



# MAKUNGWA WARD – KASENENGWA DISTRICT

## PARTICIPATORY LAND USE PLAN (PLUP)



**Prepared by: Land Alliance Consortium (TSP) in Collaboration with  
CHIPATA/KASENENGWA/CHIPANGALI DMT**

**Date: 6<sup>th</sup> April, 2022**

## Preface

This Participatory Land Use Plan (PLUP) for Makungwa Ward is a document that has been developed with a view of managing and mitigating unsustainable natural resource use. The aim of this document is to help communities in making sound decisions pertaining to land uses. This PLUP process has been supported by the Zambia Integrated Forests and Landscape Project (ZIFLP), an initiative of the Government of the Republic of Zambia with funding support from World Bank through the Bio-carbon Fund, Global Environmental Facility (GEF) and International Development Association (IDA).

PLUP activity falls under component one: This first component is meant to create conditions that will allow the livelihood investments of Component 2 to be successfully implemented and that will prepare the country for emission reduction purchases. This component includes support for two subcomponents under which PLUP falls, that is, (a) District and local level planning, which is supporting integrated district development and (b) local planning including land use and action planning through participatory processes.

The process for the creation of this PLUP was participatory in nature taking into account Social Biodiversity Assessment (SBIA), and various stakeholders were consulted and engaged such as their Royal Highnesses Chief Madzimawe and Senior Chief Nzamane, Chipata, Chipangali and Kasenengwa District Multi-sectoral Teams (DMTs), Department of Physical Planning, Makungwa Ward community Members and ZIFLP team were fully involved at every stage of the process. Thus, this PLUP will help guide Makungwa Ward residents in implementing sustainable and participatory land use practices in their ward, and also help in addressing the key issues identified, which have so far led to the unsustainable resource usage. This PLUP will help residents find alternative livelihood sources which will make them refrain from unsustainable land use practices such as unsustainable agriculture expansion, unplanned human settlement, environmental degradation and deforestation. This will help in the realisation of ZIFLP Vision which is to improve rural livelihoods in Eastern Province by Reducing Deforestation and Forest Degradation using low emission pathways through local participation by 2030.

It is further hoped that the local people in the community will appreciate the benefits of having the Land Use Plan (LUP), bearing in mind that land is a scarce resource with competing uses which are mutually exclusive. Additionally, population growth, erosion, effects of climate change and

other factors have contributed to the increasing scarcity of fertile land in rural areas despite people deriving their livelihoods from there. Thus, this PLUP is a way of balancing up competing and, in some cases, conflicting land uses.

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HRH Senior Chief Nzamane  
Nzamane Chiefdom

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HRH Chief Madzimawe  
Madzimawe Chiefdom

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Mayor  
Chipata City Council

.....  
Council Secretary  
Kasenengwa Town Council

.....  
Council Secretary  
Chipangali Town Council

.....  
District Commissioner  
Chipata District

.....  
District Commissioner  
Kasenengwa District

.....  
District Commissioner  
Chipangali District

## Table of Contents

Preface	i
Table of Contents	iii
Table of Figures	vii
List of Tables	viii
Acknowledgements	ix
Acronyms and Abbreviations	x
1. Introduction	1
1.1 Background	2
1.3 Legal Context	2
2. Approach and Methodology	3
2.1 Stages of PLUP Activity	5
3. Characteristics of the Management Area	7
3.1 Location of Makungwa Ward	7
3.2 Climatic Conditions	8
3.2.1 Rainfall and Temperature Patterns	8
3.2.2 Ecological Zone	9
3.2.3 Soil Types	10
3.3 Socio-Economic Environment	10
3.3.1 Population Projection	11
3.3.2 Social Facilities	11
3.3 Source of Livelihood	12
3.4 Livelihood Security	12
3.5 Livelihood and Natural Resource Utilisation	13

3.6 Livelihood Constraints and opportunities	14
3.7 Biodiversity Hotspots	15
3.7.1 Streams and Dams	15
3.7.2 Forests	15
3.8 Ecosystem Function	16
4. Current Land Use Patterns	17
4.1 Overall Land Use	17
4.2 Land Use Suitability Analysis	17
4.2.1 Soil Types	18
4.3 Land Resource and Administrative Boundaries	18
4.4 Current Land Uses	19
4.5 Land Use and Agriculture	20
4.6 Land Use and Forest	21
4.7 Land Use and Wildlife	22
4.8 Land Use and Mining	23
4.9 Land Use and Tourism	23
4.10 Land Use and Physical Development	23
5. Community Participation	24
5.1 Community Engagement Process	24
5.2 Agreed Local Rules for Land Use and Resource Management	27
5.3 Problem Identification	27
6. Core Issues Affecting Land Use and the Environment	28
6.1 Lack of Water Sources	29
6.2 Soil Degradation	30
6.3 Poor State of Roads and Related Infrastructure	30

6.4 Long Distances to Schools	31
6.5 Inadequate Health Facilities	33
6.6 Inadequate Telecommunications Facilities	34
7. Land Use Planning-Zoning, Validation and Governance Rules	36
7.1 Yambazi Community Meeting	36
7.2 Mshekela Community Meeting	38
7.3 Kapoko Community Meeting	40
7.4 Kanzutu Community Meeting	41
8. Framework of the PLUP and Environmental Management Plan	43
9. Implementation Strategy	45
9.1 Capital Investment Projects	48
10. Institutional Arrangement for Plan Implementation	48
11. Conclusion	49
12. Glossary	50
12. 1. Natural Resources	50
12. 1.1. Vegetation	50
12. 1.2 Soils	50
12. 1.3 Water	50
12. 2. Climate	51
12. 2.1 Rainfall	51
12. 3. Land Use Planning	51
12. 4. Participatory Land Use Planning	52
12. 5. Livelihood	52
13. References	53

Annex 1: Nzamane and Madzimawe Chiefdom by- Laws on Land Use and Natural Resource Management	54
Annex 2: Proposed Future Land Use Maps	56
Annex 3: Meeting Attendance Registers	57
First Village Meeting	60
Validation Meetings	67

## Table of Figures

Figure 1: Location Map	7
Figure 2: Annual Rainfall and Temperature Patterns for Makungwa Ward	8
Figure 3: Agro-Ecological Zones	9
Figure 4: Soil Map	10
Figure 5: Spatial Distribution of Social Facilities in Makungwa Ward	12
Figure 6: Biodiversity Hotspots	16
Figure 7: Suitability Analysis Map	18
Figure 8: Land Resource and Administration Boundaries	19
Figure 9: Current Land Uses	20
Figure 10: Land Use and Agriculture Map	21
Figure 11: Land Use and Forest	22
Figure 12: Land Use and Physical Development	24
Figure 13: Distribution of Water Sources	30
Figure 14: Primary Education Facility Service Gap	32
Figure 15: Secondary Education Facility Service Gap	33
Figure 16: Health Facility Service Gap	34
Figure 17: Telecommunication Facility Service	35
Figure 18: Future Land Use Map for Yambazi Community Meeting	38
Figure 19: Future Land Use Map for Mshekela Community Meeting	39
Figure 20: Future Land Use Map for Kapoko Community Meeting	41
Figure 21: Future Land Use Map for Kapoko Community Meeting	42



## List of Tables

Table 1: Stages of PLUP Activity	6
Table 2: Monthly Temperature Conditions for Makungwa Ward	8
Table 3: Makungwa Ward Population	11
Table 4: Livelihood Constraints and Opportunities	14
Table 5: Land Use Reservation	17
Table 6: Problems Identified	28
Table 7: Attendance Statistics	36
Table 8: Land Reservations for Yambazi Community Meeting	37
Table 9: Land Reservation for Mshekela Community Meeting	39
Table 10: Land Reservations for Kapoko Community Meeting	40
Table 11: Land Reservations for Kanzutu Community Meeting	42
Table 12: Environmental Management Plan	44
Table 13: PLUP Implementation Plan	47
Table 14: Capital Investment Projects	48
Table 15: Offences and Penalties	55

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## Acronyms and Abbreviations

CDF – Constituency Development Fund

CSA – Climate Smart Agriculture

DMT - District Multi-Sectoral Team

EP - Eastern Province

EMP - Environmental Management Plans

FPIC - Free Prior Informed Consent

GPS - Global Positioning System

ICT – Information and Communications Technology

IDP – Integrated Development Plan

JICA - Japanese International Corporation Agency

JIDP – Joint Integrated Development Plan

LAP - Local Area Plan

LULC - Land Use Land Cover

LUP - Land Use Planning

NDP - National Development Plan

NRM - Natural Resource Management

OCC - Objection, Correction and Confirmation

ODK - Open Data Kit

PAD - Project Appraisal Document

PLUP - Participatory Land Use Planning

URP - Urban and Regional Planning

COMACO - Community Markets for Conservation

WDC - Ward Development Committee

ZIFLP - Zambia Integrated Forest Landscape Project

## 1. Introduction

Participatory Land Use Planning (PLUP) is an interactive process in which local communities can discuss and determine how to manage the land and other natural resources in their locality. Land Use Planning (LUP) can be defined as a process in which land is allocated for different uses ranging from residential, commercial, agriculture, etc. (PLUP manual, 2019). PLUP is an important decision-making tool for natural resource management because it helps in defining suitable land uses which best balance ecological, economic and social objectives, thereby preventing land use and social conflicts. Thus, PLUP is of great importance if natural resources are to be effectively managed.

Currently, rural areas in Zambia are faced with challenges ranging from food insecurity, land conflicts, biodiversity protection while initiating economic growth, adapting to climate change as well as protecting people from natural disasters (JICA, 2011). Hence, PLUP is envisioned to be a great tool capable of mitigating the above challenges by focusing on conducting discussions with relevant stakeholders on future land and resource use as well as management by allocating specific areas for different human activities.

Thus land use allocation is important, owing to the fact that land is a scarce resource with a fixed supply despite demand increasing on a daily basis (thereby bringing about land related conflicts). Therefore, this PLUP aims at guiding and helping in tackling land-related conflicts as well as other natural resource issues in their early stages by facilitating consensual negotiations and eventual regulations on land uses by all interested parties.

The rationale and overall objective of conducting participatory land use planning on customary land is to consolidate information on the current status of land uses and land information within an area. The information gathered will subsequently inform land use options that are sustainable, environmentally compatible, socially desirable and economically sound. Further, the exercise helps in bringing out social and environmental issues affecting the communities in the project areas so as to design appropriate interventions to mitigate those effects.

## **1.1 Background**

Zambia Integrated Forest Landscape Project (ZIFLP) embarked on supporting the implementation of Participatory Land Use Planning (PLUP) in districts of Eastern Province (EP), focusing on community land use mapping and planning. This was the basis for the identification of primary Sub-District level activities, including issues of identification, prioritisation and sub-project identification (PLUP Manual, 2019).

ZIFLP took into consideration and followed the present government direction on land use aimed at optimizing the use of land, helping with resolution of conflicts which arise between competing land uses and needs of various interest groups, choosing sustainable options that best meet identified needs, rehabilitating and conserving natural resources, supporting the general development process and raising awareness concerning environmental problems among the populations and authorities (ZIFLP- PAD).

Additionally, this PLUP consolidated information on the current status of land use and land information within a project area, which provided information on land use options that are sustainable, socially and environmentally compatible, and socially desirable and economically sound. The PLUP initiative is based on the current social, economic and environmental challenges and opportunities facing Zambia's customary areas.

Besides, Chiefs have a large amount of autonomy in terms of land management in their chiefdoms, while at the same time depend on government for a range of services such as schools, clinics, etc. The PLUP development process recognizes the fact that Zambia's rural landscape is vast and viable for various investments. Thus, rural landscapes have the potential to provide multiple revenue sources ranging from small-scale farming, wildlife management and game ranching, forest timber extraction, tourism, and mining. It is important to note that there are a number of land uses competing with each other hence the need for a land use plan to serve as a guide to the use and management of land.

## **1.3 Legal Context**

The Makungwa Ward PLUP has been developed in accordance with the provisions of the Urban and Regional Planning (URP) Act No. 3 of 2015 of the Laws of Zambia. The URP Act is the main

legislation that guides planning and related activities in the country. The Act not only provides for the preparation of Integrated Development Plans (IDPs) for the development of each district but also provides for the preparation of Local Area Plans (LAPs) which are actually Land Use Plans for sections of a settlement, sub-areas, sub-districts or wards within a Local Authority's area. Areas under Traditional Authorities are governed by Section 25 of the Urban and Regional Planning Act No. 3 of 2015 of the Laws of Zambia.

Further, it provides guidance on the development of areas within land falling under customary tenure with the provision of developing planning agreements between traditional authority and relevant government authorities. However, there are other laws and policies that govern Land Use Planning in Zambia which were adhered to during the preparation of Makungwa Ward PLUP such as the Mines and Minerals Act No. 11 of 2015, Villages Act of 1972, Chiefs Act, Cap. 287, Agriculture Act, National Decentralisation Policy (NDP) of 2013, Forest Act No. 4 of 2015 and Zambia Wildlife Act No. 14 of 2015

## **2. Approach and Methodology**

The participatory land use planning in Makungwa Ward adopted the USAID land use planning approach; which is a combination of primary and secondary data collection. The secondary data method involved reviewing various documents on land use planning and land uses held by various government departments and other cooperating partners. The primary data was collected through village meetings and field activities, through the involvement of traditional leaders, community members and key informants across a range of government institutions and non-state actors. Facilitation of PLUP was done in local language in order to contextualise PLUP to their local settings. The whole process was participatory as it involved all stakeholders who were either affected or had interest in the landscape of the project site.

The participatory approach was used in the development of the Makungwa Ward PLUP where various relevant stakeholders were fully involved in the process. Planning was done with the community stakeholders together with their leaders (indunas and headpersons) in consultation with Senior Chief Nzamane and Chief Madzimawe. PLUP sensitization meetings were held with the Indunas, Headpersons and community members in order to collect socio-economic and

environmental data on livelihood sources and security. These PLUP sensitization meetings were held in three clustered focus group village meetings namely; Yambazi, Mshekela, Kapoko and Kanzutu. 75 villages were represented at the clustered village meeting. Community members in all the three clustered meetings took a leading role in developing sketch maps, problem analysis through pair wise ranking, identifying shared resources and validation of the maps.

The spatial and attribute data used was collected using mobile-based Open Data Kit (ODK) Collect forms, Android tablets and GLO Garmins while QGIS 3.8.1, Google Earth Engine and ArcGIS 10.5 were used for data analysis.

The data captured is uploaded to the cloud-based server using any wireless connectivity so that data can be uploaded anywhere without necessarily coming to the office, especially when the field teams are camping.

The tablets have stored MB tiles (orthophoto images) with base maps for each district and the Community Facilitators whilst in the field can map any village including all shared communal resources and using the ODK application they can gather data on number of attendees disaggregated as male and female of any village or ward. Any hand sketched land use maps by the communities are captured and uploaded to the cloud server so that the GIS team at the office can digitise the maps and produce land use maps. Each tablet in order to accurately pick the polygon points is connected to a handheld Garmin Glo Geographical Positioning System (GPS). Each community facilitator ensures that the polygon points are repeatedly captured/deleted until the point recorded is shown to be reasonably in the right location relative to the ortho-photo image.

Although there is capability to manually record the polygon points against the image, or to move captured GPS points, the GIS team may not do so until they meet the community facilitator who was in the field to clarify on any captured polygon points issues.

## 2.1 Stages of PLUP Activity

No.	Activity	Objective	Strategy	Output	Target	Indicator
1	Village Identification (Rapid village assessments)	Know the total number of villages in the ward by picking points of interest	Physical Data Collection in all villages	75 Villages were identified	All Villages within Makungwa Ward boundary	Villages falling within the ward boundaries were captured
2	Sensitization to Indunas and head persons	Sensitise Indunas and Head persons to fully accept PLUP	Indunas and head persons meeting	65 Head persons from Nzamane and Madzimawe chiefdoms were sensitised. 5 of the attending Head persons were from Nzamane chiefdom, and 60 were from Madzimawe chiefdom.	All the Headpersons in the Ward	65 Head persons in the chiefdoms of Nzamane and Madzimawe were sensitised despite working in 75 villages.
3	Community Sensitization	Sensitise communities on PLUP	Community meetings	One Community meeting in each of the 4 clustered village meetings	Community members in all the 4 clustered village meetings	A total of 62 community representatives were sensitised across the ward disaggregated as 33 men and 29 women
4	Shared Resource Mapping	Collect geographical locations of the resources present in the community	Physical Spatial data collection	12 Shared Resource Maps were produced	Makungwa ward	Shared Resource Mapping exercise completed in Makungwa ward
5	Makungwa ward resource Map validation	Show the current shared resources, land uses and have	Community engagement meetings for validation purposes.	Objections Corrections and Confirmation (OCC) done for the	Objections Corrections and Confirmation (OCC)	Shared Resource Map validated by the Chiefs and community



		the communities confirm the boundaries		shared resource map in Makungwa Ward.	done at the Palaces and in all the 4 village clusters	representatives in the ward.
<b>6</b>	Future land use planning and Formulation of By-Laws	Develop maps of how communities envisage to sustainably use their natural resources.	Community meetings	Future Land use plan developed and By- Laws formulated	The whole Makungwa Ward	Future land use plan and by-laws done
<b>7</b>	PLUP approval	Have the plan approved by all relevant authorities in order to be implemented	Submit PLUP copies to both traditional and local authorities	PLUP approved	Makungwa ward PLUP	PLUP approved by the Chiefs and Local Authority

Table 1: Stages of PLUP Activity

### 3. Characteristics of the Management Area

#### 3.1 Location of Makungwa Ward

Makungwa ward is one of the 8 wards in Kasenengwa District and is located in Nzamane and Madzimawe chiefdoms. The other wards are Mboza, Mkowe, Chiparamba, Mpunza, Kwenje, Chingazi, and Ng'ongwe. It is a boundary ward between Chipata and Kasenengwa situated between latitude 13°19'00.0"S and longitude 31°55'00.0"E. Makungwa ward shares boundaries with Ng'ongwe, Mboza, Chingazi and Chiparamba wards in Kasenengwa and Chikando ward in Chipata.

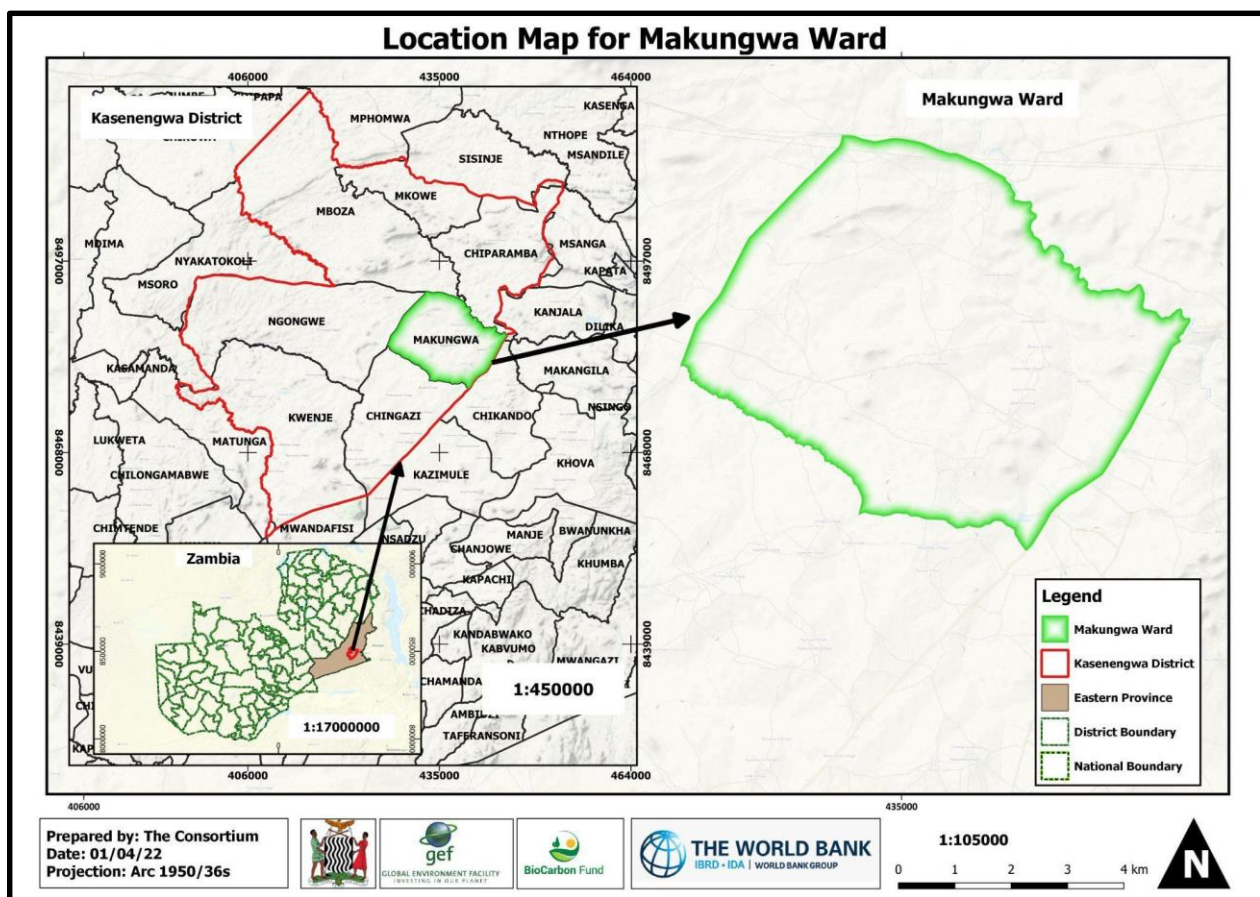


Figure 1: Makungwa Ward Location Map

### 3.2 Climatic Conditions

Makungwa Ward is characterised by Tropical Savanna climate which is associated with the tropical wet and dry climate type. The summers are much rainier than the winters in Makungwa with the average annual temperature of 23.0 °C and annual rainfall of 791 mm.

#### 3.2.1 Rainfall and Temperature Patterns

Makungwa ward receives a total annual rainfall of about 791 mm. There is high rainfall recorded during the wet season from November to February with average rainfall between 60-240 mm. The variation in the precipitation between the driest and wettest months is 120 mm. The figure below shows average monthly rainfall and temperatures of Makungwa Ward:

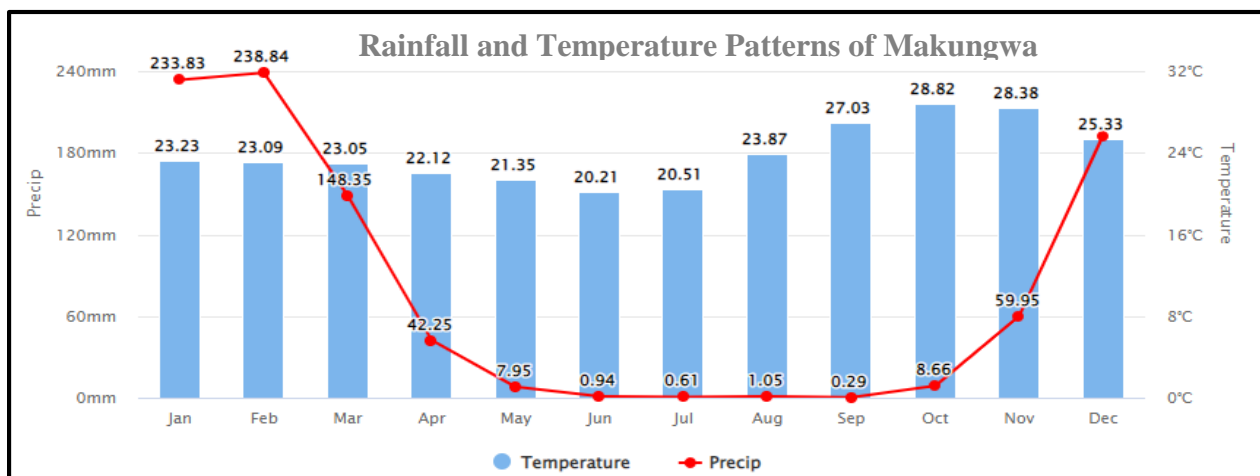


Figure 2: Annual Rainfall and Temperature Patterns for Makungwa Ward

The temperatures are highest on average in October, at around 28.82 °C and lowest in June, with temperature recording of around 20.21 °C. The table below shows the minimum, average and maximum temperatures for Makungwa Ward for each month:

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Ave. Temp (°C)	21.1	21.1	21.1	18.1	18.7	14.6	15.5	18.0	23.5	25.9	24.2	22.7
Min. Temp (°C)	19.0	19.0	19.0	16.0	16.0	9.0	10.0	12.0	20.0	23.0	20.0	20.0
Max. Temp (°C)	23.2	23.1	23.1	22.1	21.3	20.2	20.5	23.9	27.0	28.8	28.4	25.3

Table 2: Monthly Temperature Conditions for Makungwa Ward

### 3.2.2 Ecological Zone

Zambia as a country is divided into three main Ecological Zones which are Zone I, II and III. Kasenengwa District is predominantly characterised by the IIa ecological zone with some portions falling under ecological zone I. Makungwa Ward in Kasenengwa District is our main area of focus. The ward falls under IIa ecological zone characterised by annual rainfall between 800-1000 mm, and has a 100-140 days growing season, which supports growth of medium and late-maturity crop varieties such as maize, soya beans, groundnuts and other leguminous plants. The figure below shows the different ecological zones of Zambia:

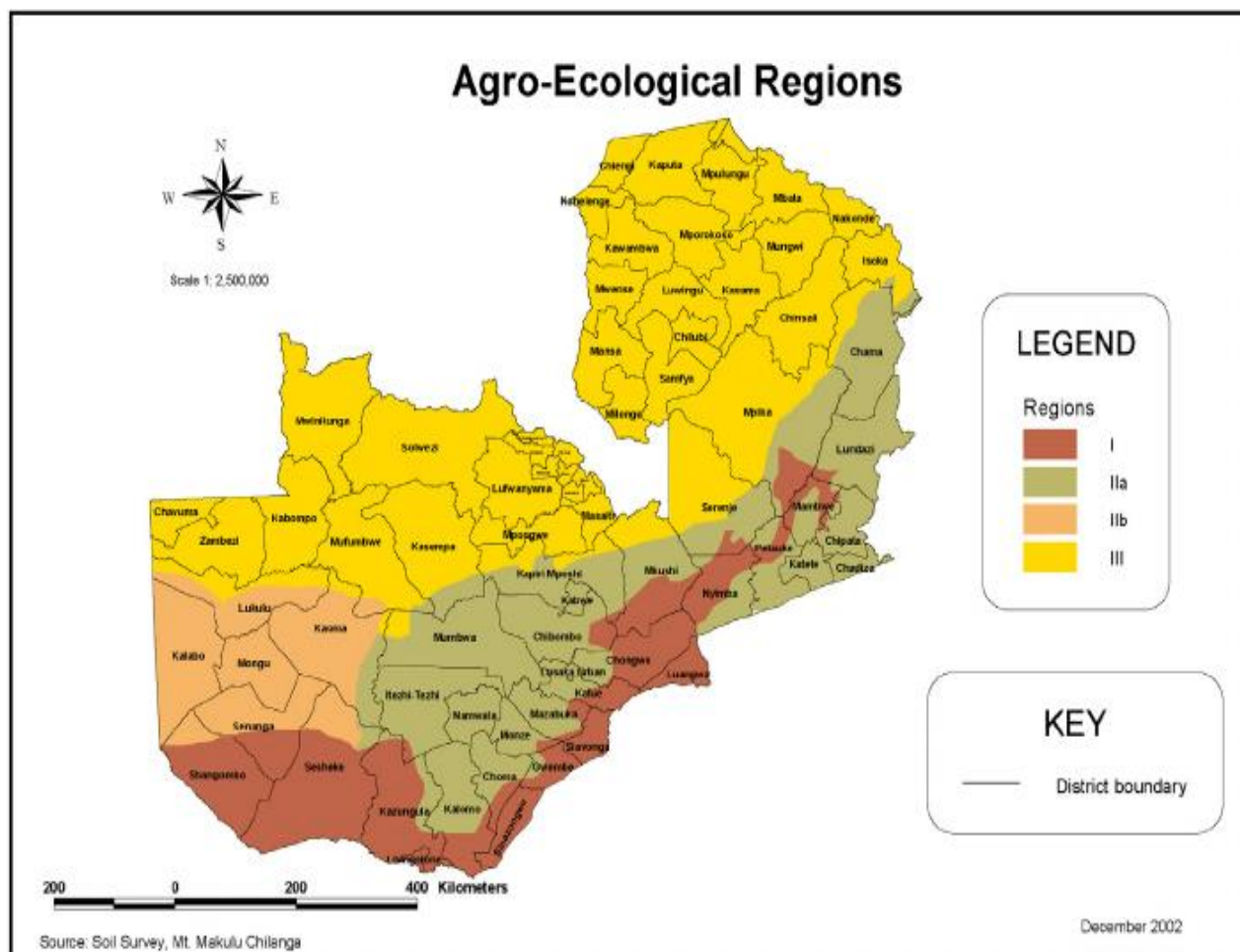


Figure 3: Agro-Ecological Zones

### 3.2.3 Soil Types

Makungwa Ward is dominated by Acrisol soil zones. The Acrisol soil zone is characterised by rich clay subsoil and is associated with humid tropic climate and often supports forested areas. Acrisols are characterised by low fertility and toxic amounts of aluminium, which make them unsuitable for agriculture (Peter Schad). The figure below shows a map of Makungwa's Soil Types:

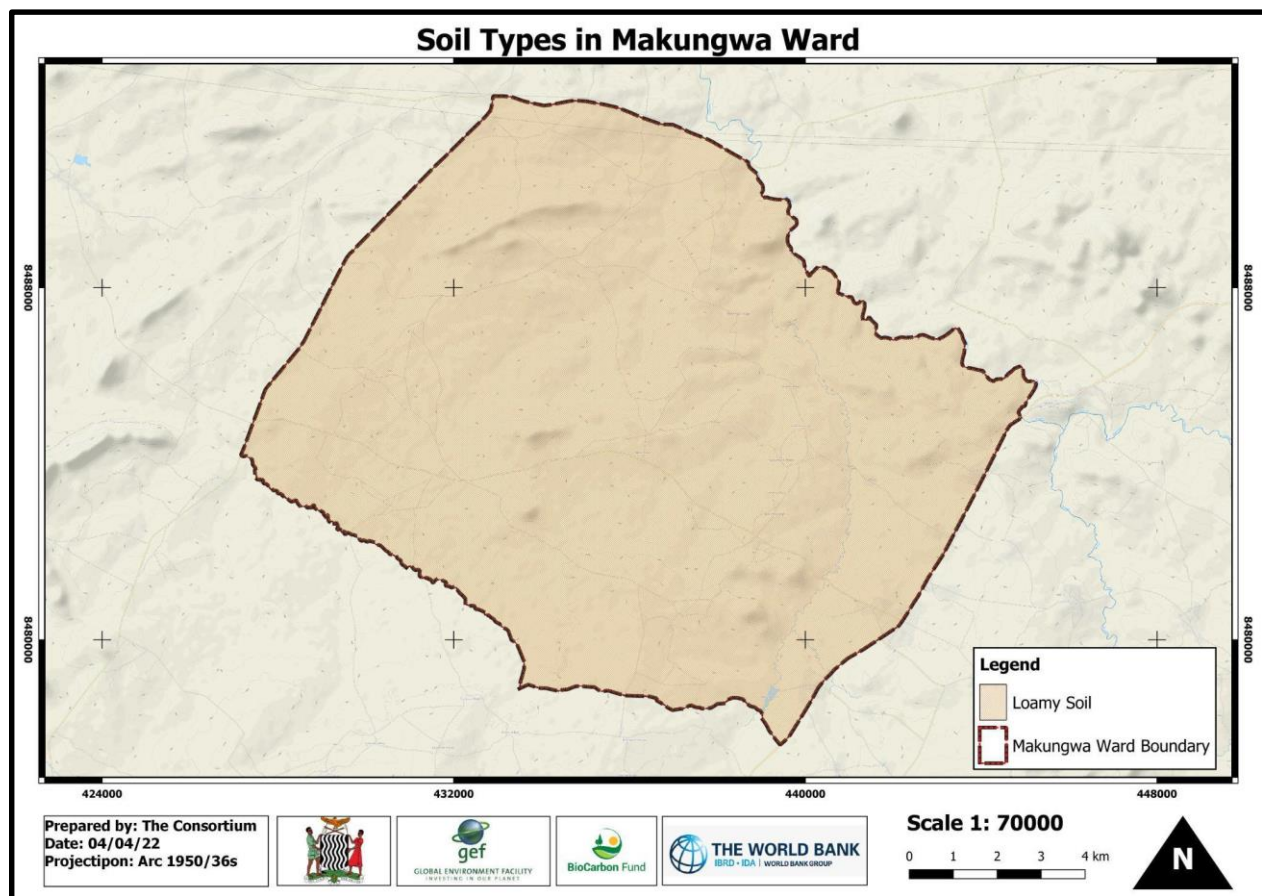


Figure 4: Makungwa Soil Map

### 3.3 Socio-Economic Environment

Makungwa ward covers a total area of 15,639.9 hectares. According to the JIDP for Chipata, Kasenengwa and Chipangali (2021), the poverty levels for Makungwa Ward in Kasenengwa District stand at 85%. Settlements in the ward are dispersed with poor road networks, especially during the rainy season, as the areas become inaccessible because streams flood and there are no bridges/culverts (Chipata, Kasenengwa, Chipangali Joint IDP, 2021). The ward has a total of 75

villages and based on the 2017 Census of Population, Makungwa Ward has an estimated total population of 12,901 (CSO, 2017) as shown in the table below:

Ward	Population		
	Male	Female	Total
Makungwa	6229	6672	15,425
Source: Chipata, Kasenengwa, Chipangali JIDP, 2021			

Table 3: Makungwa Ward Population

### 3.3.1 Population Projection

For the purposes of projecting future services and land use needs, the population forecast was based on the national population projections (adjusted to reflect the population of Kasenengwa District at 2.8% growth rate as per 2017 Zambia Census projection). On this basis, the population of Makungwa Ward is projected to increase to 14,335 and 18,171 in 2021 and 2030 respectively (Chipata, Kasenengwa, Chipangali JIDP, 2021).

This projected increase in population will not only require land for development of infrastructure and other services but will also increase pressure on ecologically sensitive areas such as forests and hills that serve as catchment areas as well as water recharge areas. This entails that more land will be opened up for agricultural purposes which will potentially lead to forest degradation and loss of biodiversity, consequently contributing to severe climate change and its related effects. However, the impact of anticipated increase in agricultural activities on land can be managed through the promotion and adoption of Climate Smart Agriculture (CSA) practices, aimed at reducing agriculture land expansion while increasing crop yields.

### 3.3.2 Social Facilities

Makungwa ward has a total of ten (10) schools out of which nine (9) are primary schools with only one (1) secondary school (Kasenengwa Boarding Secondary School). The ward has two (2) health facilities. The map below shows the spatial distribution of social facilities in the Makungwa Ward:



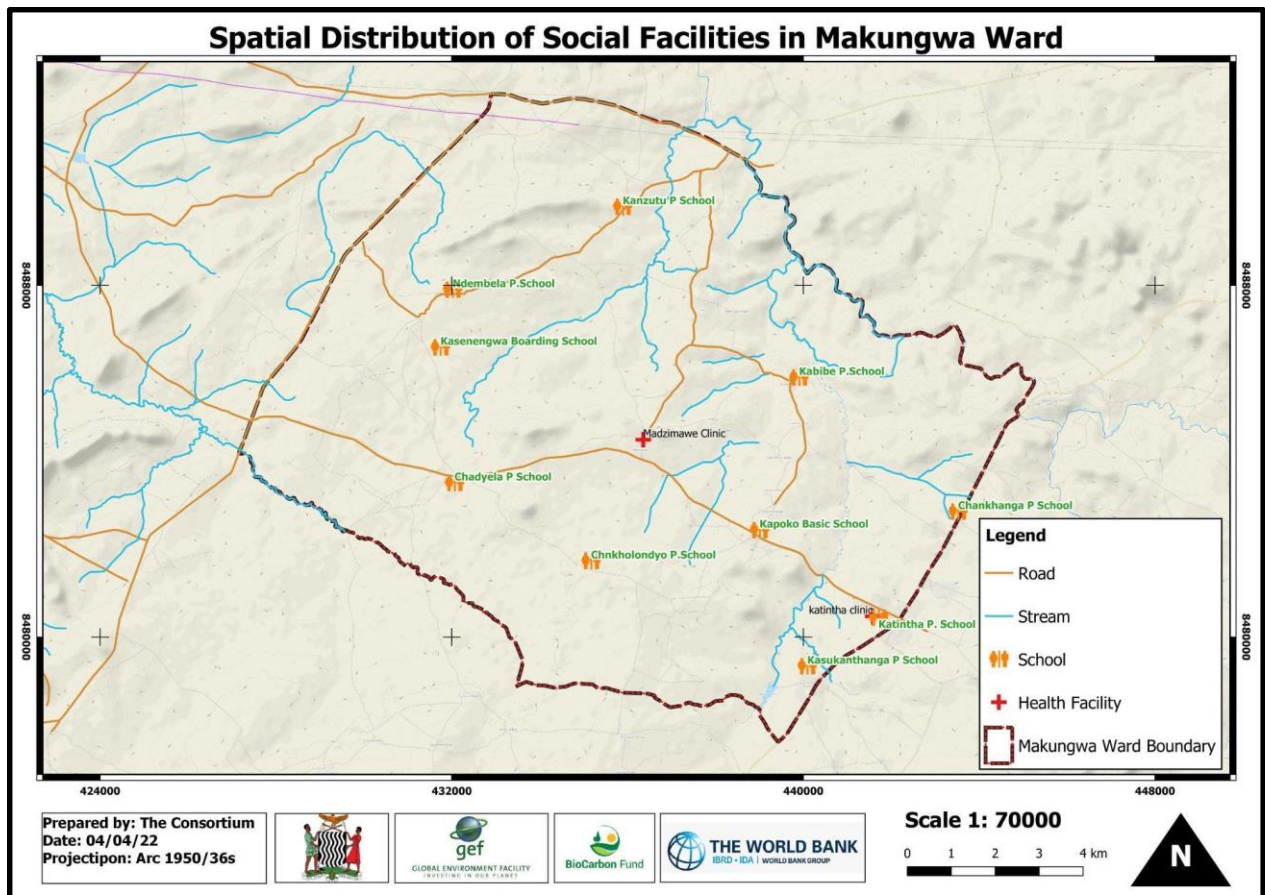


Figure 5: Spatial Distribution of Social Facilities in Makungwa Ward

### 3.3 Source of Livelihood

Livestock keeping and subsistence farming are the predominant livelihood activities in Makungwa Ward, with soya beans, maize, sweet potatoes, sun flower, tobacco, cotton and groundnuts being the crops grown. Animals reared by the local residents of Makungwa include cattle, pigs, goats, sheep, chickens, and ducks. The agricultural products are sold to the Food Reserve Agency (FRA), Good Nature or in the urban centre of Chipata. Farmers also sell their produce along the great east road at Mtenguleni Trading Area and take advantage of the N’cwala ceremony to market their produce to local and international visitors.

### 3.4 Livelihood Security

Livelihood security is the secure adequate access to resources as well as income generating activities to meet basic needs and it is shaped by the changing natural environment (Kassa, 2018).

Securing the livelihoods of Makungwa Ward residents is closely associated with the limited development of economic opportunities in the area because most, if not all, residents depend on undiversified sources of livelihood based on rain-fed agriculture.

Livelihood security is often influenced by possibilities to diversify livelihood sources. If there are diversified livelihood sources, chances of attaining livelihood security are high. However, the over dependence on agriculture as a livelihood source has contributed to soil degradation as the only option available is to open up new fields by cutting down trees, leading to deforestation, which has a negative effect on the climate. On the other hand, climate change affects rainfall patterns which further affect agricultural productivity thereby endangering the livelihoods of the local people of Makungwa Ward.

### **3.5 Livelihood and Natural Resource Utilisation**

Sustainable Livelihood refers to a livelihood that can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Ayantoye et al, 2017). The overdependence of Makungwa Ward residents on agriculture for survival has led to increased pressure on the natural resources, especially land being the means to production for agricultural-based sources of livelihood. This unsustainable natural resource utilisation for survival, such as cutting down of trees for field expansion, leaves the farmlands bare, thereby resulting in soil degradation, which, in return, affects productivity.

On the other hand, farming practices adopted by the locals contribute to soil degradation, which forces them to abandon old fields and open up new ones with a view to increasing yields. Thus, adopting conservation farming is encouraged so that one field can be used over and over without affecting the yields. This, in turn, will reduce the rate at which new agricultural fields are being opened up, thereby conserving trees.

Increase in population has equally contributed to unsustainable natural resource usage in that community members clear land for purposes of settlements and agriculture because their livelihood is entirely dependent upon farming. Thus, they either clear land for field expansions or to open up new fields. Additionally, the majority of households in Makungwa Ward have no access



to electricity hence local communities depend on wood fuel for their energy use. Thus, the high demand for firewood contributes to the rampant cutting down of trees.

Trees (forest) serve as natural habitats for various wild animals, birds and insects which get affected when their habitat is cleared. These animals, birds, and bees have the capability to serve as alternative livelihood sources through careful management. For example, the locals can venture into beekeeping as a business. However, the clearing of trees has led to the disappearance of biodiversity in the area.

### 3.6 Livelihood Constraints and opportunities

Agriculture and livestock are the major livelihood activities in Makungwa ward but due to climate change the area has been experiencing late onset of rains, occasional dry spells and floods which have affected yields, thereby affecting the livelihood of people. However, there are opportunities of improving the yields through practising climate smart agriculture which ZIFLP, through the Ministry of Agriculture, has been implementing in the ward. Additionally, communities can be encouraged to form cooperatives or groups which various stakeholders can support to venture into environmentally-friendly value addition projects to process raw products and sell them as finished products. In order to minimise the livelihood constraints in the ward, sustainable investment in agro-industries to enhance value addition and the establishment of market infrastructures are of great importance. These can, in turn, improve food security and aid in poverty reduction through exploration of alternative sources of livelihood. The table below summarises the constraints and opportunities in Makungwa Ward:

Constraints	Opportunities
<ul style="list-style-type: none"> <li>-Low agricultural yields due to poor farming practices</li> <li>-Lack of initial startup capital</li> <li>-Lack of alternative livelihood sources</li> <li>-Poor road network to access some villages</li> <li>-Lack of electricity</li> </ul>	<ul style="list-style-type: none"> <li>-Switching to climate smart agriculture</li> <li>-Venturing into value-addition activities</li> <li>-Establishment of market infrastructure</li> <li>-Construction of feeder roads</li> <li>-Investment in green energy e.g. solar</li> </ul>

Table 4: Livelihood Constraints and Opportunities

### **3.7 Biodiversity Hotspots**

The sustainable use and protection of biodiversity is an integral component of successful Land Use Planning. There is a need to identify the existing biodiversity together with the local population. Any conflicts of interest must be brought out and resolved leading to greater social acceptance. LUP is one of the tools utilised in biodiversity protection as it helps in identifying existing biodiversity and also creates a broad consensus on the sustainable use of natural resources leading to the conservation of biodiversity. Makungwa Ward has various biodiversity hotspots and the following hotspots were identified during the PLUP preparation process:

#### **3.7.1 Streams and Dams**

The streams in the ward are mostly seasonal and dry before the onset of rains. The drying is as a result of siltation as well as the late onset of rains. The dams have been silted due to soil erosion in the uphill caused by farming and cutting down of trees.

These water bodies can be revamped by the enforcement of bylaws which restrict bad farming methods and also encourage adherence to 50m buffer zone rule around water bodies as stipulated in the Environmental Management Act.

#### **3.7.2 Forests**

Makungwa has forests in the hills and small woodlots coupled with open forests which are utilised for animal grazing and several local forests that are managed by the community. The open forests are normally affected by bushfires either as a result of mouse hunting or clearing of fields. Restriction of burning of fields to months between August and October of every year as well as by-laws prohibiting bushfires can help in protecting forests in Makungwa Ward.

Chief Madzimawe and Chief Nzamane have put in place an initiative to put up forests in the hills and each village has a wood lot which they preserve. This initiative can only work effectively by introducing the formation of Community Forest Management Groups (CFMGs) across the two chiefdoms. CFMGs would help conserve and protect natural resources which are on the verge of extinction especially when complimented by scaling up of climate smart agriculture as agricultural field expansion is one driver of deforestation.

The map below shows the biodiversity hotspots in Makungwa Ward that were identified during the PLUP preparation process:

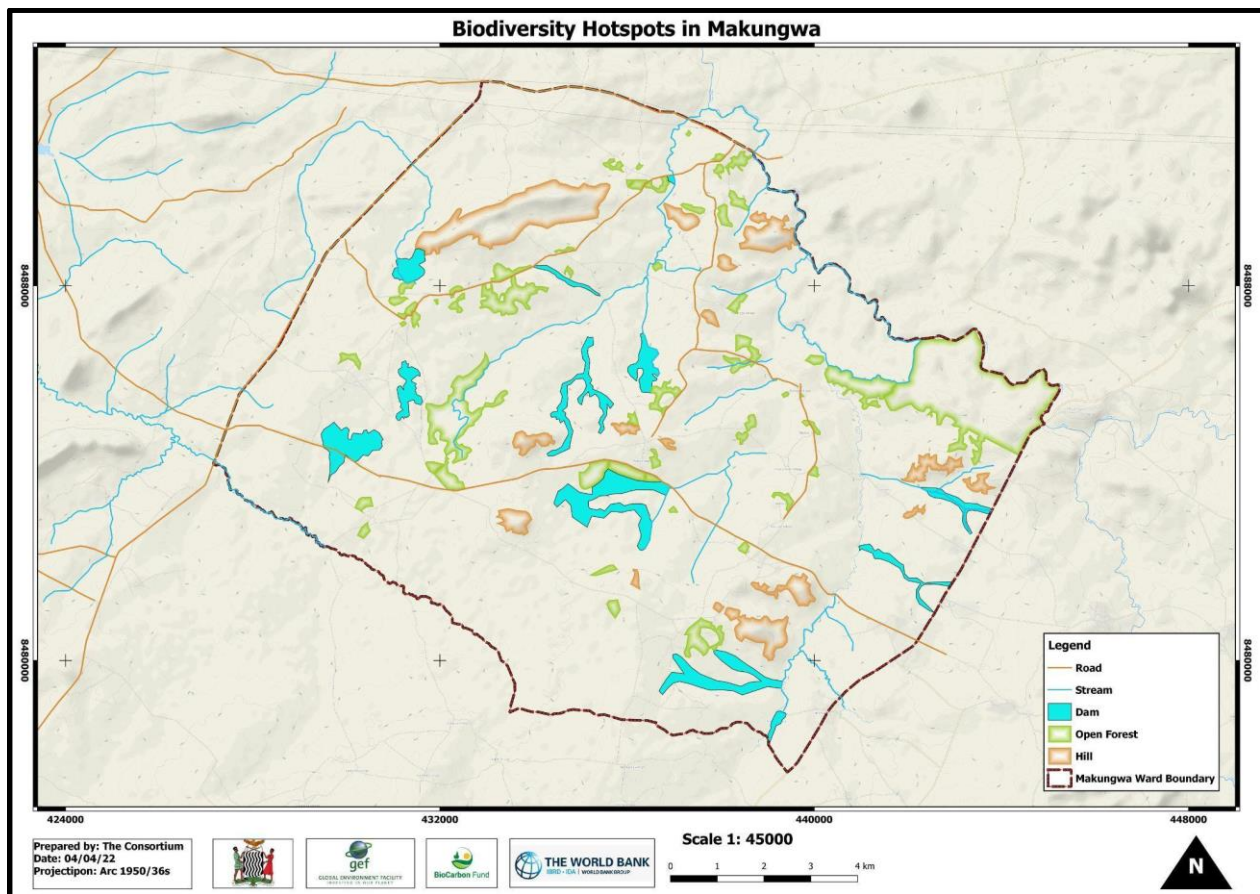


Figure 6: Biodiversity Hotspots

### 3.8 Ecosystem Function

Ecosystem function is the capacity of natural processes and components to provide goods and services that satisfy human needs, either directly or indirectly (de Groot et al 2002). Although unsustainable agricultural practices and charcoal production in the ward are the main factors transforming the natural resource base (which in turn affects the biodiversity due to habitat loss), unplanned settlements, forest reserve encroachment and soil degradation have also led to disturbance of the ecosystem. Further, poor livestock grazing area management has continued to cause a decline in the ecosystem. However, it is hoped that this PLUP will be instrumental in influencing ecosystem restoration and aiding in the conservation of biodiversity.

## 4. Current Land Use Patterns

### 4.1 Overall Land Use

Makungwa ward has several hills and the main land uses are as shown in table 5 below where agriculture is leading followed by forests that include the existing CFM and proposed CFMs, settlements, then hills, the bush and the Dambos proposed for free range grazing of animals. However, it is worth noting that some shared resources overlap the ward boundaries meaning that communities share these resources. Shared resources need to be considered in relation to existing key stakeholders who live adjacent to them. The table below shows the different land uses, the area sizes and the percentages of the whole ward:

No.	Land Use	Hectares	% Coverage	Comment
1.	Total Ward Area (ha)	15,639.9		This is the total area of Makungwa Ward.
2.	Agriculture	12,118.4	77.49%	This is land under cultivation.
3.	Forest	933.2	5.97%	All land mapped as forest.
4.	Settlements	1,163.3	7.44 %	These include: Villages and other built up areas such as; Schools, Health Facilities, Cemetery, Football Pitches, Markets etc.
5.	Hills	668.6	4.27%	Hills not designated as forests but also not used for human settlements or agriculture
6.	Bush (Woodlot)	230.9	1.48%	Land classified as community woodlots.
7.	Dambos	525.5	3.36	Dambo areas reserved for animal grazing

Table 5: Land Use Reservation

### 4.2 Land Use Suitability Analysis

This is an analysis that was done to identify the suitability of Makungwa Ward for agriculture as a land use. The analysis focused on agriculture as a whole and not necessarily evaluating the individual crops grown in the ward and it was based on the soil types.

### 4.2.1 Soil Types

There are quite a number of soil types across Kasenengwa District, but loamy soils cover Makungwa ward. From the map below (figure 7), it is clearly shown that the entire ward of Makungwa is covered by loamy soils:

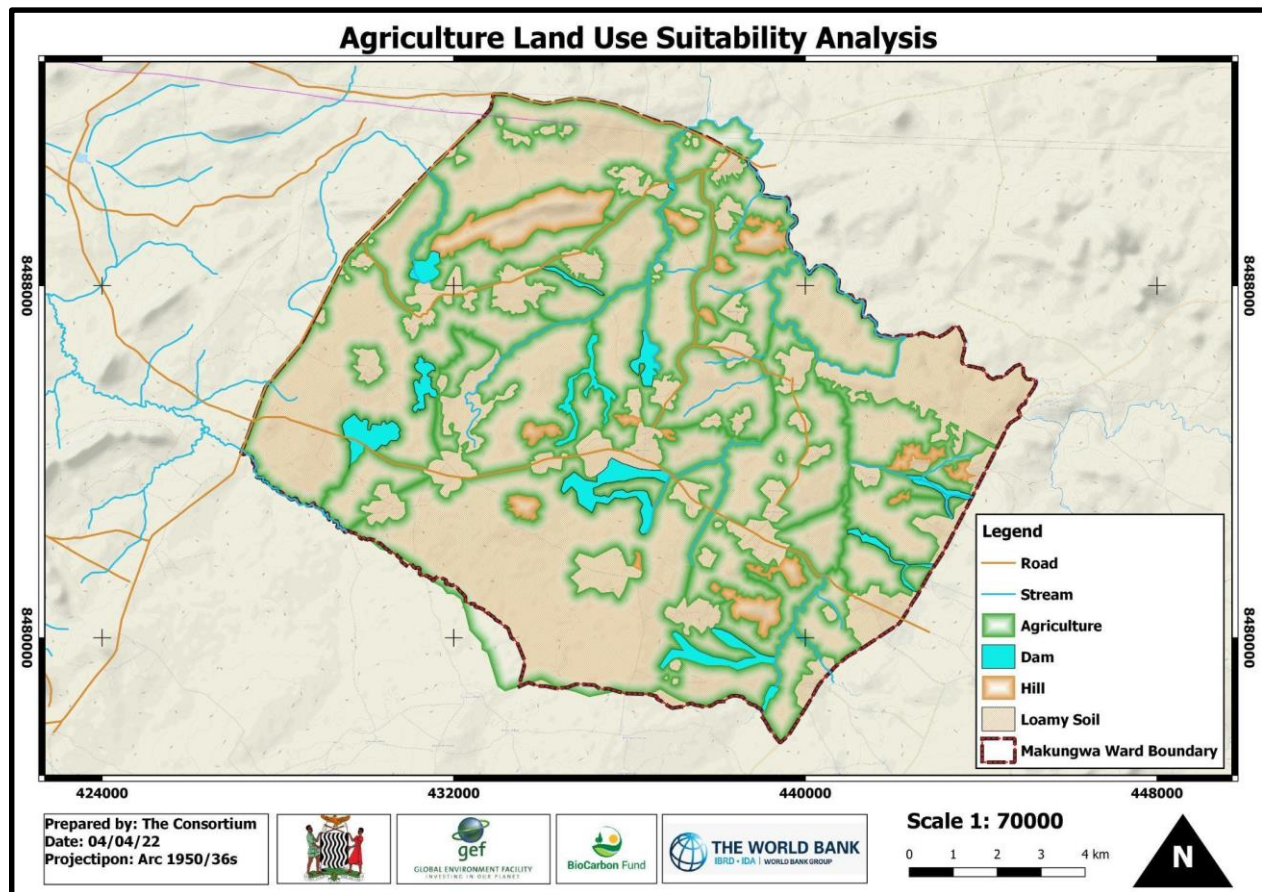


Figure 7: Makungwa Ward Agricultural Suitability Analysis Map

### 4.3 Land Resource and Administrative Boundaries

The land resources captured during the PLUP process are under Nzamane and Madzimawe Chiefdoms and may spill over into other surrounding wards. However, despite the overlapping of these shared resources between wards and chiefdoms, local people in these areas around Makungwa acquire their services from Makungwa Ward. The map below shows the land resources in Makungwa:



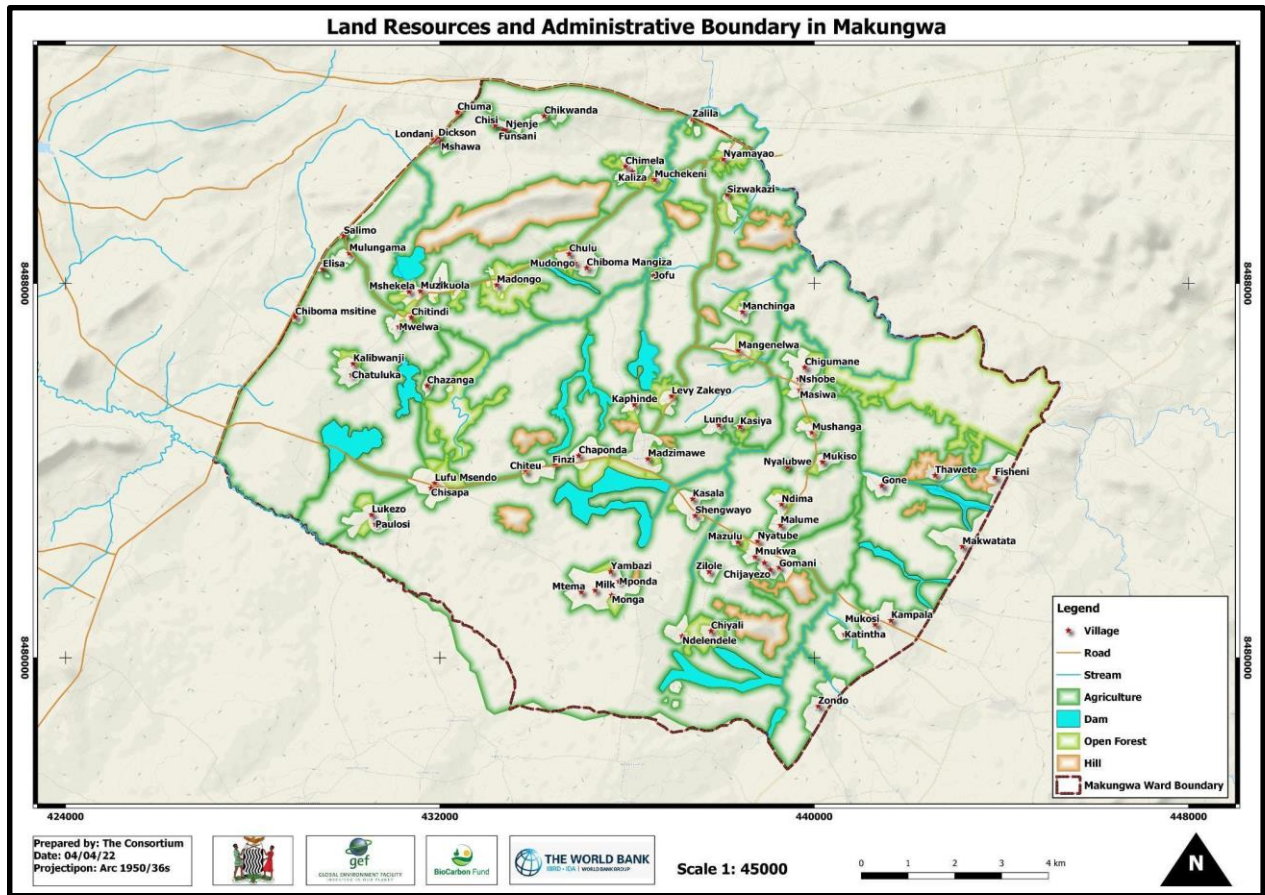


Figure 8: Land Resource and Administration Boundaries

#### 4.4 Current Land Uses

In terms of land use activities, Makungwa Ward is mainly covered with settlements (villages) and agricultural fields as well as areas for social services such as schools, clinics, places of worship and other communal services such as cemeteries, roads and streams. The map below shows the current land uses in Makungwa Ward:

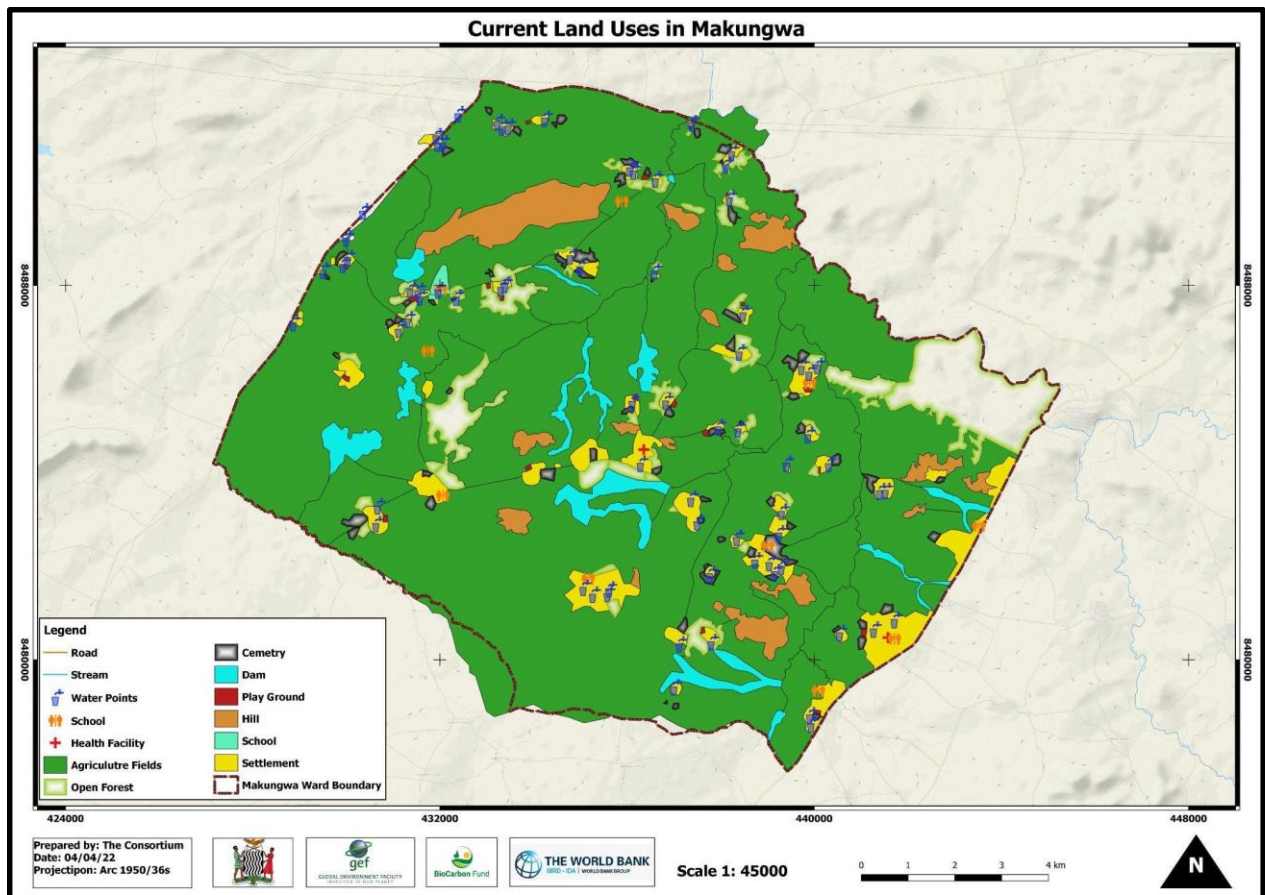


Figure 9: Current Land Uses

#### 4.5 Land Use and Agriculture

Agricultural land is the most utilised in Makungwa Ward covering about 12,118.4 ha (i.e. 77.49% of the total land extent). Most of this land is under Climate Smart Agriculture supported by the Government and Good Nature. The map below shows areas of Makungwa that are used for agriculture:

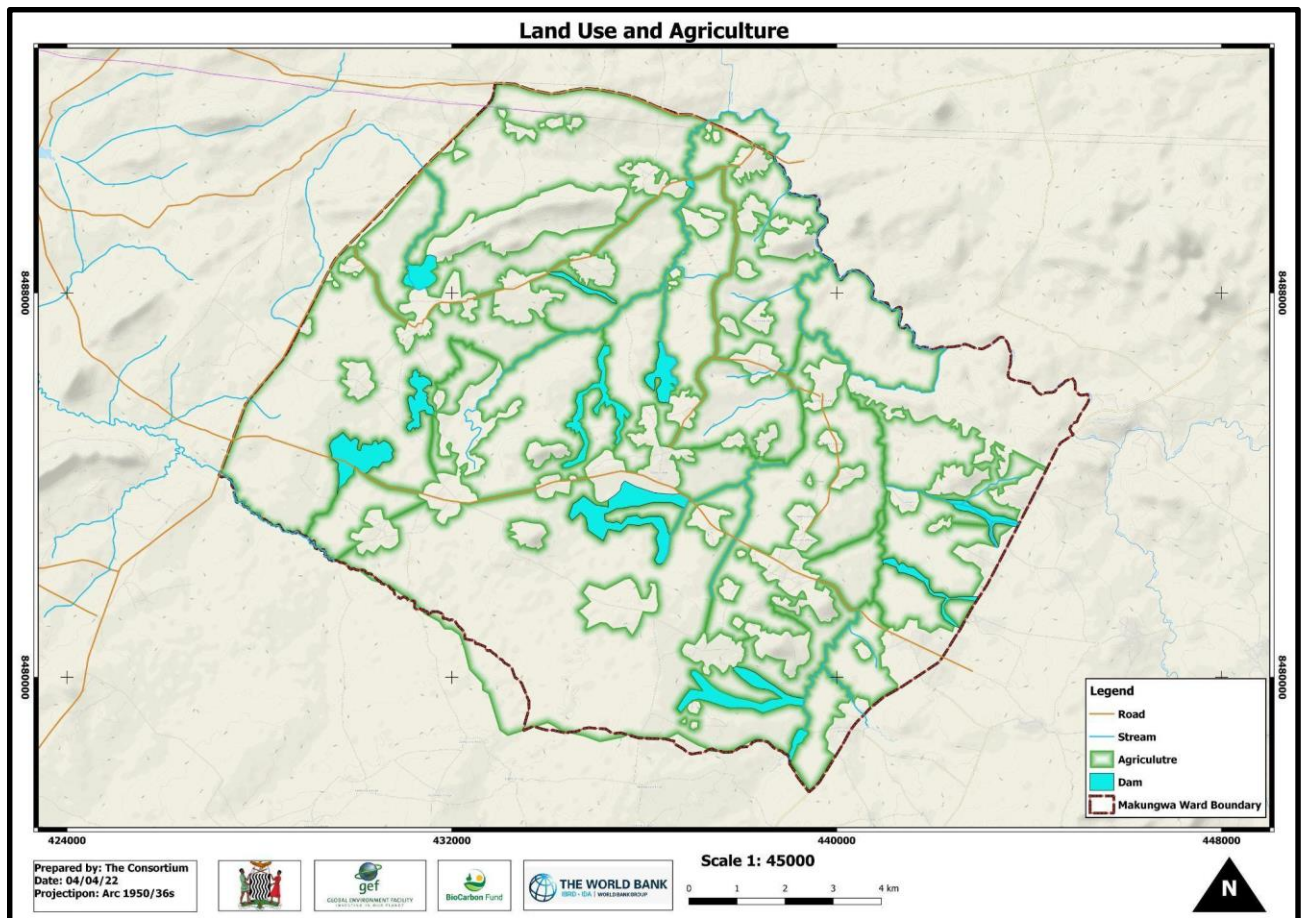


Figure 10: Land Use and Agriculture Map

#### 4.6 Land Use and Forest

The purpose of protecting forests is to provide for conservation and development of forest with a view to securing supplies of timber and other forest produce, protection against floods, erosion and desiccation, withering and maintaining the flow of rivers. Currently, the sustainable utilisation of forest land in Makungwa ward is the beekeeping that is being supported by ZIFLP through the Forest Department. Secondly, there is one forest (Banki) covering approximately 297.7 ha, which is under Community Forest Management.

There are other hills which were proposed as forests by the community during the mapping exercise. These are: Madzi-Athonya, Katala and Pheta. The other proposed area to be put under conservation are bushes surrounding settlements. Further, there is a need to enhance the community awareness on the effects of rampant cutting down of trees along the water bodies where



there is Riverine vegetation. This will mitigate the current erosion situation (siltation) that will help the water bodies in the area to restore and hold water for a longer period. The trees in the river banks will also be conserved in order to prevent streams from drying up early and this will result in the rise of the water table and eventually the problem of dried up boreholes will be a thing of the past. The map below shows the forest areas of Makungwa ward:

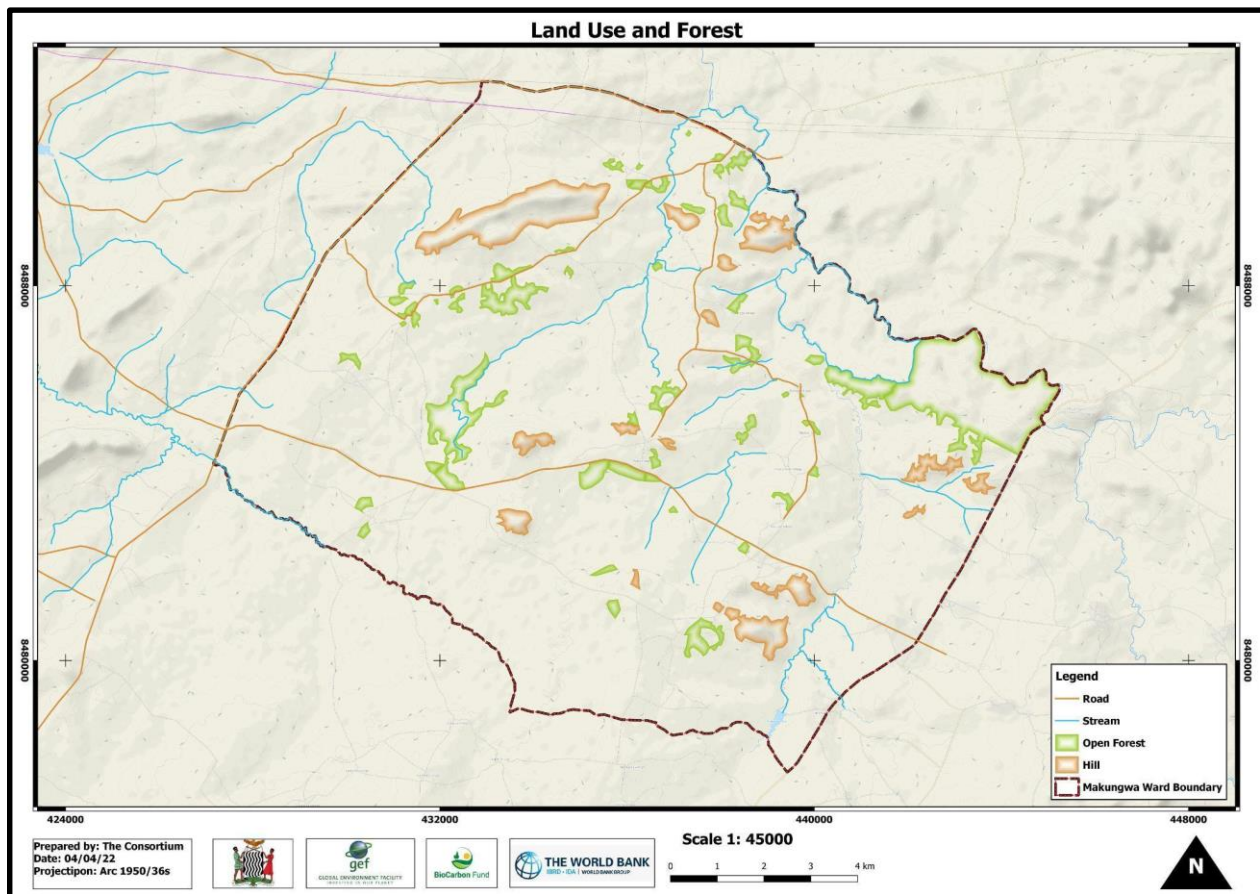


Figure 11: Land Use and Forest

#### 4.7 Land Use and Wildlife

Historically, there were a lot of animal sightings and presence of wildlife in Makungwa Ward, this was attributed to an enabling vegetation cover, lower human population, smaller agricultural fields and respect for nature by the local people through traditional authority. Currently, large mammals are rarely sighted in the area. However, the commonly sighted small game range from rabbit, guinea pigs and protected species (pangolin - which is believed to be used for medicinal and ritual

purposes). During the community engagement activity, it was suggested that one way to restore wildlife in the area is by enhancing forest conservation.

#### **4.8 Land Use and Mining**

There are no mining activities in Makungwa ward, except for artisanal mining activities such as quarrying for building and road construction. However, the only known mining company dealing with small dimensional stones at a small scale in Kasenengwa is Kuma Investments.

#### **4.9 Land Use and Tourism**

Makungwa ward is just adjacent to the cultural site where the Ngoni people gather each year in the month of February to commemorate the N'cwala ceremony. So the PLUP is envisaged to create an enabling environment for conservation and development of wildlife with a view to attracting both local and international visitors who attend this ceremony. Furthermore, the PLUP intends to promote economic activities which lead to improving livelihoods of the local people in the area.

#### **4.10 Land Use and Physical Development**

Makungwa Ward is characterised by various physical developments that have taken place in the past years. It is important to note that some of these developments are private and others are public. Some of the structures are old and in a dilapidated state. These physical developments range from schools, health facilities, churches, settlements, and markets. Changes in land use for creation of new settlements or expansion of existing ones is an area of concern in Makungwa ward because land used for settlements usually becomes a permanent feature, never to revert to the original (environmentally friendly) land use. This has also been evidenced by the mushrooming of unplanned settlements in closer proximity to the protected forest areas.

Makungwa has two (2) health facilities, namely: Katintha Clinic and Madzimawe clinic. Makungwa has ten (10) schools out of which one is Kasenengwa Boarding Secondary School and the remaining nine are primary schools, namely: Ndembela, Chadyela, Chankhanga, Kanzutu, Kabibe, Chinkolondyo, Kapoko, Katintha and Kasukanthanga Primary Schools. The map below shows the physical developments of Makungwa Ward:

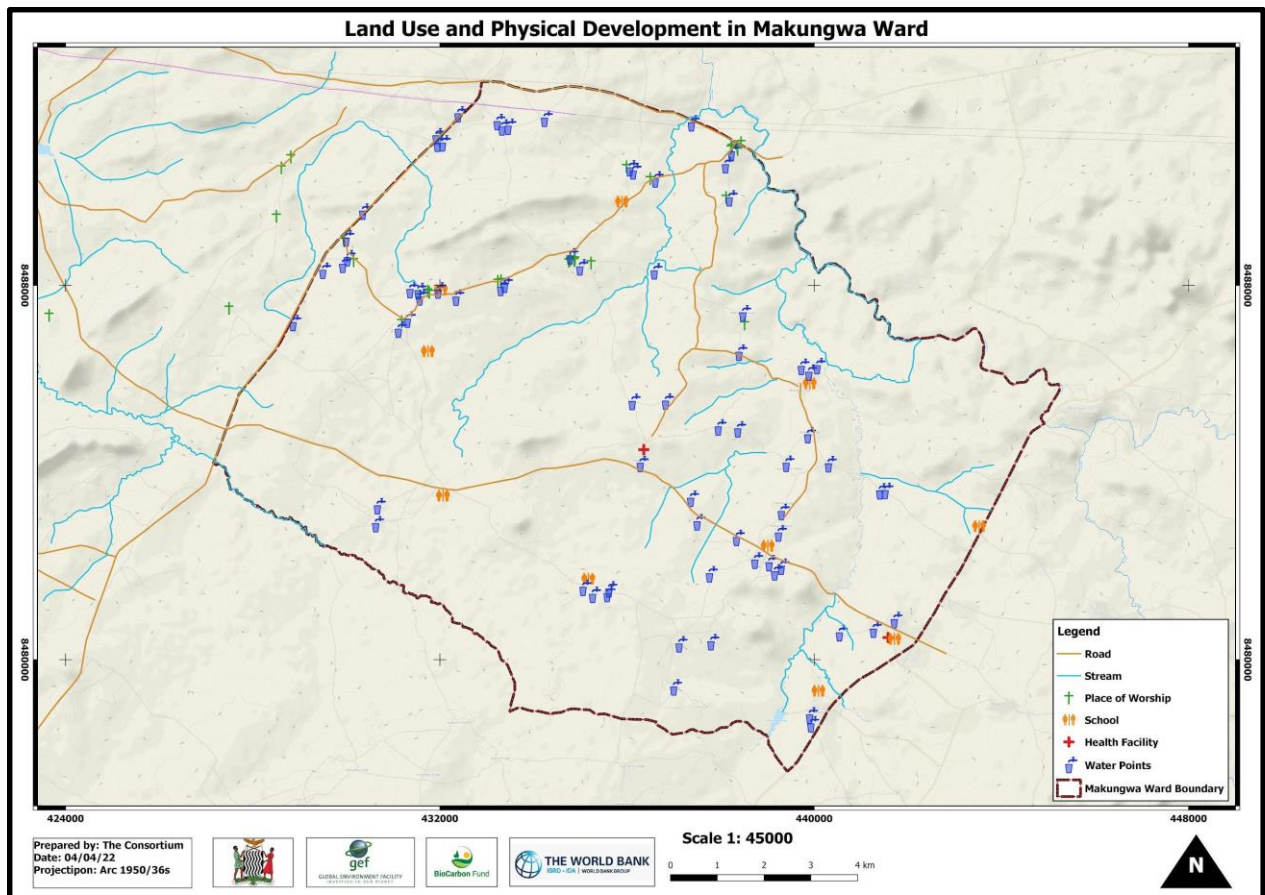


Figure 12: Land Use and Physical Development

## 5. Community Participation

### 5.1 Community Engagement Process

Before the commencement of community engagement meetings the DMTs were oriented into Participatory Land Use Planning with a lens of SBIA. The PLUP training workshop was conducted for five days, facilitated by officers from Physical Planning Unit, Provincial Administration and officers from Land Alliance, a technical support partner engaged to facilitate participatory land use planning in Eastern province. DMT staff from the three districts (Kasenengwa, Chipata and Chipangali) were trained in facilitation of PLUP. At the end of the training the Joint DMT was guided to prepare an action plan and budget to be used for facilitating PLUP activities in Kasenengwa District.

In the initial stages of PLUP activities in Kasenengwa, three Ngoni Chiefs were identified to be custodians of land in Makungwa ward. These were: Senior Chief Nzamane, Chief Madzimawe and Chief Mishoro. On separate days the team went to the three chiefs to explain and solicit support for implementation of PLUP in their Chiefdoms falling in the ward. It was clarified by their Royal highnesses that Makungwa ward falls in Nzamane and Madzimawe Chiefdoms, hence, we proceeded to seek consent from Senior Chief Nzamane and Chief Madzimawe, who expressed happiness and promised to offer support during the whole process of PLUP. They provided responsible indunas to work with.

Community engagement and participation is cardinal to the success of every community project, as it inculcates project ownership and sustainability. PLUP in Makungwa Ward was embarked on through a series of community engagement meetings which involved meetings with the two Chiefs, Indunas, Headpersons and eventually the community at large in sharing the PLUP concept so that Free Prior Informed Consent (FPIC) could be adhered to.

Since Makungwa ward has villages which are far stretched apart, community engagement meetings were held at three designated villages. This was done in order to ensure that many members of each particular village community attend in large numbers for the purpose of getting acquainted with the PLUP concept first-hand information for better and uniform decision making processes in each respective community stretching across the whole ward.

Community engagement meetings were held in three phases as follows:

**First phase** comprised of first village meetings. During the first village meetings, community members were exposed to the concept of PLUP which involved community identification of shared resources, identification of problems affecting the management of resources, sketch mapping of these resources and other spatial features. Participants were guided in drawing sketch maps that show resources in their area. To enhance participation participants were put in three separate groups of youths, women and men. This allowed peer interaction of participants during the exercise. After drawing the sketch maps one representative from each group was asked to present the maps before the meeting. The maps revealed a number of resources, natural and man-made,



Figure 1 illustrates the participatory mapping process. The first photograph shows a group of people, including men and women, gathered around a table, looking at a map. The second photograph shows a person pointing at a map on a wall. The third photograph shows a hand-drawn map titled "ISSUE IDENTIFICATION" and "OPPORTUNITIES". The fourth photograph shows a hand-drawn map titled "OPPORTUNITIES".

**Villages in Makungwa Ward**

**LEGEND**

- Village
- Makungwa Ward Boundary

The map displays the geographical distribution of villages within the Makungwa Ward. The ward boundary is delineated by a thick black dashed line. Numerous villages are marked with green dots and labeled, including Chuma, Chisi, Chikwanda, Zalila, Nyamazayo, Chimela, Kaliza Muchekeni, Sizwalani, Mshawane, Funsani Njenje, Salimo, Mulungama, Elisa, Mshekela, Muzikuola, Mudongo, Chulu, Chiboma Mangiza, Jofu, Madongo, Kaliye, Chitindi, Chiboma msitine, Mwelwa, Kalibwanji, Chatuluka, Chazanga, Kaphinde, Levy Zakeyo, Lundu, Kasiya, Mushanga, Mangenelwa, Chigumane, Nshobe, Masiwa, Thawete Fimeni, Gone, Mukiso, Nyalubwe, Finzi, Chaponda, Madzimawe, Kasala, Ndima, Shengwayo, Mazulu, Malume, Yambazi, Mnuakwa, Londe, Gomani, Mponda, Zilole Chijayezo, Milk Mtenga, Monga, Ndelendeje, Chiyali, Katintha, Kampala, Mukosa, Zondo, Lukezo, Paulosi, Chisapa, Chiteu, and Fintu.

**Metadata:**

- Prepared by: The consortium
- Date: 28/03/22
- Projection: Arc1950/36s
- Scale: 1:150,000
- Source: GISD - SDI | WORLD BANK GROUP

**Third phase:** In this phase community engagement meetings were also conducted for the verification of the digitised Shared Resource Maps in all the villages. This presented an opportunity for the community members to make objections, corrections and additions on the earlier submitted shared resource information. Community engagement meetings also involved zoning activities in all the village areas for future land uses. Members of the community were involved in the mapping of the proposed future land use areas. It was during the third phase community engagement that Resource Governance Rules were also formulated for approval by HRH Senior Chief Nzamane and HRH Chief Madzimawe. Below are pictures showing communities validating the mapped resources and proposing areas of conservation:



The attendance registers for each meeting have been attached on Annex 3.

## **5.2 Agreed Local Rules for Land Use and Resource Management**

Prudent management of natural resources where the residents derive much of their livelihood in the rural communities is a daunting task in the absence of agreed local rules for land use and resource management. The formulated by-laws for Makungwa ward are attached as Annex 1.

## **5.3 Problem Identification**

There are several challenges that rural communities face and Makungwa residents are not an exception. The most prominent challenges are synonymous to unsustainable agriculture practices, lack of tenure security due to undocumented tenure rights, marginalization of the vulnerable groups such as women and youths due to patrilineal practices.

Issues affecting land use in Makungwa Ward were captured during the clustered community meetings which were conducted. The problems, causes and suggested solutions to the problems faced by residents of Makungwa Ward are as outlined in the table below:

Problem	Causes	Possible Solutions
<ul style="list-style-type: none"> <li>● Inadequate safe water sources</li> <li>● Drying of streams</li> <li>● Delayed rains</li> <li>● Loss of soil fertility</li> <li>● Reduced crop yield</li> <li>● Shortage of land for agriculture</li> <li>● Poor roads</li> <li>● Deforestation</li> <li>● Inadequate communication facilities</li> <li>● Inadequate Dams</li> </ul>	<ul style="list-style-type: none"> <li>● Poverty</li> <li>● Ignorance</li> <li>● Seasonal streams and late onset of rains</li> <li>● Lack of alternative livelihood sources</li> <li>● Unsustainable agricultural practices</li> <li>● Land degradation</li> <li>● Lack of by-laws</li> <li>● Inadequate communication towers</li> <li>● Siltation</li> </ul>	<ul style="list-style-type: none"> <li>● Drilling of boreholes and Dam construction</li> <li>● Adopting conservation farming practices</li> <li>● Adopting climate smart agriculture practices</li> <li>● Rehabilitation/construction of roads and related infrastructure</li> <li>● Skills in mushroom conservation and bee keeping</li> <li>● Construction of Dams and Communication towers.</li> </ul>

Table 6: Problems Identified

## 6. Core Issues Affecting Land Use and the Environment

At the four clustered community meetings held at Yambazi Community School, Mshekela Village, Kapoko Primary School and Kanzutu Primary School, community members across villages in Makungwa Ward identified various problems affecting them. During this session, participants were guided to prioritise the identified problems. This was done through pair wise ranking which involved participants comparing a particular problem against each of the other identified problems. This was done to help communities to identify and rank problems in order of importance and gravity so that core problems could be identified for intervention. This activity revealed the actual core problems to be addressed, as the others identified as problems were simply the results of the core problems. The main core problems identified in table 5 above were as follows: delayed rains,

loss of soil fertility, reduced crop yield, shortage of land for agriculture, drying of streams, deforestation, lack of safe water sources, poor roads, poor communication network and lack of adequate dams.

The quest to increase crop production often leads to expansion of agricultural fields and consequently encroachment into forests. The high levels of poverty in the ward make communities heavily dependent on fuelwood and charcoal. The identified alternative sources of energy such as gas stoves and cook stoves are unaffordable and extensively unavailable. Land tenure regarding forests and other communal/shared resources is often misunderstood because the communities claim that forests and trees in the wild in general do not belong to anyone. In addition, forest fires were identified as a key driver to deforestation and forest degradation. There is a general belief held among communities that bush fires, being a long-term part of the forest ecological system and historical part of their culture, does not significantly affect forests in a negative way.

Participants were further guided to identify the causes of such problems. This was done to make them realise that there was a human activity element related to the problems. Facilitators summed up the activity by explaining that some of the problems identified, especially those related to the environment, were as a result of lack of land use planning.

### **6.1 Lack of Safe Water Sources**

Residents of Makungwa Ward mainly depend on boreholes and water wells for water, although most of the boreholes are limited to areas around schools and health facilities. As a result, those living far from such facilities have challenges in accessing water, especially that all the streams



in the Ward are seasonal.

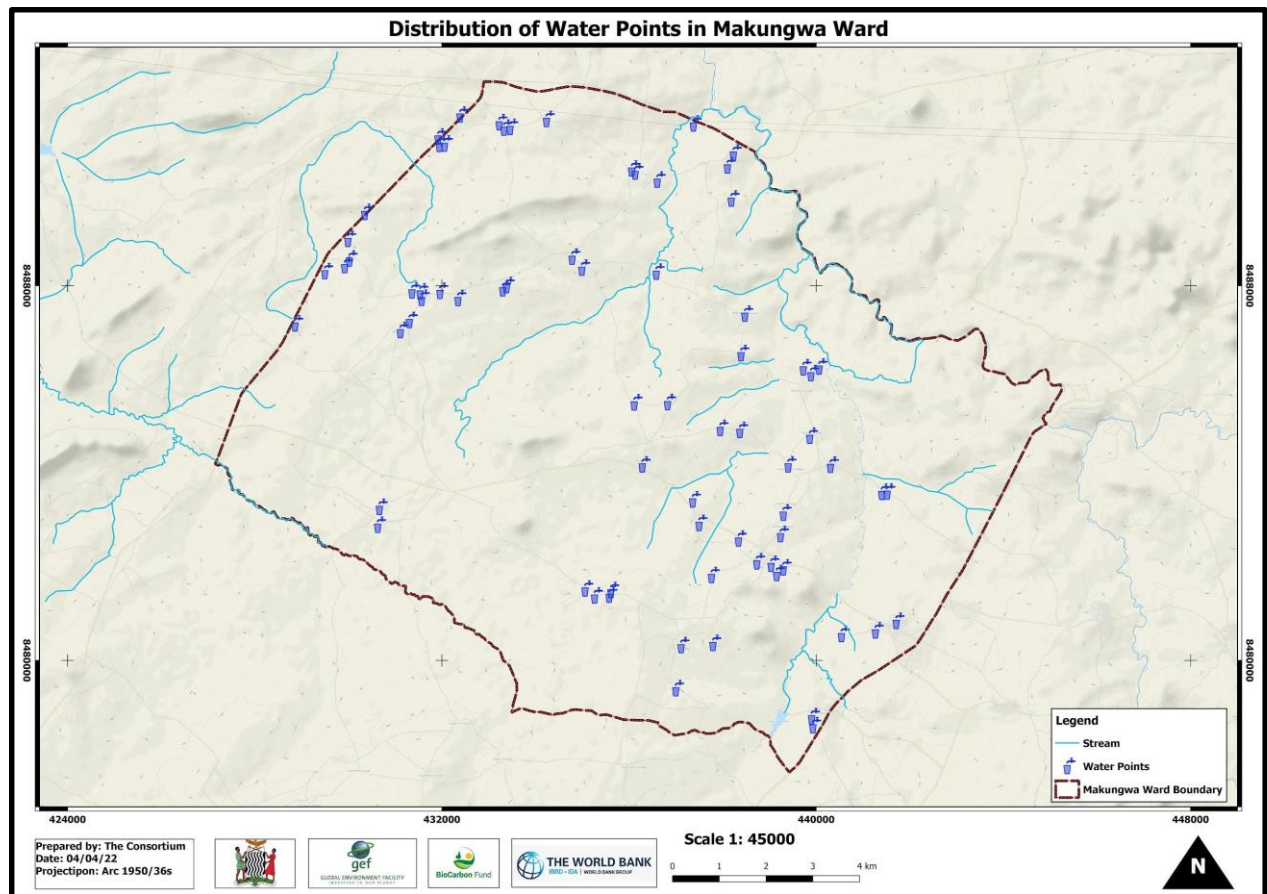


Figure 13: Distribution of Water Sources

## 6.2 Soil Degradation

This problem is mainly as a result of unsustainable agricultural practices, bush fires and cutting down of trees for either charcoal production, field expansion or by animal grazing. This has, in turn, affected land productivity, leading to food insecurity and livelihood challenges. Thus, adoption of climate smart agriculture and formulation of by laws prohibiting unsustainable land resource usage can help avert the problem of land degradation.

## 6.3 Poor State of Roads and Related Infrastructure

Inadequate transport system and lack of proper road network hampers development in Makungwa Ward because the movement of goods and services (required for such development) depends on transportation. Most feeder roads in Makungwa Ward are in poor condition especially in the rainy

season and require routine maintenance and rehabilitation. The Ward also lacks road related infrastructure such as bridges/culverts making certain areas inaccessible especially during the rainy season. This makes access to essential services such as health facilities and schools very difficult for residents especially those in far away places.

#### **6.4 Long Distances to Schools**

The entire Makungwa ward has a total of ten (10) schools and only Kasenengwa Boarding Secondary School is a secondary school which is currently servicing the residents in the ward. The primary schools in the ward are Ndembela, Kanzutu, Chadyela, Chankhanga, Kabibe, Chinkolondyo, Kapoko, Katintha and Kasukanthanga Primary Schools. These schools enable children within the ward to receive adequate primary education, but the presence of only one (1) secondary school in the ward means less access to secondary school education for the secondary school-going children of Makungwa ward.

With reference to the Ministry of Education standards of population of having access to school facilities within 5 kilometres distance, the analysis on Makungwa Ward shows that:

- 28 villages out of the 75 villages within the ward fall within the recommended 5km radius of the Secondary School (Kasenengwa Boarding Secondary School). The remaining 47 villages fall outside the recommended 5km service radius.
- All 75 villages in the ward fall within the recommended 5km radius of one or more of the 9 primary schools in Makungwa ward.

That being the case, secondary school education levels are generally low in Makungwa Ward (Chipata, Kasenengwa, Chipangali JIDP, 2020) and on average the teacher to pupil ratio for secondary schools in the ward stands at 1:40. These statistics are contrary to the teacher to pupil ratio of 1:37 recommended by the Ministry of Education. This disparity is mainly attributed to lack of adequate secondary school education facilities due to the ward having only one (1) secondary school. The figures below show the education facility service radii for both Primary and Secondary education:



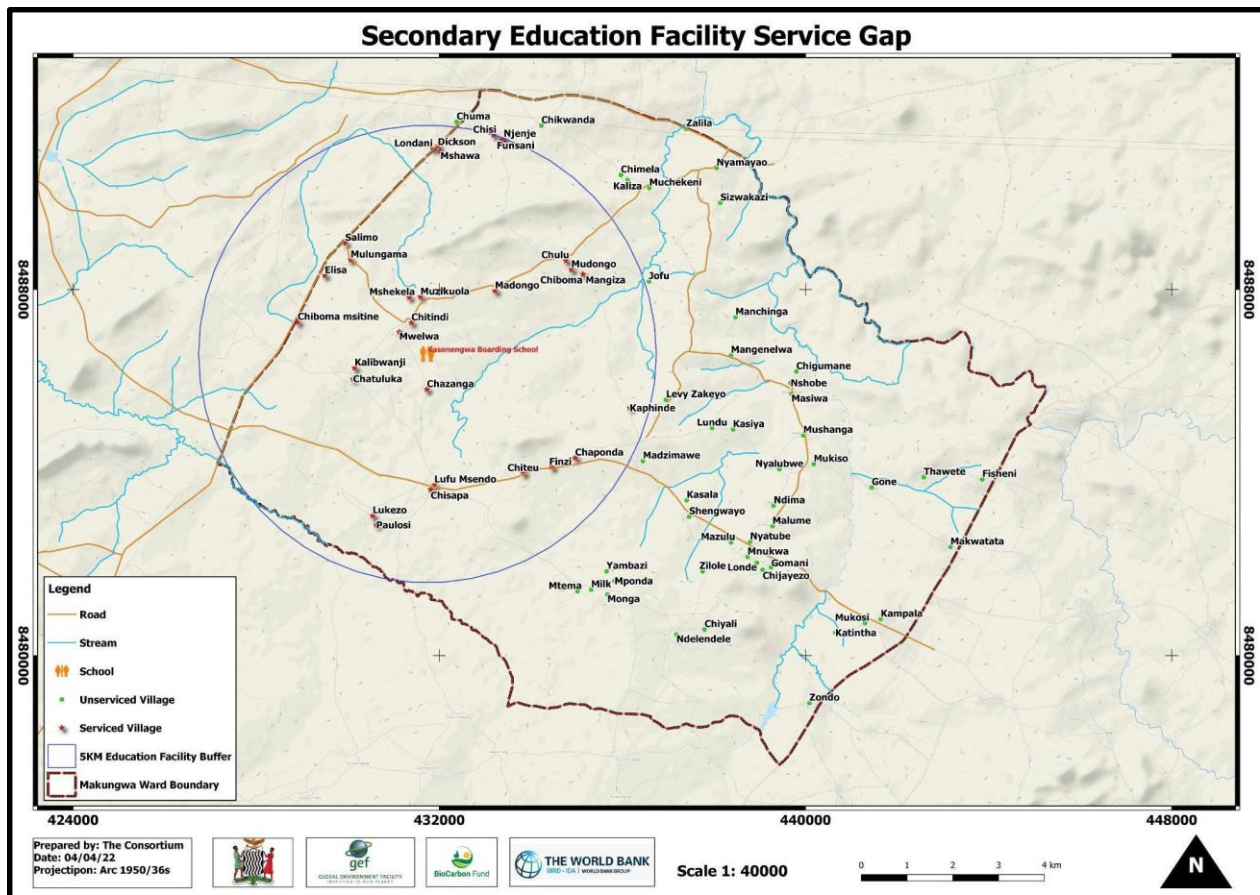


Figure 15: Secondary Education Facility Service Gap

## 6.5 Inadequate Health Facilities

There are only 50 villages in the ward with easy access to the two (2) health facilities in Makungwa ward. About 25 villages in the ward fall outside the 5KM health standards recommendation set by the Ministry of Health.

Makungwa ward is currently serviced by Madzimawe Clinic and Katintha Clinic. These two health facilities cater not only for Makungwa ward residents but other surrounding wards of Kasenengwa district as well. Some residents still have difficulties in accessing health care services because of long distances to these health facilities, coupled with the poor state of roads.

It suffices to mention that any future plans by the community should take care of the demand for primary health care which will increase in Makungwa ward and surrounding areas due to people migrating from other parts of the district. The current health services will need to be expanded in



order to improve the quality of health care. More health personnel will be required to ensure that the current high health worker to patient ratio is reduced.

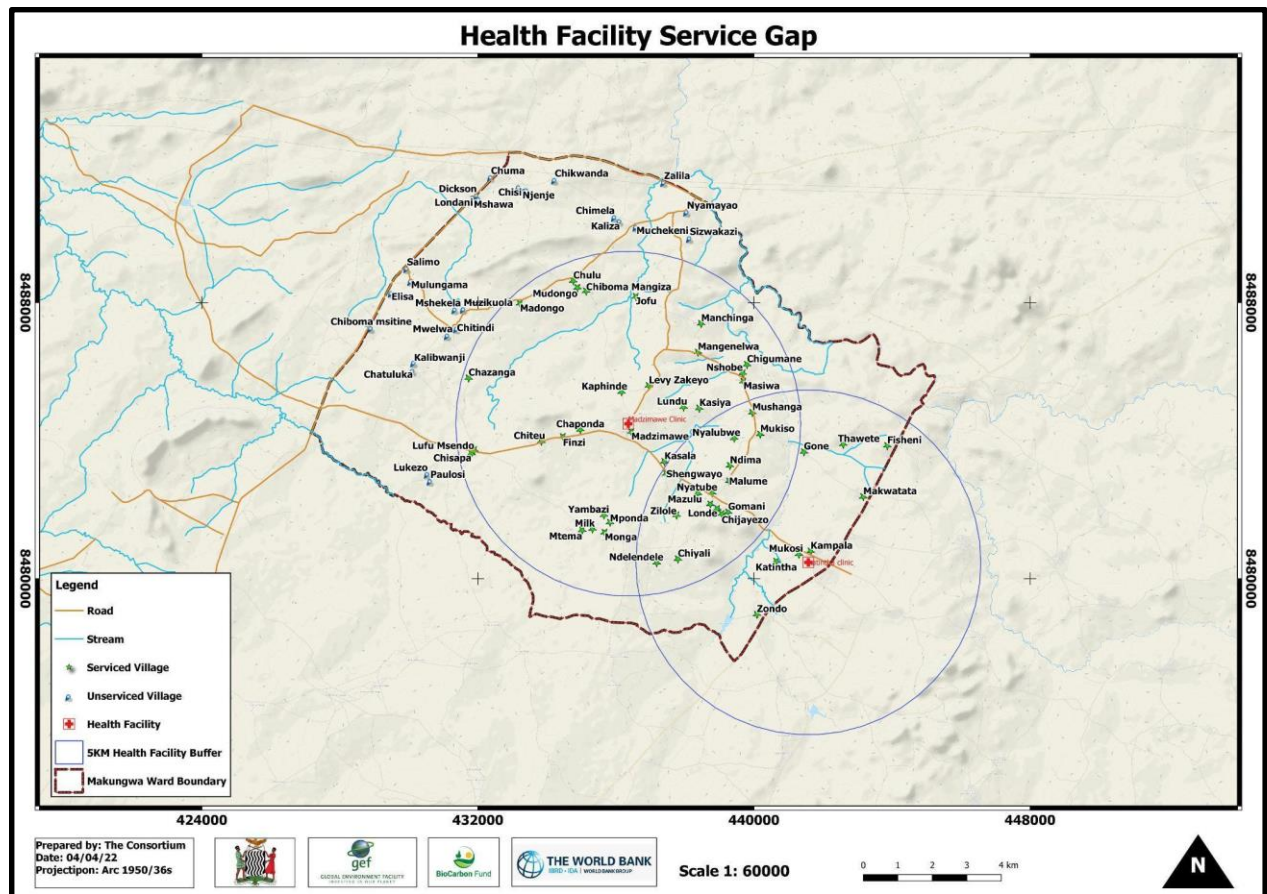


Figure 16: Health Facility Service Gap

## 6.6 Inadequate Telecommunications Facilities

The community in Makungwa ward identified telecommunication as a major challenge affecting some parts of the ward. The data analysis in the area shows deficiency of this service, with only one (1) network tower. The telecommunication network tower installations facilitate the ease of access to diverse forms of information within the shortest possible time. This enables the citizens residing in Makungwa Ward and surrounding areas to interact through phone-calls, messaging, internet etc. With the development of the 4G internet speed, citizens are able to surf the internet with less difficulty. Mobile money platforms have also made money transactions easier. In order to make this possible, several service providers ZAMTEL (Zambia Telecommunications

Network), MTN (Mobile Telecommunications Network), AIRTEL and Liquid Telecom have established themselves in the district, through the installation of network towers which enable transmission of signals containing information from the sender to the recipient, and vice versa, and capturing of satellite signals.

The advent of the Covid-19 pandemic, which led to the closure of all learning institutions in the country in 2021, forced most institutions to conduct lessons using e-learning platforms, especially for students and pupils in examination classes. Makungwa ward was no exception to this, and the one (1) telecommunication tower was not sufficient for easy internet accessibility for all residents of the ward. This highlights the need for adequate telecommunication facilities to be installed within the ward.

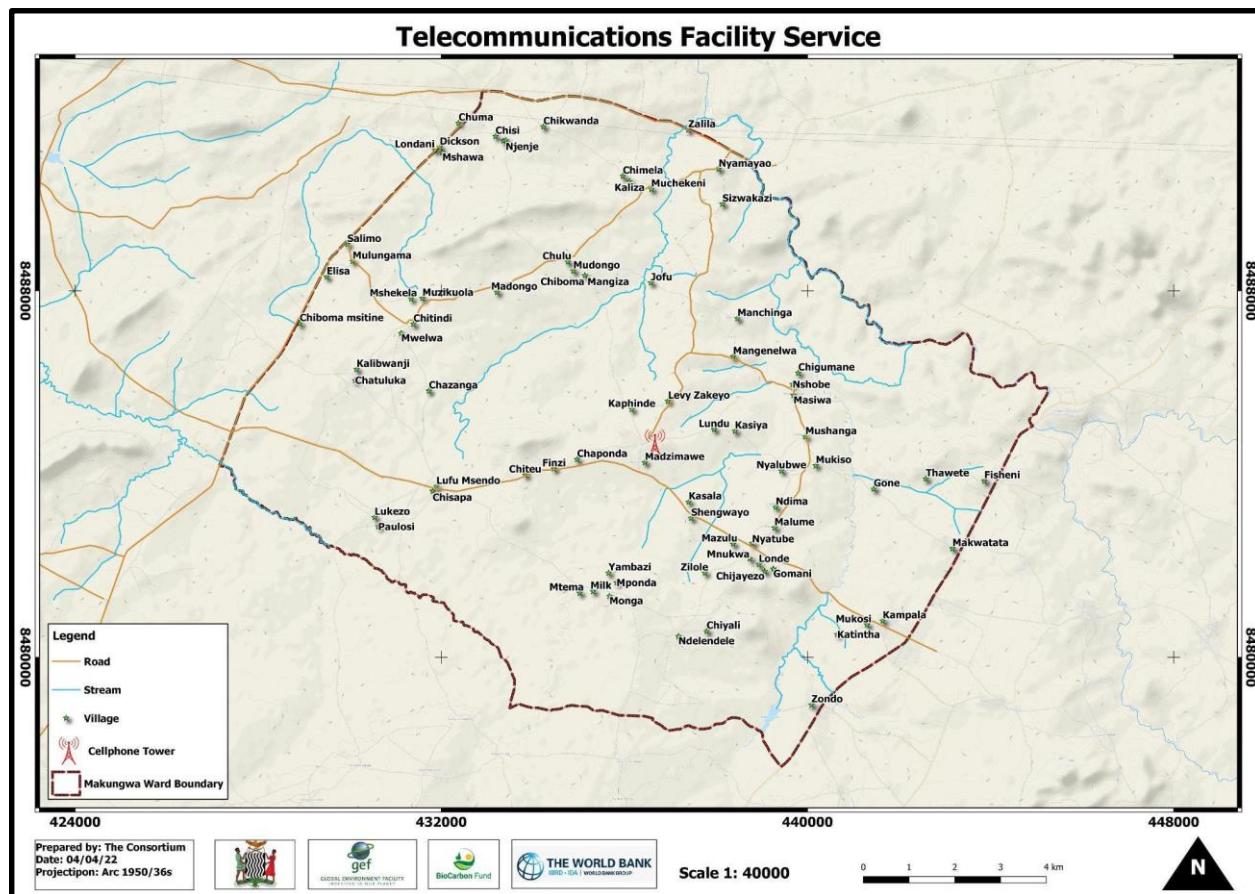


Figure 17: Telecommunications Facility Service

## 7. Land Use Planning – Zoning, Validation and Governance Rules

This activity was meant for communities to object, correct and confirm that all the mapped resources were captured on the maps and at the same time proposing areas to be protected. By protection, communities agreed on the by-laws that will help them manage their resources and other areas of development in a sustainable manner. Four clustered meetings were held in Makungwa ward at Yambazi, Mshekela, Kapoko and Kanzutu villages. Printed shared resource maps on A1 were presented to the communities to confirm if the shared resources shown on the maps were a true reflection of their input. This was done in a consultative manner to make sure that the communities take responsibility for the process and the product which is the plan itself. Community members selected the resources to be protected and zoned the areas and at the same time proposed other areas for developmental activities such as trading areas, clinics, schools and any other that would support the improvement of their livelihood. Shared resources in the Ward overlap between sections/areas especially that these sections/areas have imaginary boundaries. Thus, for the purpose of clearly presenting the proposed land uses, the meetings were clustered into four (4) areas with attendance in table 6 below:

Community Area	Female	Male	Total No. of participants
Yambazi	35	32	67
Mshekela	22	54	76
Kapoko	55	57	112
Kanzutu	15	71	86

Table 7: Attendance Statistics

### 7.1 Yambazi Community Meeting

The first validation meeting was held in Yambazi village with a representation of 20 villages. The total number of participants in this meeting was **67 (32 Male, 35 Female)**. The community proposed Madzi-Athonya, Pheta and Kala hills as forests, proposed the completion of Madzimawe Day secondary school and bridges on Mangenelo to Fisheni road. There was also a proposal of another bridge on Kanzutu stream and also the construction of Banki, Chimwa and Kaziwolile

dams. The community made a proposal of setting aside all Dambo areas for animal grazing so that the proposed forests are protected.

The rationale on proposed development was built on the problems that were identified during the first village meetings conducted in the area as a measure of mitigating the climate change as well as improving their welfare by identifying alternative sources of livelihood. Example, if the dam can be constructed, it will provide an opportunity for smallholder farmers to venture into fish farming and irrigation farming. Meanwhile the same dam will provide water to their animals and in the long run, the dependence on charcoal production as a means of survival will reduce. The forest will provide an opportunity for beekeeping while with the establishment of trading areas, investment will be attracted which will result in upgrading and servicing of roads. The table below shows the proposed areas and their respective land coverages:

S/N	Proposed Development	Area (Ha)
1.	Dam Construction (Banki, Chimwa and Kaziwolile)	8.0
2.	Forest (Madzi-Athonya)	6.0
3.	Forest (Katala)	69.9
4.	Forest (Pheta)	29.9

Table 8: Land Reservations for Yambazi Community Meeting

The map below shows the proposed developments and future land uses for villages that were represented during the meeting held at Yambazi Primary School:



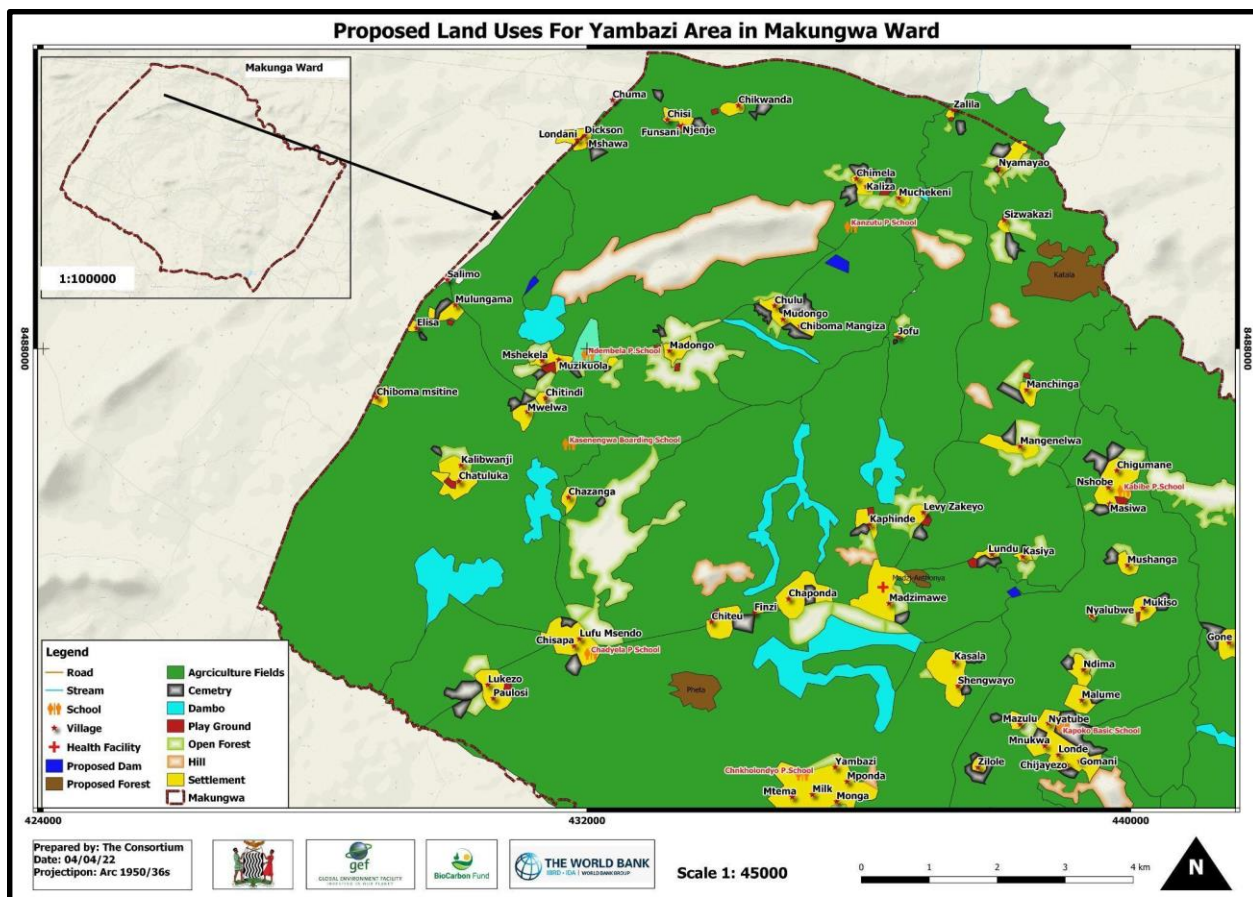


Figure 18: Future Land Use Map for Yambazi Community Meeting

## 7.2 Mshekela Community Meeting

The second validation and zoning meeting was held in Mshekela Area with the representation of 12 villages; Mshekela, Mshaba-Ngoma, Madongo, Muzikuola, Chitinti, Mwelwa, Kalibwanji, Mulungama, Kaliye, Mulao and Chuma. The total number of participants was **76** (54 Male, 22 Female). There is already a forest under Community Forest Management called Banki, and in addition to this, there are individual woodlots, which are under community protection. There were also proposals of Grazing spaces, Dams, Clinics, Schools, a Trading Area and a dip tank at Mshekela village. The areas for some of the proposed zones (such as the Trading Area) were not mapped at the time of the preparation of this PLUP, as there was still conflict among members of the community regarding the location and land allocation for these proposals. Table 8 below shows the proposed areas and their area sizes and figure 18 is the map showing the proposed areas:

S/N	Proposed Development	Area (Ha)
1.	Grazing Spaces (all Dambo areas)	525.5
2.	Dams: → Banki → Kaziwolile	1.074 5.053
3.	Clinic (Ndembela Clinic)	1.923
4.	Dip Tank (Mshekela)	0.658

Table 9: Land Reservation for Mshekela Community Meeting

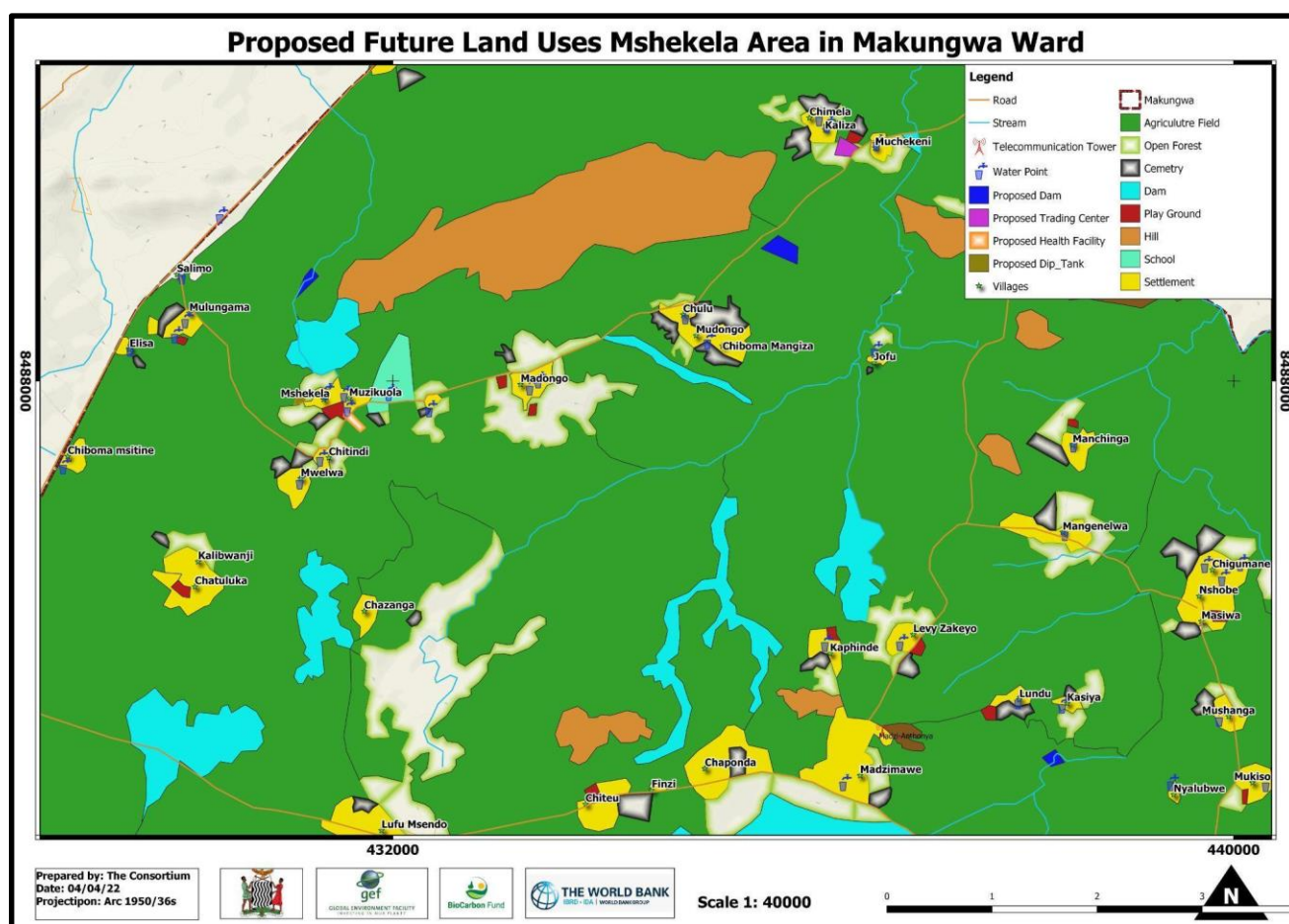


Figure 19: Future Land Use Map for Mshekela Community Meeting

### 7.3 Kapoko Community Meeting

The third validation and zoning meeting was held at Kapoko School with the representation of 21 villages and from the trading area. The list of the villages was: Gomani, Chijayezo, Luonde, Mnukwa, Mazulu, Zilole, Bunga moto, Nyalubwe, Malume, Mukiso, Shabati, Masiwa, Shone, Chigumane, Mkosi, Kampala, Katintha, Chiyali, Ndelele and Kapoko Trading. The total number of participants was **112 (57 Male, 55 Female)**. Arising from the problems that the community identified during the first village meeting in the area which were; inadequate water points, no water for animals during the dry season due to early drying of streams, poor road network, no higher learning facilities and inadequate health facilities, The community proposed a health facility in Bunga moto village; a mother's shelter in Chijayezo village; a dam construction along Chimwa stream and a bridge at Makungwa stream.

S/N	Proposed Development	Area (Ha)
1.	Health centre (Kapoko)	0.737
2.	Dam (Chimwa)	1.85

Table 10: Land Reservation for Kapoko Community Meeting

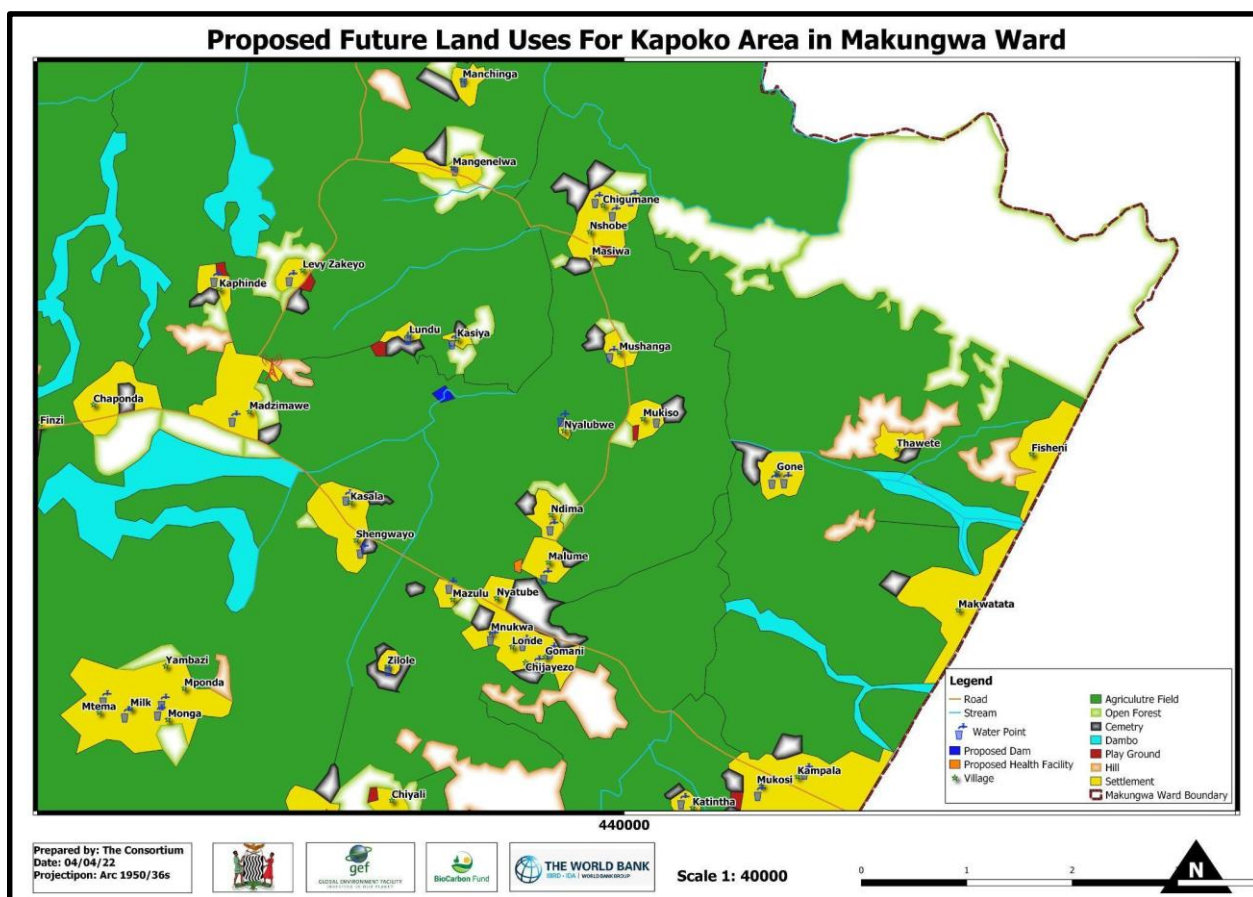


Figure 20: Future Land Use Map for Kapoko Community Meeting

#### 7.4 Kanzutu Community Meeting

The fourth meeting was held in Kanzutu area with a representation of 18 villages namely; Nyamayao, Sizwakazi, Zalila, Nchekeni, Kaliza, Chimela, Funsani, Njenje, Chisi, Chulu, Chiboma, Obugo, Mshawa, Chikanda, Chuma, Londani, Dickson and Kanzutu. The total number of participants was **86 (71 Male 15 Female)**.

Realising from the real time scenarios being witnessed by communities where droughts and floods are becoming a normal way of life which is as a result of not managing the natural resources properly, the communities proposed the following developments and measures: Market-to be put between the graveyard and the football pitch in Kaliza village, Boreholes to be drilled in 10 villages; Londani, Nchulu, Kaliza, Chikwanda, Mchekeni, Njenje, Zalila, Sizwakazi and Bomanjiza. There was also a proposal of a dam to be constructed between Banki Forest and



Kanzutu road. On the other hand, construction of another school (Nyasiza Primary school) and upgrading Kanzutu primary school to a secondary school.

S/N	Proposed Development	Area (Ha)
1	Dam Construction (Kaziwolile)	5.053
2	School (Nyasiza)	1.782
3	Trading Area (Kanzutu)	2.560

Table 11: Land Reservation for Kanzutu Community Meeting

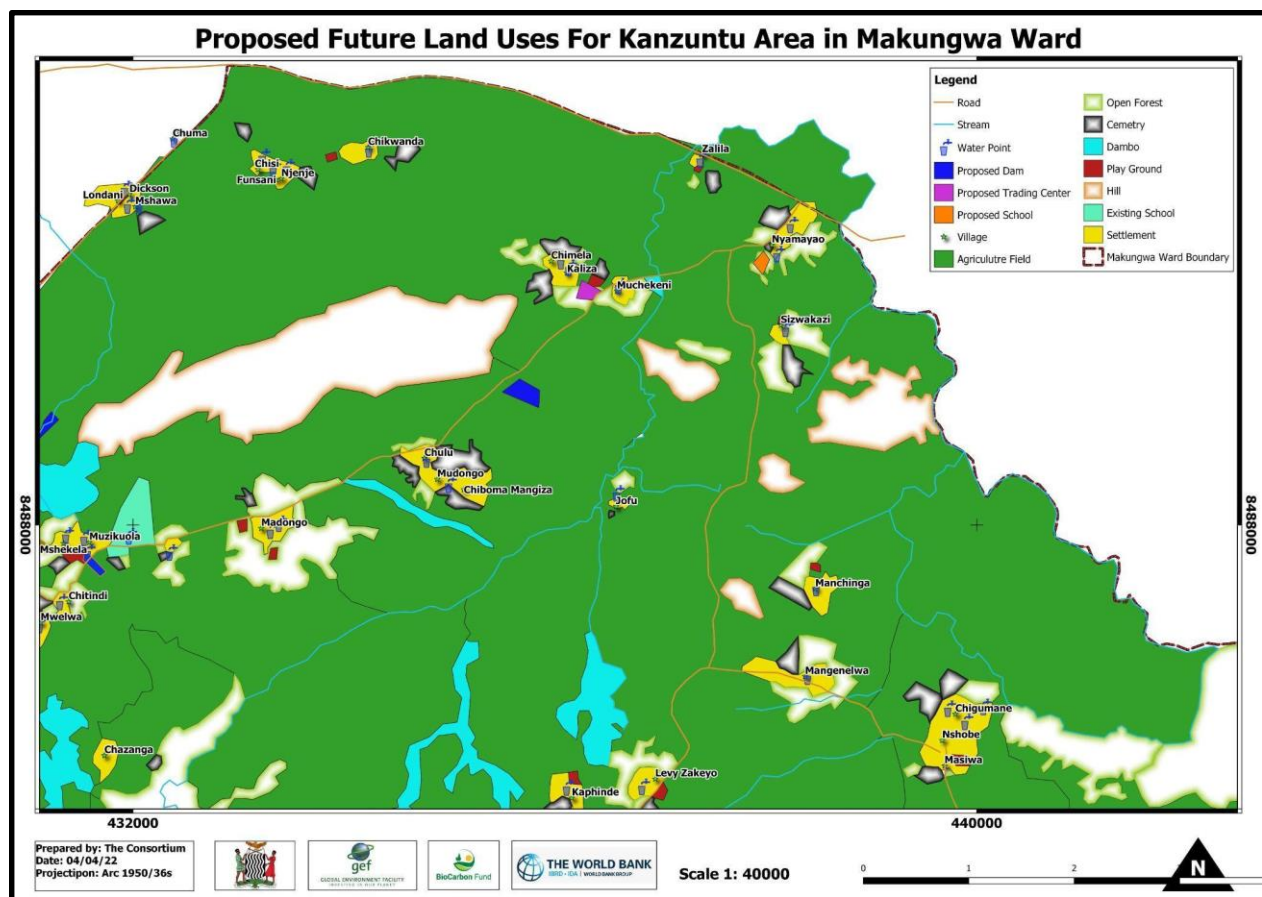


Figure 21: Future Land Use Map for Kanzutu Community Meeting

## 8. Framework of the PLUP and Environmental Management Plan

The environmental assessment of Makungwa Ward highlighted the immediate development trends and environmental requirements of the area. Based on that, the PLUP Environmental Management Framework was compiled with the aim of guiding future developmental planning and decision-making processes. However, the potential environmental and social impacts of the PLUP activity are numerous, but mainly positive. However, much of the negative impacts may be experienced during implementation of the identified sub-projects (based on the identified core issues within the ward) aiming to provide alternative livelihood sources and helping in mitigating unsustainable natural resource use and management. The specific impacts will be evaluated and distinguished during the preparation of the specific Environmental Management Plans (EMP) based on the identified sub-project investments. Therefore, this PLUP Environmental Management Plan was made with guidance originating from the current land uses and the proposed future land use analysis.

S/N	Aspect	Impact	Description	Mitigation Measure
1	Soil Erosion and Degradation	Loss of fertile soil due to exposure and land degradation due to indiscriminate cutting of trees for agriculture and construction of homesteads	Clearing of land for agricultural expansion, settlements, etc. increases the soil erosive potential. Crop cultivation methods have an impact on the soil quantity and quality leading to soil degradation.	-Revegetate cleared and abandoned areas -Adoption of climate smart agriculture -Reduce land clearing to avoid unnecessary exposure of bare ground to the elements of the weather
2	Habitat Destruction	Clearing of land for agricultural use around water bodies, which leads to drying of streams. Cutting of trees for charcoal production.	Clearing of land for agricultural use around water bodies, which leads to drying of streams. Cutting of trees for charcoal production.	-Enhance community sensitization -Restrict activities in sensitive habitats -Avoid unnecessary exposure -Restrict cutting down of trees

3	Loss of Fauna	Loss of biodiversity and siltation in the rivers	Destruction of wild fauna habitat due to unsustainable resource management. Potential investments are likely to break ecosystems, isolate species and cut off movements. For example, dams may block the upstream and downstream passage of migrating aquatic animals.	<ul style="list-style-type: none"> <li>-Enhance community sensitization</li> <li>-Prohibit hunting</li> <li>-Restrict bush fires</li> <li>-Minimise cutting down of trees</li> <li>-Forest conservation</li> <li>-Restrict locations of dams</li> </ul>
4	Air Pollution	Decreased Air Quality	Dust is anticipated during the construction phase of the identified investments as well as from vehicle movements and vehicle emissions is likely to cause air pollution.	<ul style="list-style-type: none"> <li>-Revegetate bare areas</li> <li>-Minimise vehicle movements and speed</li> <li>-Water down cleared areas to reduce dust emissions</li> </ul>
5	Resource Use Conflicts	sabotage to investment and lack of ownership	Dam construction investments may cause conflict between those with different water needs such as farmers and pastoralists, fishery, household use, etc.	<ul style="list-style-type: none"> <li>-Formulation of by-laws</li> <li>-PLUP development</li> <li>-Land use decisions must be inclusive of all users and groups, including women, youths and differently abled people in the area.</li> </ul>
6	Loss of Land	displacement of communities or households and reduced grazing land which can cause conflict	There may be loss of farm and grazing land among others by the local communities owning land to investments projects and forest conservation.	<ul style="list-style-type: none"> <li>-Communities must identify project areas in consultation with their leaders.</li> <li>-Communities must use Free Prior Informed Consent (FPIC)</li> </ul>

Table 12: Environmental Management Plan

## 9. Implementation Strategy

The table below outlines the PLUP Implementation Strategy

Problem	Objectives	Strategy	Output	Indicator
Shortage of Water	To Improve Access to Clean and Safe Water Supply and Sanitation	Drilling of boreholes equipped with solar power for pumping	At least 16 boreholes drilled in villages without boreholes	Number of boreholes drilled
		Dam Construction at Kaziwolile, Chimwa, Banki and Chanzula	At least 4 dams are constructed	Number of dams constructed
Inadequate Trading Areas	To promote investment and access to goods and services	Construction of market at Kanzutu	At Least one (1) market constructed	Number of markets constructed
Inadequate Telecommunications Towers	To create connectivity between the rural and urban communities for easy dissemination of information such as COVID prevention and other pandemics	Installation of communication towers by Telecommunication Companies	At least each Telecommunication Company should put up a tower (Zamtel and Airtel). MTN has one (1) tower in Makungwa Ward.	Number of communication towers installed
Soil Degradation	To Promote Environmental Protection and Conservation of Natural Resources	Tree planting exercise and promote natural vegetation growth	Plant at least 10,000 trees	Number of trees planted
		CFMG establishment	Formalise the establishment of the proposed 3 CFMGs (Pheta, Kalala, Madzi-Athonya)	Number of CFMGs established



	To promote agricultural productivity.	Construction of Agriculture Camp	At least 1 Camp constructed	Number of agriculture camps constructed
		Adoption of Climate smart Agriculture	At least 75% of local farmers adopt the CSA technique	Percentage adoption of CSA
		Deployment of extension workers	At least 3 extension workers deployed	Number of extension workers deployed
		Establish Livestock Service Centre	At least 1 Livestock Service Centre established at Mshekela	Number of Livestock Service Centres established
Poor State of Roads and Related Infrastructure	To promote spatial growth and improve transport system	Rehabilitation of feeder roads	Rehabilitate all feeder roads	Number and length (KM) of feeder roads rehabilitated
		Construction of culverts and bridges	Construct culverts and bridges across all streams	Number of culverts and bridges constructed
Inadequate Health Facilities	To increase the number of health facilities	Construction of health facilities	Construction of at least 2 health facilities (Ndembela and Kapoko)	Number of health facilities constructed
		Construction of health staff houses	At least 3 staff houses per health facility	Number of staff houses constructed
Long Distances to Schools	To attain a high quality education standard by increasing the number of schools and reducing the teacher to pupil ratio in all schools within the ward	Construction of new classroom blocks	Construct at least 10 classroom blocks in the ward (1 per school)	Number of classroom blocks constructed
		Construction of new primary and secondary schools	Construct at least 1 school at Nyasiza	Number of schools constructed

		Upgrading of primary schools to secondary schools	Upgrading of Kanzutu Primary School to a secondary school	Number of primary schools upgraded to secondary schools
		Construction of teachers' houses	Construction of 20 teachers houses (2 houses per school)	Number of teachers' houses constructed
Lack of Alternative Livelihood Sources	To enhance human development through skills training and empowerment programs	Establishment of a skills training centre	At least 1 skills centre established	Number of skills centres established
		Train farmers in fish farming, bee keeping and mushroom conservation Techniques	Train as many people as possible	Number of people trained
		Establishment of value addition plants	At Least 2 value addition plants established in the ward	Number of value addition plants established
		Establishment of an artefact centre and promotion of historical sites	At least 1 artefact centre and historical site in the ward	Number of artefact and historical sites recognized

Table 13: PLUP Implementation Plan

## 9.1 Capital Investment Projects

Priority Projects	Quantity	Unit Cost (K)	Total Cost (K)
Drilling of boreholes	16	70,000	1,120,000
Dam Construction	5	TBA	TBA
Construction of health Post	2	500,000	1,000,000
Construction of a school	1	500,000	500,000
Construction of Staff Houses	10	200,000	2,000,000
Establish Livestock Service Centre	1	TBA	TBA
Feeder Roads Rehabilitation	3	TBA	TBA
Construction of classroom blocks	10	450,000	4,500,000

Table 14: Capital Projects Identified

## 10. Institutional Arrangement for Plan Implementation

The Local Authorities will play a critical role in supporting the implementation of PLUP in line with the guidelines and provisions of the URP Act No.3 of 2015. The Forestry Department, Department of National Parks and Wildlife and Ministry of Agriculture will be the main implementers of the PLUP while the Ministry of Health, Ministry of Education and other line ministries will be monitoring adherence to the zoning of the land use plan with regards to schools, health facilities and other developmental and social land reserves.

Makungwa Ward PLUP is envisaged to be implemented in line with Chipata, Kasenengwa and Chipangali JIDP which is running for a period of 10-years from 2021-2030. Being a local plan, the Traditional Authority will work hand in hand with the DMT team in the implementation process since the plan is part of the Integrated Development Planning framework. The plan also provides an opportunity for the traditional leaders to lobby for support from government through local authorities e.g. from the Constituency Development Funds (CDF).

At chiefdom level, the traditional authority with guidance from the DMT team will choose community representatives who will be overseeing and executing PLUP activities and will intermittently rehearse with both the DMT and the Chiefs on the implementation process.

The mandate to carry out minor (pilot) measures may in some cases need to be transferred to the civil society (i.e. self-help groups, cooperatives, farmers' organisations or local NGOs). It is also

possible that private sector companies or individual consultants take over this part so that the Government through DMT only concentrates on the supervision and monitoring of the process.

## **11. Conclusion**

The PLUP for Makungwa Ward was developed through a consultative and participatory process, and technically analysed by the Land Alliance Consortium - the TSP hired by ZIFL Project - in consultation with the Chipata, Kasenengwa and Chipangali DMT team. Additionally, the PLUP analysed the current situation in Makungwa ward, issues pertaining to Land Use Planning were identified, with lack of alternative source of livelihood being one of the key drivers of unsustainable natural resources management. At the same time there has been haphazard and unsustainable use of land and other natural resources by residents of Makungwa Ward and those residing in surrounding areas largely due to lack of documented rules and regulations governing the use of resources. Therefore, it is hoped that this PLUP will be used for the purpose for which it was developed.

## **12. Glossary**

### **12. 1. Natural Resources**

One of the essential and prerequisite activities when embarking on participatory land use planning is understanding the quality and quantity of the land resources. Besides, participatory land use planning forms a basis for obtaining optimum level of production and also helps in introducing appropriate land management practices for better and/or improved livelihoods (Schwedes and Werne, 2010). Therefore, natural resources must be understood as conditions and elements of the land that can be exploited, developed or managed without causing negative impacts that risk the fragile environmental relationships (Negash. 2012). The following are some of the natural resources:

#### **12. 1.1. Vegetation**

In the context of PLUP, vegetation refers to all plant species that are unsustainably managed and used by communities for any of their land uses. The vegetation is used to mainly fulfil community needs such as gathering firewood, fruits, medicine, poles and also serves as habitats for wild animals. On the other hand, vegetation provides cover for the soil, allows the rainwater to percolate into the ground, and protects the soil from erosion.

#### **12. 1.2 Soils**

This is one of the key elements across the globe that determines what land can be used for, taking into consideration the physical and chemical properties (FAO, 2006). The soils exert influence in determining the feasibility of land uses and composition of natural communities such as plants, animals, etc of an area. Thus, land use planning may demand a study on physical and chemical conditions, composition, and overall characteristics of soils (GIZ, 2012; Negash, 2012). This is due to the fact that knowing the soil characteristics helps in understanding the past and present land uses and helps in predicting future land use potentials.

#### **12. 1.3 Water**

This is an essential resource which is required for use by human beings and Wildlife. It is also used for irrigation and navigation by person and by plants to perpetuate, grow and produce (Mitchell et al, 2004). Besides, the quantity of available water determines the type of land use

options and land utilization types. Thus, the availability and accessibility of water resources in an area determine sustainability and the types of land uses that can be implemented (GIZ, 2012).

## **12. 2. Climate**

Climate is one of the factors that affects land use as it is the major agent that determines water balance and dictates the nature and type of natural vegetation in a specific area (Malcolm et al, 2006). Interactions among climate, relief and soils are important in determining socially acceptable, economically viable and environmentally sound land use types (FAO, 1993). The main climatic elements which directly govern land use types to be considered for a certain area are the rainfall amount and distribution and the air temperature level (Negash. 2012). Thus, data on these elements is so important for sustainable local level land use planning processes. The following climatic elements are important factors in determining the land use options of a certain locality or planning area;

### **12. 2.1 Rainfall**

The term precipitation includes rainfall, snow and dew. The availability of water through precipitation or rather the lack of it is often the most limiting physical factor in crop and livestock production in areas where water is scarce for irrigation. It's of great importance to know the rainfall patterns of a given area when undertaking any level of land use planning. Besides, the seasonal distribution of rains governs the choice of major land uses, crops and the optimal planting time, harvesting and other farming operations such as land preparation, weeding and threshing (Negash. 2012).

## **12. 3. Land Use Planning**

According to Liversage and Mangiafico (2014), land-use planning is the systematic assessment of land and water potential, alternatives for land use and economic and social conditions in order to select and adopt the best land-use options. It's a process of decision making on the use of the resources of a certain unit of land for options of more productivity, environmentally sound and sustainable economic uses (JICA, 2011). However, Negash (2012) argued that decisions on land use options are based on the analysis of potentials and constraints of the land resources as guided by the competing needs of the communities.



#### **12. 4. Participatory Land Use Planning**

This is an interactive process in which local communities could discuss and determine how to manage the land and other natural resources in their locality (JICA, 2011). It is based on dialogue among all stakeholders with an aim of making sustainable land use decisions through negotiation (GIZ, 2012). The intention is to form comprehensive land use options based on the quality and quantity of the resources and the needs of the community (PLUP Manual, 2019). The land use plan aims at improving the livelihoods of the existing community and meeting the resources development and administration needs of the future generation (Negash. 2012).

#### **12. 5. Livelihood**

This can be defined as means and ways of making a living. It encompasses people's capabilities, assets, income and activities required to secure the necessities of life (Mutea et al, 2019). According to Kassa (2018) livelihood is said to be sustainable if it enables people to cope with and recover from shocks and stresses (such as natural disasters and economic or social upheavals) and enhance their well-being and that of future generations without undermining the natural environment or resource base.

Presently, natural resources are overexploited exceeding the rate at which they are replenished due to the increase in the demands because of high population increase and unsustainable usage (Abu and Soom, 2016). Hence, land use planning is the tool that can well be utilised in order to improve and maximise the usage and management of resources in order to better improve the livelihoods of people. This is because LUP bases its processes on the quantity and quality of resources available that can improve livelihoods and the environment (GIZ, 2012). Thus, decisions are made based on the knowledge of resources by all stakeholders.

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## Annexes

### Annex 1: Makungwa Ward by- Laws on Land Use and Natural Resource Management

#### Preamble

Having resources identified and zoned is not a guarantee that there will be proper management, hence establishing rules is key to sustainable management of all natural resources. The communities of Makungwa ward did not want just to leave things at zoning level but they also formulated by-laws pertaining the natural resources that were identified in their community. Traditionally, no one is allowed to give a penalty to the offenders except the chief as he is the custodian of natural resources in the chiefdom.

#### GOVERNANCE RULES FOR MAKUNGWA WARD

Resource/development	Rules	Penalty to offenders
Water Resources	<ul style="list-style-type: none"><li>• No farming activities around the dam and other water bodies, the buffer zone of 50m shall be applied.</li><li>• No illegal fishing on the dam.</li><li>• No disposition of poisonous chemicals in the dam.</li><li>• All gardening activities to be done on one side of the dam to allow animals to have access to water.</li><li>• No cutting down of trees around the dam.</li><li>• No farming activity to be done around the buffer zone of the dams and streams.</li></ul>	<ul style="list-style-type: none"><li>• Direct report to HRH Madzimawe or HRH Senior Chief Nzamane.</li><li>• Face the punishment.</li></ul>
Forest	<ul style="list-style-type: none"><li>• No cutting down of trees in forest area</li><li>• No charcoal burning in the forest</li><li>• No cattle grazing in the forest</li><li>• No farming activities in the forest area</li><li>• No fire burning in the forest</li><li>• No fetching of firewood without permission in the forest.</li></ul>	<ul style="list-style-type: none"><li>• Face punishment from HRH Madzimawe or HRH Senior Chief Nzamane.</li></ul>

Trading area	<ul style="list-style-type: none"> <li>• No building of a house in the trading area</li> <li>• Only the development committee recognised by the chief has the right to allocate plots.</li> <li>• No farming activities are allowed in the trading area</li> </ul>	<ul style="list-style-type: none"> <li>• The land rights will be revoked by HRH Madzimawe or HRH Senior Chief Nzamane.</li> <li>• Report to the chiefs.</li> </ul>
Expansion of agricultural area	<ul style="list-style-type: none"> <li>• Anyone wishing to expand the field should get consent from the chief.</li> </ul>	<ul style="list-style-type: none"> <li>• Any offender shall be reported to the chief for further action</li> </ul>
Hunting	<ul style="list-style-type: none"> <li>• No hunting is allowed in the chiefdom</li> </ul>	<ul style="list-style-type: none"> <li>• Any offender shall be reported to the chief for further action</li> </ul>
Telecommunication Towers	<ul style="list-style-type: none"> <li>• No vandalism of Telecommunication Towers.</li> <li>• No farming within the radius of 20m of the Telecommunication Towers.</li> </ul>	<ul style="list-style-type: none"> <li>• Inform the chiefs and report to the police.</li> </ul>

Table 15: Offences and Penalties

## Annex 2: Proposed Future Land Use Map

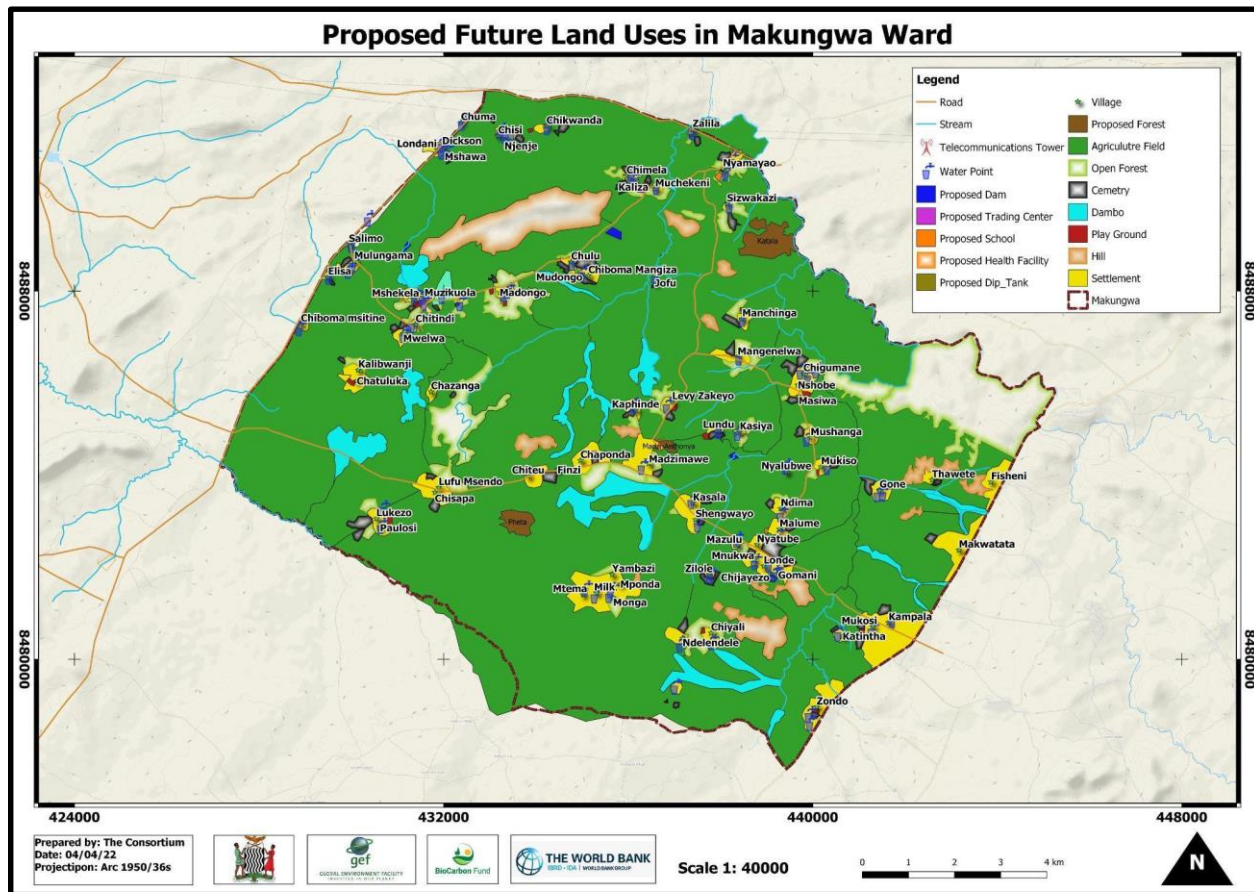


Figure 22: Future Land Use Map for Makungwa Ward

## Annex 3: Meeting Attendance Registers

### Indunas Meeting

ATTENDANCE SHEET						
Village/WARD: MAKUNGWA		DISTRICT: KASENENGWA		DATE: 04/11/21		
S/N	NAME	INSTITUTION / ORGANISATION	SEX	CONTACT NO	NRC	SIGNATURE
1	SIGEN LUNGU	LUNGU	M	0975336315	355227/52/1	[Signature]
2	SIGEN DARA	MANGENELWA	M	0965116263	632903/51/1	[Signature]
3	SABC MBENDU	MANGENELWA	M	0962297290		[Signature]
4	JOSEPH BANDA	KAPHINDI	M			[Signature]
5	JOHANNES LUNGU	PAULOSI	M		736229/52/1	[Signature]
6	LUCAS MWANZA	CHAPONDA	M	0964904399	313356/52/1	[Signature]
7	EDSON MAFENGA	MANCHINGA	M			[Signature]
8	CELESTIN JEMBO	MEFINGI	M		791753/52/1	[Signature]
9	MOSES LUNGU	CHITE	M	0979015770	693660/52/1	[Signature]
10	JOSEPH SAKALA	CHAPONDA	M	0963111939	415688/52/1	[Signature]
11	LASILI SAKALA	CHAPONDA	M		368215/52/1	[Signature]
12	EDWARD JEMBO	MEFINGI	M		174662/51/1	[Signature]
13	WILLIAM MAFENGA	LUNGU	M	0763628329		[Signature]
14	ISAC Zulu	CHIDAP	M	0971887015	675750/52/1	[Signature]
15	KALIZA Zulu	CHIDAP	M	0978753629	175241/51/1	[Signature]
16	CHRISTOPHER MAFENGA	KASIYA	M	0779497569	566711/11/1	[Signature]
17	CHRISTOPHER MAFENGA	KASIYA	M	0977506364	234388/52/1	[Signature]
18	SOFT MAFENGA	KASIYA	M	0975614125		[Signature]
19	KENEDY MAFENGA	CHIDAP	M	0975908574	201617/52/1	[Signature]
20	MARCEL SAKALA	SUCASWANA	M	0965020192	429536/52/1	[Signature]



# ATTENDANCE SHEET

Activity:

Ward: MAKUNGWA

District: KASENENGWA

DATE: 04/11/21

S/N	NAME	INSTITUTION / ORGANISATION	Sex	CONTACT NO	NRC	SIGNATURE
1	BRENDA BANDA	KASALA	F	0946103431	401378/52/1	B. Banda
2	ENDIESI JERE	SHENGWAYO	F	0978620339		E. JERE
3	ANNAH JERE	MADZIMAWA	F	0972187661	462367/52/1	A. Jere
4	RUTH MWANZA	MADZIMAWA	F	0966695421		Ruth
5	ZONDIWE TEMBO	CHIEU	F	0972391848	493183/52/1	Z. Tembo
6	MORREN MBERA	MTENA	F	0931362446	424445/52/1	M. Mbera
7	DANNA SHUMBA	CHIEU	F	0962339650	169935116/1	
8	ROSEMARY NYAU	CHAPONDA	F			R. Nyau
9	MARRY JERE	KAGIYA	F			M. Jere
10	MARRY MII	LUKU MSABA	F	0777621271	622100/52/1	M. Mii
11	HELLEN ZULU	LUKEZO	F	0974998125	432372/52/1	H. Zulu
12	MEVICE MII	PAULOSI	F			M. Mii
13	MIRIAM ZULU	PAULOSI	F			M. Zulu
14	BREJIE TEMBO	LUKEZO	F	0971411963		B. Tembo
15	RUTH SAKA	LUNDU	F			R. Saka
16	ELIZABETH MII	YAMBAZI	F	0966239549		E. Mii
17	DANIEL DANA	KASINGA	F	0763584882		D. Dana
18	SONARA SAKA	YAMBAZI	F			S. Saka
19	MUKHUMBA MBERA	LUNDU	F	0961620958		M. Mbera
20	ALIAS LUNDU	MTPONDA	M	0963206132	60061/52/1	A. Lundu

# ATTENDANCE SHEET

ACTIVITY

COMMUNITY: MAKUNGWA

DISTRICT: KASENENGWA

DATE: 04/11/21

S/N	NAME	INSTITUTION / ORGANISATION	Sex	CONTACT NO	NRC	SIGNATURE
1	DANY TEMBO	LUNDU	M	0974603176	722515/52/1	
2	MABVUID DAXA	KASIYA	M	0979888463	169993/53/1	
3	TERAD CHONGWE	JOFEU	M	0974180165	630351/52/1	
4	GESIDIM DAXA	KASIYA	M			
5	MATHONG MBEVE	JOFEU	M			
6	IRILON PHIRI	YAMBAZI	M	0465548636	527627/52/1	M. Mhaga
7	MLOQNYEN ZULU	MONGA	M	0974512896	671708/52/1	P. PHIRI
8	MUCHULIE SAKALA	MINTYUKI	M	0974901053		
9	FESTORS ZULU	MITEMA	M	0966033707	542026/52/1	
10	KALUNGO CHUMBA	MITEMA	M			
11	NATHAN PHIRI	YAMBAZI	M	0974945230	25860197/52/1	
12	ERERIEL MWAHA	MABZAKONYA	M	0978973382	747769/58/1	
13	CLEMENI MWAHA	MABZAKONYA	M	0968146217	518049/52/1	
14	MABAUZO MBUZI	LUNDU	M	0971727683	8046/	
15	MABAUZO ZULU	MONGA	M			
16	EMMANUEL JERE	MINTYUKI	M	0979745225	502071/52/1	
17	LEMEHANI TAMBO	NANT	M			
18	GOODHOPE ZULU	LUKEZO	M	0972802601	577435/52/1	
19	JOHA MWAHA	LUKEZO	M	0979117655	432363/52/1	
20	MANDON TAMBO	CHITEU	M	0978330279		

# First Village Meeting

Activity: ATTENDANCE SHEET

Village/Ward: MAKUNGWA DISTRICT: KASENENGWA DATE: 04/11/21

S/N	NAME	INSTITUTION / ORGANISATION	SEX	CONTACT NO	NRC	SIGNATURE
1	MARY TEMBO	KASALA	F			
2	YAMUC LUNGWU	LUTHUSWU	F			
3	EDIVA MWANINGWA	CHISAPA	F	0974843642	576334321	M. TEMBO
4	EIDA LUNGWU	CHICU	F	0974045979	488019/521	Y. TEMBO
5	GRACE Zulu	MANCHINGA	F			E. TEMBO
6	MARY LUNGWU	MANCHINGA	F			E. LUNGWU
7	CHRISTINA Mili	CHULU	F		413333/521	G. Zulu
8	NAOMI PHIRI	MNYUKI	F		342310158/1	CHULU
9	NAOMI CHUNGA	MNYUKI	F		312348521	C. Mili
10	RACHEAL MWANZA	MIEMA	F	0972640577		N. PHIRI
11	ELIZABETH TEMBO	CHAPONDA	F	0779233153		N. CHUNGA
12	RUTH SHAWA	KAPHINDE	F			R. MWANZA
13	BETA MILANZI	KAPHINDE	F			E. TEMBO
14	VASTI TEMBO	MANGENELWA	F			R. SHAWA
15	GVELYN TEMBO	MANGENELWA	F		419697/521	R. MILANZI
16	EDINA SAKALA	MPONDA	F			V. TEMBO
17	JOYCE Zulu	MONGA	F	0777035320	178347/241	E. TEMBO
18	ESNAI Zulu	MONGA	F			E. SAKALA
19						
20						



# ATTENDANCE SHEET

Activity: PLUP DATE: 4/10/21  
 Venue: Mankungu DISTRICT: Karungu

S/N	NAME	INSTITUTION / ORGANISATION	Sex	CONTACT NO	NRC	SIGNATURE
1	LVSAN JHE	KATINHA	M	0962675533	—	L JHE
2	Fredrich Dfiri	GOMANI	M	—	—	Fred
3	Chikaiko Jobvu	MAZUWU	M	0970735138	545129/52/1	Chikaiko
4	Rigiso Zulu	NSHONZE	M	—	138166/52/1	R. Zulu
5	JESAT LUNGA	GOMU	—	0969842844	—	J. LUNGA
6	Kesiter ngema	NYATUMBE	—	0966230831	427950/52/1	K. ngema
7	Sekina Jele	SETECH	F	0973198251	—	Sekina
8	Rebecca Nyati	Chingumali	F	—	1423969/52/1	R. Nyati
9	ELIZA bet Mober	Chingumali	F	0961466624	502291/52/1	E. Mober
10	MIRAJERE	GOMANI	F	—	409501/16/1	MIRAJERE
11	Tamala newa	Londe	F	0969547332	—	T. newa
12	Katai Ronge	Londe	F	—	—	F. Katai
13	Setridah ngema	MAZUWU	F	—	—	S. ngema
14	ALICE ngema	munukwa	F	—	—	A. ngema
15	Nyanywe ngema	malume	F	—	—	N. ngema
16	Judith MBULO	Ndima	F	—	—	J. MBULO
17	Mwanida mbuzi	malume	F	—	—	M. Mbuzi
18	Violet Zulu	Shabati	F	—	—	V. Zulu
19	Rosimery Zulu	Mukiso	F	—	—	R. Zulu
20	Lukosa Njobvu	CHIGUMANE	M	0765924704	671987/52/1	L. Njobvu

# ATTENDANCE SHEET

Activity

Area/Ward: MAKUNGUWA

District: KASENENGWA

DATE: 04/11/21

S/N	NAME	INSTITUTION / ORGANISATION	Sex	CONTACT NO	NRC	SIGNATURE
1	SIENEN LUNGU	LUKOZO	m	0985384313	353222/52/1	<i>[Signature]</i>
2	STERN DAKA	MANGENELWA	m	8963114243	632903/52/1	<i>[Signature]</i>
3	SADC MSENDO	MANGENELWA	m	0962292290		<i>[Signature]</i>
4	JOSEPH BANDA	KAPHINDE	m		736229/52/1	<i>[Signature]</i>
5	JOHANNES LUNGU	PAULOSI	m		315356/52/1	<i>[Signature]</i>
6	LYZIE MWANZI	CHAPONDA	m	0964104799		<i>[Signature]</i>
7	EDSON MAFULEKA	MANCHINGA	m		291753/52/1	<i>[Signature]</i>
8	ETHEM IEMBO	MFINZI	m		693660/52/1	<i>[Signature]</i>
9	MOSES LUNGU	CHITE	m	0979015770	215688/52/1	<i>[Signature]</i>
10	IOGIAS SAKALA	CHAPONDA	m	0963111939	368215/52/1	<i>[Signature]</i>
11	LASI SAKALA	CHAPONDA	m		174662/52/1	<i>[Signature]</i>
12	EDWARD IEMBO	MFINZI	m	0763628329		<i>[Signature]</i>
13	LEDRICK MAFULEKA	KUBI MENDI	m	0971887015	075730/52/1	<i>[Signature]</i>
14	EDSON ZULU	CHIDAP	m	0978753629	175241/52/1	<i>[Signature]</i>
15	KALISA ZULU	CHIDAPA	m	0779497560	566972/52/1	<i>[Signature]</i>
16	CHAMPION NDIWA	KASIYA	m	0977506364	234388/52/1	<i>[Signature]</i>
17	GRANDSON MISO	KASALA	m	0975614125		<i>[Signature]</i>
18	SOFT MBOLE	KAPALA	m		204617/52/1	<i>[Signature]</i>
19	KENGO MUMBA	SHENWAYO	m	0975908574	429536/52/1	<i>[Signature]</i>
20	MATIAZ SAKALA	SILASWANGU	m	0965020192	432407/52/1	<i>[Signature]</i>

# ATTENDANCE SHEET

NAME

MAKUNGWA

DISTRICT: VASENEN GWA

DATE: 06/11/21

S/N	NAME	INSTITUTION / ORGANISATION	Sex	CONTACT NO	NRC	SIGNATURE
1	IRENDA BANDA	KASALA	F	0946103431	40328/52/1	B. Banda
2	ENELISI JERE	SHENGWAYO	F	0975620379		E. JERE
3	ANNAH JERE	MADZIMAWA	F	0972137661	462367/52/1	A. Joe
4	IRITH MUDANDA	MADZIMAWA	F	0966695471		Bunt
5	ZAMPANE IEMBO	CHITEU	F	0972391848	493183/52/1	Z. IEMBO
6	MORREN NARA	ITEMA	F	09713621146	421115/52/1	M. NARA
7	DANA SHUMBA	CHITEU	F	0962339650	169935116/1	
8	ROSEMARY NYAU	CHAPONDA	F			R. NYAU
9	MARRY JERE	KAGIYA	F			
10	MARRY MII	LUEN MSOCE	F	0273621231	622100/52/1	M. MII
11	HELEN ZULU	LUKEZO	F	0974998125	432372/52/1	H. Zulu
12	MURICE MII	PAULOSI	F			M. MII
13	MURIAM ZULU	PAULOSI	F			M. Zulu
14	BROJEI IEMBO	LUKEZO	F	0971411363		
15	ZITH SAKALA	LUNDU	F			R. Saka
16	ELIZABETH MII	YAMBARI	F	0966239549		E. MII
17	DANGLI DWA	KASINGA	F	0763581882		D. Dwa
18	SONARA SAKALA	YAMBARI	F			
19	MKHUMBE MARI	LUNDU	F	0961620958		
20	ALIAS LUNDU	MPONDA	M	0963206132	60061/52/1	A. LUNDU



# ATTENDANCE SHEET

Activity

Village/Ward: MAKUNGWANA

District: KASENENGWA

DATE: 04/11/21

S/N	NAME	INSTITUTION / ORGANISATION	Sex	CONTACT NO	NRC	SIGNATURE
1	DAVY TEMBO	LUNDU	M	0974603176	722515/52/1	<i>[Signature]</i>
2	MABVUID DAKA	KASIYA	M	0973228643	169928/53/1	<i>[Signature]</i>
3	TERAD CHONGWE	JOFEU	M	0974130165	630351/52/1	<i>[Signature]</i>
4	GESHIDIM DAKA	KAGIYA	M			
5	MATHONG MBELE	JOFEU	M	0465548636	527627/52/1	<i>[Signature]</i>
6	IRILION PHIRI	YAMBAZI	M	0776512396	671708/52/1	<i>[Signature]</i>
7	MLOMNYEN ZULU	MONGA	M	0974901653		
8	MWANDILE SAKASA	MNYUKI	M	0966023707	542026/52/1	<i>[Signature]</i>
9	FESTORS ZULU	MIEMA	M			
10	KALINGO CHUMBA	MIEMA	M	01704745232	25260197/50/1	<i>[Signature]</i>
11	NATHAN PHIRI	YAMBAZI	M	0972273382	747769/58/1	<i>[Signature]</i>
12	ESHERIEL MWANZA	Mabzakhoru	M	0468176217	518049/52/1	<i>[Signature]</i>
13	CLEMENI MWANZAMASZALONYA		M	0971727683	8046/	<i>[Signature]</i>
14	MABVUID MBIZI	LUNDU	M			
15	MAXWEL ZULU	MONGA	M	0779745225	502021/52/1	<i>[Signature]</i>
16	EMMANUEL JERE	MNYUKI	M			
17	LEONARDI TEMBO	NAMZ.	M	0972822401	577435/52/1	<i>[Signature]</i>
18	GOODHOPE ZULU	LUKOZO	M			
19	JOHN MULEMA	LUKOZO	M	0079111655	432363/52/1	<i>[Signature]</i>
20	MARION TEMBO	CHITAU	M	0478330274		<i>[Signature]</i>

# ATTENDANCE SHEET

Activity: \_\_\_\_\_

Village/Ward: MAKUNUWA

District: KASENENGWA

Date: 04/11/21

S/N	NAME	INSTITUTION / ORGANISATION	Sex	CONTACT NO	NRC	SIGNATURE
1	MARY TEMBO	KASIA	F			M. TEMBO
2	YANWE LUNGU	LUEK HSEBO	F			Y. TEMBO
3	EDIVA MWAINDI	CHISAPA	F	0944343643	576834321	E. TEMBO
4	ELDAH LUNGU	CHIEU	F	0974045979	488219/521	E. LUNGU
5	GRACE Zulu	MANCHINGA	F			G. Zulu
6	MARY LUNGU	MANCHINGA	F			M. LUNGU
7	CHRISTINA Mili	CHULU	F		413333/521	C. Mili
8	NAOMI PHIRI	MNYUKI	F		348310158/1	N. PHIRI
9	NAOMI CHUNGA	MNYUKI	F		312348521	N. CHUNGA
10	RACHEL MWANZA	MIEMA	F	0972640577		R. MWANZA
11	ELIZABETH TEMBO	CHAPONDA	F	0779233153		E. TEMBO
12	RUTH SHAWA	KAPHINDE	F			R. SHAWA
13	BESTA MILANDI	KAPHINDE	F			B. MILANDI
14	VASTI TEMBO	MANGENELWA	F		419697/521	V. TEMBO
15	GVELYN TEMBO	MANGENELWA	F			G. TEMBO
16	EDINA SAKALA	MPONDA	F		178347/241	E. SAKALA
17	JOYCE Zulu	MONGA	F	0777035320		J. Zulu
18	ESNAI Zulu	MONGA	F			E. SAKALA
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## PLUP REGISTER

[illegible]

## Validation Meetings

# ATTENDANCE SHEET

Activity: PLUP - Resource Validation & Zoning DATE: \_\_\_\_\_

Venue: Mushikela

DISTRICT: Kaiserungwa

S/N	NAME	WARD	Sex	CONTACT NO	NRC	SIGNATURE	Village
1	STEVE PHIRI	makungwa	M	0969-426042	895094/52/1	<i>[Signature]</i>	Mushikela
2	SAIRI MERO	makungwa	m	—	573094/52/1	<i>[Signature]</i>	Mushikela
3	TAXOP LUNGU	makungwa	m	0270722332	421889/52/1	<i>[Signature]</i>	Mushikela
4	Stanford Phiri	makungwa	m	0776804430	1427832/52/1	<i>[Signature]</i>	Mushikela
5	Bernard Shawa	11	11	—	190782/52/1	<i>[Signature]</i>	Mushikela
6	Richard Mwanza	11	11	—	—	<i>[Signature]</i>	Mushikela
7	Joseph Tembo	11	11	—	—	<i>[Signature]</i>	Mushikela
8	Stanley Zulu	11	11	—	421422/52/1	<i>[Signature]</i>	Mushikela
9	Ahness Mafwenka	11	F	—	831988/52/1	<i>[Signature]</i>	Mushikela
10	Martha Ng'ombe	11	F	—	—	<i>[Signature]</i>	Mushikela
11	BEATRICE TEMBO	11	F	—	—	<i>[Signature]</i>	Mushikela
12	BELIA DAKA	11	F	—	415335/52/1	<i>[Signature]</i>	Mushikela
13	TILAMPENJI NG'OMBE	11	F	—	387704/52/1	<i>[Signature]</i>	Mushikela
14	REGINA MBEWE	11	F	—	—	<i>[Signature]</i>	Mushikela
15	HELEEN PHIRI	11	F	0973076810	520363/52/1	<i>[Signature]</i>	Mushikela



# ATTENDANCE SHEET

Activity: PLUP - Resource Validation & Zoning DATE: 17/03/2022

Venue: Mushakela

DISTRICT: Kasenengwa

S/N	NAME	WARD	Sex	CONTACT NO	NRC	SIGNATURE	Village
1	Mercy Soko	MALINGWA	F	-	-	m. Soko	Kaliye
2	Grace mozeKa	"	F	0777181972	139578/51/1	G. mozeKa	Mukungwa
3	STELLA LIPA	"	F	0976883408	26365820/52/1	S. Lipa	Madlongo
4	Sunice Phiri	"	F	0975395370	54099/52/1	E. Phiri	Mshakela
5	Grace Mwanza	"	F	-	52773 -	G. Mwanza	Chitindi
6	Margret Mwanza	"	"	-	-	M. Mwanza	Chitindi
7	Betina Njobvu	"	"	-	543474/52/1	B. Njobvu	Mshakela
8	Elizabeth Miti	"	"	-	-	E. Miti	Chitindi
9	Shupwe Mwanza	"	"	-	-	S. Mwanza	Chitindi
10	Fatnesi Sakala	"	"	0962503593	-	F. Sakala	Mshakela
11	Abigail Tembo	"	"	-	-	A. Tembo	Chitindi
12	Mercy Mwanza	"	"	097210021	-	M. Mwanza	Mshakela
13	LIDYA Soko	"	"	-	-	M. Mwanza	Mshakela
14	HEWLY DAKA	"	"	0973-235196	196051/06/1	H. Daka	Mshakela
15	PATRICK Mwanza	"	"	0977261459	1124210/SR/1	P. Mwanza	Mshakela



# ATTENDANCE SHEET

Activity: PLUP/RESOURCE VALIDATION & Zoning DATE: 17/03/2022

Venue: \_\_\_\_\_

DISTRICT: \_\_\_\_\_

S/N	NAME	WARD	Sex	CONTACT NO	NRC	SIGNATURE
1	MABUHO BANDA	makungu	M	0976-717406	—	M. Banda
2	Emmanuel Zumbo	"	M	0975-614079	760819/11/1	M. Zumbo
3	ECOT Tendo	"	M	0964-287481	369660/12/1	E. Tendo
4	Zulu SIEB	"	"	—	726681/01/1	S. Zulu
5	Maguya Zumbo	"	M	—	586262/01/1	M. Zumbo
6	LEV Ntshu	"	M	0761631714	—	L. Ntshu
7	Gordon C. Banda	"	"	—	—	G. Banda
8	DAVIDSON MUSA	"	M	—	432129/12/1	D. Musa
9	Natanson MUSA	"	M	0975284754	463706/12/1	N. Musa
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# ATTENDANCE SHEET

Activity: VALIDATION and Zoning DATE: 16/03/22

Venue: MAZIMANE DISTRICT: CHIKWENKWA

SN	NAME	WARD	Sex	CONTACT NO	NRC	SIGNATURE	Village
1	DAMILES JERO	makungu	f	0903859920	606099/92/1	D JERE	makungu
2	ZELIPAH Zulu	makungu	f	0979041324	220773/74/1	Z Zulu	makungu
3	ROSEMARY Zulu	makungu	f	0762960240	-	R Zulu	makungu
4	Joyce Zulu	makungu	f	0777036320	-	J Zulu	makungu
5	ELIAN BHANZA	makungu	f	297692/92/1	-	ELIAN	makungu
6	ACHENES ZANDA	makungu	f	0779763202	-	A ZANDA	makungu
7	DOROTHY TUMBA	makungu	f	0912009621	318391/92/1	DOROTHY	makungu
8	ELIAN NJIRU	makungu	f	0962298136	416372/92/1	ELIAN	makungu
9	ELIAN NJIRU	makungu	f	0966539473	269175/71/1	ELIAN	makungu
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# ATTENDANCE SHEET

Activity: VALIDATION AND ZONING DATE: 10/03/2022

Venue: MADZIMBWE DISTRICT: Kageruma

S/N	NAME	WARD	Sex	CONTACT NO	NRC	SIGNATURE	VILLAGE
1	TEMBO SALLAS	MAKUNGU	M	0975424565	4200251521	[Signature]	KAPINNE
2	Shacka Kora	M	M	0975702090	-	SDAKA	KASINA
3	Hess Phiri	M	F	-	-	I Phiri	HTHUBA
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# ATTENDANCE SHEET

Activity: \_\_\_\_\_ DATE: 16-03-2022  
 Venue: KASUNGUWA DISTRICT: KASUNGUWA

S/N	NAME	VILLAGE WARD	Sex	CONTACT NO	NRC	SIGNATURE
1	E. M. NENIA	CHITAZO	M	0974 537496	100876/42/1	[Signature]
2	STANIS NENIA	LOMBE	M	0934523773	592578/52/1	[Signature]
3	L. LUYU	ZIMBE	F		103969/53/1	L. LUYU
4	Rebecca Nigau	CHITAZO	F		103969/53/1	R. Nigau
5	Josiah Nigau	KAMPALA	M	0779271611	127685/54/1	J. Nigau
6	Servatius Nigau	KAMPALA	M	0779271611	127685/54/1	S. Nigau
7	L. LUYU	CHITAZO	F	0934523773	100876/42/1	L. LUYU
8	B. B. B. B.	LOMBE	F		283322/51/1	B. B. B.
9	M. M. M. M.	CHITAZO	F		158699/11/1	M. M. M.
10	M. M. M. M.	CHITAZO	F		250113/52/1	M. M. M.
11	S. S. S. S.	CHITAZO	F			S. S. S.
12	T. T. T. T.	LOMBE	M	0966672814	672065/52/1	T. T. T.
13	Grace Shiri	CHITAZO	F			Grace Shiri
14	Ruth Cigale	LOMBE	F			R. Cigale
15	Fredence Katayi	LOMBE	F			F. Katayi

Headwoman

# ATTENDANCE SHEET

Activity: .....

DATE: 16/03/2022

Venue: KAPOKO / MAMUNGUWA

DISTRICT: KASEUNGUWA

S/N	NAME	VILLAGE WARD	Sex	CONTACT NO	NRC	SIGNATURE
1	Telless Tumb	Makulu	F			T. Tumb
2	Millian Miti	Zilole	F			M. Miti
3	Daliet Luo	Munabo	F			S. Luo
4	Volonica Miale	Munabo	F			S. Miale
5	Quitha Daka	Munabo	F			S. Daka
6	Isang Changwe	Munabo	F			S. Changwe
7	Amphansi Tumb	Munabo	F			S. Tumb
8	Christina Tumb	Munabo	F			C. Tumb
9	Alice Xllona	Munabo	F			A. Xllona
10	Mlungwa Miti	Makulu	F			M. Miti
11	Harina Mubwa	Longa	F			A. Mubwa
12	Longa Lucy	Makulu	F			F. Longa
13	Failessi Longa	Makulu	F			N. Longa
14	Xinga Zene	Longa	F			M. Zene
15	Melua Mubwa	Mubwa	F			M. Mubwa



# ATTENDANCE SHEET

DATE: 16-03-2022

Activity:

DISTRICT: MASINGWA

Venue: KAPKO - MAKUNGWA

S/N	NAME	VILLAGE WARD	Sex	CONTACT NO	NRC	SIGNATURE
1	DALISANI LUNGU	MUKWA	M		285147/52/1	<i>[Signature]</i>
2	WILIAM JERE	MKOSI	M			<i>[Signature]</i>
3	ILACK JERE	POMANI	M	0960118812	491705/52/1	<i>[Signature]</i>
4	LAZARUS. MILANI	KAMPINA	M	0976732089	433336/52/1	<i>[Signature]</i>
5	DAINT SAKALA	MKISO	M	0962569273	57683/52/1	<i>[Signature]</i>
6	MATHEWS SAKALA	MKISO	M	0977774784	381997/52/1	<i>[Signature]</i>
7	SANGILUKA TEMBO	MKISO	M			
8	FRED PHIRI	ETOMANI	M		340	
9	RAYSON DAKA	EBIANGA	M		30563/52/1	<i>[Signature]</i>
10	MAVUTO LUNGU	MUKWA	M	0974300292	404352/52/1	<i>[Signature]</i>
11	Yobani Yanga	CHIMAYO	M		179956/68/1	<i>[Signature]</i>
12	SUZYO SAKALA	MKISO	M	0765924091	672008/52/1	<i>[Signature]</i>
13	THANDI JERE	MKISO	M	0966006759	579957/52/1	<i>[Signature]</i>
14	DAKE WHYSON JOHN	FUNJAN	M	0966865188	370247/52/1	<i>[Signature]</i>
15	LEHA SOKO	MASIWA	F	0977314416	119217/55/1	<i>[Signature]</i>



# ATTENDANCE SHEET

Activity: ..... DATE: 16-03-2022

Venue: KAPOKO - MAKUJWA

DISTRICT: KASOMBO GWA

S/N	NAME	VILLAGE WARD	Sex	CONTACT NO	NRC	SIGNATURE
1	EDWIN JERE	GOMAN	M			E. JERE
2	MASAKA SAKANA	MAKISO	M			M. SAKANA
3	JAMEKI Zulu	SHORE	M			L. Zulu
4	Julius	Shore	M	0760262228	491997/52/1	P. Jere
5	Samuel	Makulu	M		234522/52/1	E. Makulu
6	Robinet	Makulu	M	0771735080	491834/52/1	R. Chinjo
7	Jackson Makulu	Cyali	M	0962195115	098944/52/1	J. Makulu
8	Christopher Sakala	Nain	M	0975353262		C. Sakala
9	Mike	Nain	M			A. Ganga
10	Daniel	Makulu	M		514560/52/1	D. Makulu
11	Ngweny	Nyumbwe	M	0974893150	234475/52/1	Ngweny
12	Frank Makulu	Cyali	M	0779499011		F. Makulu
13	Chisano Miti	Shore	M	0968751310	420780/52/1	C. Miti
14	Lenny	Makulu	F			L. Ganga
15	Furce	Nain	F			F. Luo

# ATTENDANCE SHEET

Activity: .....

DATE: 16-05-2022

Venue: KOPDAG / MAKUQUWA

DISTRICT: KAS-ALONGWA

S/N	NAME	VILLAGE WARD	Sex	CONTACT NO	NRC	SIGNATURE
1	Dickson Mwanza	Munukwa	M	097925598	228201/52/1	[Signature]
2	Ashton Lungu	Ligwani	M	09730925962	358418/52/1	[Signature]
3	Harvey Sekale	Cidyezo	M			H. Sekale
4	Lopha Ndulu	Kopoko Hado	f	0977632788	544910/52/1	L. Ndobva
5	Elmer Lungu	Cidyezo	f	0974852231		E. Lungu
6	Isaac Saka	Marwa	M	0975994855	467101/52/1	I. Saka
7	Alton Nzinga	Dima	M	0976803930		N. Venz
8	Lazarus Sekale	Ulungu	M	0977614537	540635/52/1	L. Sekala
9	Frank Mbele	Cidyezo	f	0962922558	484809/52/1	A. Mbele
10	Edward Chinga	Makulu	M	0976135285	435801/52/1	J. Chinga
11	Dale Banda	Land	f	0919001943	524806/52/1	D. Banda
12	Charles Daka	Pumpendo	M			[Signature]
13	Arin Ndwa	Cidyezo	M		246974/52/1	[Signature]
14	Luckson Lungu	Munukwa	M	0972385822		L. Lungu
15	Bernard Ngoma	Ligwani	M	0975659877	408429/52/1	[Signature]