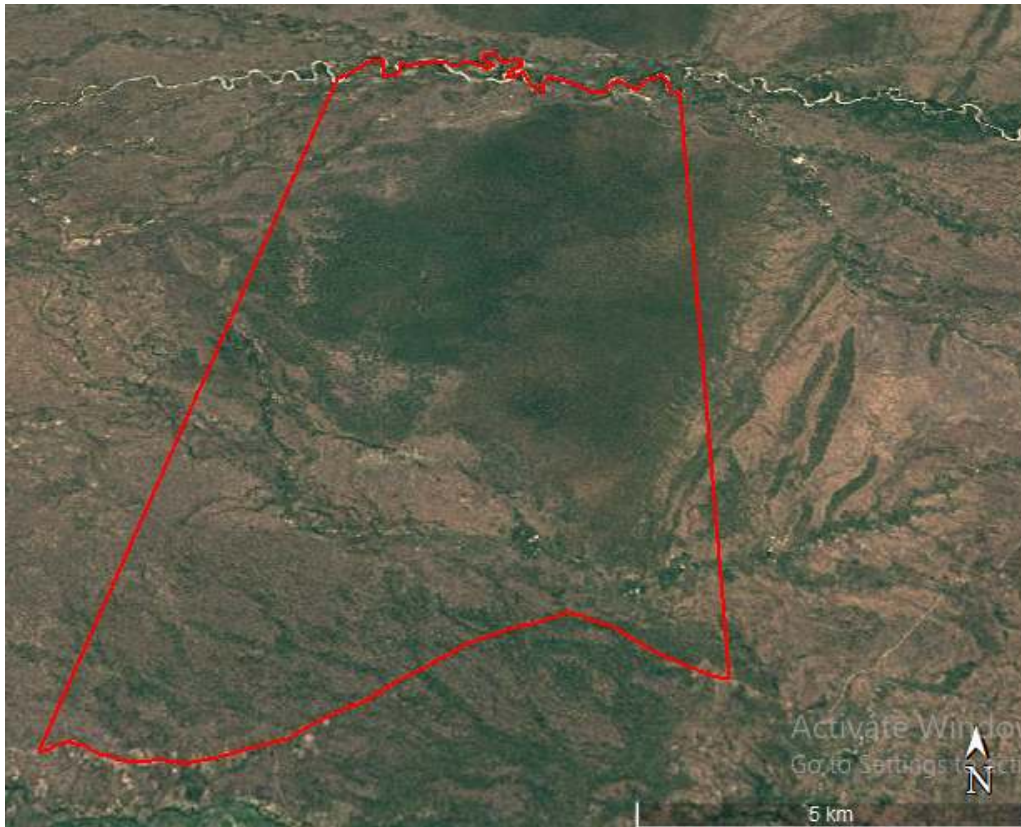




REPUBLIC OF ZAMBIA

MINISTRY OF GREEN ECONOMY AND ENVIRONMENT



LUMIMBA LOCAL FOREST (P231)

MANAGEMENT PLAN

2024-2034

APPROVAL PAGE

LUMIMBA LOCAL FOREST No. P231 - 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

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

Signature:

Director of Forestry

Date:

ACKNOWLEDGEMENTS

The development of this Forest Management Plan was made possible through support from the Zambia Integrated Forest Landscape Project (ZIFLP). The Forestry Department would like to recognize and appreciate the effort of His Royal Highness Chief Chitungulu, Headmen and the community around Lumimba Local Forest for the commitment to support this plan and importantly the sustainable management of Lumimba Local Forest.

In addition, the Provincial Forest Office, Eastern would like to recognize and appreciate the efforts of the participants in the consultation workshop for their valuable contribution to the development of the Forest Management Plan.

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

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

EXECUTIVE SUMMARY

Forests, woodlands and trees are among the nation's most important natural heritage resources. The vision of the National Forestry Policy's, 2014 is to attain sustainable forest management at all types of forests to enhance forest products and services that will contribute to mitigation of climate change, income generation, poverty reduction, job creation and protection and maintenance of biodiversity. The Policy encourages participatory forest management anchored on the active participation of local communities, traditional institutions, private sector and other stakeholders in the management and utilisation of forest resources at all levels of decision making, implementation, monitoring and evaluation.

This Forest Management Plan has been prepared for Lumimba Local Forest with the aim of equipping the management team and other interested stakeholders with a capable tool of directing the approach to be followed, guiding the process of partnerships with key stakeholders and addressing the challenges facing the management of the forest at present. 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 Lumimba Local Forest from degradation in order for it to fully contribute to local and national development as well as for the benefit of the future generations of Zambia.

Translating Policy into practice

This management plan translates national policies into a 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 Lumimba 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 were 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 2019 and 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 Lumimba Local Forest.

The inventory results indicate a total standing volume for all species in Lumimba estimated at 567.8m³ (81.1m³/ha), with a total bole volume estimated at 195.1m³ (27.8m³/ha). Total Biomass for trees ≥5cm DBH is estimated 140.5m³/ha. A basal area figure of 9.7m² per hectare is a higher figure compared with other reserves in the Province due to its relatively remote location.

Summary socio economic analysis

The livelihood survey conducted in 2019 indicated that Lumimba Local Forest is surrounded by approximately 15 villages with a total population of 1,875. These households depend on farming as their main occupation, the principal crops grown are maize, sunflower and groundnuts. The results revealed that 94 percent of households use firewood as their energy for cooking, while 6 percent use charcoal. The survey revealed that 100 percent of all the households were willing if called upon to voluntarily support management of the forest reserve with Forestry Department.

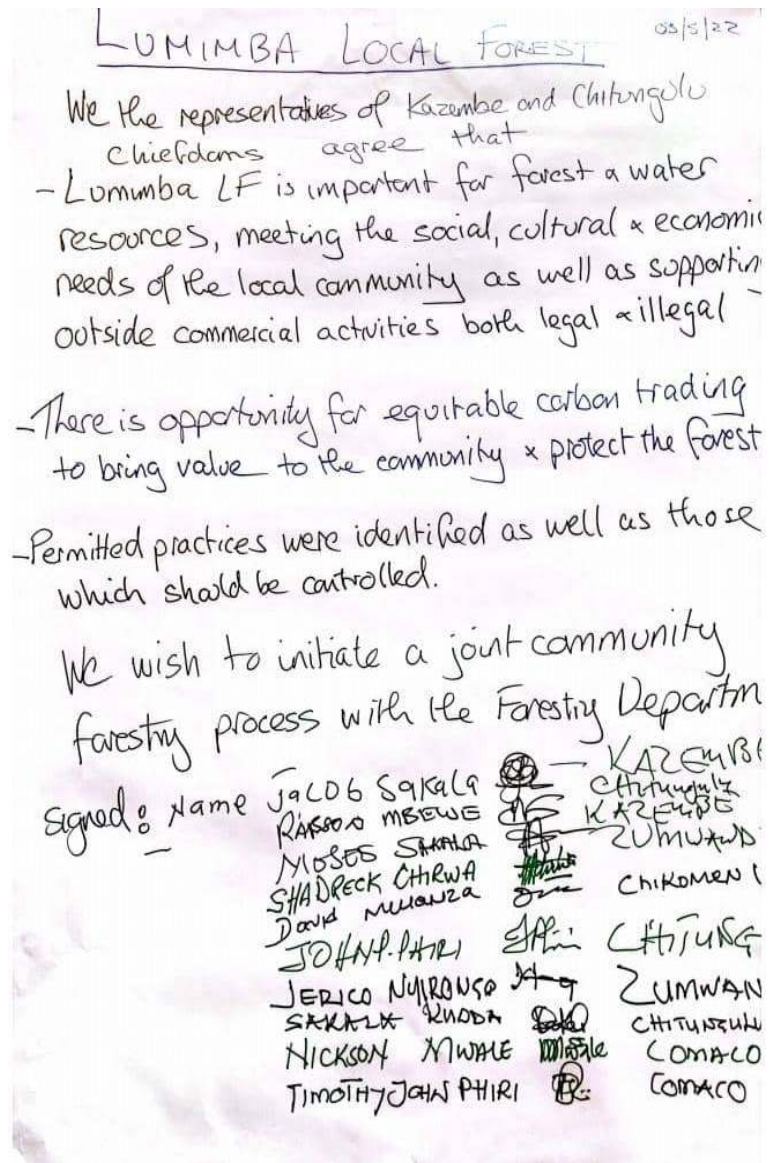
Forest change & issues analysis

A consultation meeting of stakeholders for Lumimba Local Forest was held on 2nd May 2022, at Tigone guest house, in Lundazi. 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.

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 and Traditional leaders, 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 Lumimba Local Forest.

The declaration confirmed that Lumimba Local 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 Lumimba Local Forest are:

- To secure forest resources of local and national importance
- 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.

Proposed management actions

The following management actions proposed for Lumimba Local Forest reflect the statutory purpose of the reserve as set out in section 19 of the Forests Act of 2015.

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 Lumimba 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 Lumimba 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 Zones 1 and 2 of the Local Forest; as well as developing zone (3) in the immediate surrounding area to promote greenhouse gas emission reduction interventions;

2 Forest Protection, Restoration, Management and Conservation of Biodiversity

Lumimba 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 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.

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.

3. Safeguards & other Crosscutting issues

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

Contribution to Emissions Reduction in Eastern Province

Improved management of Lumimba 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

Traditional Housing unit: referred to a housing structure usually made of mud material around the walls/poles and usually has a thatched roof.

ACRONYMS

CFMG	Community Forest Management Groups
CSA	Climate smart agriculture
DBH	Diameter at Breast Height
EA	Enumeration Area
FD	Forestry Department
FMA	Forest Management Area
FMP	Forest Management Plan
GHG	Greenhouse gases
HFO	Honorary Forest Officers
LLFMP	Lumimba Local Forest Management Plan
MGEE	Ministry of Green Economy and Environment
MOE	Ministry of Energy
NGO	Non-Governmental Organization
PAPI	Paper Assisted Personal Interviews
REDD	Reducing emissions from deforestation and forest degradation
USAID	United States Agency for International Development
ZAMSTATS	Zambia Statistics Agency
ZIFLP	Zambia Integrated Forest Landscape Project

TABLE OF CONTENTS

FOREWORD	i
ACKNOWLEDGEMENTS	i
EXECUTIVE SUMMARY	ii
1 INTRODUCTION	4
1.2. Duration of forest management plan	4
1.3. Developmental Objectives	5
1.4. General Objectives.....	5
2 GENERAL DESCRIPTION	6
2.1. Location Details.....	6
2.2. Ownership and control	6
2.3. Physical Environment.....	7
2.4. Biophysical Environment.....	8
2.5. Infrastructure and communication	9
3 PAST MANAGEMENT	10
4 GROWING STOCK	11
4.1 Tree species abundance.....	12
4.2 Total Volume, Biomass and Carbon estimate of all Species.....	14
5 STAKEHOLDER DEMOGRAPHICS	19
5.1 Introduction & Methodology	19
5.2 Household and Population dynamics.....	20
5.3 Utilization and zoning of forestry resources by stakeholders.....	21
5.4 Willingness of community to participate in forest management	25
6 PROPOSED MANAGEMENT ACTIONS	27
6.1 Zoning the forest	27
6.2 Core forest management actions.....	29
Action 1: Forest Conservation through Community Participation & Livelihood Development	29
Action 2; Forest Protection, Restoration, Management & Conservation of Biodiversity.....	31
6.3 Environmental and social safeguards and other crosscutting issues.....	35
7 STAKEHOLDERS ROLES AND RESPONSIBILITIES	39
8 MONITORING AND EVALUATING IMPLEMENTATION	41
9 ANNEXES	44
Annex 1: Declaration Order & Inventory Map.....	44
Annex II: Inventory Data.....	47
Annex III: Demographics of major forest fringe communities	49
Annex IV: Stakeholder consultations.....	52
Annex V: Stakeholder validation meeting.....	54
Annex VI: References.....	65
Annex VII: Cost of Implementing management actions	66

List of Figures and Tables

TABLE 1: SHOWING FOREST PROGRAMME WITH COST	3
FIGURE 1: MAP OF LUMIMBA LF	6
FIGURE 2: LUMIMBA LF SOIL MAP	7
FIGURE 3: MONTHLY RAINFALL SOURCE: THE ZAMBIA METEOROLOGICAL DEPARTMENT	8
FIGURE 4: MONTHLY TEMPERATURE: SOURCE: THE ZAMBIA METEOROLOGICAL DEPARTMENT.....	8
FIGURE 5: EXTRACT FROM THE FORESTRY FILES	10
FIGURE 6. SUMMARY INFORMATION TOTAL FOR ALL SPECIES	12
FIGURE 7: DENSITY BY DIAMETER CLASS/HA FOR ALL SPECIES	13
FIGURE 8: BASAL AREA (M ²) BY DIAMETER CLASS/HA FOR ALL SPECIES	14
FIGURE 9: VOLUME (M ³) BY DIAMETER CLASS/HA FOR ALL SPECIES	15
TABLE 2: VOLUME OF ALL SPECIES BY MERCHANTABLE QUALITY.....	15
FIGURE 10: BOLE VOLUME (M ³) BY QUALITY DIAMETER CLASS FOR ALL SPECIES	16
TABLE 3: TREES IN LUMIMBA LOCAL FOREST IN TERMS OF FOREST PRODUCT CATEGORIES.	17
FIGURE 11: BIOMASS AND CARBON ABOVE GROUND BY DIAMETER CLASS/HA FOR ALL SPECIES.....	18
FIGURE 12: LEVEL OF EDUCATION OF HOUSEHOLD HEADS OF LOCALITIES SURROUNDING THE LUMIMBA LOCAL FOREST	20
FIGURE 13: LEVEL OF ECONOMIC ACTIVITY OF HOUSEHOLD SURROUNDING THE LUMIMBA LOCAL FOREST	21
FIGURE 14: COMMUNITY ZONING OF LUMIMBA LOCAL FOREST	22
FIGURE 15: MAIN TYPES OF ENERGY USED FOR COOKING	23
FIGURE 16: MAIN HOUSING TYPE	23
TABLE 4: MAIN TREE RESOURCES USED BY HOUSEHOLDS SURROUNDING THE LUMIMBA LOCAL FOREST	24
TABLE 5: MAIN NON WOOD RESOURCES USED BY HOUSEHOLDS SURROUNDING THE LUMIMBA LOCAL FOREST.....	24
FIGURE 17: LAND OWNERSHIP AND USE	25
FIGURE 18: ZONING OF LUMIMBA LOCAL FOREST BASED ON COMMUNITY CONSULTATION.....	27
TABLE 6: STRATEGIC MONITORING INDICATORS.....	43
FIGURE 19: MEETING WITH PARAMOUNT GAWA UNDI'S SENIOR INDUNA MR. LUCAS PHIRI.....	52

**Summary Cost of Forest Management Plan Implementation by: Programme
Cost (ZMW)**

Forestry Programme	Cost in ZMW for 10 years
1 Forest Conservation through Community Participation and Livelihood Development and education	125,000.00
2 Forest Protection, Restoration, Management and Conservation of Biodiversity	123,000.00
3 Human Resource and infrastructure development	1,462,000.00
4. Research, Monitoring and Evaluation	177,000.00
Grand Total (ZMW)	1,887,000.00

Table 1: Showing forest programme with cost

Cost breakdown is provided in Annex VII

LUMIMBA LOCAL FOREST MANAGEMENT PLAN

1 INTRODUCTION

The Lumimba Local Forest Management Plan (LLFMP) 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 the Lumimba 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 reserve and the Forestry Department through the Green Economy and Environment (MGEE).

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

1.2. Duration of forest management plan

The duration of the FMP is ten (10) years. In theory, this means that ten years from the date that the plan is approved and adopted. In practice, however, because of the novelty of forest management in the province, and the need to be flexible and adjustment from lessons learned along the way, the plan may be adjusted every year during the first few years of implementation. In other words, the plan should be dynamic, and lessons learned are incorporated as they become obvious.

1.3. Developmental Objectives

The Development 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 Objectives

The General Objectives for the management for the Forest Reserve include:

- (a) To secure forest resources of local and national importance
- (b) To protect and restore ecosystems, particularly the protection of land and water supplies of local and strategic importance;
- (c) To ensure the sustainable utilisation of forest resources and other natural resources within the protected area;
- (d) To ensure full participation of all stakeholders at all levels of society for sustainable forest resource and ecosystem management through appropriate incentives and benefit sharing mechanisms
- (e) To meet the social, cultural and economic needs of the local community and wider society involved in management of the Forest in a gender equitable manner.

2 GENERAL DESCRIPTION

2.1. Location Details

Lumimba Local Forest (Reserve No. P. 231) forms part of the forest estates in Eastern Province, covers a land area of approximately 10,117 hectares in extent and is situated approximately 125 Km West of the administrative centre of Lundazi District.

Lumimba Local Forest No.231 Lundazi District

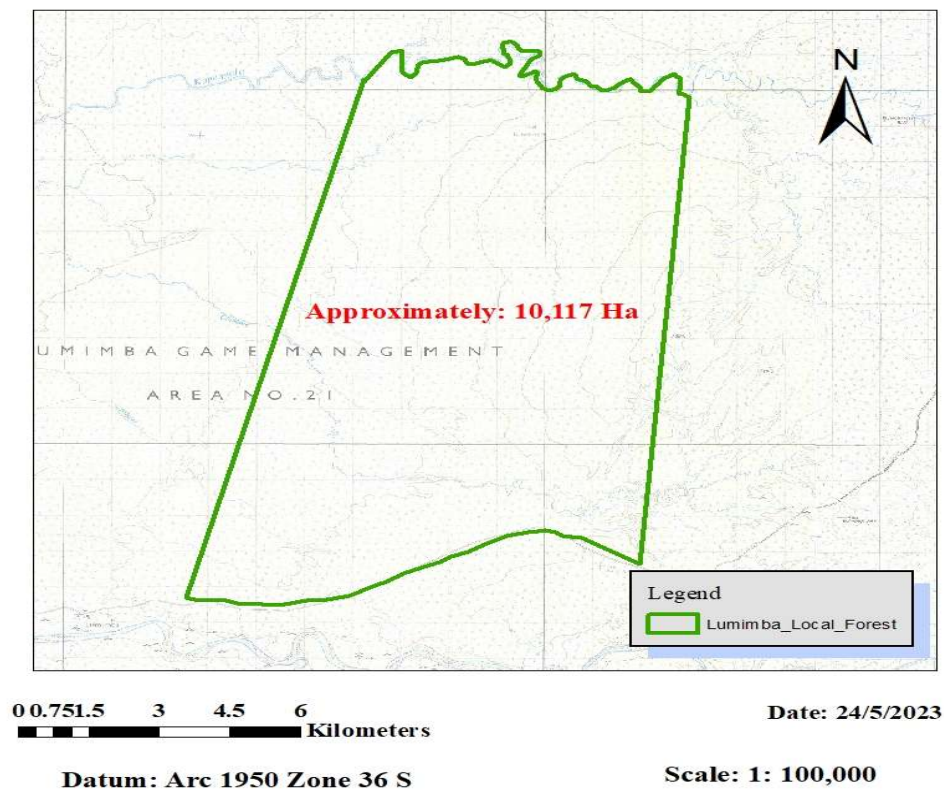


Figure 1: Map of Lumimba LF

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

2.2. Ownership and control

Lumimba Local Forest No. P. 231 was originally declared a forest reserve and gazetted under Statutory Instrument No. 50 of 1970. It is a protected forest area with the designation of “Local Forest” covered by section 19 of the Forests Act, 2015. The area is under the jurisdiction of the Forestry Department, Ministry of Green Economy and Environment through powers bestowed under the Forests Act No. 4 of 2015 of the Laws of Zambia.

2.3. Physical Environment

Topography, Geology & Soils

The Forest Reserve lies on a relatively flat land at an altitude of about 1210m above sea level. Part of the Northern and Eastern boundaries of the forest is bordered by dambo areas, while there are no perennial streams in the forest area. Geologically the area is located on Precambrian metamorphic rocks characterized by gneiss with igneous intrusion of syenite. Soils are well drained, deep to very deep, yellowish red to strong brown, friable, fine loamy and clay soils having a clear clay increase with depth. Sandy soils are found in some places of the forest and impacts species selection in plantation management.

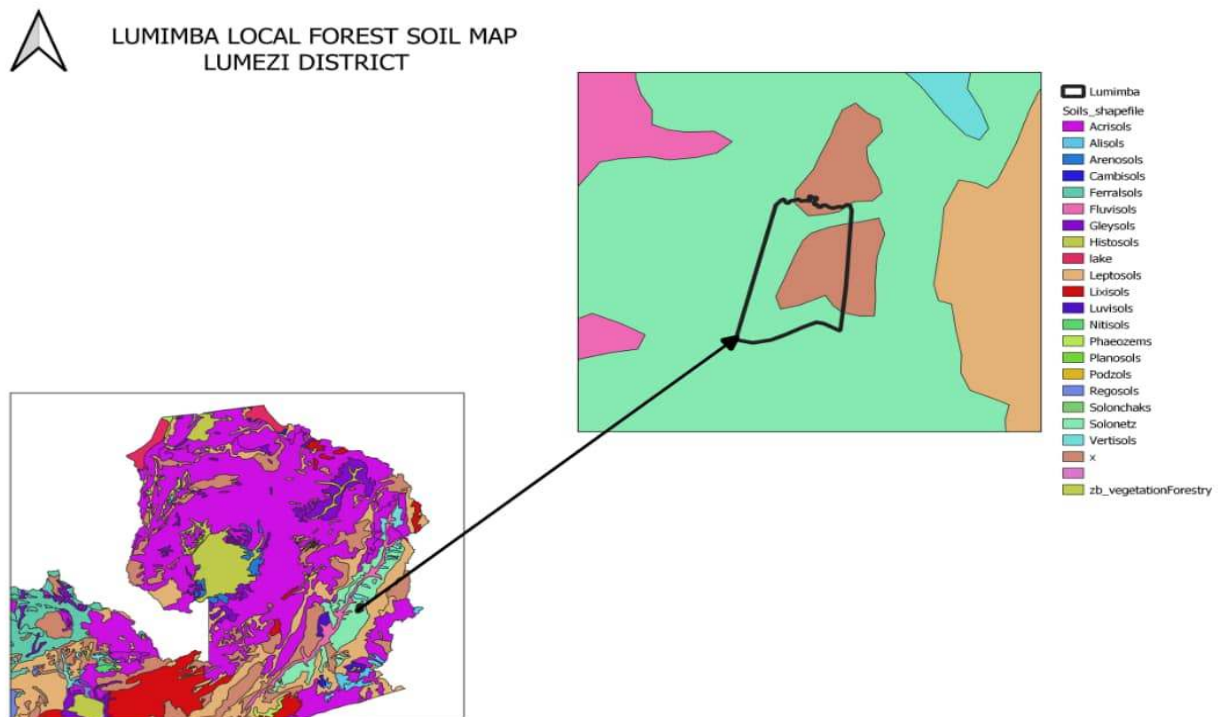


Figure 2: Lumimba LF soil map

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.

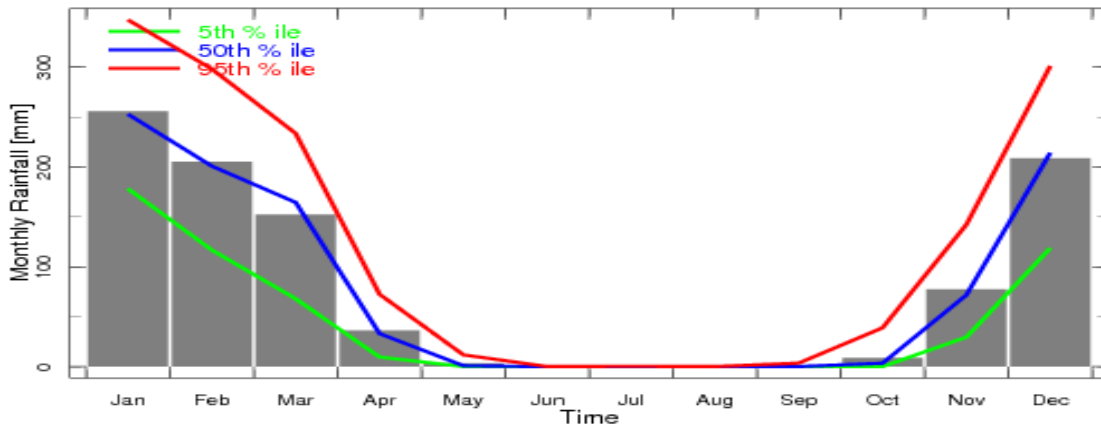


Figure 3: Monthly rainfall

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 27°C and 34°C. The highest maximum temperature occurs in October. The lowest average temperature is between 21°C and 23°C during the cool dry season occurring especially between May and June.

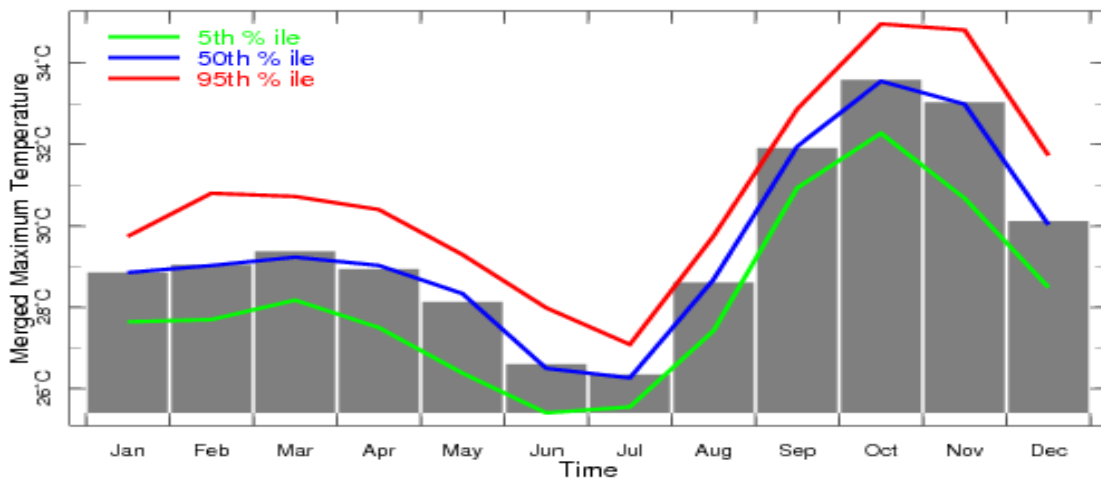


Figure 4: Monthly temperature: Source: The Zambia Meteorological Department

2.4. Biophysical Environment

Vegetation Type

Lumimba Local Forest is a homogeneous forest. The vegetation type is miombo woodland on the plateau with a diverse tree flora including *Julbernardia paniculata*, *Isoberlinia*

angolensis, *Brachystegia boehimii*, *Brachystegia floribunda*, *Parinari curatellifolia* and many other species with *Brachystegia speciformis* being the dominant species.

Fauna

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

2.5. Infrastructure and communication

In order to achieve the forest management objectives for Lumimba Local Forest a certain level of infrastructure is required. Roads, vehicle and buildings are essential to sound management of the forest. But they cannot be maintained without considerable financial expenditure since the forest itself yields very little in terms of direct revenue.

Road and Track network: A 125km track road from Lumezi to Chitungulu mission providing access to Lumimba Forest exists.

3 PAST MANAGEMENT

The Lumimba Local Forest was declared and gazetted under S.I No.177 of 1968 as contained in the provisions of the Forests Act under section five (5).

The reservation proposal of establishing Lumimba Forest was based on consultations, including a series of meetings held with the Tribal Authorities of the time. From the files it is noted that the original reason for reservation of the area was to act as a supply of valuable timber to Lundazi. Support to local sawyers was also indicated.

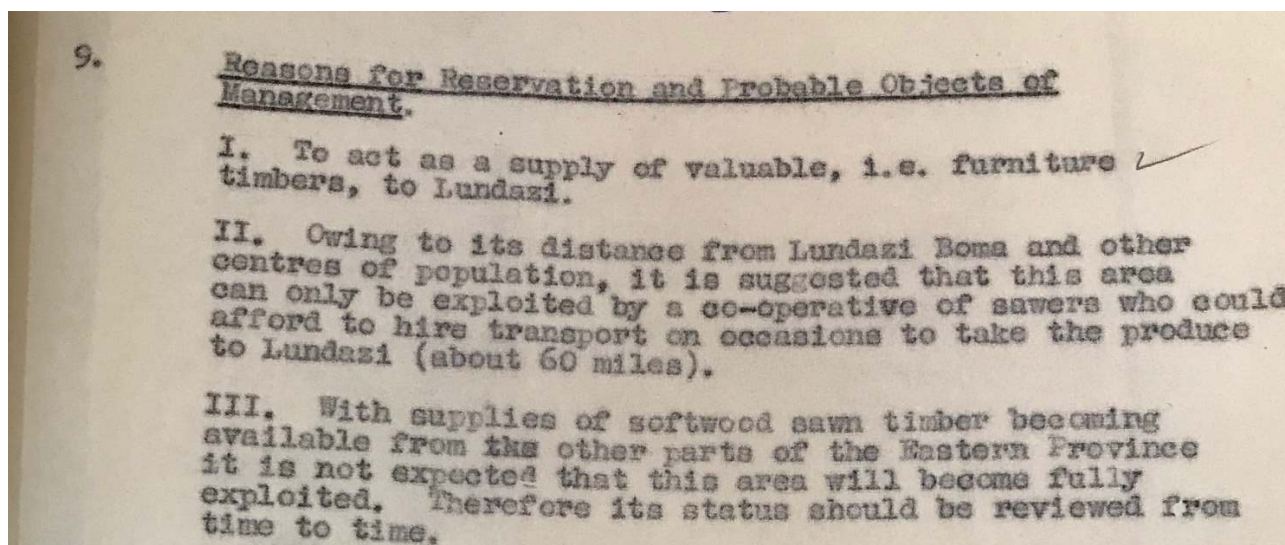


Figure 5: Extract from the forestry files

Lumimba Local Forest received support from USAID through the Forest Resource Support Programme (FRSP). The project provided resources to delineate forest boundaries, to erect beacons on the boundaries, to conduct forest patrols inside and outside the reserve, to enhance extension services and the production of information materials for communities living around protected forest areas help in promoting forest management and hence combating climate change. The project also helped in digitizing the maps of the reserve, see Annex 1.

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 2019 with financial support from the Zambia Integrated Forest Landscape Project. The following section provides the results and analysis from the data collected. A systematic sampling system was used to determine the location of the sample plots, 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. A map of the distribution of the sample plots for Lumimba is provided in Annex I. 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 Lumimba Local Forest.

Species	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Vol (m ³)	0.0	9.2	9.5	5.3	10.4	13.9	32.9	81.1
Bole Vol (m ³)	0.0	3.0	2.9	1.6	3.8	5.8	11.2	27.8
Density (SPH)	0.3	428.1	140.8	31.0	26.6	15.2	15.2	657.2
Basal area (m ²)	0.0	1.7	1.5	0.7	1.2	1.4	3.1	9.7
Biomass (tons)	0.0	14.1	14.5	8.5	18.5	24.9	60.1	140.5
Carbon (tons)	0.0	7.0	7.2	4.2	9.3	12.5	30.0	70.3
Saw log Vol (m ³)	0.0	1.2	1.3	0.9	4.3	11.4	26.6	45.8
Firewood Vol (m ³)	0.0	2.0	2.3	1.7	1.6	1.1	2.4	11.1
Pole Vol (m ³)	0.0	3.5	3.7	1.5	3.4	1.1	3.9	17.1
Fruit Vol (m ³)	0.0	2.0	2.3	1.7	1.6	1.1	2.4	11.1
Medicinal Vol (m ³)	0.0	2.2	2.0	1.0	1.0	0.4	0.0	6.6
Others Vol (m ³)	0.0	0.04	0.04	0.0	0.0	0.0	0.0	0.09
Seedlings								4,527

Figure 6. Summary information total for all species

4.1 Tree species abundance

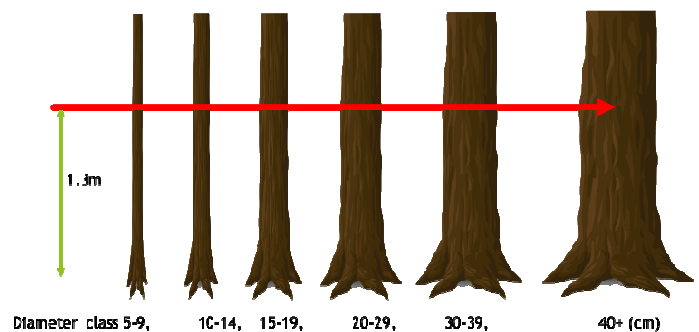
The inventory data indicates that there are over 250 different types tree species that include tree seedlings in the forest. However, the ten most frequent species are shown below.

Top Ten Abundant Species In the Forest Reserve

Species	Local Name	Species Code
Afzelia quanzensis	Mupapa	13
Albizia adianthifolia	Mutanga	15
Brachystegia boehmii	Muombo	46
Brachystegia floribunda	Musamba	48
Brachystegia longifolia	Muombo	49
Brachystegia utilis	Tsamba	55
Dalbergia melanoxylon	Mukelete	101
Dalbergia nitidula	Mchindula	102
Diplorhynchus condylocarpon	Mchindula	114
Erythrophleum africanum	kayimi	127

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.



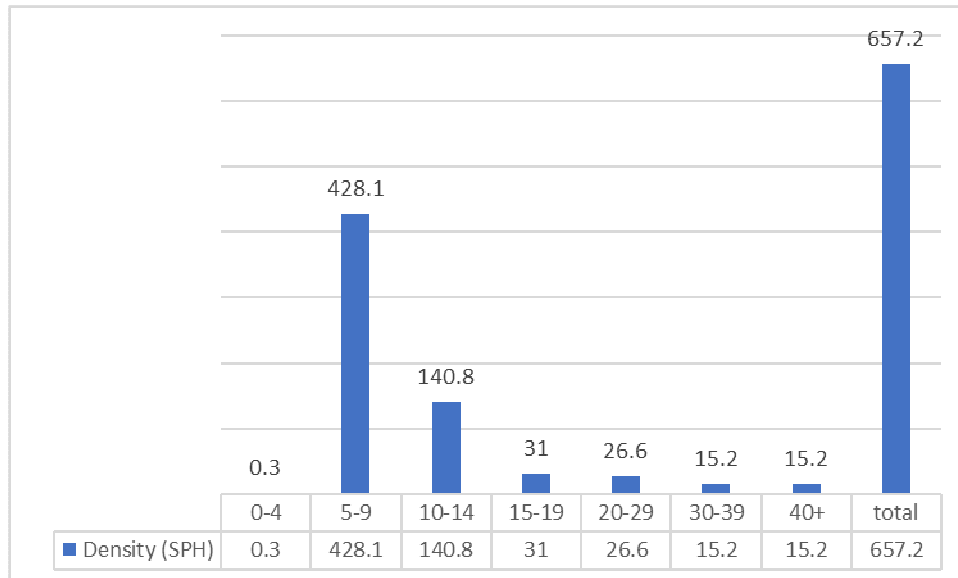


Figure 7: Density by diameter class/ha for all species

In Lumimba Local Forest, a stocking density by diameter class per hectare is 657.2 with higher in diameter class 05-14 and less from 15 and above. The outcomes indicates that there is a lot of harvesting of timber resulting more in regeneration.

Basal area (m²) by diameter class/ha for all species

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.

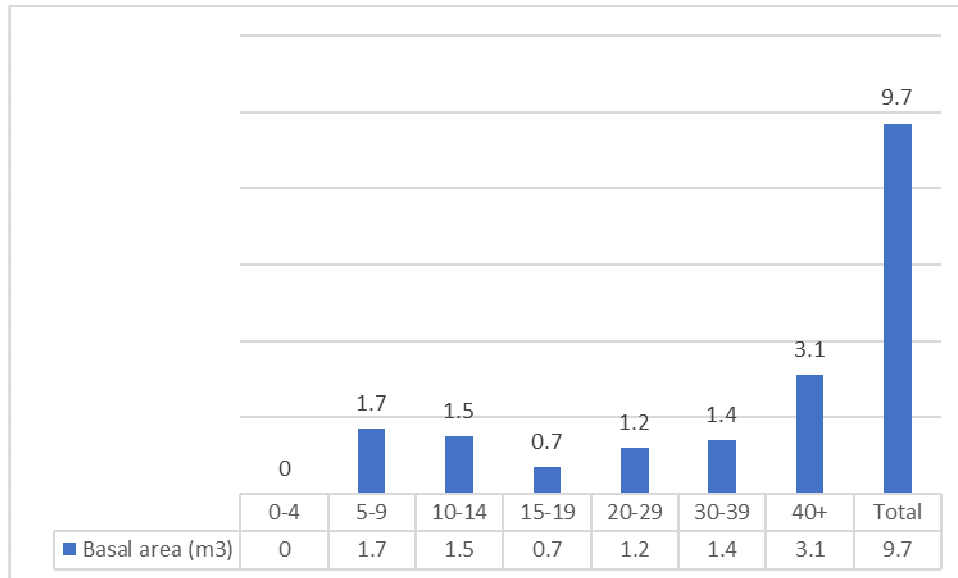


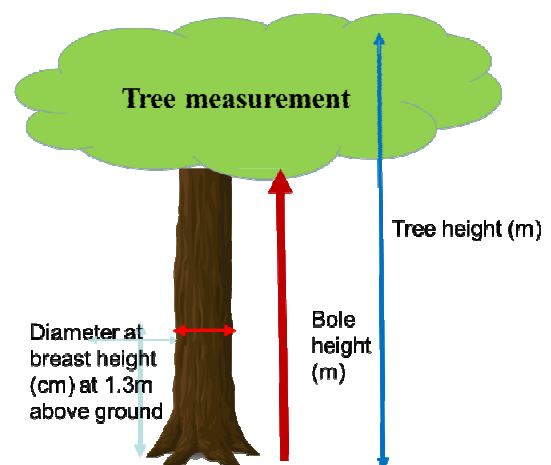
Figure 8: Basal area (m²) by diameter class/ha for all species

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 up all the measurements and expressing this as a figure of square metres, either in their size class categories or as a total per hectare.

The basal area by diameter class per hectare for all species is 9.7 with higher in diameter class 40 at 3.1. The outcome indicates that there is a moderate of mature trees.

4.2 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 for all species in Lumimba is estimated at 81.1 (81.1m³/ha), with a total bole volume estimated at (27.8m³/ha).

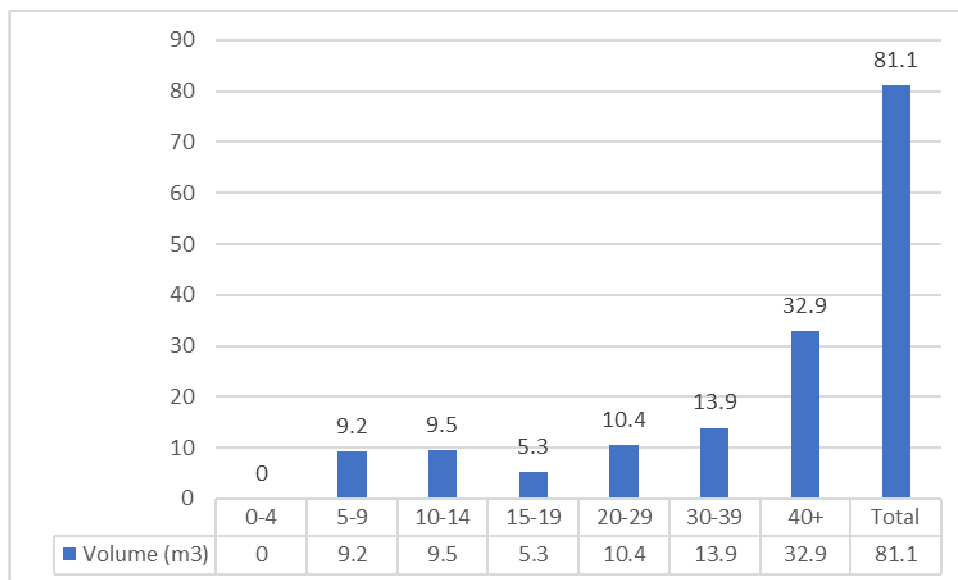


Figure 9: Volume (m³) by diameter class/ha for all species

Volume of all species by merchantable quality

Trees in Lumimba Local Forest are relatively straight, about 90% of the trees assessed are straight and 7% are bent and 3% are crooked. Three quarters of the trees in Lumimba are of harvestable quality.

No	Description	Volume	Explanation
1	Straight	13,790m ³	The entire bole length of these trees is straight
2	Slight bend	135m ³	The bole length of these trees is slight bend but are sawable
3	Crooked	47m ³	These trees have bad form, they are crooked and cannot be sawn

Table 2: Volume of all species by merchantable quality

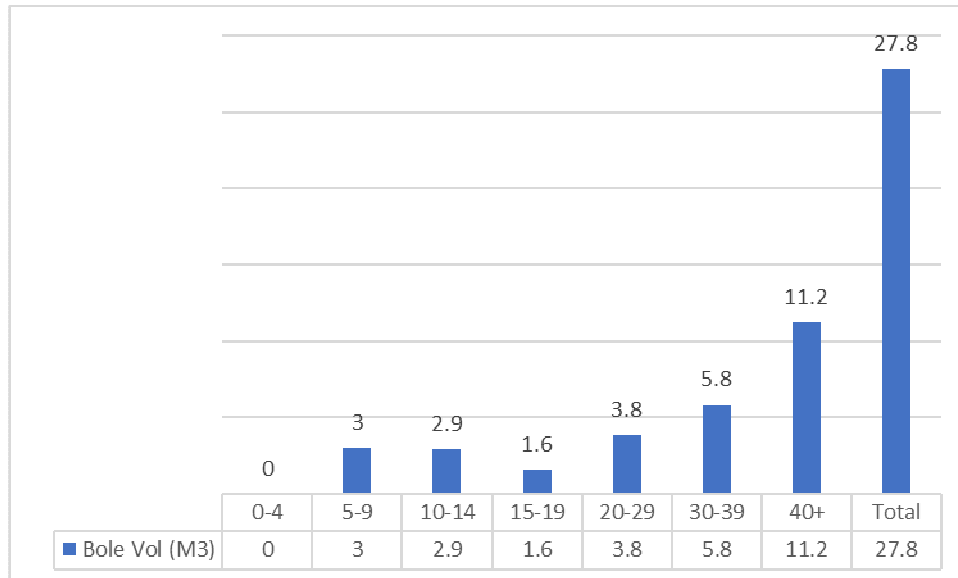


Figure 10: Bole volume (m³) by quality diameter class for all species

The total bole volume by diameter class per hectare is 27.8 cubic meters with higher in diameter class 40 and above. The outcome indicates that there is a moderate illegal of tree harvesting.

Presence of Commercial Tree Species

Based on the inventory data, species used for high valued sawlogs such *Pericopsis angolensis*, *Pterocarpus angolensis*, *Dalbergia melanoxylon*, *Faurea saligna* and the medium valued are *Brachystegia speciformis* and *Julbenadia globiflora*, are not abundant in the forest. The harvestable volume is currently high. Therefore, Lumimba Local Forest in its current condition could sustain logging operations or timber concession, however, this would need to be weighed against the other objectives of management.

High valued are *Pericopsis angolensis* (Mubanga), *Pterocarpus angolenia* (Mulombe) Mupapa, *Coleospermum mopane*, (Mopane), *Kirkiana acuminata* (Mzumba). These species are species considered to be of high value by the timber industries in Zambia for manufacturing high quality timber products, they have an average diameter of 25-35 DBH at breast height, these species are abundant in the forest reserve with average volume of 81.1 per hectares. Therefore, they can sustain a long-term logging operation for a period of about 5 years on a sustainable basis, if in accordance with the management objectives for the Local Forest.

Volume of all species by use

No	Description	Volume	Explanation
1	Sawlogs	2,433m ³	These are merchantable trees with the average diameter of 40cm dbh and above and are of exceptionally high valued suitable for timber production
2	Poles	7,187m ³	These are tree species with relative straight bole length with the average diameter at breast height of 5cm to 29cm
3	Fruits	2,751m ³	The tree species include all fruit bearing either edible or not edible
4	Medicinal	1,007m ³	All medicinal plants
5	Firewood		These include all dead and or diseased trees which can be used for firewood
6	Others	185m ³	These include all tree species which are not classified in any of the above categories

Table 3: Trees in Lumimba local forest in terms of forest product categories.

Biomass and carbon above ground

The total biomass and carbon stocks (tons) by diameter class for all species respectively of 140.5 and 70.3 estimates methodological framework applied is that developed by the IPCC documented in the 2006 guidelines for national greenhouse inventories volume 4, chapter 2 and 4. The correlation of total biomass and carbon both above and below ground is in the figure below is within the IPCC requirement of half of biomass constitute carbon stock.

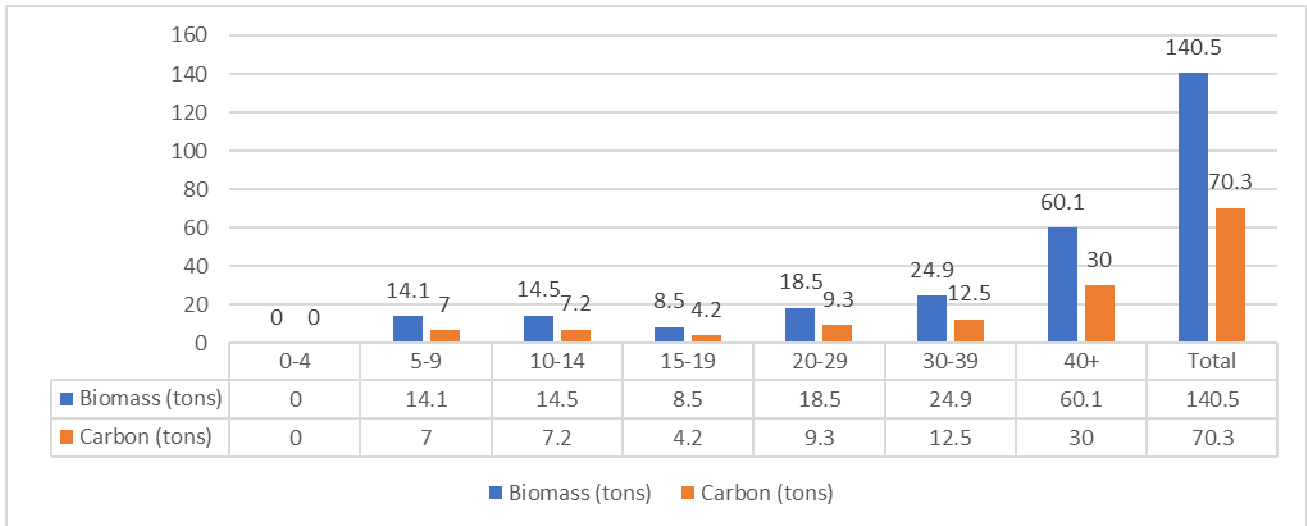


Figure 11: Biomass and Carbon above ground by diameter class/ha for all species

5 STAKEHOLDER DEMOGRAPHICS

5.1 Introduction & Methodology

A Forest livelihood survey was conducted by the Zambia Statistics Agency (ZAMSTATS) Eastern Regional office, between October and November 2019. The main objective of the Forestry livelihood Survey is to measure the well-being of the Lumimba Forest surrounding population and to measure the utilisation and management of trees resources. Also, to determine the benefits the surrounding communities derive from forest reserve.

The demographic characteristics of any area are important in understanding the living conditions of the people through the impact they have on the prevailing situations. Furthermore, data on the demographic characteristics provide background information and the necessary framework for the understanding of other aspects of the population, including economic activities, poverty and food security.

Considering the household population distribution of Lumimba Local forest reserve can be translated as having an Average size of the household membership of about 5 per household.

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

Let $K = N/n$ Where:

N = total number of households assigned sampling serial numbers

n = total desired sample size to be drawn from an EA

K = Sampling interval in each EA calculated as $K = N/n$

The 2019 forest survey was Paper Assisted Personal Interviews (PAPI) collected. All the field questionnaires were checked for completeness by the field supervisors. After data collection, all questionnaires were submitted for data entry using statistical software SPSS, Version 20.

After data entry was completed, the data were subjected to extensive checks on their validity and consistency in order to facilitate analysis using statistical package SPSS version 20, which was done by Mully Phiri and Dr Richard Kaela.

5.2 Household and Population dynamics

Lumimba local forest reserve as at 2019 livelihood survey was surrounded by approximately 15 villages as indicated in Annex III with a total population of 1,875. The main ethnic groups in the area are the Bisa. 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, Soya beans and groundnuts. The land tenure of the population surrounding the Lumimba local forest reserve is mostly under customary land tenure system and not state land as the households have 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 Lumimba Local forest reserve was found to be mainly primary level that contributed **80 percent**, while tertially contributed about **15 percent**. The rest being No formal education and secondary education indicating **2 percent** and **2 percent** respectively. As shown in the figure below:

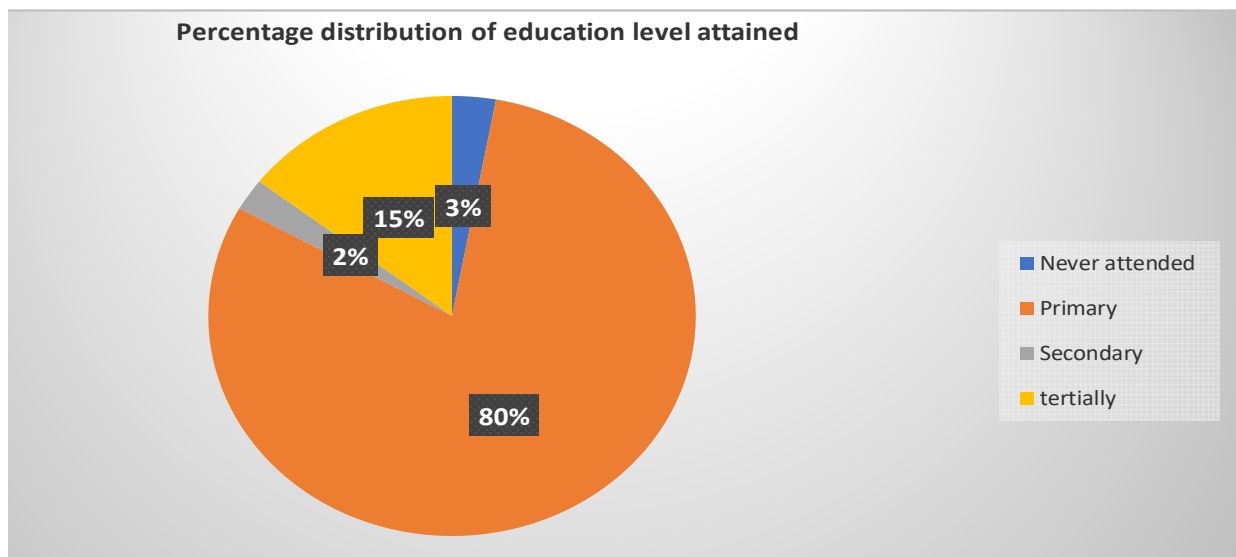


Figure 12: Level of Education of household heads of localities surrounding the Lumimba Local Forest

Economic activity

Lumimba LF reserve population depends on farming as their main occupation. The results showed that 70 percent of the household population surrounding Lumimba LF reserve had farming as their main occupation, while the rest of economic activities contributed 25 percent those in paid employment and 4 percent in small businesses, unstated 1 percent

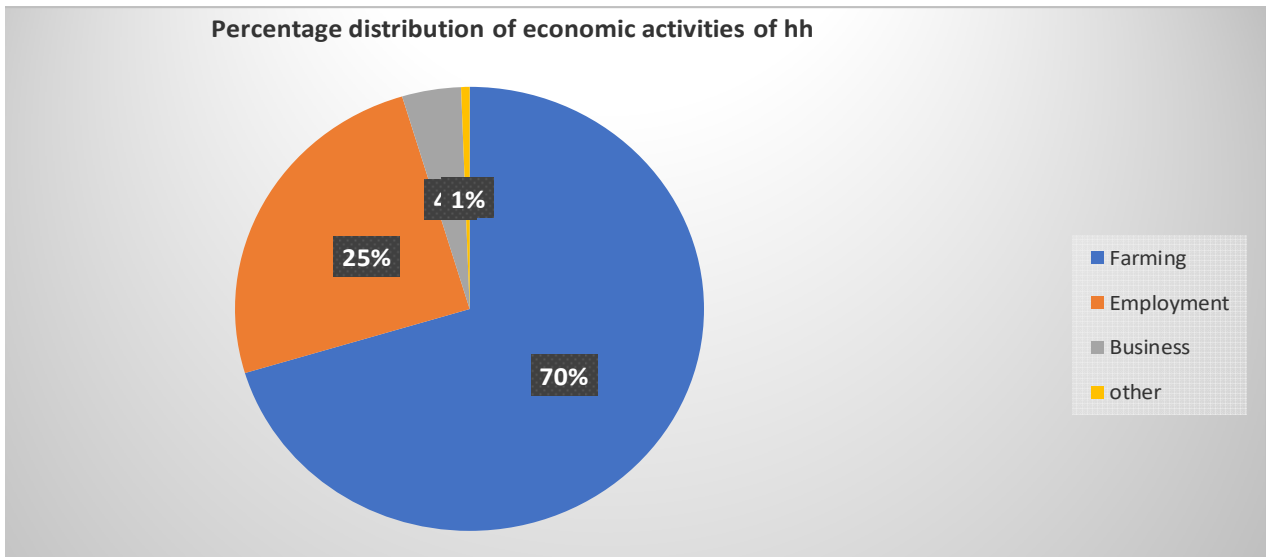
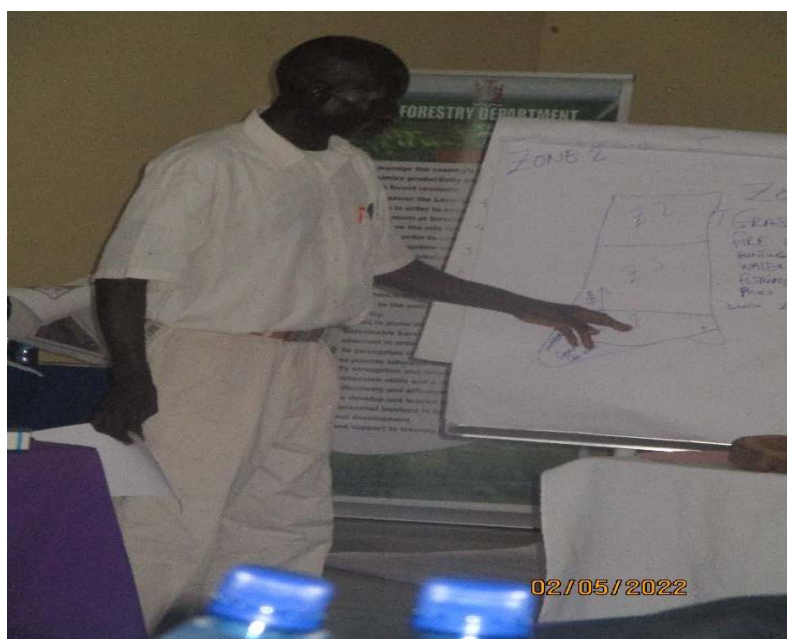


Figure 13: Level of Economic activity of household surrounding the Lumimba Local Forest

5.3 Utilization and zoning of forestry resources by stakeholders

Lumimba LF reserve consultative meeting held on 2nd May 2022, the stake holders identified the uses of the forest reserve and zoned the Lumimba local forest reserve as below:



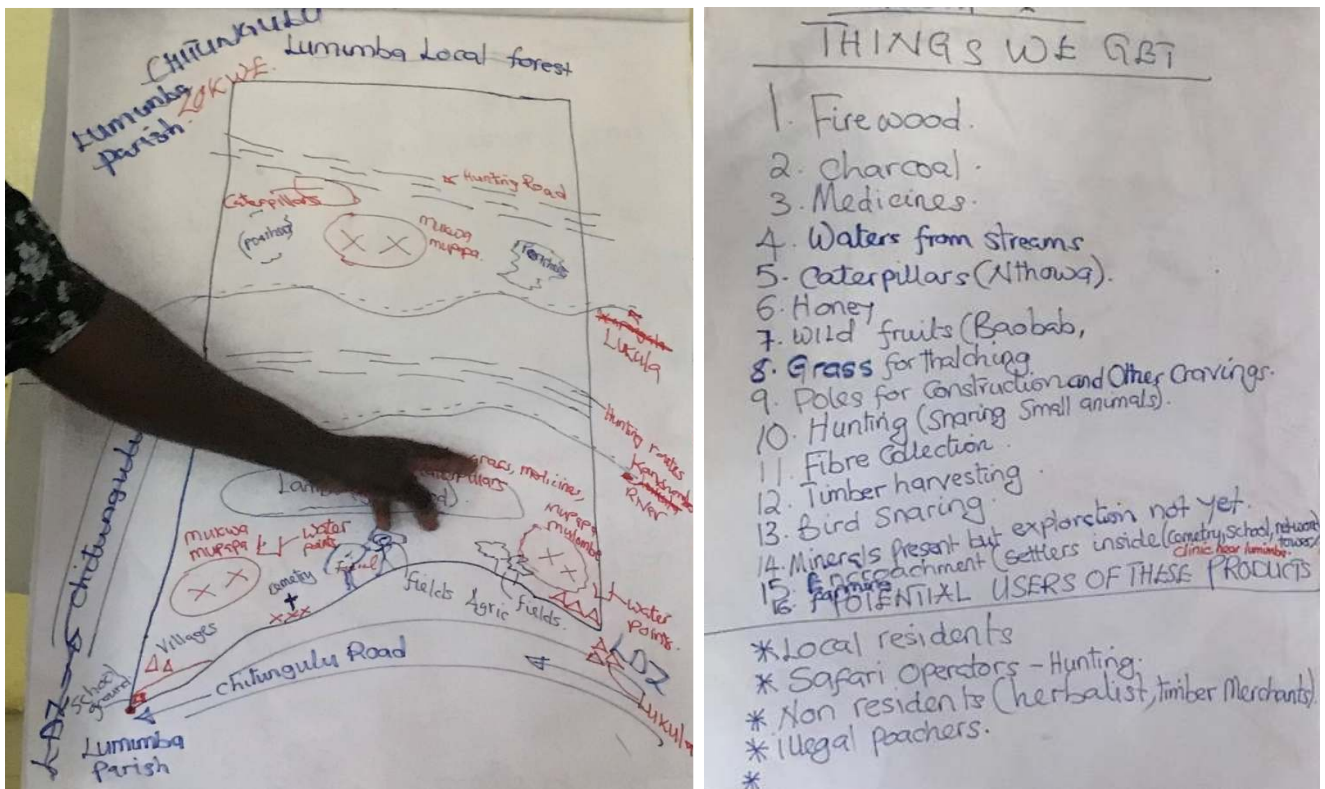


Figure 14: community zoning of Lumimba Local Forest

The forest use zones were identified as follows:

Zone 1.

- Grazing
- Hunting
- Water sources
- Firewood
- Fishing

Zone 2.

- Grasses
- Fishing

Zone 3.

- Caterpillars
- Hunting
- Timber

Types of Energy Used For Cooking

Almost all households in the localities surrounding Lumimba Local Forest reserve use firewood as their energy for cooking. The livelihood survey revealed a percentage of about 94 percent using firewood as energy for cooking, while 6 percent use charcoal for cooking

As in figure below.

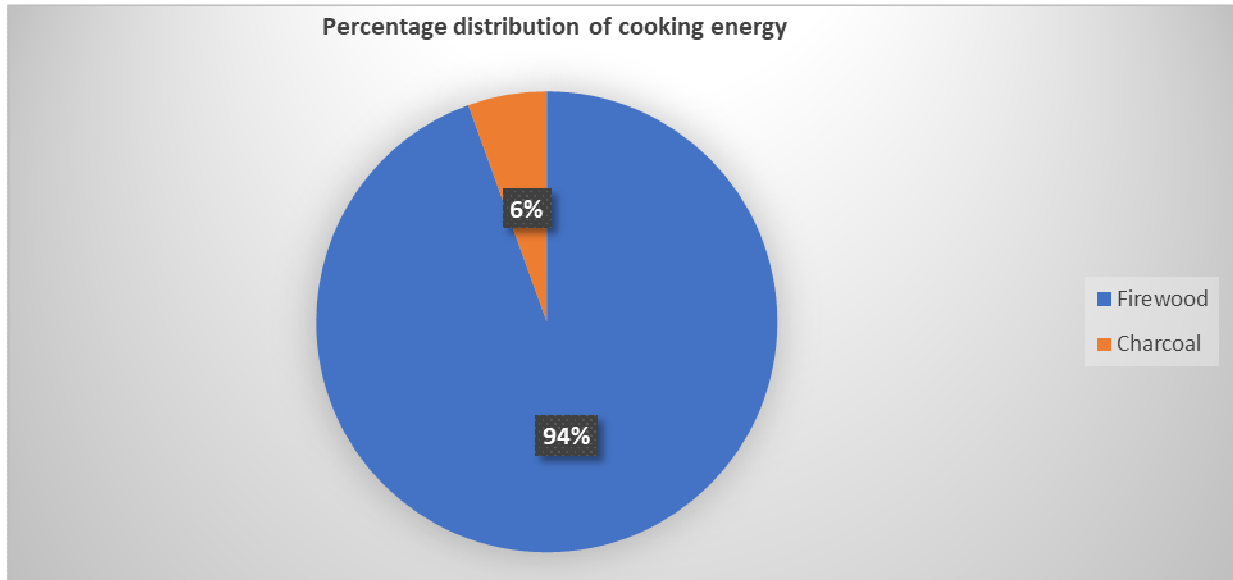


Figure 15: Main Types of Energy Used for Cooking

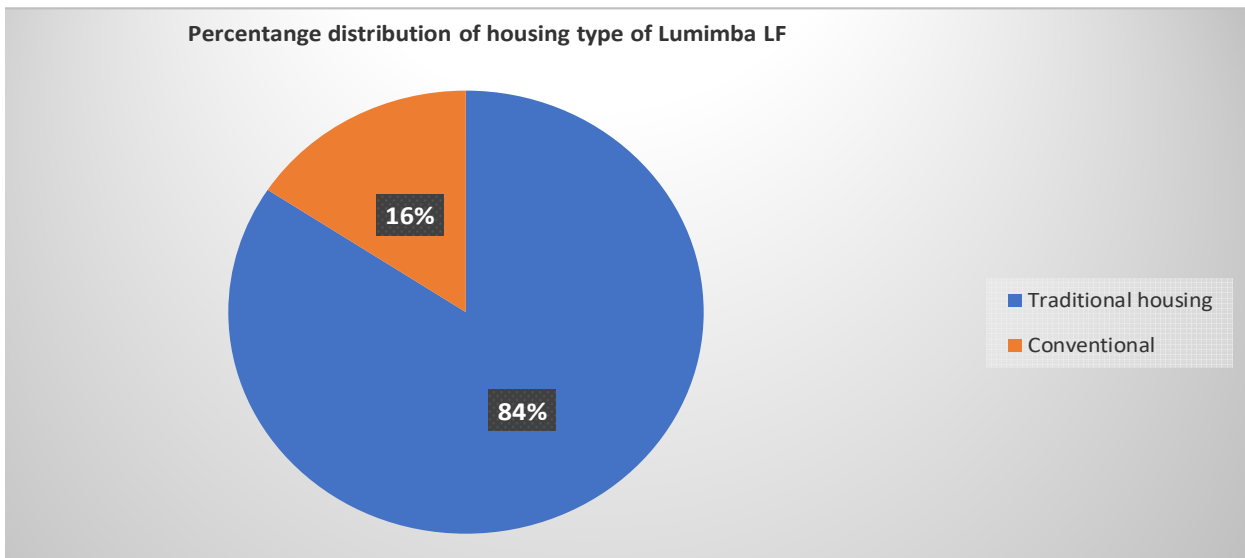


Figure 16: main housing type

The figure above shows that 84 percent of households live in traditional structures, these are referred to a housing structure usually made of mud material around the walls and usually has a thatched roof.

The results tell that with 94 percent depending of the forest for energy and 94 percent depending on same local forest for housing, means that the forest is under pressure and mitigation measures are required in the management plan.

Main tree resources used by households for Firewood

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

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

Main Tree Resources Used
Brachystegia Bohemii
Brachystegia spiciformis
Julbernadia globiflora
Diplorynchus condlocarpon
Pericopsis angolensis
Pseudolachnostylis maprouneifolia
Brachystegia boehmii
Combretum collinum
Bauhinia petersiana
Piliostigma thoningii
Brachystegia manga
Parinari curatellifolia
Julbenadia Paniculata

Table 4: Main Tree Resources Used by households surrounding the Lumimba Local Forest

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

Non wood Forest products

The main Non wood Forest products used by households surrounding the Lumimba Local forest reserve are as shown in the table below.

Non wood Forest products
Mushroom
Fruits
Grass
Medicine
Caterpillars

Table 5: Main non wood resources Used by households surrounding the Lumimba Local Forest

Land Ownership and Use

The livelihood survey for the communities surrounding the Lumimba Local Forest revealed that most of the land owned by the households was for Agricultural activities which indicated 48 Percent, followed by other uses at 15 percent, fallow land 18 percent, Land maintained as natural forest 14 percent and land used for growing trees at 5 percent.

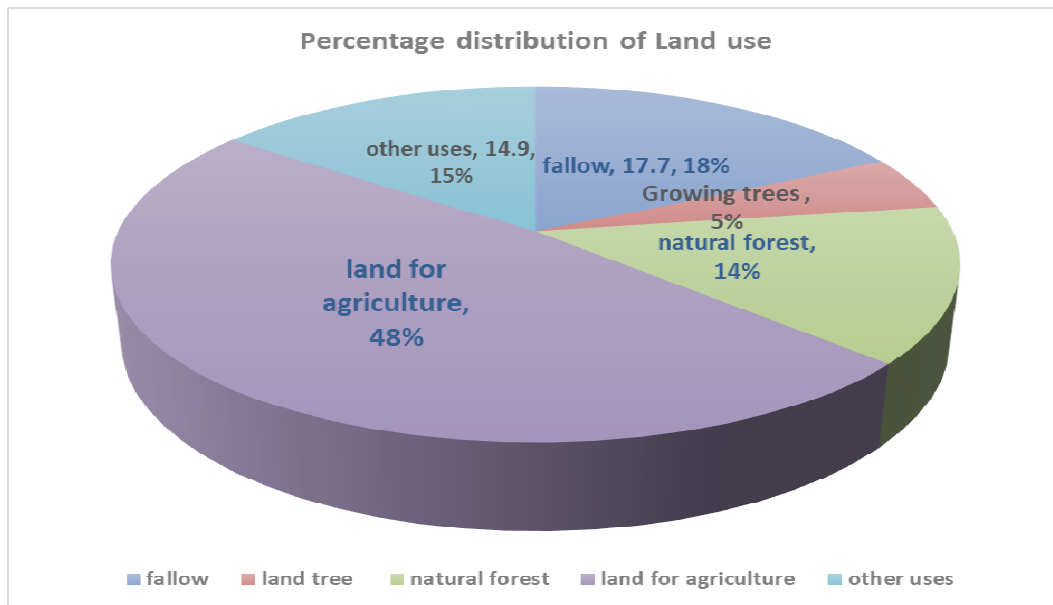


Figure 17: Land Ownership and Use

5.4 Willingness of community to participate in forest management

The livelihood survey revealed that 100 percent of all the households surrounding the Lumimba Local Forest were willing if called upon to voluntarily support management of the forest reserve with Forestry Department and other stake holders in the community.



6 PROPOSED MANAGEMENT ACTIONS

The following management actions proposed for Lumimba Local Forest reflect the statutory purpose of the reserve as set out in section 19 of the Forests Act of 2015. These include:

<p>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—</p> <p>(a) the security of forest resources;</p> <p>(b) the protection of ecosystems, particularly the protection of land and water supplies of local strategic importance;</p> <p>(c) the utilisation of forest resources at the local level; and</p> <p>(d) meeting the social, cultural and economic needs of the local community.</p>	<p>Purpose of Local Forest</p>
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Further, the Local Forest falls with the Lumimba Game Management Area, with management strategies indicated under the Wildlife Act, 2015.

6.1 Zoning the forest

This management plan recognizes the 2 major zones identified during the stakeholder consultation of May 2022, which identified use of the forest, the main users of the forest, issues affecting Lumimba Local Forest, local solutions and permitted activities. A further zone (3) covers the immediate area surrounding the Local Forest to act as a buffer which will be the focus of development as well as emissions reductions related activities.

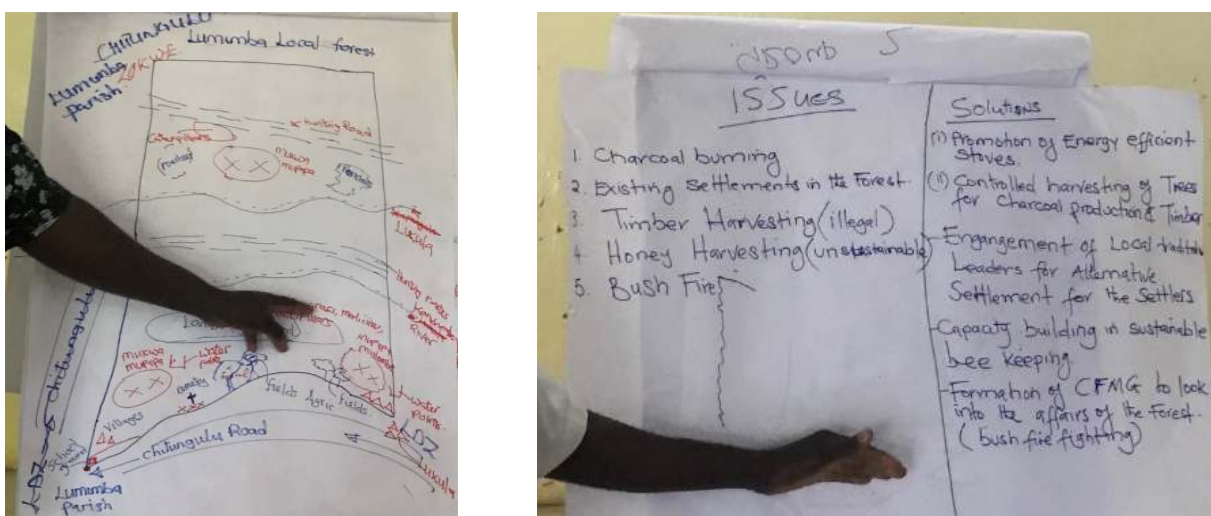
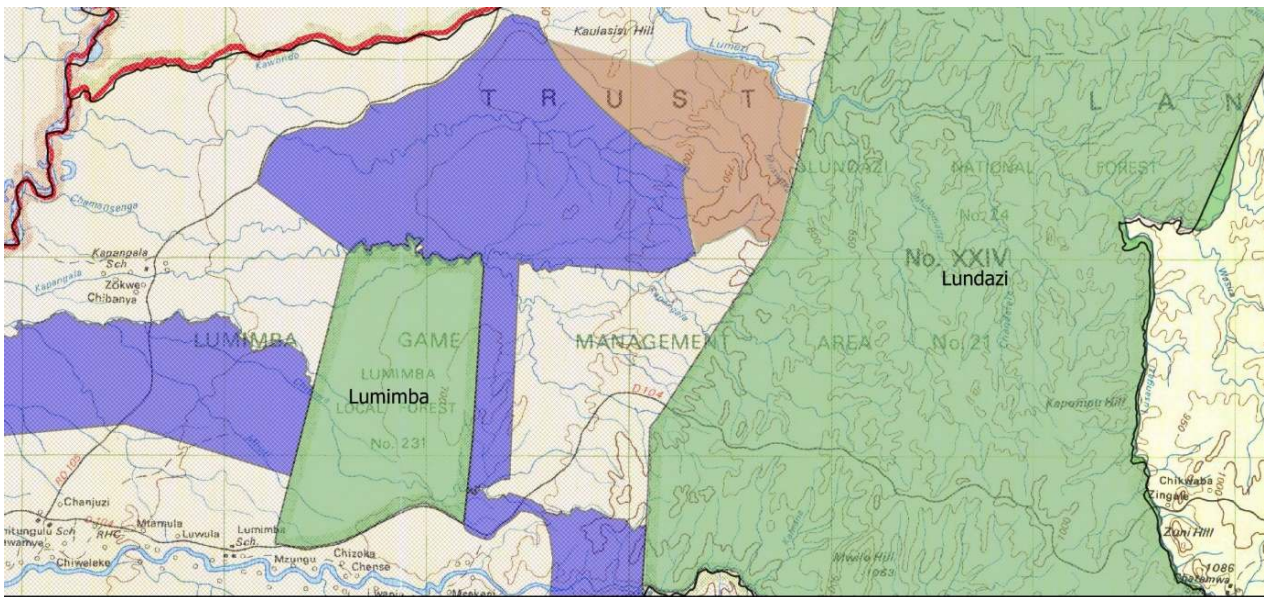


Figure 18: Zoning of Lumimba Local Forest based on community consultation

The following management approaches are proposed for the identified zones:

Zone 1: Forest Protection, Management and Conservation of Biodiversity through community forestry

Lumimba Local Forest is an important forest ecosystem containing different plant species and fauna. The Local Forest also falls within the Lumimba Game Management Area and lies directly north of and forms a common boundary with a number of community forest areas.



However, the level of unsustainable use is anticipated to intensify with increasing human populations resulting in higher levels of resource exploitation and degradation over time. Protection of this forest habitat is therefore essential to ensure the continued ecosystem services and local livelihood needs. 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. This area represents the southern boundary area of the reserve which follows the Chitungulu public road. This is an area where informal settlement is appearing. 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, agroforestry and tackling the core issue of encroachment through a variety of initiatives.

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.

Zone 3: Development buffer area: This is the area immediately surrounding the southern boundary of the reserved forest area where farming and settlements are located. Further, this area is provisionally identified for the location and construction of the district administration for the recently created district of Lumezi. This therefore will be a area of development with high demand for residential as well as associated agricultural development. 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.

6.2 Core forest management actions

The identified management actions are described as follows:

Action 1: Forest Conservation 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 Lumimba Forest Reserve 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 Lumimba Local Forest. Within this management action, the following interventions will be undertaken in Zones 1 and 2 of the Local Forest;

- Promotion of community forestry and the establishment of a community forest management group;
- Forest enterprise development (based on stakeholder consultations to be further developed through the CFM process). These may include:
 - Beekeeping using improved hives;
 - Mushroom collection and processing;
 - Community management of wild fish stocks through local harvesting rules;

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

Specific Objectives	Strategy	Actions	Responsible	Indicator
1. Enter into partnership with clear roles and responsibilities with surrounding communities	Promote community forestry approach	Conduct CFM Steps 1-7	FD	Signed CFM agreement. Annual work plan reports from the CFMG
2. To contribute towards meeting social, cultural and economic needs and improving the livelihoods of forest-adjacent communities.	Forest resource condition is developed and 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.
3. To reduce carbon emissions from deforestation and forest degradation by ensuring community benefit from carbon	Establish an incentive benefit sharing mechanism through the carbon trading	Stake holder participatory awareness meetings (Traditional leaders,	FD/NGOs	Tonnage of GHG sequestered increased thereby income shared to community is improved year on

credits.	scheme to be established by Government in Eastern province	Government, NGOs and the community)		year.
4 Reduce forest dependency by local communities.	Promoting diversification of activities, particularly on-farm activities such as agroforestry and establishment of wood-lots, to create alternative Sources for forest products.	Involve local communities in woodlot establishment.	FD/ Adjacent communities	Number of people dependent on the forests reserve reduced by half at mid term review

Action 2; Forest Protection, Restoration, Management & Conservation of Biodiversity

Lumimba 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. Already poaching has been identified as an issue by the stakeholders. Protection of this forest habitat is therefore essential to ensure the continued ecosystem services and local livelihood needs. In addition, awareness of the importance of ecosystem services, conservation of biodiversity and climate change mitigation services of Lumimba 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.

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

- Fire management, boundary and firebreak maintenance
- Joint forest patrols (FD/HFOs)
- Promotion of agroforestry and woodlots in surrounding villages.
- Promotion of energy saving cook stoves and production biomass for energy
- Promotion of environmental education to create wider awareness of the forest, its importance, and the need for its conservation (review Biodiversity Conservation actions to be included here explicitly)
- Promotion of environmental standards for forest operations, use of chemicals and other hazardous substances to health and safety of employees and communities.

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

No	Specific Objectives	Strategy	Actions	Responsible	Indicators
1	To protect Forest Reserve from late fires	Encourage 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

2	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 signpost on roads entering the Forest	FD/ Community	Distance in km of forest perimeter cleared
3	To conserve and enhance the biodiversity of the forest reserve.	Enhance understanding of the forest ecosystem.	-Awareness on biodiversity with regard to indigenous knowledge. -Promote local participation and ownership through meetings.	FD/NGOs	
4	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
5	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

6	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
7	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 15% by mid year review.
8	To improve forest cover in the fringe areas of the forest reserve	To Provide Forest extension services.	Promotion of agroforestry and Woodlot establishment for communities surrounding the forest. Training the communities in assisted natural regeneration	FD	Hectarage of forest in the fringe areas increased year on year.
9	Improve local awareness of biodiversity and its value.	Seek greater participation of local communities in research and other biodiversity	1. Conduct research that documents and utilizes the indigenous knowledge of Forest-adjacent	FD/Forestry Research	Levels of community participation in forest management activities is sustained

		activities Such as eco-tourism, with the result that biodiversity values will become of more direct relevance to them.	communities. 2.Promote local participation and benefits from eco-tourism as a means of creating better awareness of biodiversity		over time.
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6.3 Environmental and social safeguards and other crosscutting issues

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

In brief, safeguards will ensure:

- Gender equity and empowerment including addressing issues of gender based violence. Women shall be integrated into all aspects of management of Lumimba 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 Lumimba 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 workplan and operational plans should include a process of social and environmental screening. These should be reviewed and updated in accordance with the type of activity being planned and general screening reviewed annually.
- A Grievance redress mechanism will be operational at the District and Provincial level to allow a mechanism for grievances to be raised, documented and addressed. Documentation and tracking is core to this issue.

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

Environmental Education

Environmental education is the key to ensuring the future of Lumimba local Forest reserve. With improved understanding and appreciation of its importance especially amongst the surrounding local communities, there will be less pressure on this forest with regard to destructive activities. In the long term, improved environmental education will lead to a better understanding of the importance of conserving Lumimba Local Forest. The following interventions will be undertaken in order to create wider awareness of the forest, its importance, and the need for its conservation:

No	Specific Objectives	Strategy	Actions	Responsibility	Indicators
1	To create wider awareness of the forest, its importance, and the need for its conservation	1. To target a wider range of groups in the community through different actions including school children, and headmen.	-Conduct meetings and drama performances to assess community understanding on forest use and conservation. -Sensitization on Climate change through radio. - Produce pamphlets on the need for forest conservation. (Local language).	FD/MOE/ NGOs	Number of awareness raising activities undertaken
		2. To encourage the involvement of local clubs and schools to use the forest conservation	-Facilitate the formation of forest conservation clubs in surrounding	FD/MOE	Number of awareness raising activities undertaken

		Clubs as an educational resource.	schools.		
		3.Strengthen school environmental education programmes	-Conduct environmental talks in schools on forest conservation and climate change. Conduct study visits to other areas and projects to gather practical and potentially useful experiences from elsewhere.	FD/Other Partners	Number of awareness raising activities undertaken

7 STAKEHOLDERS ROLES AND RESPONSIBILITIES

All key stakeholders will be involved in the implementation of the Lumimba Forest Management Plan in line with the following roles and responsibilities:

Forestry Department

The Forestry Department (FD) have a key role to play in promoting sustainable forest management and shall inform all relevant government departments on the management plan and raise awareness on the programmes and activities. The Department shall facilitate the implementation of the FMP at District and local level.

Role of the Local Authorities

The Local authority have a key role to play to fully integrate the management plan into local development plans with good cross sectorial linkages. The Local Forest is a natural resource asset within the district boundary supporting local economic development and wider well being of the community.

Role of the Traditional Authorities

Traditional leaders play a vital role in providing mentorship and guidance to communities and helping resolve any conflicts and enforcement of customary laws relating to natural resource management. In terms of the community forestry approach, the chief plays a key role in providing consent to the process of recognition of the community and to the signing of the community forest management agreement between the community and the Director of Forestry. This agreement further reinforces the role of the traditional leaders in the oversight of the community forest management groups, including controlling access and use of the forest, hearing cases that cant be dealt with by the community, ensuring reporting and conduct of the election of office bearers is in conformity with the community constitution.

Role of communities

As key rights holders must take the lead in controlling access to the forest, ensuring benefits from sustainable use are maximized. Through the community forestry process roles, rights and responsibilities for controlling access and use as well as protection and sustainable

management are clearly defined. The local community are therefore core to the implementation of the management plan.

Role of Honorary Forest Officers

As community members nominated by their peers and appointed by the Minister, Honorary Forest Officers are key to the protection of the Local Forest and therefore play an important role in the implementation of the Forest Management Plan. The District Forest Officials and officers allocated responsibilities for the management of Lumimba Local Forest require to coordinate the work of the HFOs in enforcing community resolutions and bylaws and where necessary enforce the statutory laws provided by the Forests Act, 2015.

Role of Private sector & Civil society organization

Both private sector entities and civil society organisations can play a key role in providing services (both forest and non forest) and promoting new investment, development of market linkages for community based forest enterprises. These can assist promoting economic value to the sustainable management of Lumimba Local Forest and therefore well being of surrounding communities.

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 be based on annual work plans that will be prepared for Lumimba Local Forest.

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 LLFMP 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 LLFMP 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	Records, reports and photographs. -Community Visits.	The Plan is successfully implemented Availability of funds

	yields.		
Environmental Education	No. 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.
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 6: strategic monitoring indicators

9 ANNEXES

Annex 1: Declaration Order & Inventory Map

SECTIONS 5 AND 6-THE LOCAL FOREST NO. P231: LUMIMBA (DECLARATION) ORDER

Order by the Minister

Statutory Instruments: 50 of 1970 & 66 of 1975

1. This Order may be cited as the Local Forest No. P231: Lumimba (Declaration) Order.
Title

2. It is hereby declared that the area described in the Schedule hereto is a Local Forest.

SCHEDULE LOCAL FOREST NO. P231: LUMIMBA

Starting at Lumimba Mission, the boundary follows a demarcated line on a true bearing of 15 degrees approximately for a distance of 14,821.08 metres approximately to a beacon on the south bank of the easterly direction Kapangala stream: thence along the south bank of this stream in an easterly direction for a distance of 9,090.9 metres approximately to a beacon; thence on a demarcated line on a true bearing of 185 degrees approximately for a distance of 12,129 metres approximately to a beacon on the north side of the track running from Lumimba mission to Lundazi: thence along the north side of this track in a generally westerly direction for a distance of 10,012.7 metres approximately to Lumimba mission, the point of starting.

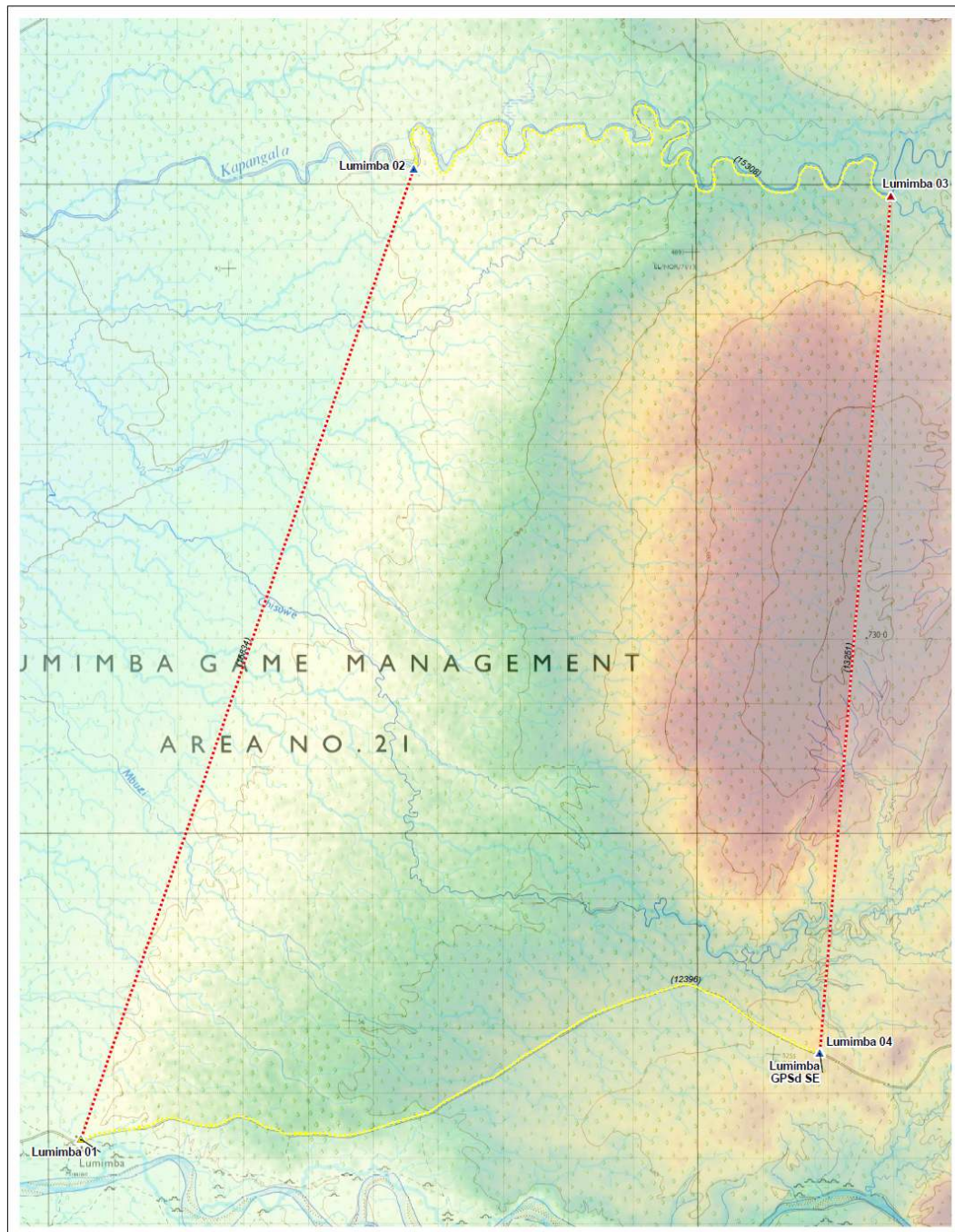
All bearings and distances are approximate, and all bearings are magnetic.

The above-described area, in extent 10,117.5 hectares approximately, is shown bordered green on Plan No. FR299, deposited in the office of the Surveyor-General, signed by him and dated 27th September 1968.

CONFIDENCE	BEACON/POINT NAME	LATITUDE DD	LONGITUDE DD	UTM EASTING	UTM NORTHING
Med	Lumimba 01	-12.43764	32.36107	8625093	430558
Low	Lumimba 03	-12.30627	32.47606	8639646	443028
Med	Lumimba 04	-12.42568	32.46580	8626439	441938
GPS	Lumimba GPSd SE	-12.42581	32.46577	8626425	441935
GPS	Lumimba 02	-12.30227	32.40855	8640073	435685

Lumimba Local Forest


13032 Ha.



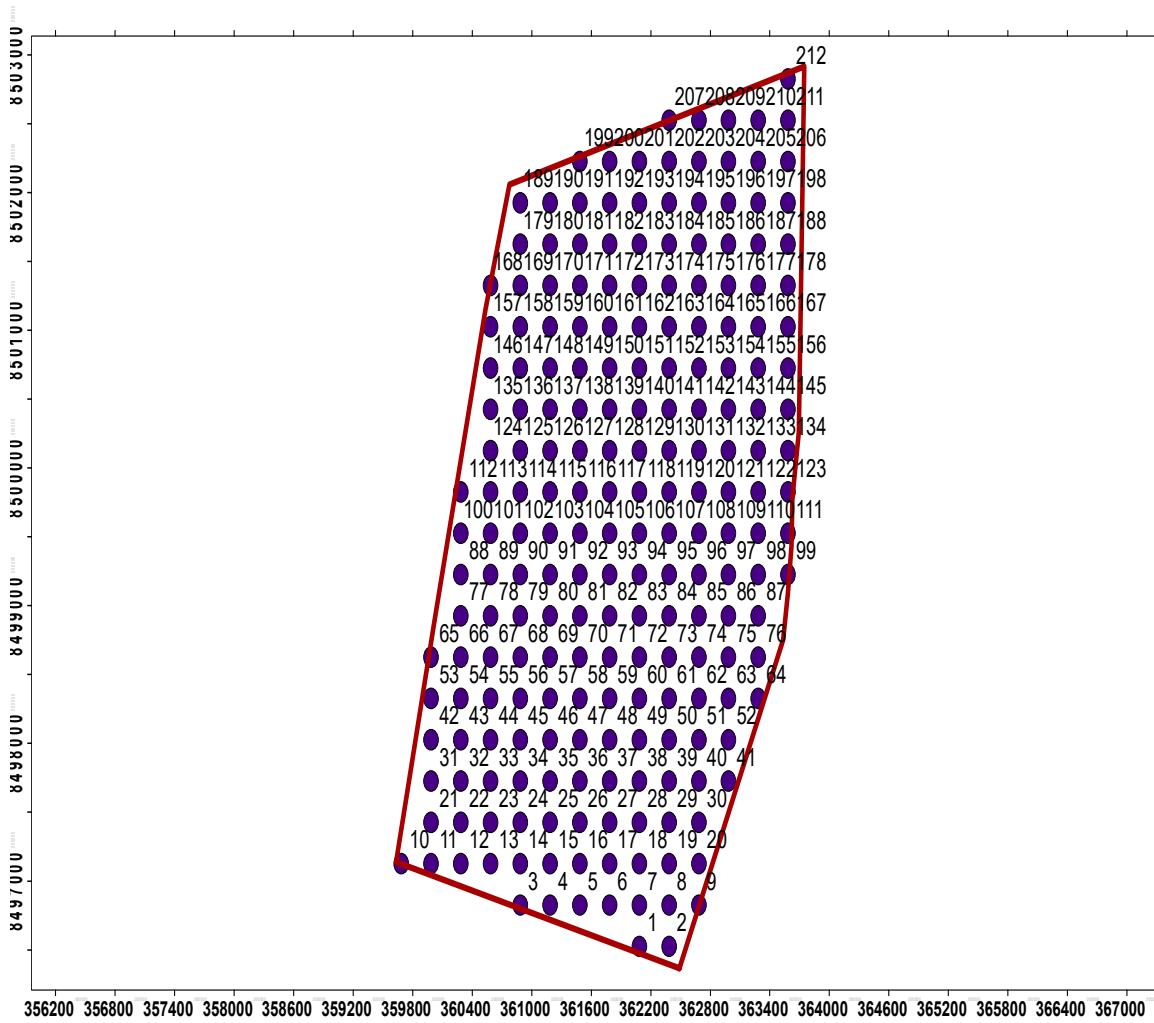
Beacon/Corner	High	Topo	Cut Line	Digitized FSRP Boundary	Med	COGO	(Boundary segment in meters)
GPS	Med	Low	Cut Line	High	Low		

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

0 0.5 1 2 3 4 5 6 7 Kilometers



Map of Lumimba Local Forest with Inventory Sample Plot layout



Annex II: Inventory Data**DENSITY OF SEEDLINGS**

Species	Species Code	Density
<i>Afzelia quanzensis</i>	13	7,669
<i>Albizia adianthifolia</i>	15	14
<i>Brachystegia boehmii</i>	46	1,139
<i>Brachystegia floribunda</i>	48	43
<i>Brachystegia longifolia</i>	49	72
<i>Brachystegia utilis</i>	55	14
<i>Dalbergia melanoxylon</i>	101	38,668
<i>Dalbergia nitidula</i>	102	865
<i>Diplorhynchus condylocarpon</i>	114	2,711
<i>Erythrophleum africanum</i>	127	14
<i>Euphorbia candelabrum</i>	139	144
<i>Faurea saligna</i>	145	505
<i>Faurea speciose</i>	147	663
<i>Ficus brachylepsis</i>	149	216
<i>Ficus wakefieldii</i>	157	9,045
<i>Garcinia huillensis</i>	159	2,293
<i>Grumilea buchanani</i>	172	187
<i>Isoberlinia angolensis</i>	185	55,555
<i>Julbernardia globiflora</i>	188	10,854
<i>Julbernardia paniculata</i>	189	1,774
<i>Khaya nyasica</i>	190	87
<i>Kirkia acuminata</i>	192	72
<i>Landolphia kirkii</i>	193	260
<i>Lannea discolor</i>	194	851
<i>Monotes africanus</i>	221	9,247
<i>Olax obtusifolia</i>	226	361
<i>Ozoroa reticulata</i>	229	476
<i>Parinari capensis</i>	232	130
<i>Parinari curatellifolia</i>	233	15,150
<i>Pericopsis angolensis</i>	239	3,950
<i>Phyllocomus lemaireanus</i>	243	461
<i>Pseudolachnostylis maprouneifolia</i>	258	24,325
<i>Rothmannia engleriana</i>	272	548

<i>Securidaca longipedunculata</i>	280	29
<i>Stereospermum kunthianum</i>	287	389
<i>Strychnos innocua</i>	289	50,654
<i>Strychnos pungens</i>	292	43
<i>Strychnos spinosa</i>	293	14
<i>Swartzia madagascariensis</i>	295	101
<i>Syzigium guineense</i>	297	72
<i>Uapaca kirkiana</i>	310	447
<i>Uapaca nitida</i>	311	288
<i>Vitex doniana</i>	321	332
<i>Ximenia americana</i>	328	29
<i>Xylopia odoratissima</i>	332	159

Annex III: Demographics of major forest fringe communities

Demographics of major forest fringe communities of Lumimba Local Forest

Locality name	POPULATION		Total population	HOUSEHOLDS		Total number of HH
	MALE	FEMALE		Total Male headed HH	Total female headed HH	
Total	883	992	1875	213	131	344
Chanjuzi Game Camp	48	38	86	14	1	15
Chief Chitungulu	18	23	41	5	1	6
Chikomangala	9	3	12	2	0	2
Chikomeni	12	6	18	1	2	3
Chilangu	16	22	38	4	2	6
Chilobe	12	22	34	2	6	8
Chilubezi P. School	1	3	4	1	0	1
Chilundo	33	35	68	3	9	12
Chimekete	14	8	22	3	2	5
Chimkoko	3	3	6	1	0	1
Ching'andu	18	25	43	5	2	7
Chinse	7	5	12	2	1	3
Chitungulu Clinic	8	4	12	1	0	1
Chitungulu p. School	4	7	11	1	1	2
Chiundila	5	2	7	1	0	1
Chiwela	2	3	5	1	0	1
Chulu	11	10	21	3	1	4
Daniel	6	2	8	1	0	1
Eludi	25	39	64	7	10	17
Gontho	15	11	26	4	2	6
Headman Mbuzi	3	4	7	2	0	2
Kachule	11	13	24	4	1	5
Kalikuwa	1	2	3	1	0	1
Kalimbila	6	7	13	1	1	2
Kalimbila 2	4	7	11	3	0	3
Kalopa	18	23	41	5	2	7
Kamlaza	13	15	28	3	0	3
Kamphata	12	15	27	2	2	4
Kamphilu	18	21	39	5	1	6
Kanyuzu	42	46	88	7	7	14

Kasongo	32	19	51	3	5	8
Kasula	3	6	9	2	0	2
Katube Camp	16	15	31	6	0	6
Katundila	12	16	28	4	1	5
Kaweche	1	1	2	1	0	1
Kazula	10	16	26	3	3	6
Kazyula	12	12	24	2	2	4
Lumimba Day	14	19	33	5	0	5
Lumimba Parish	15	16	31	4	1	5
Makalani	5	2	7	2	0	2
Malanda	3	6	9	3	0	3
Malembo	4	8	12	1	4	5
Mambi	17	16	33	2	5	7
Mambi SDA	1	3	4	1	0	1
Matandika	11	23	34	2	4	6
Mberuka	30	42	72	3	11	14
Mbuzi	21	18	39	5	2	7
Mbuzi Game Camp	15	17	32	4	2	6
Mbuzi P. School	11	14	25	3	0	3
Mgwantha	2	4	6	1	0	1
Mkweche	8	12	20	4	0	4
Mlamba	11	14	25	1	5	6
Mtonga	18	21	39	5	5	10
Muchambwe	9	6	15	2	0	2
Mundu	15	17	32	3	3	6
Munkhombwe	8	6	14	1	1	2
Museba	6	7	13	2	0	2
Musutu	8	10	18	2	2	4
Mutamula	21	14	35	2	2	4
Mzungu	6	4	10	0	1	1
Ndelema	5	3	8	1	0	1
Rabson	4	5	9	0	2	2
Saina	3	6	9	2	0	2
Sampha	54	72	126	12	9	21
Semphe P. School	9	10	19	3	0	3
Temba	4	5	9	1	1	2
Thomu	5	10	15	1	2	3
William	7	9	16	3	1	4

Wiziman	15	18	33	4	1	5
Zabwata	2	3	5	1	0	1
Zanimuone	4	5	9	2	0	2
Zondani	6	8	14	2	0	2
Zungwala	25	30	55	7	2	9

Annex IV: Stakeholder consultations

The Forestry Department in Eastern Province initiated a process to prepare forest management plans for 13 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 Lumimba Local forest reserves fall were targeted with the following objectives.

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

Visitations

1. Paramount Chief - Gawa Undi

Prior to meeting Chewa Sub Chiefs, the first visit was to pay courtesy call to the Paramount Chief of the Chewa people Kalonga Gawa Undi who was represented by his Induna Hon. Lucas Phiri in Chipangali district. Lumimba Forest Reserves Chief Mwase Ntembwe in fall in Kalonga Gawa Undi.



Figure 19: Meeting with Paramount Gawa Undi's senior Induna Mr. Lucas Phiri

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

The Senior Induna informed the team that through the Chewa Development Trust, Gawa is able to bring a halt to all illegal cutting in the Chewa territory, and he acknowledges that development in the territory can only come by working with other stakeholders. Paramount Kalonga Gawa Undi therefore welcomed the ideas of developing forest management plans for the targeted forest reserves and encouraged the team to move forward and report to Gawa challenges that we may be encountered with any of his sub chief during this engagement.

2. Meeting Chief Chitungulu of Lumezi District

At HRH Chief Chitungulu's Palace the team briefed the induna's as the Chief Chitungulu passed on mid that year, about the upcoming validation meeting for FMP which included Lumimba LF and solicited for their input in the FMP. A team of four Senior Indunas have been mandated to handle the affairs of the chieftom not until a new chief is installed. The indunas were briefed of the purpose of the visit that this was with a view to have an input from the chieftom in the draft Management plan for Lumimba LF.

However, the Indunas asked for more time so that they consult the other village headmen who are closer to the forest reserve and be visited later to get their input.

Annex V: Stakeholder validation meeting

REPORT FOR THE LUMIMBA LOCAL FOREST MANAGEMENT PLAN STAKEHOLDERS' VALIDATION MEETING HELD AT TIGONE GUEST HOUSE, LUNDAZI DISTRICT ON 2ND MAY 2022



1.0 Introduction:

The Forestry Department in 2019 undertook a forest inventory exercise to take stock of the forest resources in Lumimba Local Forest (LLF) among others with the view of collecting data to inform the preparation of Forest Management Plans (FMPs). The FMPs are prepared to guide the community-government partnership in the management of protected forest areas (FPAs) in the Eastern Province. Following the forest inventory exercise, draft FMPs were prepared for all the FPAs in Eastern Province. The Stakeholders Validation Meeting for LLF in Lundazi was organized to validate the FMP for the LLF which was developed by the Forestry Department.

The meeting brought together 31 participants: (4 females and 27 males) drawn from government departments, civic leaders, CSOs, private sector, community groups and traditional leaders.

2.0 Official Opening

Mr. Jimmy Phiri, District Commissioner for Lumezi officiated at the LLF FMP validation meeting. The District Commissioner informed the participants that the formulation of

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

3.0 Meeting's Expectations

Mr Katebe facilitated the session on meeting's expectations. And the stakeholders brought out the following expectations:

- i) to learn how to manage their forest and what to do;
- ii) to hear what Forestry Department had brought for them so that they would go and share with their respective communities;
- iii) develop the FMPs for Lumimba Local Forest
- iv) learn how to manage their local forest
- v) Implement lessons learnt

4.0 Meeting Objectives

As the meeting objectives were highlighted by the DC in his speech.

5.0 Structure of Meeting

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

5.1 Presentations

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

5.1.1 Policy and Legal Context

The presentation on Policy and legal context was done by Mr. Alastair Anton, Community Forest Technical Advisor, ZIFLP. The presentation covered the roles and functions of protected forest areas (PFAs); and why they are established. To enhance comprehension of the information in the presentation imagery was also used. Also highlighted in the

presentation was a brief overview of the Zambia Integrated Forest Landscape Project (ZIFLP) and its significance in the sustainable forest management. The major highlights from the presentation were:

- The objectives of ZIFLP that is “To improve the landscape management and increase environmental and economic benefits for the targeted rural communities in the Eastern Province” was highlighted;
- The ZIFLP as a GRZ project provided the Forestry Department with resources to enable it to fulfil its mandate and functions;
- Also highlighted in the presentation were the reasons that prompted government to implement the ZIFLP in Eastern Province which include the following on-going degradation, deforestation, unsustainable livelihood activities, low crop yields, increased adverse effects of climate change, and low community participation in forest management:
- The importance of forests in line with the legal framework were highlighted in the presentation such as soil conservation, carbon sequestration, water cycle and habitat protection;
- The ZIFLP was a REDD+ Project, to determine where Green House Gases (GHG) were being emitted and the sources of these emission, Green House Gases (GHG) baseline survey was conducted which revealed 3 main sources of GHG emissions in Zambia: degradation 82%, forestry loss to agriculture 8% and emissions from agriculture soils at 4 %. The underlying causes of the 3 main source of GHG emissions were also highlighted;
- Through ZIFLP government was not only intervening to arrest the situation but also to make the communities aware of the imminent consequences if no action was taken at national and subnational levels;
- An overview of selected of existing pieces of Forest legislation were shared such as the National Forest Policy 2014, National Strategy to Reduce Deforestation and Forest Degradation, National Forestry Act No 4 of 2015 among others. Contents such as vision, objectives and measures were also shared;
- Also presented were the policy and pieces of legal documents pertaining to LLF. It was highlighted that LLF was gazetted as a forest in 1968 a local supply of timber. Forest protection was important for both the present and future generation as provided for in the legal documents;

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

5.1.2 Situation Analysis

The presentation on situation analysis focused on the two surveys- Natural Resources Profiles and the other on the socio-economic profile, that were undertaken in the national forests 2019 and the results.

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

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

- Total number Protected Forest Reserves in eastern province was 73: 11 NFs and 62 LFs covering 469,142 ha which translates to 9.2% of the total surface area of the eastern province. the total boundary area covers 2,042.7km;
- LLF was gazetted in 1968 with total hectarage of 10,117.5
- How volume was calculated/measured was demonstrated
- The sampling design used to select the sample plots in the survey was systematic sampling design through which sample plots were created and data was accordingly collected from all the sample plots;
- Parameters that were considered in the survey were highlighted and explained.
- Total CO₂ for the net area of 449ha was estimated at 11,449.5tons
- The proposed programmes as contained in the draft FMP for LLF were also presented.

b) Social-Economic Profile.

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

- The Province undertook the Socio-Economic Survey in LDLF in 2019 alongside the Forest Inventory.
- At the time of the survey, the total population for the 15 villages surrounding LLF included in the survey that derived benefits from the forest was 1,875 out of which 883 were male and 992 were female. The sample comprised 344 households, out of which 213 were male headed households and 131 were female headed households;

- Farming (70%) was the main source of livelihood for the people surrounding the Forest, while (25%) are in paid employment and (4%) in business as main income generating activities, (1%) unstated
- Almost (94%) all the people sampled Majority depended on firewood for cooking while only 6% use charcoal.
- Traditional housing units comprise of 84 % of the population living in this type of housing units, while 16%are conventional housing units
- LLF was the main source of water for the sampled population;
- As much as 97% of the total sample population expressed willingness to protect and manage the LLF and only 3% expressed lack of willingness;
- 58.4% of the sampled population used protected boreholes as their main source of water supply while 40% and 0.6% used rivers and streams, and unprotected wells respectively as their main source of water supply;

Clarifications raised by participants included: -

The villages surrounding LLF had been willing to co-manage the forest since 2014 when the Forestry Department engaged pertaining joint management. Through the same process the community management plan was even developed. However, the Department went quiet; there had been no follow-up since then until now. The community had been waiting for the actualization of the plan.

4.2 Group Work

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



- Identify issues and suggest possible solutions;

- ✚ Identify priorities and strategies;
- ✚ Identify uses of the forest and map where they were most prevalent
- ✚ Zone the FPA and identification of practices which should be allowed or not allowed in the respective zones
- ✚ Who should be involved in the management of LLF, how should they be selected, their role, office tenure, what authority in terms of decision making should they make, who decides, how should the benefits be shared?

4.2.1 Group Presentations

The Groups made presentations to facilitate agreement of the strategies and partnership for management.

6.0 Collaboration Declaration Pledge

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

“We the interested stakeholders of LLF agree the need to increase the productivity of the LLF to enhance the environmental, social, cultural and economic values.

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

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

5.0 Next steps

The team facilitated the session on next steps. Below were the agreed next steps/ way forward

- Forestry Department team to capture discussions, issues, strategies and recommendations from the meeting and report the opportunities to the Provincial Forestry Office and the Forestry Department Headquarters
- The chiefs’ representative should report Their Royal Highnesses the proceedings of the meeting

- Forestry Department Team to:
 - Support follow up activities
 - Develop proposal to secure funding for development of LLF with stakeholders' involvement
 - Subject to Project extension, check for opportunities for supporting enterprise development

7.0 Vote of thanks, Closing Remarks

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

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

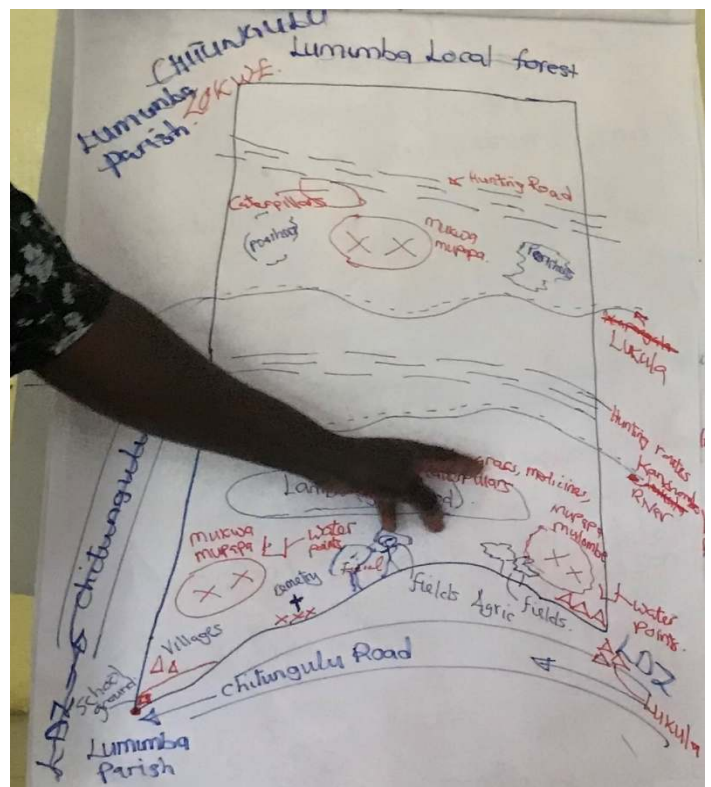
The following is a synopsis of the group work and write up from flipcharts and other materials:

GROUP WORK - 1

1. Identify in Lumimba local Forest

What- Uses of the forest

- Firewood
- Charcoal
- Medicine
- Water from the streams
- Caterpillar (Nthowa)
- Honey
- Wild fruits
- Grass for thatching
- Poles for construction
- Fibre Collection
- Timber Harvesting
- Bird snaring
- Minerals present but exploration not yet
- Encroachment (Graveyard, school football pitch. Agriculture Fields)



Sketch map to show where it is used and harvested.

Who- Uses the forest?

- Local Residents
- Safari Operators
- Traditional Healers
- Illegal Poachers

Where- it is used/harvested.

ISSUES	Solutions/opportunities
Encroachment in the Forest	Realign forest boundary
No sign Post	Sign posting all Forest areas, maps and books should be given to residents on Lumimba Forest
Poaching	Recruit informers
Illegal cutting of Timber	Recruit informers
Charcoal Productions	Sensitization on the importance of conserving the forest
Late burning /bush fires	Controlled early burning
Usage of fire to fetch firewood	Promotion of cook stove , Collection of dry firewood
Agriculture	Promotion of smart agriculture
Fish Poisoning	Sensitization - Avoid fish poisoning
Boundary Chieftdom Disputes	Let the local authority harmonize

3. Zoning of forest

List permitted practices/prohibited practices in each zone identified.

Permitted practices in the forest.

- Grass harvesting
- Hunting routes
- Caterpillars
- Dry firewood
- Fruits
- Early burning

- Carbon (Keep trees)
- Honey

Prohibited practices in the forest

- No Charcoal Production
- No fresh Timber cutting
- No Late fires
- No poaching
- No fish Poisoning

GROUP WORK – 2

2. Identify in Lumimba local Forest

What- Uses of the forest

- Firewood
- Charcoal
- Medicine
- Water from the streams
- Caterpillar (Nthowa)
- Honey
- Wild fruits
- Timber Harvesting
- Bird snaring
- Mushroom
- Brooms
- Minerals present but exploration not yet

Who- Uses the forest?

- Local Residents
- Safari Operators
- Traditional Healers
- Illegal Poachers
- Animals
- Safari hunters

ISSUES	Solutions/opportunities
Charcoal burning	Promotion of energy efficient stoves
Existing settlement in the forest	Engaging local leaders
Timber harvesting	Controlled harvesting of timber
Honey harvesting	Capacity building in sustainable bee keeping

Bush fires	Formation of CFMG to help into the affairs of the Forest (bush firefighting)
Floods victims settled in the forest.	Let the local authorities look for alternative land outside the forest for the victims.

4. Zoning of forest

List permitted practices/prohibited practices in each zone identified.

Permitted practices

- Grass harvesting
- Hunting routes
- Caterpillars
- Dry firewood
- Fruits
- Early burning
- Carbon (Keep trees)
- Honey

Prohibited practices

- No Charcoal Production
- No fresh Timber cutting
- No Late fires
- No poaching
- No fish Poisoning

List Suggestions on how to manage the forest.

- Let's form committee (Between Chitungulu 5 and Kazembe 5) and forest department, ZAWA, Councillors.

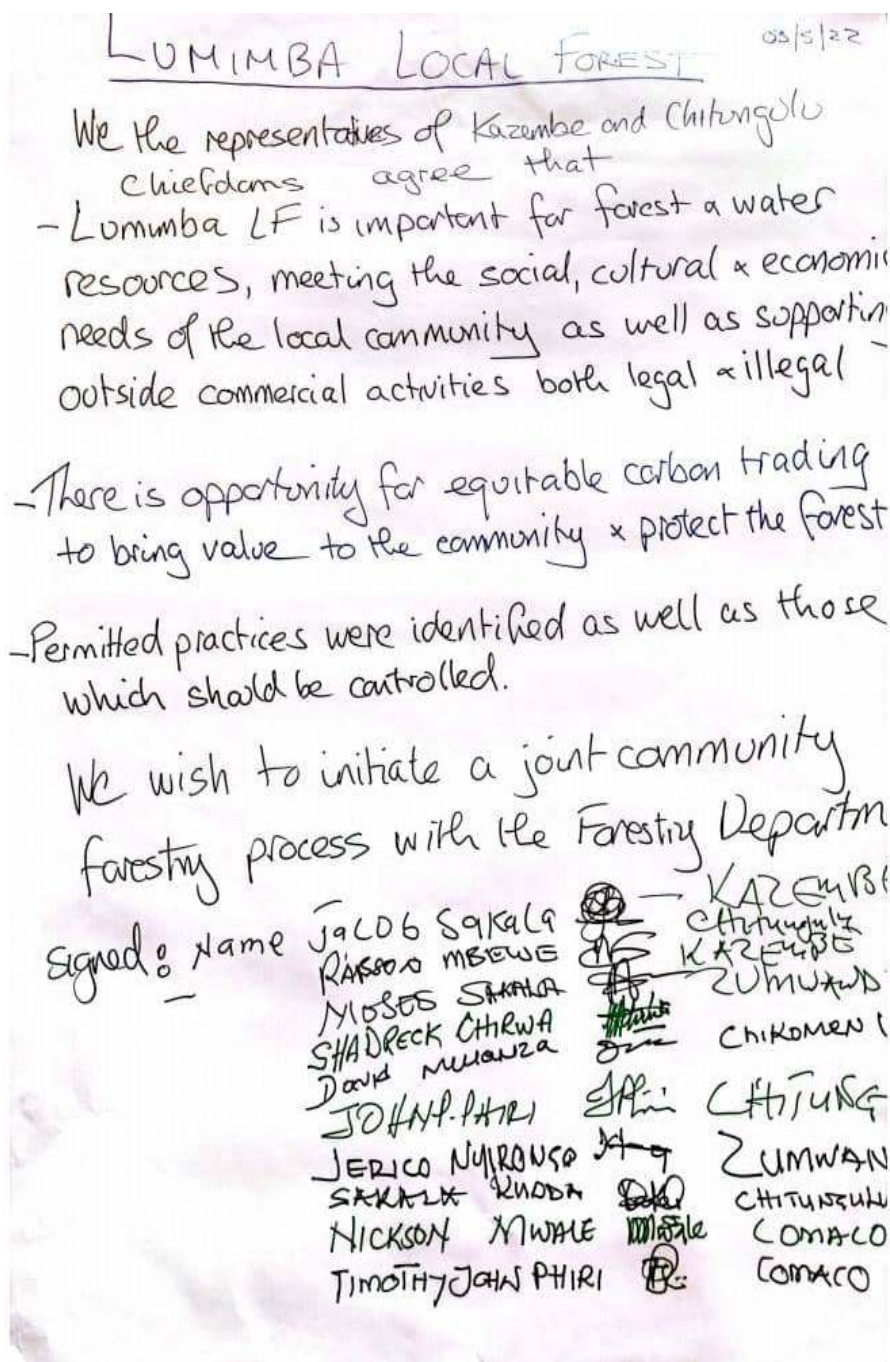
NEXT STEPS

- Compilation of the report
- Reporting to the chief and the Community
- Community forest processes
- FD to help CF processes.

Declaration

The stakeholders meeting for Lumimba local forest that was held on 2nd May 2022, at Tigone Guest house, in Lundazi district. The stakeholders signed a joint declaration pledging to collaborate in the sustainable management of Lumimba Local Forest.

Below are the contents of the Declaration Pledge prepared and signed by stakeholders.



Annex VI: References

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

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

Annex VII: Cost of Implementing management actions

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

Programme: Forest Conservation through Community participation and Livelihood Development															
Specific Objective	Prescribed treatment	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
To Enter into partnership with clear roles and responsibilities with surrounding communities	Establish community forest	No	8	1	145,000	145,000									145,000
	Forest enterprise development • Beekeeping • Mushroom collection & production		8	8	2000	16,000	17,600	19,360	21,296	23,426	25,768	28,345	31,179	34,297	37,727
To contribute towards meeting social, cultural and economic needs and improving the livelihoods of forest-adjacent communities.	Trainings; • Beekeeping • Mushroom drying • Gardening	No.	15	1	4000	60,000	66,000	72,600	79,860	87,846	96,631	106,294	116,923	128,615	141,477
To reduce carbon emissions from deforestation and forest degradation by ensuring community benefit from carbon credits.	Stake holder participatory awareness meetings (Traditional leaders, Government, NGOs and the community)	No	2	1	20000	40,000	44,000	48,400	53,240	58,564	64,420	70,862	77,949	85,744	94,318
	Establish an incentive benefit sharing mechanism			1	5,000	5,000									5,000
To reduce forest dependency by local communities.	Woodlot establishment for communities surrounding the forest.	No.	10	2	5000	100,000	110,000	121,000	133,100	146,410	161,051	177,156	194,872	214,359	235,795
Subtotal						366,000	237,600	261,360	287,496	316,246	347,870	382,657	420,923	463,015	659,317

Programme: Forest Protection, Restoration and Management and Conservation of Biodiversity															
Specific Objective	Prescribed treatment	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
To secure the boundary and define the extent of the boundary and prevent possible encroachment.	Carry out annual external boundary maintenance in accordance with the boundary maintenance schedule.	km	7	1	1500	10,500	11,550	12,705	13,976	15,373	16,910	18,601	20,462	22,508	24,758
	Forest beacon maintenance	No.	14	1	650	9,100	10,010	11,011	12,112	13,323	14,656	16,121	17,733	19,507	21,457
	Erection of sign post on roads entering the Forest	No.	15	1	300	4,500	4,950	5,445	5,990	6,588	7,247	7,972	8,769	9,646	10,611
To significantly reduce levels of illegal forest product harvesting.	Conduct sensitization meetings	No.	24	1	2000	48,000	52,800	58,080	63,888	70,277	77,304	85,035	93,538	102,892	113,181
	Conduct forest patrols	No	72	6	1100	475,200	522,720	574,992	632,491	695,740	765,314	841,846	926,030	1,018,633	1,120,497
To reduce carbon emissions from agric soils and dependency on inorganic fertilizer	Promotion of Climate Smart Agriculture	No.	8	4	3000	24,000	26,400	29,040	31,944	35,138	38,651	42,516	46,767	51,443	56,587
To protect Forest Reserve from late fires	Conduct prescribed and early burning.	596Ha	1	1	5500	5,500	6,050	6,655	7,321	8,053	8,858	9,744	10,718	11,790	12,969
	Training the local communities on fire management techniques	No	5	1	2500	12,500	13,750	15,125	16,638	18,301	20,131	22,145	24,359	26,795	29,474
To ensure protection against pests, fire, and human damage for the forest core and fringe areas of the forest reserve.	Inspections for diseases and pests, and detection of possible illegalities.	No	4	4	15,000	240,000	264,000	290,400	319,440	351,384	386,522	425,175	467,692	514,461	565,907
	Woodlot establishment for communities surrounding the forest.	No	20	1	1500	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
To conserve and enhance the biodiversity of the forest reserve.	Promote local participation and ownership through meetings.	No	8	4	2000	64,000	70,400	77,440	85,184	93,702	103,073	113,380	124,718	137,190	150,909
Improve local awareness of biodiversity and its value.	Awareness on biodiversity with regard to indigenous knowledge through drama.	No.	8	4	2500	80,000	88,000	96,800	106,480	117,128	128,841	141,725	155,897	171,487	188,636
	Conduct meetings and drama performances to assess community understanding on forest use and	No	12	1	2500	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
Subtotal						1,033,300	1,136,630	1,250,293	1,375,322	1,512,855	1,664,139	1,830,553	2,013,607	2,214,967	2,436,464

Programme: Plantation establishment and Mangement															
Specific Objective	Prescribed treatment	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
To promote nursery management as a tree seedling production facility for the plantation and wider distribution	Expand and manage the existing tree nurseries	No.	1	1	10000	10,000	11,000	12,100	13,310	14,641	16,105	17,716	19,487	21,436	23,579
To increase productivity in demarcated plantation areas	Undertake Silvicultural operations to maximise the production potential of the demarcated plantation areas.	No		1	250000	250,000	275,000	302,500	332,750	366,025	402,628	442,890	487,179	535,897	589,487
To improve livelihoods of the local community adjacent to the forest	Create employment for income generation to the communities around the forest.	No	1	1	80000	80,000	88,000	96,800	106,480	117,128	128,841	141,725	155,897	171,487	188,636
Subtotal						340,000	374,000	411,400	452,540	497,794	547,573	602,331	662,564	728,820	801,702
Grand Total						1,739,300	1,748,230	1,923,53	2,115,358	2,326,895	2,559,582	2,815,541	3,097,094	3,406,802	3,897,483



Ministry of Green Economy & Environment

The Zambia Integrated Forest Landscape Project 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).



Forestry Department

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