Act, 2015**.** In parallel, ZAMSTATS undertook forest livelihoods and economic surveys with communities surrounding the National Forest.

Traditional leaders were consulted and approvals to proceed with data collection and subsequent participatory land use planning processes. Local stakeholder meetings were held with community representatives, local organisations and other Government Departments to raise awareness of climate change issues, the sources of greenhouse gas emissions in the Province, sensitise on the policy and legal framework, the proposed collaborative planning approach, issues affecting the specific forest areas and exploring opportunities for a partnership for management.

The information collected allowed assessment of the condition of the forest, both economic value of the forest and biodiversity in terms of species diversity and abundance. Past management, exploitation as well as current management and pressures on the forest can be seen in the species abundance and size distribution in the areas assessed. These as well as the current Policies and development priorities can guide the short, medium and long term management of Mzewe South National Forest.

The inventory results indicate a total standing volume for all species in Mzewe South National Forest estimated at (64.86m^3/ha), with a total bole volume estimated at 29.36m^3/ha). Total Biomass for trees ≥5cm DBH is estimated 98.17 tonnes per hectare with an above ground carbon estimate of 49.09t/ha. A basal area figure of 7.70m^2 per hectare is a low figure for the type of forest by 50%. This confirms the status of Mzewe South National Forest as a forest not achieving optimum growth potential.

Summary socio economic analysis

The livelihood survey conducted in 2021 indicated that Mzewe South National Forest is covered a total of 407 household with a total population of about 2,059. These households depend on farming as their main occupation, the principal crops grown are maize, sunflower and groundnuts from land holdings ranging between

0.25ha to 6ha. Almost all households use firewood as their energy for cooking. The survey revealed that 82 percent of all the households were willing if called upon to voluntarily support management of the forest reserve with Forestry Department. At the time of survey, there were serious encroachment in the reserve including schools and clinics within the forest.

Forest change & issues analysis

A consultation meeting of stakeholders for Mzewe South National Forest was held on 15th December, 2023 at Elshadai Lodge, in Vubwi district. Participants were requested to review the uses and users of the forest, the issues that are contributing to forest loss and forest degradation, but importantly to propose local solutions to these issues. Utilising forest cover imagery, participants were able to relate to the areas of forest and forest loss through agriculture and settlement across the forest and surrounding areas. This was used to focus discussion on issues, identifying different zones of use and management, possible strategies and priorities for management as well as agreeing permitted and non-permitted activities within each of the identified zones.

Stakeholders' observations and Concerns

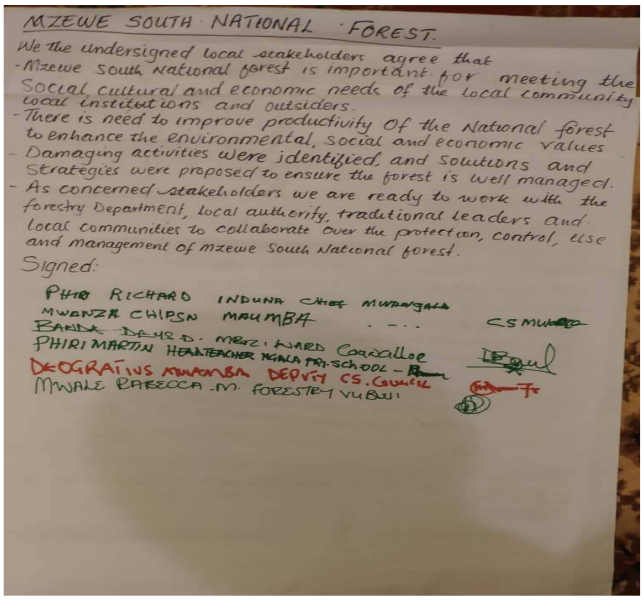
The stakeholders made several observations and raised some concerns notable among them include the following:

- The stakeholder admitted that, they know there was a time MSNF was intact but what changed it, was the encroachment levels which started raising as a result of relaxed law enforcement by the forest department. No arrest was made to those who had already encroached in the reserve.
- The forest is important to the surrounding communities as well as a habitat for animals. Forest loss threatens everyone and everything that depends on it.
- There are serious encroachments in MSNF, therefore there is need to protect what is remaining of the forest as well as bring it back to its former glory at the same time find a lasting solution to the illegal forest activities.
- Need to change the mind-set of the people for them to appreciate the consequences of deforestation as well as need to provide sustainable/ alternative livelihoods.
- The Forestry Department to resolve the inadequate human resource issue in there department. There is need to re-introduce forest guards to police all those breaking the law in MSNF and also need to stiffen laws/ punishment.
- The community forestry model should be promoted as it also promotes local sense of ownership.

Making a commitment to work together for change

As a statement of concern, but interest to work together with the Forestry Department, the Local Authority, Traditional leaders, and stakeholders agreed that there was need to

collaborate over the protection, sustainable use and management of the protected forest area and a declaration of intent was signed pledging to collaborate in the sustainable management of Mzewe South National Forest.


MZEWE SOUTH NATIONAL FOREST.
We the undersigned local stakeholders agree that
- Mzewe South National forest is important for meeting the social, cultural and economic needs of the local community local institutions and outsiders.
- There is need to improve productivity of the National forest to enhance the environmental, social and economic values
- Damaging activities were identified, and solutions and strategies were proposed to ensure the forest is well managed.
- As concerned stakeholders we are ready to work with the forestry Department, local authority, traditional leaders and local communities to collaborate over the protection, control, use and management of mzewe South National forest.
Signed:
PHIRI RICHARD INDUNA CHIEF MUDANGALA
MWANZA CHIRSN MAUMBA
BANDA DAVID - MBIZI WARD COUNCILLOR
PHIRI MARTIN HEADTEACHER NGALA PRI. SCHOOL - BOARD
DEOGRATIUS MWAMBA DEPUTY CS. COUNCIL
MWALE REBECCA .M. FORESTRY VUBWI
CS MUMBA

The declaration confirmed that, Mzewe South National Forest is of importance for meeting the local social, cultural and economic needs of the surrounding communities as well as of environmental importance, primarily through securing local water resources. The stakeholders requested to work in partnership with the Forestry Department and others to safeguard the forest.

Objectives and Management Actions

Based on the policy and legal framework and the consultation process conducted, the General Objectives for the management of Mzewe South National Forest are:

(a) To secure forest resources of local and national importance

(b) To protect and restore ecosystems, particularly the protection of land and water supplies of local and strategic importance;

(c) To ensure the sustainable utilisation of forest resources and other natural resources within the protected area;

(d) To ensure full participation of all stakeholders at all levels of society for sustainable forest resource and ecosystem management through appropriate incentives and benefit sharing mechanisms.

(e) To meet the social, cultural and economic needs of the local community and wider society involved in management of the Forest in a gender equitable manner.

These in the case of Mzewe South National Forest are urgent and if not actioned immediately may result in the loss of the forest and the functions it was reserved to protect.

Proposed Management Actions

The following management actions which are proposed for Mzewe South National Forest reflect the statutory purpose of the National Forest as set out in section 12 of the Forests Act of 2015. The actions are intended to address and reverse the degrading factors threatening the current existence of the National Forest.

1 Forest Conservation through Community Participation and Livelihood Development

Community empowerment is central to participatory forest management for the effective coordination and sustainable management of forest resources. This Plan recognizes that communities surrounding Mzewe South National Forest are key stakeholders in the conservation of this forest as well as beneficiaries from its sustainable management. This aims to meeting the social, cultural and economic needs and thereby improving the livelihoods of the communities around Mzewe South National Forest. This will be achieved through promotion of community forestry and the establishment of a community forest management group to partner over the management of Zones 1 and 2 of the National Forest, as well as a development zone (3) in the immediate surrounding area to promote greenhouse gas emission reduction interventions;

2 Forest Protection, Restoration, Management and Conservation of Biodiversity

Mzewe South National Forest is an important forest ecosystem containing different plant species and fauna. The forest is surrounded by an increasing population which is highly dependent on it for subsistence and increasingly economic needs including collection of mushroom, wild fruits, caterpillars, honey, firewood and poles. The level of unsustainable use is anticipated to intensify with increasing human populations resulting in higher levels of resource exploitation and degradation. Protection of this forest habitat is therefore essential to ensure the continued ecosystem services and local livelihood needs.

Without considering the needs of local communities, gaining their support, and working with them, rather than against them, forest protection and management goals and objectives will not be reached. Consequently, the strategy will be to work together with communities to develop joint protection systems in return for agreed levels of utilization within the capacity of the forest to meet subsistence needs whilst safeguarding the environmental aspects including conservation of biodiversity.

Safeguards & other crosscutting issues

In implementing the above management actions, cross cutting issues as well as other environmental and social safeguards processes will be mainstreamed in all aspects of forest management. Specific activities as well as the annual workplan and operational plans should include a process of social and environmental screening. These should be reviewed and updated in accordance with the type of activity being planned and general screening reviewed annually. A Grievance Redress Mechanism will be operational at the District and Provincial level to allow a mechanism for grievances to be raised, documented and addressed. Documentation and tracking is core to this issue. Women shall be integrated into all aspects of management of Mzewe South National Forest and empowered through equal participation in decision making, governance and benefit sharing.

Contribution to Emissions Reduction in Eastern Province

Improved management of Mzewe South National Forest through the proposed interventions will directly address the need for emissions reductions through promotion of Sustainable Forest Management. This centres on expansion of community forestry and strengthening collaboration in the management of this and other protected forest areas in the Province. Carbon sequestration will also be achieved through plantation forestry and locked in timber products.

Delivering sustained results

The expected outcomes of participatory management through local stakeholder involvement in the management of this and other protected forest areas will be to reduce emissions in the Eastern Province. Strengthening sustainable land and forest management practices, creating increased incomes and resilience of local communities, conforming to national strategies will reduce the effects of climate change. Implementing the proposed management actions should result in improved local livelihoods and local economic development, improved availability of major forest products whilst sustaining the key ecological functions of the National Forest and its surrounding area.

Definition of Terms

Above ground Biomass- refers to *vegetation above the soil, including stem, stumps, branches, bark, and foliage*

Basal Area- is the measure of cross-sectional areas of a tree trunk at breast height, typically measured in square meters per hectare

Below ground Biomass- This is one of the carbon pools including biomass of the roots and organic matter

Biomass- refers to the total mass of living organisms in a particular ecosystem or biological community

Bole height - The distance from the base of a tree to the base of the living branch that part of the tree crown

Bole volume- refer to the amount of wood contained in the trunk or stem of the tree, typically from the ground level up to a point where the trunk reached a certain diameter or height. It is used in forestry inventory

Community Forest - refers to forest management that has ecological sustainability and local community benefit as central goal

Fauna- refers to the animals in particular region or ecosystem it includes all animal species that inhabit a given area from tiny insects to and microorganisms to large mammal and birds

Flora- refers to the plants, trees, flowers and other living organisms that are classified as part of the plant kingdom

Regeneration- refers to the process of renewing a forest or woodland to replace those that have been harvested or lost due to natural causes

Topography- refer to the physical features of a particular area of land, including its elevation, shape and relief

ACRONYMS

CAPI	Computer Assisted Personal Interviews
CFMG	Community Forest Management Groups
CSA	Climate smart agriculture
DBH	Diameter at Breast Height
EA	Enumeration Area
EP-JSLP	Eastern Province Jurisdictional Sustainable Landscape Project
FD	Forestry Department
FMA	Forest Management Area
FMP	Forest Management Plan
FPIC	Free Prior Informed Consent
GHG	Greenhouse gases
HFO	Honorary Forest Officers
MSNFMP	Mzewe South National Forest Management Plan
MGEE	Ministry of Green Economy and Environment
MOE	Ministry of Energy
NGO	Non-Governmental Organization
REDD	Reducing emissions from deforestation and forest degradation
USAID	United States Agency for International Development
ZAMSTATS	Zambia Statistics Agency
ZIFLP	Zambia Integrated Forest Landscape Project

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1. INTRODUCTION

The Mzewe South National Forest Management Plan (MSFMP) is prepared in response to the National Forestry Policy of 2014 which has set forth clear guidelines to: "ensure adequate protection and sustainable utilization of forests, by promoting the development and use of forest and non-forest products by involving all interested key stakeholders particularly local communities around the forest reserve in the management of the forests and non-forest products in line with provisions of the Forests Act No. 4 of 2015. The Management Plan relates to the Southern Zone of Mzewe National Forest which falls in Vubwi and small portions in Chadiza District, Eastern Province.

1.1 Purpose of the forest management plan

The purpose of the forest management plan is to guide the rural communities, traditional and local leadership, and Key stakeholders in collaboration with the Forestry Department during the exploitation and management of the forest resources of the Mzewe South National Forest in a sustainable approach and manner. The plan will serve as a legal document to guide utilization and management of resources by local communities and key stakeholders around the forest and the Forestry Department through the Green Economy and Environment (MGEE).

This Forest Management Plan aims to contribute towards the Goal of the National Strategy for REDD which is to reduce deforestation and forest degradation for sustainable natural resource management, improvement of livelihoods and achievement of a green economy.

1.2 Duration of forest management plan

The duration of the FMP is ten (10) years from the date that the plan is approved and registered in the Government Gazette. However, implementation of the Plan will be monitored periodically and evaluated at year 5 and may be adjusted accordingly as lessons are learned.

1.3 Policy Objectives

The Objectives for this Forest Management Plan are aligned with the objectives of the National Forestry Policy, 2014, which include:

Objective 1: To manage the country's forest resources in order to maximize productivity and the development potential of the forest resources:

Objective 2: To empower local communities and traditional leaders in order to ensure adequate protection and management of forests:

Objective 3: To improve the role of forests in addressing climate change in order to contribute to reducing its impact through mitigation and adaptation measures:

1.4 General Management Objectives

The General Objectives for the management for the Forest Reserve are aligned with the purpose of a National Forest as defined in the Forests Act, 2015, and include:

(a) To secure forest resources of local and national importance

(b) To protect and restore ecosystems, particularly the protection of land and water supplies of local and strategic importance;

(c) To ensure the sustainable utilisation of forest resources and other natural resources within the protected area;

(d) To ensure full participation of all stakeholders at all levels of society for sustainable forest resource and ecosystem management through appropriate incentives and benefit sharing mechanisms

(e) To meet the social, cultural and economic needs of the local community and wider society involved in management of the Forest in a gender equitable manner.

2. GENERAL DESCRIPTION

2.1 Location Details

Mzewe South National Forest (Reserve No. P. 164) forms part of the forest estates in Eastern Province. The Southern Zone which falls within Vubwi District under His Royal Highness Chief Pembamoyo and a small portion in Chadiza district which is under Chief Mwangala. The whole MSNF covers a total land area of approximately 21,044 hectares in extent and is situated approximately 30Km west of the administrative centre of Vubwi District. The Northern part it shares the boundary with Mzewe north national forest No.143 and the western parts of the reserve is Chadiza District with farms while the southern part, it borders with Mozambique.

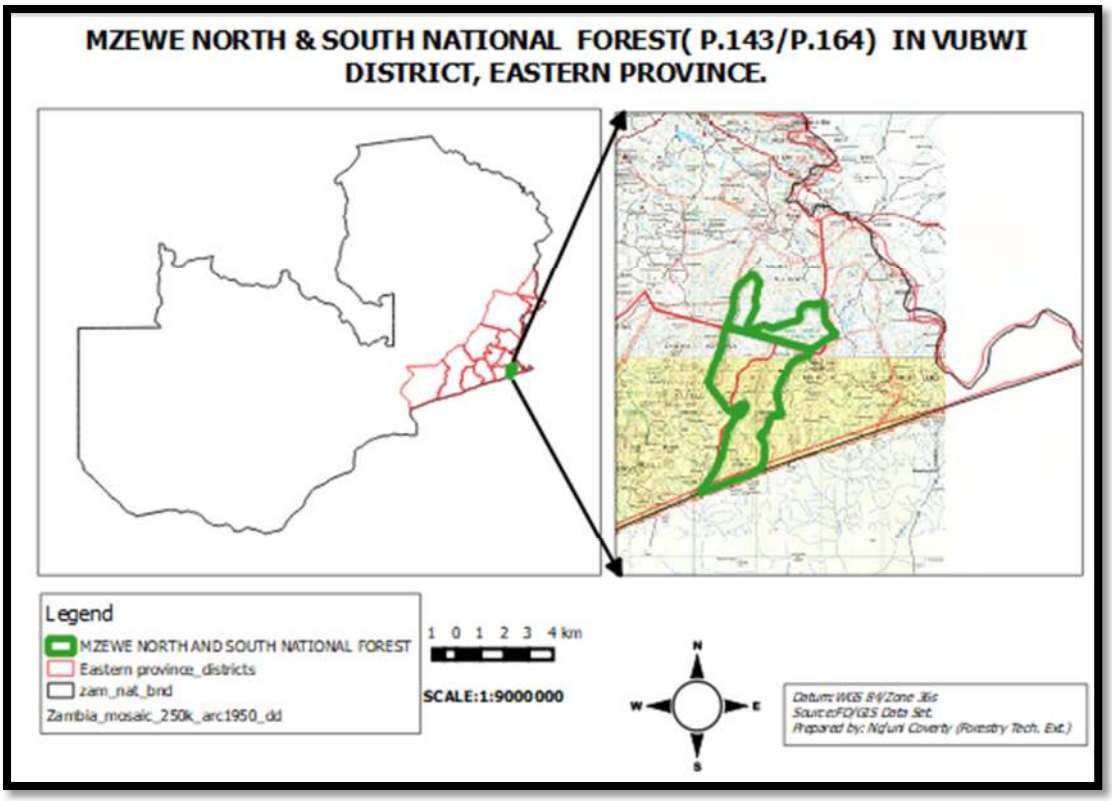

Figure 1 Map of Mzewe South National Forest

A detailed description of the gazetted forest boundary is provided in Annex 1.

2.2 Ownership and control

Mzewe South National Forest No. P.164, was originally declared a forest reserve and gazetted under Statutory Instrument No. 158 of 1964 and 158 of 1975 and deposited in the office of the Surveyor-General on plan No. FR206 and signed by him dated 29th November, 1961. The forest was gazetted as a protected forest area with the designation of "National Forest" covered by section 12 of the Forests Act, 2015. The area is under the jurisdiction of the Forestry Department, Ministry of Green Economy and Environment through powers bestowed under the Forests Act No. 4 of 2015 of the Laws of Zambia. The Forestry Department is responsible for the protection and management of this forest.

2.3 Reasons for reservation

The reason of reservation proposal as stated in the proposal at the time the forest was gazetted as a protected forest area under Statutory Instrument 39 of 1964 and subsequently under notice 158 of 1975. The reservation aimed at protecting indigenous pole production to purely meet local supply and also reduction of erosion in avoidance of land deterioration or degradation. This proposal was to be handed over, under Section 10 of the Forests Ordinance, to Chewa and Ngoni Native Authorities to manage.

2.4 Physical and Biophysical Environment

Topography, Geology & Soils

The Forest lies on a relatively flat land at an altitude of about 1210m above sea level, is relatively flat with few rock outcrops. Geologically the area is located on Precambrian metamorphic rocks characterized by genesis with igneous intrusion of syenite. The exploratory soil map of Zambia compile by the soil survey section research branch of the Ministry of Agriculture 1971 classified the area covering Mzewe South National Forest well drained, moderately deep, red to strong brown, friable, gravelly, moderately weathered fine loamy to clayey soils (chromi-haplic ALISILS, partly skeletic phase).

Rainfall & Temperature

The rainfall usually lasts for 5 to 6 months starting from November to March and the peak months are December and February. The rainfall amount ranges from 900 to 1000mm.

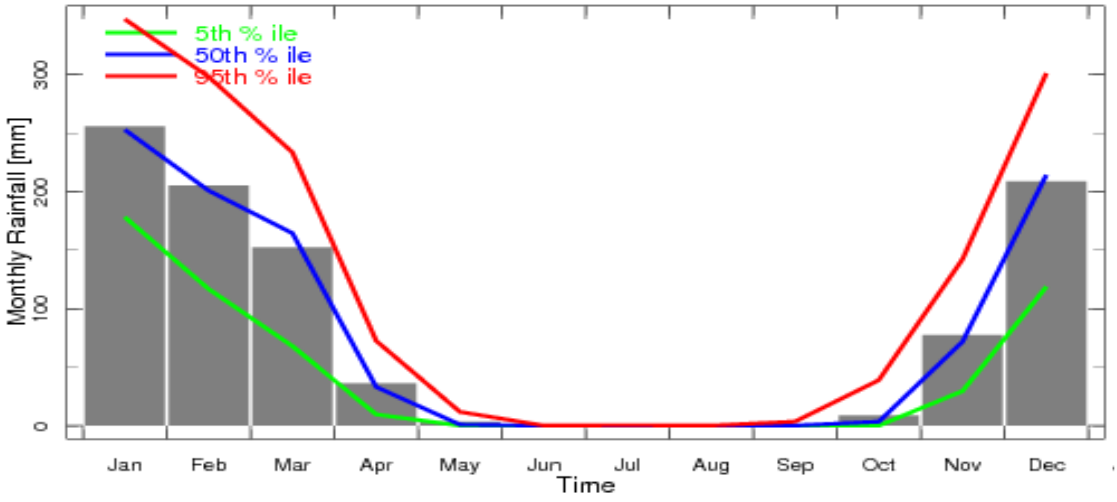

Figure 2 Monthly rainfall *Source: The Zambia Meteorological Department – Eastern Province*

Normally, temperatures are very high, especially during the dry months which occurs between August and December. The maximum average monthly temperature is between 27C and 34 C. The highest maximum temperature occurs in October. The lowest average temperature is between 21^{0}C and 23^{0}C during the cool dry season occurring especially between May and June.

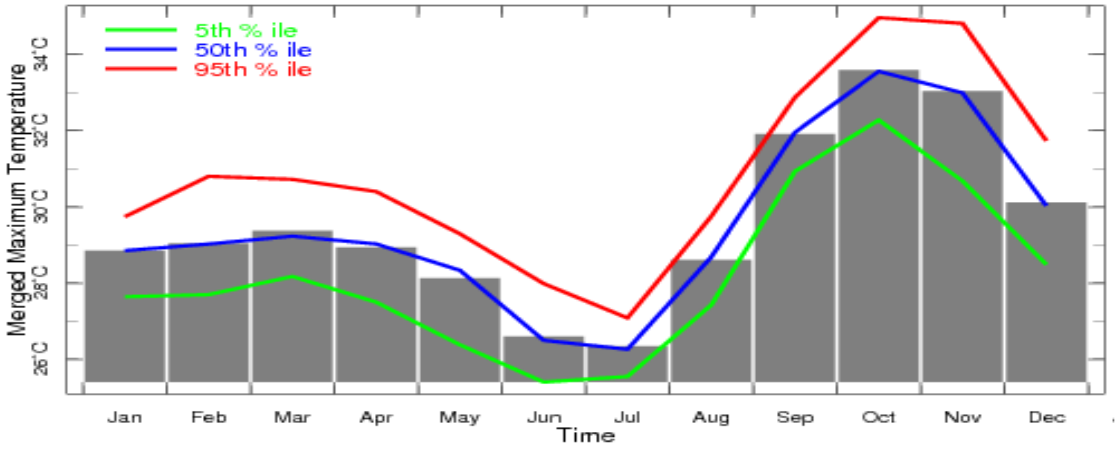

Figure 3 Monthly temperature Source: The Zambia Meteorological Department-Eastern Province

Vegetation Type

Mzewe South National Forest is a homogeneous forest. The vegetation type is miombo woodland on the plateau with a diverse tree flora including *Brachystegia manga, Brachystegia bussei, Brachystegia utiilisand Brachystegia boehmii Julbernardia paniculata*, *Brachystegia floribunda*, *Parinari curatellifolia* which are the dominant species. *The other tress species growing on the flat ridges between main watersheds are Isoberlinia angolensis and Uapaca* and many other species with *Brachystegia speciformis* being the dominant species.

Fauna

During both the reconnaissance survey and the forest inventory, there was no physical observation of major wildlife. However, an indication of their presence was recorded through observations such as foot prints and droppings as well as through oral interviews with some community members. Animals such as Vervet Monkeys, Warthog, Bush pigs, Antelopes, Guinea fowls and common Duikers are present. Smaller animal species such as squirrels, birds, Snakes and Lizards were encountered during the surveys.

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3. PAST MANAGEMENT

The Mzewe South National Forest was declared and gazetted in 1966. The management of the reserve has been guided by the objectives of reservation proposal as stated in the proposal at the time the forest was gazetted as a protected forest area under notice 39 of 1964 and subsequently under Statutory Instrument 158 of 1975. The reservation aimed at protecting stream catchment area, conservation biodiversity of indigenous tree species and securing the supply of forest and non-forest products for present and future generation in particular communities around the forest reserve.

The Public Service Reform Programme (PSRP) in 1997 and economic downturn, had an adverse impact on the management of the National Forest. This combined with an increase in population, high poverty levels resulted in increase pressure on the forest compounded by a Department of reduced manpower. With the result, Mzewe South National Forest has over the years been heavily encroached by influx of migrants from surrounding areas and Chiefdoms. Agriculture, timber harvesting and informal land allocation for settlement are the major challenges facing the National Forest for some time. The encroachment includes some substance farmers growing maize and cotton. Various initiatives have taken place to address including meetings with Chiefs, stakeholder meetings and in 2018 a programme of issuing notices to those illegally settled within the Reserve.

Maintenance works

In 2018, Mzewe South National Forest boundary beacons were verified and new maps produced under the Forest Reserve Support Project funded by US Forest Service.

In 2021 ZIFLP supported the district officers to conduct boundary clearing and checking boundary beacons. In December 2021, sections of the National Forest boundary had been cleared. Boundary beacons were renewed where required. See Annex 1 for details and map. In 2022, signboards were erected to indicate the National Forest and restrictions therein. Sporadic prescribed burning has been implemented, most recently in 2021 and 2025.

4. GROWING STOCK

Assessing the growing stock of the forest is important in terms of ensuring Sustainable Forest Management. In basic terms, assessment is needed to ensure that the removal of trees and forest products does not exceed the rate of replacement in terms of growth and abundance. This is the basic principle of sustainable forestry otherwise the forest will be depleted and degraded.

A forest inventory was conducted by the Forestry Department in 2021 with financial support from the Zambia Integrated Forest Landscape Project. A map of the distribution of the sample plots for Mzewe South National Forest is provided in Annex I. Measurement of trees and soils followed the Department's Guidelines and the software *forestcalc* (version 6.4.1) used to process the data to provide the summary information contained in this chapter. The information collected allows assessment of the condition of the forest, the value of the forest both economic as well as biodiversity value in terms of species diversity and abundance. Past management, exploitation as well as current management and pressures on the forest can be seen in the species abundance and size distribution in the areas assessed. These as well as the current Policies and development priorities can guide the short, medium- and long-term management of Mzewe South National Forest. The following sections provides the results and analysis from the data collected. The following table presents the summary information from the forest inventory:

4.1 Stratum total by all species

Diameter Class	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Vol (m^3)/ha	0.00	3.49	10.01	13.19	19.83	6.06	12.27	64.86
Bole Vol (m^3)/ha	0.00	1.36	4.24	5.67	8.80	2.70	6.61	29.39
Density/SPH	1.10	132.56	120.16	68.90	47.96	6.89	1.93	379.49
Basal area (m^2)/ha	0.00	0.60	1.39	1.56	2.13	0.59	1.43	7.70
Biomass, Total (Tons)/ha	0.00	5.17	14.91	19.20	29.73	8.93	20.21	98.17
Carbon, Total (Tons)/ha	0.00	2.59	7.46	9.60	14.87	4.47	10.10	49.09
Vol (m^3)/ha Sawlogs	0.00	0.04	0.53	1.94	5.37	3.54	0.47	11.90
Vol (m^3)/ha Poles	0.00	0.96	2.34	3.16	2.94	0.31	0.00	9.73
Vol (m^3)/ha Fruits	0.00	0.34	0.87	0.50	1.00	0.26	9.41	12.39
Vol (m^3)/ha Medicinal	0.00	0.94	2.53	1.94	1.51	0.21	1.31	8.44
Vol (m^3)/ha Firewood	0.00	1.17	3.59	5.46	8.53	1.73	1.09	21.56
Vol (m^3)/ha Other	0.00	0.01	0.10	0.17	0.34	0.00	0.00	0.63
Seedlings								4,862

Table 1:stratum total for all species

4.2 Tree species abundance

The inventory data indicates that there are over 185 different types of tree species that include tree seedlings in the forest. Below is a table of summary information from the forest inventory and will be described in the sections below;

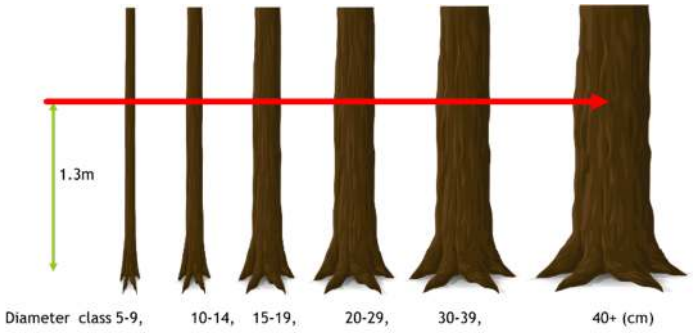
Top Ten Abundant Species in the Reserve

Species	Local Name	Species code
Brachystegia floribunda	Musamba	48
Brachystegia longifolia	Mbovu	49
Brachystegia bussei	Mukongolo	47
Brachystegia boehmii	Muomba	46
Brachystegia spiciformis	Kaponi	52
Diplorihynchus condylocarpo	Mchindula	114
Jubernadia paniculata	Mutondo	189
Pericopsis angolensisi	Mulombwa	264
Parinari curatellifolia	Mupundu	233
Pseudolachnostylis maprouneifolia	Musolo	258

Table 2 Top Ten Abundant Species in the Forest Reserve

4.3 Tree and Sampling Distribution by Size Classes

Size Class Distribution is a way to describe the structure of a forest by categorizing the tree population by size of the tree through measurement of each tree, its diameter-at-breast-height (DBH) in centimetres and allocating each measured tree into a size range as means to assess the tree population. Trees below 5cm are counted, not measured. The actual distribution of measured trees into various classes is then compared to a suggested "ideal" benchmark as an indicator of forest health and sustainability. The presence or absence of trees in various size classes informs the manager of past management, current stocking and the future growth potential of the forest.



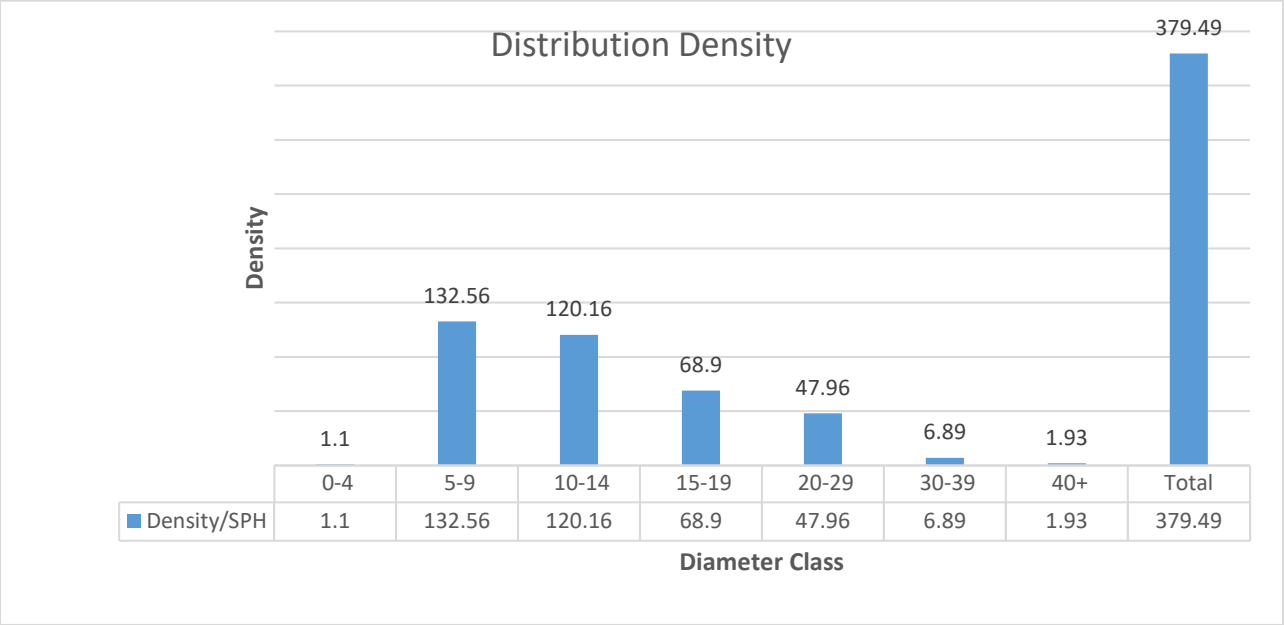


Figure 4 Density by diameter class/ha for all species

In Mzewe South National Forest, a stocking density for trees ≥ 5 cm DBH was estimated as 379 stems per hectare.

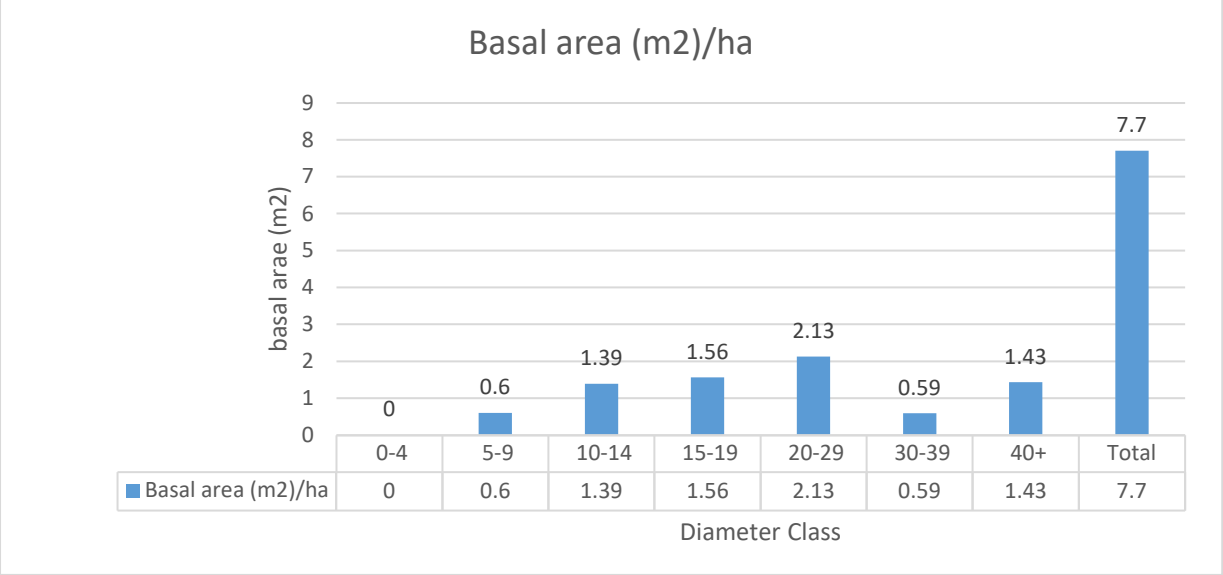


Figure 5 Basal area (m^2) by diameter class/ha for all species

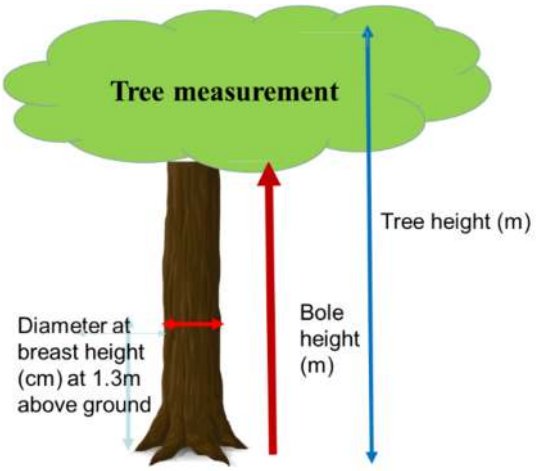
The stocking by diameter class basal area per hectare is more in 20-29cm class. The data indicates that there has been much tree harvesting resulting in high coppicing and regeneration. This indicates that the forest in terms of growth potential is in a relatively healthy condition allowing succession from one size class to the next higher one. The data also indicates this is a secondary forest.

Forest condition is further assessed by the amount of area occupied by the stems of trees, termed basal area. This is measured by determining the cross-sectional area of a tree at breast height (1.3m), summing all the measurements and expressing this as a figure of square meters, either in their size class categories or as a total per hectare. A figure of 7.7 m^2 per hectare is a lower figure for basal area in a similar

type of forest type by half. This confirms the status of Mzewe South National Forest as a forest not achieving optimum growth potential.

4.4 Total Volume, Biomass and Carbon estimate of all Species

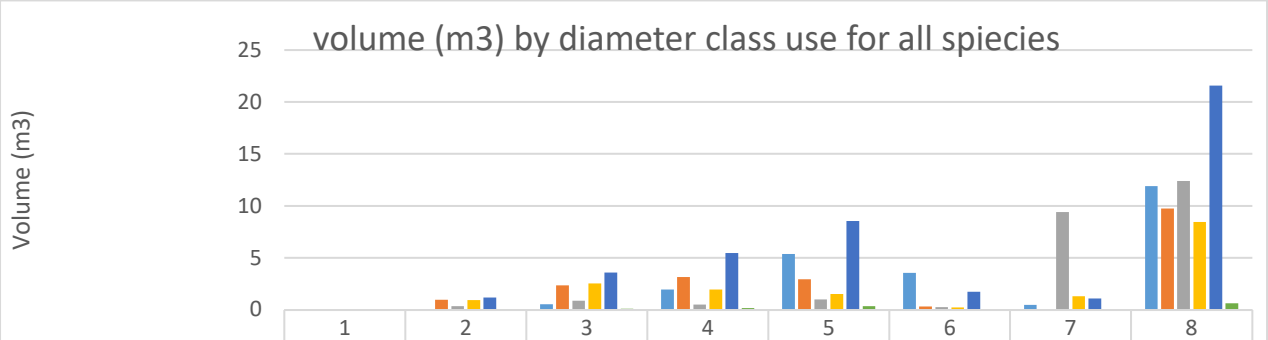
Calculating volume of the standing trees of DBH > 5cm is a further measure of the condition of the forest, site quality and previous management and exploitation. Tree volume to different heights is measured and calculated by individual trees and summed to give a total volume estimate per hectare. An estimate of the volume in a stand or plot is important for forests quantification and management decision making. The amount of merchantable wood in cubic metres (m3) in a tree, as well as across the forest, was estimated while the trees are still standing using the methods of forest mensuration. Tree bole volume is based on the timber height relating to the parts of the tree that could be cut and sawn. Stand volume based on tree height is important for providing an estimate of total wood biomass resource. An assessment of carbon stocks was then estimated using the methodological framework developed by the IPCC.



The total standing volume per hectare for all species in Mzewe South National Forest is estimated at 64.86m³/ha., with a total bole volume estimated at 29.39 m³/ha. Total. Biomass for trees ≥5cm DBH is estimated at 98.17 tons/ha and it has carbon estimated at 49.09 tons/ha.

Technical characteristics

The volume of other technical characteristics or use are computed per hectare as follow: Saw-log 11.90m³, Pole 9.73m³, Firewood/charcoal 21.56m³, Fruit 12.39m³, Medicine 8.44 and others 0.63m³. The poles are evenly distributed mainly in diameter class 5 to 29 and less above 30. The sawlog are minimal, less than 5 cubic meters per hectare. This indicates that the forest is under threat.



	1	2	3	4	5	6	7	8
Vol (m3)/ha Sawlogs	0	0.04	0.53	1.94	5.37	3.54	0.47	11.9
Vol (m3)/ha Poles	0	0.96	2.34	3.16	2.94	0.31	0	9.73
Vol (m3)/ha Fruits	0	0.34	0.87	0.5	1	0.26	9.41	12.39
Vol (m3)/ha Medicinal	0	0.94	2.53	1.94	1.51	0.21	1.31	8.44
Vol (m3)/ha Firewood	0	1.17	3.59	5.46	8.53	1.73	1.09	21.56
Vol (m3)/ha Other	0	0.01	0.1	0.17	0.34	0	0	0.63

Diameter (cm)

Figure 6 Volume (m³) by diameter class/ha for all species by use

Bole volume total by diameter class/ha for all species

The total bole volume by diameter class per hectare is 29.39 cubic meters with higher in diameter class 05 – 29 and less from 30 and above. The outcome indicate that there is a lot of tree harvesting resulting in high coppicing and regeneration.

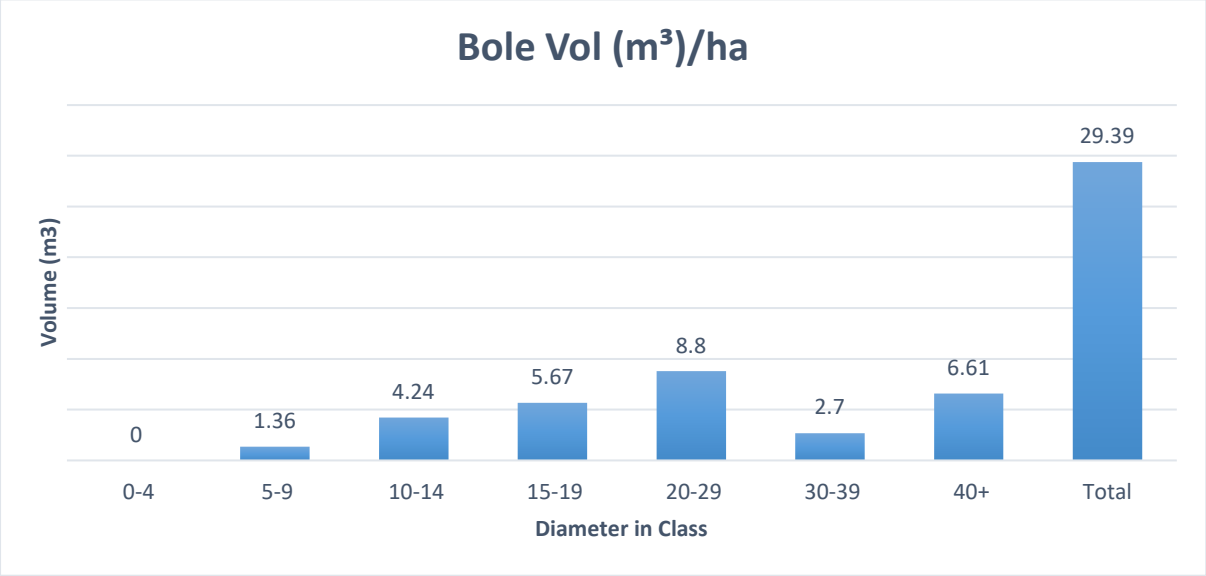


Figure 7 Bole volume (m³) by quality diameter class for all species

4.5 Presence of Commercial Tree Species

Based on the inventory data, species used for high valued sawlogs such *Pterocarpus angolensis, Jubernadia paniculata, Brachystegia bussei, Parinari curatellifolia, Brachystegia spiciformis* and *Brachystegia longifolia* are not abundant in the forest. The harvestable volume is low. Therefore, Mzewe South National Forest in its current condition cannot sustain large scale logging operations or timber concession because it is highly encroached and degraded in most areas.

Technical characteristics - Volume of all species by use

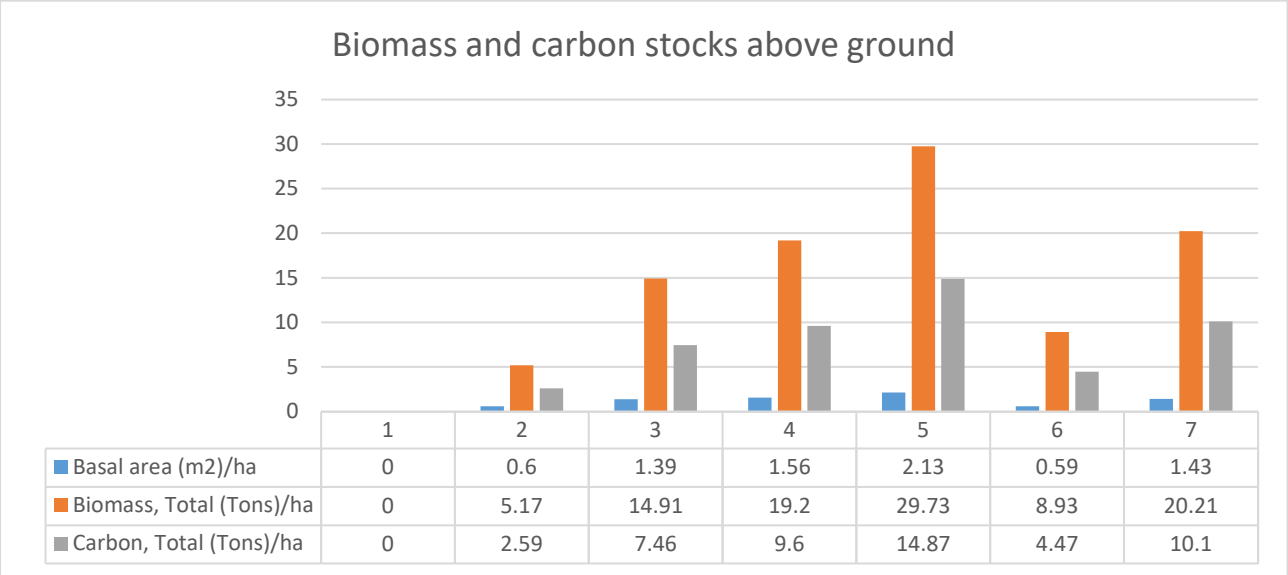
No	Description	Volume(m³/ha)	Explanation
1	Sawlogs	11.9	These are merchantable trees with the average diameter of 40cm dbh and above
2	Poles	9.73	These are tree species with relative straight bole length with the average diameter at breast height of 10cm to 19cm
3	Fruits	12.39	The tree species include all fruit bearing either edible or not edible
4	Medicinal	8.44	All medicinal plants
5	Firewood	21.56	These include all dead and or diseased trees which can be used for firewood

6	Others	0.63	These include all tree species which are not classified in any of the above categories

Table 3 Trees in the National Forest in terms of forest product categories

Biomass and carbon above ground

Based on the inventory data, the biomass and carbon figures by size class and total are summarized in figure 12. Note, this figure is standing carbon and not the amount of carbon that may be traded under carbon trading schemes which are based on measured reduction of emissions.



	1	2	3	4	5	6	7
Basal area (m2)/ha	0	0.6	1.39	1.56	2.13	0.59	1.43
Biomass, Total (Tons)/ha	0	5.17	14.91	19.2	29.73	8.93	20.21
Carbon, Total (Tons)/ha	0	2.59	7.46	9.6	14.87	4.47	10.1

Figure 8 Biomass and Carbon above ground by diameter class/ha for all species

Biomass and Carbon total (tons) by diameter class/ha for all species

The total biomass and carbon stocks per hectare respectively of 98.17 m^3/ha and 49.09 m^3/ha. The methodological framework applied is that developed by the IPCC documented in the 2006 guidelines for national greenhouse inventories volume 4, chapter 2 and 4. The correlation of total biomass and carbon both above and underground is in the figure above is within the IPCC requirement of half of biomass constitute carbon stock above ground.

4.6 Forest Condition and Restoration Assessment

To supplement the forest inventory data, a land cover assessment was conducted using Sentinel-2 2025 images (date filtered: 2024-01-01 - 2025-07-01) at a resolution of 30 meters. The area of different land classes was calculated using Compute Geometry in ArcMap. The results indicated the following:

Land cover category	**Estimated area**	**Percentage**
Forest	17,859.1	85.5
Cropland	2,808.1	13.4
Degraded forest (open)	205.0	0.98
Degraded (scrub)	19.0	0.09
Bare land	2.6	0.01
Total	**20,893.8**	**100.00**

Table 4 Forest condition analysis 2025 by land cover

Restoration map narration

The following projected restoration potential map was developed using Sentinel-2 2025 images (date filtered: 2024-01-01 - 2025-07-01) at a resolution of 30 meters. Land use land cover (LULC) classification was performed using a supervised classification method for accurate IPCC classes, with all computations performed in Google Earth Engine. The Normalised Difference Vegetation Index was calculated for: Forest Land, Cropland, Grassland, Wetlands, Settlements, and Other Land. Since forest shapefiles were utilised, the area of different land classes was calculated using Compute Geometry in ArcMap. Therefore, the combined area may not necessarily be the same as the original gazetted forest area.

Mzewe South National Forest Landcover Assessment

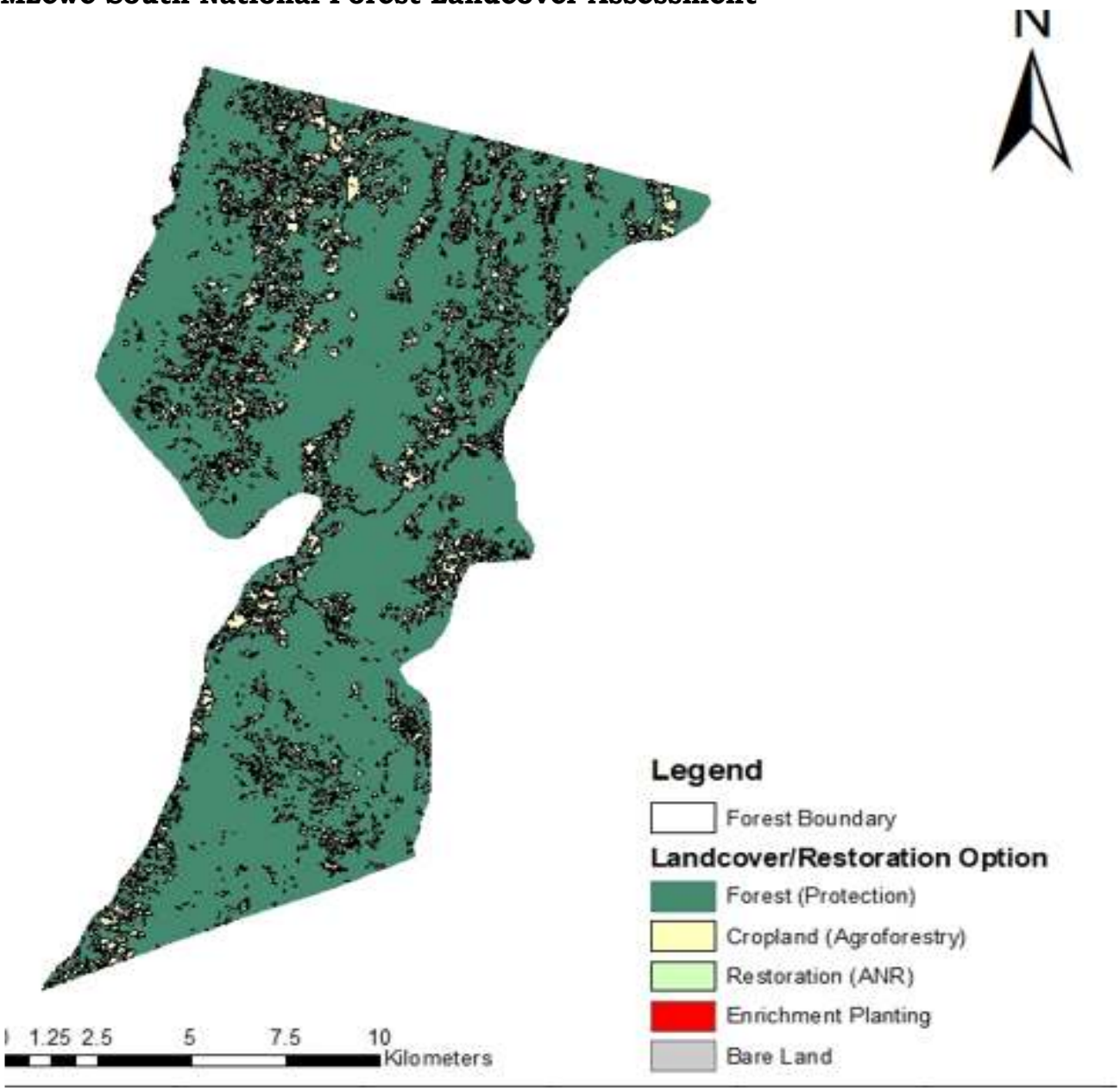


Figure 9 MSNF Landcover Assessment 2025

The pressure on the forest is high and risk of further loss and degradation severe. The approach for Mzewe South national Forest is to secure areas with forest cover and restore areas of lost forest cover with people's participation in order to improve environmental, social and economic impacts. The landcover analysis allows for identification of restoration strategies. These are outlined in the chapter on proposed management options.

5. SOCIAL – ECONOMIC CONDITIONS

5.1 Livelihood Data analysis

Forestry livelihood survey was conducted by the Zambia Statistics Agency (ZAMSTATS) Eastern Regional office, in November 2021. The main objective of the Forestry Livelihood Survey was to measure the well-being of the communities dependent on Mzewe South National Forest and to measure the utilisation and management of trees resources. Also, to determine the benefits the surrounding communities derive from forest reserve. The demographic characteristics of any area are important in understanding the living conditions of the people through the impact they have on the prevailing situations. Furthermore, data on the demographic characteristics provide background information and the necessary framework for the understanding of other aspects of the population, including economic activities, poverty, and food security. Considering the household population distribution of Mzewe South National Forest can be translated as having an average size of the household membership of about 5 per household.

Methodology

The systematic sampling method was used to select households from each Enumeration Area (EA). The method assumes that households are arranged in a straight line and the following relationship applies:

Let K = N/n Where: N = total number of households assigned sampling serial numbers n = total desired sample size to be drawn from an EA K = Sampling interval in each EA calculated as K = N/n

The 2021 forest survey was paper Assisted Personal Interviews (PAPI) collected. All the field questionnaires were checked for completeness by the field supervisors. After data collection, all questionnaires were submitted for data entry using statistical software SPSS, Version 20. After data entry was completed, the data were subjected to extensive checks on their validity and consistency in order to facilitate analysis using statistical package SPSS version 20, which was done by Mully Phiri and Dr Richard Kaela.

Household and Population dynamics

Mzewe South National Forest as at 2021 livelihood survey covered about 407 households and farming blocks as indicated in Annex: III with a total population of about 2059. The main ethnic groups in the area are Chewas. The forest adjacent population are mostly small-scale farmers who utilize the forest for some of their livelihood requirements. The main crops grown are Maize, Sunflower, Soya beans and groundnuts. The land tenure of the population surrounding the Mzewe south NF is mostly under customary land tenure system. Those households within have no formal title deeds or letter of allotment.

Level of Education

Education is one of the fundamental factors that enhance the well-being and quality of life for persons and for entire society. Education, therefore, has profound effect on the population's welfare in terms of health, employment earnings, poverty levels and nutrition. Education levels of the head of households in the Villages/Localities surrounding the Mzewe South National Forest was found to be mainly primary level that contributed 59.2 percent, while tertiary contributed about 2.5 percent. The rest being No formal education and secondary education indicating 23.3 percent and 15.0 percent respectively. As shown in the table below:

Education Level	Percent
No Education	23.3
Primary	59.2
Secondary	15.0
Tertiary	2.5
Total	100.0

Figure 10 Education levels attained.

Economic activity

The results showed that 95.8 percent of the household population surrounding Mzewe South Forest had farming as their main occupation, while few were in business or paid employment.

Main Economic activity	Percent
Business	0.8
Employment	3.4
Farming	95.8
Total	**100.0**

Table 5: Percentage distribution of main economic activity

Types of energy used for cooking.

Almost all households in the localities surrounding Mzewe South National Forest use firewood as their energy for cooking. The livelihood survey revealed a percentage of about 100 percent using firewood. It shows how threatened the forest is as every household depends on the forest for cooking energy.

Main tree resources used for firewood.

The main tree species used for firewood by households in the localities surrounding the Mzewe South National Forest are as shown in the table below.

Main tree species used-
Brachystegia floribunda
Brachystegia longifolia
Brachystegia bussei
Brachystegia boehmii
Brachystegia spiciformis
Diplorihynchus condylocarpo
Jubernadia paniculata
Pericopsis angolensisi
Parinari curatellifolia
Pseudolachnostylis maprouneifolia

Table 6 Main tree species used for firewood.

Note: these species are therefore under serious threat for wood energy and mitigation measures are required in the management plan.

Non wood Forest products

The main Non wood forest products used by households surrounding the Mzewe South National forest are as shown in the table below.

Non wood Forest products
• Mushroom • Caterpillars • Fruit

Table 7 Non Wood forest Products used by households

Willingness of community to participate in management of the forest reserve

The livelihood survey revealed that 82 percent of all the households interviewed were willing if called upon to voluntarily support management of the forest reserve with the Forest Department and other stakeholders in the community.

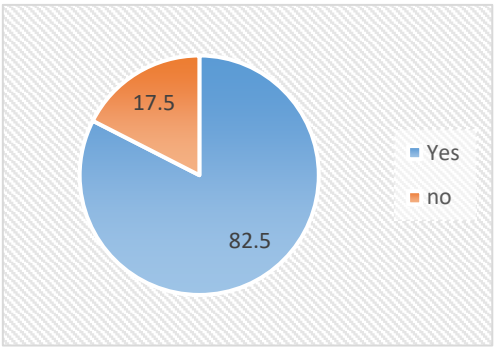


Figure 11 Willingness to participate when called upon to support forest management

Land Occupation and Use

The livelihood survey for the communities surrounding the Mzewe National Forest revealed that most of the settled land is by households who expressed traditional occupation (83.2 percent) with the balance (16.8 percent) through informal renting. All land occupied by households is mainly used for agriculture purpose. Further inquiry indicated that 15.8 percent increased their area under farming in the last 5 years.

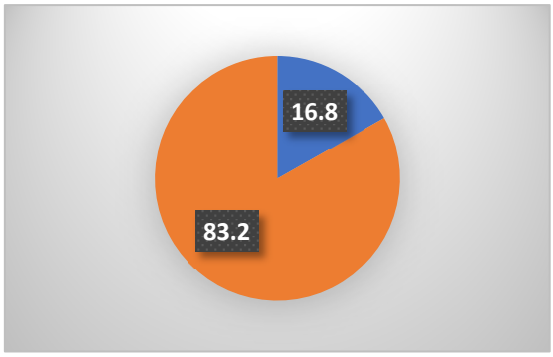


Figure 12 Land Occupation and Use

Willingness to plant trees on land occupied

The survey revealed the willingness to planting trees by the households on the land they occupy. Those willing to plant trees on this land represented 86.7 percent, while those not willing to plant trees at 13.3 percent.

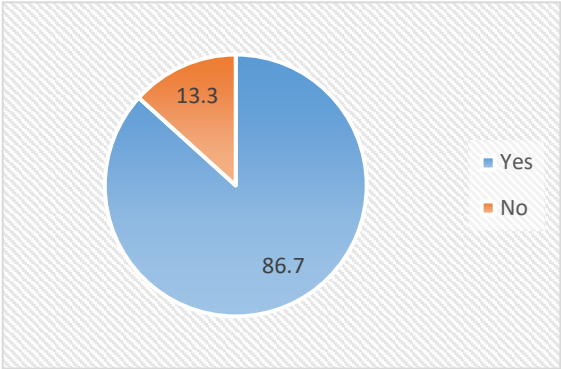


Figure 13 Willingness to plant trees on land occupied by households.

5.2 Utilization issues and solutions proposed by stakeholders

The consultative meeting held on 16th December 2023, the stake holders identified the uses and users of the forest. These included:

-Construction material
-Collection of wild food
-Collection of firewood
-For prayers

The Users of the forest:

1. The community surrounding Mzewe South NF
2. Outsiders

Local issues and local solution

ISSUES	SOLUTION
Late burning	Early burning
Illegal cutting of trees	Punishment
Charcoal burning	Ban charcoal production
Forest loss	Planting trees/Forest regeneration

5.3 Enterprise opportunities

A healthy forest ecosystem provides a strong foundation for income generation through forest products by maintaining biodiversity, soil fertility, and water resources essential for their sustainable production. When forests are in good ecological condition, they support the growth of high-value timber and Non Timber Forest Products (NTFPs) which local communities and others can harvest and commercialize in a regulated manner. A well-managed forest ensures a continuous supply of these resources without depleting them, allowing for long-term economic benefits.

Mzewe South National Forest provides a number of income generation/enterprise opportunities based on the current forest condition, the interests of local communities and other stakeholders, but particularly based on the commitment to sustainable forest management through agreed institutional arrangements already described. The foundations for community based forest enterprises can be built on the elements of forest resource condition and associated forest product availability, access to markets, an identified enterprise group and importantly, overall governance arrangements to regulate access, use and protection of the forest.

Through the resource assessment and mapping exercise, combined with the socio-economic survey, stakeholder consultation as well as the community forestry management planning process, the following enterprise opportunities have been identified:

Potential Forest product enterprises

- Beekeeping
- Wood biomass energy production
- Wild fruit and mushroom harvesting

The development of the above identified opportunities would be subject to conduct of specific forest product value chain analysis and enterprise development assessment to ensure a viable and financially feasible forest based enterprise could be promoted in line with the Forestry Department Forestry Enterprise Strategy for 2025-2030. This strategy seeks to promote sustainable forest management while enhancing value addition in forestry value chains through empowering local communities.

5.4 Encroachment - illegal settlement and cropping

Mzewe South National Forest has over the years been heavily encroached by influx of migrants from surrounding areas and Chiefdoms. Agriculture, timber harvesting and informal land allocation for settlement are the major challenges facing the Local Forest for some time. Over the years, various initiatives have taken place to address including meetings with Chiefs, stakeholder meetings and a programme of issuing notices to those illegally settled within the Reserve. In addition, a number of settlements with associated infrastructure including schools are located within the gazetted forest area. In 2018 a programme of issuing notices to those illegally settled within the Reserve was conducted following a nationwide instruction from the Minister of Lands and Natural Resources. In addition, a number of settlements with associated infrastructure including schools are located with the gazetted forest area

To ensure the reserve was well protected (MSNF), in 2015 and 2019 Forest Reserve Support Project (FRSP) supported the Department to conduct the following activities;

i. Boundary clearing
ii. Beacon replacement/painting
iii. Early burning
iv. Forest patrols.

Initiatives to address and reverse the situation with a view to restore more of the ecological function of the National Forest as well as meeting the social, cultural and economic needs of the local community are set out in the following chapter.

6. PROPOSED MANAGEMENT ACTIONS

In view of the current condition and rate of deforestation and forest degradation being experienced across this National Forest, the overall objective is to secure the ecological functions of the forest through engaging local stakeholders and surrounding communities and agree new strategies for management and restoration of the National Forest. This includes applying the community forestry process which supports community control, use and management of forest areas in partnership with the Forestry Department. All approaches will conform to the stated purpose of a National Forest as described in section 12 of the Forests Act, 2015:

Purpose of National Forest

12. Subject to the other provisions of this Act, all land comprised in a National Forest shall be used for—

(a) the security of forest resources of national importance;

(b) the conservation of ecosystems and biological diversity;

(c) improved forest resource management and sustainable utilisation of forest resources; and

(d) the management of major water catchments and head waters, subject to the Water Resources Management Act, 2011.

Act No. 21 of 2011

The emphasis will be on Forest Landscape Restoration (FLR) as a process for sustaining ecological functionality, increasing availability of resources and therefore enhancing values across deforested or degraded forest landscape of MSNF. The approach will be to secure areas with forest cover and restore areas of lost forest cover with people's participation in order to improve environmental, social and economic impacts. In order to achieve these impacts, the main management strategies identified focus on steps to protect, restore and replant, as follows:

- **Protect** - areas where the forest is intact with local stakeholder involvement;
- **Restore -** the forest where it is degraded by promoting regeneration encouraging regrowth of local species or reafforestation with people's participation.
- **Replant** - increase forest cover through planting tree species in fields where cropping is taking place. This aims to increase tree cover, soil fertility, provide fodder and small biomass for energy needs. Further, reafforestation through planting of indigenous or exotic species in abandoned fields in a plantation environment where practical.

Opportunities for collaboration with partners and seeking investment and sustainable financing through climate change mitigation / emissions reduction trading will be explored to provide the investment, incentive and reward for sustainable land management in the forest. Sharing benefits from the anticipated Jurisdictional Sustainable Landscape Programme will be core to the process of incentivising and rewarding good practices in mitigating the effects of climate change and providing the mechanism for monetary benefits to accrue to local communities and other service providers from carbon trading by Government.

6.1 Zoning the forest for effective forest management

This management plan recognizes the 2 major zones identified during the stakeholder consultation of December 2023, which identified use of the forest, the main users of the forest, issues affecting MSNF, local solutions and permitted activities. A further zone (3) covers the immediate area surrounding the National Forest to act as a buffer which will focus on development as well as emissions reductions related activities.

Zone 1: Forest Protection, Management and Conservation of Biodiversity

Mzewe South National Forest (MSNF) is an important forest ecosystem containing different plant species and fauna. MSNF provides an important function to safeguard downstream to communities through rainwater interception and release. However, the level of unsustainable use is anticipated to intensify with increasing human populations resulting in higher levels of resource exploitation and degradation. Protection of this forest habitat is therefore essential to ensure the continued ecosystem services and local livelihood needs.

Without considering the needs of local stakeholders and communities, gaining their support, and working with them, rather than against them, forest protection and management goals and objectives will not be reached. Consequently, the strategy will be to work together with communities to develop joint protection systems in return for agreed levels of utilization within the capacity of the forest to meet subsistence needs whilst safeguarding the environmental aspects including conservation of biodiversity in this protection zone.

Zone 2: Forest restoration zone

This covers the areas already impacted by human activity including seasonal and permanent farming including settlement. The main focus within this zone is to re-establish tree cover and therefore conform with the purpose of the National Forest. This will involve promoting forest restoration approaches, agroforestry and tackling the core issue of encroachment through a variety of initiatives. Continuation of environmentally harmful crops such as cotton and tobacco growing within the National Forest should be reviewed.

Zone 3: Development buffer area

This is the area immediately surrounding the reserved forest area where farming and settlements are located. These will be the focus for forest extension activities, creation of community and household woodlots, use of energy efficient stoves, promotion of agroforestry and other climate smart agricultural activities. Much of this area is already covered by farm blocks more especially in the eastern direction.

Zones 1 & 2: These zones will be managed in partnership with the local community following the community forestry approach as set out in the Forests (Community Forest Management) Regulations, 2018, and the National Guidelines for Community Forestry, 2018. This will be covered by a Community Forest Management Agreement, management plan and local resource use rules which set out both rights

and obligations for control, protection and management of the identified forest area. Annual workplans will be developed by the community with technical guidance from the Forestry Department to ensure the sustainable management of these zones.

6.2 Forest landscape restoration guiding principles

Successful forest landscape restoration (FLR) integrates a number of guiding principles, including:

- *Focus on the entire landscape*. Consideration and restoration across the entire landscape of MSNF as opposed to individual sites. This entails balancing a mosaic of land uses across the gazetted forest, such as securing intact forested areas, regenerating degraded forests, promoting agroforestry systems, climate smart agriculture, well-managed woodlots where appropriate, as well as identifying ecological corridors and riparian strips to protect watercourses and waterways.
- *Restoring ecological functions.* Restore the ecological functionality of the landscape, such as its richness as a habitat, its ability to contain erosion and floods, and its resilience to climate change and various disturbances. This can be done in many ways, one of which is to restore the landscape "back" to the "original" vegetation, but other strategies may also be used, ranging from natural regeneration to tree planting.
- *Allowing for multiple benefits.* Increasing tree cover across the landscape including existing cleared farmed areas, without necessarily forming a forest canopy, in order to enhance food production, reduce erosion, provide shade, and produce firewood. In other places, trees may be added to create a closed canopy forest capable of sequestering large amounts of carbon, protecting downstream water supplies, and providing rich wildlife habitat.
- *Promoting stakeholders' involvement.* Actively engaging local stakeholders in decisions regarding restoration goals, implementation methods, and trade-offs for sustainable land management practices which provides incentives and performance benefits.
- *Adaptively managing* the restoration strategy over time as environmental, social and economic conditions evolve supported through continuous monitoring and learning through the restoration process.

Based on the forest condition and restoration potential assessment conducted through remote sensing, the following categories and areas were identified:

Land cover category	**Estimated area**	**Percentage**
Forest protection	17.859.1	85.5
Cropland (Agroforestry)	2,808.1	13.4
Forest Restoration	205	0.98
Enrichment Planting	19.0	0.09
Bare land	2.63	0.01
Total	**20.893.40**	**100.00**

Table 8 Restoration landcover and option analysis.

6.3 Core forest management actions

The identified management actions are described as follows:

Action 1: Forest Protection, Management & Conservation of Biodiversity

The National Forest is surrounded by an increasing population which is highly dependent on it for subsistence and increasingly economic needs like collection of mushroom, wild fruits, caterpillars, honey, firewood and poles. The level of unsustainable use is anticipated to intensify with increasing human populations resulting in higher levels of resource exploitation and degradation. Protection of this forest habitat is therefore essential to ensure the continued ecosystem services and local livelihood needs. However, the awareness of the importance of ecosystem services, conservation of biodiversity and climate change mitigation services of Mzewe South National Forest is low among the adjacent communities.

Forest protection is therefore key in the sustainable management of forest resources. Traditionally, patrolling has been relied upon as the main protection activity but, despite these efforts and in view of the staffing levels, it has not been possible to control the level of unregulated use. Experience has shown that adequate levels of forest protection cannot be achieved through confrontation and conflict between the managers and forest-adjacent communities. In practice, both local people and the government have a mutual interest in conserving the forest, and utilizing forest products in a sustainable way. Without considering the needs of local communities, gaining their support, and working with them, rather than against them, forest protection and management goals and objectives will not be reached. Consequently, the strategy will be to work together with communities to develop joint protection systems in return for agreed levels of utilization within the capacity of the forest to meet subsistence needs whilst safeguarding the environmental aspects including conservation of biodiversity.

Therefore, the following are the 7 steps that the stakeholder communities have to be taken through in order to develop a full partnership for shared management:

1. Stakeholder engagement, community awareness raising and mobilisation;
2. Stakeholder mapping including forest use, users and geographic interest.
3. Forming community level institutions to coordinate, manage and control local resource use in partnership with the Forestry Department.
4. Developing forest product and issues based operational management plans for areas of interest.
5. Agreeing roles, rights, responsibilities and obligations for shared management.
6. Implementing practical forest protection and management interventions that bring value and other environmental and social benefits.
7. Conducting joint monitoring and evaluation of management and benefit sharing measures to ensure a sustainable partnership.

These 7 steps to establishing shared management responsibilities and benefit sharing directly mirrors the 7 steps of the National Guidelines for Community Forestry in Zambia. Therefore, tangible steps will be taken to incentivise and reward local stakeholder communities in the protection and management of Mzewe South National Forest through following the community forestry development steps and processes. This management action will be operationalized and results measured as follows:

No	Specific Objectives	Strategy	Actions	Responsible	Indicators
1	To develop a shared management approach to forest protection, management and utilisation.	1. Stakeholder engagement, community awareness raising and mobilisation;	Conduct awareness meetings with traditional leadership & communities	FD	Meetings conducted
		2 Stakeholder mapping including forest use, users and geographic interest.	Conduct meetings to determine effective span of management control across LNF	FD	FPIC Meetings conducted
		3. Forming community level institutions to coordinate, manage and control local resource use in partnership with the Forestry Department.	Through participatory processes, form local committee responsible to coordinate and assist management of the LNF	Community groups & FD	
		4. Developing forest product and issues based operational management plans for areas of interest.	For each Zone and area of shared management, development management plans and resource use rules		
		5. Agreeing roles, rights, responsibilities and obligations for shared management.			Signed CFM agreements. Annual work plan reports
		6. Conducting joint monitoring and evaluation of management and benefit sharing measures to ensure a sustainable partnership.	See monitoring section of LNFMP		

No	Specific Objectives	Strategy	Actions	Responsible	Indicators
2	To protect the Forest from late fires	Practice early burning within and outside the forest by involving local communities.	-Conduct prescribed and early burning. -Training the local communities on fire management techniques -Sensitizing the local community on the importance of early burning.	FD/ Adjacent communities	Area in hectares of controlled burning
3	To secure the boundary and define the extent of the boundary and prevent possible encroachment	Involve forest adjacent communities in Forest protection and management.	-Carry out annual Boundary maintenance. -Beacon maintenance - Erection of sign post on roads entering the Forest	FD/ Community	Distance in km of forest perimeter cleared
4	To conserve and enhance the biodiversity of the forest reserve through environmental awareness and education.	Enhance understanding of the forest ecosystem and its function and benefits to community groups and schools.	-Awareness on biodiversity with regard to indigenous knowledge. -Promote local participation and ownership through meetings.	FD/NGOs	
5	To ensure protection against pests and human damage	Frequent monitoring of forest resources	Inspections for diseases and pests and detection of possible illegalities.	FD/ Community	Hectarage of forest protected from pests and human damage
6	To significantly reduce levels of illegal forest product harvesting.	Involve the local communities in the management of forest resources in order to create a sense of ownership. Engage honorary forest Officers/guards	-Conduct sensitization meetings. -Conduct forest patrols.	FD/ community and other security wings	Number of illegal harvesters/ activities reduced
7	Improve local awareness of biodiversity and its value.	Seek greater participation of local communities in research and other biodiversity activities Such as eco-tourism, with the result that biodiversity values will become of more direct relevance to them.	1.Conduct research that documents and utilizes the indigenous knowledge of Forest-adjacent communities. 2.Promote local participation and benefits from eco-tourism as a means of creating better awareness of biodiversity	FD/Forestry Research	Levels of community participation in forest management activities is sustained over time.

Action 2: Forest Restoration through Community Participation & Livelihood Development

Community empowerment is central to participatory forest management for the effective coordination and sustainable management of forest resources. This Plan recognizes that communities surrounding and within the National Forest are key stakeholders in the conservation of this forest as well as beneficiaries from its sustainable management. This action aims to meeting the social, cultural and economic needs and thereby improving the livelihoods of the communities around and within the National Forest. Within this management action, the following interventions will be undertaken in Zone 2 of the National Forest as well as extension services and activities in Zone 3, the areas surrounding the National Forest:

- Promotion of community forestry and the establishment of a community forest management group;
- Promote interventions with community groups to protect, restore and replant, as follows:
    - **Protect** - areas where the forest is intact with local stakeholder involvement;
    - **Restore -** the forest where it is degraded by promoting regeneration encouraging regrowth of local species or reafforestation with people's participation.
    - **Replant** - increase forest cover through planting agroforestry species in fields where cropping is taking place. This aims to increase tree cover, soil fertility, provide fodder and small biomass for energy needs. Further, reafforestation through planting of indigenous or exotic species in abandoned fields in a plantation environment where practical.
- Promote forest enterprise development (based on stakeholder consultations to be further developed through the CFM process). These may include:
    - Beekeeping using improved hives;
    - Fruit collection and processing;
    - Wood biomass production and woodlots;

This management action will be operationalized and results measured as follows:

Specific Objectives	**Strategy**	**Actions**	**Responsible**	**Indicator**
1. Enter into partnership with clear roles and responsibilities with surrounding communities	Promote community forestry approach	Conduct CFM Steps 1-7	FD	Signed CFM agreement. Annual work plan reports from the CFMG
2. To protect, restore and replant forest cover in the fragmented forest areas of the National Forest	To Provide Forest extension services.	Training the communities in assisted natural regeneration Promotion of agroforestry and Woodlot establishmen t for communities surrounding the forest.	FD	Hectarage of forest in the fringe areas increased year on year.
3. To reduce carbon emissions from agric soils and dependency on inorganic fertilizer	Promote CSA through Agroforestry	Partnership with MoA and others in training communities in CSA and agroforestry. Establishme nt of agroforestry tree nursery species in FD nursery.	FD/ Agric/ CSO's/ community	Tonnage of GHG emissions in the forest reserve reduced by 15% by mid year review.
4. To significantly reduce levels of tree cutting for wood energy.	Promotion of energy efficient Cook stoves and Alternative energy sources.	Training community members in construction of Permanent energy cook stoves. Provide incentives to people using the improved cook stoves.	FD/ DoE/ community	Volume of wood cut for energy reduced by 30% by mid term review

5 Reduce forest dependency by local communities.	Promoting diversification of activities, particularly on-farm activities such as agroforestry and establishment of wood-lots, to create alternative Sources for forest products.	Involve local communities in woodlot establishmen t.	FD/ Adjacent communities	Number of people dependent on the forests reserve reduced by half at mid term review
6. To contribute towards meeting social, cultural and economic needs and improving the livelihoods of forest-adjacent communities.	Forest resource condition is improved through management actions emphasizing the use of best practices.	Training forest-adjacent communities in sustainable forest enterprises, such as beekeeping, and other non- wood forest enterprises	FD/ NGOs	Forest enterprise activities developed and producing income.
7. To reduce carbon emissions from deforestation and forest degradation by ensuring community benefit from carbon credits.	Establish an incentive benefit sharing mechanism through the carbon trading scheme to be established by Government in Eastern province	Stake holder participatory awareness meetings (Traditional leaders, Government, NGOs and the community)	FD/NGOs	Tonnage of GHG sequestered increased thereby income shared to community is improved year on year.

Table 9 Management Action 2 Activities

6.4 Promoting Forest Based Enterprise

Based on the condition of the forest including plant species as well as information gathered during the socio economic assessment and stakeholder consultation meetings, a number of enterprise opportunities were identified and described earlier. Therefore, through the proposed management actions where appropriate in the relevant zones, forest based enterprises will be promoted within the context of the purpose of a National Forests as described in the Forests Act, 2015. These relate to economic needs of the local community whilst ensuring the protection of ecosystems, particularly the protection of land and water supplies of national strategic importance. These reflect the importance of the principles of sustainable forest management. Therefore, the following enterprise initiatives are highlighted for promotion through local stakeholder involvement:

Forest product/ enterprise	Beekeeping	Wood biomass energy production	Wild fruit harvesting	Woodlot establishment
Market/ demand	High, local & urban (Chipata)	Medium local, potential supply Chipata & tobacco farmers	To be determined beyond local area	Local poles & timber for construction
Product supply	Patches of flowering trees with suitable pollen fodder, water restricted to certain areas	Through agroforestry & forest restoration activities	*Brachystegia floribunda* *Brachystegia longifolia* *Brachystegia bussei* *Brachystegia boehmii* *Brachystegia speciformis* *Diplorihynchus condylocarpo* *Jubernadia paniculata* *Pericopsis angolensisi* *Parinari curatellifolia* *Pseudolachnostylis maprouneifolia*	Not currently available due to lack of established plantations
Potential entrepreneurs	CFMG plus individual beekeepers	CFMG plus individual households	Individual households	CFMG or individuals
Opportunities	Honey off-takers are available in the district as a ready market.	Planned forest restoration works including agroforestry in cropped areas, potential bamboo sites, Tobacco growers in Kasenengwa. Trading opportunity on Mambwe - Chipata road	Existing livelihood activity conducted by women. Trading opportunity on Mambwe -Chipata road	Creation of woodlots crops in abandoned fields (where regeneration is not feasible). Practice taungya system in cropped areas. (example available in Masupe Local Forest)
Challenges	Investment in sufficient hives, Honey bulking centre and water reticulation system investment, technical & business skills training	Seedlings, marketing	Drying, processing and packaging facilities	Seedling availability, long term nature to revenue generation
Source of investment finance	Development projects & partners, CDF	Development projects & partners, CDF	Development projects & partners, CDF	Development projects & partners, CDF

Table 10 Promoting potential forest based enterprises

In the case of Mzewe South National Forest, the enterprise development process will form part of the community engagement and strengthening of community forestry practice and partnership in the reserve. This provides for monitoring and mentoring, development and review of annual workplans and periodic review of CF Management plans. These include a forest product importance, use and management matrix and forest enterprise development activities. Once there is consensus on developing an enterprise concept, an assessment of market and value chain issues will be formed into a bankable business opportunity. Importantly the support to business development and investment will primarily

Four key areas of strengthening capacity for viable community based forest enterprises will focus on:

- Enhancing technical skills in production, harvesting, processing;
- Building business capacity, including business planning, marketing, financial management, reinvestment and profit sharing:
- Strengthening governance arrangements and membership, conflict resolution mechanisms;
- Improving forest protection, management and monitoring arrangements upon which the business depends on.

Based on the above, formulation of detailed bankable business and investment plans can be developed and supported through financing opportunities from development projects, private sector partners and though Community Development Funding through the local authority.

6.5 Law enforcement Strategy

This Law Enforcement Strategy aims to protect and sustainably manage Mzewe South National Forest; 164, through effective enforcement of legal provisions, regulations, and community participation. Ensuring compliance is essential to prevent illegal activities such as illegal timber harvesting, poaching, and forest encroachment.

Objectives

- To prevent illegal exploitation of forest resources.
- To promote community participation in enforcement.
- To ensure timely and fair response to violations.

Key Enforcement Strategies

Regulation of Forest Activities

- Designating legal zones for access, harvesting, and charcoal production.
- Issuing permits and licenses for activities like harvesting, collection, and tourism.
- Enforcing restrictions on cutting, hunting, or collecting forest products outside authorized zones.

Monitoring and Surveillance

- Regular patrols by forest rangers and enforcement officers.
- Using technology such as drones, and GPS tracking.
- Engaging Honorary Forest Officers in reporting illegal activities.

Community Involvement in Law Enforcement

- Strengthening community forest groups' role in patrols and reporting.
- Providing incentives for communities that actively participate in enforcement.
- Publicizing penalties to serve as deterrents.

Collaboration with Stakeholders

- Coordinating with police, community groups, NGOs, and traditional leaders.
- Promoting joint patrols and awareness campaigns.

6.6 Fire management strategy

Fire has a critical impact on the forest environment, the condition of the forest and the services that it provides. While fire is frequently naturally occurring in the dryland forests of Eastern Province, it has been used as a management tool technically by foresters as well as by communities for different socio-economic and cultural needs. However, fire that occurs late in the year when the forest is dry causes the greatest harm to the health of the forest as well as the succession process influencing the future productivity, abundance of forest products and therefore its economic contribution locally and nationally. Further, forest fire is a key source of emissions of greenhouse gases (GHGs) in Eastern Province, which affects weather patterns, locally, regionally and globally. Therefore if managed correctly as a management tool, prescribed fire can reduce these emissions and impacts, safeguarding the forest resources, biodiversity while providing enhanced opportunities for local economic development.

Therefore a **fire management strategy and plan** is essential for the proper management of the forest incorporating elements of fire protection and fire suppression. Recognising the important role the forest plays in support to surrounding communities, the fire management strategy for the Local Forest will be developed through stakeholder consultation and implementation participation with clear roles and responsibilities. The **fire protection strategy** should indicate: priority areas for protection – valuable and fire sensitive species, newly planted areas, enrichment planting, areas of fire sensitive natural regeneration, as well as high risk areas based on access, use and past frequency of fires. Based on the participatory assessment, protection measures such as: firebreaks – both internal and boundary should be planned, areas for prescribed (early) burning identified as appropriate. An action/ activity plan with roles, responsibilities and timings should be discussed and agreed with stakeholders.

The **Fire suppression strategy** details the response should a wild-fire start which threatens the forest area. This will detail the pre-planned procedures along with roles and responsibilities. It will include the following:

- **A fire detection system:** The process and procedures to report the incidence of fire to promote prompt reaction and therefore protection.

- **Procedures in response to a fire alert:** How to alert stakeholders and local community members to assist with fire suppression including the availability and location of equipment to fight the fire.

- **Fire fighting strategy:** This will include details of various approaches to tackling fires using the materials and equipment that are available locally.

- **Methods to fight fires:** This will cover different fire suppression methods depending on the nature of the fire (Frontal attack, Flank attack, indirect

attack – back burning). These will have been explained and key personnel trained in each of the approaches. This will also include risk assessment methods and requirements for personal protective equipment.

Fire Education Strategy will be developed at the start of the implementation of the FMP: This aims to raise awareness of the community on the impact of fire and the need to protect the forest from fire. Groups which represent a higher risk should be targeted for education, e.g., honey collectors, charcoal burners, mice collectors, schoolchildren etc.

6.7 Environmental and social safeguards and other crosscutting issues

The Forestry Department shall ensure that, the management of Mzewe South National Forest is carried out in accordance with the Environmental and Social Standards (ESSs) in relation to national policies as well as international standards and agreements, both multilateral and bilateral as appropriate. Existing requirements are set out in the National Strategy to Reduce Deforestation and Forest Degradation, 2016 as well as new requirements that may come into force through the Eastern Province Jurisdictional Sustainable Landscapes Programme. In implementing the indicated management actions, these safeguards and other cross cutting issues will be mainstreamed in all aspects of forest management. In view of the participatory approaches applied in the development of the FMP and follow-up actions to promote community forestry it is expected that this FMP will have a positive impact upon local livelihoods and to provide support for the development of more sustainable or alternative livelihoods, where needed.

In brief, safeguards will ensure:

- Gender equity and empowerment including addressing issues of gender based violence. Women shall be integrated into all aspects of management of Mzewe South National Forest and empowered through equal participation in decision making, governance and benefit sharing. Gender equity shall be pursued to ensure that both men and women have the full range of opportunities and benefits arising from the management of the National Forest. This aspect should be in line with the National Gender Policy and Climate Change Gender Action Plan. Further safeguards in relation to emissions reductions benefit sharing plan for Eastern Province should be adhered to.
- Environmental and social screening processes. Specific activities as well as the annual workplan and operational plans should include a process of social and environmental screening. These should be reviewed and updated in accordance with the type of activity being planned and general screening reviewed annually.
- A Grievance redress mechanism will be operational at the District and Provincial level to allow a mechanism for grievances to be raised, documented and addressed. Documentation and tracking is core to this issue.

Specific Objectives	**Strategy**	**Activity**	**Responsible**	**Indicator**
To ensure cross cutting issues are mainstreamed in all aspects of forest management for social equity wellbeing and empowerment through sustainable development	Ensure that all environmental and social impacts, risks and liabilities are identified and mitigated. Identify training needs. Promote ownership and access to forest products and services.	Awareness raising Short courses Exchange visits Refresher courses	FD/NGOs	All crosscutting issues mainstreamed in all forest management aspects. Zero grievances raised. Grievances addressed and closed within 3 months

6.8 Sources of revenue

Climate change emissions reduction trading

The Government of the Republic of Zambia has identified climate financing as a potential source of revenue to support climate change mitigation and adaptation activities to safeguard the natural environment and importantly the ecosystem services that society as a whole and specifically rural communities depend on for their livelihoods and wellbeing. In the Eastern Province, the Ministry of Green Economy and Environment is implementing the Jurisdictional Sustainable Landscape Programme (EP-JSLP). The Programme Development Objective (PDO) is "to promote greenhouse gas (GHG) emissions reduction or removals in the Eastern Province, while simultaneously improving rural livelihoods including forest and wildlife conservation and management. These emissions reductions are being measured, verified, traded and revenue distributed according to an agreed Benefit Sharing Plan. An estimate has been made of the potential revenue that might be generated through the GRZ emissions reduction trading under the JSLP benefit sharing mechanism. The GHG baseline inventory indicated that the major emissions in the Province are coming from forest land through degradation from forest fires. Implementing improved forest management, conducting fire management and protecting the integrity of the forest areas including from forest loss, degradation and encroachment can be measured and monetised.

In the case of Mzewe South National Forest and based on the intact forest area of 85% may generate emissions reduction of over 11,000 tonnes of carbon equivalent which may be monetised to generate around $33,000 or ZMW 828,600 annually. This may increase as prescriptions of forest restoration may result in increased carbon sequestration that can be measured and monetised.

6.9 Summary Budget of Forest Management Plan Implementation

Based on the proposed management actions described above, a budget has been developed covering the period of the plan. The summary table is provided below with the detailed cost breakdown in the Annex VII.

Forestry Programme	**Cost in ZMW for 10 years**
1. Forest Conservation through Community Participation and Livelihood Development	2,001,164
2. Forest Protection, Restoration, Management and Conservation of Biodiversity	2,035,748
3. Enterprise development support	668,748
Grand Total Costs (ZMW)	**4,705,660**
Potential revenue generation (10 years ZMW)	21,528,360
Funding surplus ZMW	**16,822,700**

7. STAKEHOLDERS ROLES AND RESPONSIBILITIES

All key stakeholders will be involved in the implementation of the Mzewe South National Forest

Management Plan in line with the following roles and responsibilities:

1 Forestry Department

The Forestry Department (FD) have a key role to play in promoting sustainable forest management and shall inform all relevant government departments on the management plan and raise awareness on the programmes and activities. The Department shall facilitate the implementation of the FMP at District and local level with oversight from Provincial level. **The District Forest Office** plays a pivotal role in on-the-ground forest management, enforcement, and community engagement. Its specific responsibilities include:

- **Conduct Regular Patrols:** Carrying out routine patrols within the Mzewe South National forest to prevent illegal activities such as unauthorized logging, poaching, and encroachment.
- **Maintain Boundaries and Beacons:** Ensuring all forest boundaries and beacons are clearly marked, visible, and maintained to prevent boundary disputes and illegal incursions.
- **Monitor Forest Recovery and Growth:** Tracking forest regeneration, health, and overall ecological status to inform management decisions and detect signs of degradation.
- **Develop and Implement Forest Fire Management Plans:** Establishing proactive fire prevention, detection, and suppression strategies, including community-based fire management initiatives.
- **Conduct Environmental Education (EE) Campaigns**: Raising awareness among local communities and stakeholders about sustainable forest use, conservation practices, and the importance of forest resources.
- **Train Communities in Sustainable Forest Management (SFM):** Providing capacity-building programs, workshops, and technical assistance to community members and forest management groups.
- **Report and Document Activities:** Preparing and submitting comprehensive reports on forest conditions, patrol outcomes, enforcement actions, and community engagement efforts to relevant authorities for oversight and planning.

The **Provincial Forest Office** provides strategic oversight, governance, and support to ensure effective implementation of the Forest Management Plan. Its primary responsibilities include:

- **Monitoring and Evaluation:** Regularly assessing the implementation of the FMP at district and community levels using predefined performance indicators to measure progress and identify gaps.
- **Disbursement of Funds:** Managing financial resources allocated for forest management activities, community support programs, capacity-building, and infrastructure development.

- **Facilitation of Audits:** Overseeing and supporting the auditing process of District Forest Offices and community initiatives to ensure transparency, accountability, and proper use of resources.
- **Coordination and Support:** Offering technical guidance, resources, and capacity-building support to District Forest Offices, community groups, and other stakeholders involved in forest management.
- **Policy and legal framework:** Ensuring that the FMP aligns with national forestry policies and legal frameworks, particularly the Forests Act, 2015.
- **Stakeholder Engagement:** Facilitating communication and collaboration among government agencies, communities, NGOs, private sector partners, and other relevant entities.

2. Role of the Local Authorities

Local authorities are vital for integrating sustainable forest management into broader development initiatives at the district and community levels. Their responsibilities include:

- Incorporating the FMP into local development plans, ensuring that forest management considerations are mainstreamed into land use, infrastructure, and ecosystem planning.
- Facilitating alignment between forest management activities and other sectors such as agriculture, water, and health.
- Supporting the enforcement of forest laws and regulations within their jurisdictions.
- Promoting rural development projects that leverage forest resources to enhance community livelihoods and economic resilience.

3. Role of Traditional Authorities

Traditional leaders play an influential role based on customary authority, community trust, and cultural management systems. Their roles encompass:

- Providing mentorship and guidance to community members on sustainable resource use.
- Helping resolve conflicts related to forest access, use, and rights according to customary laws.
- Providing formal consent for community-based forest management processes, including recognition and signing of community forest management agreements with the Director of Forestry.
- Supervising the community forest management groups, ensuring their activities conform to customary norms and legal provisions.
- Overseeing access control, management of natural resources, and the conduct of community elections for forest management committees.

- Ensuring that enforcement of rules and resolutions reflects community values and customary laws.

4. Role of Communities

Communities are the primary custodians of the forest and hold the rights to sustainably manage and benefit from forest resources. Their responsibilities include:

- Controlling access to forest resources to prevent illegal activities and overexploitation.
- Actively participating in decision-making processes related to forest management.
- Implementing community-based sustainable forest practices as outlined in the management plan.
- Protecting the forest from illegal activities such as logging, poaching, and encroachment.
- Ensuring equitable sharing of benefits derived from forest resources, including income, employment, and social services.
- Reporting violations and participating in community-led enforcement efforts.
- Maintaining the community forest management groups and ensuring transparency and accountability in their operations.

5. Role of Honorary Forest Officers (HFOs)

Honorary Forest Officers are community members appointed based on peer nominations and official approval by the Minister. Their roles include:

- Facilitating community compliance with forest laws, bylaws, and resolutions.
- Supporting enforcement of sustainable harvesting and access regulations.
- Acting as mediators in conflict resolution within the community regarding forest use.
- Reporting infractions and assisting in investigations related to illegal activities.
- Collaborating with District Forest Officials to ensure harmonized enforcement efforts.

6. Role of Private Sector and Civil Society Organizations (CSOs)

Private sector entities and civil society organizations are crucial for fostering economic development and social empowerment through forests. Their roles include:

- Providing technical and financial services to support community enterprises, such as training, capacity building, and infrastructure development.
- Developing market linkages for forest-based products, ensuring fair trade and sustainable value chains.
- Promoting innovative approaches and investments that enhance forest conservation while generating income.
- Supporting additional services such as environmental education, capacity building, and advocacy for policy reforms.
- Facilitating the development of non-timber forest products (NTFP) enterprises, eco-tourism, and other sustainable livelihood opportunities.
- Monitoring social and environmental impacts of forest-based activities to ensure compliance with sustainability standards.

8. MONITORING AND EVALUATING IMPLEMENTATION

Monitoring and evaluation (M&E) of the management plan is essential since it provides a basis for observation, adjustment and improvement of the targeted activities and assessment of the achievements. The Forest Management Plan will be implemented by Forestry Department by involving local communities around the forest reserve. The Department will provide a forum for dialogue, consensus building, priority setting and balancing of the various interests involved. Monitoring and evaluation of this management plan will also be based on annual work plans that will be prepared for Mzewe South National Forest which will operationalise the management actions described in Chapter 6.

8.1 Monitoring

To ensure that implementation of the management plan is on course, FD will facilitate monitoring of activities and programmes in coordination with partners, stakeholders and community representatives in the Mzewe South National Forest including the impact of the FMP on the well-being of the communities on the forest fringes. Implementation of the FMP will be monitored through a number of identifiable indicators as described in the management actions in Chapter 6. These will be subject to regular review during the plan period. Continuous monitoring during the implementation period will be maintained through preparation and submission of monthly, quarterly and annual progress reports.

8.2 Evaluation

The Mzewe South National Forest implementation and impact will be evaluated at two points. Mid-term (5years) and at end of term (10 years). Evaluation will involve analysis of both activities and impact generated to sustainable management of the forest and the fringe communities as this will generate evidence to inform the development, focus and implementation of future management plans. Evaluation carried out will assess progress in the implementation of planned activities and achievement of objectives. The evaluation report will also provide essential information to revise the management plan.

8.3 Monitoring Responsibilities

The Provincial Forestry Office will undertake monitoring and evaluation of the implementation of the plan. The District Forestry Office will be responsible for submitting annual plans of operations, as well as monthly, quarterly, and annual progress reports to the Provincial Forestry Office.

8.4 Strategic monitoring indicators

Strategic monitoring indicators provide a measure of assessing whether set targets are progressively being achieved as described in the management actions Chapter. The lead implementing agencies represented by the Forestry Department will undertake monitoring and evaluation of the implementation of the plan.

Programme	Indicator of Success	Means of Verification	Assumptions
Forest Protection	Reduced incidences of forest crimes Reported. Performance of the local communities and honorary forest officers.	Records and reports.	The Plan is successfully completed and implemented with Cooperation from community Members
Biodiversity Conservation	Increase in species biodiversity.	Surveys on biodiversity, records, photographs and reports.	The Plan is successfully implemented Good working relationship between stakeholders Availability of resources
Community Conservation and Livelihood development	-Number of people - trained and practicing sustainable forest enterprises. -No. of woodlots established -Number and types of IGAs. -Crop and livestock yields.	Records, reports and photographs. -Community Visits.	The Plan is successfully implemented Availability of funds
Environmental Education	Number of school conservation clubs formed. No. of awareness meetings and attendance. -No of trainings held/exposure visits	Records, monitoring & Evaluation reports and photographs.	The plan is successfully implemented with funds made available.
Infrastructure Development	Number and type of infrastructure Developed/ maintained	Records Monitoring and evaluation reports	The Plan is successfully implemented Availability of funds
Human Resource Development	Number of people employed Number of people trained. Number of community members involved in forest activities	records Monitoring and evaluation report	The Plan is successfully implemented Availability of funds

Table 11 Strategic monitoring indicators

9. ANNEXES

Annex 1: Declaration Order, Topo Map & Inventory Map:

MZEWE SOUTH NATIONAL FOREST NO. P164:

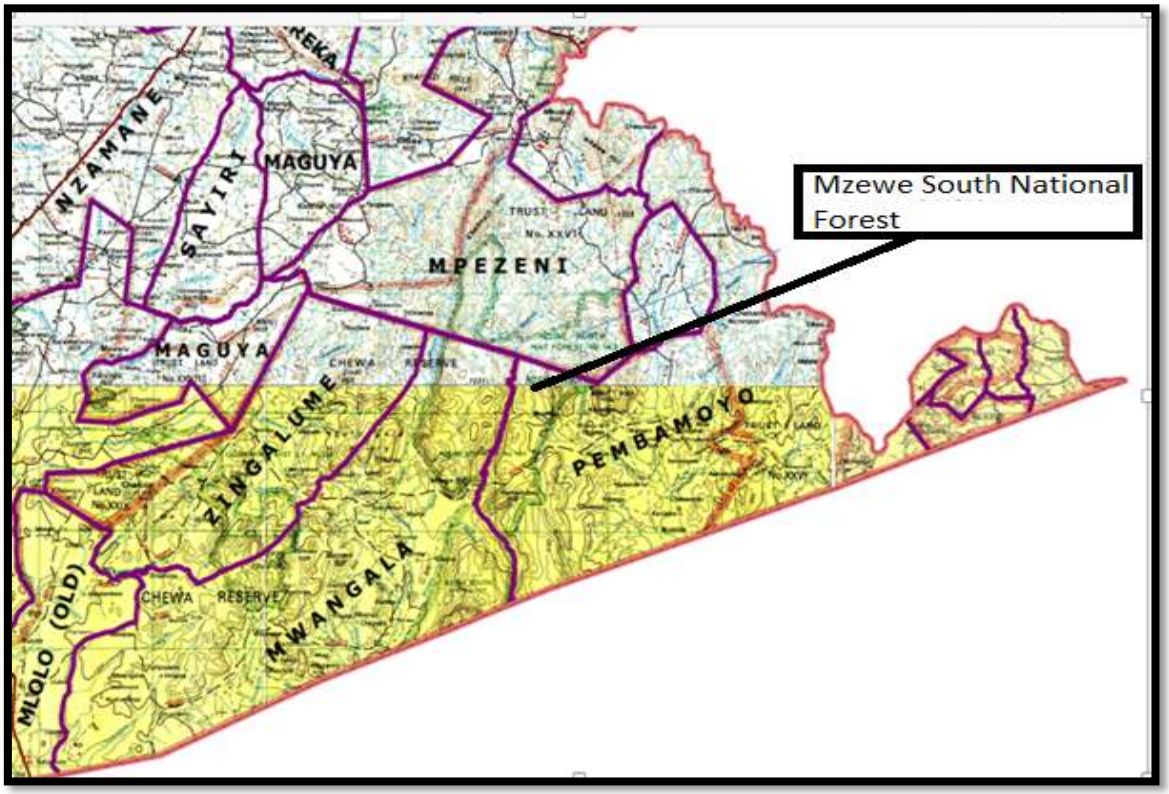
Government Notice

***Statutory Instrument:* 298 of 1966 158 of 1975**

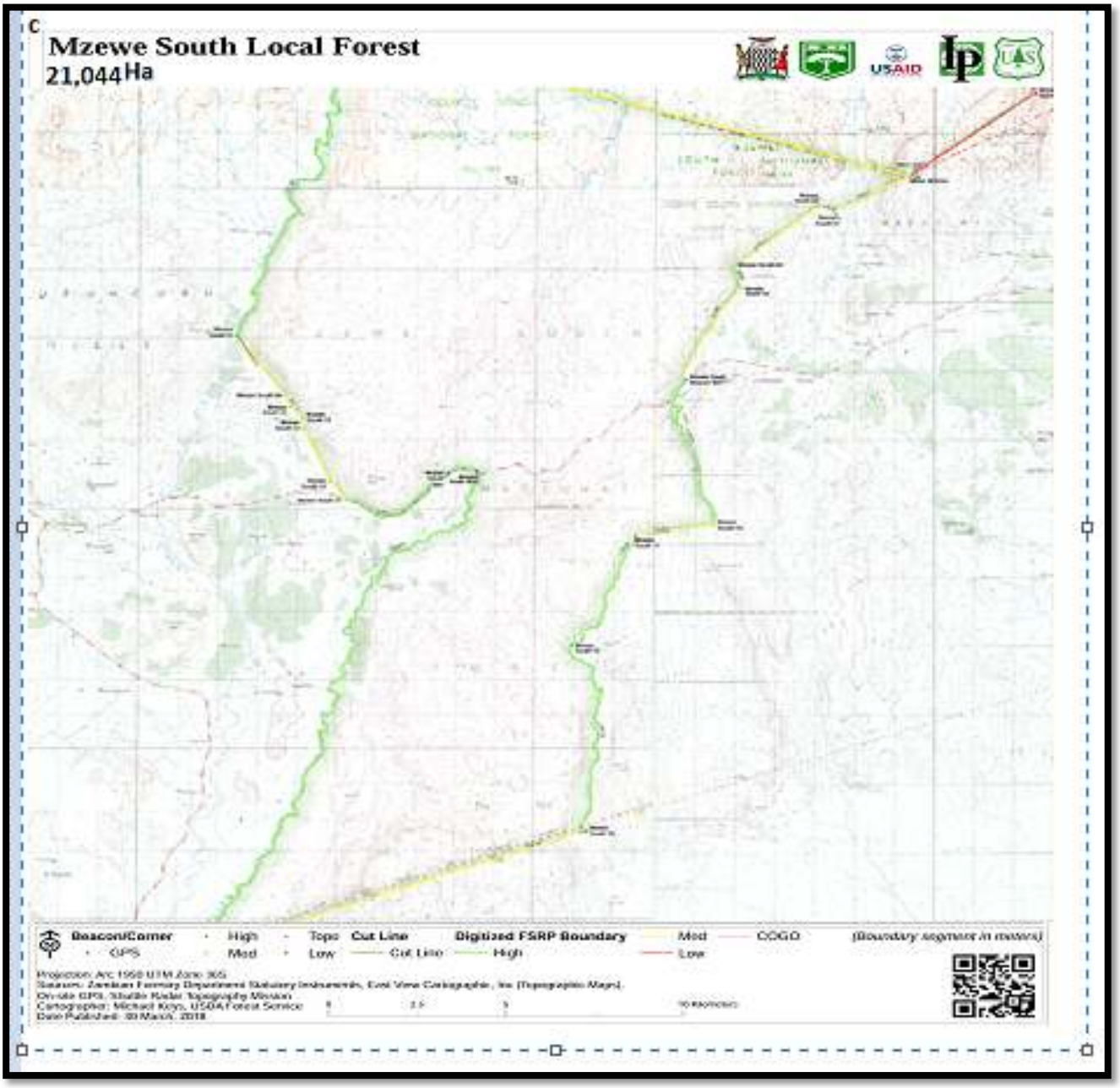
NATIONAL FOREST NO. P164: MZEWE SOUTH Statutory Instruments 39 of 1964 158 of 1975 Starting from Mbozi Hill, the boundary follows a true bearing of 240G degrees in a straight line for approximately 2.25 kilometers to Beacon 1; thence in a straight line on a true bearing of 301G degrees for approximately 0.402 kilometers to Beacon 2; thence in a straight line on a true bearing of 231G degrees for approximately 2.73 kilometers to Beacon 3 on an unnamed stream; thence down this stream in a southerly direction for approximately 0.804 kilometers to Beacon 4; thence in a straight line on a true bearing of 216G degrees for approximately 0.804 kilometers to Beacon 5; thence in a straight line on a true bearing of 196G degrees for approximately 0.402 kilometers to Beacon 6; thence in a straight line on a true bearing of 221G degrees for approximately 0.483 kilometers to Beacon 7; thence in a straight line on a true bearing of 201G degrees for approximately 1.287 kilometers to Beacon 8; thence in a straight line on a true bearing of 121G degrees for approximately 0.0805 kilometers to Beacon 9 on the Chamoto Stream; thence up this stream in a general south-westerly direction to its confluence with the Mthilakuwili Stream; thence up the Mthilakuwili Stream for approximately 4.023 kilometers to Beacon 10 near its source; thence in a straight line on a true bearing of 263G degrees for approximately 1.93 kilometers to Beacon 11 at the head of the Dzozwe Dambo; thence down the Dzozwe to its confluence with the Nyavuzi Stream; thence up the Nyavuzi Stream to its intersection with the Zambia-Mozambique boundary; thence along this boundary in a south-westerly direction to its intersection with the Mzewe River; thence up the left bank of the Mzewe River for approximately 7.4 kilometers to Beacon 12; thence in a straight line on a true bearing of 81G degrees for approximately 0.322 kilometers to Beacon 13; thence in a straight line on a true bearing of 21G degrees for approximately 1.21 kilometers to Beacon 14; thence in a straight line on a true bearing of 56G degrees for approximately 0.402 kilometers to Beacon 15; thence in a straight line on a true bearing of 357G degrees for approximately 1.45 kilometers to Beacon 16; thence in a straight line on a true bearing of 41G degrees for approximately 0.43 kilometers to Beacon 17; thence in a straight line due north for approximately 0.29 kilometers to Beacon 18; thence in a straight line on a true bearing of 6G degrees for approximately 0.483 kilometers to Beacon 19 on an unnamed tributary of the Mzewe River; thence down this tributary to its confluence with the Mzewe River; thence up the left bank of the Mzewe River to its intersection with the Chadiza-Pembamoyo Road; thence along this road in a generally westerly direction for approximately 3.86 kilometers to Beacon 20; thence in a straight line on a true

bearing of 222G degrees for approximately 0.724 kilometers to Beacon 21; thence in a straight line on a true bearing of 337G degrees for approximately 1.93 kilometers to Beacon 22; thence in a straight line on a true beaing of 3G degrees for approximately 0.24 kilometers to Beacon 23; thence in a straight line on a true bearing of 321G degrees for approximately 0.322 kilometers to Beacon 24; thence in a straight line on a true bearing of 320 degrees for approximately 0.21 kilometers to Beacon 25; thence in a straight line on a true bearing of 339G degrees for approximately 0.29 kilometers to Beacon 26; thence in a straight line on a true bearing of 321G degrees for approximately 2.1 kilometers to Beacon 27 on the left bank of the Mwami River; thence up the left bank of this river to its intersection with the Chewa Reserve No. III Boundary; thence in a south-easterly direction along this boundary to Mbozi Hill, the point of starting. The above distances were measured by cyclometer wheel and are approximate, as are the bearings. The above described area, in extent approximately 21,044.4 hectares, is shown bordered green upon Plan No. FR231, deposited in the office of the Surveyor-General, signed by him and dated 7th February, 1964.

1. Map of Mzewe South National Forest in relation to Chiefdom boundaries (1958 map)



FRSP Survey Map March 2018



CONFIDENCE	BEACON/POINT NAME	LATITUDE DD	LONGITUDE DD	UTM EASTING	UTM NORTHING
GPS	Mzewe South Beacon B07	-14.05230	32.75730	8446614	473796
GPS	Mzewe South B30	-14.07630	32.70864	8443954	468546
GPS	Mzewe South B31	-14.07684	32.70183	8443894	467810
Med	Mbozi Beacon	-13.99856	32.80952	8452562	479430
Med	Mzewe South 01	-14.00812	32.79187	8451503	477524
Med	Mzewe South 02	-14.00661	32.78825	8451670	477133
Med	Mzewe South 03	-14.02242	32.76863	8449919	475017
Med	Mzewe South 04	-14.02807	32.77021	8449296	475188
Med	Mzewe South 10	-14.09071	32.76382	8442367	474504
Med	Mzewe South 11	-14.09319	32.74554	8442091	472531
High	Mzewe South 12	-14.12226	32.73055	8438874	470917
High	Mzewe South 13	-14.17133	32.73384	8433448	471278
High	Mzewe South 14	-14.20387	32.64191	8429837	461363
Med	Mzewe South 21	-14.08380	32.67807	8443120	465247
Med	Mzewe South 22	-14.07874	32.67429	8443679	464837
Med	Mzewe South 23	-14.06509	32.66821	8445188	464179
Med	Mzewe South 24	-14.06204	32.66797	8445526	464153
Med	Mzewe South 25	-14.05924	32.66523	8445835	463856
Med	Mzewe South 26	-14.05647	32.66402	8446140	463725
High	Mzewe South 27	-14.04050	32.65282	8447906	462514

Boundary beacon points

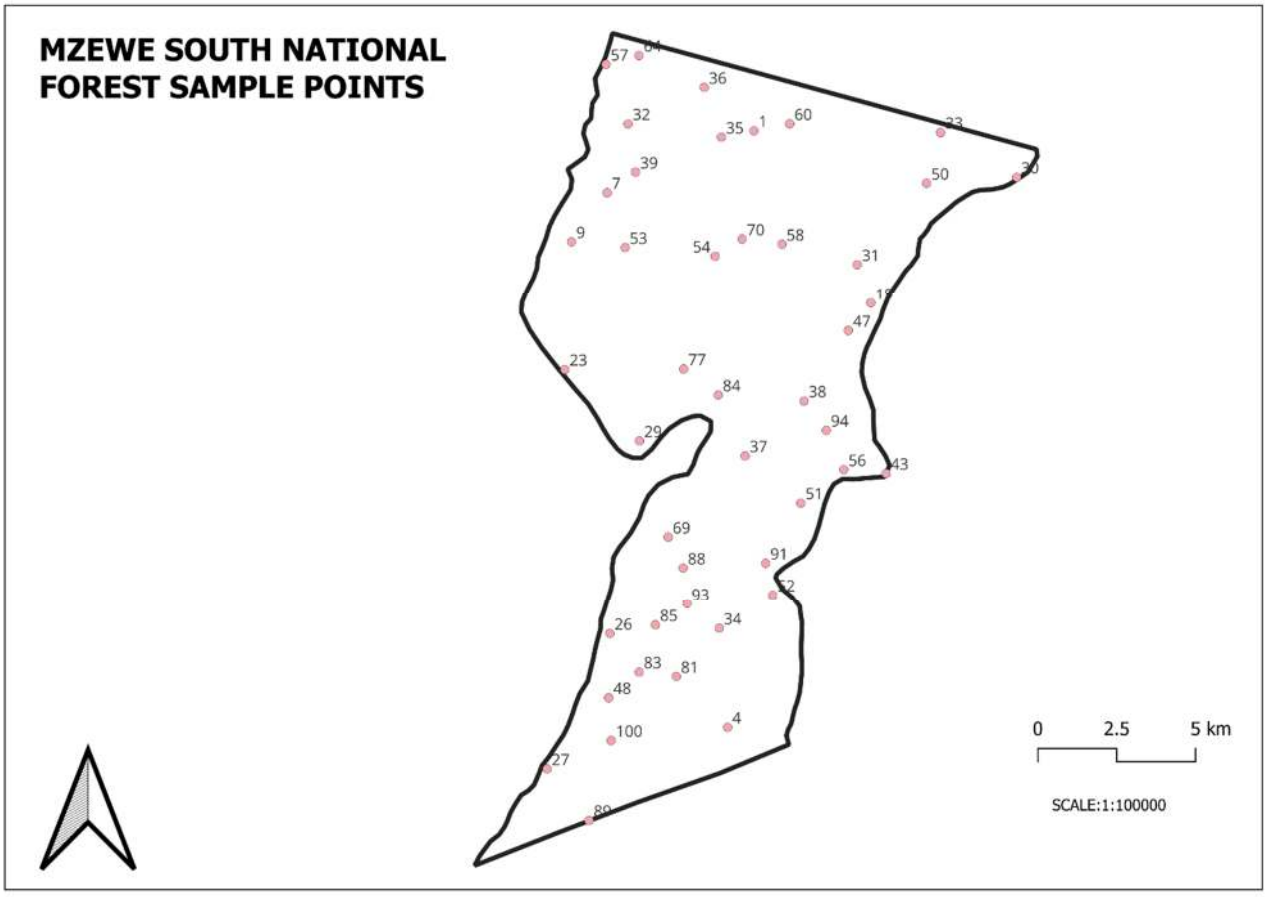


Figure 14: Location of Sample points

Annex II: Inventory Data

Species	Species code	Density
Albizia antunesiana	17	2.10
Anisophyllea boehmii	23	2.02
Annona senegalensis	25	0.07
Brachystegia boehmii	46	29.42
Brachystegia bussei	47	15.64
Brachystegia floribunda	48	7.11
Brachystegia longifolia	49	31.51
Brachystegia manga	50	11.75
Brachystegia spiciformis	52	7.49
Brachystegia utilis	55	0.67
Bridelia cathartica	57	8.16
Combretum molle	86	5.39
Combretum zeyheri	89	3.44
Dalbergia melanoxylon	101	2.02
Dalbergiella nyasae	103	1.50
Dichrostachys cinerea	108	0.67
Diospyros batocana	109	0.67
Diospyros kirkii	111	8.76
Diospyros mespiliformis	112	2.17
Diplorhynchus condylocarpon	114	18.56
Erythrophleum africanum	127	4.87
Faurea saligna	145	2.69
Ficus sycomorus	155	0.67
Hymenocardia acida	181	1.35
Julbernardia globiflora	188	7.11
Julbernardia paniculata	189	19.31
Lannea discolor	194	2.02
Lannea stuhlmannii	199	0.75
Lonchocarpus capassa	200	1.35
Maprounea africana	209	0.67
Ochna pulchra	223	12.28
Parinari curatellifolia	233	20.36
Parkia filicoidea	236	0.07
Pericopsis angolensis	239	2.10
Pseudolachnostylis maprouneifolia	258	10.78
Pterocarpus angolensis	262	2.17
Pterocarpus chrysothrix	264	0.82
Pterocarpus rotundifolius	265	0.67
Stereospermum kunthianum	287	2.02
Strychnos potatorum	291	1.35
Strychnos spinosa	293	2.84

Swartzia madagascariensis	295	1.42
Syzigium cordatum	296	3.37
Syzigium guineense	297	8.76
Uapaca kirkiana	310	8.68
Uapaca nitida	311	6.21
Unknown	999	8.83
Vitex doniana	321	2.02
Ximenia americana	328	1.57

Annex III: Demographics of major forest fringe communities

Village/locality	Female	Male	Total
Aonenji Farm	0	2	2
Bangulani Farm	1	3	4
Benard Banda Farm	0	2	2
Cain Farm	0	2	2
Chapitambili	1	18	19
Chathope farm	1	10	11
Chimuzimu	1	4	5
Chipeni	7	12	19
Chitupe	3	9	12
Enerst farm	2	6	8
Gamba	5	16	21
Geje Farm	0	2	2
Green farm	0	1	1
Kalumphe	1	5	6
Kampandeni Farm	1	3	4
Kamtondo	1	5	6
Kapinji	11	13	24
Kasuzi	1	7	8
Kazombe	5	21	26
Kummawa Farm	0	4	4
Manyani	0	1	1
Matiyele	3	18	21
Maumba	1	1	2
Mbalani	0	27	27
Milimbo	2	9	11
Mkayani	4	24	28
Mphwayi	7	28	35
Noah Farm	1	1	2
Nyumbu	5	31	36
PEMBELE	5	6	11
Sekani	4	19	23
SONGEA SCHOOL	3	2	5
Vubwi	0	1	1
Wenala Farm	1	0	1
Wenala Farm	0	17	17
Total	77	330	407

Annex IV: Stakeholder consultations

The Forestry Department in Eastern Province initiated a process to prepare forest management plans for 12 forest reserves with support from Zambia Integrated Forest Landscape Project (ZIFLP). In accordance with section 41 of the Forests Act, 2015, a process of engagement with traditional leaders was conducted in order to gain support from the Chiefs in the preparation of the Forest Management plans before the proposed data collection activities and later local validation meetings. It was planned to meet their Royal Highnesses to gain consent and have an input in these Forest Management Plans.

Therefore, the Chiefs under which Mzewe South National Forest reserves fall were targeted with the following objectives.

- To provide a platform of getting the views of the concerned Chiefs, in relation to the respective developed forest management plans for forest reserves in their Chiefdoms.
- To collect and incorporate the agreed views from the Chiefs in the message pack for the local validation meeting.

Visitations - Chiefs

During Chief consultations, prior to visiting the two chiefs thus; Chief Mwangala and Chief Pembamoyo all under paramount Chief Gawa Undi of the Chewa speaking people, Paramount Chief Mphezeni was Visited since three quarters of Mzewe South National Forest falls in his Chiefdom in Chipata district and a small part of it falls under Vubwi and Chadiza district.

Figure 18: Meeting with Paramount Gawa Undi's senior Induna Mr. Lucas Phiri

During the courtesy call the team gave the background of forest inventories conducted in Mzewe South National Forest reserve and the interventions that ZIFLP is helping, the importance of the landscape and the areas of interventions including climate smart agriculture, support to Forestry Department to continue protecting existing forest estates, support to nurseries, assisted natural regeneration and also support to establishment and management of community forests. The specifics of the visit were also made clear as to have an input from the Royal Highnesses in the development of the forest management plans.

The two chiefs welcomed the ideas of developing forest management plans for the targeted forest reserves and encouraged the team to move forward and ensure their subordinate are sensitized during engagement.

Annex V: Stakeholder validation meeting

REPORT FOR THE MWEZE SOUTH LOCAL FOREST MANAGEMENT PLAN STAKEHOLDERS' VALIDATION MEETING HELD AT GUEST HOUSE, VUBWI DISTRICT ON 16TH DECEMBER 2022

Introduction:

The Forestry Department in 2021 undertook a forest inventory exercise to take stock of the forest resources in Mzewe South National Forest (MSNFL) among others with the view of collecting data to inform the preparation of Forest Management Plans (FMPs). The FMPs are prepared to guide the community-government partnership in the management of protected forest areas (FPAs) in the Eastern Province. Following the forest inventory exercise, draft FMPs were prepared for all the FPAs in Eastern Province.

The Stakeholders Validation Meeting for MSNFL in Vubwi was organized to validate the FMP for the MSNFL which was developed by the Forestry Department. The Stakeholders Validation Meeting for the MSNFL brought together 33 participants: 4 females and 29 males drawn from government departments, civic leaders, CSOs, private sector, CFMG and traditional leaders.

Official Opening

The District Commissioner for Vubwi officiated at the MSNFL FMP validation meeting. The District Commissioner informed the participants that the formulation of Forestry Management Plans (FMPs) was required by law (Forests Act No. 4 of 2015) to be validated by stakeholders. Hence the meeting was very important. The meeting was called to facilitate sustainable management of the MSNFL which has had no FMP. In this regard the District Commissioner implored the stakeholders to constructively engage and contribute actively in the meeting. The District Commissioner reiterated that FMP formulation is a legal obligation and needed to be formulated and validated in a consultative and participatory way. The importance of the meeting could not be over emphasized.

Structure of Meeting

The meeting had three main components presentations, group work and plenary discussions

Presentations

Three main context setting presentations were made by the workshop facilitators: i) Policy and legal context; ii) Natural Resources profiles; and iii) Socio-economic profile.

Policy and Legal Context

The presentation on Policy and legal context was done by Mr. Christopher Gondwe, Forestry Technician form the Provincial Forestry office. The presentation covered the roles and functions of protected forest areas (PFAs); and why they are

established. To enhance comprehension of the information in the presentation imagery was also used. Also highlighted in the presentation was a brief overview of the Zambia Integrated Forest Landscape Project (ZIFLP) and its significance in the sustainable forest management. The major highlights from the presentation were:

- The objectives of ZIFLP that is "To improve the landscape management and increase environmental and economic benefits for the targeted rural communities in the Eastern Province" was highlighted;
- The ZIFLP provided the Forestry Department with resources to enable it undertake its mandate and functions;
- Also highlighted in the presentation were the reasons that prompted government to implement the ZIFLP in Eastern Province which include the following on-going degradation, deforestation, unsustainable livelihood activities, low crop yields, increased adverse effects of climate change, and low community participation in forest management:
- The importance of forests in line with the legal framework were highlighted in the presentation such as soil conservation, carbon sequestration, water cycle and habitat protection;
- The ZIFLP was a REDD+ Project, to determine where Green House Gases (GHG) were being emitted and the sources of these emission, Green House Gases (GHG) baseline survey was conducted which revealed 3 main sources of GHG emissions in Zambia: degradation 82%, forestry loss to agriculture 9% and emissions from agriculture soils at 2 %. The underlying causes of the 3 main source of GHG emissions were also highlighted;
- Through ZIFLP government was not only intervening to arrest the situation but also to make the communities aware of the imminent consequences if no action was taken at national and subnational levels;
- An overview of selected of existing pieces of Forest legislation were shared such as the National Forestry Policy 2014, National Strategy to Reduce Deforestation and Forest Degradation, the Forests Act No 4 of 2015 among others. Contents such as vision, objectives and measures were also shared;
- Also presented were the policy and pieces of legal documents pertaining to MSNFL. It was highlighted that MSNF was gazetted as a forest in **1964** as a local supply of timber. Forest protection was important for both the present and future generation as provided for in the legal documents;

The meeting was being held because sustainable forest protection and management required concerted efforts and that FMPs formulation was a legal obligation that needed to be done in a consultative and participatory manner;

Stakeholders' Observations and concerns

The stakeholders made several observations and raised some concerns notable among them include the following:

- The stakeholder admitted that they know that there was a time the forest was intact but what changed it is the encroachment levels because the current laws /rules were too weak.
- The forest is important to the surrounding communities as well as a habitat for animals. Forest loss threatens everyone and everything that depends on this forest.
- There are serious encroachments in MSNF, therefore there is need to protect what is remaining of the forest as well as bring it back to its former glory at the same time find a lasting solution to the illegal forest activities.
- Need to change the mind-set of the people for them to appreciate the grave consequences of deforestation as well as need to provide sustainable/ alternative livelihoods.
- To resolve the inadequate human resource issue there was need to be re-introduce forest guards to police the MSNF and need to stiffen laws.
- The community forestry model should be promoted as it also promotes local ownership.

Situation Analysis

The presentation on situation analysis focused on the two surveys- Natural Resources Profiles and the other on the socio-economic profile, that were undertaken in the national forests 2021 and the results.

a) Natural Resources Profiles- Forestry Inventory Results including Change Analysis

Mr. Gondwe, presented the situation analysis highlighting the natural resources profiles and inventory results and change analysis. Major highlights from the presentation included:

- Total number Protected Forest Reserves in eastern province was 73: 11 NFs and 62 LFs covering 469,142 ha which translates to 9.2% of the total surface area of the eastern province. the total boundary area covers 2,042.7km;
- MSNFL was gazetted in 1964,
- How volume was calculated/measured was demonstrated
- The sampling design used to select the sample plots in the survey was systematic sampling design through which sample plots were created and data was accordingly collected from all the sample plots;
- Parameters that were considered in the survey were highlighted and explained.
- The proposed programmes as contained in the draft FMP for MSNF were also presented.

b) Social-Economic Profile.

Mr. Zulu from Zambia Statistics Agency made the presentation on Social-Economic Profile. Noteworthy highlights from the presentation included the following:

- The Province undertook the Socio-Economic Survey in LDLF in 2021 alongside the Forest Inventory.
- At the time of the survey, the total population for the 16 villages surrounding MNLF included in the survey that derived benefits from the forest was 2059 out of which 964 were male and 1095 were female. The sample comprised 407 households, out of which 330 were male headed households and 77 were female headed households;
- Farming (95%) was the main source of livelihood for the people surrounding the Forest.
- Almost (99%) all the people sampled Majority depended on firewood for cooking while only 1.0% used electricity.
- MSNFL was the main source of water for the sampled population;
- All (100%) the people in the sample expressed willingness to protect and manage the MSNFL;

Group Work
-Identify in Mzewe South National Forest

USES OF FOREST

-Construction material

-Collection of wild food

-Collection of firewood

-For prayers

WHO USES OF THE FOREST

-Local community around and inside forests

-Outsiders

WHAT ARE THE ISSUES

-Illegal settlement

-Illegal cultivation

WHAT ARE THE THREATS

-Late burning

-Charcoal

-Illegal settlement

WHAT ARE THE OPPORTUNITIES

-Collection of mushrooms

-Collection of herbs

-Collection of caterpillars

-Collection of firewood

LOCAL ISSUES AND LOCAL SOLUTION

ISSUES	SOLUTION
Late burning	Early burning
Illegal cutting of trees	Punishment
Charcoal burning	Ban charcoal production
Forest loss	Planting trees/Forest regeneration

PERMITTED
Collection of mushrooms
-Collection of caterpillars
-Collection of dried wood
-Collection of herbs

PROHIBITED
-Illegal settlement
-Cultivation
-Cutting trees
-Charcoal burning
-Burning

STRATEGIES OF IMPROVING FORESTS
-Planting of trees
-Sensitizing of communities
-Forest regeneration

PRIORITY
-Sensitize the community on the importance of forests

WHO TO WORK WITH?
-NGO
-POLICE
-CHIEFS

Group work on issues and threats affecting the Protected Forest Area (PFA) and identification of hot sports of concern was facilitated by Mr. Gondwe. Two groups were formed to:-

- Identify issues and suggest possible solutions;
- Identify priorities and strategies;
- Identify uses of the forest and map where they were most prevalent
- Zone the FPA and identification of practices which should be allowed or not allowed in the respective zones

- Who should be involved in the management of MSNFL, how should they be selected, their role, office tenure, what authority in terms of decision making should they make, who decides, how should the benefits be shared?

Group Presentations

The Groups made presentations to facilitate agreement of the strategies and partnership for management. Arising from the group presentations, Mr. Gondwe presented the synopsis of the situation Analysis as presented by the participants.

Stakeholders' Observations and concerns

The stakeholders made several observations and raised some concerns notable among them include the following:

- The stakeholder admitted that they know that there was a time the forest was intact but what changed it is the encroachment levels because the current laws /rules were too weak.
- The forest is important to the surrounding communities as well as a habitat for animals. Forest loss threatens everyone and everything that depends on this forest.
- There are serious encroachments in MSNF, therefore there is need to protect what is remaining of the forest as well as bring it back to its former glory at the same time find a lasting solution to the illegal forest activities.
- Need to change the mind-set of the people for them to appreciate the grave consequences of deforestation as well as need to provide sustainable/ alternative livelihoods.
- To resolve the inadequate human resource issue there was need to be re-introduce forest guards to police the MSNF and need to stiffen laws.
- The community forestry model should be promoted as it also promotes local ownership.

Collaboration Declaration Pledge

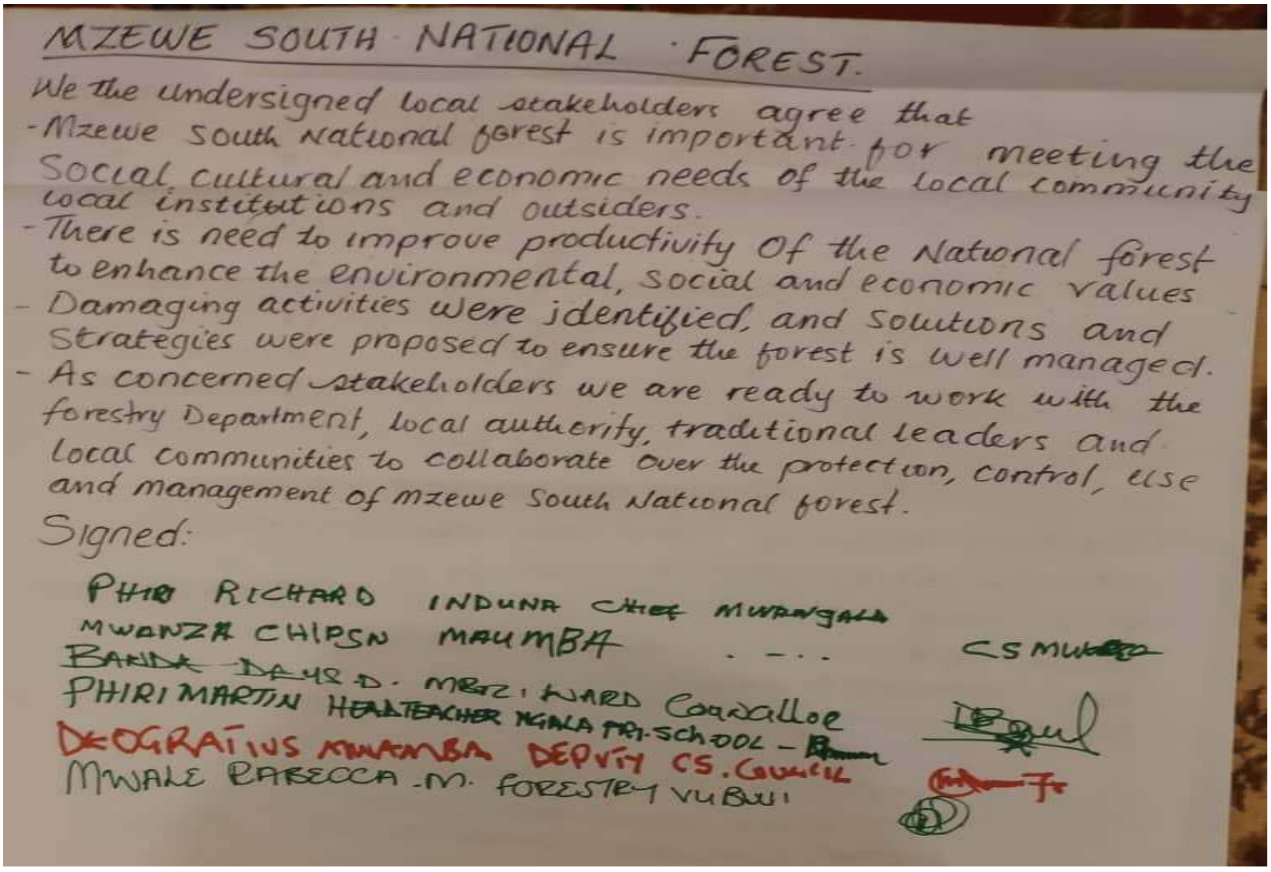
The stakeholders signed a joint declaration pledging to collaborate in the sustainable management of MSNF. Below are the contents of the Declaration Pledge:

"We the interested stakeholders of MSNFL agree the need to increase the productivity of the MSF to enhance the environmental, social, cultural and economic values.

Damaging activities were identified and solutions and strategies put forward to ensure the forest is well managed and protected. Permitted practices were identified as well as those which should be controlled.

As concerned stakeholders we are ready to work in partnership with the Forestry Department, Local Authority, traditional leaders to collaborate over the protection, control, use and management of MSNFL".

Declaration



MZEWE SOUTH NATIONAL FOREST.

We the undersigned local stakeholders agree that
- Mzewe South National forest is important for meeting the social, cultural and economic needs of the local community local institutions and outsiders.
- There is need to improve productivity Of the National forest to enhance the environmental, social and economic values
- Damaging activities were identified, and solutions and strategies were proposed to ensure the forest is well managed.
- As concerned stakeholders we are ready to work with the forestry Department, local authority, traditional leaders and local communities to collaborate over the protection, control, use and management of mzewe South National forest.

Signed:

PHIRI RICHARD INDUNA CHIEF MUKANGALA
MWANZA CHIPSN MAUMBA
BANDA DAVID D. MBOZI WARD COUNCILLOR
PHIRI MARTIN HEADTEACHER NGALA PRI-SCHOOL
DEOGRATIUS MWAMBA DEPUTY CS. COUNCIL
MWALE REBECCA M. FORESTRY VUBWI

Next steps

Mr. Gondwe and Mr. Yobe Nyirenda facilitated the session on next steps. Below were the agreed next steps/ way forward

- Forestry Department team to capture discussions, issues, strategies and recommendations from the meeting and report the opportunities to the Provincial Forestry Office and the Forestry Department Headquarters
- The chiefs' representative should report Their Royal Highnesses the proceedings of the meeting
- Forestry Department Team to:
    - Support follow up activities
    - Develop proposal to secure funding for development of MSNF with stakeholders' involvement
    - Subject to Project extension, check for opportunities for supporting enterprise development

Vote of thanks, Closing Remark and Prayer

A representative of the stakeholders thanked government for convening that important meeting but appealed to government to implement the recommendations.

Mr. Gondwe thanked everyone for attending the meeting and contributing through their inputs in perfecting the FMP. He implored the stakeholders to report back to their superiors and/or their communities.

Annex VI: References

References that were used in the collection of information for this Forest Management Plan included the following:

- Fanshawe D.B (1971), The Vegetation of Zambia, Forest Research Bulletin No. 7 Ministry of Rural Development, Republic of Zambia, Government Printer, Lusaka, Zambia
- Government of Zambia, (2018) The National Guidelines for Community Forestry in Zambia, Forestry Department, Lusaka, Zambia. https://ziflp.org.zm/cfm/
- Hollingworth, L.T D. Johnson, G. Sikaundi, S. Siame, (2015) Fire Management Assessment of Eastern Province, Zambia. Washington. DC: USDA Forest Service.
- ILUA II (2006) Integrated Land Use Assessment Phase 1- Field Manual.
- The Food and Agriculture Organization of the United Nations and the Forestry Department, Ministry of Lands and Natural resources, Lusaka, Zambia
- ILUA II (2008) Integrated Land Use Assessment Phase 1- Report for Zambia.
- The Food and Agriculture Organization of the United Nations and the Forestry Department, Ministry of Lands and Natural resources, Lusaka, Zambia
- ILUA II (2014) Forest Biophysical Field Data Entry Booklet; Forestry Department, Ministry of Lands and Natural Resources, Lusaka, Zambia
- ILUA II (2016) Integrated Land Use Assessment Phase II- Report for Zambia.
- The Food and Agriculture Organization of the United Nations and the Forestry Department, Ministry of Lands and Natural resources, Lusaka, Zambia
- ILUA II (2016) Integrated Land Use Assessment Phase II- Technical Report for Eastern Province.

Annex VII: Budget estimate of implementing management actions

The various prescribed activities are outlined and their corresponding costs and revenues are indicated

	Core Forest Management Actions																
	Action 1: Forest Protection, Management & Conserv		**Unit of Measure**	**Quantity**	**Frequency**	**Unit Cost**	**Total Cost Year 1**	**Total Cost Year 2**	**Total Cost Year 3**	**Total Cost Year 4**	**Total Cost Year 5**	**Total Cost Year 6**	**Total Cost Year 7**	**Total Cost Year 8**	**Total Cost Year 9**	**Total Cost Year 10**	**Total cost**
1	**To develop a shared management approach to forest protection, management and utilisation.**	1. Stakeholder engagement, community awareness raising and	Community meetings	3	3	2,500	22,500					-	-	-	-	-	22,500
		2 Stakeholder mapping including forest use, users and geographic	Community meetings	4	1	5,000	20,000									-	20,000
		3. Forming community level institutions to coordinate, manage and control local resource use in partnership with	Community meetings	4	3	4,500	54,000										54,000
		4. Developing forest product and issues based operational management plans for areas of	Community meetings	4	2	4,500	36,000		-	-	39,600		-	-	-	-	75,600
		5. Agreeing roles, rights, responsibilities and obligations for shared	Community meetings	4	1	4,500	18,000		-	-	-	-	-	-	-	-	18,000
		6 Conduct training in control functions: Permits, rules, financial	Community meetings	4	1	4,500	18,000		-	-	19,800		-	-	-	-	37,800
		7. Conducting joint monitoring and evaluation of management and benefit	Community meetings	4	1	4,500	18,000	19,800	21,780	23,958	26,354	28,989	31,888	35,077	38,585	42,443	286,874
2	**To protect the Forest from late fires**	Practice early burning within and outside the forest by involving local	10,000Ha	1	1	25000	25,000	27,500	30,250	33,275	36,603	40,263	44,289	48,718	53,590	58,949	398,436
3	**To secure the boundary and define the extent of the boundary and prevent possible encroachment**	1 Carry out annual Boundary maintenance.	10Km	1	1	70,000	70,000		77,000		84,700		93,170		102,487		427,357
		2 Beacon maintenance	No.	20	1	650	13,000	14,300	15,730	17,303	19,033	20,937	23,030	25,333	27,867	30,653	207,187
		3 Erection of sign posts	No.	10	1	300	3,000		-	-	-	3,000		-	-	-	6,000
4	**To conserve and enhance the biodiversity of the forest reserve through environmental awareness and education.**	Enhance understanding of the forest ecosystem and its function and benefits to community	School visits	3	1	2,500	7,500		8,250		9,075		9,983		10,981		45,788
5	**To significantly reduce levels of illegal forest product harvesting & other damage.**	Engage honorary forest Officers/guards	coord meetings	1	4	1,500	6,000	6,600	7,260	7,986	8,785	9,663	10,629	11,692	12,862	14,148	95,625
		Conduct patrols	No	2	12	800	19,200	21,120	23,232	25,555	28,111	30,922	34,014	37,415	41,157	45,273	305,999
															Action 1 Sub total		**2,001,164**

Action 2: Forest Restoration through Community Participation & Livelihood Development																
1. Enter into partnership with clear roles and responsibilities with surrounding communities	Promote community forestry approach / restoration planning	Community meetings	3	3	2,500	22,500		24,750		-	-	27,225		-	-	74,475
2. To protect, restore and replant forest cover in the fragmented forest areas of the National Forest	Support forest restoration activities	Community meetings	3	3	2,500	22,500	24,750	27,225	29,948	32,942	36,236	39,860	43,846	48,231	53,054	358,592
3. To reduce carbon emissions from agric soils and dependency on inorganic fertilizer	Promote CSA through Agroforestry	CSA ha	15	1	500	7,500	8,250	9,075	9,983	10,981	12,079	13,287	14,615	16,077	17,685	119,531
4. To significantly reduce levels of tree cutting for wood energy.	Promotion of energy efficient Cook stoves	Training	1	2	5,000	10,000	11,000	12,100	13,310	14,641	16,105	17,716	19,487	21,436	23,579	159,374
	Roll out programme	stoves	100	2	100	20,000	22,000	24,200	26,620	29,282	32,210	35,431	38,974	42,872	47,159	318,748
local communities.	products/ woodlots/	establishme	5	1	5,000	25,000	27,500	30,250	33,275	36,603	40,263	44,289	48,718	53,590	58,949	398,436
social, cultural and economic needs and improving the livelihoods of forest-adjacent	Forest enterprises promoted & supported	groups formed & trained	3	1	2,750	8,250	9,075	9,983	10,981	12,079	13,287	14,615	16,077	17,685	19,453	131,484
		Equipment	3	1	30,000	90,000		99,000				108,900		-	-	297,900
7. To reduce carbon emissions from deforestation and forest degradation by ensuring community benefit from carbon credits.	Access to an incentive benefit sharing mechanism through the carbon trading scheme to be established by	Community meetings	3	1	2,500	7,500		8,250		9,075		9,983		10,981		45,788
8. To ensure cross cutting issues are mainstreamed in all aspects of forest management for social equity wellbeing and empowerment through sustainable	1 Ensure that all environmental and social impacts, risks and liabilities are identified and mitigated.	Community meetings	3	1	2,500	7,500		8,250		9,075		9,983		10,981		45,788
	2 Identify training needs.	Community meetings	3	1	2,500	7,500		8,250		9,075		9,983		10,981		45,788
	3 Monitoring safeguards & Grievances	Community meetings	1	1	2,500	2,500	2,750	3,025	3,328	3,660	4,026	4,429	4,872	5,359	5,895	39,844
9. To maintain the infrastructure necessary to achieve the multiple objectives of forest management.	Maintain the existing infrastructure	Site specific				-	-	-	-	-	-	-	-	-	-	-
														Action 2 Sub total		**2,035,748**
10. Support the development of viable forest based enterprises	1. Beekeeping	Equipment	500	1	700	350,000										350,000
	2. Wood biomass energy	Training	1	2	2,500	5,000	5,500	6,050	6,655	7,321	8,053	8,858	9,744	10,718	11,790	79,687
	3. Wild fruit harvesting	Training	1	2	2,500	5,000	5,500	6,050	6,655	7,321	8,053	8,858	9,744	10,718	11,790	79,687
	4. Plantation	Training	1	4	2,500	10,000	11,000	12,100	13,310	14,641	16,105	17,716	19,487	21,436	23,579	159,374
		Supply seedlings														-
		Monitoring	1	4	2,500	10,000	11,000	12,100	13,310	14,641	16,105	17,716	19,487	21,436	23,579	159,374
														Enterprise Sub total		**668,748**

													Grand total costs for the period of the Plan (ZMW			4,705,661
			Unit of Measure	Quantity	Frequency	Unit revenue	Total Revenue Year 1	Total Revenue Year 2	Total Revenue Year 3	Total Revenue Year 4	Total Revenue Year 5	Total Revenue Year 6	Total Revenue Year 7	Total Revenue Year 8	Total Revenue Year 9	Total Revenue Year 10	Total Revenue
Revenue				Ha													
1 Carbon trading benefit share EP-JSLP- Forest land	Carbon t/ha/yr inc 10% per yr		Hectare	17859	1	75	########	1,473,376	1,620,713	########	1,961,063	########	########	2,610,175	########	3,158,312	21,347,104
2 Small woodlots	Carbon t/ha		Hectare	10	1	75	750	825.0	990.0	1,287.0	1,801.8	2,702.7	4,054.1	6,486.5	11,027.0	19,848.6	49,773
3 Agroforestry	Assume 1tC/ha inc to 2		Hectare	100	1	75	7,500	8,250.0	9,075.0	9,982.5	10,980.8	12,078.8	13,286.7	14,615.4	16,076.9	17,684.6	119,531
4 Natural regeneration	Assume 1tC/ha inc to 2		Hectare	10	1	75	750	825.0	907.5	998.3	1,098.1	1,207.9	1,328.7	1,461.5	1,607.7	1,768.5	11,953
															Revenue sub total		**21,528,361**
															Net cost (surplus)		**16,822,700**

REPUBLIC OF ZAMBIA

Ministry of Green Economy & Environment

The Zambia Integrated Forest Landscape Project (ZIFLP) is a government initiative which provides support to rural communities in the Eastern Province to allow them to better manage the resources of their landscapes so as to reduce deforestation and unsustainable agricultural expansion; enhance benefits they receive from forestry, agriculture, and wildlife; and reduce their vulnerability to climate change.

Simultaneously the project is creating the enabling environment for emission reduction purchases to be done through the subsequent phase - the Zambia Eastern Province Jurisdictional Sustainable Landscape Programme (EP-JSLP).

The ZIFLP & JSLP are a cooperation between the Government of Zambia, the World Bank & partners.

Forestry Department

Supported by:

Zambia Integrated Forest Landscape Project

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