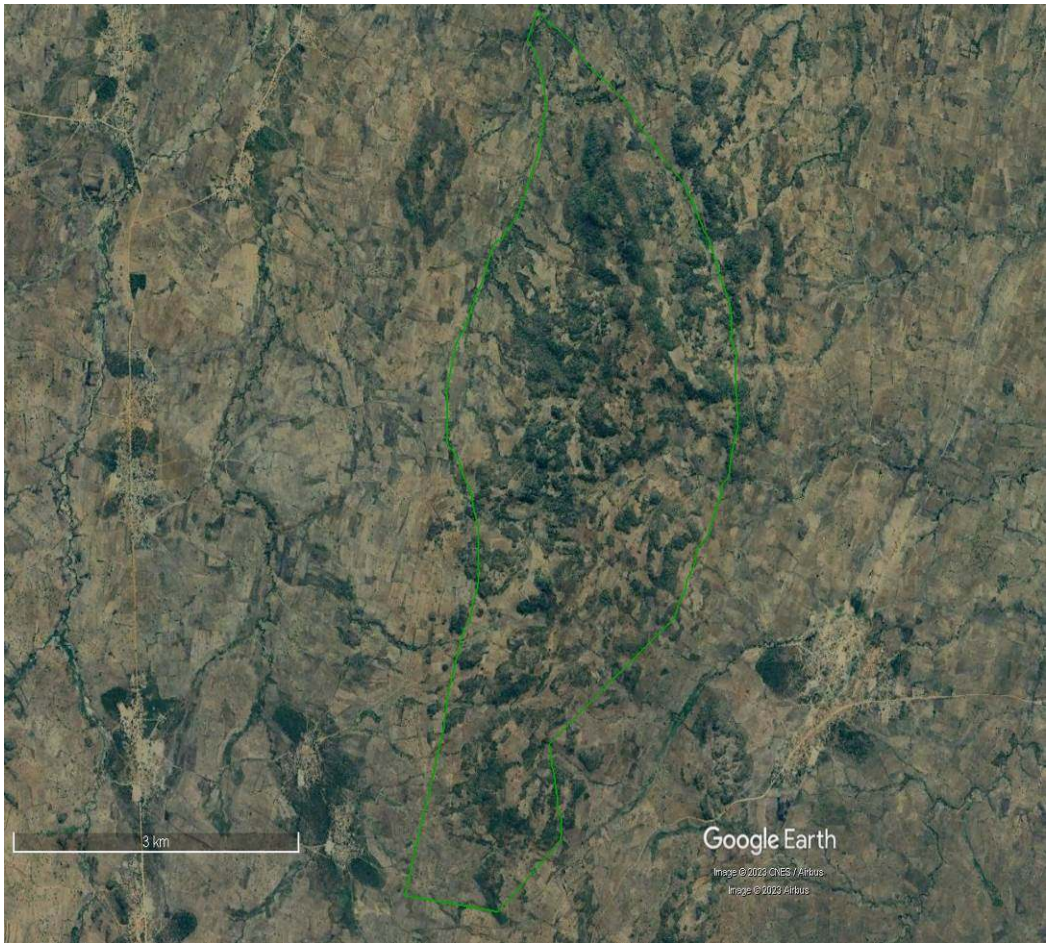
Publication Draft

REPUBLIC OF ZAMBIA

MINISTRY OF GREEN ECONOMY AND ENVIRONMENT



KONDONGWE LOCAL FOREST (P162)

MANAGEMENT PLAN

2024-2034

APPROVAL PAGE

KONDONGWE LOCAL FOREST No. P162 - 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 Kondongwe Local Forest Management Plan (KLFMP) 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 efforts the Royal Highness in the district, Headmen and the community around Kondongwe Local Forest for the support and passion to support this plan and sustainable management of the forest reserve.

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

The production of the Plan would not have been possible without the input from Zambia Statistics Agency (ZAMSTATS) and present and past officers of the Forestry Department. The contribution of the members of the forestry inventory, livelihood data collection, analysis and reporting teams who made it possible to generate the needed information to develop this forest management plan is acknowledged.

Local community contribution was vital in both the livelihood and biodiversity surveys as well as in the participatory discussion. Their Royal Highness' contributions during the awareness meetings leading to livelihood survey for the development of the FMP are also highly appreciated.

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

EXECUTIVE SUMMARY

Forests, woodlands and trees are among the nation's most important natural heritage resources. The vision of the National Forestry Policy, 2014 is to attain sustainable forest management at all types of forests to enhance forest products and services that will contribute 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 Kondongwe 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 Kondongwe Local Forest from degradation in order for it fully contribute to local and national development as well as for the benefit of the future generations of Zambia.

Translating Policy into practice

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

Community based natural resource management is core to this Forest Management Plan. Through promoting community involvement in the management of Kondongwe 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 Kondongwe Local Forest.

Summary socio economic analysis

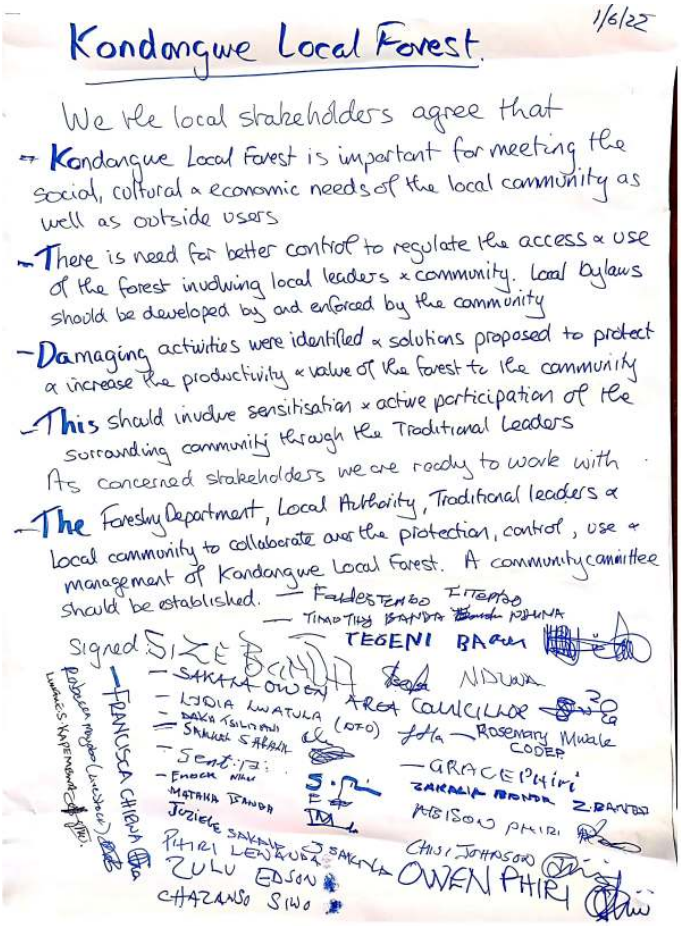
The livelihood survey conducted in 2019 indicated that Kondongwe Local Forest is surrounded by approximately 24 villages with a total population of 4,102. These households depend on farming as their main occupation, the principal crops grown are maize, sunflower and groundnuts Soyabeans. Almost all households use firewood as their energy for cooking. 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. At the time of survey, there were no squatters within the forest.

Forest change & issues analysis

A consultation meeting of stakeholders for Kondongwe Local Forest was held on 22nd May 2022, where 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, Traditional leaders, and stakeholders agreed that there was need to collaborate over the protection, sustainable use and management of the protected forest area and a declaration of intent was signed pledging to collaborate in the sustainable management of Kondongwe Local Forest.


Kondongwe Local Forest 1/6/22

We the local stakeholders agree that

- Kondongwe Local Forest is important for meeting the social, cultural & economic needs of the local community as well as outside users
- There is need for better control to regulate the access & use of the forest involving local leaders & community. Local bylaws should be developed by and enforced by the community
- Damaging activities were identified & solutions proposed to protect & increase the productivity & value of the forest to the community
- This should involve sensitisation & active participation of the surrounding community through the Traditional Leaders

As concerned stakeholders we are ready to work with

- The Forestry Department, Local Authority, Traditional leaders & local community to collaborate over the protection, control, use & management of Kondongwe Local Forest. A community committee should be established.

Signed

The declaration confirmed that Kondongwe 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 Kondongwe Local Forest are:

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

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

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

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

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

Proposed management actions

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

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 Kondongwe Forest Reserve are key stakeholders in the conservation of this forest as well as beneficiaries from its sustainable management. This aims to meeting the social, cultural and economic needs and thereby improving the livelihoods of the communities around Kondongwe 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 a development zone (3) within the Forest area to promote greenhouse gas emission reduction interventions;

Forest Protection, Restoration, Management and Conservation of Biodiversity

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

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

Safeguards & other crosscutting issues

In implementing the above management actions, cross cutting issues as well as other environmental and social safeguards processes will be mainstreamed in all aspects of forest management. Specific activities as well as the annual 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 are core to this issue. Women shall be integrated into all aspects of management of Kondongwe Local Forest and empowered through equal participation in decision making, governance and benefit sharing.

Contribution to Emissions Reduction in Eastern Province

Improved management of Kondongwe 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 animal's 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 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
KLFMP	Kondongwe 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

List of Figures and Tables

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

Forestry Programme	Cost in ZMW for 10 years
1. Forest protectionand management	**354,546**
2. Biodiversity conservation and Environmental education	**42,443**
3. Community conservation and livelihood development	**179,204**
4. Human resource development	**146,193**
5. Infrastructure development	**3,371,865**
6. Research, Monitoring and Evaluation	**403,209.00**
Grand Total (ZMW)	**1,233,207.00**

Table 1 Forest program with cost

Cost breakdown is provided in Annex VII

KONDONGWE LOCAL FOREST MANAGEMENT PLAN

1 INTRODUCTION

The Kondongwe Local Forest Management Plan (KLFMP) 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 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 Kondongwe 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 need to be flexible and adjust based on lessons learned along the way, the plan may be modified 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

Kondongwe Local Forest (Reserve No. P. 162) forms part of the forest estates in Eastern Province, covers a land area of approximately 1,396 hectares in extent with total perimeter of 19.01km, and is situated approximately 35 Km North -East of Sinda. It is dominantly rural area surrounded by villages.

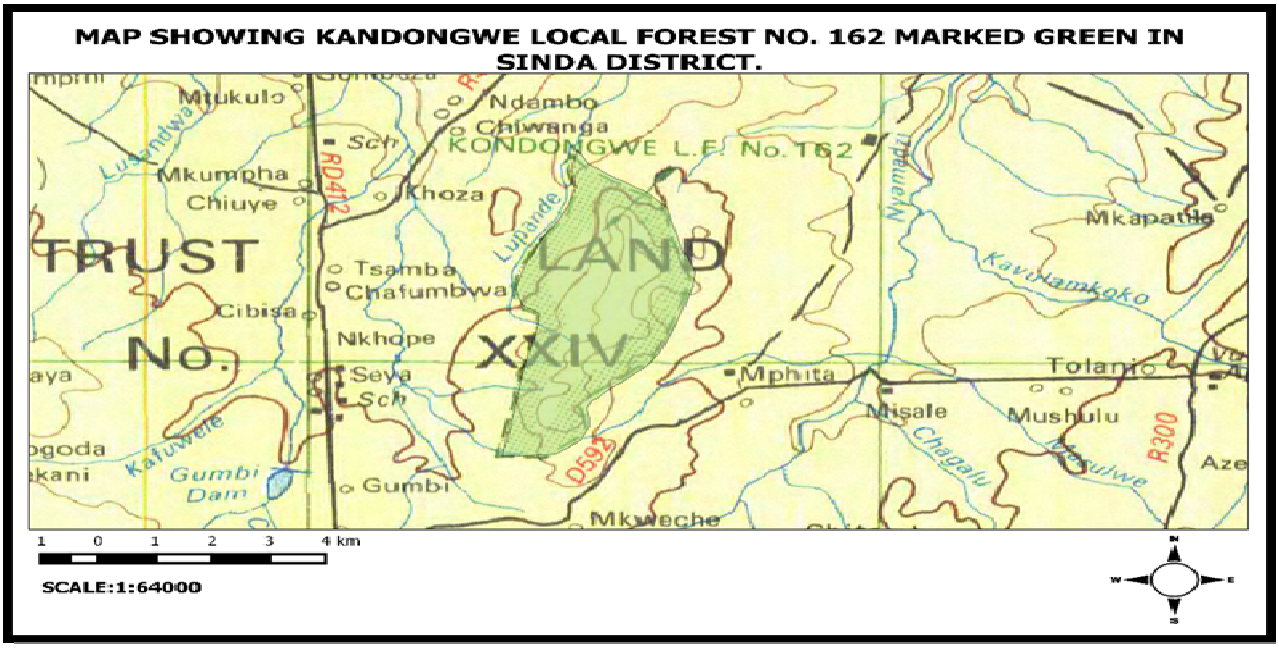


Figure 1 Map of Kondongwe Local Forest

2.2 Ownership and control

Kondongwe Local Forest No. P. 162 was originally declared a forest reserve and gazetted under Statutory Instrument No. 263 of 1966. It is a protected forest area with the designation of "Local Forest" covered by section 12 of the Forests Act, 2015. The area is under the jurisdiction of the Forestry Department, Ministry of Green Economy and Environment through powers bestowed under the Forests Act No. 4 of 2015 of the Laws of Zambia.

2.3 Physical Environment

Topography, Geology & Soils

The Local Forest is relatively hilly with a lot of rock outcrop and geologically located on Precambrian metamorphic rocks characterized by gneisis with igneous intrusion of syenite. Soils are well drained, moderately deep, red to strong brown, friable, gravelly, moderately weathered fine loamy to clayey.

Rainfall & Temperature

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

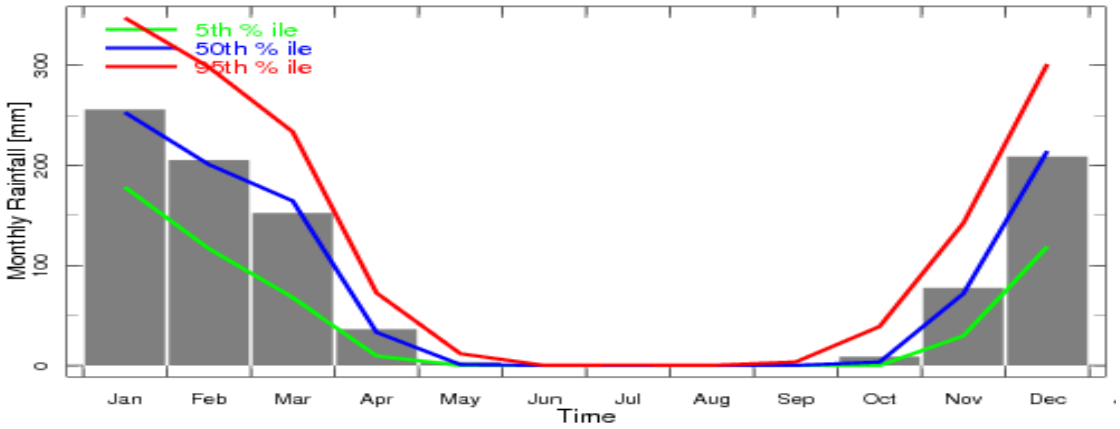


Figure 2 Monthly rainfall *Source: The Zambia Meteorological Department*

Normally, temperatures are very high, especially during the dry months which occurs between August and December. The maximum average monthly temperature is between 27C and 34 C. The highest maximum temperature occurs in October. The lowest average temperature is between 210C and 230C during the cool dry season occurring especially between May and June.

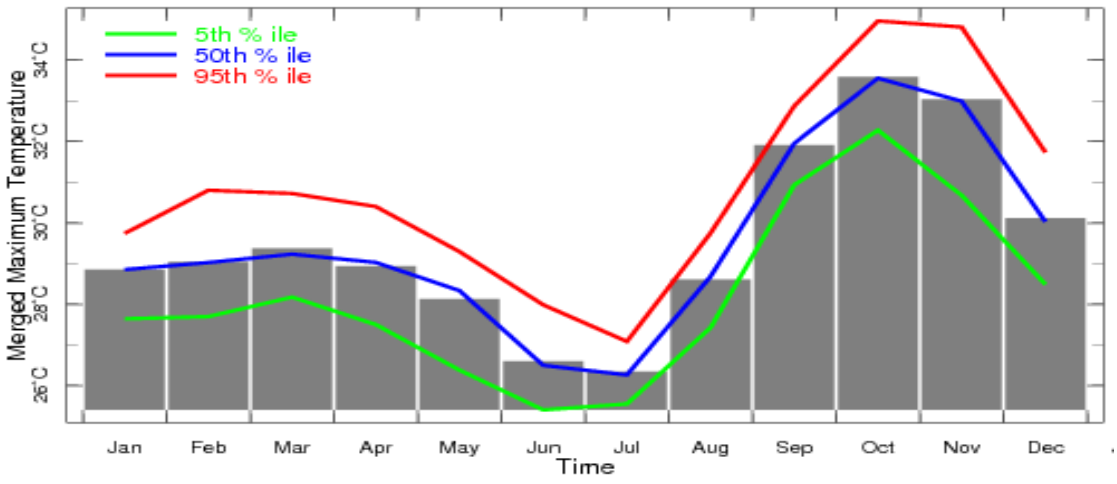


Figure 3 Monthly Temperatures Source: The Zambia Meteorological Department

2.4 Biophysical Environment

Vegetation Type

Kondongwe Local Forest is a homogeneous forest. The vegetation type is miombo woodland on the hilly area

Fauna

The forest has a number of small fauna such as rabbits, snakes, mice and various bird types.

2.5 Infrastructure and communication

In order to achieve the forest management objectives for Kondongwe Local Forest a certain level of infrastructure is required. Roads, transport 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: The area is well linked and can be accessed through the great east road the forest road.

Buildings: There is no infrastructure inside the forest area.

3 PAST MANAGEMENT

Kondongwe Local Forest No. P. 162, was declared a forest reserve and gazetted under Statutory Instrument No. 263 of 1966. The reservation proposal was based purely on indigenous pole production to meet demand for timber by the local community in the area.

The forest was managed on a simple early burning-cum-coppice system, but this could not continue due to government restructure reforms.

Following the internal restructuring of the Department under the Public Service Reform Programme (PSRP) in 1997 as well as years of economic downturn, increase in population, high poverty level have impacted on the ability of the Forestry Department to adequately protect and manage the Local Forest. However, the current Forests Act no. 4 of 2015 addresses some of the challenges experienced in past forest management by involving communities surrounding forest reserves in the management.

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. 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 Kondongwe Local Forest.

Tree species abundance

The inventory data indicates that there are over 40 different types of tree species that include tree seedlings in the forest. The table below provides a summary of the forest inventory and will be described in the sections below;

4.1 Stratum total by diameter class

Diameter class	0-4	5-9	10-14	15-19	20-29	30-39	40+	Total
Vol (m^3)	0.0	18.5	19.7	15.8	19.0	16.7	35.3	125.0
Bole Vol (m^3)	0.0	6.8	6.3	4.5	9.9	7.2	20.7	55.5
Density (SPH)	4.5	1050.4	318.3	113.7	45.5	22.7	18.2	1573.4
Basal area (m^2)	0.0	4.1	3.6	2.5	2.2	2.0	6.3	20.7
Biomass (tons)	0.0	28.2	29.3	23.5	28.8	23.9	57.5	191.2
Carbon (tons)	0.0	14.1	14.7	11.7	14.4	12.0	28.8	95.6
Saw log Vol (m^3)	0.0	3.5	1.2	1.3	1.9	0.0	22.1	30.0
Firewood Vol (m^3)	0.0	2.3	2.1	2.4	3.9	0.0	6.6	17.3
Pole Vol (m^3)	0.0	1.3	1.1	2.2	0.0	0.0	0.0	4.6
Fruit Vol (m^3)	0.0	1.5	2.0	0.3	0.0	0.0	0.0	3.8
Medicinal Vol (m^3)	0.0	4.1	4.9	3.5	1.4	0.0	0.0	14.0
Others Vol (m^3)	0.0	5.8	8.4	6.0	11.8	16.7	6.5	55.3
Seedlings								5,752

Table 2 Stratum Total by diameter class

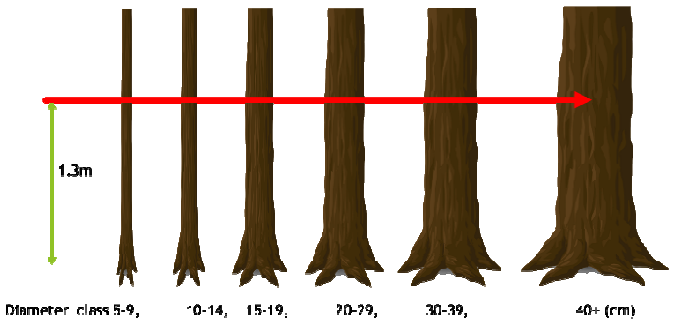
Ten Abundant Species in the Forest Reserve

Species	Local Name
Afzelia quanzensis	Mupapa
Albizia adianthifolia	Mutanga
Brachystegia boehmii	Muombo
Brachystegia floribunda	Musamba
Brachystegia longifolia	Muombo
Brachystegia utilis	Tsamba
Dalbergia melanoxylon	Mukelete
Dalbergia nitidula	Mchindula
Diplorhynchus condylocarpon	Mchindula
Erythrophleum africanum	Kayimi

Table 3 Top ten abundant species in the forest reserve

Tree and Sampling Distribution by Size Classes

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



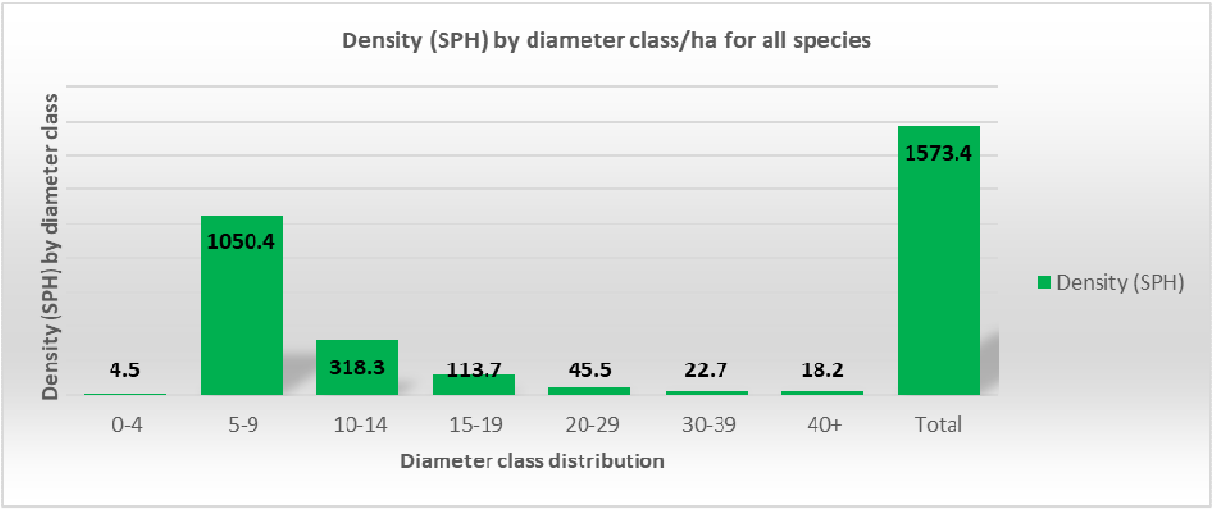


Figure 4 Density by diameter class/ha for all species

The density or number of stems by diameter class per hectare is 1,573.4 with higher in diameter class 05 – 14 and less from 30 and above. The outcome indicates that there is a lot of tree harvesting or cutting due agriculture activities resulting in high coppicing and regeneration.

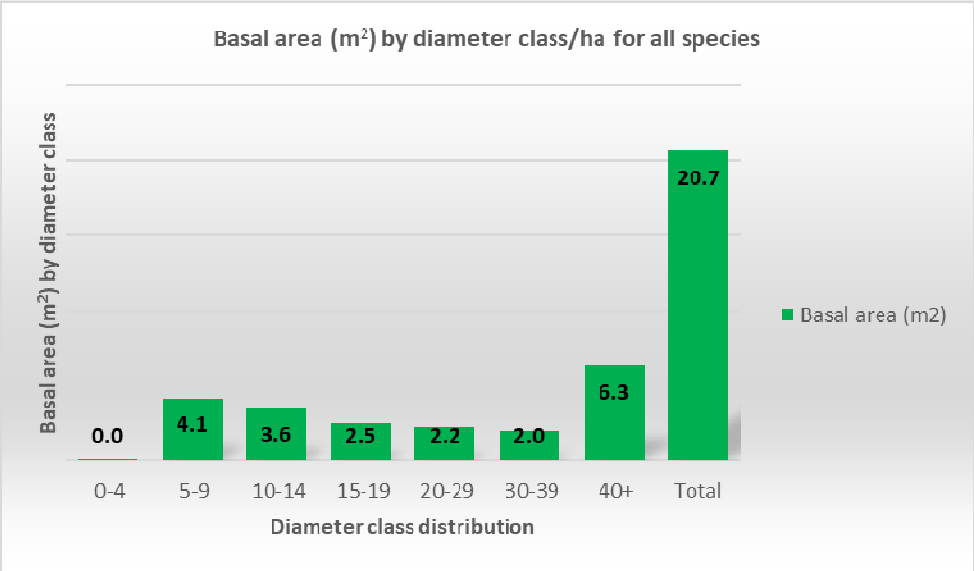


Figure 5: Basal area (m^3) by diameter class/ha for all species

Basal area (m^2) 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.

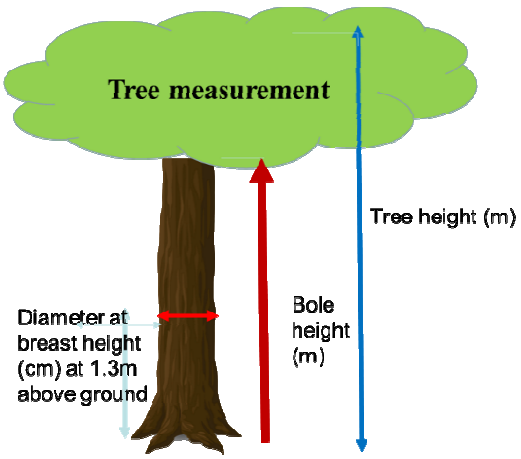
The basal area by diameter class per hectare for all species is 20.7 with higher in diameter class 40. The outcome indicates that there is a moderate of mature trees mostly in hilly portions.

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 (m^3) 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 volume by diameter class per hectare is 125 cubic meters with higher in diameter class 40 and above and evenly distributed in diameter below 40 and above. The outcome indicates that there is heavy illegal tree harvesting. The high volume is in hilly portions of reserve.



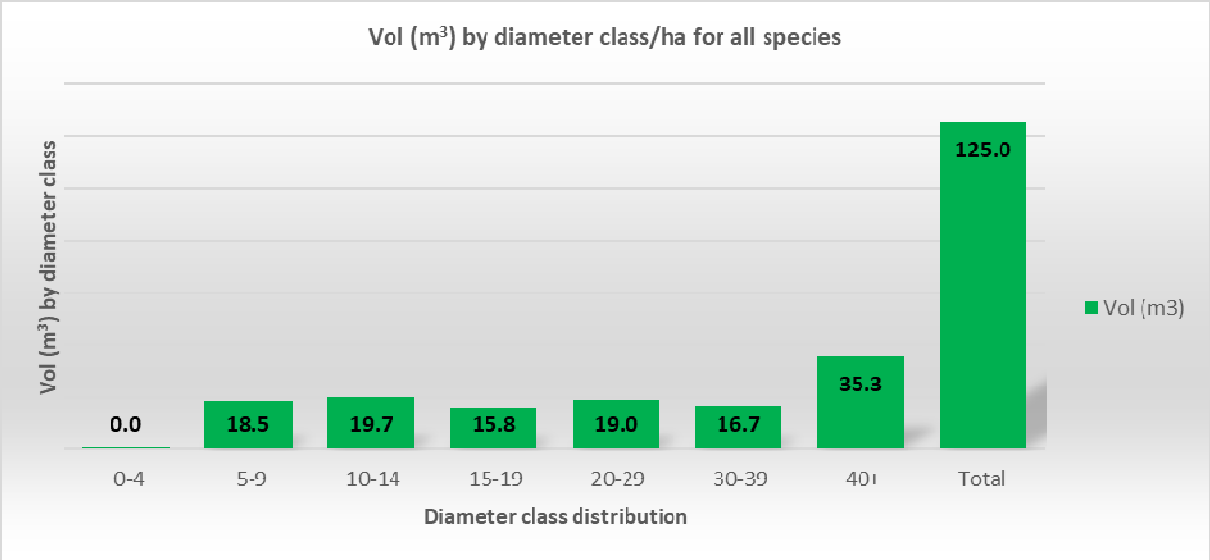


Figure 6: Volume (m³) by diameter class for all species

The total bole volume by diameter class per hectare is 55.5 cubic meters with higher in diameter class 40 and above. The outcome indicates that there is a moderate illegal of tree harvesting of remaining trees on hilly areas of the forest reserve.

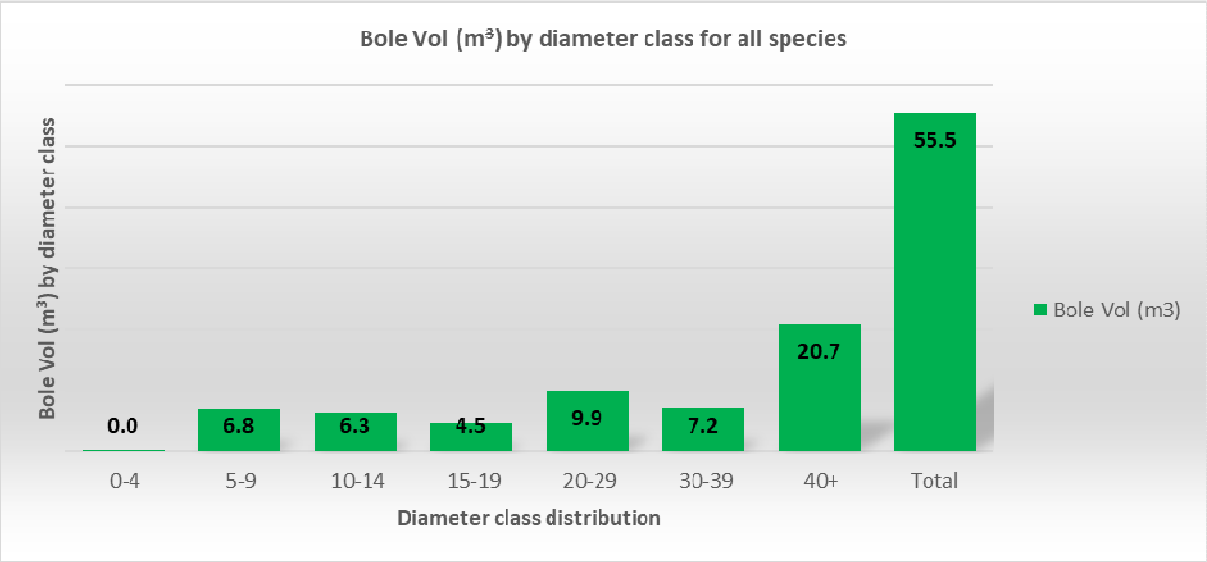


Figure 7: Bole volume (m³) by diameter class/ha for all species

Volume of all species by merchantable quality

Trees in Kondongwe 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 Kondongwe are of harvestable quality.

No	Description	Volume	Explanation
1	Straight	13,790m³	The entire bole length of these trees is straight
2	Slight bend	135m³	The bole length of these trees is slight bend but are sawable
3	Crooked	47m³	These trees have bad form, they are crooked and cannot be sawn

Table 4 Volume of all species by merchantable quality

Presence of Commercial Tree Species

Based on the inventory data, species used for high valued sawlogs such *Brachystegia bussei, Pterocarpus angolensis and Dalbergia nitidula* were identified. Medium valued are *Brachystegia boehmii* and *Julbenadia globiflora,* are not abundant in the forest. The harvestable volume is low. Therefore, Kondongwe Local Forest in its current condition cannot sustain large scale logging operations or timber concession.

Volume of all species by use

No	Description	Volume(M^3)	Explanation
1	Sawlogs	30.0	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	4.6	These are tree species with relative straight bole length with the average diameter at breast height of 5cm to 29cm
3	Fruits	3.8	The tree species include all fruit bearing either edible or not edible
4	Medicinal	14.0	All medicinal plants
5	Firewood	17.3	These include all dead and or diseased trees which can be used for firewood
6	Others	55.3	These include all tree species which are not classified in any of the above categories

Biomass and carbon above ground

The total biomass and carbon stocks (tons) by diameter class for all species respectively of 191.2 and 95.6 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.

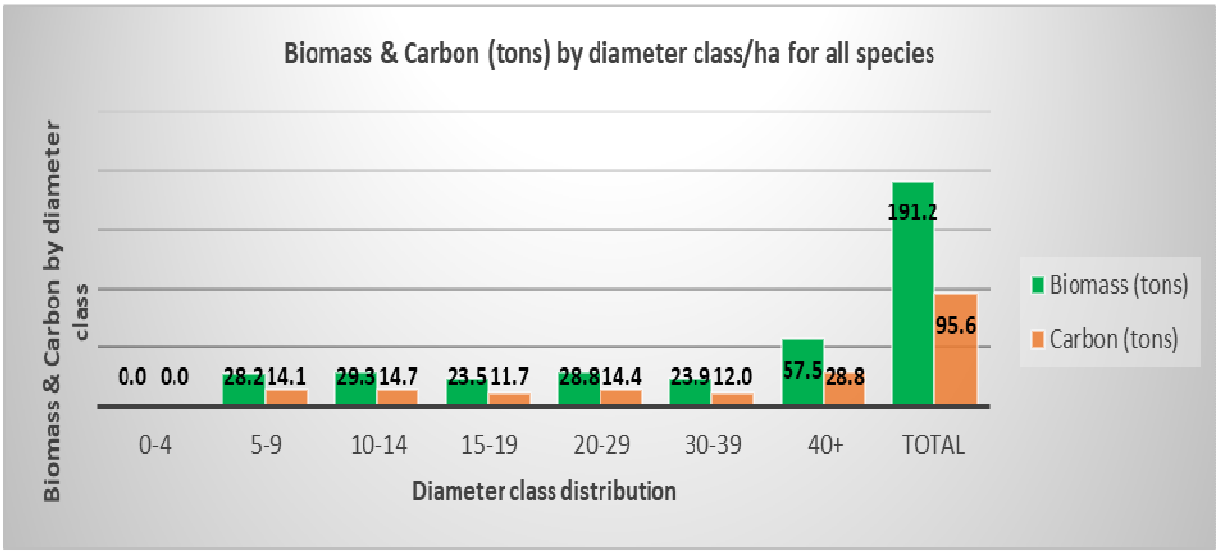


Figure 8: Biomass & Carbon (tons) by diameter class for all species

5 STAKEHOLDER DEMOGRAPHICS

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 Kondongwe Forestry reserve 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 Kondongwe 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.

5.1 Household and Population dynamics

Kondongwe Local Forest as at 2019 livelihood survey was surrounded by approximately **25** villages with a total population of **4,102**. The main ethnic groups in the area are the Chewas. The forest adjacent population are mostly small-scale farmers who utilize the forest for some of their livelihood requirements. The main crops grown are Maize, Sunflower, Soya beans and groundnuts. The land tenure of the population surrounding the Kondongwe Local Forest 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 Kondongwe LF forest reserve was found to be mainly primary level that contributed 55 percent, while tertiary contributed about 1 percent. The rest being No formal education and secondary education indicating 24 percent and 20 percent respectively. As shown in the figure below:

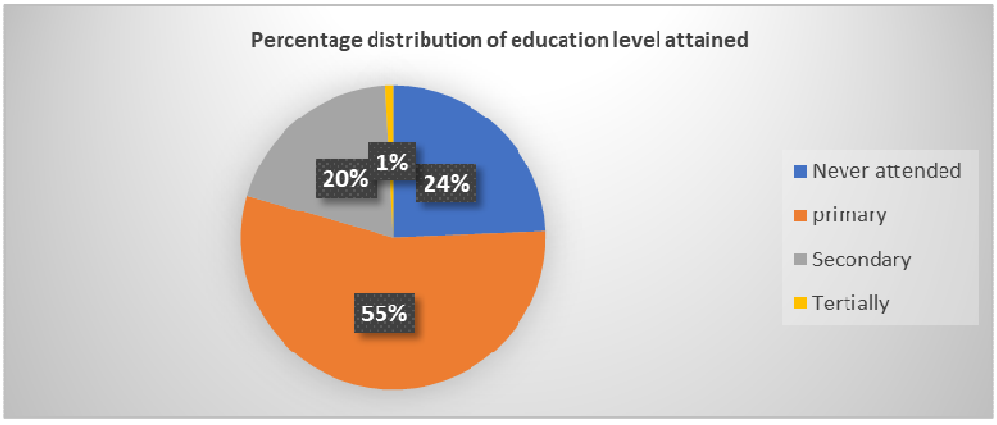


Figure 9: Level of Education of household heads of localities surrounding the Kondongwe Local Forest

Economic activity

The population around Kondongwe local Forest depends on farming as their main occupation. The results showed that 87 percent of the household population surrounding Kondongwe Local Forest had farming as their main occupation, while the rest of economic activities contributed 2 percent those in paid employment and 9 percent in small businesses and unstated 2 percent.

5.2 Utilization and zoning of forestry resources by stakeholders

At the consultative meeting held on 26th April 2022, the stake holders identified the uses of the forest reserve and zoned the Kondongwe Local Forest as below:

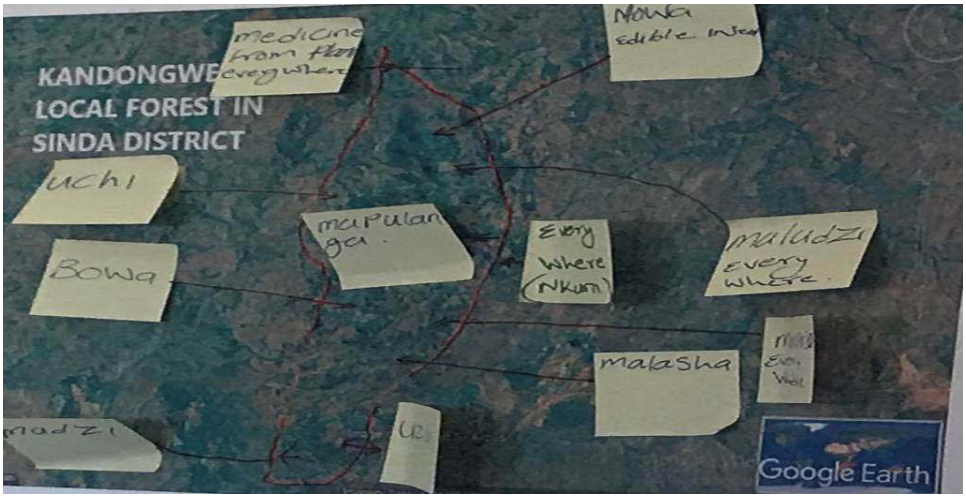


Figure 10: community zoning of Kondongwe Local Forest

The zones were identified for the following:

Zone 1. Upper part	Zone 2. Mid part	Zone 3. Bottom part
• Harvesting of grass for thatching • Beekeeping	• Harvesting of timber • Firewood • Mushroom • Beekeeping	• Herbs • Mushroom

5.3 Types of Energy Used For Cooking

Almost all households in the localities surrounding Kondongwe Local Forest use firewood as their energy for cooking. The livelihood survey revealed a percentage of about 99 percent using firewood as energy for cooking, while 1 percent using electricity as energy for cooking.

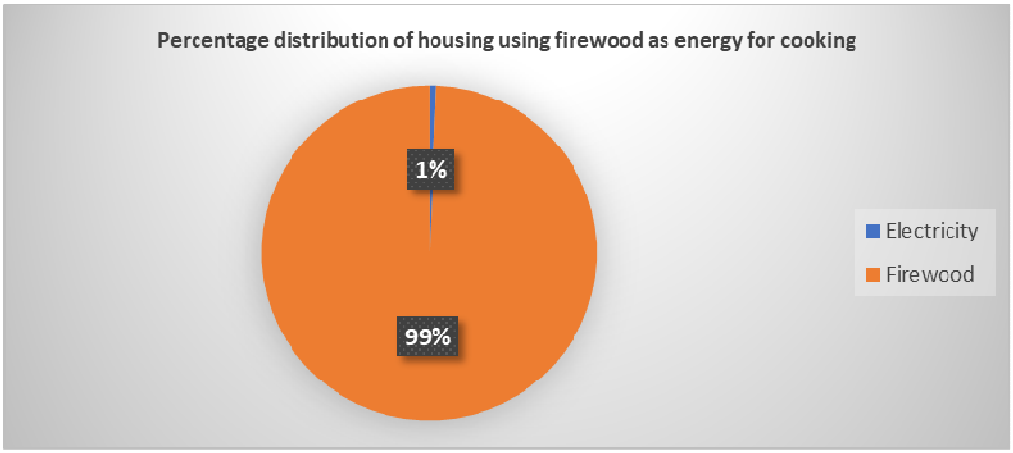


Figure 11: Main Types of Energy Used For Cooking

5.4 Main tree resources used by households for Firewood

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

Main Tree Resources Used – Kandongwe Local Forest Reserve
Brachystegia bohemii
Brachystegia spiciformis
Julbernadia globiflora
Diplorynchus condlocarpon
Pericopsis angolensis
Pseudolachnostylis maprouneifolia
Combretum collinum
Bauhinia petersiana
Piliostigma thoningii
Brachystegia manga
Parinnari curatellifolia
Julbernadia Paniculata

Table 5: Main Tree Resources Used by households surrounding the Kondongwe Local Forest

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

5.5 Non wood Forest products

The main non-wood forest products used by households surrounding the Kondongwe local forest are as shown in the table below.

Main type of non-wood forest products used by households
Fruits
Mushroom
Grass
Medicine
Caterpillars

Table 6: Main non wood resources Used by households surrounding the Kondongwe Local Forest

5.6 Land Ownership and Use

The livelihood survey for the communities surrounding the Kondongwe Local Forest reserve revealed that most of the land owned by the households was for Agricultural activities which indicated 69 percent, followed by other uses at 17 percent, fallow land 9 percent, Land maintained as Natural Forest 3 percent and land used for growing trees at 2 percent.

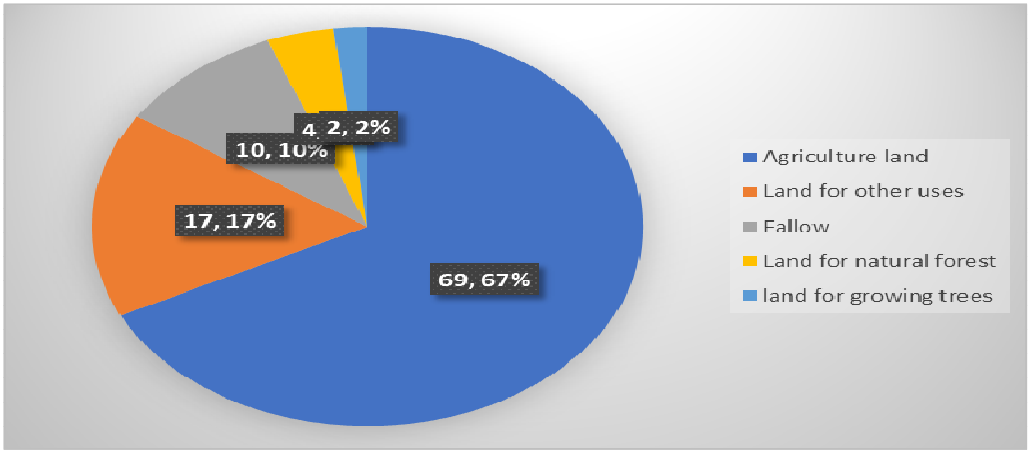


Figure 12: Land ownership & use

Willingness of community to participate in forest management

The livelihood survey revealed that 89 percent of all the households surrounding the Kondongwe LF reserve were willing if called upon to voluntarily support management of the forest reserve with forest department and other stake holders in the community.

6 PROPOSED MANAGEMENT ACTIONS

In view of the current condition and rate of deforestation and forest degradation being experienced across this Local Forest, the overall objective is to secure the ecological functions of the forest through engaging local stakeholders and surrounding communities and agree new strategies for management and restoration of the Local Forest. This includes applying the community forestry process which supports community control, use and management of forest areas in partnership with the Forestry Department. Learning from this approach in this critical Local Forest will inform similar processes for other selected protected forest areas in Eastern Province and across Zambia. All approaches will conform to the stated purpose of a Local Forest as described in section 19 of the Forests Act, 2015:

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

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

- **Protect** - areas where the forest is intact with local stakeholder involvement;
- **Restore -** the forest where it is degraded by promoting regeneration encouraging regrowth of local species or reafforestation with people's participation.

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

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

Figure 13: Zoning of Kondongwe Local Forest based on community consultation

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 Kondongwe 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 the focus of development as well as emissions reductions related activities.

Zone 1: Forest Protection, Management and Conservation of Biodiversity

Kondongwe Local Forest is an important forest ecosystem containing different plant species. The Local Forest also falls directly in between communities, KLF provides an important function in preserving cultural heritage. However, the level of unsustainable use is anticipated to intensify with increasing human populations resulting in higher levels of resource exploitation and degradation. Protection of this forest habitat is therefore essential to ensure the continued ecosystem services and local livelihood needs.

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

Zone 2: Forest restoration zone

This covers the areas already impacted by human activity including seasonal and permanent farming including settlement. The main focus within this zone is to re-establish tree cover and therefore conform with the purpose of the Local Forest. This will involve promoting forest restoration approaches, agroforestry and tackling the core issue of encroachment through a variety of initiatives.

Zone 3: Development buffer area: This is the area immediately surrounding the reserved forest area where farming and settlements are located. These will be the focus for forest extension activities, creation of community and household woodlots, use of energy efficient stoves, promotion of agroforestry and other climate smart agricultural activities.

Forest landscape restoration guiding principles

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

- *Focus on the entire landscape.* Consideration and restoration across the entire landscape of KLF as opposed to individual sites. This entails balancing a mosaic of land uses across the gazetted forest, such as securing intact forested areas, regenerating degraded forests, promoting agroforestry systems, climate smart

agriculture, well-managed plantations where appropriate, as well as identifying ecological corridors and riparian strips to protect watercourses and waterways.

- *Restoring ecological functions.* Restore the ecological functionality of the landscape, such as its richness as a habitat, its ability to contain erosion and floods, and its resilience to climate change and various disturbances. This can be done in many ways, one of which is to restore the landscape "back" to the "original" vegetation, but other strategies may also be used, ranging from natural regeneration to tree planting.
- *Allowing for multiple benefits.* Increasing tree cover across the landscape including existing cleared farmed areas, without necessarily forming a forest canopy, in order to enhance food production, reduce erosion, provide shade, and produce firewood. In other places, trees may be added to create a closed canopy forest capable of sequestering large amounts of carbon, protecting downstream water supplies, and providing rich wildlife habitat.
- *Promoting stakeholders involvement.* Actively engaging local stakeholders in decisions regarding restoration goals, implementation methods, and trade-offs for sustainable land management practices which provides incentives and performance benefits.
- *Adaptively managing* the restoration strategy over time as environmental, social and economic conditions evolve supported through continuous monitoring and learning through the restoration process.

6.1 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 in and surrounding Kondongwe Local Forest are key stakeholders in the conservation of this forest as well as beneficiaries from its sustainable management. This action aims at meeting the social, cultural and economic needs and thereby improving the

livelihoods of the communities in Kondongwe Local Forest. Within this management action, the following interventions will be undertaken in Zones 1 and 2;

- 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	Training forest-adjacent communities in sustainable forest enterprises, such as	FD/NGOs	Forest enterprise activities developed and producing income.

	best practices.	beekeeping, and other non- wood forest enterprises		
3. To reduce carbon emissions from deforestation and forest degradation by ensuring community benefit from carbon credits.	Establish an incentive benefit sharing mechanism through the carbon trading scheme to be established by Government in Eastern province	Stake holder participatory awareness meetings (Traditional leaders, Government, NGOs and the community)	FD/NGOs	Tonnage of GHG sequestered increased thereby income shared to community is improved year on year.
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

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

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

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

1. Stakeholder engagement, community awareness raising and mobilisation;

2. Stakeholder mapping including forest use, users and geographic interest.

3. Forming community level institutions to coordinate, manage and control local resource use in partnership with the Forestry Department.

4. Developing forest product and issues based operational management plans for areas of interest.

5. Agreeing roles, rights, responsibilities and obligations for shared management.

6. Implementing practical forest protection and management interventions that bring value and other environmental and social benefits.

7. Conducting joint monitoring and evaluation of management and benefit sharing measures to ensure a sustainable partnership.

These 7 steps to establishing shared management responsibilities and benefit sharing directly mirrors the 7 steps of the National Guidelines for Community Forestry in Zambia. Therefore tangible steps will be taken to incentivise and reward local stakeholder communities in the protection and management of Lundazi National Forest through following the community forestry development steps and processes.

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

- To develop a shared management approach to forest protection, management and utilisation.

This management action will be operationalized and results measured as follows:
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	FD/ Adjacent communities	Area in hectares of controlled burning

			local community on the importance of early 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	-Conduct sensitization meetings. -Conduct forest	FD/ community and other security	Number of illegal harvesters/ activities

		resources in order to create a sense of ownership. Engage honorary forest Officers/guards	patrols.	wings	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. Establishment of agroforestry tree nursery species in Kondongwe nursery.	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	FD	Hectarage of forest in the fringe areas increased year on year.

			surrounding the forest. Training the communities in assisted natural regeneration		
9	Improve local awareness of biodiversity and its value.	Seek greater participation of local communities in research and other biodiversity activities Such as eco-tourism, with the result that biodiversity values will become of more direct relevance to them.	1.Conduct research that documents and utilizes the indigenous knowledge of Forest-adjacent communities. 2.Promote local participation and benefits from eco-tourism as a means of creating better awareness of biodiversity	FD/Forestry Research	Levels of community participation in forest management activities is sustained over time.

These will be detailed in an annual plan of operations to be prepared by the Officers responsible for the management of the Reserve. This management action will be operationalized, and results measured as follows:

Specific Objective	Strategy	Activity	Responsibility	Indicators
1. To improve livelihoods of the local community adjacent to the forest	Create employment for income generation to the communities around the forest.	Silvicultural and forest protection operations	FD/Community	Income of local community adjacent to the forest increased

6.2 Environmental and social safeguards and other crosscutting issues

The Forestry Department shall ensure that the management of Kondongwe 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 Kondongwe 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 Kondongwe 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

6.3 Environmental Education

Environmental education is the key to ensuring the future of Kondongwe 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 regarding destructive activities. In the long term, improved environmental education will lead to a better understanding of the importance of conserving Kondongwe 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 Clubs as an educational resource.	-Facilitate the formation of forest conservation clubs in surrounding schools.	FD/MOE	Number of awareness raising activities undertaken

		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 & potentially useful experiences from elsewhere.	FD/Other Partners	Number of awareness raising activities undertaken

1.1. Infrastructure Development

In order to achieve the forest management objectives for Kondongwe local Forest, a certain level of infrastructure is required. Roads, buildings and vehicles are all essential to sound management of the forest, but they cannot be constructed, purchased or maintained without considerable financial expenditure.

Since the forest itself yields very little in terms of direct revenue, the maintenance of a sound infrastructure base is an ongoing problem for forest management, where funds are always scarce. Maintenance of the track road connecting Kondongwe Local Forest to the main road is a major challenge. Similarly, to maintain sufficient and well-motivated staff, the provision of good quality housing and services is important. Lack of funds is a drawback, with the result that morale and work quality deteriorates.

No	Specific Objectives	Strategy	Actions	Responsibility	Indicators
1	To maintain the infrastructure necessary to achieve the	Maintain the existing infrastructure	1. Maintain the road network. 2.	FD/Maintenance/ Infrastructure	All infrastructure maintained to optimum

	multiple objectives of forest management.				standards

7 STAKEHOLDERS ROLES AND RESPONSIBILITIES

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

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 wellbeing 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 can't 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 Kondongwe 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 Kondongwe Local Forest and therefore wellbeing 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 Kondongwe Local Forest.

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 wellbeing of the communities on the forest fringes. Implementation of the FMP will be monitored through a few 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.

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.

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.

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

	-Crop and livestock 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

9 ANNEXES

Annex 1: Declaration Order and maps

1. Map of Kondongwe Local Forest with Inventory Sample Plot layout

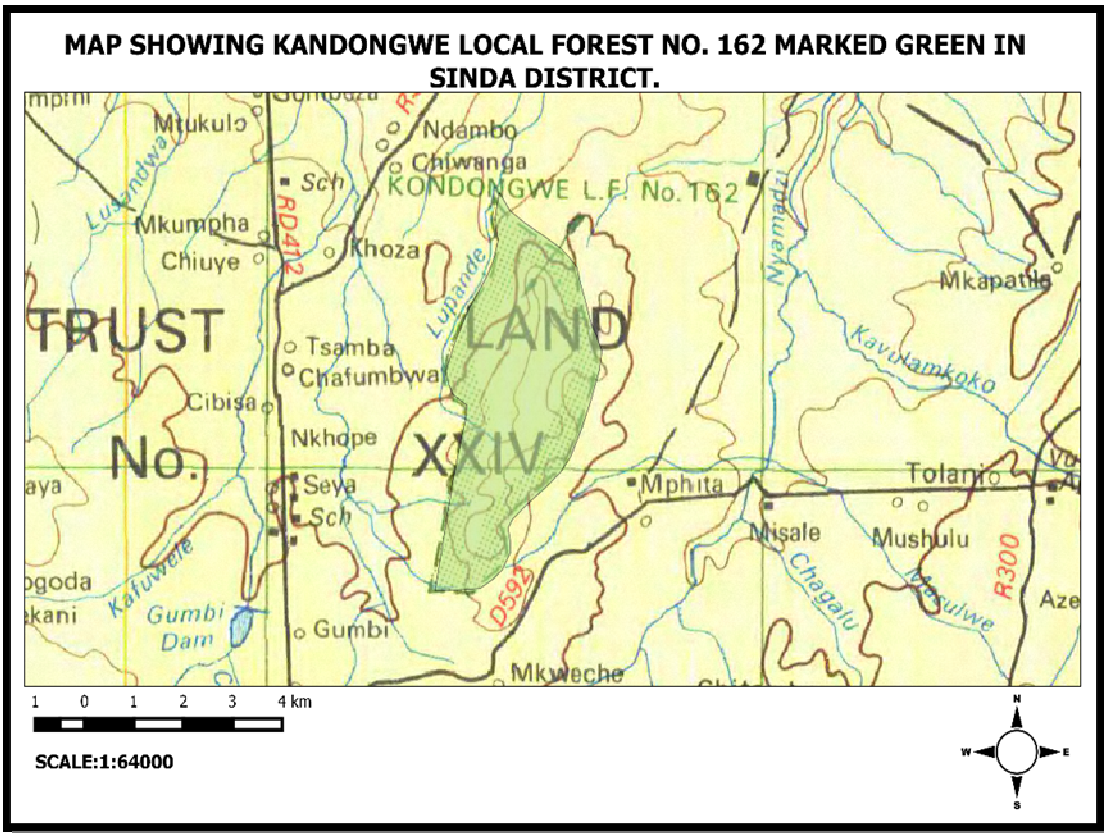


Figure 13 Map of Kondongwe forest reserve with inventory samples plot layout

KONDONGWE (DECLARATION) ORDER

Order by the Minister

Statutory Instrument

50 of 1970

66 of 1975

1. This Order may be cited as the Local Forest No. P231: Kondongwe (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: KONDONGWE

Starting at Kondongwe 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 Kondongwe 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 Kondongwe mission, the point of starting.

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

The above-described area, in extent10,117.5 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.

Annex II: Inventory Data

Species	Code	Density
Acacia albida	1	9.095
Acacia polyacantha	6	50.02
Albizia adianthifolia	15	27.284
Albizia antunesiana	17	18.189
Annona senegalensis	25	31.831
Azanza garckeana	26	4.547
Bauhinia petersiana	34	27.284
Brachystegia boehmii	46	50.02
Brachystegia bussei	47	131.871
Brachystegia floribunda	48	27.284
Brachystegia longifolia	49	13.642
Brachystegia manga	50	27.284
Brachystegia spiciformis	52	50.02
Combretum molle	86	22.736
Combretum zeyheri	89	22.736
Commiphora mollis	90	31.831
Cussonia arborea	98	4.547
Dalbergia nitidula	102	9.095
Dalbergiella nyasae	103	45.473
Diospyros mespiliformis	112	45.473
Diospyros mweroensis	113	9.095
Diplorhynchus condylocarpon	114	409.256
Erythrina abyssinica	125	4.547
Erythrophleum suaveolens	128	4.547
Julbernardia globiflora	188	4.547
Lannea discolor	194	68.209
Lannea schimeri	198	31.831
Lannea stuhlmannii	199	4.547
Monotes africanus	221	18.189
Piliostigima thonningii	244	13.642
Pseudolachnostylis maprouneifolia	258	4.547
Pterocarpus angolensis	262	40.926
Steganotaenia araliacea	283	4.547
Strychnos cocculoides	288	18.189
Strychnos pungens	292	4.547
Terminalia sericea	304	9.095
Terminalia stenostachya	305	77.304
Unknown	999	168.25
Ximenia americana	328	4.547
Zyziphus abyssinica	338	22.736

Annex III: Demographics of major forest fringe communities

Demographics of major forest fringe communities of Kondongwe Local Forest

NAME OF COMMUNITY	POPULATION		TOTAL POPULATION	HOUSEHOLDS		
				Male headed HH	Female headed HH	TOTAL NUMBER OF HOUSEHOLDS
	MALE	FEMALE				
Total	**2042**	**2060**	**4102**	**565**	**150**	**715**
KHOZA	132	131	263	40	7	49
CHAGWA	65	64	129	18	5	23
DAMBO	70	54	124	17	5	22
CHAFUMBWA	66	78	144	20	8	28
TSAMBA	71	58	129	19	5	24
CHINDIWINDIWI	23	19	42	7	0	7
SEMU FARM	5	4	9	3	3	3
CUSTOM FARM	24	19	43	6	2	8
THANILA	40	44	84	14	6	20
KALOMO	19	14	33	6	0	6
MPHITA	60	73	133	19	6	25
MVELANI	78	86	164	20	5	26
NATANI	213	202	415	65	20	85
MAKHOZA	80	95	175	26	9	35
MNYAMANZI SCHOOL	9	6	15	5	0	5
PUNDI	110	100	210	29	3	32
JOMBO	295	288	583	63	27	90
KOZUNGWE	126	151	277	40	6	46
RODGERS FARM	8	3	11	1	0	1
KHONDOWE FARM	14	16	30	4	2	6
CHIBANGA	337	373	710	94	22	116
CHIPHWANYA	97	97	194	22	7	29
SEKANI	70	59	129	19	2	21
KALOMO	30	26	56	8	0	8

Table 7 Demographics of major forest fringe of the forest reserve

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 Kondongwe 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

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. Kondongwe Forest Reserves Chief Mwase Ntembwe in fall in Kalonga Gawa Undi.

Figure 14 Meeting with Paramount Gawa Undi's senior Induna

During the courtesy call the team gave the background of forest inventories conducted in Kondongwe 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.

Senior Chieftainess Kawaza of Katete and Sinda districts- Kondongwe LF(1,396ha

Provincial Forestry officer displays the map to HRH Kawaza at the palace. Right team photo with HRH

Annex V: Stakeholder validation meeting

REPORT FOR THE KONDONGWE LOCAL FOREST MANAGEMENT PLAN STAKEHOLDERS' VALIDATION MEETING HELD AT TILITONSE PRIMARY IN SINDA

Introduction:

The Forestry Department in 2019 undertook a forest inventory exercise to take stock of the forest resources in Kondongwe 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 KLF in Sinda was organized to validate the FMP for the KLF 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. Lungwe, Act/ District Commissioner for Sinda officiated at the KLF FMP validation meeting. The Act/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 KLF which has no current FMP. In this regard the Act/District Commissioner implored the stakeholders to constructively engage and contribute actively in the meeting. He 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 Kondongwe 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 46%, forestry loss to agriculture 16% and emissions from agriculture soils at 14 %. 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 KLF. It was highlighted that KLF 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.
- 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 CO_2 for the net area of 449ha was estimated at 11,449.5tons
- The proposed programmes as contained in the draft FMP for KLF 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 24 villages surrounding KLF included in the survey that derived benefits from the forest was 4,104 out of which 2042 were male and 2060 were female. The sample comprised 715 households, out of which 565 were male headed households and 150 were female headed households.
- Farming (87%) was the main source of livelihood for the people surrounding the Forest, while (2%) are in paid employment and (9%) in business as main income generating activities, (2%) unstated.
- Almost (99%) all the people sampled Majority depended on firewood for cooking while only 1% use charcoal.
- The results show that the most common type of housing unit occupied by household was conventional houses at 53.01 percent, while 29.37 percent occupied improved traditional houses. Traditional huts contributed 14.69 percent, the lowest was mixed housing with 3.08 percent.
- KLF shows that 80.00 percent of households in Kondongwe forest reserve had the boreholes as their main sources of drinking water. While 6.29 percent had protected well, 1.40 had unprotected well as main sources of drinking water, 12.31

percent of households had well/river/stream as their main source of drinking water.

- As much as 89% of the total sample population expressed willingness to protect and manage the LLF and only 11% expressed lack of willingness.

Clarifications raised by participants included: -

The villages surrounding KLF 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 sports 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 KLF, 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 KLF. Below are the contents of the Declaration Pledge:

"We the interested stakeholders of KLF agree the need to increase the productivity of the KLF 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 KLF".

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

Vote of thanks, Closing Remark and Prayer

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

Mr 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 closing prayer was done by one of the stakeholders.

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

GROUP WORK – 1

1. Identify in Kondongwe 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)

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 signpost	Sign posting all Forest areas, maps and books should be given to residents on Kondongwe 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 Chiefdom 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 Kondongwe 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

Where- it is used/harvested.

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
- Caterpillars
- Dry firewood
- Fruits
- Early burning
- Carbon (Keep trees)
- Honey

Prohibited practices.

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

List Suggestions on how to manage the forest.

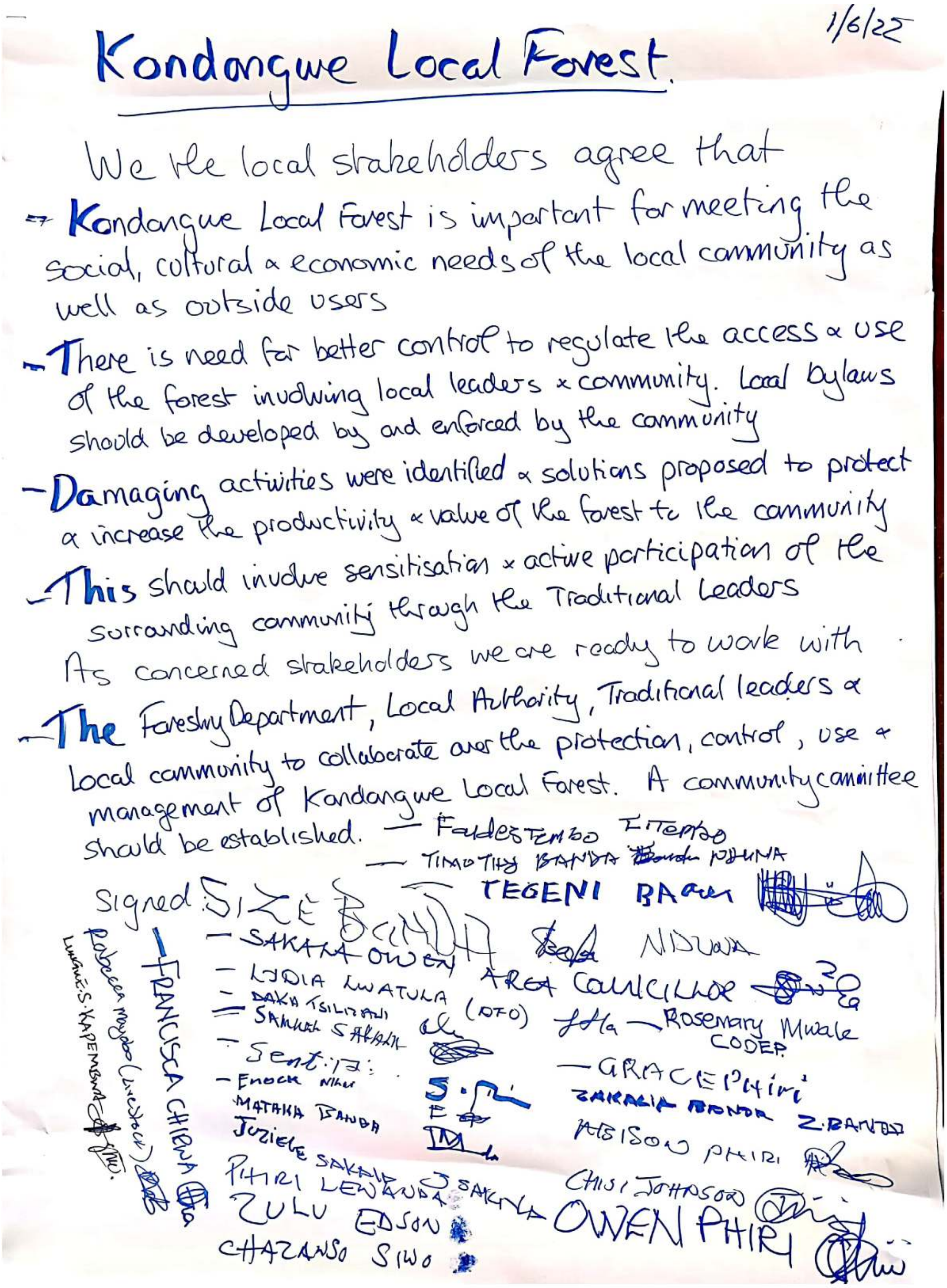
- Let's form committee (Between Chieftainess Kawaza and Chief Mbang'ombe residents) and forest department, with all local authority.

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 Kondongwe local forest that was held on May 2022, at Tilitonse Primary School Hall, in Sinda district. The stakeholders signed a joint declaration pledging to collaborate in the sustainable management of Kondongwe Local Forest.



1/6/22

Kondongwe Local Forest.

We the local stakeholders agree that

- Kondongue Local Forest is important for meeting the social, cultural & economic needs of the local community as well as outside users
- There is need for better control to regulate the access & use of the forest involving local leaders & community. Local bylaws should be developed by and enforced by the community
- Damaging activities were identified & solutions proposed to protect & increase the productivity & value of the forest to the community
- This should involve sensitisation & active participation of the surrounding community through the Traditional Leaders

As concerned stakeholders we are ready to work with

- The Forestry Department, Local Authority, Traditional leaders & Local community to collaborate over the protection, control, use & management of Kondongwe Local Forest. A community committee should be established.

Signed

- Fardes Tembo
- Timothy Banda
- Tegeni Banda
- Sakala Owen
- Ndlovu
- Lydia Lwatula
- Area Councillor
- Daka Tsilizani
- (DFO)
- Sakala Sarah
- Rosemary Mwale CODEP
- Sent
- Enock Nkhoma
- Grace Phiri
- Mataka Banda
- Zakaria Banda
- Juziele Sakala
- Alison Phiri
- Phiri Lewanda
- Sakala
- Chisi Johnson
- Zulu Edson
- Owen Phiri
- Chazanso Siwo
- Francisca Chibwa
- Rebecca Mojobo (Livestock)
- Lukas S. Kapembwa

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
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- ILUA II (2006) Integrated Land Use Assessment Phase 1- Field Manual.
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  ILUA II (2014) Forest Biophysical Field Data Entry Booklet; Forestry Department, Ministry of Lands and Natural Resources, Lusaka, Zambia
- ILUA II (2016) Integrated Land Use Assessment Phase II- Report for Zambia.
- The Food and Agriculture Organization of the United Nations and the Forestry Department, Ministry of Lands and Natural resources, Lusaka, Zambia
- ILUA II (2016) Integrated Land Use Assessment Phase II- Technical Report for Eastern Province.

Annex VII : Cost of Implementing and funding Cost Estimates

The various prescribed activities are outlined and their corresponding estimated costs are indicated in the following tables:

Forest Protection & Management

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.	Annual external boundary maintenance	49Km	49	1	600	29,400	32,340	35,574	39,131	43,045	47,349	52,084	57,292	63,022	69,324
	Forest beacon maintenance	No.	98	1	75	7,350	8,085	8,894	9,783	10,761	11,837	13,021	14,323	15,755	17,331
	Erection of sign post on roads	No.	6	1	300	1,800	1,980	2,178	2,396	2,635	2,899	3,189	3,508	3,858	4,244
To significantly reduce levels of illegal forest product harvesting.	Conduct sensitization meetings	No.	4	1	2,000	8,000	8,800	9,680	10,648	11,713	12,884	14,172	15,590	17,149	18,864
	Conduct forest patrols	No	8	3	800	19,200	21,120	23,232	25,555	28,111	30,922	34,014	37,415	41,157	45,273
To protect Forest Reserve from late fires	Conduct prescribed and early burning.	10,117Ha	1	1	15,612	15,612	17,173	18,891	20,780	22,858	25,143	27,658	30,423	33,466	36,812
	Training the local communities on fire management	No	2	1	2,500	5,000	5,500	6,050	6,655	7,321	8,053	8,858	9,744	10,718	11,790
	Sensitizing community on importance of early burning.	No.	2	1	2,000	4,000	4,400	4,840	5,324	5,856	6,442	7,086	7,795	8,574	9,432
To ensure protection against pests, fire, and human damage for the sustainability of forest resources	Inspections for diseases and pests, and detection of illegalities.	No	2	1	15,000	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
To improve forest cover in the fringe areas of the forest reserve	Woodlot establishment surrounding the forest.	No	20	1	1,500	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
Subtotal						**150,362.00**	**165,398**	**181,938**	**200,132**	**220,145**	**242,160**	**266,375**	**293,013**	**322,314**	**354,546**

Biodiversity conservation

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 conserve and enhance the biodiversity of the forest reserve.	Promote local participation and ownership through meetings.	No	2	2	2,000	8,000	8800	9680	10648	11712.8	12884.08	14172.488	15589.7368	17148.71048	18863.58153
Improve local awareness of biodiversity and its value.	Awareness on biodiversity with regard to indigenous knowledge	No.	2	2	2,500	10,000	11000	12100	13310	14641	16105.1	17715.61	19487.171	21435.8881	23579.47691
Subtotal						**18,000**	**19,800**	**21,780**	**23,958**	**26,354**	**28,989**	**31,888**	**35,077**	**38,585**	**42,443**

Community Conservation 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
To contribute towards meeting subsistence needs and improving the livelihoods of forest-adjacent communities.	Training forest-adjacent communities in sustainable forest enterprises beekeeping, other non-wood enterprises	No	3	2	10,000	60,000.00	66000	72600	79860	87846	96630	106293.	116923	128615
Reduce forest dependency by local communities	Involve local communities in woodlot establishment	No.	4	1	4,000	16,000.00	17600	19360	21296	23425.6	25768	28344	31179	34297
Subtotal						**76,000.00**	**83,600**	**91,960**	**101,156**	**111,272**	**122,399**	**134,639**	**148,102**	**162,913**

Human Resource 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 Improve skills for effective management	Short courses Exchange visits, Refresher courses	No	1	1	30,000	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
To build capacity in the local members for effective performance	Training.	No.	2	2	8,000	32,000	35,200	38,720	42,592	46,851	51,536	56,690	62,359	68,595	75,454
Subtotal						**62,000**	**68,200**	**75,020**	**82,522**	**90,774**	**99,852**	**109,837**	**120,820**	**132,903**	**146,193**

Infrastructure 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 establish and maintain the infrastructure necessary to achieve the multiple objectives of forest management.	1. Lobby for Maintenance the access roads to forest reserve.	Km	1	1	30,000	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
	2. Lobby for construction of forest camp 4 houses and office	No	4	1	250,000	1,000,000	1,100,000	1,210,000	1,331,000	1,464,100	1,610,510	1,771,561	1,948,717	2,143,589	2,357,948
			1	1	400,000	400,000	440,000	484,000	532,400	585,640	644,204	708,624	779,487	857,436	943,179
Subtotal						**1,430,000**	**1,573,000**	**1,730,300**	**1,903,330**	**2,093,663**	**2,303,029**	**2,533,332**	**2,786,665**	**3,065,332**	**3,371,865**

Research, Monitoring & Evaluation

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 conduct research to enhance regeneration potentials of important tree spp.	Identify the important trees based on demand for research and their locations in the reserve.	No.	3	3	4,000	36,000	39,600	43,560	47,916	52,708	57,978	63,776	70,154	77,169	84,886
	Lay plots at the identified locations.	No	3	3	5,000	45,000	49,500	54,450	59,895	65,885	72,473	79,720	87,692	96,461	106,108
	Regeneration potentials of the identified trees would be observed.	Ha	0	0	0	0	0	0	0	0	0	0	0	0	0
continuously conduct research on community interactions in forest reserve	Identify all forest fringe communities.	No	0	0	0	0	0	0	0	0	0	0	0	0	0
	Socio-economic survey conducted for forest fringe community	No	1	1	20000	20,000	22,000	24,200	26,620	29,282	32,210	35,431	38,974	42,872	47,159
To attain improved understanding of the forest and its usage, in conformity with the Management Plan.	Implement Management plan and monitor activities	No	1	1	30,000	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
	Evaluate the implementation	No	1	1	40,000	40,000	44,000	48,400	53,240	58,564	64,420	70,862	77,949	85,744	94,318
Subtotal						**171,000**	**188,100**	**206,910**	**227,601**	**250,361**	**275,397**	**302,937**	**333,231**	**366,554**	**403,209**
Grand-Total						**1,956,362**	**2,151,998**	**2,367,198**	**2,603,918**	**2,864,310**	**3,150,741**	**3,465,815**	**3,812,396**	**4,193,636**	**4,612,999**

Table 8 Cost of implementing and funding cost estimates.

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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Zambia Integrated Forest Landscape Project

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