Publication Draft

REPUBLIC OF ZAMBIA

MINISTRY OF GREEN ECONOMY AND ENVIRONMENT

CHISAMBALA LOCAL FOREST: P156

MANAGEMENT PLAN

2025-2035

APPROVAL PAGE

CHISAMBALA LOCAL FOREST NO. P156 FOREST MANAGEMENT PLAN

Notice of completion

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

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

Director of Forestry

Date:_____

Registration of the Forest Management Plan

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

Minister for Green Economy and Environment

Date:_____

FORESTRY DEPARTMENT

FOREWORD

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

Signature:

Director of Forestry

Date:

ACKNOWLEDGEMENTS

The development of this Forest Management Plan (FMP) was made possible through the generous support of the Zambia Integrated Forest Landscape Project (ZIFLP).The Forestry Department wishes to express its deep appreciation to Their Royal Highnesses, Headpersons, and the communities surrounding Chisambala Local Forest for their unwavering commitment to this initiative and, more importantly, to the sustainable management of the Local Forest.

In addition, the Forestry Department, Eastern Province also gratefully acknowledges the contributions of the participants in the consultation workshops, whose insights and feedback played a vital role in shaping the content and direction of this Management Plan.

The production of the Plan could not have been developed without the invaluable input from ZAMSTATS and the dedication of both current and former officers of the Forestry Department. Special thanks are extended to the forestry inventory, livelihood data collection, analysis, and reporting teams whose work provided the critical data required for evidence-based planning. The active participation of local communities was central to the success of both the livelihood and biodiversity surveys, as well as the participatory discussions that informed this Plan. The contributions of Traditional Leaders during awareness meetings leading up to the livelihood survey are also sincerely acknowledged.

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

EXECUTIVE SUMMARY

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

- Guides the approach to sustainable forest management;
- Facilitates meaningful partnerships with relevant stakeholders;
- Provides a clear framework to address the current and emerging challenges affecting the forest.

These in the case of Chisambala Local 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 an imperative so as to protect the remaining forest cover of Chisambala Local Forest from degradation in order for it 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 Local 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 Chisambala Local 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 Local 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 Chisambala Local Forest.

In view of the current condition of the forest, systematic sampling was used because of the reserve being homogenous. The inventory results indicate a total standing volume for all species in Chisambala Local forest estimated at (26.79m^3/ha), with a total bole volume estimated at 14.16m^3/ha). Total Biomass for trees ≥5cm DBH is estimated 39.19 tonnes per hectare with an above ground carbon estimate of 19.6t/ha. A basal area figure of 4.67m^2 per hectare is a low figure for the type of forest by over a third. This confirms the status of Chisambala Local Forest as a forest not achieving optimum growth potential.

Summary socio economic analysis

The livelihood survey conducted in 2021 indicated that Chisambala Local Forest is surrounded by approximately 15 villages with a total population of 1,786. 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 79 percent of all the households were willing if called upon to voluntarily support management of the forest reserve with Forestry Department. At the time of survey, there were serious encroachment in the reserve including schools and clinics within the forest.

Forest change & issues analysis

A consultation meeting of stakeholders for Chisambala Local Forest was held on 16th December, 2023, at Jemita Lodge. 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.

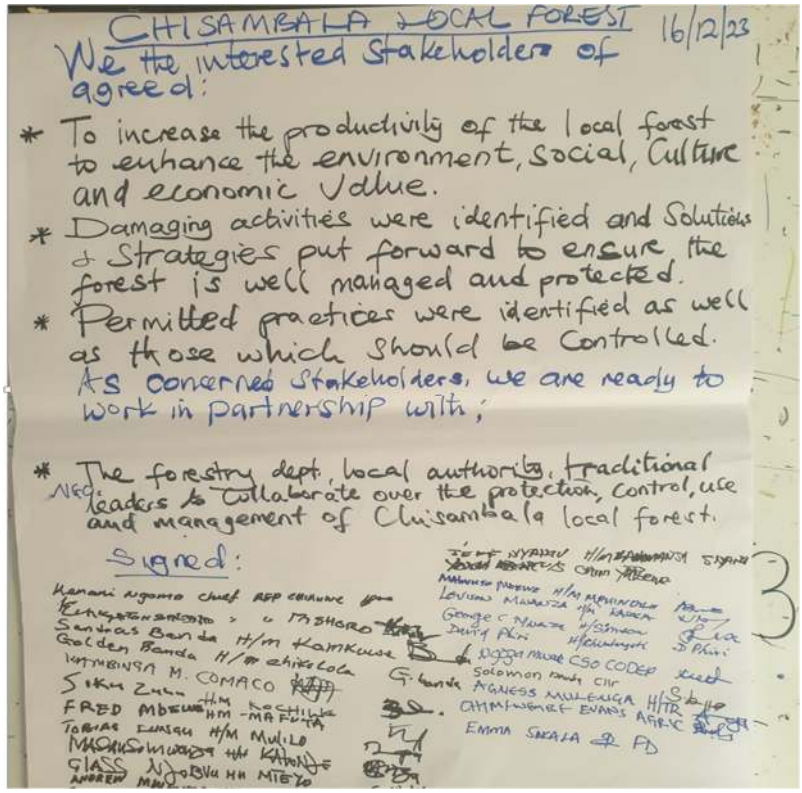
Stakeholders' observations and Concerns

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 cultivations and encroachments in CLF, 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 and cultivations.
- 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 was need to be re-introduce forest guards to police the CLF and need to stiffen laws.
- 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.
- The community forestry model should be promoted as it also promotes local ownership

Making a commitment to work together for change

As a statement of concern, but interest to work together with the Forestry Department, the Local Authority, Traditional leaders, and stakeholders agreed that there was need to collaborate over the protection, sustainable use and management of the protected forest area and a declaration of intent was signed pledging to collaborate in the sustainable management of Chisambala Local Forest.


CHISAMBALA LOCAL FOREST 16/12/23

We the interested Stakeholders of agreed:

* To increase the productivity of the local forest to enhance the environment, social, Culture and economic Value.
* Damaging activities were identified and Solutions & Strategies put forward to ensure the forest is well managed and protected.
* Permitted practices were identified as well as those which should be Controlled.

As concerned Stakeholders, we are ready to work in partnership with;

* The forestry dept, local authority, traditional leaders to collaborate over the protection, control, use and management of Chisambala local forest.

Signed:

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

Objectives and management actions

Based on the policy and legal framework and the consultation process conducted, the General Objectives for the management of Chisambala Local 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 Chisambala Local 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 Chisambala Local Forest reflect the statutory purpose of the Local Forest as set out in section 19 of the Forests Act of 2015. The actions are intended to address and reverse the degrading factors threatening the current existence of the Local 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 Chisambala Local 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 Chisambala Local 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 areas identified of the Local Forest as well as a development zones in the immediate surrounding area to promote greenhouse gas emission reduction interventions;

2 Forest Protection, Restoration, Management and Conservation of Biodiversity

Chisambala Local 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 Chisambala Local Forest and empowered through equal participation in decision making, governance and benefit sharing.

Contribution to Emissions Reduction in Eastern Province

Improved management of Chisambala Local 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 plantation forestry and locked in timber products.

Delivering sustained results

The expected outcomes of participatory management through local stakeholder involvement in the management of this and other protected forest areas will be to reduce emissions in the Eastern Province. Strengthening sustainable land and forest management practices, creating increased incomes and resilience of local communities, conforming to national strategies will reduce the effects of climate change. Implementing the proposed management actions should result in improved local livelihoods and local economic development, improved availability of major forest products whilst sustaining the key ecological functions of the Local 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
CLFMP	Chisambala Local Forest Management Plan
CFL	Chisambala Local Forest
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
MGEE	Ministry of Green Economy and Environment
MOE	Ministry of Energy
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

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CHISAMBALA LOCAL FOREST MANAGEMENT PLAN

1 INTRODUCTION

The Chisambala Local Forest Management Plan (CLFMP) 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.

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 Chisambala Local 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 Ministry of 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. In theory, this means ten years from the date that the plan is approved and registered in the Government Gazette. However, implementation of the plan will 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 Local Forest 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

Chisambala Local Forest No. P.156, approximately 526 hectares in extent forms part of the forest estate in Eastern Province. It is a protected area under Government Notice No. 263 of 1966. The local forest is located 500 metres from Chiparamba Sub Centre and 8km off Mambwe/Mfuwe road.

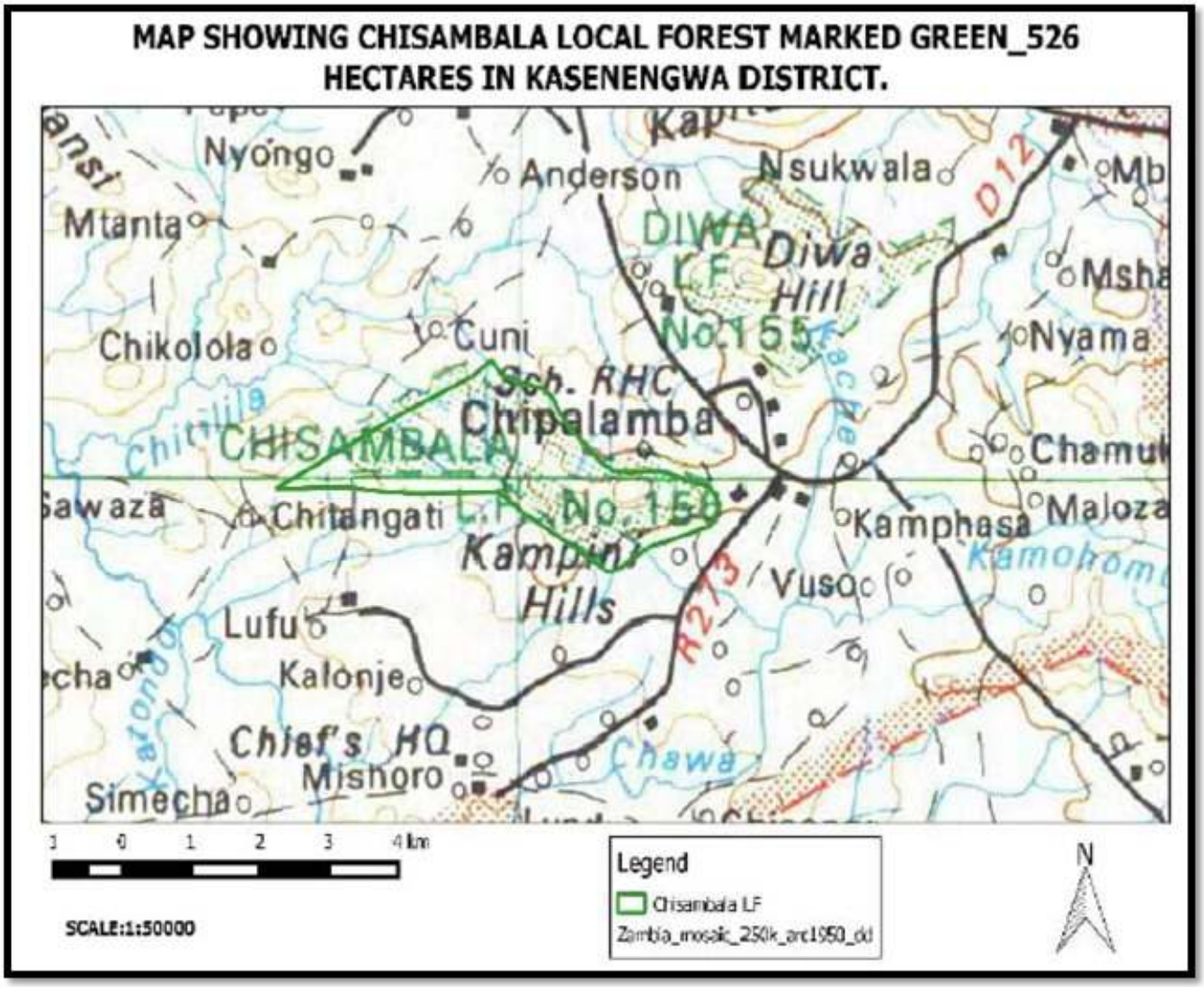

Figure 1 Map of Chisambala Local Forest

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

2.2 Ownership and control

Chisambala Local Forest No. P. 156, was originally declared a forest reserve and gazetted under Statutory Instrument No. 66 of 1975 and deposited in the office of the Surveyor-General on 26th February 1964. It is a protected forest area with the designation of "Local Forest" covered by section 17 of the Forests Act, 2015. The Forestry Department according to the Forest Act No.4 of 2015 is responsible for the protection and management of Chisambala Local Forest.

2.3 Reasons for reservation

The protected forest area formed part of the series of indigenous pole production for local demands for poles will be met. It was intended that the proposal be handed over, under section 10 of the Forests Ordinance to the Chewa (under Chief Chikuwe) and Ngoni (under Chief Mishoro) 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 and hilly land at an altitude of about 1210m above sea level. Geologically the area is located on Precambrian metamorphic rocks characterized by gneisis 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 Chisambala Local Forest, the soils are mainly red brown loams with quartz stones and gravel.

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.

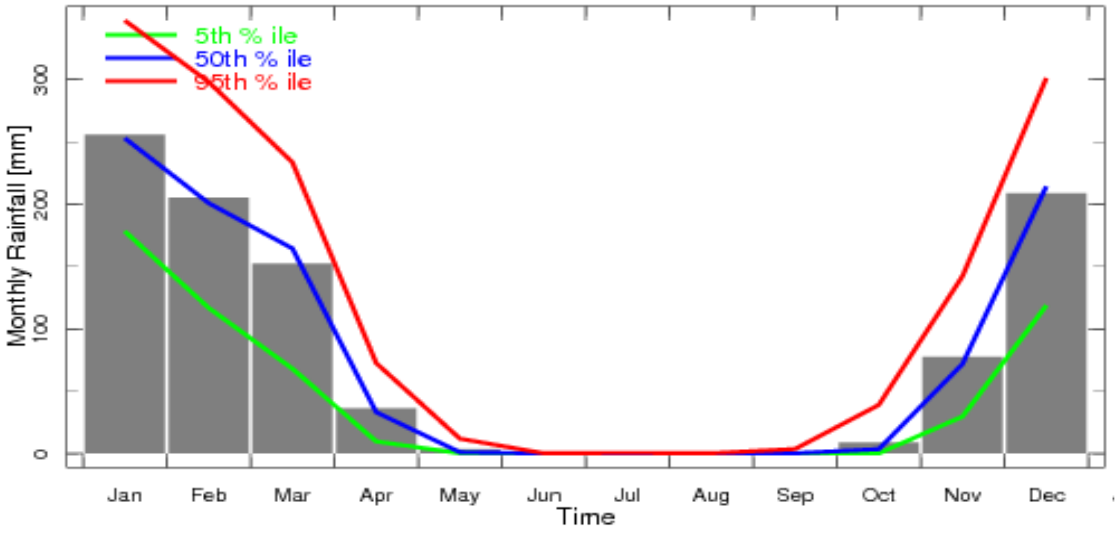

Figure 2 Monthly rainfall Eastern Province Source: The Zambia Meteorological Department-

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

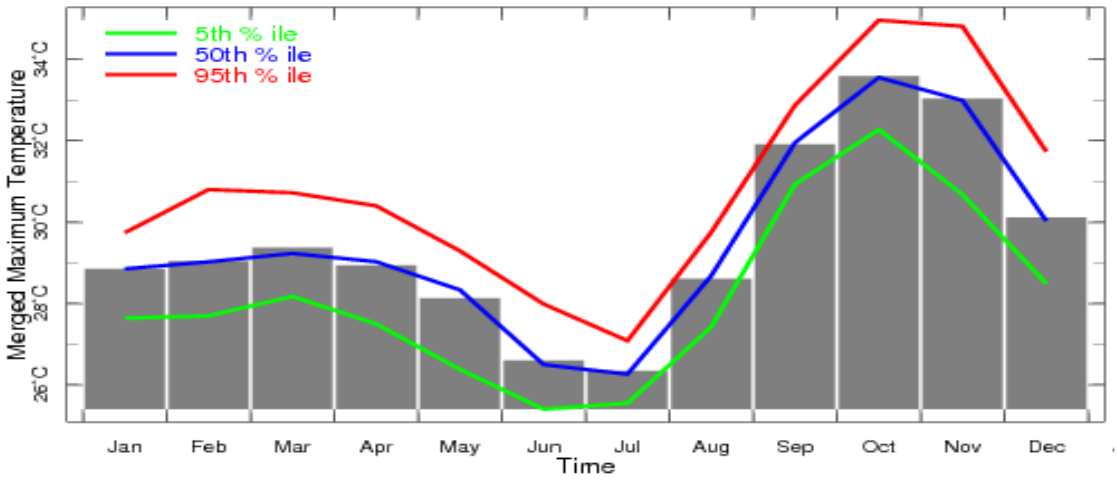

Figure 3 Monthly temperature Source: The Zambia Meteorological Department- Eastern Province

Vegetation Type

Chisambala Local Forest is a homogeneous forest. The vegetation type is Miombo woodland on the plateau and hill with a diverse tree flora including *Brachystegia bussei*, *Comberum molle*, *Parinari curatellifolia* and many other species with *Brachystegia spiciformis* being the dominant species. The Forest diversity (number of tree species, shrubs and herbs) and description of composition, structure and economic value based on availability of timber, medicinal, food plants) are described in Chapter 4 for Growing stock while the future utilization as related to development of area and benefits to communities is further described under proposed management actions.

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 Monkeys, Guinea fowls 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 Chisambala Local Forest was declared and gazetted in 1966. The management of the reserve has been guided by the objectives of reservation proposal as stated in the proposal at the time the forest was gazetted as a protected forest area under notice 263 of 1966 and subsequently under Statutory Instrument No.66 of 1975. The reservation aimed at indigenous pole production forests from which purely local demands for poles will be met.

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, Chisambalala Local Forest has over the years experienced illegal activities such as Encroachments, Agriculture fields, timber logging and charcoal production. Various initiatives have taken place to address this including meetings with Chiefs, stakeholder meetings, the reserve has been beaconed, boundary cleared/maintained and in 2015 a programme of issuing notices (eviction notices) to those illegally settled within the reserve was also done.

To support improved management and enforcement, the forest reserve boundaries were cleared and beacons maintained in 2021, with financial support from the Zambia Integrated Forest Landscape Project (ZIFLP). Sixteen (16) beacons were erected during the exercise. The project further supported the Department to conduct prescribed burning in 2021 and 2022, most recently in 2025. These efforts are part of a broader strategy to restore and sustainably manage the Local Forest.

Maintenance works

In 2021 ZIFLP supported the district officers to conduct boundary clearing and checking boundary beacons. In December 2021, sections of the forest boundary had been cleared. Boundary beacons were renewed where required. In 2022, signboards were erected to indicate the Local Forest and restrictions therein. Sporadic prescribed burning has been implemented, most recently in 2021, 2022 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 Chisambala Local 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 Chisambala Local Forest. The following table presents the summary information from the forest inventory:

Stratum total by all species

Diameter Class	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Vol (m^3)/ha	0	2.97	2.10	1.54	7.33	4.94	7.91	26.79
Bole Vol (m^3)/ha	0	1.56	0.94	0.80	4.07	2.81	3.96	14.16
Density/SPH	0	247.14	49.21	16.04	24.61	7.49	6.41	351.00
Basal area (m^2)/ha	0	0.93	0.53	0.37	1.14	0.67	1.03	4.67
Biomass, Total (Tons)/ha	0	4.39	3.00	2.14	10.61	7.19	11.86	39.19
Carbon, Total (Tons)/ha	0	2.20	1.50	1.07	5.30	3.60	5.93	19.60
Vol (m^3)/ha Sawlogs	0	0.00	0.00	0.00	0.00	1.10	0.00	1.10
Vol (m^3)/ha Poles	0	0.86	0.40	0.44	0.27	0.61	0.00	2.59
Vol (m^3)/ha Fruits	0	0.26	0.37	0.31	0.44	0.00	0.00	1.39
Vol (m^3)/ha Medicinal	0	1.17	0.80	0.31	0.64	0.00	0.94	3.89
Vol (m^3)/ha Firewood	0	0.14	0.07	0.36	0.00	0.00	0.00	0.59
Vol (m^3)/ha Others	0	0.49	0.40	0.00	0.91	0.00	0.00	1.81
Seedlings								1,476

Table 1 Stratum total for all species

4.1 Tree species abundance

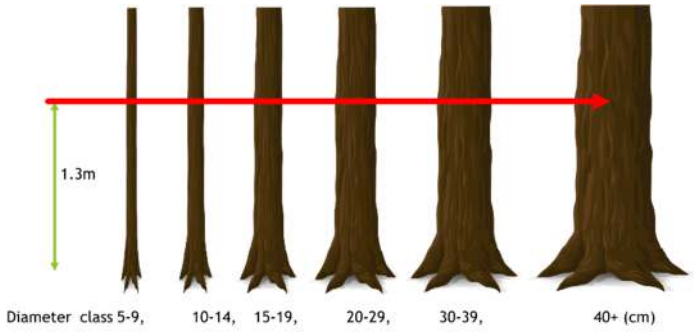
The inventory data indicates that there are over 35 different types' tree species that include tree seedlings in the forest. However, the ten most frequent species are shown below.

Species	Local Name(Nyanja)	Species Code
Brachystegia bussei	Mukongolo	47
Combetum molle	Kalama	86
Bauhinia petersiana	Mpondo	34
Brachystegia spiciformis	Puti	52
Diplorhynchus condylocarpon	Mtowa	114
Pseudolachnostylis maprouneifolia	Msolo	258
Dalbergia nitidula	Kasalusalu	102
Acacia polyacantha	Ngowe	6
Lannea stuhlmannii	Msambandola	199
Pterocarpus rotundifolius	Mukambo	265

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.



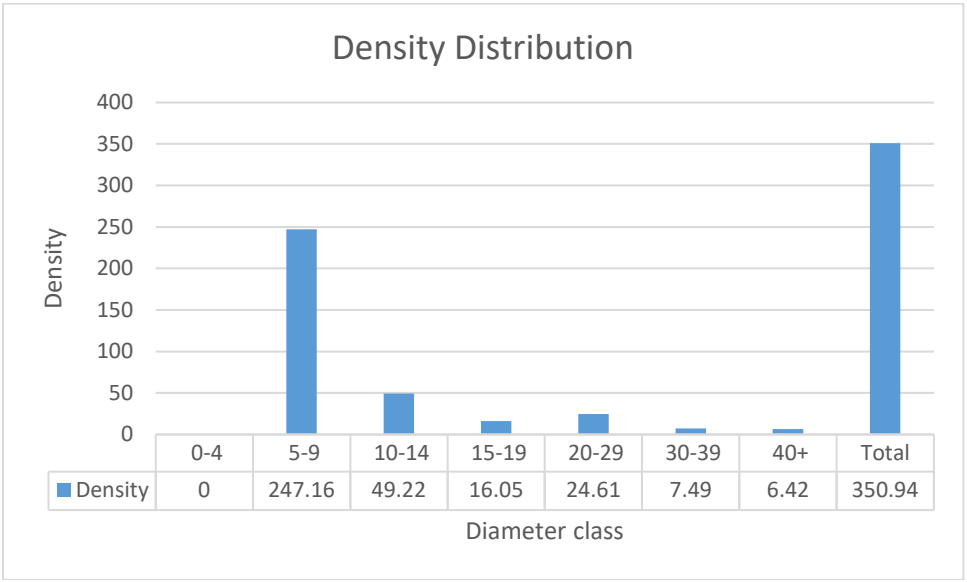


Figure 4 Density by diameter class/ha for all species

In Chisambala Local Forest, a stocking density for trees ≥ 5 cm DBH was estimated as 351 stems per hectare.

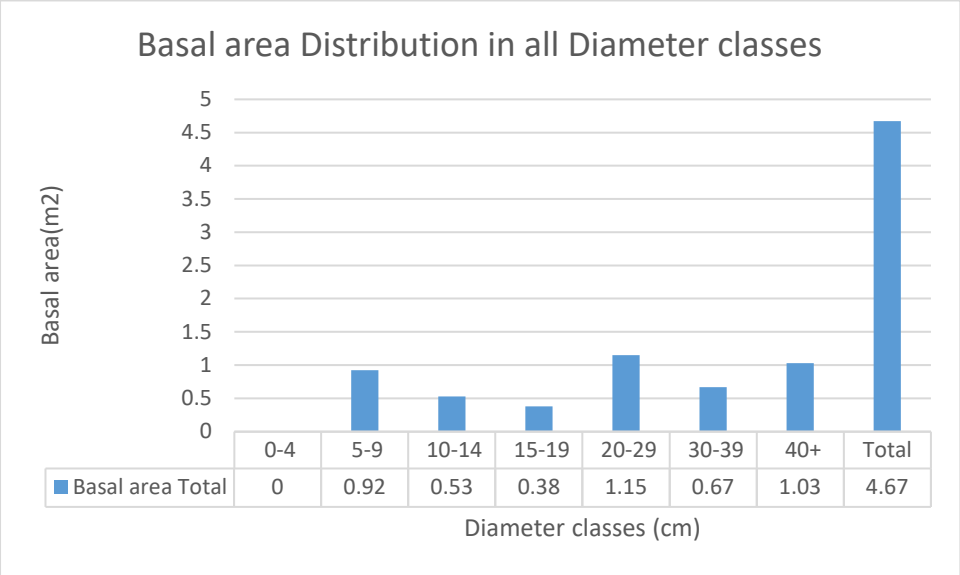


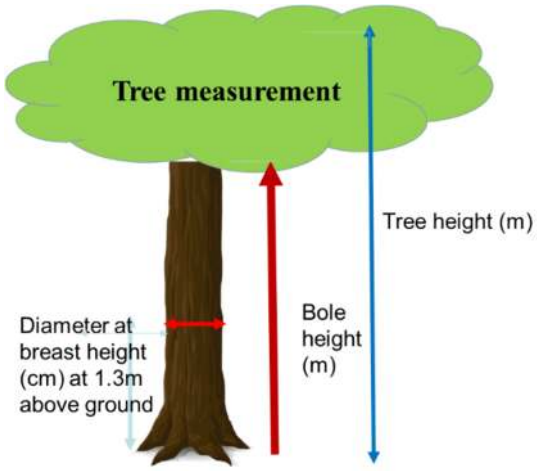
Figure 5 Basal area (m^2) by diameter class/ha for all species

The stocking by diameter class basal area per hectare is more in 20 –29cm class.. This indicates that the forest in terms of growth potential is in a relatively healthy condition allowing succession from one size class to the next higher one. The data also indicates this is a secondary forest. The species with the high density is *Brachystegia bussei* with 66 stems per hectares, this is followed by *Diplorhynchus condylocarpon, Bauhinia petersiana and Brachystegia spiciformis.*

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 metres, either in their size class categories or as a total per hectare. A figure of 4.67m^2 per hectare is a low figure for basal area in a similar type of forest type by over a third of its potential. This confirms the status of Chisambala Local Forest as a forest of concern following most likely current levels of moderate exploitations of large sized trees.

4.3 Total Volume, Biomass and Carbon estimate of all Species

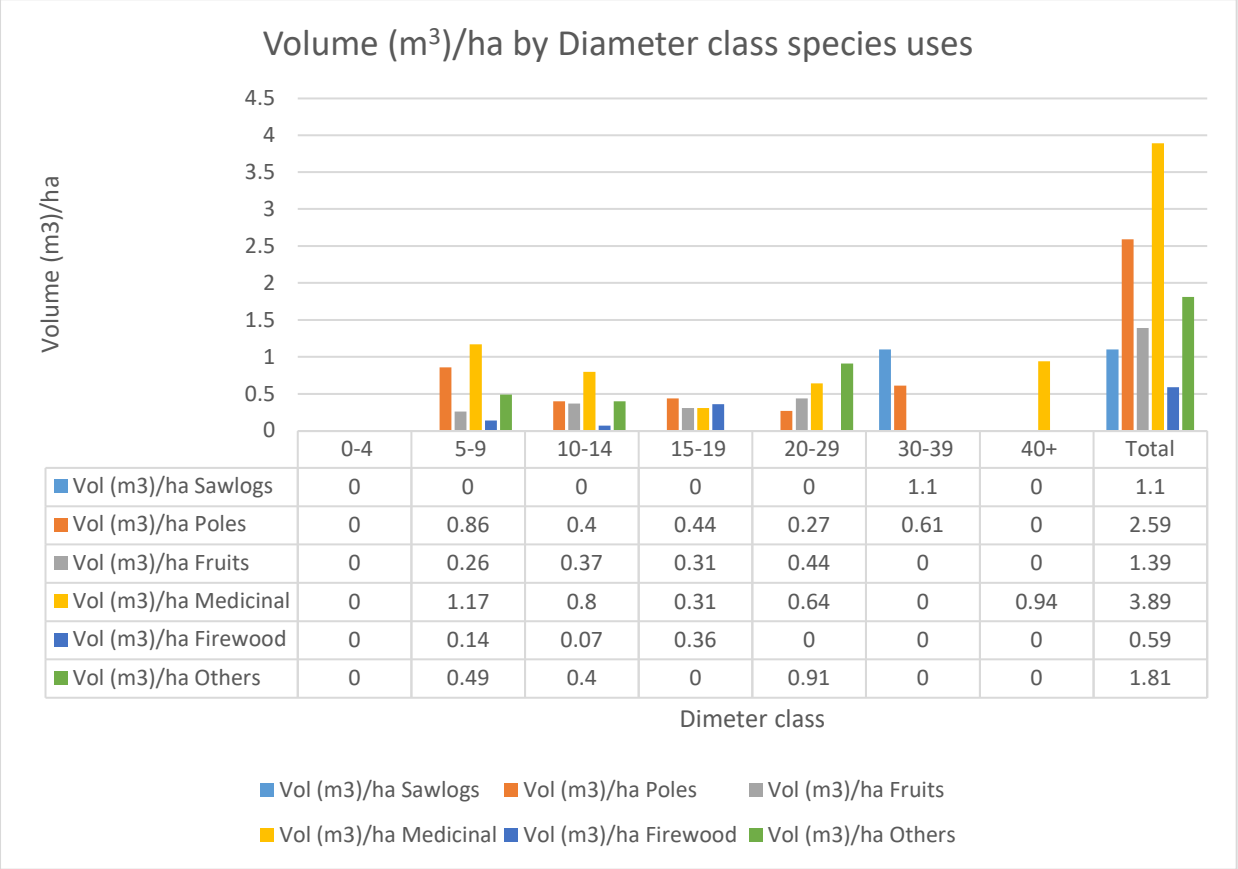
Calculating volume of the standing trees of DBH > 5cm is a further measure of the condition of the forest, site quality and previous management and exploitation. Tree volume to different heights is measured and calculated by individual trees and summed to give a total volume estimate per hectare. An 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 Chisambala Local Forest is estimated at 26.79m3/Ha., with a total bole volume estimated at 14.16m3/Ha. Total Biomass for trees ≥5cm DBH is estimated at 39.19 tonnes/ha and it has carbon estimated at 19.60 tonnes/ha.

Technical characteristics

The volume of other technical characteristics or use are computed per hectare as follow: Saw-log 1.10m^3, Pole 2.59m^3, Firewood/charcoal 0.59m^3, Fruit 1.39m^3 and others 1.81m^3. 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.

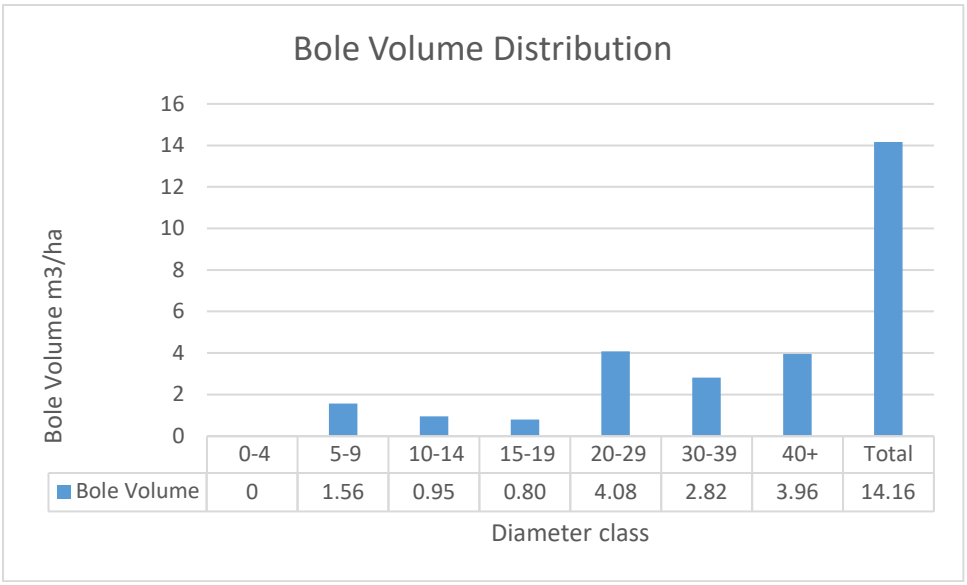


	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Vol (m3)/ha Sawlogs	0	0	0	0	0	1.1	0	1.1
Vol (m3)/ha Poles	0	0.86	0.4	0.44	0.27	0.61	0	2.59
Vol (m3)/ha Fruits	0	0.26	0.37	0.31	0.44	0	0	1.39
Vol (m3)/ha Medicinal	0	1.17	0.8	0.31	0.64	0	0.94	3.89
Vol (m3)/ha Firewood	0	0.14	0.07	0.36	0	0	0	0.59
Vol (m3)/ha Others	0	0.49	0.4	0	0.91	0	0	1.81

Figure 6 Volume (m^3) 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 14.16 cubic meters with higher in diameter class 05 – 29 and less from 30 and above. The outcome indicate that there is a lot of tree harvesting resulting in high coppicing and regeneration mainly agriculture activities.



	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Bole Volume	0	1.56	0.95	0.80	4.08	2.82	3.96	14.16

Figure 7 Bole volume (m^3) 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, , Colophospermum mopane, Swartzia madagascariensis, Pterocarpus chrysothrix* and the medium valued are *Brachystegia spiciformis* and *Julbenadia globiflora*, are not abundant in the forest. The harvestable volume is low. Therefore, Chisambala Local Forest in its current condition cannot sustain large scale logging operations or timber concession because the volume for sawlog is very low per hectare.

Volume of all species by use

No	Description	Volume(m^3/ha)	Explanation
1	Sawlogs	1.10	These are merchantable trees with the average diameter of 30cm dbh and above and are of exceptionally high valued suitable for timber production. This figure is low.
2	Poles	2.59	These are tree species with relative straight bole length with the average diameter at breast height of 5cm to 29cm
3	Fruits	1.39	The tree species include all fruit bearing either edible or not edible
4	Medicinal	3.89	All medicinal plants
5	Firewood	0.59	These include all dead and or diseased trees which can be used for firewood
6	Others	1.81	These include all tree species which are not classified in any of the above categories

Table 3 Trees in Chisambala Local 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 31.35 tons/ha and 15.68 tons /ha. Note, this figure is standing carbon and not the amount of carbon that may be traded under carbon trading schemes which are based on measured reduction of emissions.

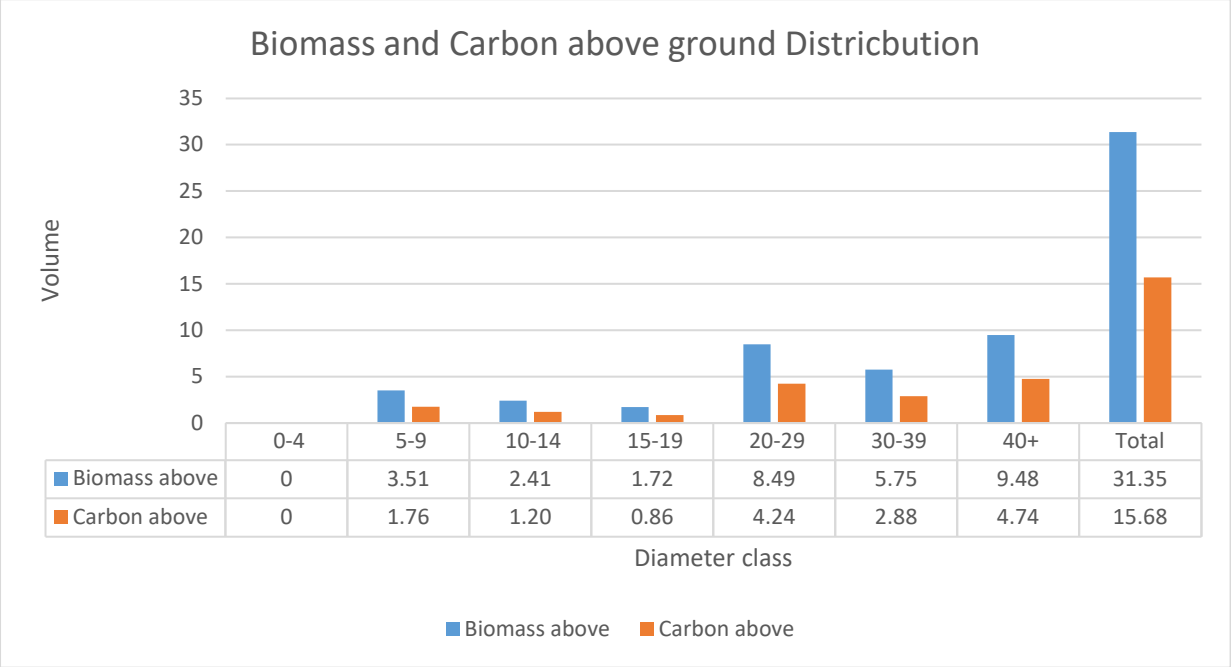


Figure 8: Biomass and Carbon above ground by diameter class/ha for all species

4.6 Forest condition and restoration assessment

In order to restore the ecological functions of the forest as well as the socio economic needs of the community, Forestry Department conducted forest restoration analysis with imagery. This indicated that approximately the following:

Landcover category	*Area (ha)*	*Percentage*
Forest	*481.9*	*74.2*
Cropland	*158.8*	*24.5*
Degraded (scrub)	*8*	*1.2*
Degraded forest (open)	*0.7*	*0.1*
Total	*649.4*	*100*

Table 4 Forest condition assessment 2025

The Chisambala Local Forest is under significant pressure, with a high risk of continued loss and degradation. The management strategy focuses on protecting existing forested areas and restoring degraded ones through active community involvement. This approach aims to enhance environmental, social, and economic outcomes. Land cover analysis helps in identifying suitable restoration strategies, which are detailed in the chapter on proposed management options.

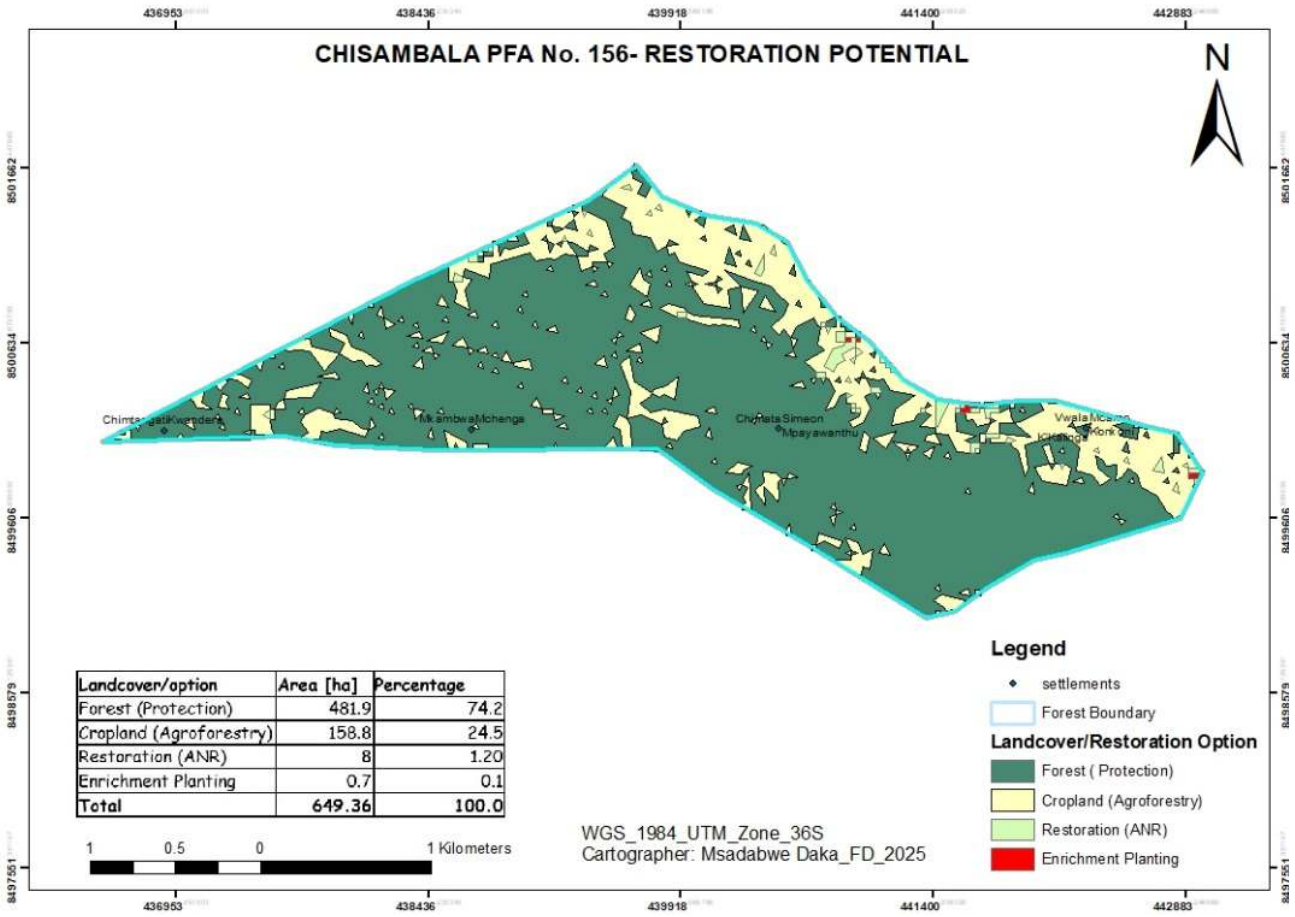


Figure 8 Forest condition and restoration potential assessment

Restoration map narration

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 Normalized Difference Vegetation Index was calculated for: Forest Land, Cropland, Grassland, Wetlands, Settlements, and Other Land. Since forest shapefiles were utilized, 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.

5 SOCIO-ECONOMIC CONDITIONS

5.1 Household and Population dynamics

Forestry livelihood survey was conducted by the Zambia Statistics Agency (ZAMSTATS) Eastern Regional office, between November 2021. The main objective of the Forestry livelihood Survey is to measure the well-being of the communities dependent on Chisambala Local Forest and to measure the utilization 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 Chisambala Local 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

Livelihood data analysis

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 done using statistical package SPSS version 24, which was done by Mully Phiri.

Chisambala Local Forest as at 2021 livelihood survey was surrounded by approximately 15 villages with a total population of 1,786. Some of these villages are in the forest such as, part of Chuni and Simioni villages. The main ethnic groups in the area are the Ngoni's and Chewa's. 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 Chisambala LF 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 Chisambala Local Forest was found to be mainly primary level that contributed 68.0 percent, the rest being No formal education and secondary education indicating 18.0 percent and 14.0 percent respectively. As shown in the table below:

Percentage distribution of education attained	Percent
Never attended School	18.0
Primary	68.0
Secondary	14.0
Total	100.0

Table 5 Education levels attained.

Economic activity

Chisambala Local reserve population depends on farming as their main occupation. The results showed that 85.0 percent of the household population surrounding Chisambala Local Forest had farming as their main occupation, while the rest of economic activities contributed 1.0 percent those in paid employment and 14.0 percent in small businesses.

Distribution of main economic activities	Percent
Business	14.0
Employment	1.0
Farming	85.0
Total	100.0

Table 6 Percentage distribution of main economic activity

The survey indicates that the majority depend of farming as main source of income as shown in the table above.

Types of energy used for cooking.

Almost all households in the localities surrounding Chisambala Local Forest use firewood as their energy for cooking. The livelihood survey revealed a percentage of about 99.0 percent using firewood as energy for cooking while 1.0 percent use charcoal as energy for cooking. It shows how threatened the forest is as every household depends on the forest for cooking energy.

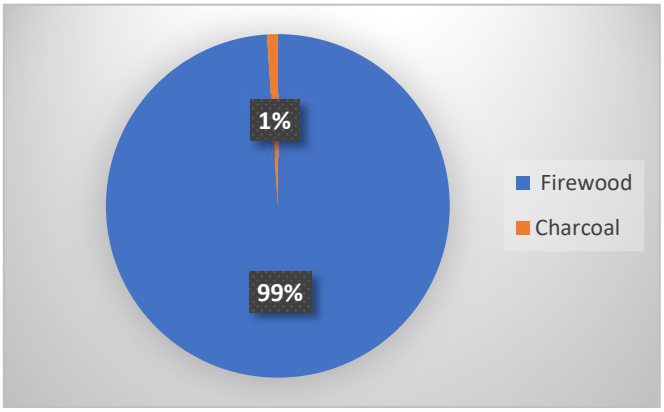


Figure 9 Energy sources for cooking

Main tree resources used for firewood.

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

Firewood species
Species
Brachystegia bussei
Combetum molle
Bauhinia petersiana
Brachystegia spiciformis
Diplorhynchus condylocarpon
Pseudolachnostylis maprouneifolia
Dalbergia nitidula
Acacia polyacantha
Lannea stuhlmannii
Pterocarpus rotundifolius

Table 7: shows the main tree resource used for firewood.

Non wood Forest products

The main Non wood forest products used by households surrounding the Chisambala LF are as shown in the table below.

Non wood Forest products
• Mushroom • Caterpillars • Fruits • Honey

Table 8: Non-Wood Forest Products used by households surrounding Chisambala Local Reserve

Willingness of community to participate in Forest Management

The livelihood survey revealed that 79 percent of all the households interviewed were willing if called upon to voluntarily support management of the Local Forest with the Forest Department and other stake holders in the community. This is a lower percentage than found around other Forest Reserves in the Province.

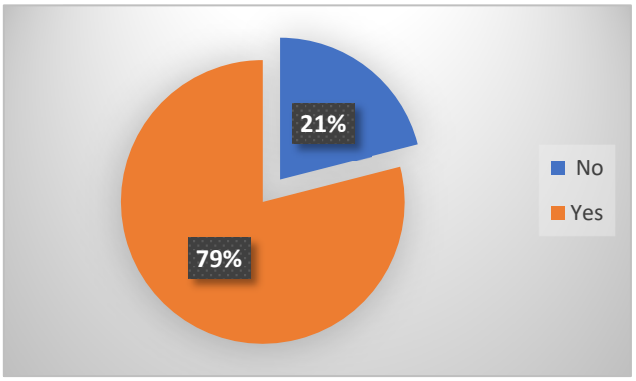


Figure 10 Willingness to participate when called upon to support FM

Land Occupation and Use

The livelihood survey for the communities surrounding the Chisambala Local Forest revealed that most of the land is occupied by tradition by households that showed 91 percent ownership compared to those who don't own traditionally at 9 percent. All land occupied by households is mainly used for agriculture purpose.

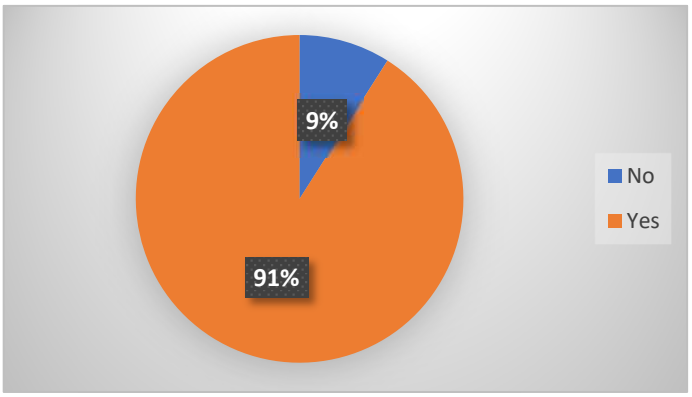


Figure 11 Occupation of land for the surrounding communities

Willingness to plant trees on land owned

The survey revealed the willingness to planting trees by the households occupying land. Those willing to plant trees on their land contributed 80 percent, while those not willing to plant trees had 20 percent contribution as shown in the figure below.

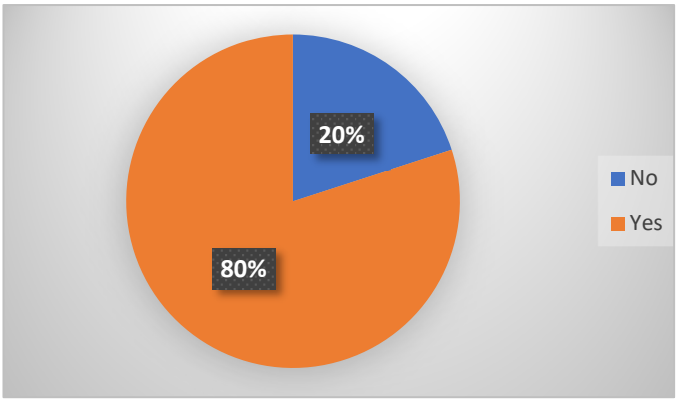


Figure 12 shows the willingness of surrounding communities to plant trees

5.2 Utilization, issues and solutions proposed by stakeholders

Chisambala consultative meeting held on 16th December 2023, the stakeholders identified the uses and users of the forest reserve.

The uses where identified:

1. Firewood
2. Charcoal
3. Fruits, Mushroom, Caterpillars
4. Medicine
5. Timber production.

The Users of the forest:

1. The community surrounding Chisambala LF
2. Animals (Domestic & Wildlife)
3. People outside Chisambala community.

ISSUES	SOLUTIONS
- Indiscriminate cutting down of trees	- Strengthen already existing by laws - Encourage the communities to do tree planting
- Charcoal Burning	- Sensitize the communities on the effects of cutting dawn of fresh trees
- Late burning	- Practicing early burning
- Loss of forest land to agriculture	- No expansion of farmland
- Illegal allocation of land by some tradition leaders	- Sensitization management among the leaders/coordination
- Overgrazing	- Promotion of rotational grazing
- Collection of Herbal medicines	- No uprooting of trees when collecting medicine.

Table 6: Issues and solution identified

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.

Chisambala Local 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 Settlements and Cropping

Chisambala Local Forest currently is in a dynamic state due to external pressure factors. However, the reasons for encroachment include high poverty levels vis-a-vis Low household incomes, illegal harvesting of forest products (both wood and non-wood) and land demand and clearing for agriculture and settlement expansion are evident. Over the years, various initiatives have taken place to address including meetings with Chiefs, stakeholder meetings and a programme of issuing notices to those illegally settled within the Reserve. In addition, a number of settlements with permanent structures are located within the gazetted forest area. 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 2020.

In 2018 a programme of issuing notices to those illegally settled within the Reserve was conducted following a nationwide instruction from the Minister of Lands and Natural Resources. In 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 Forest Act, the National Forestry Policy, and SI 11 of 2011 related to Community Forestry Management.

6 PROPOSED MANAGEMENT ACTIONS

In view of the current condition and rate of deforestation and forest degradation being experienced in this Local 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 Local 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 Local 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 Local Forest as described in section 19 of the Forests Act, 2015:

> **19.** Subject to the other provisions of this Act and any other written law, all land comprised in a Local Forest shall be used for the conservation and development of forests for— Purpose of Local Forest
>
> *(a)* the security of forest resources;
>
> *(b)* the protection of ecosystems, particularly the protection of land and water supplies of local strategic importance;
>
> *(c)* the utilisation of forest resources at the local level; and
>
> *(d)* meeting the social, cultural and economic needs of the local community.

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 Chisambala Local Forest. 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 re-afforestation with people's participation.
- **Replant** - increase forest cover through planting tree species in fields where cropping is taking place. This aims to increase tree cover, soil fertility, provide fodder and small biomass for energy needs. Further, re-afforestation through planting of indigenous or exotic species in abandoned fields in a plantation environment where practical.

Opportunities for collaboration with partners and seeking investment and sustainable financing through climate change mitigation / emissions reduction trading will be explored to provide the investment, incentive and reward for sustainable land management in the forest. Sharing benefits from the anticipated

Jurisdictional Sustainable Landscape Programme will be core to the process of incentivizing and rewarding good practices in mitigating the effects of climate change and providing the mechanism for monetary benefits to accrue to local communities and other service providers from carbon trading by Government.

6.1 Zoning the forest for effective 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 Chisambala Local Forest, local solutions and permitted activities. A buffer which is the immediate area surrounding the Local Forest will focus on developmental activities as well as emissions reductions related activities.

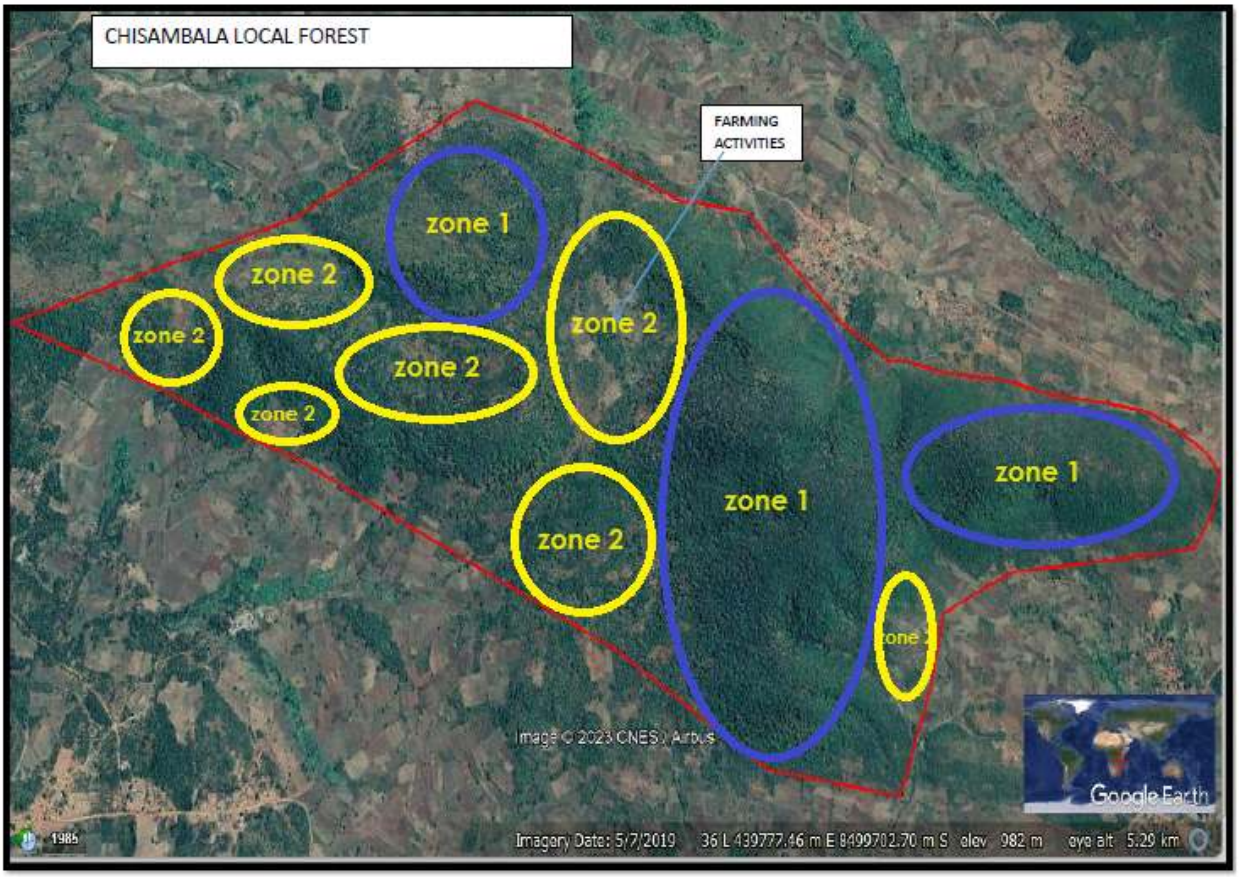


Figure 13 Zoning of Chisambala Local Forest based on community consultation

Zone 1: Forest Protection, Management and Conservation of Biodiversity

Chisambala Local Forest is an important forest ecosystem containing different plant species and fauna. The Local Forest reservation aimed at indigenous pole production forests from which purely local demands for poles will be met. 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 Local Forest. This will involve promoting forest restoration approaches 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 Local 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.

Zones 1 & 2: These zones will be managed in partnership with the local community following the community forestry approach as set out in the Forests (Community Forest Management) Regulations, 2018, and the National Guidelines for Community Forestry, 2018. This will be covered by a Community Forest Management Agreement, management plan and local resource use rules which set out both rights and obligations for control, protection and management of the identified forest area. Annual workplans will be developed by the community with technical guidance from the Forestry Department to ensure the sustainable management of these zones.

6.2 Forest landscape restoration guiding principles

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

- *Focus on the entire landscape*. Consideration and restoration across the entire landscape of CLF 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.
- *Restoring ecological functions.* Restore the ecological functionality of the landscape, such as its richness as a habitat, its ability to contain erosion and floods, and its resilience to climate change and various disturbances. This can be done in many ways, one of which is to restore the landscape "back" to

the "original" vegetation, but other strategies may also be used, ranging from natural regeneration to tree planting.

- *Allowing for multiple benefits.* Increasing tree cover across the landscape including existing cleared farmed areas, without necessarily forming a forest canopy, in order to enhance food production, reduce erosion, provide shade, and produce firewood. In other places, trees may be added to create a closed canopy forest capable of sequestering large amounts of carbon, protecting downstream water supplies, and providing rich wildlife habitat.
- *Promoting stakeholders involvement.* Actively engaging local stakeholders in decisions regarding restoration goals, implementation methods, and trade-offs for sustainable land management practices which provides incentives and performance benefits.
- *Adaptively managing* the restoration strategy over time as environmental, social and economic conditions evolve supported through continuous monitoring and learning through the restoration process.

6.3 Core forest management actions

The identified management actions are described as follows:

Action 1: Forest Protection, Management & Conservation of Biodiversity

Chisambala Local 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 Chisambala Local 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 Chisambala Local Forest through following the community forestry development steps and processes. This management action will be operationalized and results measured as follows:

No	Specific Objectives	Strategy	Actions	Responsible	Indicators
1	To develop a shared management approach to forest protection, management and utilisation.	1. Stakeholder engagement, community awareness raising and mobilisation;	Conduct awareness meetings with traditional leadership & communities	FD	Meetings conducted
		2 Stakeholder mapping including forest use, users and geographic interest.	Conduct meetings to determine effective span of management control across CLF	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 CLF	Community groups & FD	

No	Specific Objectives	Strategy	Actions	Responsible	Indicators
		4. Developing forest product and issues based operational management plans for areas of interest.	For each Zone and area of shared management, development management plans and resource use rules		
		5. Agreeing roles, rights, responsibilities and obligations for shared management.			Signed CFM agreements. Annual work plan reports
		6. Conducting joint monitoring and evaluation of management and benefit sharing measures to ensure a sustainable partnership.	See monitoring section of CLFMP		
2	To protect the Forest from late fires	Practice early burning within and outside the forest by involving local communities.	-Conduct prescribed and early burning. -Training the local communities on fire management techniques -Sensitizing the local community on the importance of early burning.	FD/ Adjacent communities	Area in hectares of controlled burning
3	To secure the boundary and define the extent of the boundary and prevent possible encroachment	Involve forest adjacent communities in Forest protection and management.	-Carry out annual Boundary maintenance. -Beacon maintenance - Erection of sign post on roads entering the Forest	FD/ Community	Distance in km of forest perimeter cleared
4	To conserve and enhance the biodiversity of the forest reserve through environmental awareness and education.	Enhance understanding of the forest ecosystem and its function and benefits to community groups and schools.	-Awareness on biodiversity with regard to indigenous knowledge. -Promote local participation and ownership through meetings.	FD/NGOs	
5	To ensure protection against pests and human damage	Frequent monitoring of forest resources	Inspections for diseases and pests and detection of possible illegalities.	FD/ Community	Hectarage of forest protected from pests and human damage

No	Specific Objectives	Strategy	Actions	Responsible	Indicators
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 Chisambala Local 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 Chisambala Local Forest. Within this management action, the following interventions will be undertaken in Zone 2 of the Local Forest as well as extension services and activities in buffer, the areas surrounding Chisambala Local 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 re-afforestation with people's participation.

- **Replant** - increase forest cover through planting tree species in fields where cropping is taking place. This aims to increase tree cover, soil fertility, provide fodder and small biomass for energy needs. Further, re-afforestation through planting of indigenous or exotic species in abandoned fields in a plantation environment where practical.

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

Specific Objectives	Strategy	Actions	Responsible	Indicator
1. Enter into partnership with clear roles and responsibilities with surrounding communities	Promote community forestry approach	Conduct CFM Steps 1-7	FD	Signed CFM agreement. Annual work plan reports from the CFMG
2. To protect, restore and replant forest cover in the fragmented forest areas of the National Forest	To Provide Forest extension services.	Training the communities in assisted natural regeneration Promotion of agroforestry and Woodlot 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.	FD/ Agric/ CSO's/ community	Tonnage of GHG emissions in the forest reserve reduced by 20% 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	Involve local communities in woodlot establishment.	FD/ Adjacent communities	Number of people dependent on the forests reserve

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

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	Plantation establishment
Market/ demand	High, local & urban (Chipata)	Local poles & timber for construction
Product supply	Patches of flowering trees with suitable pollen fodder, water restricted to certain areas	Not currently available due to lack of established plantations
Potential entrepreneurs	Individual beekeepers	Individuals
Opportunities	Need for a honey bulking center and water reticulation system investment.	Creation of plantation crops in abandoned fields (where regeneration is not feasible). Practice Taungya system in cropped areas. (example available in Masupe Local Forest)
Challenges	Investment in beehives and all processing equipment and tools, technical & business skills training	Seedling availability, long term nature to revenue generation
Source of investment finance	Development projects & partners, Community Development Fund (CDF)	Development projects & partners, CDF

Table 7: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

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 dry land 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. Recognizing 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.
- **Firefighting 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.

6.6 Law Enforcement Strategy

This Law Enforcement Strategy aims to protect and sustainably manage Chisambala Local Forest; 156, 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 Zambia Police, Department of National Parks and Wildlife, Community Forest Management groups (CFMGs), NGOs, and traditional leaders.
- Promoting joint Forest patrols and awareness campaigns.

6.7 Environmental and Social Safeguards and other Crosscutting issues

The Forestry Department will ensure that the management of Chisambala Local Forest aligns with the Environmental and Social Standards (ESSs), adhering to relevant national policies as well as applicable international agreements both multilateral and bilateral. Management actions will be guided by existing frameworks such as the National Strategy to Reduce Deforestation and Forest Degradation (2016), and by any new requirements that may emerge under the Eastern Province Jurisdictional Sustainable Landscapes Programme. These safeguards, along with other cross-cutting issues, will be integrated across all

aspects of forest management. Given the participatory approaches employed in the development of this Forest Management Plan (FMP), and the planned follow-up actions to promote community forestry, the FMP is expected to positively impact local livelihoods and support the development of more sustainable or alternative livelihood options where necessary.

In brief, safeguards will ensure:

- Gender equity and empowerment including addressing issues of gender based violence. Women shall be integrated into all aspects of management of Chisambala Local 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 Chisambala Local Forest. This aspect should be in line with the National Gender Policy and Climate Change Gender Action Plan. Further safeguards in relation to emissions reductions benefit sharing plan for Eastern Province should be adhered to.
- Environmental and social screening processes. Specific activities as well as the annual 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.

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

6.8 Infrastructure Development

In order to achieve the forest management objectives for Chisambala Local 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 Chisambala Local Forest to the main road is a major challenge.

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.	FD/Maintenance/ Infrastructure	All infrastructure maintained to optimum standards

6.9 Sources of revenue

Climate Change Emissions Reduction Trading

The Government of the Republic of Zambia has identified climate financing as a potential source of revenue to support climate change mitigation and adaptation activities to safeguard the natural environment and importantly the ecosystem services that society as a whole and specifically rural communities depend on for their livelihoods and well-being. 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, and 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.

6.10 Summary Budget of Forest Management Plan Implementation

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

Forestry Programme	**Cost in ZMW for 10 years**
1 Forest Conservation through Community Participation and Livelihood Development	1,540, 935
2 Forest Protection, Restoration, Management and Conservation of Biodiversity	3,929.012
Grand Total (ZMW)	**5,469,947**
Potential revenue generation (10 years)	1,162,699
Funding gap (ZMW)	**4,307,248**

7 STAKEHOLDERS ROLES AND RESPONSIBILITIES

Effective implementation of the Chisambala Local Forest Management Plan (CFMP) 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.

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 Chisambala Local 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.

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.
-

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.

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.

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.

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 & assisting in investigations related to illegal activities.
- Collaborating with Forest Officials to ensure harmonized enforcement efforts.

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 Chisambala Local Forest which will operationalize the management actions described in Chapter 6.

8.1 Monitoring

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

8.2 Evaluation

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

8.3 Monitoring Responsibilities

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

8.4 Strategic monitoring indicators

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

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

Table 8 strategic monitoring indicators

9 ANNEXES

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

CHISAMBALA LOCAL FOREST (DECLARATION) ORDER

Order by the Minister

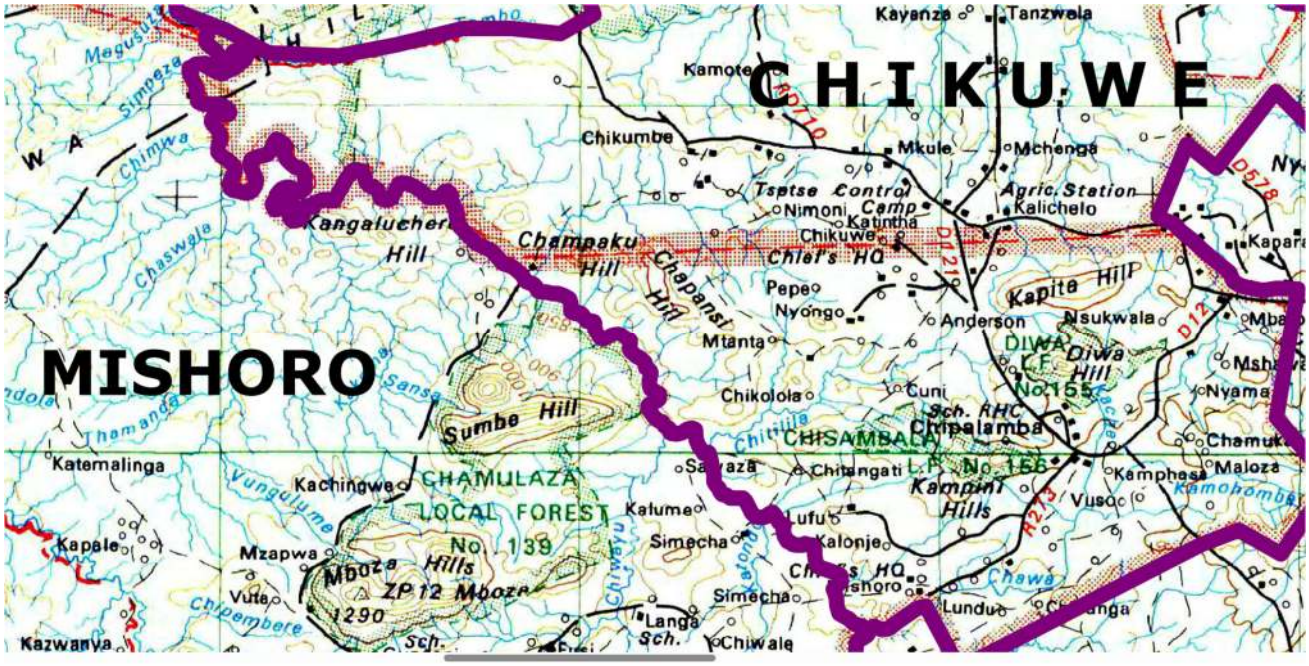
Statutory Instrument

1. This Order may be cited as the Forest No. P156: Chisambala Local Forest (Declaration) Order. Notice 263 of 1966, Statutory Instruments: **66 of 1975,**

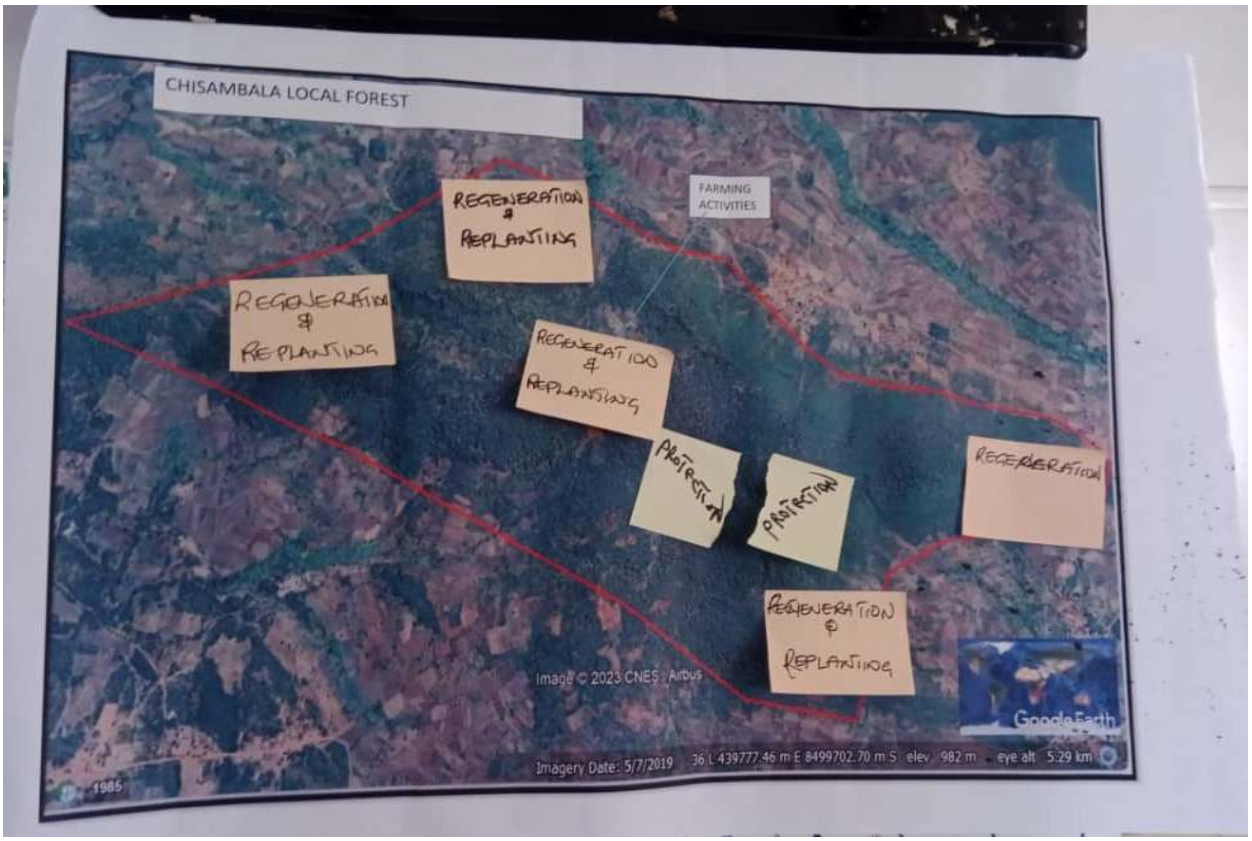
LOCAL FOREST NO. P156: CHISAMBALA

Starting from Beacon A, a point on the Chewa-Ngoni Boundary cut line lying west of and 1.368 kilometres from the intersection of the Chiparamba-Chief Mishoro road and a footpath connecting Chikomeme's Village and Mteyo Kapatomoyo's Village, the boundary follows the Chewa/Ngoni Boundary in a north-westerly direction to Beacon B at the intersection with the footpath connecting Mteyo Kapatamoyo and Lupiya villages; thence along this footpath in a north-easterly direction for 0.322 kilometres to Beacon C; thence in a straight line on a true bearing of 62 degrees for 1.53 kilometres to Beacon D; thence in a straight line on a true bearing of 96 degrees for 0.322 kilometres to Beacon E; thence in a straight line on a true bearing of 127 degrees for 0.483 kilometres to Beacon F; thence in a straight line on a true bearing of 96 degrees for 0.45 kilometres to Beacon G; thence in a straight line on a true bearing of 129 degrees for 1.45 kilometres to Beacon H; thence in a straight line on a true bearing of 87 degrees for 0.724 kilometres to Beacon I; thence in a straight line on a true bearing of 109 degrees for 0.885 kilometres to Beacon J which lies on the footpath connecting Mphindila and Chingowiro villages; thence along this footpath in a southerly direction for 0.29 kilometres to Beacon K; thence in a straight line on a true bearing of 260 degrees for 1.046 kilometres to Beacon L; thence in a straight line on a true bearing of 222 degrees for 0.965 kilometres to Beacon A, which is the point of starting. Bearings and distances are approximate. The above described area, in extent 526.11 hectares approximately, is shown bordered green upon Plan No. FR223, deposited in the office of the Surveyor-General, signed by him and dated 26th February, 1964.

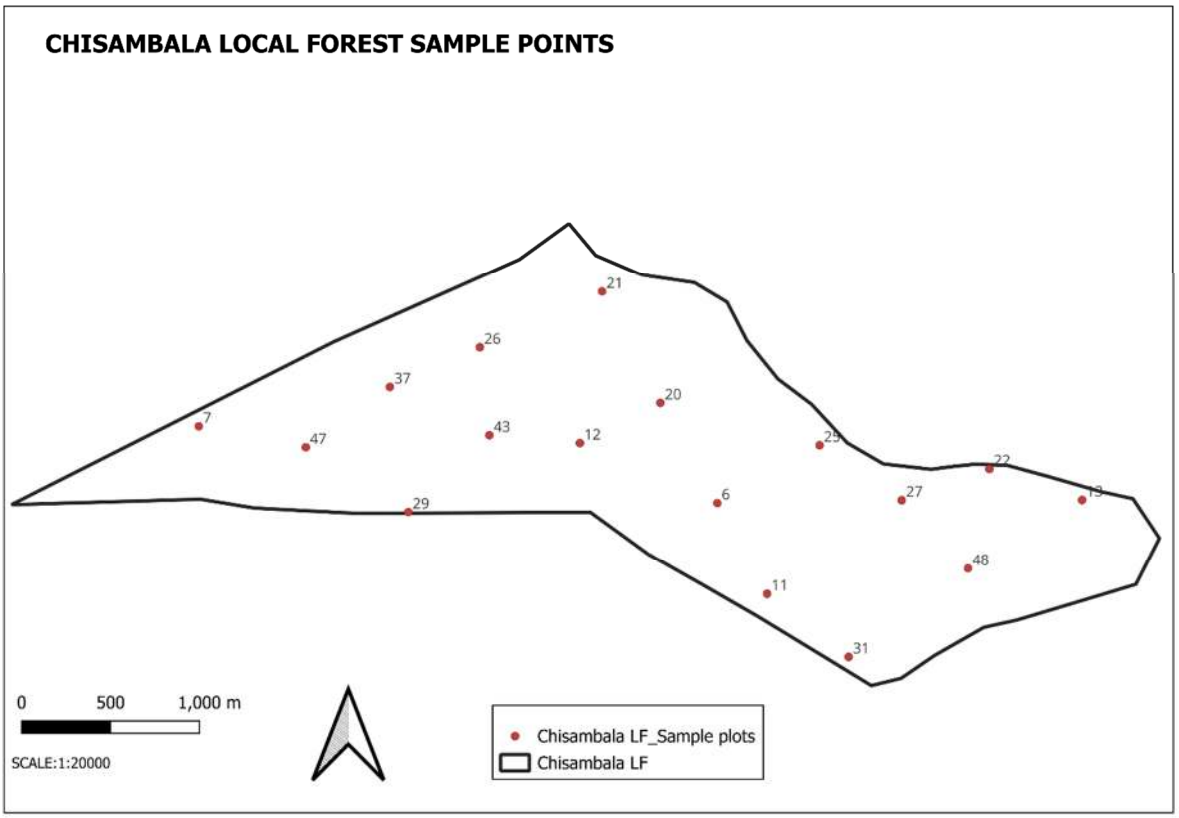
1. Map of Chisambala Local Forest in relation to Chiefdom boundaries (1958 map)



2. Map of forest zones relating to forest condition



3. Map indicating systematic sample points within the inventory squares.



4.

Beacon locations confirmed and renovated in 2021.

EASTINGS	**NORTHINGS**	**ELEVATIONS**
36L 0442766	UTM 8499418	1012M
36L 0442310	UTM 8499274	1010M
36L 0440593	UTM 8498850	1059M
36L 0439971	UTM 8499453	1007M
36L 0439779	UTM 8500751	956M

9.2 Annex II: Inventory Data

Species	Code	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Density	Total	0	247.16	49.22	16.05	24.61	7.49	6.42	350.94
Acacia nigrescens	4	0	1.07	0.00	0.00	1.07	1.07	0.00	3.21
Acacia polyacantha	6	0	6.42	0.00	1.07	1.07	0.00	0.00	8.56
Annona senegalensis	25	0	3.21	1.07	0.00	0.00	0.00	0.00	4.28
Bauhinia petersiana	34	0	26.75	2.14	0.00	0.00	0.00	0.00	28.89
Brachystegia bussei	47	0	35.31	4.28	1.07	14.98	5.35	5.35	66.34
Brachystegia spiciformis	52	0	13.91	1.07	0.00	0.00	1.07	0.00	16.05
Bridelia duvigneaudi	58	0	2.14	0.00	0.00	0.00	0.00	0.00	2.14
Cassia abbreviata	68	0	3.21	0.00	0.00	0.00	0.00	0.00	3.21
Combretum molle	86	0	18.19	3.21	2.14	0.00	0.00	0.00	23.54
Combretum zeyheri	89	0	1.07	0.00	0.00	0.00	0.00	0.00	1.07
Cussonia arborea	98	0	1.07	1.07	0.00	1.07	0.00	0.00	3.21
Dalbergia nitidula	102	0	7.49	1.07	0.00	0.00	0.00	0.00	8.56
Dalbergiella nyasae	103	0	14.98	0.00	0.00	0.00	0.00	0.00	14.98
Diospyros kirkii	111	0	13.91	5.35	3.21	0.00	0.00	0.00	22.47
Diplorhynchus condylocarpon	114	0	38.52	10.70	2.14	0.00	0.00	1.07	52.43
Dombeya rotundifolia	116	0	1.07	0.00	0.00	0.00	0.00	0.00	1.07
Erythrina abyssinica	125	0	1.07	1.07	0.00	1.07	0.00	0.00	3.21
Flacourtia indica	158	0	1.07	0.00	0.00	0.00	0.00	0.00	1.07
Hexalobus monopetalus	178	0	0.00	2.14	0.00	0.00	0.00	0.00	2.14
Lannea discolor	194	0	4.28	0.00	0.00	0.00	0.00	0.00	4.28
Lannea stuhlmannii	199	0	12.84	3.21	1.07	0.00	0.00	0.00	17.12
Lonchocarpus capassa	200	0	2.14	0.00	0.00	0.00	0.00	0.00	2.14
Markhamia obtusifolia	211	0	0.00	0.00	0.00	1.07	0.00	0.00	1.07
Ochna pulchra	223	0	0.00	1.07	0.00	0.00	0.00	0.00	1.07
Pericopsis angolensis	239	0	0.00	0.00	0.00	1.07	0.00	0.00	1.07
Pseudolachnostylis maprouneifolia	258	0	18.19	3.21	3.21	1.07	0.00	0.00	25.68
Pterocarpus angolensis	262	0	1.07	2.14	2.14	1.07	0.00	0.00	6.42
Pterocarpus chrysothrix	264	0	2.14	0.00	0.00	0.00	0.00	0.00	2.14
Pterocarpus rotundifolius	265	0	4.28	2.14	0.00	1.07	0.00	0.00	7.49
Steganotaenia araliacea	283	0	1.07	0.00	0.00	0.00	0.00	0.00	1.07
Sterculia quinqueloba	285	0	5.35	1.07	0.00	0.00	0.00	0.00	6.42
Strychnos cocculoides	288	0	1.07	0.00	0.00	0.00	0.00	0.00	1.07
Strychnos spinosa	293	0	0.00	1.07	0.00	0.00	0.00	0.00	1.07
Unknown	999	0	4.28	0.00	0.00	0.00	0.00	0.00	4.28
Vangueriopsis lanciflora	316	0	0.00	1.07	0.00	0.00	0.00	0.00	1.07
Ximenia americana	328	0	0.00	1.07	0.00	0.00	0.00	0.00	1.07

9.3 Annex III: Demographics of major forest fringe communities

Demographics of major forest fringe communities of Chisambala Local Forest

Village	Frequency	Percent
Chikuwe	1	0.3
Chuni	29	7.7
Kalonje	4	1.1
Kampini farm	3	0.8
Kawawa Sch	4	1.1
Kochiwe	41	10.8
Lufu	73	19.3
Mafuta	51	13.5
Mphindila	13	3.4
Mteyo	31	8.2
Mulilo	15	4
Onje	31	8.2
Payani	8	2.1
Simion	8	2.1
Simion village	66	17.5
Total	378	100

9.4 Annex IV: Stakeholder consultations- Chiefs

The Forestry Department in Eastern Province initiated a process to prepare forest management plans for 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 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.

Chief Chanje (standing in for Chief Chikuwe) and Chief Misholo

Chief Chanje is the chief standing in for Chikuwe chiefdom for the Chewa people and Chief Misholo for the Ngoni people. Chisambala Local Forests falls in these chiefdoms

FINDINGS

Below are the findings for the 2 chiefs that were visited:

Chief Chanje (Standing in for Chief Chikuwe) and Chief Misholo

The Chikuwe chiefdom and Misholo chiefdom has Chisambala Local Forest which cover 526Ha. The chiefs appreciated the initiation of developing forest management plans which are community driven as the local communities are the beneficiaries of all the products in the forest. They echoed on the previous forest management that was biased to Forestry Department leaving the communities surrounding the forests. Below are issues to be added in the management plans

- General sensitizations in climate change issues and more engagements between the department and the community.
- Need for more sensitizations in the constructions and use of energy saving cook stoves to all communities surrounding the forest.
- The plan to also have afforestation activities in areas that are bear both in the forest and surroundings areas and also asked for support for the local groups in form of seeds and seedlings
- His royal highness also mentioned the aspects of no more expansions for Agric activities for the ones inside the forest.
- He further mentioned the urgent need for By Laws regarding illegal harvesting of timber and charcoal burning
- The benefits accrued from the conserved forests to be used for developmental projects within the chiefdom

Picture showing Forestry staff with Chief Chanje (standing in for Chief Chikuwe)

CONCLUSION

All the two chiefs appreciated the inclusiveness in forming the Community driven management plan as they are all currently involved in conservation of forest resources in different aspects. All the two chiefs consented that the department proceeds with the second phase which will be meeting of local authorities, local communities and other stakeholders to get their submission for the Forest Management Plans

9.5 Annex V: Stakeholder validation meeting

REPORT FOR THE CHISAMBALA LOCAL FOREST MANAGEMENT PLAN STAKEHOLDERS' VALIDATION MEETING HELD AT JEMITA GUEST HOUSE, CHIPATA DISTRICT ON 16TH DECEMBER 2023

1.0 Introduction:

The Forestry Department in 2021/2022 undertook a forest inventory exercise to take stock of the forest resources in Chisambala Local Forest (CLF) among others with the view of collecting data to inform the preparation of Forest Management Plans (FMPs). The FMPs are prepared to guide the community-government partnership in the management of protected forest areas (FPAs) in the Eastern Province. Following the forest inventory exercise, Draft FMPs were prepared for all the FPAs in Eastern Province that were included in the Forest Inventory that was undertaken in 2021/2022.

The Stakeholders Validation Meeting for (CLF) which covers an area of 526Ha and extends over Chikuwe and Misholo chiefdom in Kasenengwa District was organized to validate the FMP for the CLF which was developed by the Forestry Department.
The Stakeholders Validation Meeting in Chipata brought together participants: 35, females 6 and 29 males drawn from community, government departments, local authority and traditional leaders.

2.0 Official Opening

The District Commissioner Kasenengwa officially opened the Chisambala Local Forest FMP validation meeting

3.0 Meeting's Expectations

The first session was facilitated on teasing the meeting's expectations. Below is what the stakeholders brought out as the four main expectations as:

i) Learn how to manage their local forests
ii) What will be agreed in the consultation will help protect CLF
iii) Come up with strategies to restore CLF.
iv) Share the findings of the forest inventory conducted in CLF.

Why need for FMP

In the Second session, Community was mainly invited to provide their input which would help in protecting and managing CLF, the importance of forests, why local forests were declared etc

- On-going forest degradation
- Rapid deforestation
- Unsustainable livelihood activities
- Inadequate community participation in forest and wildlife management, land use planning
- Increase in adverse effects of climate change
- Poor yield.

Importance of forests

- Soil conservation
- Co2 sequestration
- Habitat protection

- Water cycle

Local forests were declared for:

- Safety of forest resources
- Protection of the ecosystem
- Forest resources use by the locals
- To meet the socio-economic and cultural needs of the community

Way forward requirements

Need for: Consensus, active support & collective action. Government desire is to empower local communities and the traditional leaders to protect and manage forests. Legal framework supporting sustainable forest management exist in Zambia which is the Forest Act, National Policy and SI 11 of 2011 for Community Forestry Management. CLF was designated in 1964 as LF for extraction of poles by the local community. LF are therefore designated as such to meet local needs similarly, the solutions for resolving the issues related to the local forests should be proposed by the local communities.

Session for Questions:

Below are some of the questions that were brought out:

- What do you do with people who have settled in the protected areas? - - Answer: Options were given on either evicting them or coming out with local rules that will deter further extensions on where they have settled.

Session three: Forest Inventory (Forest condition assessment)

This session gave out results from the inventory exercise that was conducted in 2021.Forests must be sustainably managed through sustainable harvesting that avoids depletion

Objective of the conducting the inventory was to inform the formulation of the FMP for CLF

Determine actual stocking, distribution of tree species Carbon stocks and regeneration potential.

Findings

Majority of trees in the forest were between 5-9cm diameter class. 36 tree species were found in CLF and that CLF not growing at its full capacity

- Over harvesting of tree species
- Human disturbances through over cutting, fires and grazing
- If No intervention forest degradation and depletion will be intensified.

Questions/concerns

It was true that there are human disturbance in CLF as some people have settled there, farming there, and tree cutting. Since CLF is the property of the government how can it then be managed?

- Community said they can manage to protect and manage the CLF

It would be good to hear how and which areas are degraded CLF

Session four: Livelihood Survey Overview presentation (ZAMSTATS)

Below are the statistics:

- 378 HHs (Male: 270 & 108) with a population 1786 (879 males and 907 females). 20 HHs formed part of the sample
- Economic activities 86% of HH engaged in agriculture, 14% business and 1% employed
- Land ownership: 9% didn't own any while 91% owned land.
- Size/Extent of Land cultivated: 48% no change; 33% increased while 8 decreased
- Willingness to plant trees: 80% expressed willingness while 20% declined HHs that use the forest resources: 100 said they use the forest resources
- Access to forestry extension services: majority 83% said they didn't received advice on sustainable woodlots establishment while 17% had majority 91.2% said they didn't received advice on sustainable woodlots any information about fire management while 8.8% had type of housing: majority (61.2%) lived in improved traditional Houses while 25% lived in traditional. Hut
- Source of water: 90% boreholes rest use protected wells, rivers/dams/streams and communal taps
- Source of energy for cooking: 97.5% used firewood and 2.5 charcoal Source of lighting: 68.8% torch
- Willingness to participate in forest management: 75 were willing while the rest were not.

Session Five: What should be in the proposed FMP

Development objectives of FMP as stipulated in the National Forestry Policy were shared as being:

(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 utilization 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.

.

The expected management actions were also discussed as:

- Forest Protection, Restoration, Management and Conservation of Biodiversity. This is triggered by:
  - The forest is surrounded by an increasing population
  - The level of unsustainable use is anticipated to intensify 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. Hence 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 local needs.

- Forest Restoration through Community Participation and Livelihood Development. Community empowerment is central to sustainable management of forest resources
  - This will be achieved through promotion of community forestry and the establishment of a community forest management group to partner over the management of the forest
  - The Plan proposes interventions with community groups to protect, restore and replant, as part of the restoration planning for Chisambala Local Forest.

Later, the session on identifying uses, users, issues, threats and solutions and opportunities was done as group work. Below are the findings:

GROUP WORK- Chisambala Local Forest
Concerns from the stakeholders surrounding the forest.

- Needs general meeting with the community.
- There about 15 villages inside the forest.
- The stakeholders needs to do know how best we can manage the forest.

What- Uses of the forest

- Firewood
- Charcoal
- Caterpillar
- Timber
- Mushroom
- Medicine (Herbs)
- Wildlife
- Bamboos
- Grass
- Water
- Fibre
- Poles
- Local people
- People from outside the forest surroundings

Where- it is used/harvested

ISSUES	**Solutions/opportunities**
Indiscriminate cutting of trees	-formation of local rules
Late fires	-Afforestation
Illegal extraction of timber.	-Forest education
Mineral extraction illegally	-Involvement of traditional leaders

Permitted practices were also discussed:
- Mushroom collection.
-Herbal medicine collection without uprooting the tree
- Collection of fruits
- Rotational animal grazing

Prohibited practices were also discussed
-Charcoal and timber production
- No farm land extensions

- No grazing of animals any how
-

3.0 Zoning of forest

Map was used to identify specific areas were intervention need to take place. The members stuck the innervations on the degraded areas and those that are intact

List Suggestions/strategies to improve productivity/management of the forest.

- Sensitizations and Formation of committee
- Afforestation (Promotion of agroforestry trees and tree planting)
- Promoting Assisted Natural regeneration.

What should be the priority?

- Afforestation and formation of management committees

Who should be involved?

- Local communities
- Traditional leaders: Chief and headmen
- Forestry Department
- Agriculture
- Church
- Local Authority
- All NGOs and CSOs

How do we work together?

Through Cooperation and coordination in the community

Next Steps

i. Development of FMP
ii. Submission of draft FMP to Forestry Department HQ
iii. After review by HQ will be sent back to the community with comments for their review of comments

Declaration

The stakeholders meeting for Chisambala Local Forest that was held on 16th December, 2023, at Jemita Lodge, in Kasenengwa District. The stakeholders signed a joint declaration pledging to collaborate in the sustainable management of Chisambala Local Forest.

CHISAMBALA LOCAL FOREST 16/12/23

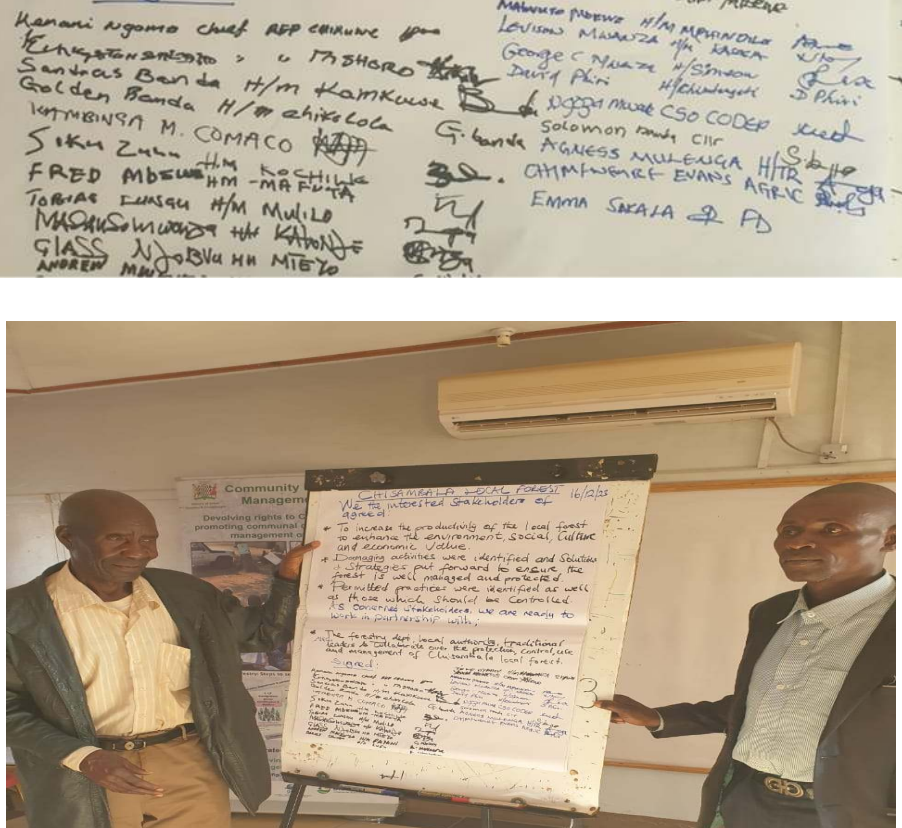
We the interested Stakeholders of agreed:

* To increase the productivity of the local forest to enhance the environment, social, Culture and economic Value.
* Damaging activities were identified and Solutions & Strategies put forward to ensure the forest is well managed and protected.
* Permitted practices were identified as well as those which should be Controlled.

As Concerned Stakeholders, we are ready to work in partnership with;

* The forestry dept, local authority, traditional leaders to Collaborate over the protection, control, use and management of Chisambala local forest.

Signed:



Indunas for Misholo and Chikuwe posing with their declaration

9.6 Annex VI: References

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

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- 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.

9.7 Annex VII: Budget for implementing management actions

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

#	Core Forest Management Actions																
	Action 1: Forest Protection, Management & 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	**To develop a shared management approach to forest protection, management and utilisation.**	1. Stakeholder engagement, community awareness raising and mobilisation;	Community meetings	4	3	2,500	30,000					-	-	-	-	-	30,000
		2 Stakeholder mapping including forest use, users and geographic interest.	Community meetings	4	1	5,000	20,000									-	20,000
		3. Forming community level institutions to coordinate, manage and control local resource use in partnership with the Forestry Department.	Community meetings	4	3	4,500	54,000										54,000
		4. Developing forest product and issues based operational management plans for areas of interest.	Community meetings	3	2	4,500	27,000		-	-	29,700		-	-	-	-	56,700
		5. Agreeing roles, rights, responsibilities and obligations for shared management.	Community meetings	3	1	4,500	13,500		-	-	-	-	-	-	-	-	13,500
		6 Conduct training in control functions: Permits, rules, financial management, law enforcement	Community meetings	4	1	4,500	18,000		-	-	19,800		-	-	-	-	37,800
		7. Conducting joint monitoring and evaluation of management and benefit sharing measures to ensure a sustainable partnership.	Community meetings	4	1	4,500	18,000	19,800	21,780	23,958	26,354	28,989	31,888	35,077	38,585	42,443	286,874
2	**To protect the Forest from late fires**	Practice early burning within and outside the forest by involving local communities.	600Ha	1	1	6000	6,000	6,600	7,260	7,986	8,785	9,663	10,629	11,692	12,862	14,148	95,625
3	**To secure the boundary and define the extent of the boundary and prevent possible encroachment**	1 Carry out annual Boundary maintenance.	14Km	1	1	25,000	25,000	27,500	30,250	33,275	36,603	40,263	44,289	48,718	53,590	58,949	398,436
		2 Beacon maintenance	No.	15	1	650	9,750	10,725				15,702		19,000		22,990	78,167
		3 Erection of sign posts	No.	10	1	350	3,500	3,850						6,821		8,253	22,423
4	**To conserve and enhance the biodiversity of the forest reserve through environmental awareness and education.**	Enhance understanding of the forest ecosystem and its function and benefits to community groups and schools.	School visits	3	1	2,500	7,500		8,250		9,075		9,983		10,981		45,788
5	**To significantly reduce levels of illegal forest product harvesting & other damage.**	Engage honorary forest Officers/guards	coord meetings	1	4	1,500	6,000	6,600	7,260	7,986	8,785	9,663	10,629	11,692	12,862	14,148	95,625
		Conduct patrols	No	2	12	800	19,200	21,120	23,232	25,555	28,111	30,922	34,014	37,415	41,157	45,273	305,999
															Action 1 Sub total		**1,540,935**

Action 2: Forest Restoration through Community Participation & Livelihood Development																
1. Enter into partnership with clear roles and responsibilities with surrounding communities	Promote community forestry approach / restoration planning	Community meetings	3	3	2,500	22,500		24,750		-	-	27,225		-	-	74,475
2. To protect, restore and replant forest cover in the fragmented forest areas of the National Forest	Support forest restoration activities	Community meetings	3	3	2,500	22,500	24,750	27,225	29,948	32,942	36,236	39,860	43,846	48,231	53,054	358,592
3. To reduce carbon emissions from agric soils and dependency on inorganic fertilizer	Promote CSA through Agroforestry	CSA ha	20	1	500	10,000	11,000	12,100	13,310	14,641	16,105	17,716	19,487	21,436	23,579	159,374
4. To significantly reduce levels of tree cutting for wood energy.	Promotion of energy efficient Cook stoves	Training	1	2	5,000	10,000	11,000	12,100	13,310	14,641	16,105	17,716	19,487	21,436	23,579	159,374
	Roll out programme	stoves	200	2	150	60,000	66,000	72,600	79,860	87,846	96,631	106,294	116,923	128,615	141,477	956,245
5 Reduce forest dependency by local communities.	Sources for forest products/ woodlots/ plantations	woodlot establishment	5	1	5,000	25,000	27,500	30,250	33,275	36,603	40,263	44,289	48,718	53,590	58,949	398,436
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	3	1	25,000	75,000	82,500	90,750	99,825	109,808	120,788	132,867	146,154	160,769	176,846	1,195,307
		Equipment	500	1	900	450,000		-				-		-	-	450,000
		Other Beekeeping accessories				33,000										
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	2,500	7,500		8,250		9,075		9,983		10,981		45,788
8. To ensure cross cutting issues are mainstreamed in all aspects of forest management for social equity wellbeing and empowerment through sustainable development	1 Ensure that all environmental and social impacts, risks and liabilities are identified and mitigated.	Community meetings	3	1	2,500	7,500		8,250		9,075		9,983		10,981		45,788
	2 Identify training needs.	Community meetings	3	1	2,500	7,500		8,250		9,075		9,983		10,981		45,788
	3 Monitoring safeguards & Grievances	Community meetings	1	1	2,500	2,500	2,750	3,025	3,328	3,660	4,026	4,429	4,872	5,359	5,895	39,844
9. To maintain the infrastructure necessary to achieve the multiple objectives of forest management.	Maintain the existing infrastructure	Site specific				-	-	-	-	-	-	-	-	-	-	-
														Action 2 Sub total		3,929,012
												Grand total for the period of the Plan (ZMW)				5,469,947

			Unit of Measure	Quantity	Frequency	Unit revenue	Total Revenue Year 1	Total Revenue Year 2	Total Revenue Year 3	Total Revenue Year 4	Total Revenue Year 5	Total Revenue Year 6	Total Revenue Year 7	Total Revenue Year 8	Total Revenue Year 9	Total Revenue Year 10	Total Revenue
	Revenue			Ha													
	Carbon trading benefit share under EP-JSLP		Carbon t/ha	481.9	1	75	36,143	39,757	43,732	48,106	52,916	58,208	64,029	70,432	77,475	85,222	**576,018**
	2 Small woodlots	Carbon t/ha	Hectare	5	1	75	375	413	495	644	901	1,351	2,027	3,243	5,514	9,924	**24,886**
	3 Agroforestry	Assume 1tC/ha inc to 2 t/ha yr 10	Hectare	20	1	75	1,500	1,650	1,815	1,997	2,196	2,416	2,657	2,923	3,215	3,537	**23,906**
	4 Natural regeneration	Assume 1tC/ha inc to 2 t/ha yr 10	Hectare	50	1	75	3,750	4,125	4,538	4,991	5,490	6,039	6,643	7,308	8,038	8,842	**59,765**
		beekeeping	kg	1000	1	30	30000	33,000.00	36,300.00	39,930.00	43,923.00	48,315.30	53,146.83	58,461.51	64,307.66	70,738.43	478,122.74
																	1,162,699
																	- **4,307,248**

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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