REPUBLIC OF ZAMBIA

MINISTRY OF GREEN ECONOMY AND ENVIRONMENT

MZEWE NORTH NATIONAL FOREST: P143 MANAGEMENT PLAN

2025-2035

APPROVAL PAGE

MZEWE NORTH NATIONAL FOREST No. P143 - 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.

<u>Director of Forestry</u>

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.

<u>Minister for Green Economy and Environment</u>

Date:_____

FORESTRY DEPARTMENT

FOREWORD

Forests provide essential functions and services to the local community and the country at large, conserving and protecting biodiversity, social and livelihood wellbeing. Zambia has adopted a participatory approach to forest management allowing community based natural resource management in respect to forest management between the Forestry Department whose function is to control, manage, conserve and administer Local and National Forests, promoting partnership with communities and civil society organizations. This forest management approach is driven by the need to promote sustainable use and management of forests across the country and reduce forest degradation and deforestation. The high demand for forest resource products and services due to increase in human population, and the ever-changing environmental conditions have highlighted the need to hasten the partnership approach to the management of forests in a planned manner. It is for this reason that, Mzewe North National Forest Management plan (MNFMP) is formulated.

Signature:

Director of Forestry

Date:

ACKNOWLEDGEMENTS

EXECUTIVE SUMMARY

Forest Management Planning is a requirement for Sustainable Forest Management (SFM) and is provided under the provisions of the Forests 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 North 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 North 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 North 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 North 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, 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 North National Forest.

The inventory results indicate a total standing volume for all species in Mzewe North National forest estimated at ($33.47m^3$/ha), with a total bole volume estimated at $14.70m^3$/ha). Total Biomass for trees ≥5cm DBH is estimated 50.67tonnes per hectare with an above ground carbon estimate of 25.34t/ha. A basal area figure of $4.0m^2$ per hectare is a low figure for the type of forest by over a factor of 4. This confirms the status of Mzewe North National Forest as a forest not achieving optimum growth potential.

Summary socio economic analysis

The livelihood survey conducted in 2021 indicated that Mzewe North National Forest is surrounded by villages with a total population of 543. 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 92.5 percent of all the households were willing if called upon to voluntarily support management of the National Forest with the 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 North 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 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 MNNF, 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 settlements.

•   Need to change the mindset 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 is need to re-introduce forest guards to police forest offenders also need to stiffen laws.

•   Headmen, senior headmen and Indunas, are allocating land to people coming from outside, in this regard consideration should be to ensure no further encroachments and means to restore the forest found.

•   Late burning was observed as one of the major causes of forest degradation and the only remedy to this was to ensure early burning is conducted in time.

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 North National Forest.

The declaration confirmed that Mzewe North National Forest is of importance for meeting the local social, cultural and economic needs of the surrounding communities as well as of environmental importance. The stakeholders requested to work in partnership with the Forestry Department and others to safeguard the forest.
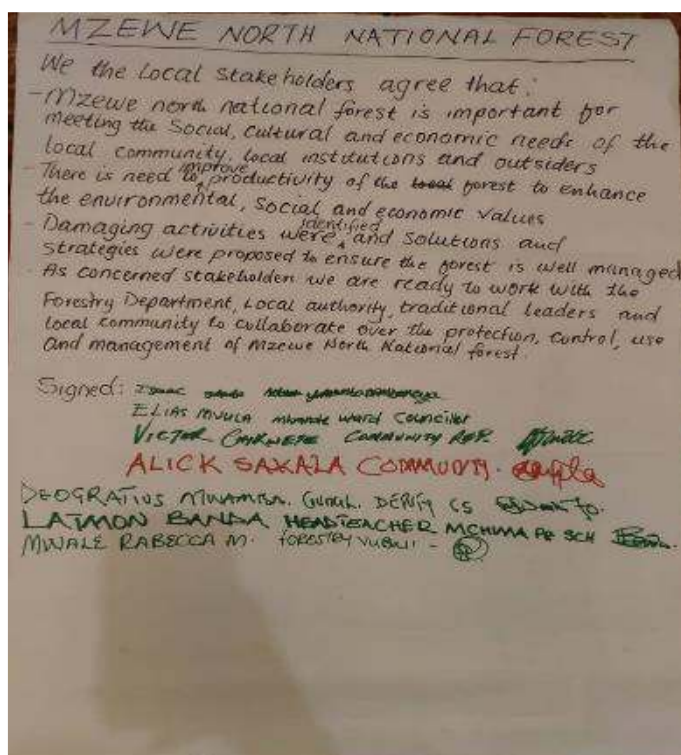
Objectives and management actions

Based on the policy and legal framework and the consultation process conducted, the General Objectives for the management of Mzewe North 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 North 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 North 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 North 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 North 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 North 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 work plan 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 North 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 North National Forest through the proposed interventions will directly address the need for emissions reductions through promotion of Sustainable Forest Management. This centres around 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 forest restoration interventions.

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
MNNFMP	Mzewe North National Forest Management Plan
MGEE	Ministry of Green Economy and Environment
NGO	Non-Governmental Organization
REDD	Reducing emissions from deforestation and forest degradation
SFM	Sustainable forest management
USAID	United States Agency for International Development
ZAMSTATS	Zambia Statistics Agency
ZIFLP	Zambia Integrated Forest Landscape Project

TABLE OF CONTENTS

List of Figures

List of Tables

MZEWE NORTH NATIONAL FOREST MANAGEMENT PLAN

1   INTRODUCTION

The Mzewe North National Forest Management Plan (MNNFMP) 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 National Forest falls in Chipata and small portions in Vubwi and 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 North 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 Policy 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 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 North National Forest (Reserve No. P. 143) forms part of the forest estates in Eastern Province. The forest falls within Chipata District under His Royal Highness paramount Chief Mphezeni and a small portion in Vubwi district covers a total land area of approximately 7,885.58 hectares in extent and is situated approximately 30Km north- west of the administrative centre of Vubwi District. The Northern part and western parts of the reserve are surrounded by farms while the southern part, is Mzewe South National Forest sharing boundary with Mzewe North.
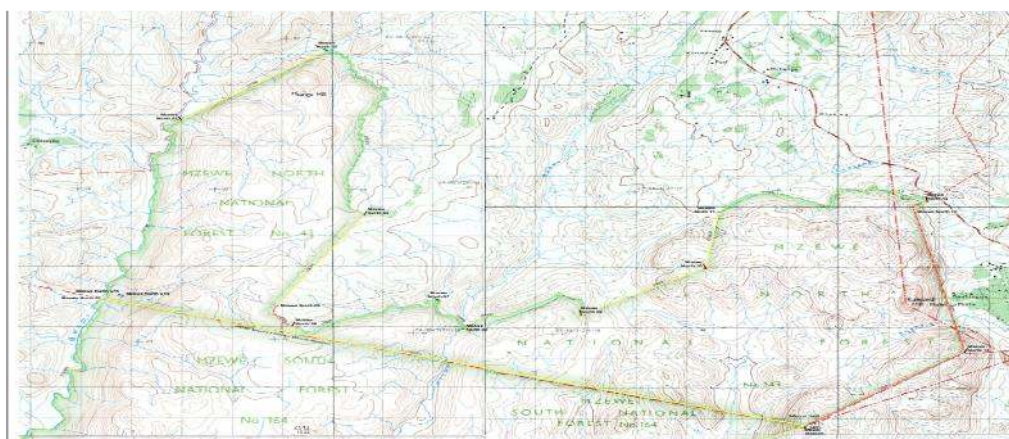
Figure 1:Map of Mzewe North National Forest

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

2.2 Ownership and control

Mzewe North National Forest No. P.143, was originally declared a forest reserve and gazetted under Statutory Instrument No. 298 of 1966 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 Forestry Department is responsible for the protection and management of Mzewe North National Forest.

2.3 Reasons for reservation

The area forms part of the series of indigenous pole production forests from which purely local demands for poles will be met. It is also proposed for reservation because the area was eroding and any cultivation would lead to a rapid deterioration of the land. It was intended that the proposal be handed over, under Section 10 of the Forests Ordinance, to Chewa and Ngoni Native Authorities to manage on a simple early burning - cum - coppice system.

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 gneiss 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 North National Forest well drained, moderately deep, red to strong brown, friable, gravelly, moderately weathered fine loamy to clayey soils (chromi-haplic Alisols, 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.
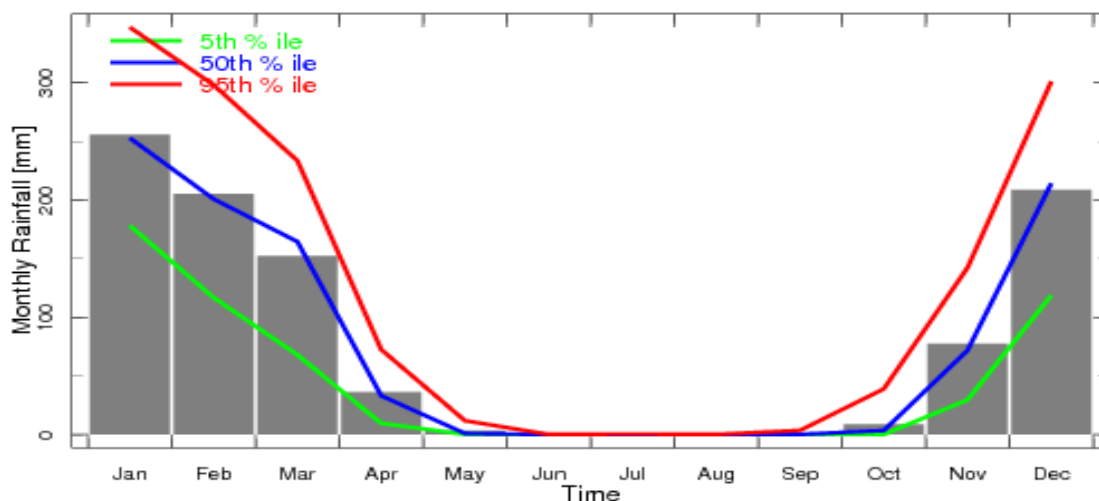
Figure 2: Monthly Rainfall-Eastern province   Source: The Zambia Meteorological Department

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 21^0C and 23^0C during the cool dry season occurring especially between May and June.
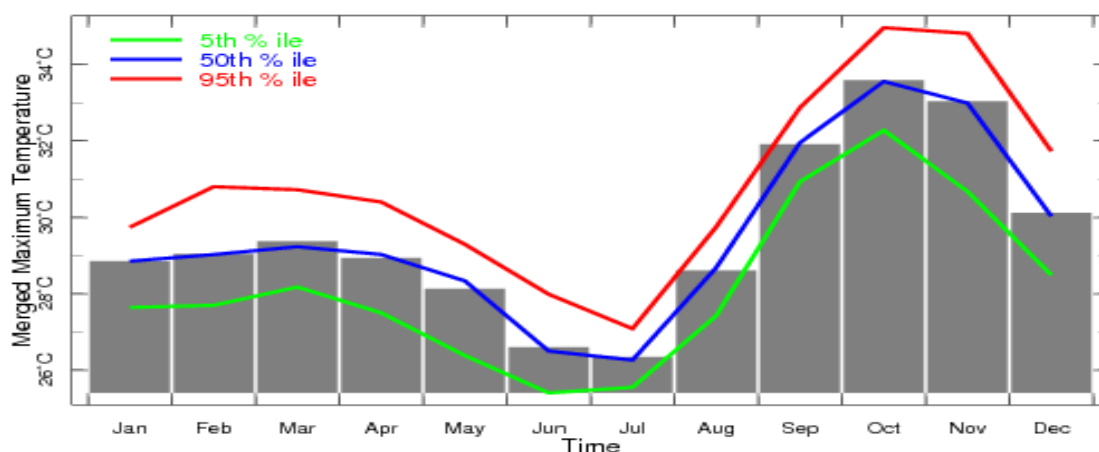
Figure 3: Monthly Temperature-Eastern province   Source: The Zambia Meteorological Department

Vegetation Type

Mzewe North National Forest is a homogeneous forest. The vegetation type is miombo woodland on the plateau with a diverse tree flora including *Julbernardia paniculata, Isoberlinia angolensis, Brachystegia boehimii, Brachystegia floribunda,*

Parinari curatellifolia 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 North National Forest was first identified in 1960 then 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. 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.

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MZEWE NORTH RESERVATION PROPOSAL E.101/A.

        The spelling of the name of this proposal has been
changed as above.

2.      As the area is divided between two different Native
Authorities it will now be considered as two separate
proposals.  The northern part, which is considered in
this report, is E.101/A and comes under the Ngoni Native
Authority; while the southern part is E.101/B and comes
under the Chewa Native Authority.

3.      The northern part was pointed out to members of the
Ngoni Native Authority by the Provincial Forest Officer
in July, 1960; and provisional boundaries were blazed
in September 1960 in the presence of councillors from
the Native Authority.

4.      The blazed boundaries differed greatly from those
originally proposed because of several villages and
cultivation between the Mzewe and Mwami rivers.

5.      A small piece of cultivated land within the proposal
on the eastern bank of the Mwami river will be used as
long as it is required by Nsoro village.

6.      At a meeting of the Ngoni Native Authority at Feni
on 9th May, 1961 they gave their formal approval to the
formation of this Protected Forest Area, and it was under-
stood that all the acts listed under Section 4 of the
Forests Ordinance would be prohibited, except for Sub-
section (d) - the grazing of livestock.

7.      The Provincial Team formally approved the setting
up of this Protected Forest Area on in October 1961.
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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 North National Forest has over the years been heavily encroached by influx of migrants from surrounding areas and Chiefdoms. Agriculture, timber logging 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

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with Chiefs, stakeholder meetings and in 2018 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 with the gazetted forest area.

Maintenance works

In 2018, Mzewe North 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. The following section provides the results and analysis from the data collected. A map of the location of the sample plots for Mzewe North 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 North National Forest.

4.1   Tree species abundance

The inventory data indicates that there are over 185 different types of tree species that include tree seedlings in the forest. A summary of the forest inventory is presented in the table below and will be further detailed in the following sections.

Diameter Class	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Vol (m³)/ha	0	3.51	10.11	4.87	6.37	7.46	1.14	33.47
Bole Vol (m³)/ha	0	1.46	4.56	2.33	2.84	3.06	0.44	14.70
Density/SPH	0	140.13	109.13	23.96	16.17	8.16	0.74	298.29
Basal area (m²)/ha	0	0.63	1.29	0.54	0.69	0.74	0.10	4.00
Biomass, Total (Tons)/ha	0	5.43	15.17	7.34	9.90	11.11	1.73	50.67
Carbon, Total (Tons)/ha	0	2.71	7.59	3.67	4.94	5.56	0.86	25.34
Vol (m³)/ha Sawlogs	0	0.00	0.00	0.01	0.27	0.60	1.03	1.93
Vol (m³)/ha Poles	0	0.50	1.61	0.84	1.16	1.69	0.00	5.80
Vol (m³)/ha Fruits	0	0.43	0.21	0.04	1.04	0.00	0.00	1.73
Vol (m³)/ha Medicinal	0	0.69	1.11	0.39	0.77	0.66	0.00	3.61
Vol (m³)/ha Firewood	0	0.37	1.33	0.57	0.44	0.43	0.00	3.16
Vol (m³)/ha Others	0	1.54	5.81	3.01	2.70	4.07	0.11	17.26
Seedlings								4,913.80

Table 1 stratum total for all species

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

4.2 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.

1.3m

Diameter class 5-9,   10-14,   15-19,   20-29,   30-39,   40+ (cm)

Tree Density Stratum total by diameter class for species use

TREE DENSITY DISTRIBUTION

	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Density/SPH	0	140.13	109.13	23.96	16.17	8.16	0.74	298.29
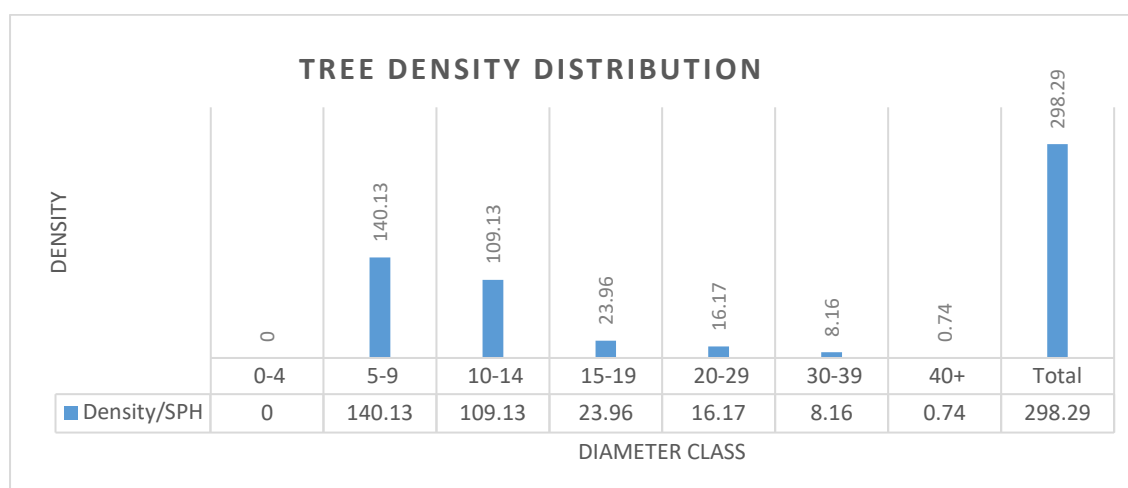
DIAMETER CLASS

Figure 4: Density by diameter class/ha for all species

In Mzewe North National Forest, a stocking density for trees ≥ 5 cm DBH was estimated as 298 stems per hectare.
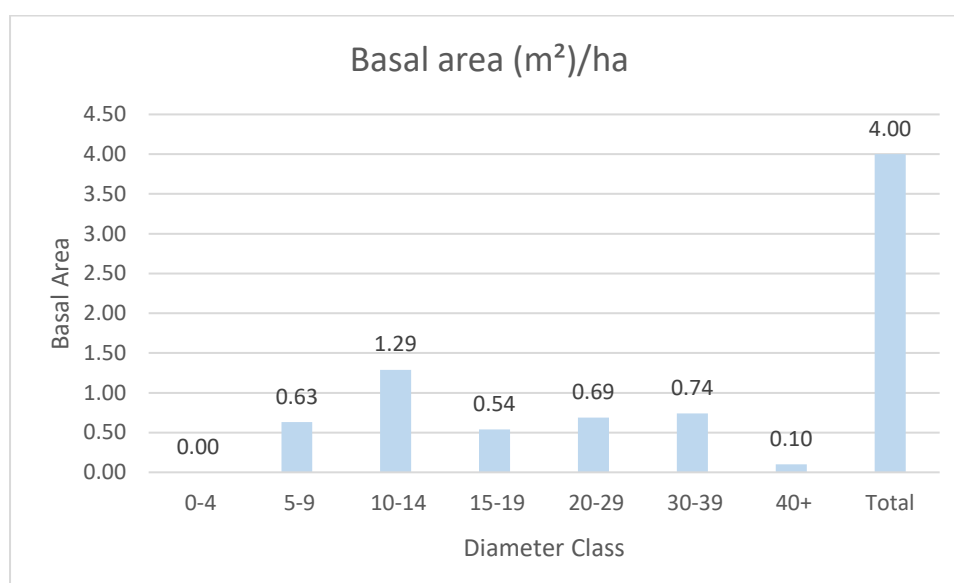
Figure 5: Basal area (m2) by diameter class/ha for all species

The stocking by diameter class basal area per hectare is more in 10 –14cm 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 if allowed to do so. The data also indicates this is a secondary forest. The species with the high density is *Brachystegia bussei* with 53 stems per hectares, this is followed by *Brachystegia bohemii and Brachystiegia globiflora.*

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 4 m² per hectare is a low figure for basal area in a similar type of forest type by over a factor of 3-4. This confirms the status of Mzewe North National Forest as a forest of concern following past and most likely current high levels of exploitation of medium and large sized trees.

4.3 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 North National Forest is estimated at 33.47m³/ha., with a total bole volume estimated at 14.70m³/ha. Total Biomass for trees ≥5cm DBH is estimated at 50.67 tonnes/ha and it has carbon estimated at 25.34 tonnes/ha.
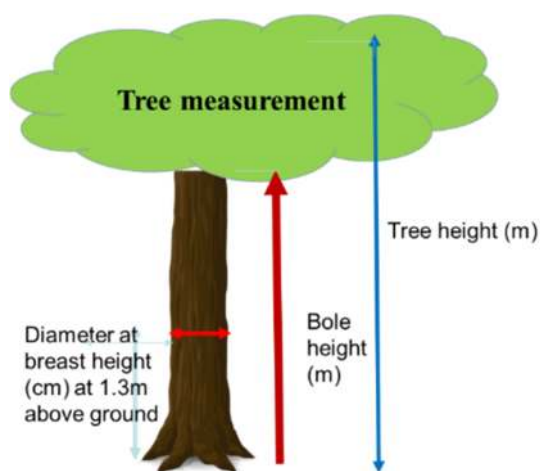
Technical characteristics

The volume of other technical characteristics or use are computed per hectare as follow: Saw-log 1.93m³, Pole 5.80m³, Firewood/charcoal 3.16m³, Fruit 1.73m³, Medicine 3.61 and others 17.26m³. 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 as there are extensive logging and illegal exploitation of forest resources.

volume (m³) by diamter class use for all species

Diameter class by use	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Vol (m3)/ha Sawlogs	0	0	0	0.01	0.27	0.6	1.03	1.93
Vol (m3)/ha Poles	0	0.5	1.61	0.84	1.16	1.69	0	5.8
Vol (m3)/ha Fruits	0	0.43	0.21	0.04	1.04	0	0	1.73
Vol (m3)/ha Medicinal	0	0.69	1.11	0.39	0.77	0.66	0	3.61
Vol (m3)/ha Firewood	0	0.37	1.33	0.57	0.44	0.43	0	3.16
Vol (m3)/ha Others	0	1.54	5.81	3.01	2.7	4.07	0.11	17.26
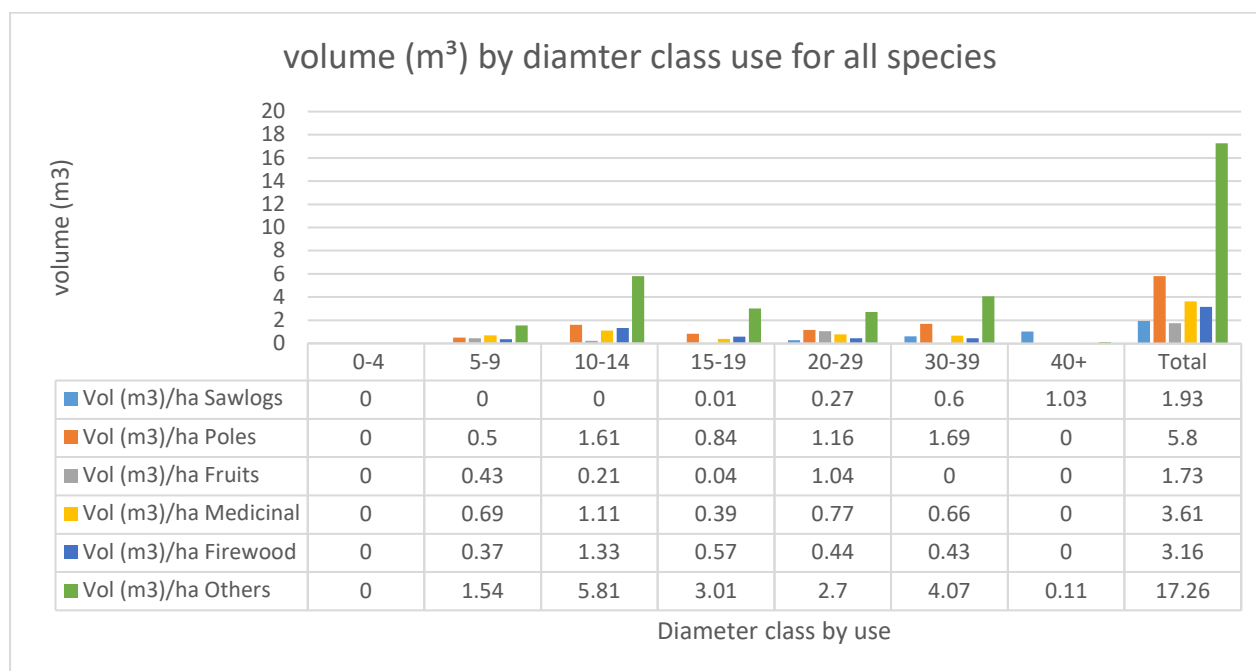
Figure 6: Volume (m³) by diameter class/ha for all species by use

4.4 Bole volume total by diameter class/ha for all species

The total bole volume by diameter class per hectare is 14.7 cubic meters with higher in diameter class 05 – 29 and less from 30 and above. The outcome indicates that there is a lot of tree harvesting resulting in high coppicing and regeneration mainly agriculture activities. These figures are 50% of those in Mzewe South National Forest.
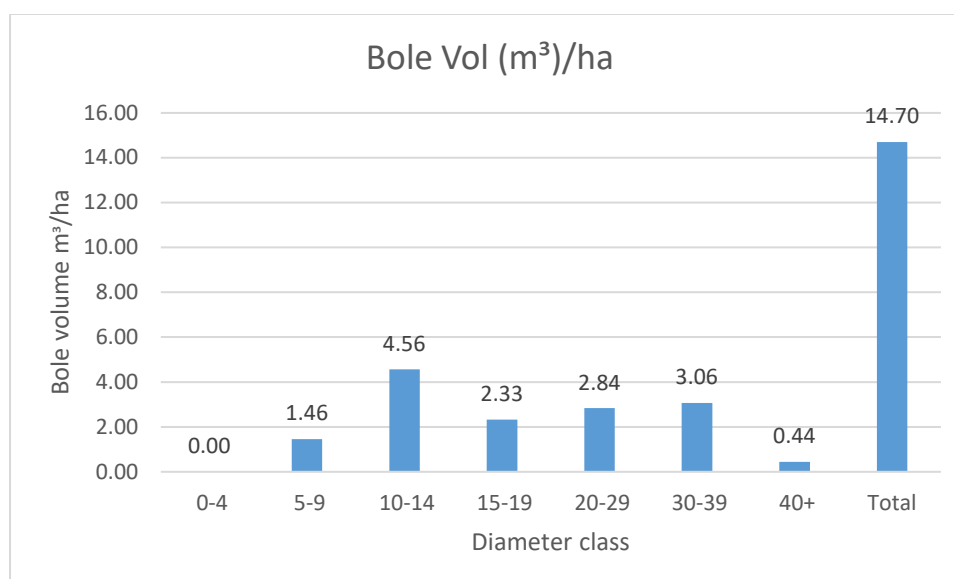
Figure 7: Bole volume (m³) by quality diameter class for all species

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

12

abundant in the forest. The harvestable volume is low. Therefore, Mzewe North National Forest in its current condition cannot sustain commercial logging operations or timber concession.

Volume of all species by use

No	Description	Volume(m³/ha)	Explanation
1	Sawlogs	1.93	These are merchantable trees with the average diameter of 40cm dbh and above. This is a low figure
2	Poles	5.80	These are tree species with relative straight bole length with the average diameter at breast height of 5cm to 29cm
3	Fruits	1.73	The tree species include all fruit bearing either edible or not edible
4	Medicinal	3.61	All medicinal plants
5	Firewood	3.16	These include all dead and or diseased trees which can be used for firewood
6	Others	17.26	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 below. Note, this figure relates to standing carbon and not the amount of carbon that may be traded under carbon trading schemes which are based on measured reduction of emissions. These figures are 50% of those in Mzewe South National Forest.

Biomass and carbon above ground

diameter class	1	2	3	4	5	6	7	8
Biomass, Total (Tons)/ha	0	5.43	15.17	7.34	9.9	11.11	1.73	50.67
Carbon, Total (Tons)/ha	0	2.71	7.59	3.67	4.94	5.56	0.86	25.34
Basal area (m2)/ha	0	0.63	1.29	0.54	0.69	0.74	0.1	4
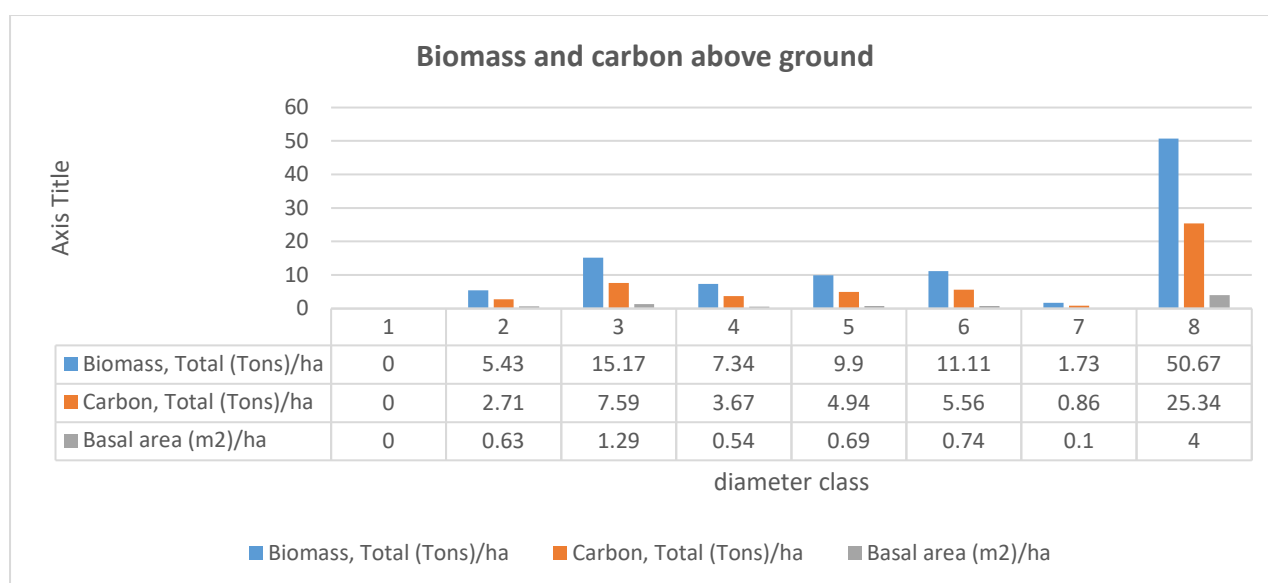
Figure 8: Biomass and Carbon above ground by diameter class/ha for all species

The total biomass and carbon stocks per hectare respectively of 50.67and 25.34 estimates 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.

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	6,306.9	84.3
Cropland	1,118.7	15,0
Degraded (scrub)	3.0	0.04
Degraded forest (open)	48.6	0.65
Bare land	0.84	0.01
Total	**7,478.04**	**100**

Table 4 Forest condition analysis 2025 by land cover

Landcover/option	Area ha]	Percentage
Forest (Protection)	6,306.9	84.3
Cropland (Agroforestry)	1118.7	15.0
Restoration (ANR)	3	0.04
Enrichment Planting	48.6	0.65
Bare land	0.84	0.01
Total	7,478.27	100.0
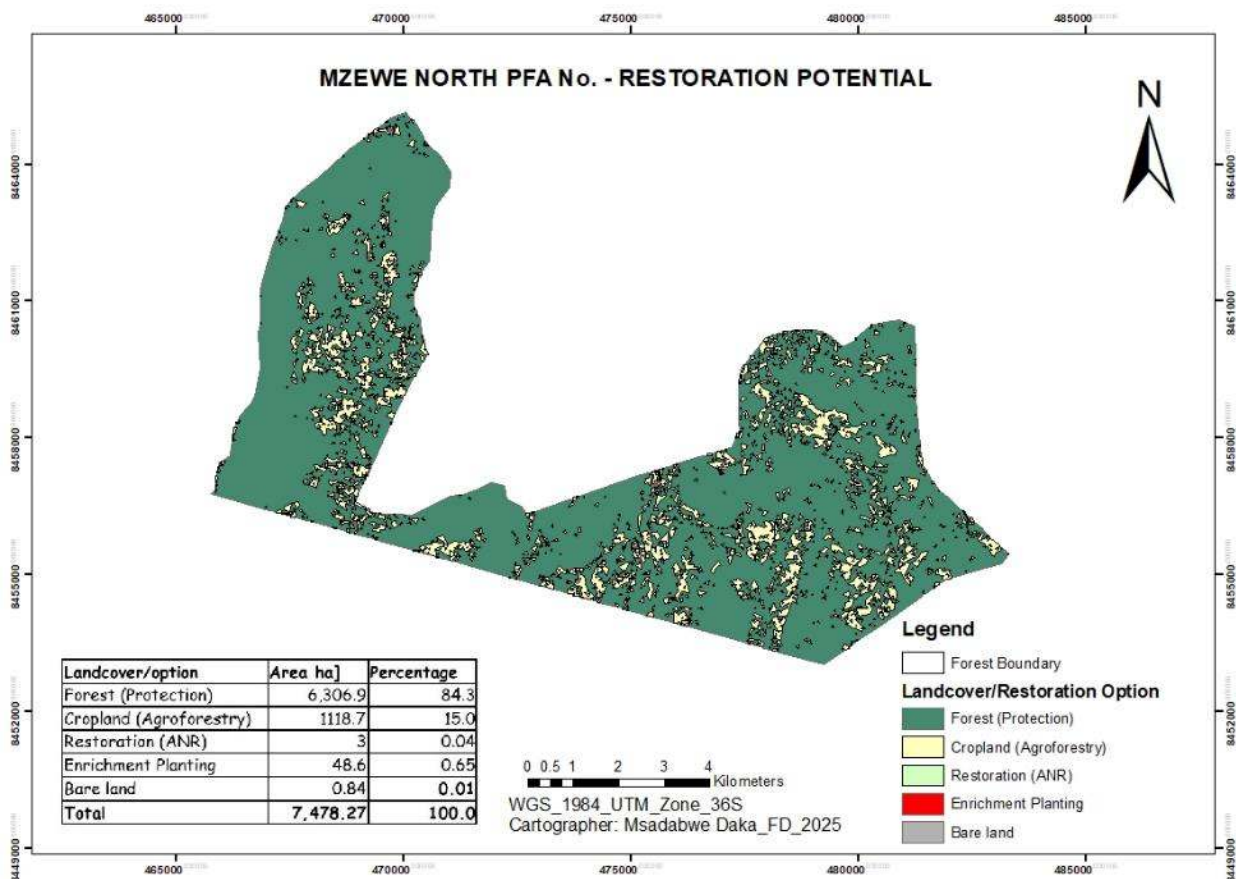
Figure 9: **Mzewe North Land cover restoration map**

The 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.

15

5 SOCIO-ECONOMIC CONDITIONS

5.1 Household and Population dynamics

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 is to measure the well-being of the communities' dependent on Mzewe North 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 North 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 livelihood survey was collected using Computer Assisted Personal interview (CAPI), using Tablets android Ver9. The CAPI system allows quality check of the data at the server (HQ) as it is collected. It also minimizes data entry errors after data collection, the data were subjected to extensive checks on their validity and consistency as it was synched to the server. Analysis was undertaken using statistical package SPSS version 24.

Mzewe North National Forest reserve as at 2021 livelihood survey was surrounded by approximately 45 villages and farming blocks as indicated in Annex: III with a total population of 543. The main ethnic groups in the area are Ngonis and 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 North NF is mostly under customary land tenure system. Those households within have formal no 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 North National Forest was found to be mainly primary level that contributed 60.0 percent, while tertially contributed about 7.5 percent. The rest being No formal education and secondary education indicating 15.0 percent and 17.5 percent respectively. As shown in the table below:

Education Level	Percent
No Education	15.0
Primary	60.0
Secondary	17.5
Tertiary	7.5
Total	100.0

Table 5 Education levels attained.

Economic activity

The results showed that 87.5 percent of the household population surrounding Mzewe North Forest reserve had farming as their main occupation, while the rest of economic activities contributed 12.5 percent those in paid employment. In terms of utilization, the survey revealed that 98.3 percent of the population utilise the forest. This indicates dependency but also pressure on the forest resources.
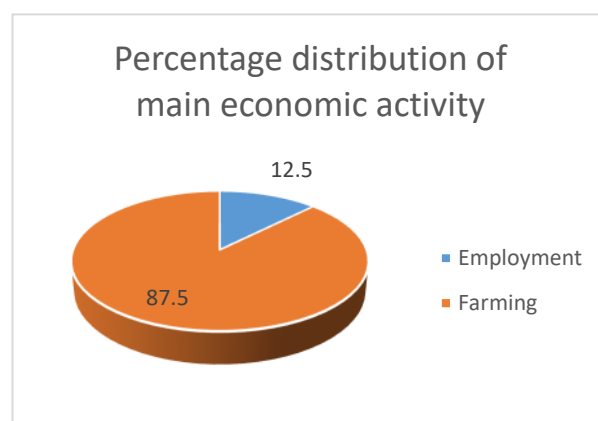
Figure 10: percentage distribution of main economic activity

Types of energy used for cooking and construction

The livelihood survey revealed all households using firewood for cooking energy and 47% living in traditional housing constructed with timber poles. It indicates dependency on the forest and threat to the future condition of the forest.

Main tree resources used for firewood.

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

Main tree resources 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 resource used for firewood.

Note: these species are therefore under serious threat for wood energy as the statistics can show 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 North NF are as shown in the table below.

Non wood Forest products
• Mushroom • Caterpillars • Fruits

Table 7: Non-Wood Forest Products used by households surrounding the NF

Land Occupation

The livelihood survey for the communities surrounding the National Forest revealed that most of the settled land is by households who expressed traditional occupation (90 percent) with the balance (10 percent) through informal renting. All land occupied by households is mainly used for agriculture purpose.
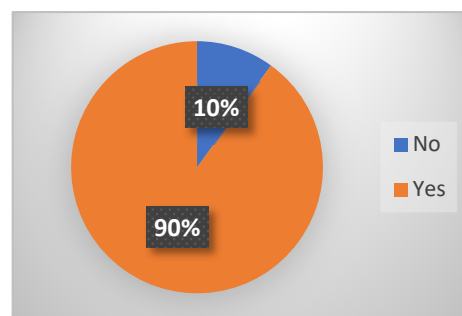
Figure 11:Land Occupation

Willingness to plant trees on land owned.

The survey revealed a strong willingness among land-owning households to plant trees. Approximately 95% of respondents expressed readiness to plant trees on their land, while only 5% indicated unwillingness, as illustrated in the figure below.
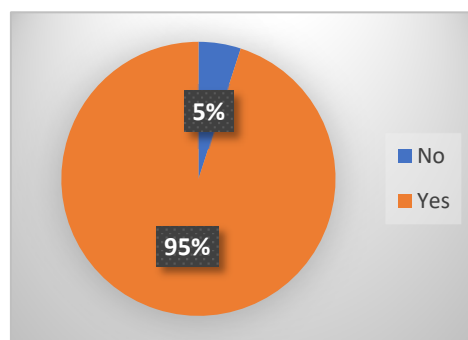
Willingness of community to participate in management of the forest

The livelihood survey revealed that 93 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 stake holders in the community.

Figure 12 Distribution of willingness to participate when called upon to support FM
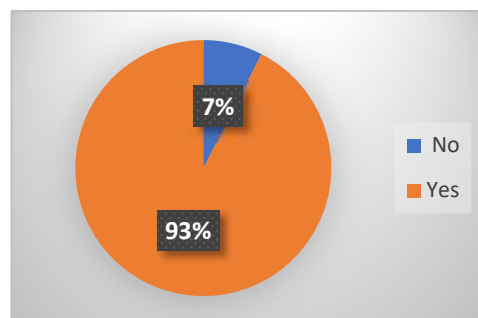
5.2 Issues and solutions proposed by Stakeholders

Further at the Mzewe North NF consultative meeting held on 15th December 2023, the stake holders identified the uses and users of the forest reserve.

Uses of the forest
-for construction materials
-herbal medicine
-source of food e.g. fruits
-relish
-source of income in terms of planks and charcoal

Users of the Forest
-Surrounding community
-Neighboring communities
-Wild animals
-Government

Issues and solutions identified

Issues
- Clearing the forest
- Illegal cutting of trees
- Forest degradation
- Late fires

Solutions
- Sensitization /afforestation
- Afforestation
- Enforce the law
- Early burning

5.3 Enterprise opportunities

A healthy forest ecosystem forms a vital basis for generating income from forest products by preserving biodiversity, soil health, and water resources necessary for sustainable production. When forests are ecologically intact, they support the growth of valuable timber and non-timber forest products (NTFPs), which can be responsibly harvested and marketed by local communities and other stakeholders. Effective forest management ensures the ongoing availability of these resources, providing long-term economic.

Mzewe North National Forest presents multiple income-generating and enterprise development opportunities, shaped by the current condition of the forest, the interests of local communities and other stakeholders, and most critically the commitment to sustainable forest management supported by established institutional arrangements. The success of community-based forest enterprises depends on several key factors, including the condition and availability of forest resources, access to markets, the presence of organized enterprise groups, and robust governance mechanisms to regulate forest access, use, and protection.

Drawing on insights from resource assessments and mapping, socio-economic surveys, stakeholder consultations, and the community forest management planning process, the following enterprise opportunities have been identified:

- Beekeeping
- Plantation establishment

The development of the identified enterprise opportunities will require detailed value chain analysis and enterprise development assessments for specific forest products. This will help determine their viability and financial feasibility, ensuring that any forest-based enterprise promoted aligns with the Forestry Department's Forestry Enterprise Strategy for 2025–2030. The strategy aims to support sustainable forest management while enhancing value addition within forestry value chains, with a strong focus on empowering local communities.

5.4 Encroachment- illegal settlement and cropping

Mzewe North National Forest currently is in a dynamic state due to external pressure factors. However, the reasons for encroachment in forest reserves across the country are many. High poverty levels vis a-vis low household incomes in surrounding populations result in illegal harvesting of forest products (both wood and non-wood) and demand for land, with clearing for agriculture and settlement expansion evident. In addition, a number of settlements with permanent structures are located within the gazetted forest area. 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 National Forest.

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.

The reserve has forest beacons constructed on its boundaries with the support from USAID under the project Forest Reserve Support Project (FRSP) between 2015 and 2018, with further support from ZIFLP in 2021.

In 2023, during a stakeholder consultative meeting supported by Zambia Integrated Forest Landscape Project (ZIFLP), participants reached a consensus and expressed strong support and a shared commitment to all local communities and their traditional leaders for the protection and proper management of forests. This engagement sparked the interest of the local community and its leadership in Community Forest Management (CFM), guided by Zambia's legal framework for sustainable forest management, which includes the Forests Act, 2015, the National Forestry Policy, 2014 and SI #11 of 2018 related to Community Forestry Management.

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. Learning from this approach in this critical National Forest will inform similar processes for other selected protected forest areas in Eastern Province and across Zambia. 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

Act No. 21 of 2011

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

The emphasis will be on Forest Landscape Restoration (FLR) as a process for regaining ecological functionality, increasing availability of resources and therefore enhancing values across deforested or degraded forest landscape of LNF. 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 reforestation with people's participation.

- **Replant** -To enhance forest cover, agroforestry species will be planted in actively cultivated fields. This approach is intended to increase tree cover, improve soil fertility, and provide fodder as well as small-scale biomass for household energy needs. Additionally, reforestation will be promoted by establishing plantations of indigenous or exotic tree species in abandoned fields, where feasible.

Efforts will be made to collaborate with partners and attract investment through sustainable financing mechanisms, including climate change mitigation initiatives and emissions reduction trading. These avenues will help mobilize resources, create incentives, and support sustainable land management in forested areas. A key aspect will be ensuring equitable benefit-sharing from the expected outcomes of the Jurisdictional Sustainable Landscape Programme, particularly in carbon trading. This will provide financial incentives and rewards for climate-resilient practices,

enabling local communities and other stakeholders to benefit directly from improved forest management and emission reduction efforts.

6.1 Zoning the forest for effective 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 the National Forest, local solutions and permitted activities. A further zone (3) covers the immediate area surrounding the National Forest to act as a buffer which will the focus of development as well as emissions reductions related activities.
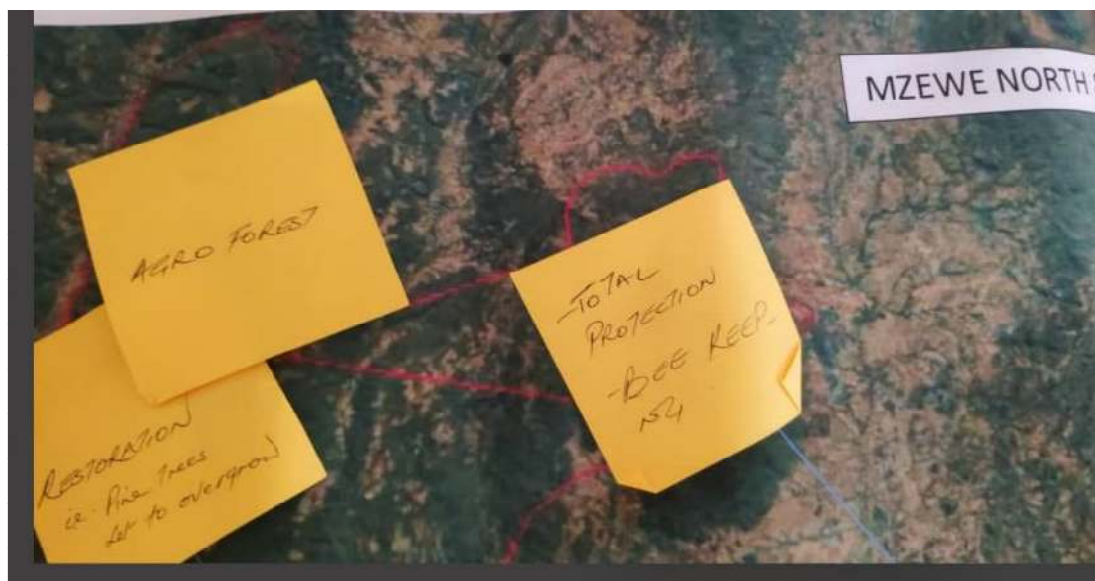
Figure 13: Zoning of the National Forest based on community consultation

Zone 1:   Forest Protection, Management and Conservation of Biodiversity

Mzewe North National Forest is an important forest ecosystem containing different plant species and fauna. Mzewe North NF 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 work plans 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 LNF 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 plantations where appropriate, as well as identifying ecological corridors and riparian strips to protect watercourses and waterways.

- *Sustaining ecological functions.* Restore and sustain 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 stakeholder's 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.

6.3 Core forest management actions

The identified management actions are described as follows:

Action 1: Forest Protection, Management & Conservation of Biodiversity

Mzewe North National Forest is an important forest ecosystem containing a number of 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 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 North 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 North National Forest through following the community forestry development steps and processes.

In order to achieve this the following activities will be undertaken;

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	For each Zone and area of shared management,		

No	Specific Objectives	Strategy	Actions	Responsible	Indicators
		management plans for areas of interest.	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		
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	Enhance understanding of	-Awareness on biodiversity	FD/NGOs	

No	Specific Objectives	Strategy	Actions	Responsible	Indicators
	the biodiversity of the forest reserve through environmental awareness and education.	the forest ecosystem and its function and benefits to community groups and schools.	with regard to indigenous knowledge. -Promote local participation and ownership through meetings.		
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 Mzewe North 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 Mzewe North 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 Mzewe North 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;
  - Mushroom collection and processing;
  - Community management of wild fish stocks through local harvesting rules;

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

Specific Objectives	Strategy	Actions	Responsible	Indicator
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 establishment 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. Establishment of agroforestry tree nursery species 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 establishment.	FD/ Adjacent communities	Number of people dependent on the forests reserve reduced by half at mid term review

Specific Objectives	Strategy	Actions	Responsible	Indicator
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.

6.4 Promoting Forest Based Enterprises

Based on the current condition of the forest including its plant species composition as well as insights from the socio-economic assessment and stakeholder consultations, some enterprise opportunities have been identified and outlined earlier. Accordingly, through the proposed management actions and where appropriate within designated zones, forest-based enterprises will be promoted in alignment with the purpose of Local Forests as defined in the Forests Act of 2015. This purpose emphasizes the sustainable utilization of forest resources at the local level to address the social, cultural, and economic needs of surrounding communities, while safeguarding vital ecosystems, particularly land and water sources of local strategic importance. These efforts underscore the core principles of sustainable forest management. In this context, the following enterprise initiatives are recommended for promotion through active involvement of local stakeholders:

Forest product/ enterprise	Beekeeping	Woodlot establishment
Market/ demand	High, local & urban (Chipata)	Local poles for construction
Product supply	Patches of flowering trees with suitable pollen fodder, water restricted to certain areas	Availability of a rich forest.
Potential entrepreneurs	Individual beekeepers	Individuals/farmers
Opportunities	Honey off-takers are available in the district as a ready market.	Creation of woodlots in abandoned fields (where regeneration is not feasible).
Challenges	Investment in beehives and all processing equipment and tools, Need for a honey bulking centre and water reticulation system investment. technical & business skills training	Initial capital to establish the woodlots.
Source of investment finance	Development projects & partners, Community Development Fund (CDF)	Development projects & partners, CDF

Table 8 Promoting potential forest based enterprises

The enterprise development process will be an integral part of community engagement and the strengthening of community forestry practices and partnerships within the reserve. This approach supports ongoing monitoring and mentoring, the formulation and review of annual work plans, and the periodic updating of Community Forest Management (CFM) plans. These activities will include tools such as a forest product importance, use and management matrix and targeted forest enterprise development actions. Once consensus is reached on an enterprise concept, a detailed assessment of market conditions and value chain dynamics will be conducted to transform the idea into a viable, bankable business opportunity. Crucially, support for business development and investment will focus on the following four key areas aimed at building capacity for sustainable and community-driven forest enterprises:

•	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.

With these foundations in place, detailed and bankable business and investment plans can be developed. These plans may then be supported through financing from

development programs, private sector partnerships, and Community Development Funds administered by the local authority

Outline Beekeeping Business Plan

Objective

To promote sustainable beekeeping activities that support forest conservation and enhance income for local communities.

Activities

- Establishment of beehives in designated zones.
- Training local community members in beekeeping techniques.
- Harvesting and selling honey and beeswax.
- Promoting environmental awareness about the importance of bees and forests.

Benefits

- Increased income for local communities.
- Improved pollination of nearby crops and forest plants.
- Preservation of forest biodiversity through eco-friendly practices.
- Community empowerment and poverty reduction.

Implementation plan

- **Community Engagement:** Conduct trainings and promote awareness.
- **Procurement:** Purchase beekeeping equipment and tools.
- **Setup:** Install hives in strategic, safe locations within the forest zones.
- **Management:** Regular monitoring, harvesting, and maintenance.
- **Market:** Develop local markets and cooperatives for selling honey and beeswax.

Expected Outcomes

- Sustainable income for participating households.
- Enhanced forest health through pollination.
- Increased awareness of forest conservation.

The budget to develop and promote such na enterprise is included in the cost tables in Annex VII.

6.5 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, that 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.

A 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, eg, honey collectors, charcoal burners, mice collectors, schoolchildren etc.

6.6 Law enforcement Strategy

This Law Enforcement Strategy aims to protect and sustainably manage Mzewe North National Forest, through effective enforcement of legal provisions, regulations, and community participation. Ensuring compliance is essential to prevent illegal activities such as illegal logging, 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, logging, 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.

6.7 Environmental and social safeguards and other crosscutting issues

The Forestry Department shall ensure that the management of Mzewe North 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:

- o Gender equity and empowerment including addressing issues of gender based violence. Women shall be integrated into all aspects of management of Mzewe North 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 Mzewe North 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.
- o Environmental and social screening processes. Specific activities as well as the annual work plan 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.
- o 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

Infrastructure Development

In order to achieve the forest management objectives for Mzewe North National Forest, maintenance of infrastructure is required. To date, the forest itself yields very little in terms of direct revenue, the maintenance of infrastructure is an ongoing problem for forest management, where funds are always scarce. Maintenance of the track road connecting Mzewe North National Forest to the main road is a major challenge. Previous investments planned in terms of establishing forest camps inside the National Forest should be revisited and an investment in good quality infrastructure (office, houses, water and reticulation system) is vital.

No	Specific Objectives	Strategy	Actions	Responsibility	Indicators
1	To maintain the infrastructure necessary to achieve the multiple objectives of forest management.	Maintain the existing infrastructure	1. Maintain the road network. 2. Construction of forest camp with staff housing units within the National Forest.	FD/ Maintenance/ Infrastructure	All infrastructure maintained to optimum standards

6.8 Sources of Revenue

Sources of revenue in **Mzewe North National Forest** typically is from the forest's resources, outlined below;

Licenses and Permits

- Issued by forest authorities (e.g., Forestry Department unless transferred under a CFM Agreement) for:
    - Timber / fuelwood harvesting
    - NTFP collection
    - Carbon projects (REDD+)
    - Eco-Tourism and Recreation
    - Visitor fees, concessions, or partnerships with private operators.
    - Others as provided by the Forests Act, 2015 or relevant regulations.

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 National Forest and based on the intact forest area of 84% may generate emissions reduction of over 4,600 tonnes of carbon equivalent which may be monetised to generate around $14,000 or ZMW 350,000 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.

Forestry Programme	Cost in ZMW for 10 years
1 Forest Conservation through Community Participation and Livelihood Development	2,943,039
2 Forest Protection, Restoration, Management and Conservation of Biodiversity	4,014,964
3. Support the development of viable forest-based enterprises.	589,061
Grand Total Costs (ZMW)	**7,547,064**
Potential revenue generation (10 years ZMW)	**5.666,919**
Funding cost ZMW	**1,880,146**

Table 9: Summary Cost of Forest Management Plan Implementation

Budget breakdown is provided in Annex VII

7   STAKEHOLDERS ROLES AND RESPONSIBILITIES

Effective implementation of the Mzewe North National Forest Management Plan requires active participation and collaboration among all key stakeholders. Each stakeholder has specific roles and responsibilities to promote sustainable forest management, conservation, and community development.

1. District Forest Office (DFO)

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 North 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.

2. Provincial Forest Office (PFO)

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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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 North National Forest which will operationalise the management actions described in Chapter 6.

i. 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 North 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.

ii. Evaluation

The Mzewe North 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.

iii.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.

iv. 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 10: strategic monitoring indicators

9 ANNEXES

Annex I: Declaration Order, Maps

SECTIONS 5 AND 6-THE NATIONAL FOREST NO. P143:

MZEWE (DECLARATION) ORDER

MZEWE NORTH FOREST NATIONAL NO. P143:

Government Notice

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

NATIONAL FOREST NO. P143: MZEWE NORTH Statutory Instruments 298 of 1966 158 of 1975 Starting at Mbozi Beacon, the boundary proceeds on a true bearing of approximately 286G degrees for approximately 14,569.94 metres to the Mwami River; thence up the left bank of this river to its confluence with the Wankomola River; thence in a straight line to the confluence of the Chazama and Msambaimfa rivers; thence up the left bank of the latter river to its source; thence in a straight line to a point approximately 457.2 metres north-west of the source of the Mtanga Stream; thence to this source; thence down the right bank of this stream to its confluence with the Mzewe River; thence down the right bank of this river to its confluence with the Chenje Stream; thence up the left bank of this stream to its easternmost source; thence on a true bearing of approximately 59 degrees for approximately 2,865.12 metres; thence in a straight line to the source of the Fwifi River; thence down the right bank of this river for approximately 5,394.96 metres; thence on a true bearing of approximately 228 degrees for approximately 365.76 metres; thence on a true bearing of approximately 166 degrees for approximately 4,724.4 metres; thence on a true bearing of approximately 230 degrees for approximately 4,206.24 metres to Mbozi Beacon, the point of starting. The area described above, in extent 7,885.58 hectares approximately, is shown bordered green upon Plan No. FR206, deposited in the office of the Surveyor-General, signed by him and dated 29th November, 1961.

MZEWE NORTH NATIONAL FOREST NO.P143 (7,885.58HA)

Legend:
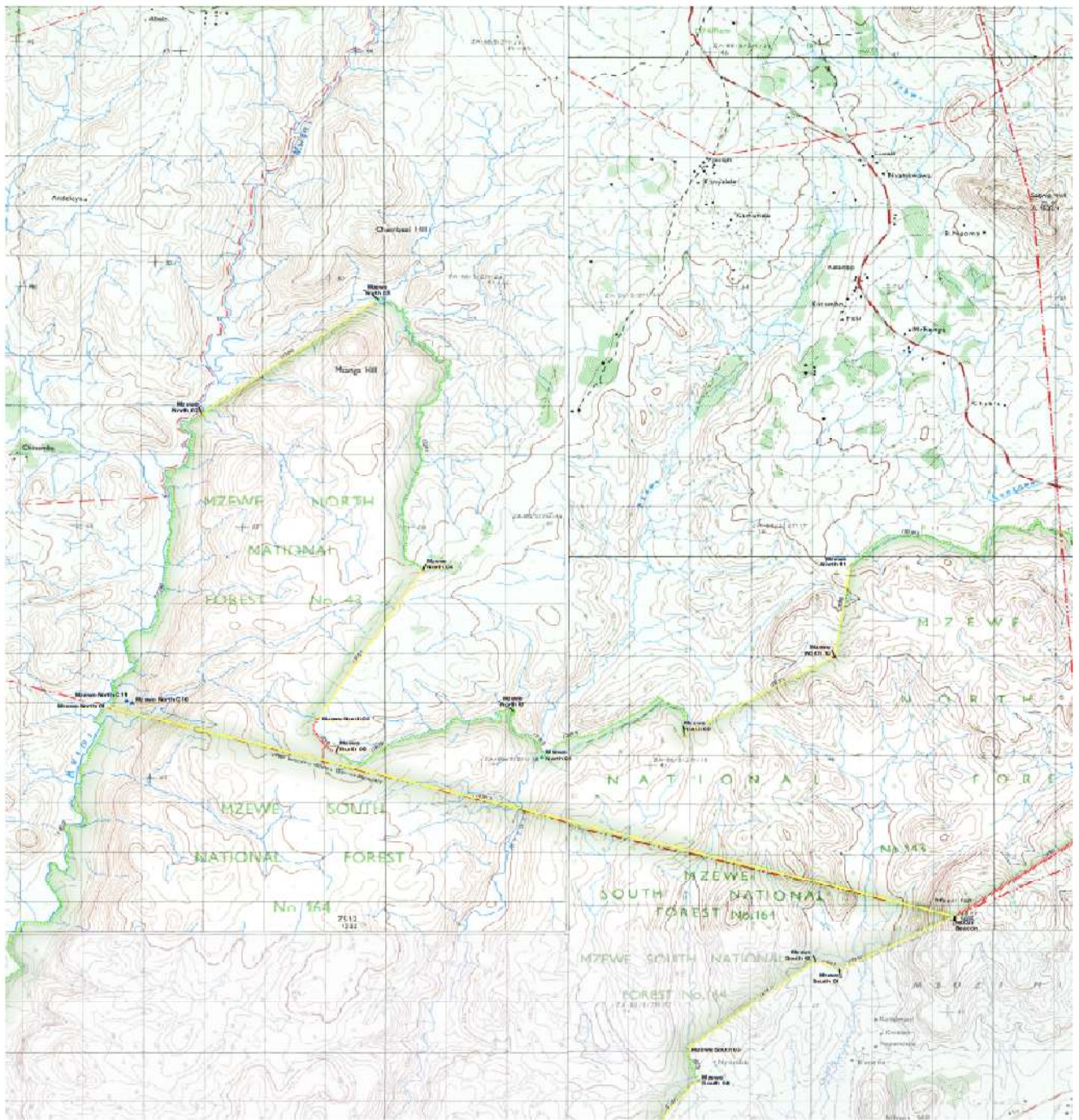
Beacon/Corner	High	Topo	**Cut Line**	**Digitized FSRP Boundary** — Med — COGO (Boundary
GPS	Med	Low	— Cut Line	High — Low

Projection: Arc 1950 UTM Zone 36S
Sources: Zambian Forestry Department Statutory Instruments, East View Cartographic, Inc (Topographic Maps),
On-site GPS, Shuttle Radar Topography Mission
Cartographer: Michael Keys, USDA Forest Service
Date Published: 30 March, 2018

0   2.5   5 Kilometers

CONFIDENCE	BEACON/POINT NAME	LATITUDE DD	LONGITUDE DD	UTM EASTING	UTM NORTHING
GPS	Mzewe North C11	-13.95926	32.68315	8456894	465776
GPS	Mzewe North C10	-13.95963	32.68380	8456853	465846
Med	Mzewe North 02	-13.90720	32.69462	8462653	467008
High	Mzewe North 03	-13.88633	32.72145	8464964	469903
Med	Mzewe North 04	-13.93556	32.72833	8459521	470654
Med	Mzewe North 06	-13.96861	32.71500	8455864	469218
High	Mzewe North 07	-13.96100	32.74202	8456710	472135
High	Mzewe North 08	-13.96945	32.74639	8455776	472608
Med	Mzewe North 09	-13.96548	32.76825	8456217	474969
Med	Mzewe North 11	-13.93472	32.79361	8459621	477705
Med	Mzewe North 12	-13.93172	32.83198	8459956	481850
Med	Mzewe North 13	-13.93397	32.82959	8459707	481592
Med	Mbozi Beacon	-13.99856	32.80952	8452562	479430
Med	Mzewe North 01	-13.96050	32.68050	8456756	465490
Low	Mzewe North 14	-13.97660	32.83892	8454993	482603
Med	Mzewe North 05	-13.96250	32.71222	8456540	468917
Low	Mzewe North 10	-13.95133	32.79119	8457784	477445

Map showing chiefdom boundary demarcations.
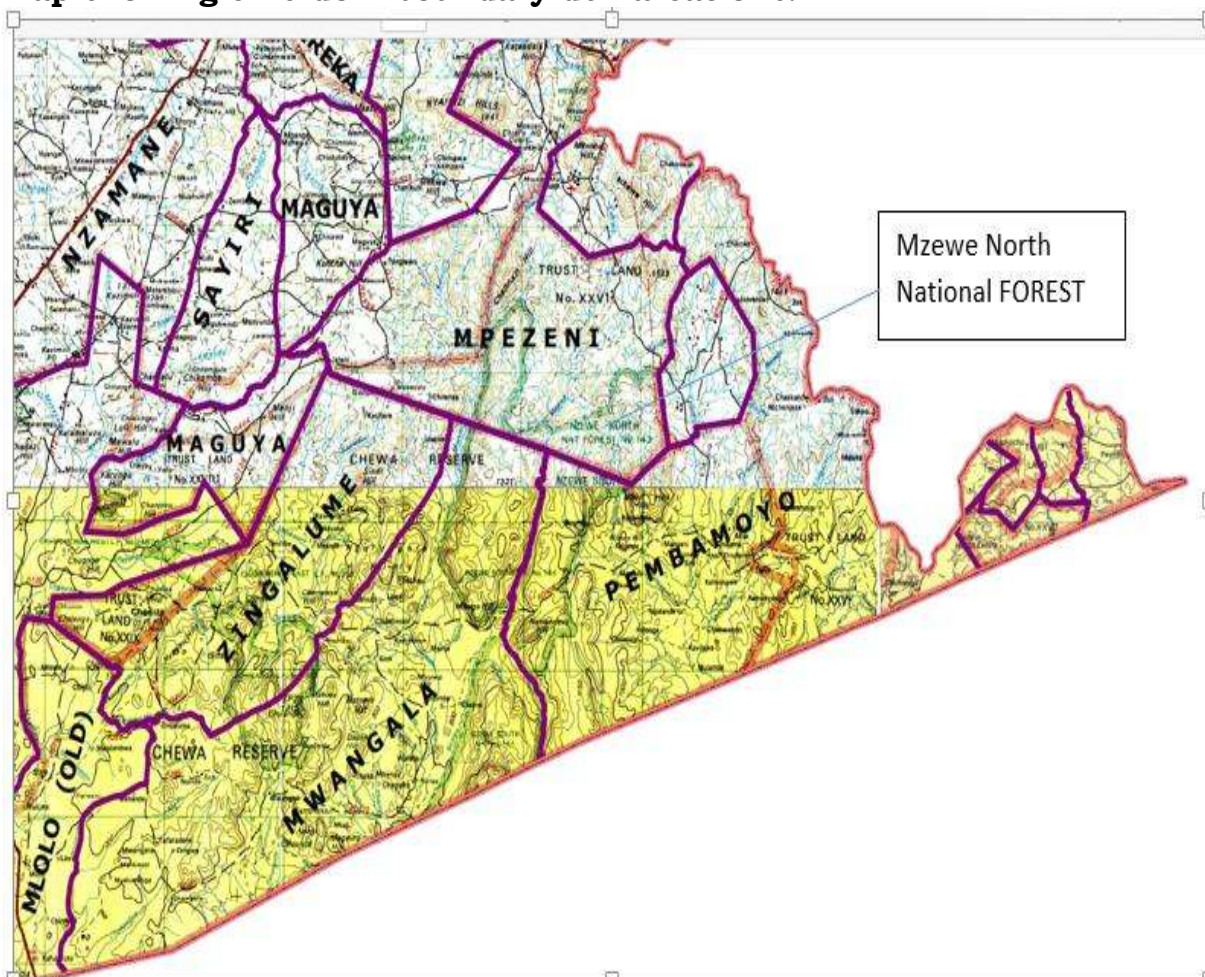
Chiefdom boundaries

48
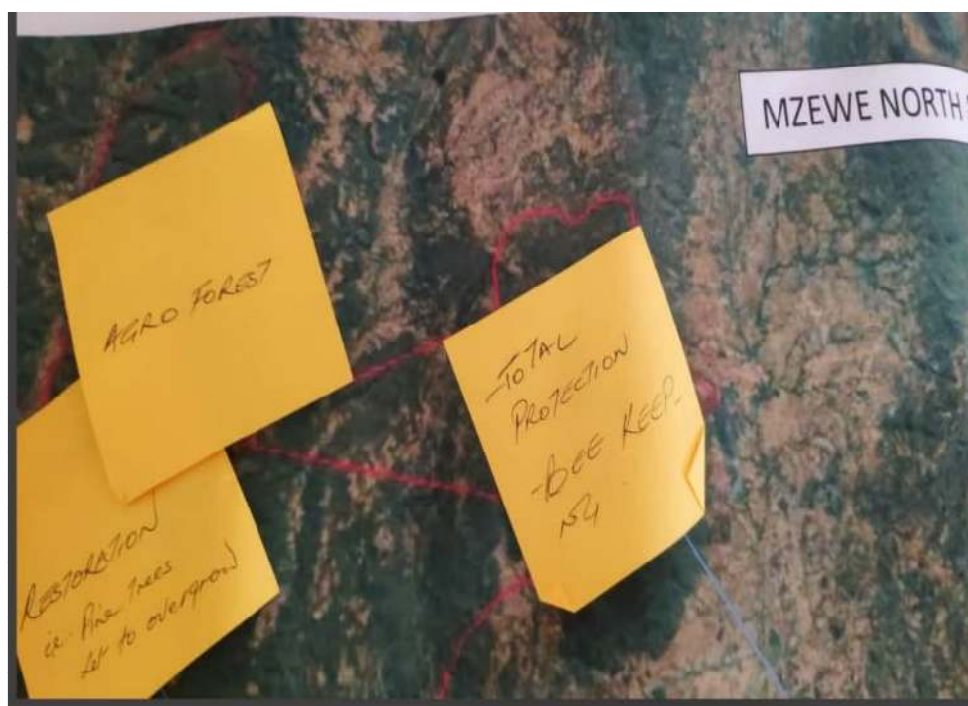
Map of zones from stakeholder consultation

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	0.673714
Ochna pulchra	223	12.27586
Parinari curatellifolia	233	20.35986
Parkia filicoidea	236	0.074857
Pericopsis angolensis	239	2.095857
Pseudolachnostylis maprouneifolia	258	10.77871
Pterocarpus angolensis	262	2.170714
Pterocarpus chrysothrix	264	0.823429
Pterocarpus rotundifolius	265	0.673714
Stereospermum kunthianum	287	2.021
Strychnos potatorum	291	1.347286
Strychnos spinosa	293	2.844429
Swartzia madagascariensis	295	1.422143
Syzigium cordatum	296	3.368429
Syzigium guineense	297	8.757714
Uapaca kirkiana	310	8.682857
Uapaca nitida	311	6.212714
Unknown	999	8.832571
Vitex doniana	321	2.021
Ximenia americana	328	1.571857
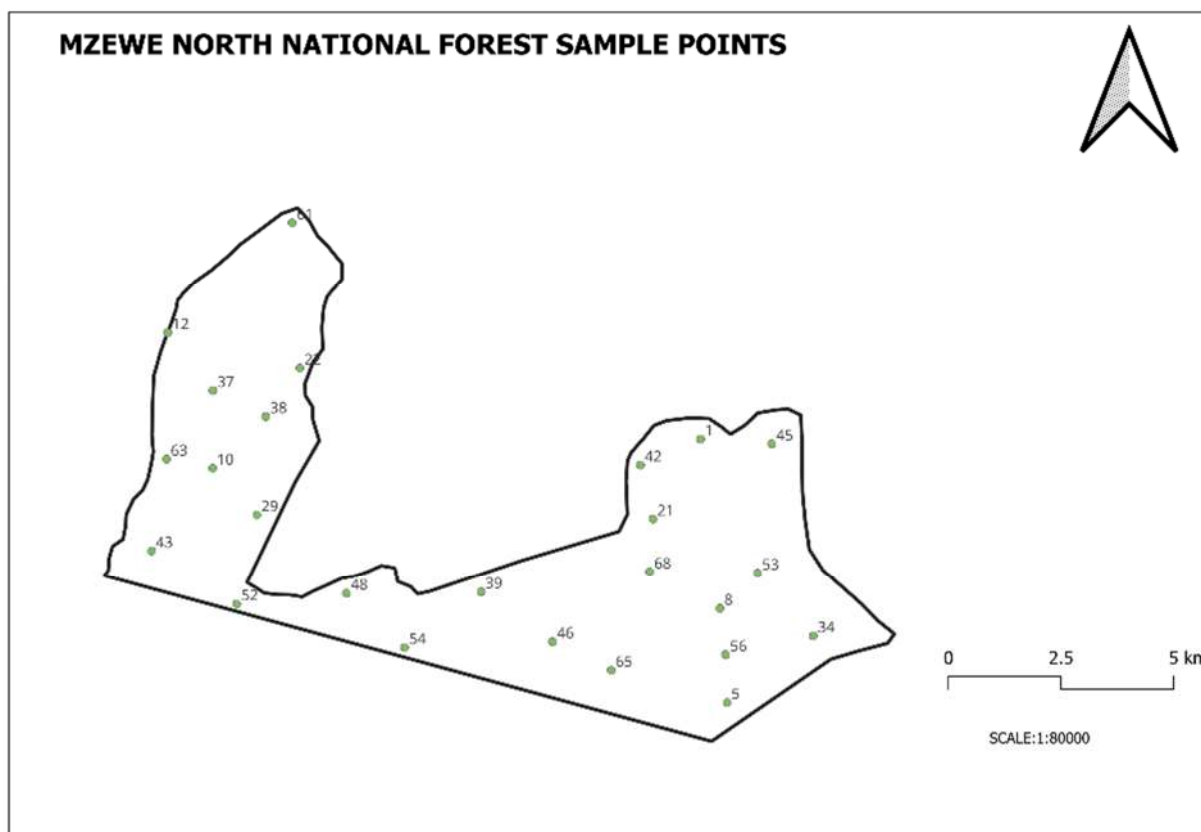
Figure 14 Location of Sample points

Annex III: Demographics of major forest fringe communities

Demographics of communities of the National Forest - 2021

Name of community	sex of household head			Population		
	female	male	Total	Male	Female	Total
Mutengeni bwino	0	1	1	6	6	12
Akupilila farm	2	3	5	10	13	23
Bondar	0	2	2	5	5	10
Chifunge clinic	0	2	2	3	1	4
Chifunge school	0	2	2	2	0	2
Chikandamatika	4	4	8	14	14	28
Chikondi farm	0	1	1	2	3	5
Enasakondwela	0	4	4	13	12	25
Ginger farm	1	3	4	10	9	19
John phiri farm	0	1	1	4	3	7
Joloma farm	0	1	1	2	3	5
Kamakuku	0	3	3	4	6	10
Kamphata farm	4	1	5	10	19	29
Khamalidyesa farm	2	1	3	3	7	10
Lukhelo farm	0	1	1	4	1	5
Masiku farm	1	0	1	2	2	4
Mkaka	0	1	1	3	3	6
Mlanga primary school	0	4	4	9	10	19
Mpanza	0	1	1	3	3	6
Mundawanga	0	2	2	6	4	10
Mushasho	0	3	3	4	4	8
Mutawila	0	2	2	5	5	10
Mwanawakosa	2	3	5	15	13	28
Ngoma farm	1	0	1	2	4	6
Njirayamanda	0	11	11	31	30	61

Nsingo jere	0	1	1	4	2	6
Paliyaba	1	3	4	8	5	13
Peter mbewe	0	1	1	2	4	6
PF	0	1	1	1	0	1
Phiri farm	0	1	1	2	4	6
Regina farm	1	2	3	5	6	11
Silvester farm	0	1	1	1	5	6
Simbaweka farm	1	2	3	9	9	18
Simbazako farm	0	2	2	3	4	7
Subset farm	0	2	2	5	8	13
Sungani farm	0	1	1	4	1	5
Tambala farm	0	3	3	4	2	6
Taonga farm	0	2	2	4	4	8
Tauzeni Farm	1	4	5	7	6	13
Tengolibetha	0	1	1	3	2	5
Tiyeseko farm	1	3	4	8	7	15
Tobias Tembo	0	1	1	2	4	6
Vanansio farm	2	2	4	17	9	26
Vengi farm	0	2	2	5	4	9
Zikavutha	1	1	2	5	6	11
Total	**25**	**93**	**118**	**271**	**272**	**543**

Table 11: Population Distribution of major forest fringe localities of the Reserve by sex

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 North 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 as three quarters of Mzewe North National Forest falls in his Chiefdom in Chipata district and a small part of it falls under Pembamoyo of Vubwi district and Chief Mwangala of 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 North National Forest reserve and the interventions that ZIFLP is helping, the importance of the Luangwa 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 MANAGEMENT PLAN STAKEHOLDERS' VALIDATION MEETING HELD AT ELSHADAI LODGE IN VUBWI DISTRICT - 15TH OF DECEMBER, 2023

Introduction:
The Forestry Department in 2021 undertook a forest inventory exercise to take stock of the forest resources in Mzewe NF Forest (LNF) 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 selected FPAs in Eastern Province. The Stakeholders Validation Meeting for Mzewe North National was organized to validate the FMP for the Mzewe North National Forest which was developed by the Forestry Department. The meeting brought together 34 participants: (5 females and 29 males) drawn from government departments, civic leaders, CSOs, private sector, community groups and traditional leaders.

Opening
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. The meeting was called to facilitate sustainable management of the MNNF which has no current forest management plan, hence the meeting was very important. In this regard the District Commissioner implored the stakeholders to constructively engage the team and contributing 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 manner.

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

Group Work

Group work on issues and threats affecting the Protected Forest Area (PFA) and identification of hot sports of concern.. 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 MNNF, 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. The following is a synopsis of the group work and write up from flipcharts and other materials:

GROUP ONE-1

1. Identify in Mzewe North National Forest uses and users of the forest

What-Uses of the forest	**Who -Uses the Forest**
-firewood and construction materials	-Surrounding community
-herbal medicine	-Neighboring communities
-source of food e.g. fruits	-Wild animals
- Relish	-Government
-it is also a source of income in terms of planks and charcoal	

Local issues and solutions and opportunities

ISSUES	**SOLUTIONS**
Clearing the forest	Sensitization /afforestation
Illegal cutting of trees	Afforestation
Forest degradation	Enforce the law
Late fires	Early burning

3. Zoning of forest - List permitted practices/prohibited in each zone identified.

Permitted practices	**Prohibited practices**
-Collection of mushrooms	-Illegal settlement
-Collection of caterpillars	-cultivation
-collection of dried wood	-cutting trees
-collection of herbs	-charcoal burning
	-burning

4. List suggestion /strategies to improve productivity/management of the forest

What should be the priority?
- Planting of trees
- Forest regeneration
- Sensitize the community on the importance of forests

Who should be involved?	**How do we work together?**
- Traditional Leaders	-visiting villages around
- Forestry department	-sensitization through posters
- Local Authority	-by having quarterly meetings with all
- NGOs	stakeholders
- Local communities	-sensitization through media such as
- Ministry of Agriculture	Radio
- Police	

GROUP WORK- 2

Identify in Mzewe North National forest

1.What -Uses the of forest?
-Construction material
-collection of wild food
-collection of firewood
-for prayers

Who- Uses of the Forest?
-Local community around and inside forests
-outside

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

3.Zoning of forest
List permitted practices/prohibited in each zone identified.

Permitted practices
Collection of mushrooms
-Collection of caterpillars
-collection of dried wood
-collection of herbs

Prohibited practices
-Illegal settlement
-cultivation
-cutting trees
-charcoal burning
-burning

4.list suggestion /strategies to improve productivity/management of the forest
W**hat should be the priority?**
-Planting of trees
-sensitisation of communities
-forest regeneration

Who should be involved?
-Traditional Leaders
-Local communities
-Forestry Department
-Ministry of Agriculture
-Local Authority
-NGOs

How do we work together?
- by having meetings with all stakeholders
-sensitization through posters and radio

Collaboration Declaration

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

"We the local stakeholders agree that MNNF is important for meeting the social, cultural and economic needs of the local community, local institutions and outsiders.

There is need to improve the productivity of the forest to enhance the environmental, social and cultural 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 community to collaborate over the protection, control, use and management of MNNF".
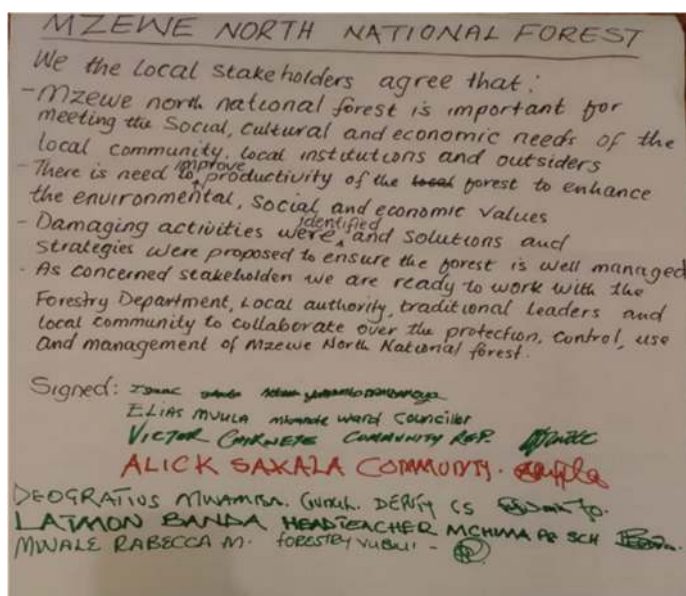
Next steps

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 MNLF with stakeholders' involvement
    - Subject to Project extension, check for opportunities for supporting enterprise development

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.

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- 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 for implementing core management actions

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

Action 1: Forest Protection, Management & Conservation of Biodiversity	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. Stakeholder engagement,	Community meetings	2	2	3,000	12,000		-	-	17,569	-	-	-	-	-	29,569
2.community awareness raising and mobilisation;	Community meetings	1	2	5,000	10,000	-	-	-	14,641	-	-	-	-	-	24,641
2. Stakeholder mapping including forest use, users and geographic interest.	Community meetings	2	1	6,000	12,000									-	12,000
1. To develop a shared management approach to forest protection, management and utilisation. 3. Forming community level institutions to coordinate, manage and control local resource use in partnership with the Forestry Department.	Community meetings	1	1	5,000	5,000										5,000
4. Developing forest product and issues based operational management plans for areas of interest.	Community meetings	2	2	4,500	18,000				26,354					42,443	86,797
5. Agreeing roles, rights, responsibilities and obligations for shared management.	Community meetings	1	1	5,000	5,000		-	-	-	-	-	-	-	-	5,000
6. Conduct training in control functions: Permits, rules, financial management, law enforcement	Community meetings	1	2	6,000	12,000				17,569						29,569
7. Conducting joint monitoring and evaluation of management and benefit sharing measures to ensure a sustainable partnership.	Community meetings	1	10	6,000	60,000	66,000	72,600	79,860	87,846	96,631	106,294	116,923	128,615	141,477	956,245
2. To protect the Forest from late fires Practice early burning within and outside the forest by involving local communities.	7885	1	10	3000	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738	478,123
3. To secure the boundary and define the the extent of the boundary and prevent possible encroachment 1. Carry out annual Boundary maintenance.	59.8KM	1	1	70,000	70,000	77,000	84,700	93,170	102,487	112,736	124,009	136,410	150,051	165,056	1,115,620
2. Beacon maintenance	No.	20	2	800	32,000				46,851					75,454	154,306
3. Erection of sign posts	No.	15	1	300	4,500										4,500
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.	School visits	4	3	300	3,600	13,200	14,520	15,972	17,569	19,326	21,259	23,385	25,723	28,295	182,849
To significantly reduce levels of illegal forest product harvesting & other damage. Engage honorary forest Officers/guards	coord meetings	1	10	2,000	20,000	22,000	24,200	26,620	29,282	32,210	35,431	38,974	42,872	47,159	318,748
Conduct patrols	No	1	48	800	38,400	42,240	46,464	51,110	56,221	61,844	68,028	74,831	82,314	90,545	611,997
SUB-TOTAL					332,500	253,440	278,784	306,662	460,313	371,062	408,168	448,984	493,883	661,169	4,014,964

Action 2: Forest Restoration through Community Participation & Livelihood Development

Objective	Activity	Unit of Measure	Quantity	Frequency	Unit revenue	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
1. Enter into partnership with clear roles and responsibilities with surrounding communities	Promote community forestry approach / restoration planning	Community meetings	3	3	3,000	27,000	-	29,700	-	-	-	32,670	-	-	-	89,370
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	3,000	27,000	29,700	32,670	35,937	39,531	43,484	47,832	52,615	57,877	63,665	430,310
3. To reduce carbon emissions from agric soils and dependency on inorganic fertilizer	Promote CSA through Agroforestry	CSA ha	25	1	650	16,250	17,875	19,663	21,629	23,792	26,171	28,788	31,667	34,833	38,317	258,983
4. To significantly reduce levels of tree cutting for wood energy.	Promotion of energy efficient Cook stoves	Training	1	2	5,000	10,000	-	-	-	14,641	-	-	-	-	-	24,641
	Roll out programme	stoves	200	2	100	40,000	44,000	48,400	53,240	58,564	64,420	70,862	77,949	85,744	94,318	637,497
5 Reduce forest dependency by local communities.	Sources for forest products/ woodlots/ plantations	woodlot establishment(Ha)	1	10	5,000	50,000	55,000	60,500	66,550	73,205	80,526	88,578	97,436	107,179	117,897	796,871
6. To contribute towards meeting social, cultural and economic needs and improving the livelihoods of forest-adjacent communities.	Forest enterprises promoted & supported	Enterprise groups formed & trained	4	1	2,750	11,000	12,100	13,310	14,641	16,105	17,716	19,487	21,436	23,579	25,937	175,312
		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 Government in Eastern province	Community meetings	3	1	3,000	9,000	-	9,900	-	10,890	-	11,979	-	13,177	-	54,946
8. To ensure cross cutting issues are mainstreamed in all aspects of forest management for social equity wellbeing and empowerment through sustainable development	1. Ensure that all environmental and social impacts, risks and liabilities are identified and mitigated.	Community meetings	3	1	5,000	15,000	-	16,500	-	18,150	-	19,965	-	21,962	-	91,577
	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				-	-	-	-	-	-	-	-	-	-	-
SUB-TOTAL						305,250	161,425	340,918	195,324	267,613	236,342	443,473	285,974	360,691	346,029	2,943,039

10. Support the development of viable forest based enterprises	Unit of Measure	Quantity	Frequency	Unit revenue	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
1. Beekeeping	Equipment	500	1	700	350,000										350,000
2. Wood biomass energy production	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
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
	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

Enterprise Sub total 589,061

Grand total costs for the period of the Plan (ZMW) 7,547,064

Revenue

		Unit of Measure	Quantity (Ha)	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
1 Carbon trading benefit share EP-JSLP- Forest land	Carbon t/ha/yr inc 10% per yr	Hectare	6702	0.7	75	351,855	387,041	425,745	468,319	515,151	566,666	623,333	685,666	754,232	829,656	5,607,663
2 Small woodlots	Carbon t/ha	Hectare	5	0.7	75	263	288.8	346.5	450.5	630.6	945.9	1,418.9	2,270.3	3,859.5	6,947.0	17,420
3 Agroforestry	Assume 1tC/ha inc to 2 t/ha yr 10	Hectare	20	0.7	75	1,050	1,155.0	1,270.5	1,397.6	1,537.3	1,691.0	1,860.1	2,046.2	2,250.8	2,475.8	16,734
4 Natural regeneration	Assume 1tC/ha inc to 2 t/ha yr 10	Hectare	30	0.7	75	1,575	1,732.5	1,905.8	2,096.3	2,306.0	2,536.6	2,790.2	3,069.2	3,376.2	3,713.8	25,101

Revenue sub total 5,666,919

Net cost (ZMW) 1,880,146

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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