LUANDAZI WARD – SINDA DISTRICT

PARTICIPATORY LAND USE PLAN
(PLUP)

Prepared by: Land Alliance Consortium (TSP) in Collaboration with SINDA DMT

Date: 7th June, 2022

Preface

This Participatory Land Use Plan (**PLUP**) for Luandazi 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: Enabling Environment. This first component is meant to create conditions that will allow the livelihood investments of Component 2 (Livelihood and Low-Carbon Investments) to be successfully implemented and that will prepare Zambia for emission reduction purchases. This component includes support for two sub-components under which PLUP falls. These are:

a. District and Local Level Planning, which supports Integrated District Development.
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 such as Her Royal Highness Chieftainess Kawaza of Kawaza Chiefdom, Sinda District Multi-sectoral Teams (**DMT**s), Department of Physical Planning, Luandazi Ward community Members and ZIFLP team were consulted and engaged and were fully involved at every stage of the process. Thus, this PLUP will help guide Luandazi Ward residents in implementing sustainable and environmentally friendly 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.

……. **……**

Council Secretary **District Commissioner**

Sinda Town Council **Sinda District**

…….

HRH Chieftainess Kawaza

Kawaza Chiefdom

Table of Contents

Table of Figures

List of Tables

Acknowledgements

We the Consortium of Land Alliance comprising of Chipata District Land Alliance, Petauke District Land Alliance and Zambia Land Alliance Nyimba would like to express our gratitude to the Republic of Zambia for sourcing funding from the World Bank for the Zambia Integrated Forest Landscape Project (ZIFLP) through the Project Manager Dr Tasila Banda, Department of Physical Planning, Ministry of Local Government through the Sinda District Multi Sectoral Team (DMT), Her Royal Highness Chieftainess Kawaza, and the community of Luandazi Ward.

Acronyms and Abbreviations

CDF – Constituency Development Fund

CFM – Community Forest Management

CFMG – Community Forest Management Group

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

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 optimising 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 Luandazi 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 Luandazi 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 Luandazi 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 Luandazi 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 Chieftainess Kawaza. 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 two clustered focus group village meetings namely; **Mjancha** and **Chilasa**. **29** villages were represented at the two (2) clustered community meetings. Community members in both 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	29 Villages were identified	All Villages within Luandazi 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	12 Head persons from Kawaza Chiefdom were sensitised.	All the Headpersons in the Ward	12 Head persons in the chiefdom of Kawaza were sensitised.
3	Community Sensitization	Sensitise communities on PLUP	Community meetings	One community meeting in each of the 2 clustered village meeting locations	Community members in both clustered village meetings	A total of 152 community representatives were sensitised across the ward disaggregated as 77 men and 85 women
4	Shared Resource Mapping	Collect geographical locations of the resources present in the community	Physical Spatial data collection	9 Shared Resource Maps were produced	Luandazi ward	Shared Resource Mapping exercise completed in Luandazi Ward
5	Luandazi ward resource Map validation	Show the current shared resources, land uses and have the communities confirm the boundaries	Community engagement meetings for validation purposes.	Objections Corrections and Confirmation (OCC) done for the shared resource map in Luandazi Ward.	Objections Corrections and Confirmation (OCC) done at the Palace and in both village clusters	Shared Resource Map validated by the Chief and community

						representatives in the ward.
6	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 Luandazi Ward	Future land use plan and by-laws done
7	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	Luandazi 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 Luandazi Ward

Luandazi ward is one of the 19 wards in Sinda District, which was declared as a district through Statutory Instrument (SI) No. 41 of 2012, and is located in Kawaza Chiefdom. The other wards are **Chingo'mbe**, **Chitawe**, **Chiwuyu**, **Kamwaza**, **Kasangazi**, **Matambazi**, **Mng'omba**, **Mnyamanzi**, **Mwangaila**, **Kapoche**, **Nchingilizya**, **Chamakuwi**, **Sinda**, **Chilongozi**, **Kapungwe**, **Nchembwe**, **Siwva**, and **Nyamasonkho**. It is a boundary ward situated along the Katete-Sinda boundary on the East as shown in figure 1 below. It is about 120 Km west of Chipata, the Provincial Headquarters and 460 Km east of Lusaka, Zambia's Capital City. Sinda District, where Luandazi ward lies, shares an international boundary with the Republic of Mozambique in the South. It is situated between latitudes **-14.2296°** and **14° 13' 47"** South and Longitudes **31.7097°** and **31° 42' 35"** East. The map below shows the location of Luandazi Ward:

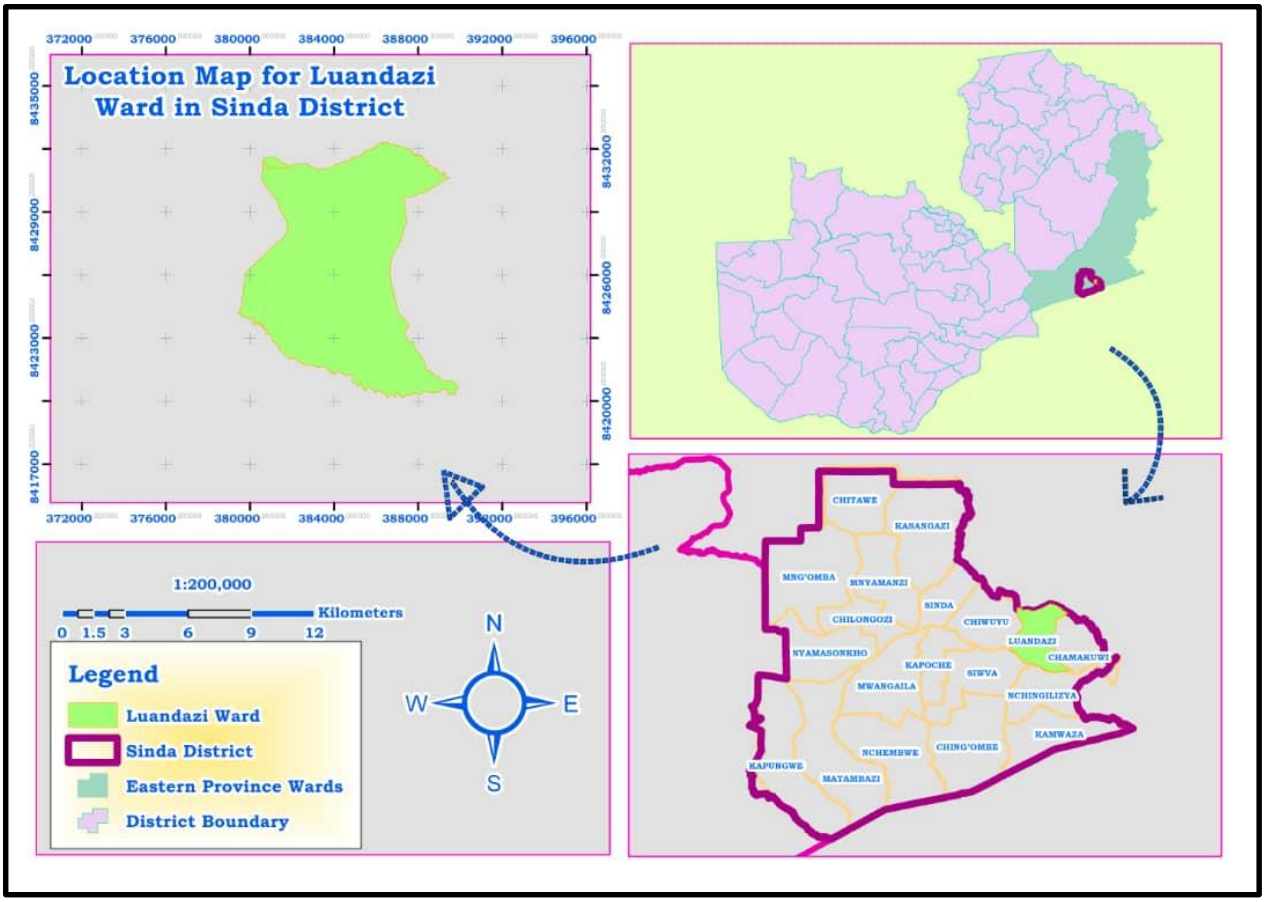


Figure 1: Luandazi Ward Location Map

3.2 Climatic Conditions

Luandazi 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 Luandazi with the average annual temperature of 23.3 °C and annual rainfall of 1,011 mm.

3.2.1 Temperature Patterns

The temperatures are highest on average in October, at around 34.5 °C and lowest in July, with temperature recording of around 13.4 °C.

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Ave. Temp (°C)	23.4	23.3	22.9	22.1	21.0	19.6	19.5	22.6	25.9	27.7	26.8	24.8
Min. Temp (°C)	19.2	18.8	18.1	16.8	15.2	13.6	13.4	15.8	18.7	20.9	20.9	20.1
Max. Temp (°C)	27.6	27.7	27.6	27.3	26.8	25.5	25.6	29.3	33.0	34.5	32.7	29.5

Table 2: Monthly Temperature Conditions for Luandazi Ward

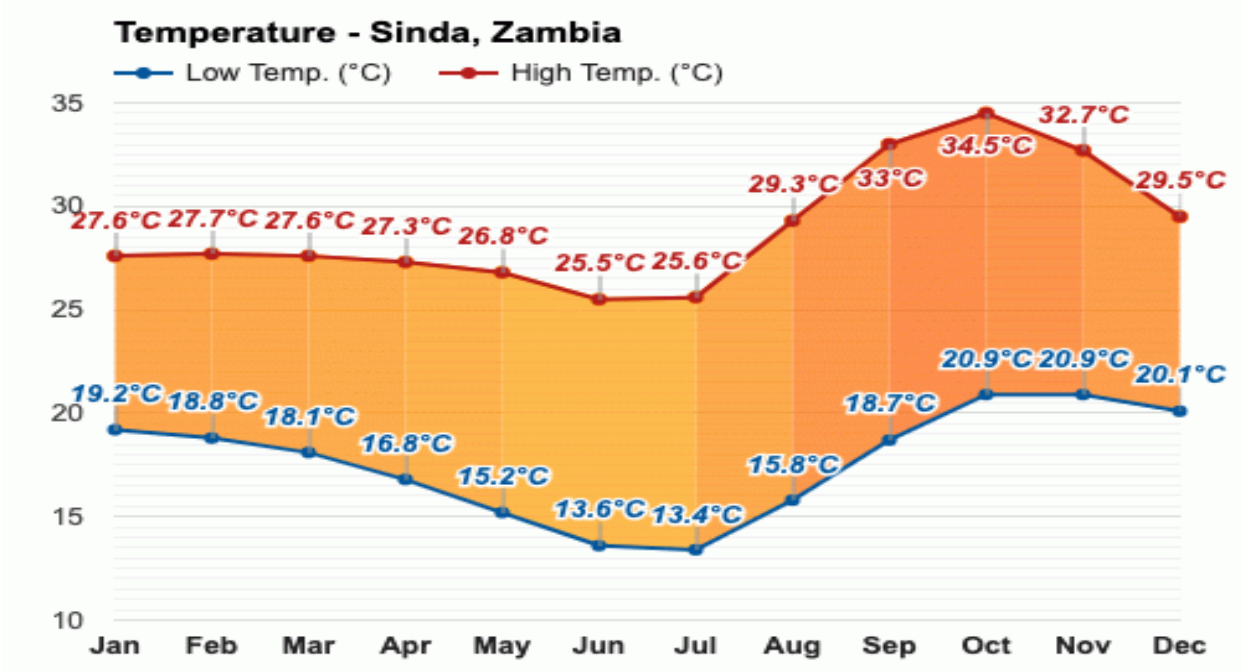


Figure 2: Monthly Temperature Conditions for Luandazi Ward

3.2.2 Rainfall Patterns

Luandazi ward receives a total annual rainfall of about 1,011 mm. There is high rainfall recorded during the wet season from November to February with average rainfall between 91-248 mm. The variation in the precipitation between the driest and wettest months is 125 mm. The figure below shows average monthly rainfall and temperatures of Luandazi Ward:

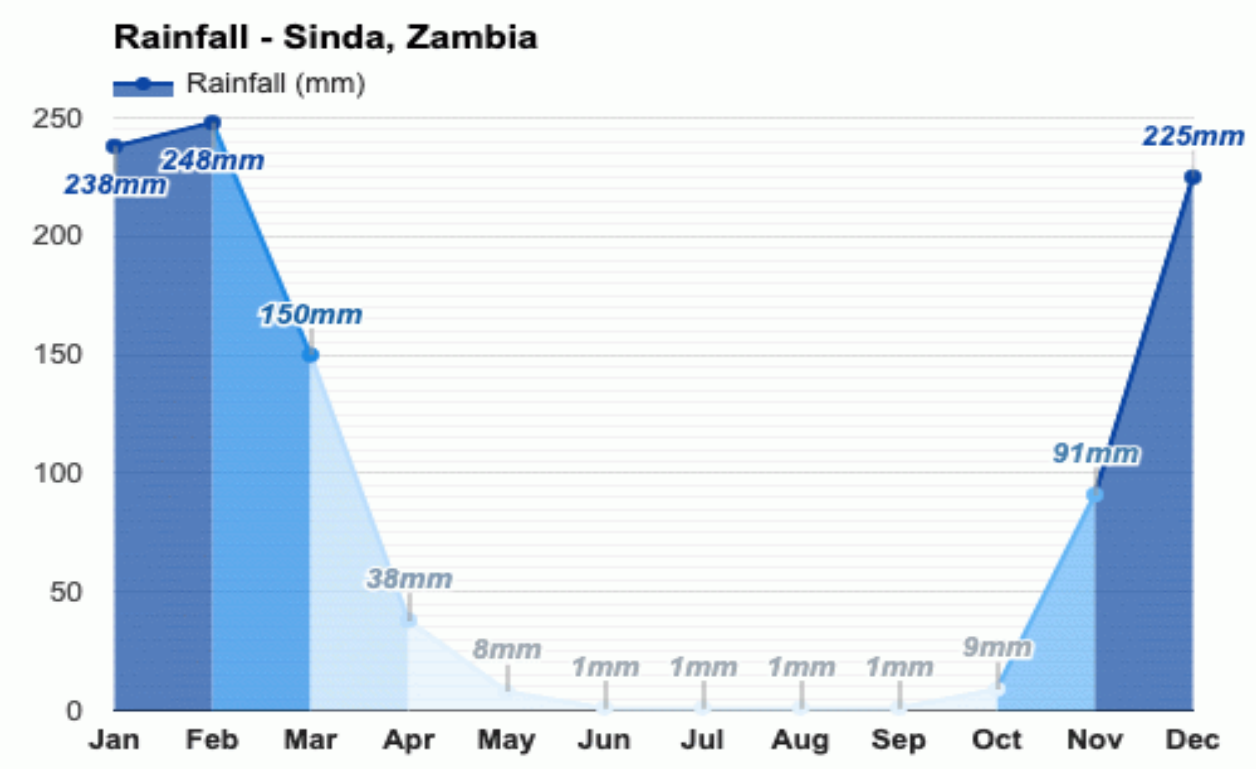


Figure 3: Annual Rainfall Patterns for Luandazi Ward

3.2.3 Ecological Zone

Zambia as a country is divided into three main Ecological Zones which are **Zone I**, **II** and **III**. Sinda District is characterised by the **I** and **IIa** Ecological Zones. Luandazi Ward in Sinda District is our main area of focus. The ward falls under both **I** and **IIa** Ecological Zones characterised by annual rainfall between **800-1000** mm, and has a **80-140** days growing season, which supports growth of medium and late-maturity crop varieties such as maize, soya beans, groundnuts and other leguminous plants. Figure 4 below shows the different Ecological Zones of Zambia:

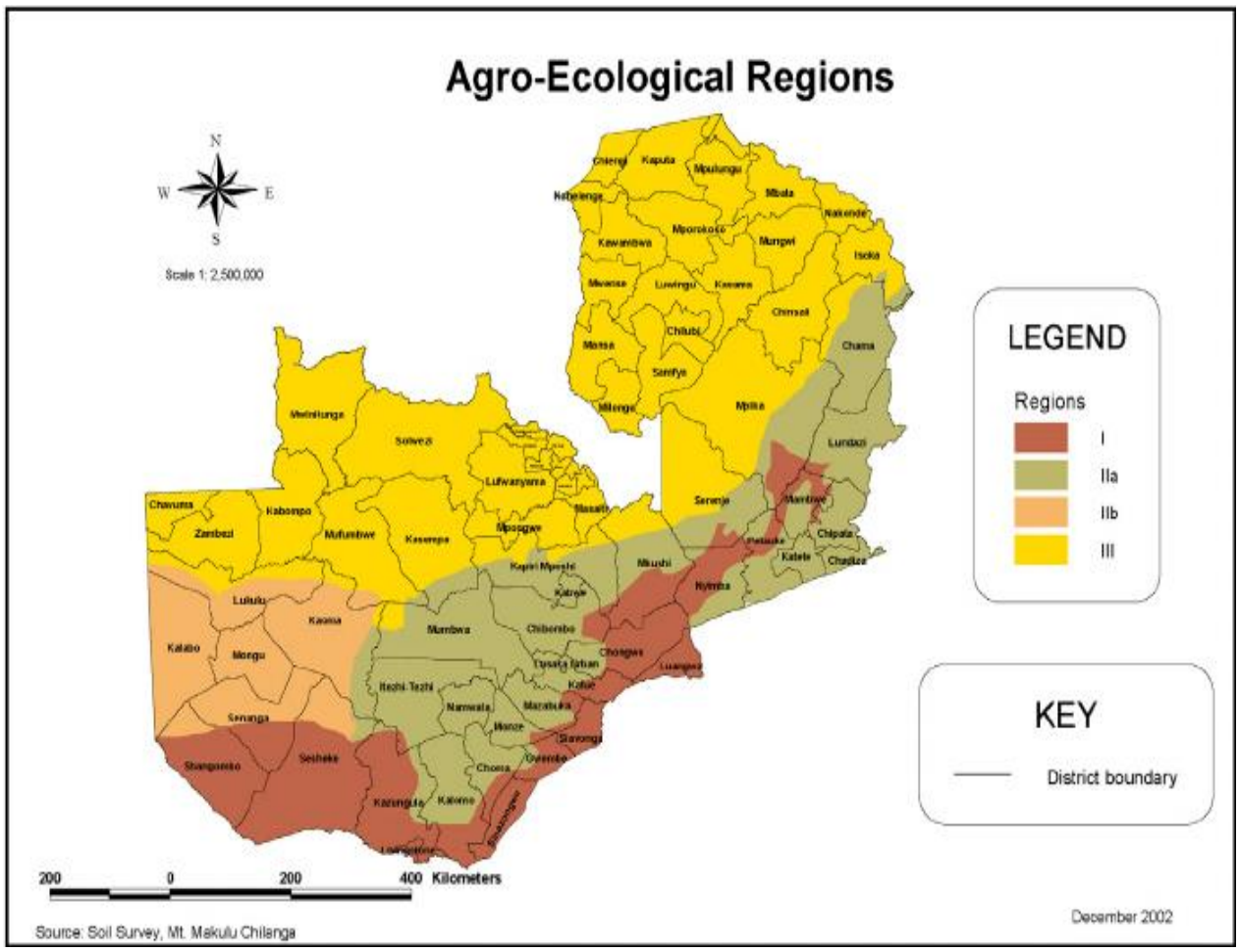


Figure 4: Agro-Ecological Zones

3.2.4 Soil Types

Luandazi Ward is covered by one (1) Soil Zone i.e. **Acrisol**. The Acrisol Soil Zone is characterised by rich clay subsoil mostly associated with humid tropic climate and often supports forested areas. Acrisols are easy to till but are characterised by low fertility, low water holding capacity and more toxic amounts of aluminium, which make them unsuitable for agriculture (Peter Schad, 2006). The figure below shows a map of Luandazi Soil Type:

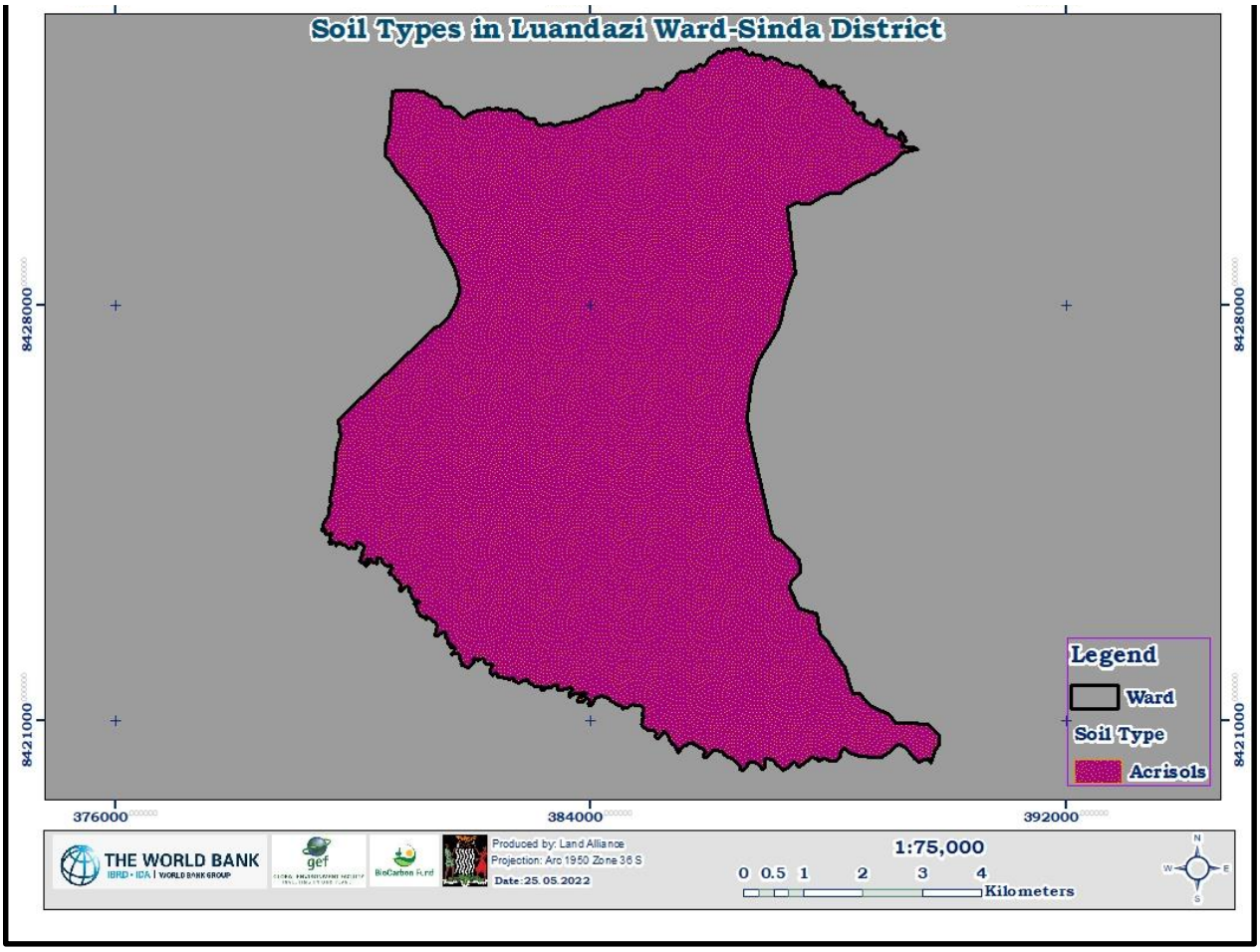


Figure 5: Luandazi Soil Map

3.3 Socio-Economic Environment

Luandazi ward covers a total area of **7,288.7** hectares. Settlements in the ward are dispersed with poor road networks, especially during the rainy season, as the areas become inaccessible because streams flood, roads get eroded by the heavy rains and there are no bridges/culverts (Sinda IDP, 2021). Based on the village geo points collected, the ward has a total of 29 villages, and according to the 2017 Census of Population, Luandazi Ward has an estimated total population of **7,462** (CSO, 2017) as shown in the table below:

	POPULATION		
LUANDAZI	**Male**	**Female**	**Total**
	3,640	3,822	7,462
Source: Sinda IDP, 2021			

Table 3: Luandazi Ward Population

3.3.1 Population Projection

For the purpose of projecting future services and land use needs, the population forecast was based on the national population projections (adjusted to reflect the population of Sinda District at **2.6%** growth rate as per 2017 Zambia Census projection). On this basis, the population of Luandazi Ward is projected to increase to **8,269** and **10,418** in 2021 and 2030 respectively (Sinda IDP, 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

Luandazi Ward has two (2) primary schools (Chanjoka primary school and Chilasa primary school). The ward also has two (2) health facilities (Chanjoka Health Post and Chilasa Clinic). The map below shows the spatial distribution of social facilities in Luandazi Ward:

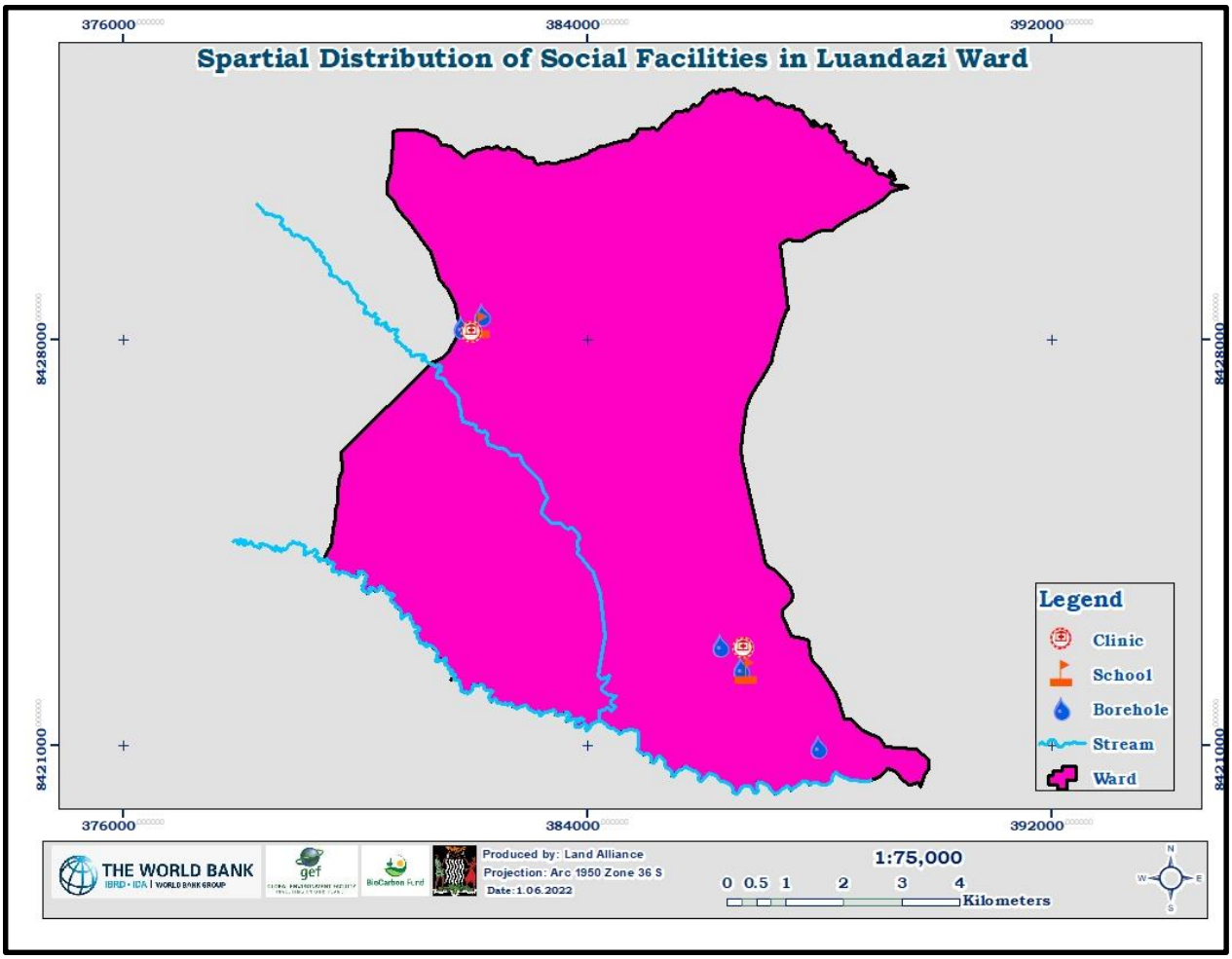


Figure 6: Spatial Distribution of Social Facilities in Luandazi Ward

3.4 Source of Livelihood

Livestock keeping and subsistence farming are the predominant livelihood activities in Luandazi Ward, with soya beans, maize, sweet potatoes, sun flower, tobacco, cotton and groundnuts being the crops grown. Animals reared by the local residents of Luandazi include cattle, pigs, goats, sheep, chickens, and ducks. The agricultural products are sold to the Food Reserve Agency (FRA). Farmers also sell their produce in Katete and take advantage of the annual Kulamba traditional ceremony of the Chewa-speaking people to market their produce to local and international visitors.

3.5 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 Luandazi Ward residents is closely related to 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 Luandazi Ward.

3.6 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 Luandazi Ward residents on agriculture for survival has led to increased pressure on the natural resources, especially with 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, forcing 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 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 Luandazi 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.

Forests 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.

3.7 Livelihood Constraints and opportunities

Agriculture and livestock are the major livelihood activities in Luandazi ward but due to changing climate, 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 agricultural 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 Luandazi Ward:

Constraints	Opportunities
• Low agricultural yields due to poor farming practices • Lack of initial startup capital • Lack of alternative livelihood sources • Poor road network to access some villages • Lack of electricity	• Switching to climate smart agriculture • Venturing into value-addition activities • Establishment of market infrastructure • Construction of feeder roads • Investment in green energy e.g. solar

Table 4: Livelihood Constraints and Opportunities

3.8 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. Luandazi Ward has various biodiversity hotspots and the following hotspots were identified during the PLUP preparation process:

3.8.1 Streams and Dams

Luandazi Ward has 7 streams, 4 of which are seasonal and 3 are year-round. The seasonal streams dry before the onset of rains. The drying is aggravated by siltation and the late onset of rains. Luandazi Ward currently has no dams but the presence of streams presents a potential for dam construction.

These water bodies can be revamped and conserved 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.

3.8.2 Forests

Luandazi has one (1) community forest (Luandazi Forest) and 2 hills, which may be 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 forest fires and expansion of fields and settlements can help in protecting forests and hills in Luandazi Ward.

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

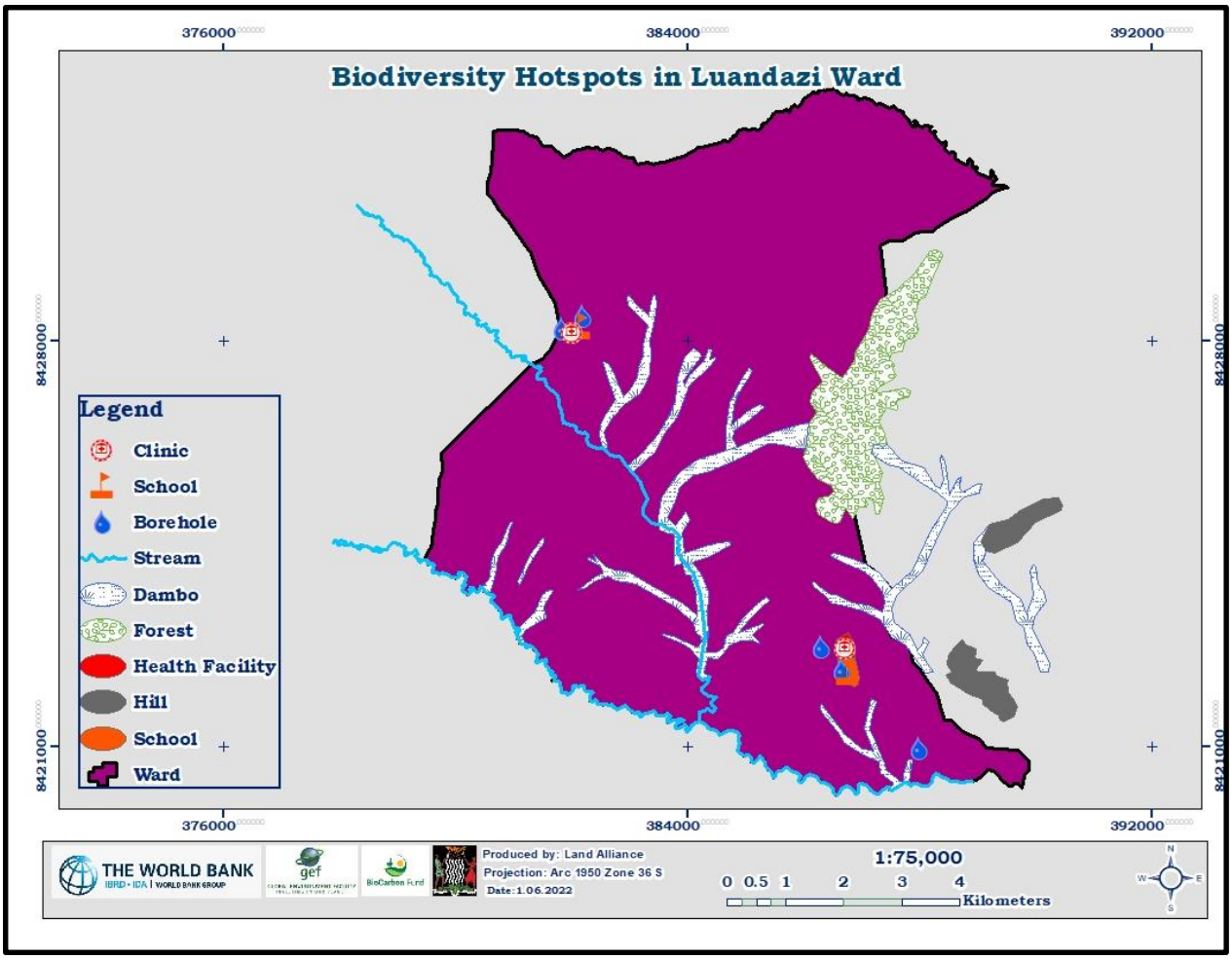


Figure 7: Biodiversity Hotspots

3.9 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, overgrazing due to poor livestock grazing area management has continued to cause a decline in the ecosystem. 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

Luandazi has 2 hills and the main land uses are as shown in table 5 below where agriculture is leading followed by settlements, then dambos, then forest and hills. 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	Area (Ha)	% Coverage	Comment
1.	Total Ward Area (ha)	7,289.1		This is the total area of Luandazi Ward.
2.	Agriculture	8,236.4	113.0%	This is land under cultivation. **Mapped areas spill over into the neighbouring Chamakuwi and Chiwuyu Wards.**
3.	Forest	427.7	5.87%	Area size of Luandazi forest. **More than half of Luandazi Forest falls in the neighbouring Chamakuwi Ward.**
4.	Settlements	469.3	6.4%	These include: Villages and other built up areas such as Schools, Health Facilities, Cemetery, Football Pitches, Markets etc. **Some mapped settlements fall in the neighbouring Chamakuwi Ward.**
5.	Hills	129.9	1.78%	Hills not designated as forests but also not used for human settlements or agriculture. **These fall in the neighbouring Chamakuwi Ward.**
6.	Dambos	575.2	7.89	Dambo areas reserved for animal grazing. **Some mapped areas fall in the neighbouring Chamakuwi Ward.**

Table 5: Land Use Reservation

4.2 Land Use Suitability Analysis

This is an analysis that was done to identify the suitability of Luandazi 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 of Luandazi Ward.

4.2.1 Agriculture Suitability Analysis Of Luandazi Soils

There are 2 Soil Zones within Sinda District, namely: Acrisols and Luvisols. Luandazi Ward is covered by Acrisols (Loamy). The Acrisol Soil Zone is characterised by rich clay subsoil mostly associated with humid tropic climate and often supports forested areas. Acrisols are easy to till but are characterised by low fertility, low water holding capacity and more toxic amounts of aluminium, which make them unsuitable for agriculture (Peter Schad, 2006). Agricultural activities in Luandazi Ward are done in these Loamy (Acrisol) soils. The map below (figure 8) shows Luandazi Ward agricultural suitability:

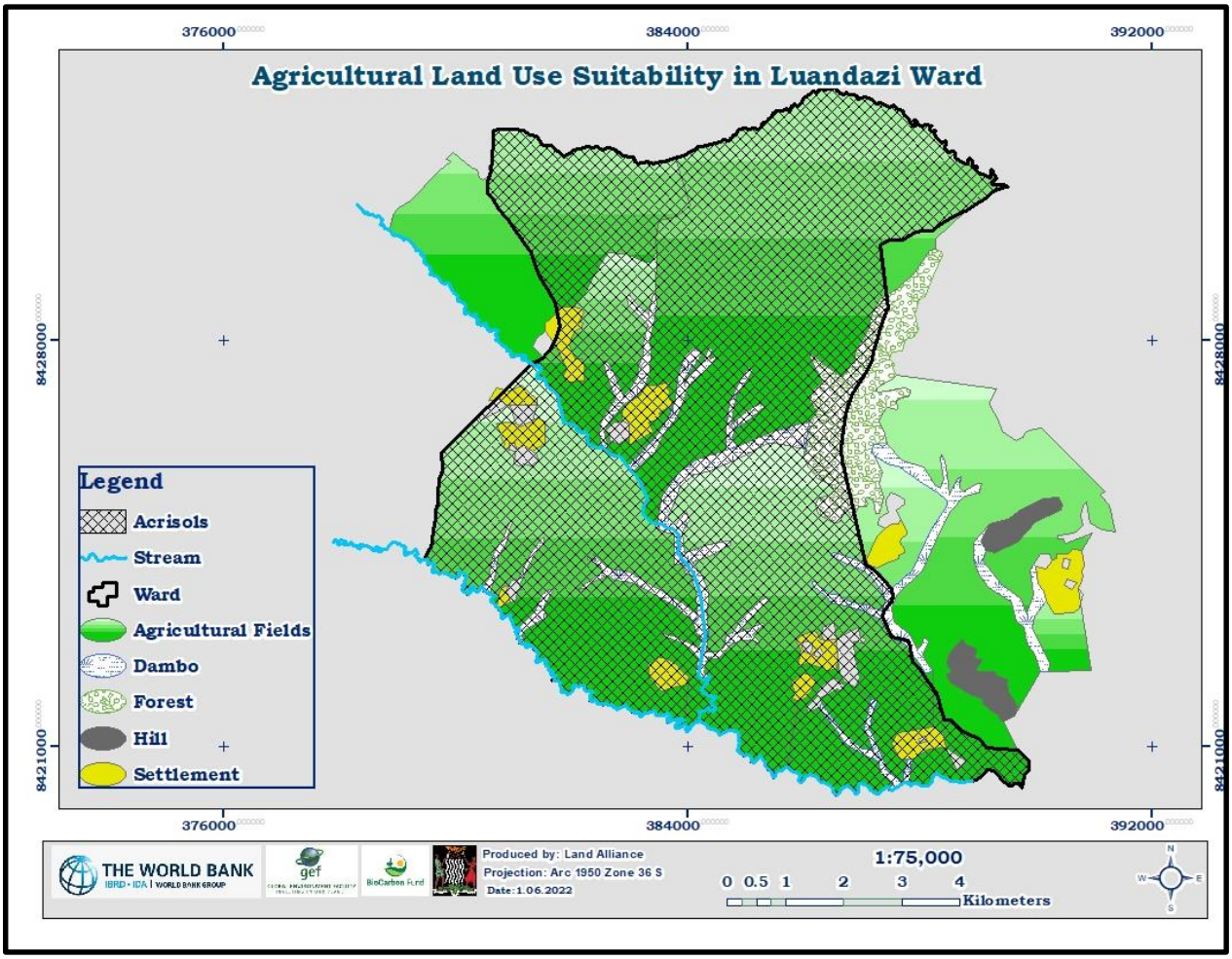


Figure 8: Luandazi Ward Agricultural Suitability Analysis Map

4.3 Land Resource and Administrative Boundaries

The land resources captured during the PLUP process are under Luandazi Ward and may spill over into other surrounding wards. However, despite the overlapping of these shared resources between wards

and chiefdoms, local people in areas around Luandazi acquire their services from Luandazi Ward. The map below shows the land resources in Luandazi Ward:

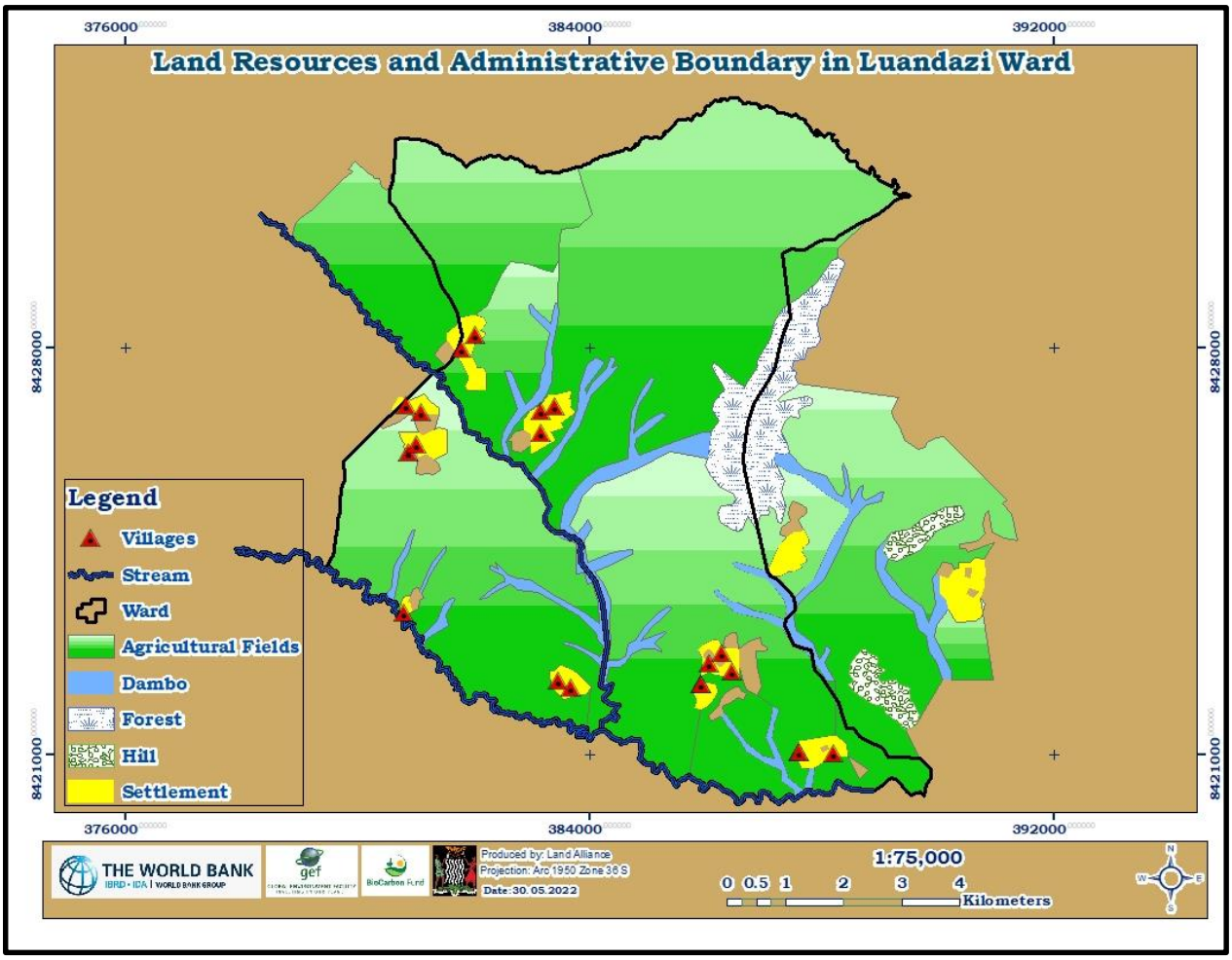


Figure 9: Land Resource and Administration Boundaries

4.4 Current Land Uses

Luandazi Ward is mainly covered by agricultural fields, hills, a community forest (Luandazi Forest), dambos, as well as areas for social services such as schools, places of worship and other communal services such as cemeteries, roads and streams. The map below shows the current land uses in Luandazi Ward:

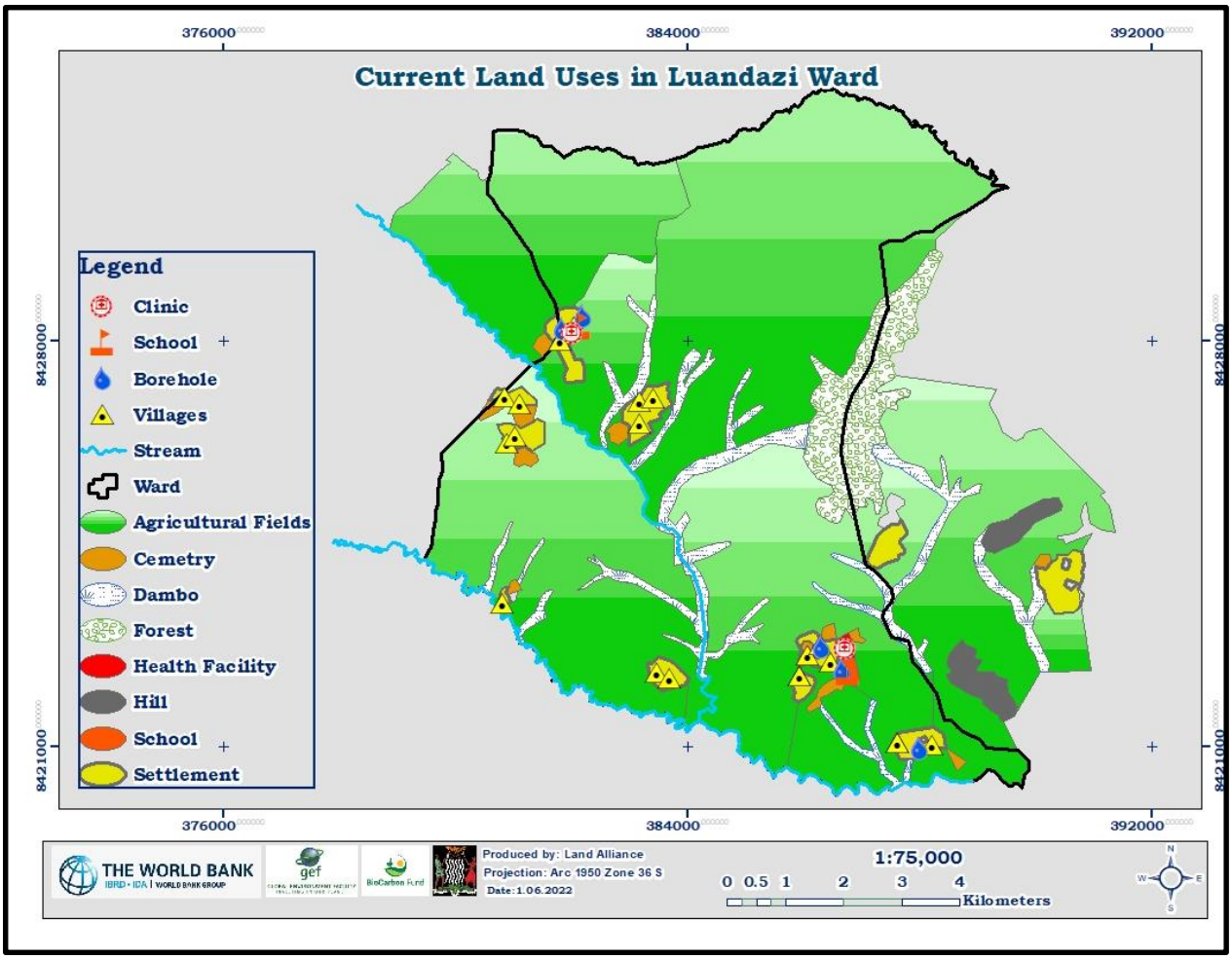


Figure 10: Current Land Uses

4.5 Land Use and Agriculture

Agricultural land is the most utilised in Luandazi Ward covering about 8,236.4 ha (spills over into the neighbouring Chamakuwi and Chiwuyu Wards). Most of this land is under Climate Smart Agriculture supported by the Government. The map below shows areas of Luandazi that are used for agriculture:

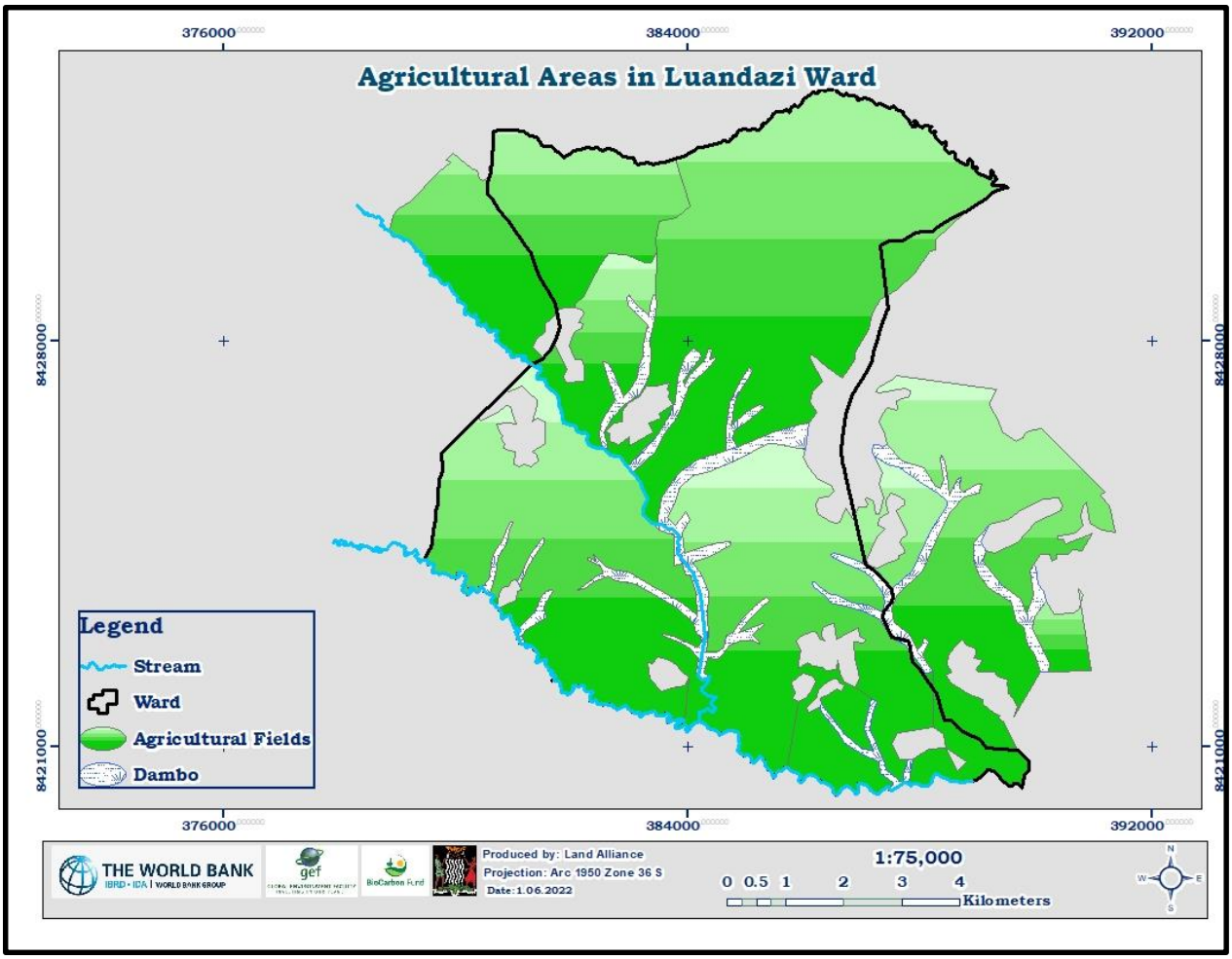


Figure 11: Land Use and Agriculture Map

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, prevention of floods, soil erosion and desiccation, withering and maintaining the flow of rivers. Currently, the sustainable utilisation of forest land in Luandazi ward is the beekeeping that is being promoted by ZIFLP through their community forest management group at Luandazi.

Currently, Luandazi Ward local residents collect firewood, mushrooms and vinkubala (mopani worms) from Luandazi forest. The map below shows Luandazi's forest and hills:

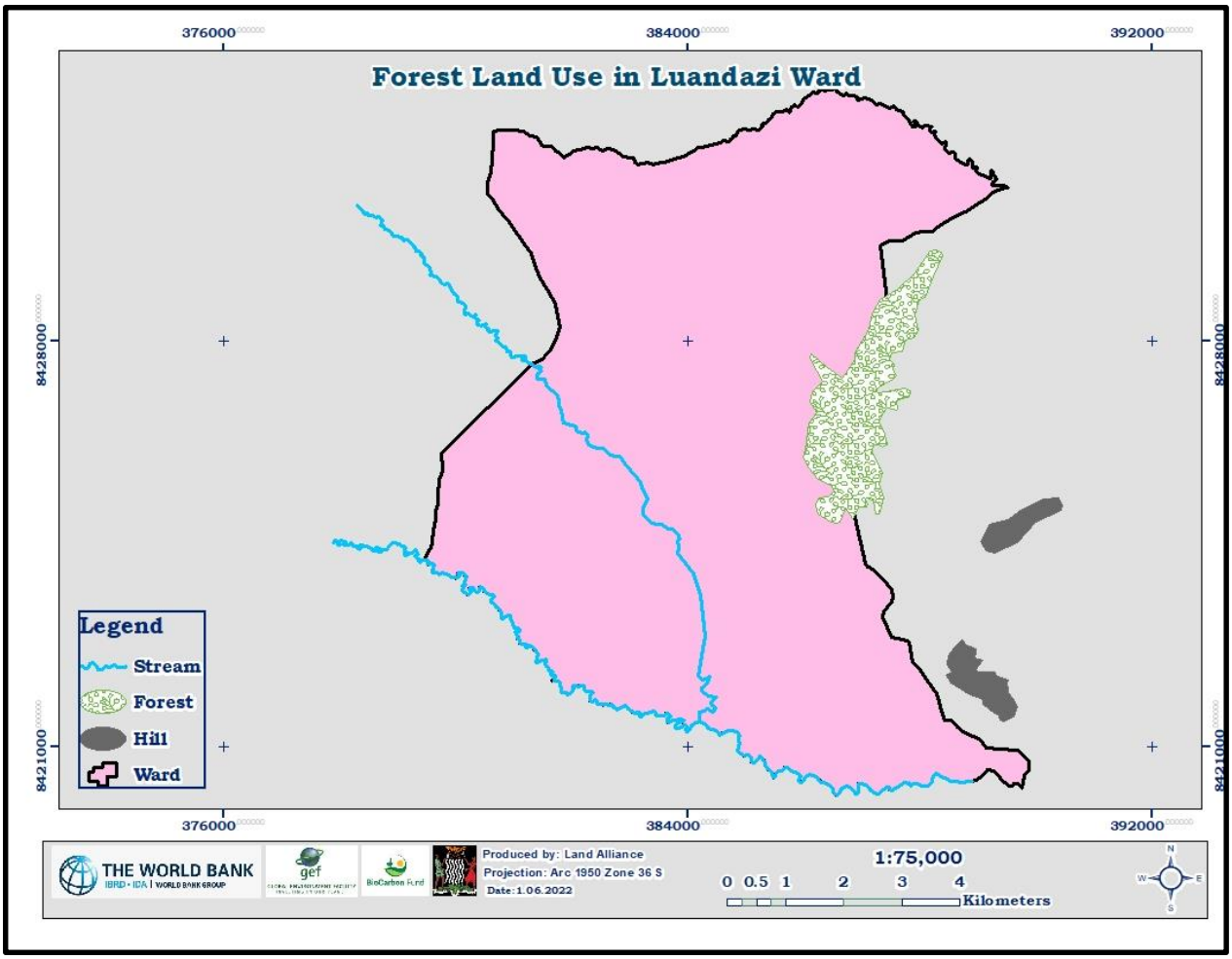


Figure 12: Land Use and Forest

4.7 Land Use and Wildlife

There is no potential for wildlife in Luandazi as the two closest Game Reserve areas (Sandwe and Lupande GMA) are more than 40 km and 50 km away, respectively. Additionally, since much of the land is being utilised under agriculture, this can cause human-wildlife conflict if wildlife is to be promoted in the area. During the community engagement activity, communities suggested that the only way to restore some habitat for small bush animals in the area is by enhancing forest conservation and engaging in sustainable agricultural practices.

4.8 Land Use and Mining

There are no mining activities reported in Luandazi ward despite the area having the potential for such activities.

4.9 Land Use and Tourism

Luandazi ward is less than 40 kilometres away from the cultural site where the Chewa speaking people gather each year in the month of August to commemorate the Kulamba ceremony. Thus, this PLUP is envisaged to create an enabling environment for conservation and development of activities to attract 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

Luandazi 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 Luandazi ward because land used for settlements usually becomes a permanent feature, never to revert to the original (environmentally friendly) land use. Although there are currently no encroachments into forested areas, the mushrooming of unplanned settlements in closer proximity to the protected forest areas (with the closest being 500m away from the edge of Luandazi Forest) is a cause for concern.

Luandazi Ward has two (2) health facilities, namely: Chanjoka Health Post and Chalasa Clinic and two (2) primary schools, namely: Chanjoka primary school and Chilasa primary school. The map below shows the physical developments of Luandazi Ward:

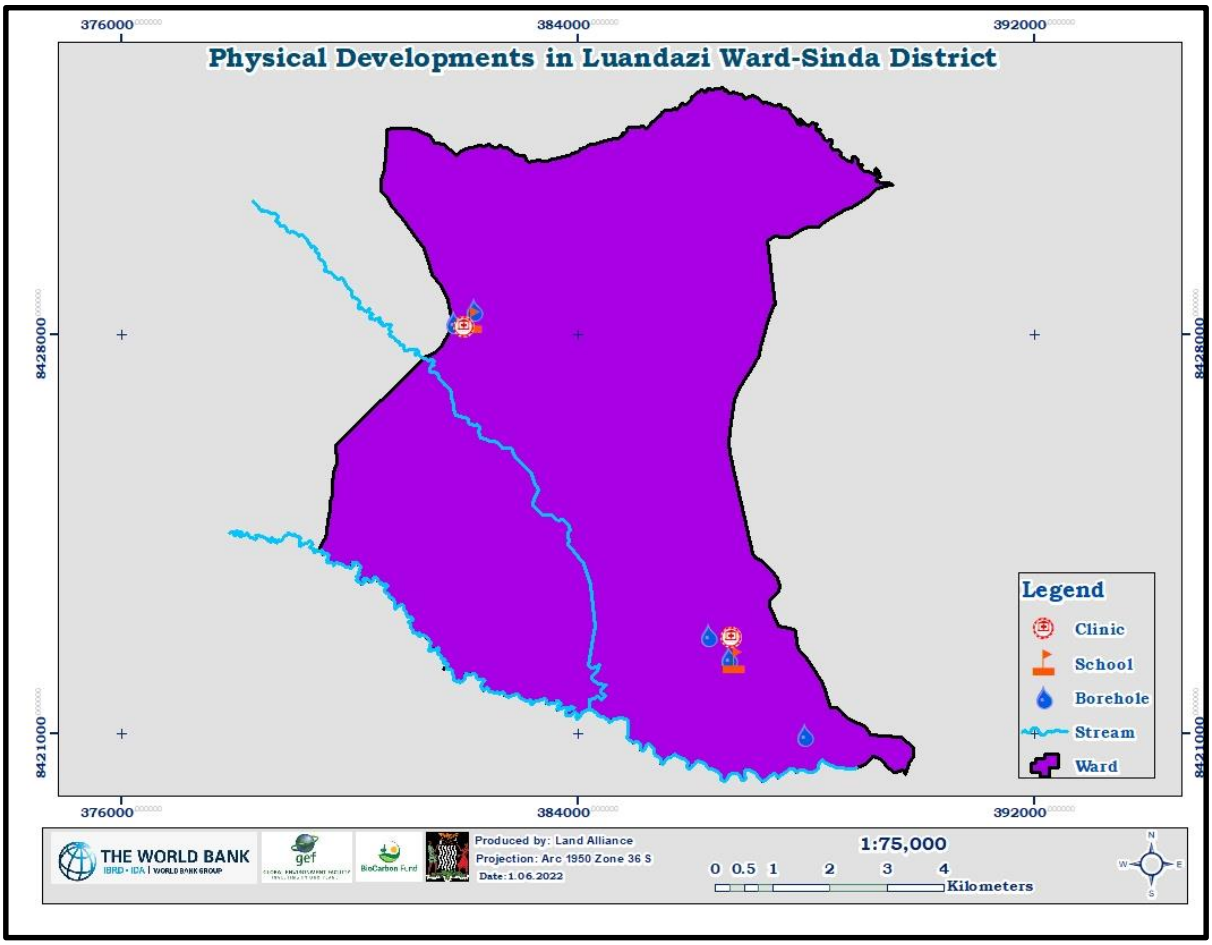


Figure 13: Land Use and Physical Development

5. COMMUNITY PARTICIPATION

5.1 Community Engagement Process

Before the commencement of community engagement meetings, the DMTs were oriented in Participatory Land Use Planning with a lens of SBIA. The PLUP training workshop was conducted for five days, facilitated by officers from the Physical Planning Unit, Provincial Administration and officers from Land Alliance, a Technical Service Provider engaged to facilitate Participatory Land Use Planning in Eastern province. DMT staff from Sinda were trained in facilitation of PLUP. At the end of the training, the DMT was guided to prepare an action plan and budget to be used for facilitating PLUP activities in Sinda District.

In the initial stages of PLUP activities in Sinda, Chieftainess Kawaza was identified to be the custodian of land in Luandazi Ward. The team went to the Chieftainess to explain and solicit support for

implementation of PLUP in the Ward falling in her Chiefdom. She expressed willingness and promised to offer support during the whole process of PLUP. She 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 Luandazi Ward was embarked on through a series of community engagement meetings which involved meetings with the Chieftainess, 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 Luandazi ward has villages which are far stretched apart, community engagement meetings were held at two (2) designated locations. This was done to ensure that many members of each village community attended for the purpose of getting acquainted with the PLUP concept and getting 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: Consisted of the 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 depicted resources in their area. To enhance participation, participants were put in three separate groups of youths, women and men. This allowed peer-to-peer interaction among 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, that were in Luandazi Ward. These resources included streams, forests, hills, dambos, fields, schools, health facilities, roads etc. After the exercise, facilitators captured images of the maps and original copies were left with the communities. The pictures below demonstrate the steps during this phase:

Second Phase: Consisted of rapid village assessments, where village coordinate points were captured by the enumerators in the company of Indunas so that Shared Resource Maps can be produced. Shared Resource mapping follows once shared resource maps are produced using data captured during rapid village assessments. Below is a picture showing the product of this stage in the process:

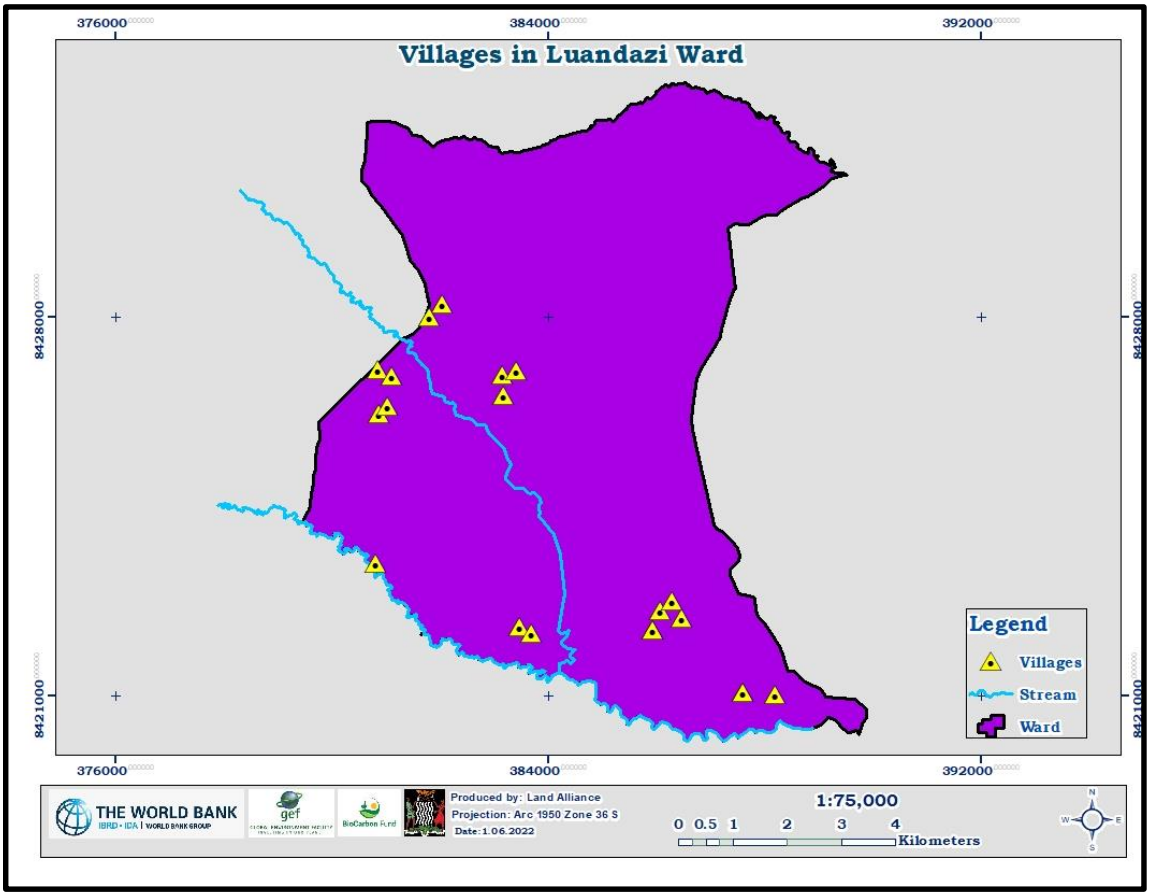
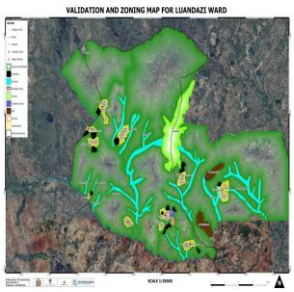


Figure 14: Output Map of Rapid Village Assessment

Third Phase: In this phase community engagement meetings were also conducted for the verification of the digitised Shared Resource Maps showing Shared Resources captured in all the villages during the

second phase of the exercise. 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 of community engagement that Resource Governance Rules were also formulated for approval by HRH Chieftainess Kawaza. Below are pictures showing communities validating the mapped resources and proposing areas of conservation:



The attendance registers for each meeting have been attached in 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. To make management of Shared Resources easier, by-laws for the Shared Resources were drafted by the community to guide in the prudent management of their resources. The formulated by-laws for Luandazi ward are attached as Annex 1.

5.3 Problem Identification

There are several challenges that rural communities face and Luandazi residents are no exception. The most prominent challenges are:

- Unsustainable agriculture practices.
- Lack of tenure security due to undocumented tenure rights.
- Marginalisation of the vulnerable groups such as women and youths.

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

Problem	Causes	Possible Solutions
• Inadequate safe water sources • Drying of streams • Delayed rains • Loss of soil fertility • Reduced crop yield • Shortage of land for agriculture • Poor roads • Deforestation • Inadequate communication facilities • Inadequate Dams	• Lack of safe water facilities • Poverty and ignorance • Seasonal streams and late onset of rains • Land degradation • Unsustainable agricultural practices • Lack of alternative livelihood sources • Lack of by-laws • Inadequate communication towers • Siltation	• Drilling of boreholes and Dam construction • Adopting conservation farming practices • Adopting climate smart agriculture practices • Rehabilitation/construction of roads and related infrastructure • Skills in mushroom conservation and bee keeping • Installing communication towers.

Table 6: Problems Identified

6. CORE ISSUES AFFECTING LAND USE AND THE ENVIRONMENT

At the two clustered community meetings held at Mjancha and Chilasa, community members across villages in Luandazi 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 6 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 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 in identifying 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 Luandazi 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 clean, safe water, especially that 4 of the 7 streams in the Ward are seasonal. The map below shows the distribution of water facilities in Luandazi Ward:

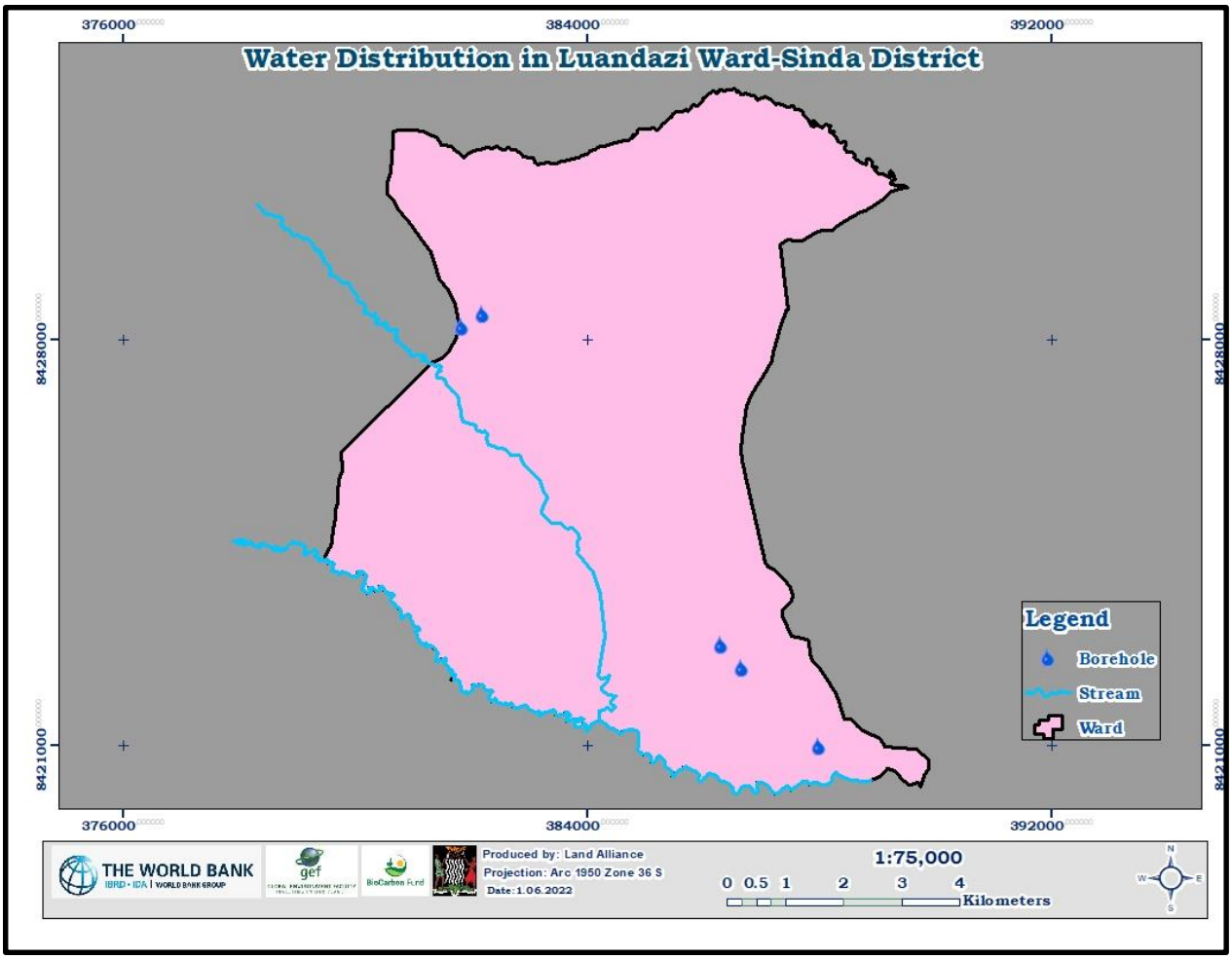


Figure 15: Distribution of Water Sources

6.2 Soil Degradation

This problem is mainly as a result of encroachment into forest areas and protected areas, unsustainable agricultural practices, bush fires and cutting down of trees for either charcoal production or field expansion and poorly managed animal grazing practices. 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 use 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 Luandazi Ward because the movement of goods and services (required for such development) depends on

transportation. Most roads in Luandazi 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 Luandazi Ward has a total of two (2) schools, which are primary schools, namely: Chanjoka primary school and Chilasa primary school. These schools enable children within the Ward to receive adequate primary education, but the absence of a secondary school in the Ward means less access to secondary school education for the secondary school-going children of Luandazi ward. It suffices to mention that the two primary schools in the ward are not adequately staffed with trained teachers and this negatively affects the quality of education received by the pupils in the Ward.

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

- Although Luandazi has no secondary school, 5 villages in the Ward fall within the recommended 5km radius of a Secondary School (Chassa Boarding Secondary School) in the neighbouring Ward.
- All villages in the ward fall within the recommended 5km radius of one or more of the 2 primary schools in Luandazi Ward.

That being the case, secondary education levels are generally low in Luandazi Ward. This is mainly attributed to the lack of secondary education facilities due to the Ward having no secondary schools. The figure below shows the education facility service radius for primary education:

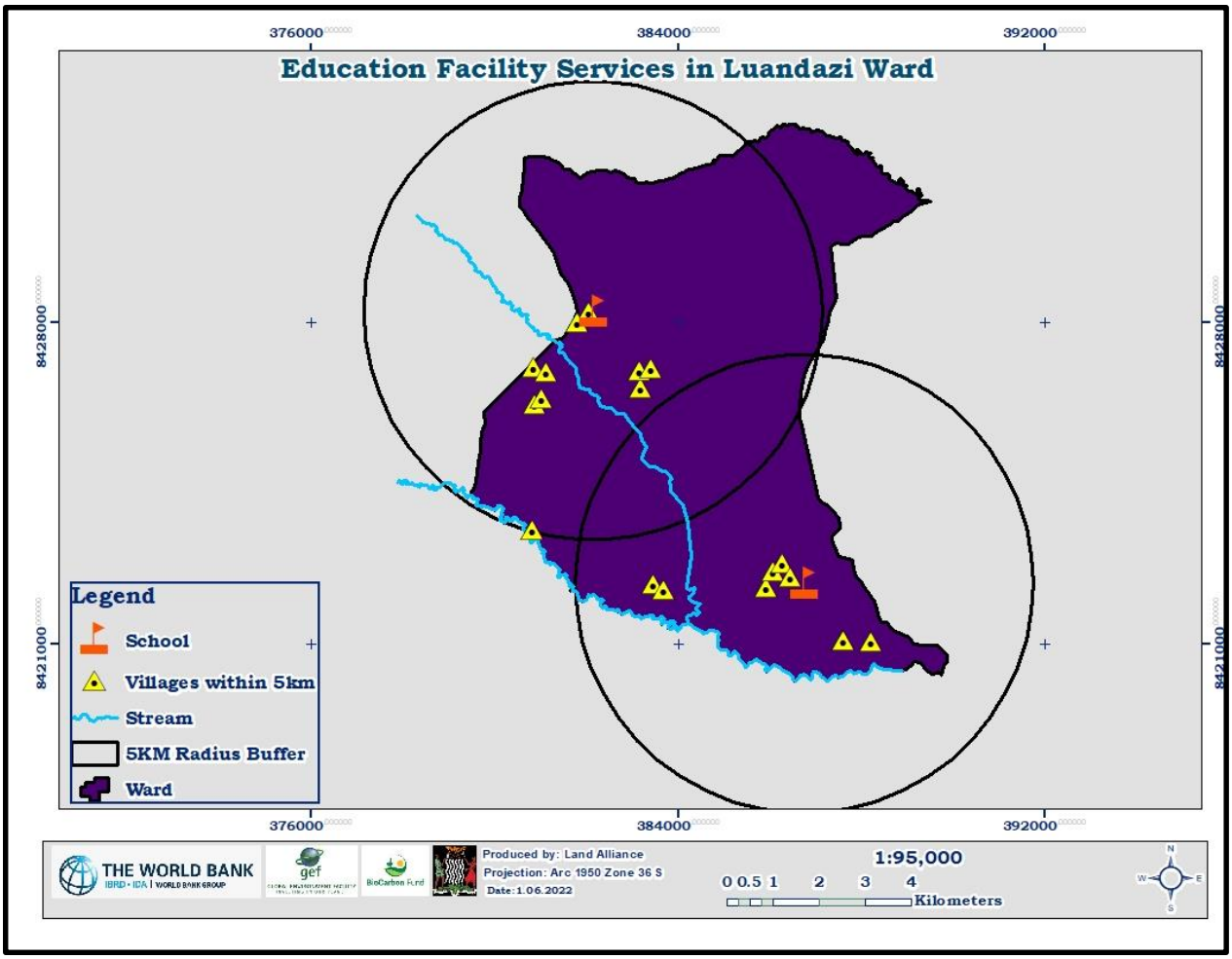


Figure 16: Primary Education Facility Service

6.5 Inadequate Health Facilities

In Sinda, the scenario is that one health facility is serving 12, 000 – 15, 000 people, depicting a deficit of health facilities in the district. The standard recommendation is that there should be a health facility every 5 km. Sinda currently has no District Hospital, but has a privately owned mission hospital belonging to the Reformed Church of Zambia - Nyanje Mission Hospital - which is currently serving as a 1st level hospital (Sinda IDP, 2021).

Although 29 villages were captured under Luandazi Ward during this PLUP exercise, only 18 fall within the boundaries of Luandazi Ward. The other 11 villages fall in the neighbouring Chamakuwi and Chiwuyu Wards. The 18 villages that are within the boundaries of Luandazi Ward all fall within the recommended 5km service access radius of the two (2) health facilities in the Ward. However, the two (2) health facilities

(Chilasa Clinic and Chanjoka Health Post) cater not only for Luandazi Ward residents, but other surrounding Wards as well, making them congested. 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 Luandazi 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 not only in Luandazi ward but in Sinda District as a whole.

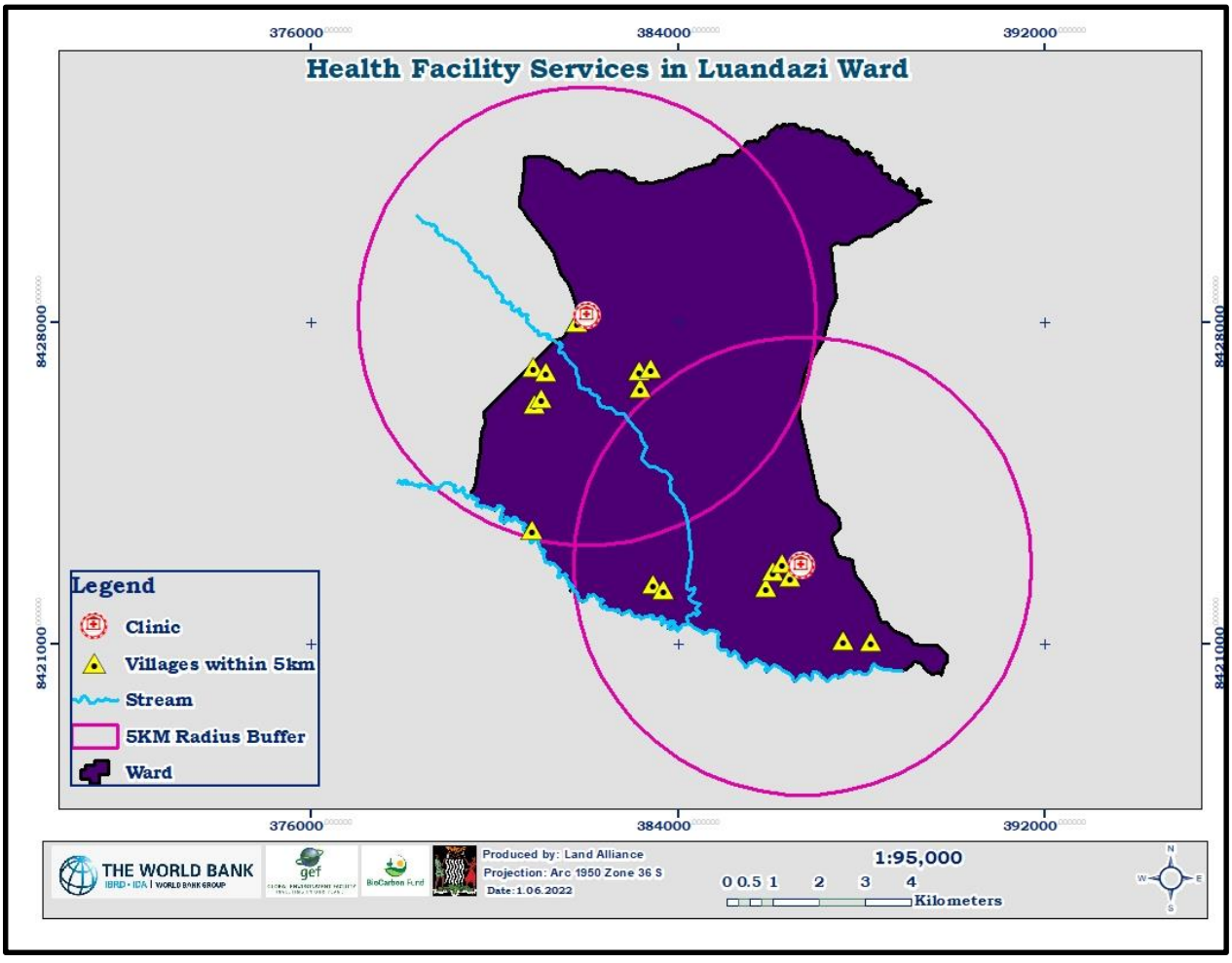


Figure 17: Health Facility Service Radius Map for Luandazi Ward

6.6 Inadequate Telecommunication Facilities

The community in Luandazi ward identified telecommunication as a major challenge affecting the Ward. The data analysis in the area shows a deficiency of this service, with no network tower installed in the Ward. The telecommunication network tower installations facilitate the ease of access to diverse forms of information within the shortest possible time. Having telecommunication towers installed in the Ward would enable the residents of Luandazi 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 Sinda 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 2020 and 2021, forced most institutions to conduct lessons using e-learning platforms, especially for students and pupils in examination classes. Luandazi Ward was no exception to this, and the lack of telecommunication towers presented challenges in internet access for residents of the Ward and most pupils in Luandazi Ward were affected by this. This highlights the need for adequate telecommunication facilities to be installed within the ward.

7. LAND USE PLANNING – ZONING, VALIDATION AND GOVERNANCE RULES

This activity was meant for communities to correct and confirm that all the mapped resources were captured on the maps. At the same time, they could propose areas for new developments such as dams, fish farming, Community Forest etc. For purposes of conservation and sustainable utilisation of these resources, communities agreed on the by-laws governing them. Three clustered meetings were held in Luandazi Ward for the purpose of validation of mapped areas. 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 ensure that 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 propose other areas for developmental activities such as trading areas, clinics, schools and any other facilities that will support the improvement of their livelihood. Shared Resources in the Ward overlap between villages/areas especially that these villages/areas have imaginary boundaries. Thus, for the purpose of clearly presenting the proposed land uses the meetings were clustered into three (3) areas as shown in table 7 below:

Community Area	Female	Male	Total No. of Participants
Dzikolabene	**5**	**24**	**29**
Mjancha	**29**	**36**	**65**
Njilatenga	**13**	**21**	**34**

Table 7: Attendance Statistics

7.1 Dzikolabene Community Meeting

The first validation meeting was held at Dzikolabene village with a representation of 5 villages, namely: Dzikolabene, Konza-Chowola, Mang'onga, Ndiwo and Thaulo. The total number of participants in this meeting was **29** (24 Males, 5 Females). The community proposed Luandazi Hill as a Community Forest, but Luandazi Forest is an already established forest. They also proposed the construction of a pre-school, a primary school, a dam at Thaulo and fish ponds at Mang'onga. The rationale for the proposed developments was built on the problems that were identified during the first village meetings conducted in the area. These developments would act as a measure of mitigating the effects of climate change and improving their welfare by identifying alternative sources of livelihoods. For example, if a dam can be constructed, it would provide an opportunity for smallholder farmers to venture into fish farming and irrigation-based farming. The same dam would provide water for their animals and in the long run, the dependence on charcoal production as a means of survival would reduce. The community forest would provide an opportunity for beekeeping and mushroom harvesting. Other investments would be attracted,

which would result in upgrading and servicing of roads. The table below shows the proposed areas and the land coverages:

S/N	Proposed Development	Area (Ha)
1	Dam Construction (Thaulo Dam)	5.9
2	Fish pond areas (Mang'onga)	1.0
3	Thaulo Pre-School	2.0
4	Dziko Laweni primary school	1.4

Table 8: Land Reservations for Dzikolabene Community Meeting

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

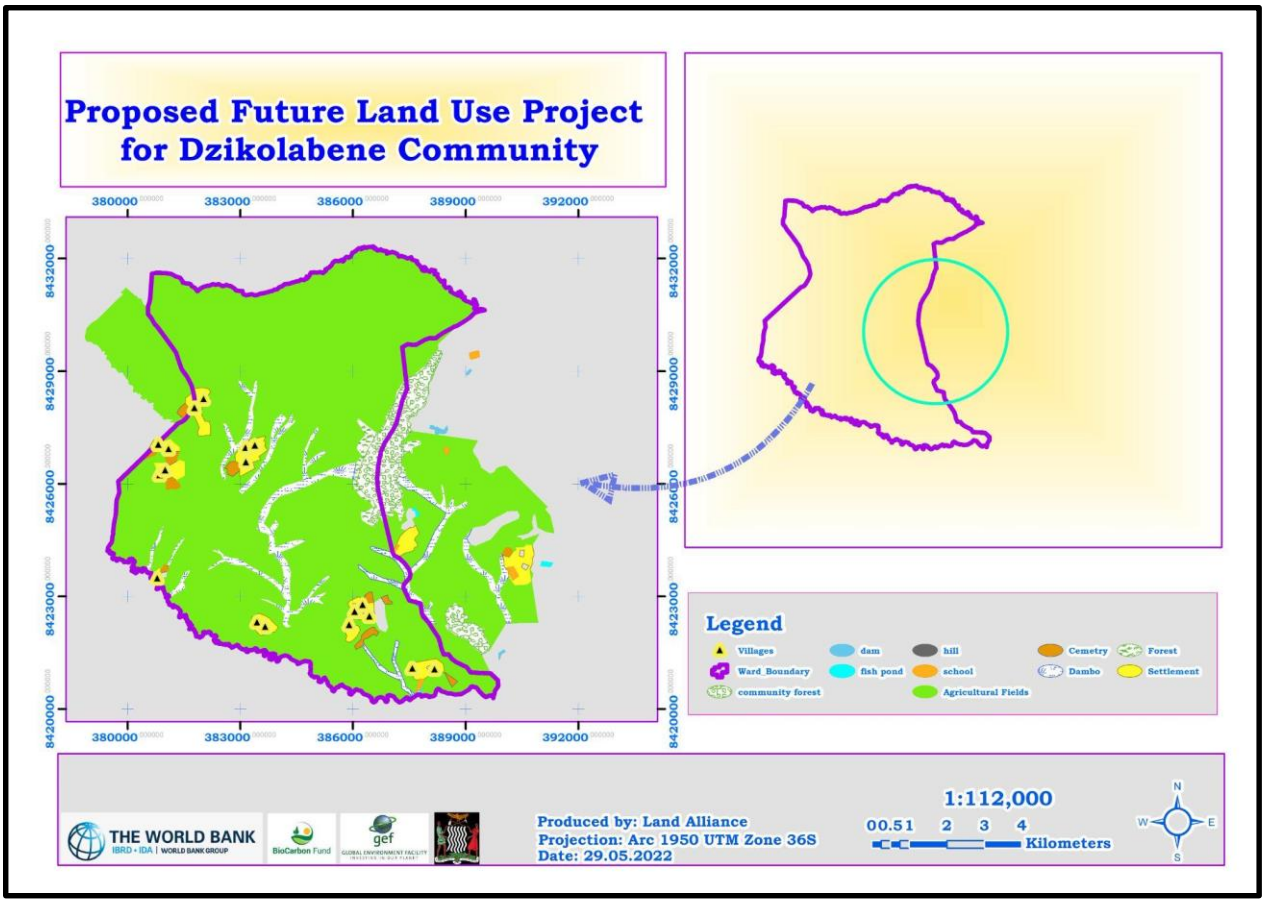


Figure 18: Future Land Use Map for Dzikolabene Community Meeting

7.2 Mjancha Community Meeting

The second validation and zoning meeting was held at Mjancha village with a representation of four (4) villages, namely: Thadeyo, Guma, Thaulo and Mjancha.. The total number of participants was **65** (36 Males, 29 Females). The community proposed Luandazi hills as forest, but Luandazi Forest is already an established forest. They also proposed the construction of Kafulama dam, Kafulama primary school and clinic. The justification for the proposed developments was built on the problems that were identified during the first village meetings conducted in the area. These developments would act as a measure of mitigating the effects of climate change and improving their welfare by identifying alternative sources of livelihood. The table below shows the proposed areas and the land coverages:

S/N	Proposed Development	Area (Ha)
1	Kafulama Primary School	4.6
2	Kafulama Clinic	1.5
3	Dam (Kafulama/Chankhoko Dam)	1.1

Table 9: Land Reservation for Mjancha Community Meeting

The map below shows the proposed areas of development and future land uses for villages that were represented during the meeting held at Mjancha Community Meeting:

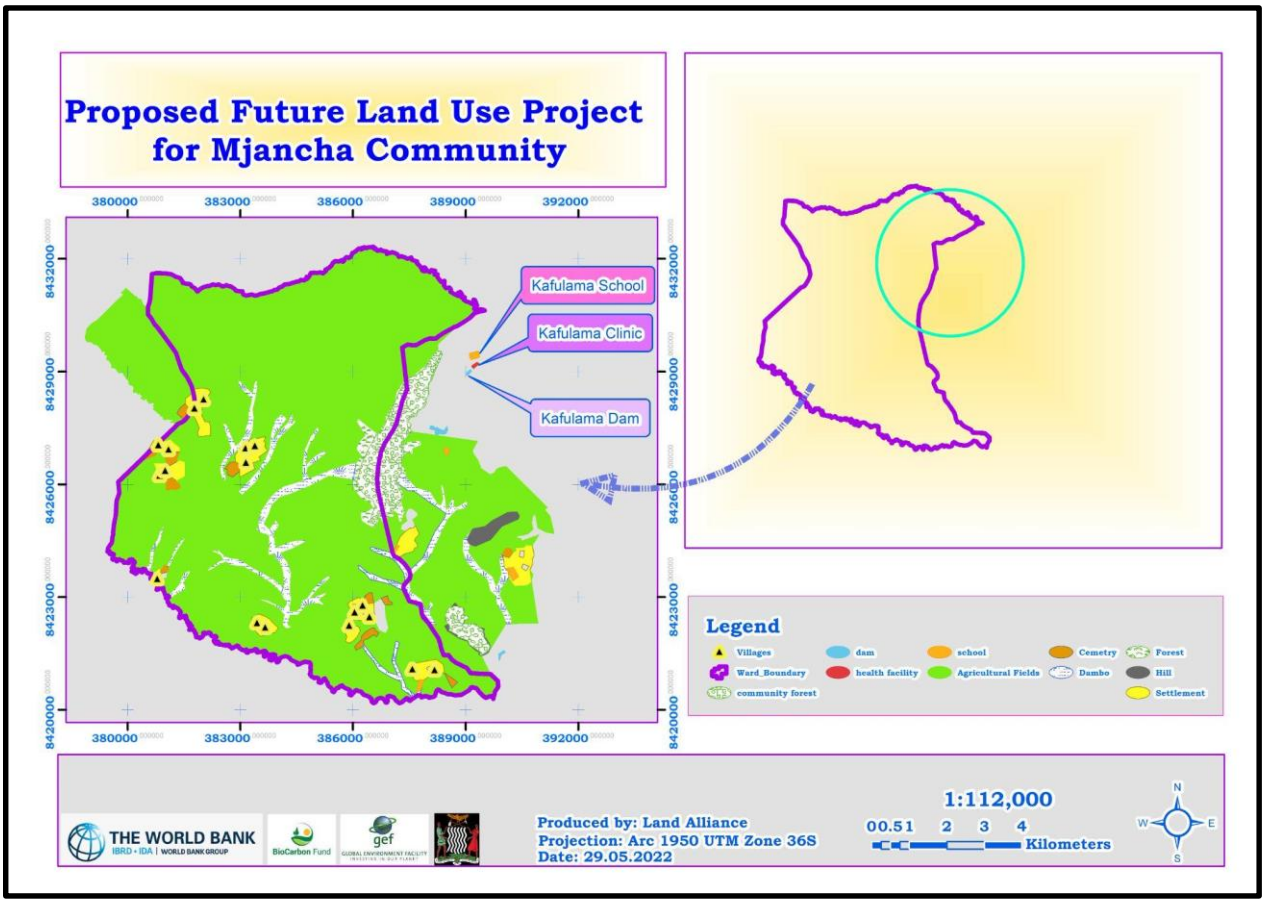


Figure 19: Future Land Use Map for Mjancha Community Meeting

7.3 Njilatenga Area Community Meeting

The third validation and zoning meeting was held at Njilatenga village with the representation of 6 villages, namely: Njilatenga, Nkhwinjili, Kamushapu, Magamba, Kauta and Nyakamphundu. The total number of participants was **34** (21 Males, 13 Females). The community proposed Mpenya as a Community Forest, Chafulu Dam, and fish farming at Nkhwinjili and Magamba villages, a pre-school, a borehole and market. The rationale for the proposed developments was built on the problems that were identified during the first village meetings conducted in the area as a means of mitigating the climate change as well as improving their welfare by identifying alternative sources of livelihood. The table below shows the proposed areas and the land coverages:

S/N	Proposed Development	Area (Ha)
1	Forest (Mpenya)	68.6
2	Dam (Chafulu)	1.7
3	Market (Kauta Market)	4.3
4	Fish Ponds (Magamba)	2.6
5	Pre-School (Kauta Pre-School)	6.2

Table 10: Land Reservation for Njilatenga Community Meeting

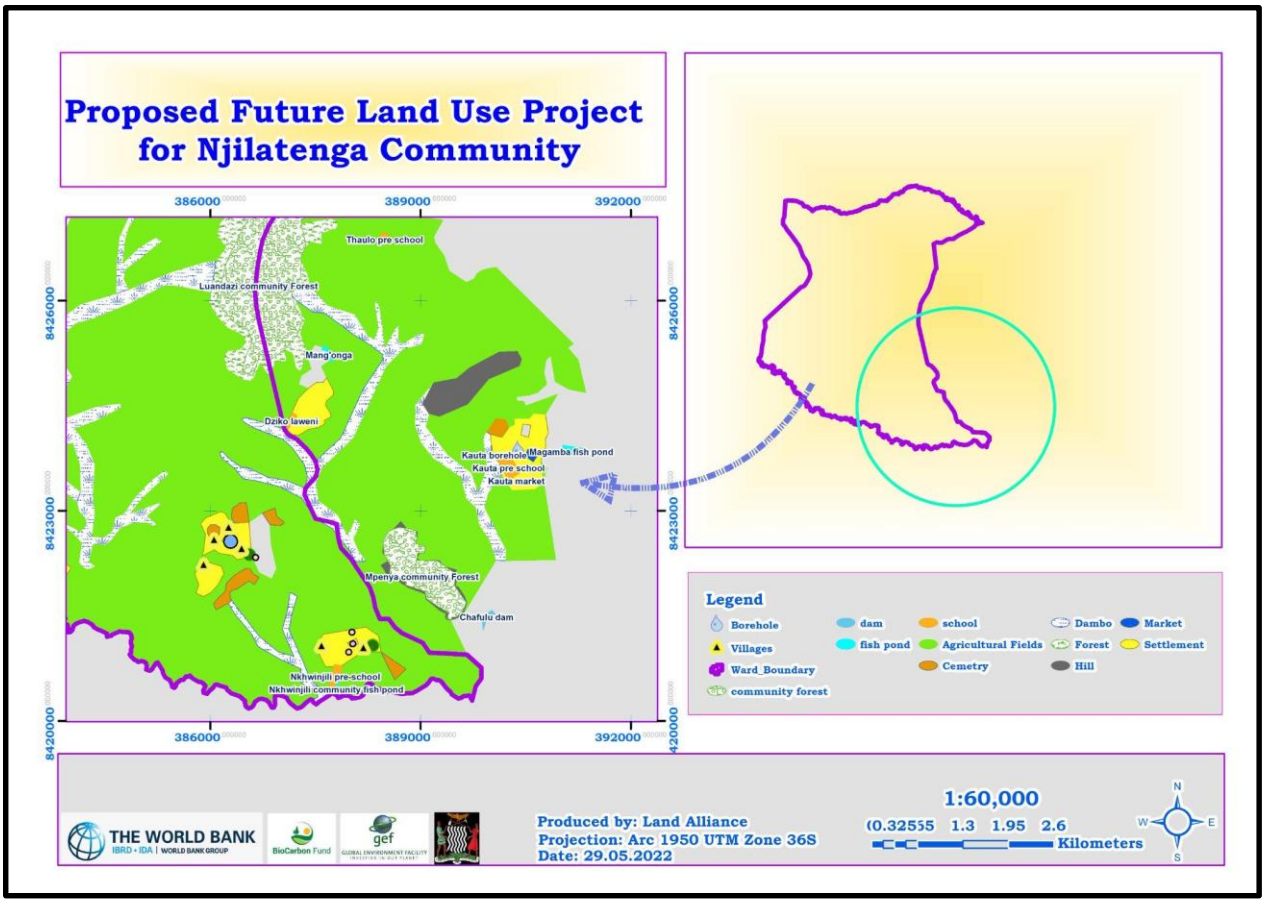


Figure 20: Future Land Use Map for Njilatenga Community Meeting

8. FRAMEWORK OF THE PLUP AND ENVIRONMENTAL MANAGEMENT PLAN

The environmental assessment of Luandazi 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	Description	Impact	Mitigation Measure
1	**Soil Erosion and Degradation**	People of Luandazi are dependent on crops and wood fuel which is expected to increase drastically. That will mean more pollution and more carbon for the forests to deal with, and by 2030 these forests being currently cut down will no longer be there to process the carbon dioxide.	Clearing of land for agricultural expansion, settlements, etc. increases the soil erosive potential.	Revegetate cleared and abandoned areas.
			Crop cultivation methods have an impact on the soil quantity and quality leading to soil degradation.	Adoption of climate smart agriculture.
			Life support system - source of wild fruits, mushroom, fuel wood, medicine, honey and other forest products will be diminished.	Adopting and investments in green energy such as the use of energy saving stoves, utilization of solar and wind energy, biogas production from the locally available materials.
			Loss of livelihood (income opportunities and generation of carbon benefits will be lost.	Strengthen local community participation and commitments, and private sector involvement at both communal and individual farmer level.
			High demand for opening of land for settlements and agriculture purposes arising to increase in population.	Find alternative sources of energy other than wood particularly for urban population.
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.	Support tree planting around hills and discourage cultivation along river banks.
				Restrict activities in sensitive habitats.
				Avoid unnecessary exposure.
				Restrict indiscriminate 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.	Enhance community sensitization by discouraging them from cultivating along river banks.
				Prohibit illegal hunting.
				Restrict bush fires.
				Minimise indiscriminate cutting down of trees.
				Encourage communities to establish water schemes.
				Restrict locations of dams.
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.	Revegetate bare areas by planting a lot of trees.
				Minimise vehicle movements and speed.
				Water down cleared areas to reduce dust emissions.
5	**Resource Use Conflicts**	Sabotage of 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.	Formulation of by-laws.
				PLUP development.
				Land use decisions must be inclusive of all users and groups, including women, youths and differently abled people in the area.
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.	Communities must identify rangeland project areas in consultation with their leaders.
				Land use decisions must be inclusive of all users and groups, including women, youths and differently abled people in the area.

Table 11: 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 Thaulo, Chafulu and Kafulama/Chankhoko	At least 3 dams are constructed	Number of dams constructed
Inadequate Trading Areas	To promote investment and access to goods and services	Construction of market at Kauta	At Least one (1) market constructed	Number of markets constructed
Inadequate Telecommunication 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 Luandazi 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 CFMG (Mpenya)	Number of CFMGs established

Poor Agricultural Practices	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	Number of Livestock Service Centres established
Poor State of Roads and Related Infrastructure	To promote spatial growth and improve transport system	Rehabilitation of roads	Rehabilitate roads in the ward	Number and length (KM) of 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 1 health facility (Kafulama)	Number of health facilities constructed
		Construction of health staff houses	At least 3 staff houses for the proposed 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 2 classroom blocks in the ward (1 per school)	Number of classroom blocks constructed
		Construction of new primary and secondary schools	Construct at least 2 primary schools at Dziko Laweni and Kafulama	Number of primary schools constructed
		Construction of pre schools	Construct at least 3 Pre-schools at Thaulo, Kauta and Nkhwinjili.	Number of pre-schools constructed
		Construction of teachers' houses	Construction of 15 teachers houses (3 houses per primary school and 1 for each pre-school)	Number of teachers' houses constructed

		Construction of teachers' houses	Construction of 15 teachers houses (3 houses per primary school and 1 for each pre-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 honey value addition plants established in the ward	Number of value addition plants established

Table 12: PLUP Implementation Plan

9.1 Capital Investment Projects

Priority Projects	Quantity	Unit Cost (K)	Total Cost (K)
Drilling of boreholes	16	81,000	1,296,000
Dam Construction	3	TBA	TBA
Construction of health Post	1	500,000	500,000
Construction of a primary school	2	500,000	1,000,000
Construction of a pre-school	3	100,000	300,000
Construction of Staff Houses	10	200,000	2,000,000
Establish Livestock Service Centre	1	TBA	TBA
Roads Rehabilitation	3	TBA	TBA
Construction of classroom blocks	2	450,000	900,000

Table 13: 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.

Sinda Ward PLUP is envisaged to be implemented in line with Sinda IDP 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 Luandazi 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 Sinda DMT team. Additionally, the PLUP analysed the current situation in Luandazi 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 Luandazi 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). Additionally, the quantity of available water determines the type of land use options and land utilisation 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.

13. REFERENCES

1. Sinda District Integrated Development Plan (IDP) 2021.
2. JICA 2011. Participatory Land Use Planning: Community Based Natural Resource Management. Available: https://www.jica.go.jp/project/english/easttimor/003/index.html
3. Food and Agriculture Organization (FAO). 1993. Guidelines for Land-Use Planning. Rome, Italy.
4. Liversage, H and Mangiafico, M.E. 2014. How to do Participatory land-use planning: Land tenure toolkit.
5. GIZ. 2012. Land Use Planning: Concept, Tools and Applications. Federal Ministry for Economic Cooperation and Development (BMZ): Eschborn, Germany. p. 268.
6. Ayantoye K, Amao J. O. and Fanifosi G. E. 2017. Determinants of livelihood diversification among rural households in Kwara State, Nigeria.
7. Malcolm, J. R., Liu, C., Neilson, R. P., Hansen, L. & Hannah, L. 2006. Global Warming and Extinctions of Endemic Species from Biodiversity Hotspots.
8. Kassa W.A. 2018. Determinants and challenges of rural livelihood diversification in Ethiopia: Qualitative review. Journal of Agricultural Extension and Rural Development.
9. Mitchell D, Buxton M and Budge T. 2004. Assessing the Role of Land Use Planning in Natural Resource Management. Spatial Planning for Sustainable Development.
10. Schwedes, S and Werne, W. 2010. Ministry of Lands and Resettlement and German Technical Cooperation in the context of the Modelling Land Use Planning Project.
11. Negash, M. 2012. Local Level Participatory Land Use Planning Manual: Concepts and steps in LLPLUP. Ministry of Agriculture Rural Land Administration and Use Directorate.
12. Mutea. E, Bottazzi. P, Jacobi. J, Kiteme. B, Speranza. C.I and Rist. S. 2019. Livelihoods and Food Security Among Rural Households in the North-Western Mount Kenya Region
13. Abu, G. A., and Soom, A. (2016). Analysis of factors affecting food security in rural and urban farming households of Benue State, Nigeria.
14. Shitumbanuma. V, Simfukwe. P, Kalala. D, Kaninga. B, Gondwe. B, Nambala. M, Kabwe. S, Siulemba. G, Kapulu. N, Lungu. O and Mutegi. J. 2014. Integrated Soil Fertility Management in Zambia.
15. FAO (2006). Food security. Policy Brief 2, 1–4.

ANNEXES

Annex 1: Luandazi 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 Luandazi 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 LUANDAZI WARD

Resource/Development	Rules	Penalty to Offenders
Water Resources	No farming activities around the dam and other water bodies, the buffer zone of 50m shall be applied.	Direct report to HRH Kawaza.
	No illegal fishing on the dam.	
	No disposition of poisonous chemicals in the dam.	
	No cutting down of trees around the dam.	Face the punishment.
	All gardening activities to be done on one side of the dam to allow animals to have access to water.	
	No farming activity to be done around the buffer zone of the dams and streams.	
Forest	No cutting down of trees in forest area	Face punishment from HRH Kawaza.
	No charcoal burning in the forest	
	No cattle grazing in the forest	
	No farming activities in the forest area	
	No fire burning in the forest	
	No fetching of firewood without permission in the forest.	

Trading Area	No building of a house in the trading area	The land rights will be revoked by HRH Kawaza.
	Only the development committee recognised by the chief has the right to allocate plots.	Report to the chiefs.
	No farming activities are allowed in the trading area.	
Expansion of Agricultural Area	Anyone wishing to expand the field should get consent from the chief.	Any offender shall be reported to the chief for further action.
Hunting	No hunting is allowed in the chiefdom.	Any offender shall be reported to the chief for further action.
Telecommunication Towers	No vandalism of Telecommunication Towers.	Inform the chiefs and report to the police.

Table 14: Offences and Penalties

Annex 2: Proposed Future Land Use Map

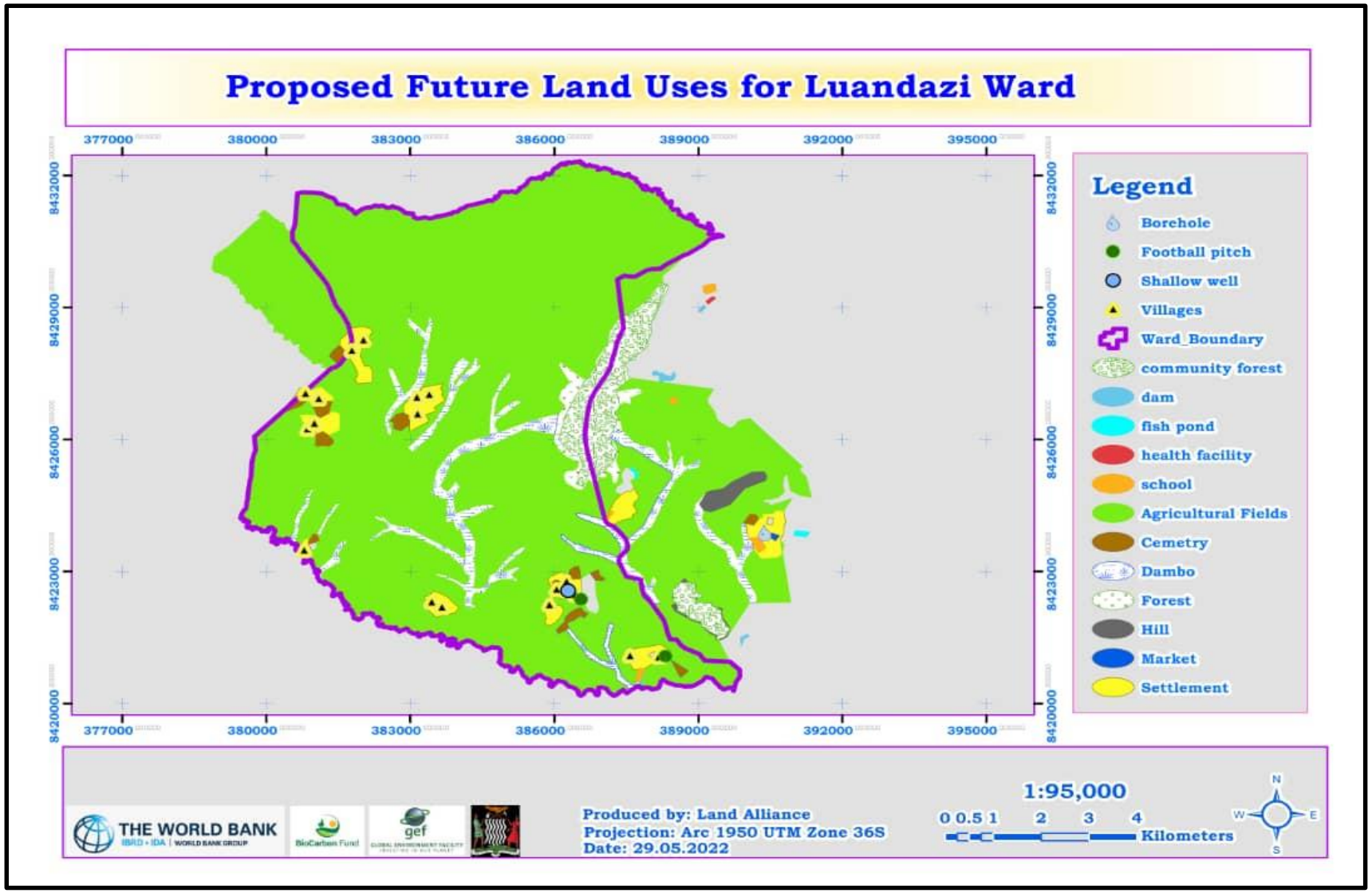
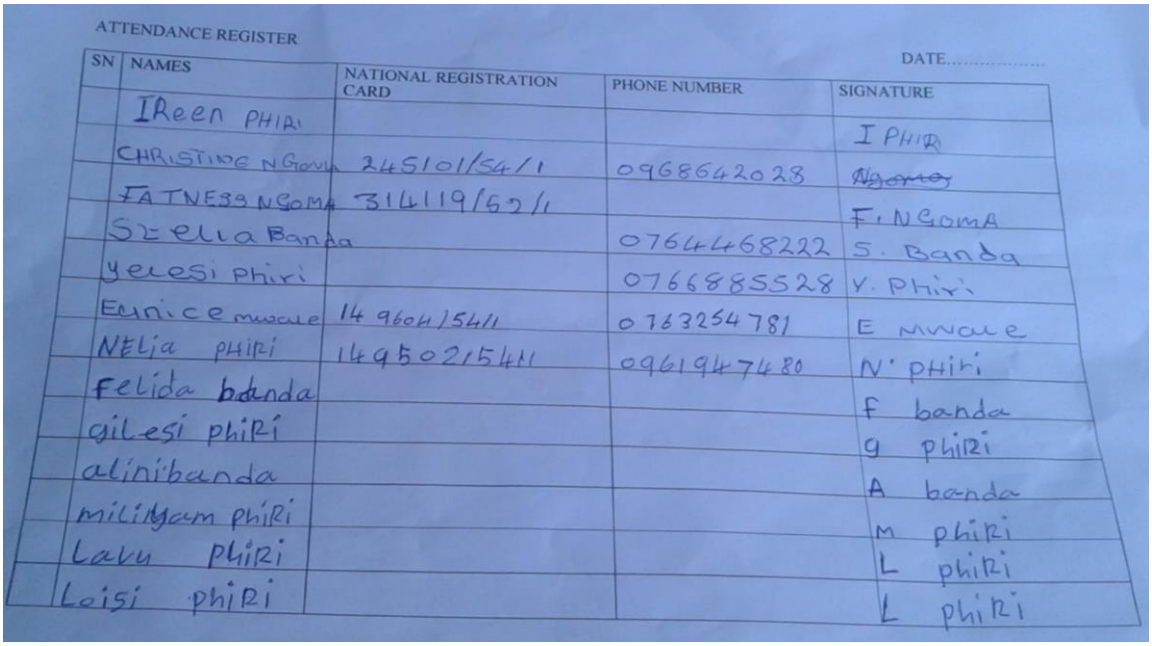


Figure 21: Future Land Use Map for Luandazi Ward

Annex 3: Meeting Attendance Registers

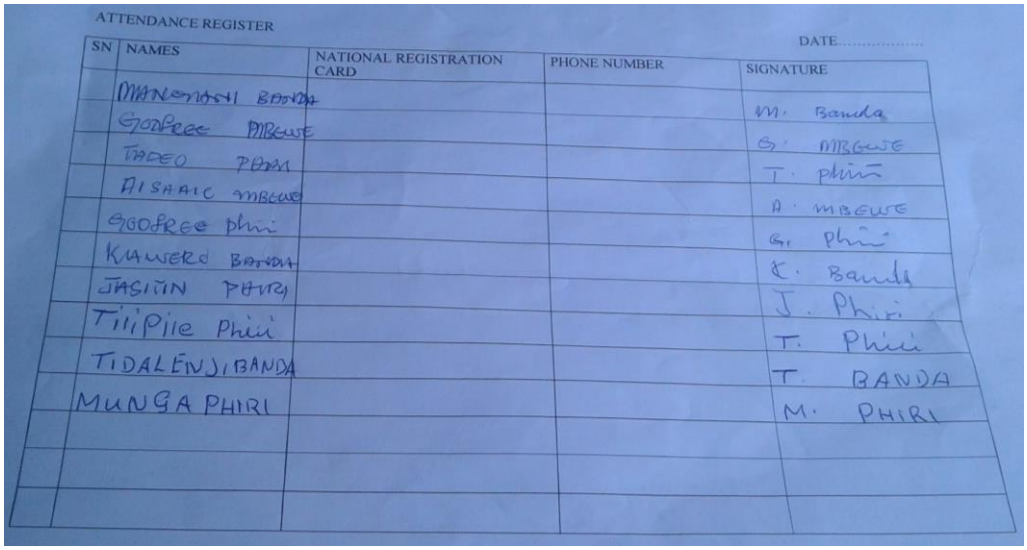
First Village Meetings



ATTENDANCE REGISTER

DATE.....

SN	NAMES	NATIONAL REGISTRATION CARD	PHONE NUMBER	SIGNATURE
	IReen PHIRI			I PHIRI
	CHRISTINE NGOMA	345101/54/1	0968642028	~~Ngoma~~
	FATNESS NGOMA	314119/52/1		F. NGOMA
	Stella Banda		0764468222	S. Banda
	yelesi phiri		0766885528	Y. PHIRI
	Eunice mwale	14 960H/54H	0763254781	E MWALE
	NELia PHIRI	14950215411	0961947480	N' PHIRI
	Felida banda			f banda
	gilesi phiRi			g phiRi
	alinibanda			A banda
	miliyam phiRi			M phiRi
	Laku phiRi			L phiRi
	Loisi phiRi			L phiRi



ATTENDANCE REGISTER

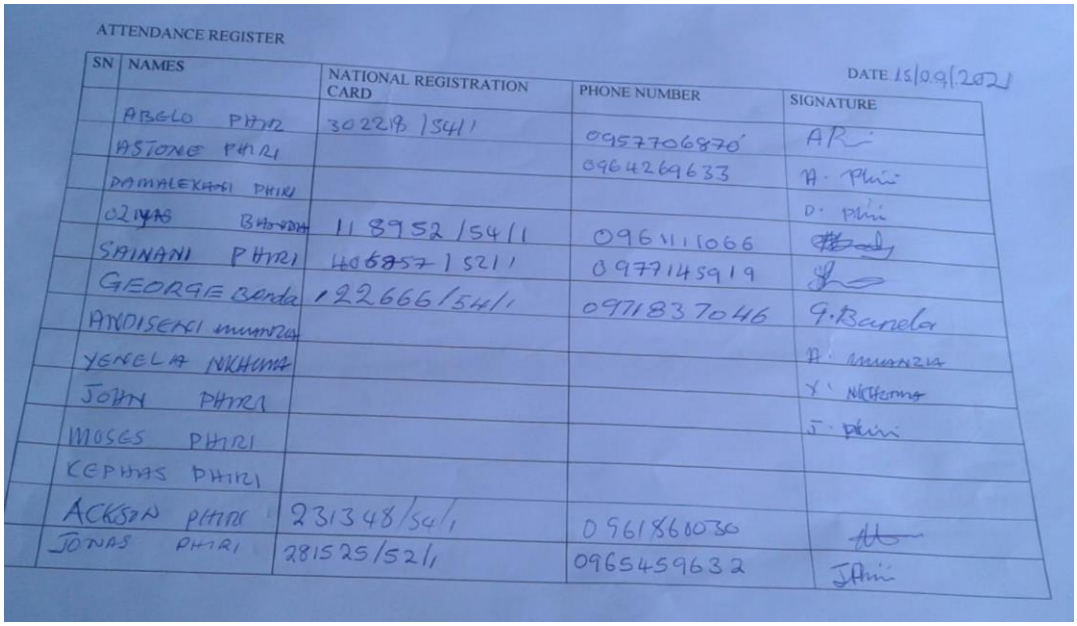
DATE.....

SN	NAMES	NATIONAL REGISTRATION CARD	PHONE NUMBER	SIGNATURE
	MANENGANI BANDA			M. Banda
	GODFREE MBEWE			G. MBEWE
	THEO PHIRI			T. Phiri
	ISAAC MBEWE			A. MBEWE
	GODFREE phiri			G. Phiri
	KAWERO BANDA			K. Banda
	JASIN PHIRI			J. Phiri
	TiliPile Phiri			T. Phiri
	TIDALENJI BANDA			T. BANDA
	MUNGA PHIRI			M. PHIRI

ATTENDANCE REGISTER

DATE: 15/09/2021

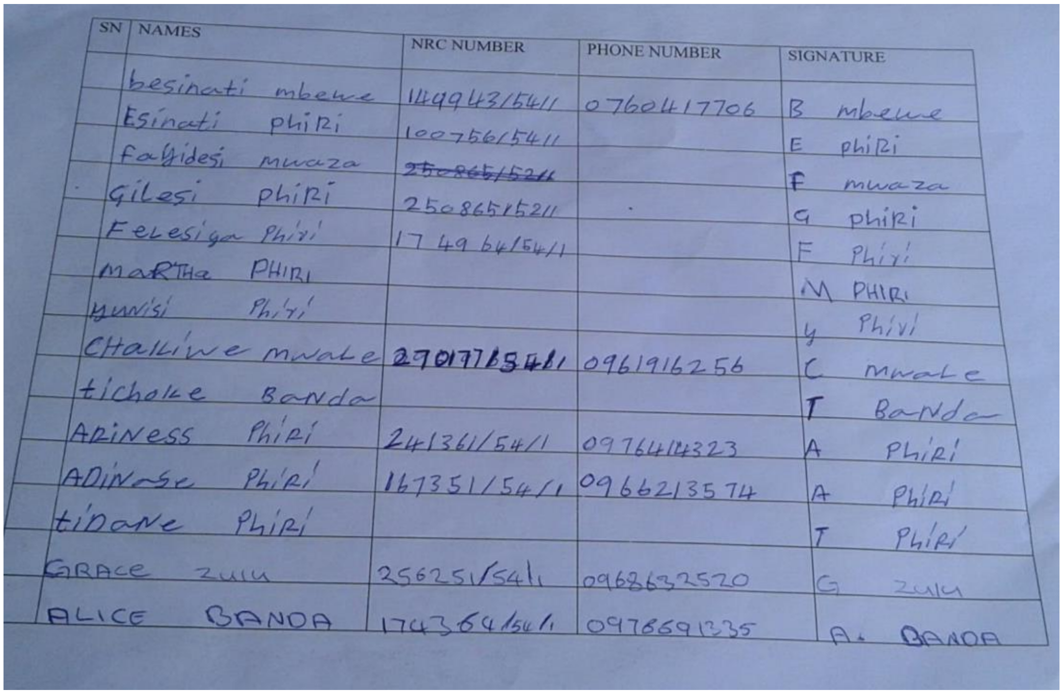
SN	NAMES	NATIONAL REGISTRATION CARD	PHONE NUMBER	SIGNATURE
	AARON PHIRI	167014/54/1	0966988350	
	GABRIEL BANDA	320460/52/1	0976505199	
	RUMAKIYO ZULU	895616/52/1	0978799239	
	AGARIDA PHIRI	335578/52/1	0976304664	
	MSAIWALE MWALE	112671/54/1	0970682119	
	SINIBWELIZA BANDA			
	GOSINO TEMBO	115699/541	07604/3421	
	NILAMADIA PHIRI	100764/541		
	LAZALASI MBEWE			
	ABRB PHIRI			
	THERESI NKHOMA			
	JAMES PHIRI			
	FANIEL PHIRI	227419/541/1		



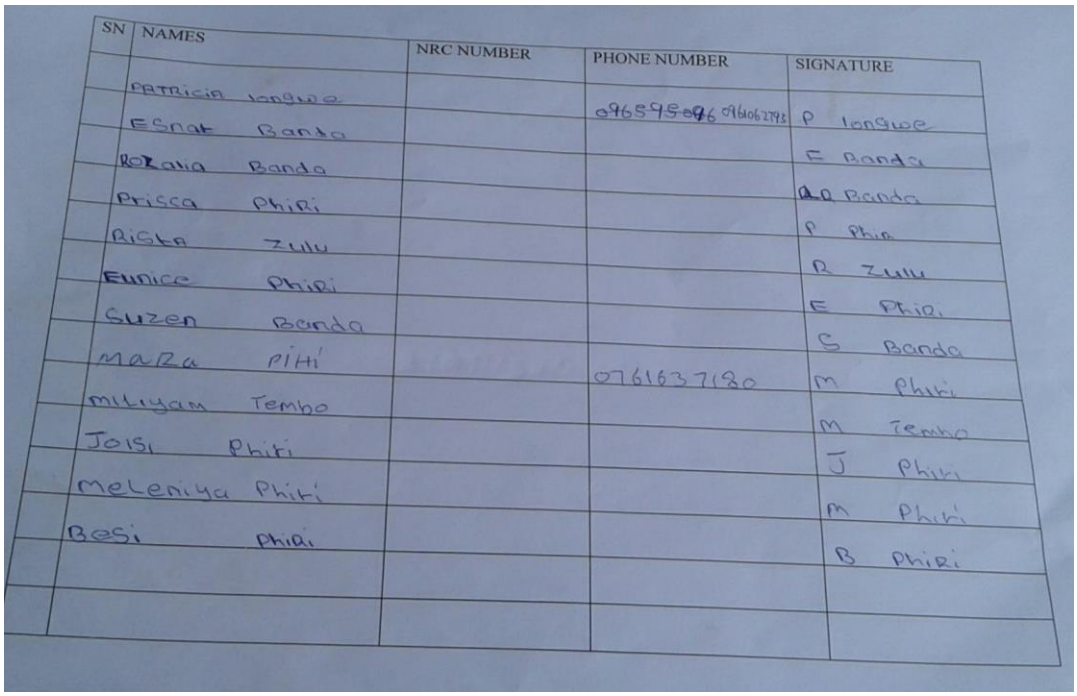
ATTENDANCE REGISTER

DATE 15/09/2021

SN	NAMES	NATIONAL REGISTRATION CARD	PHONE NUMBER	SIGNATURE
	ABELO PHIRI	302218/54/1	0957706870	AP.
	ASTONE PHIRI		0964269633	A. Phiri
	DAMALEKANI PHIRI			D. Phiri
	02[illegible] BANDA	118952/54/1	0961115066	[illegible]
	SAINANI PHIRI	106857/52/1	0977145919	
	GEORGIE Banda	122666/54/1	0971837046	G. Banda
	ANDISEKI [illegible]			A. [illegible]
	YENELA NKHOMA			Y. Nkhoma
	JOHN PHIRI			J. Phiri
	MOSES PHIRI			
	KEPHAS PHIRI			
	ACKSON PHIRI	231348/54/1	0961860130	
	JONAS PHIRI	281525/52/1	0965459632	JPhiri

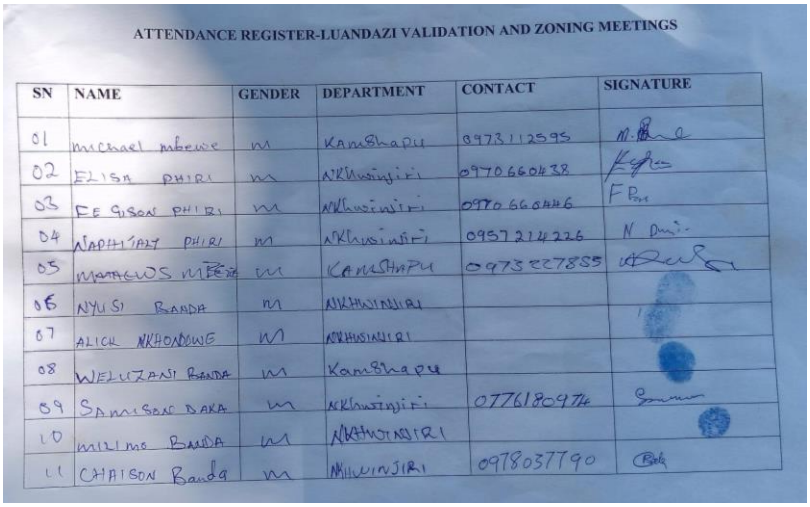


SN	NAMES	NRC NUMBER	PHONE NUMBER	SIGNATURE
	besinati mbewe	144943/54/1	0760417706	B mbewe
	Esinati phiri	100756/54/1		E phiri
	fagidesi mwaza	~~250865/52/1~~		F mwaza
	Gilesi phiri	250865/52/1		G phiri
	Feresiga Phiri	174964/54/1		F Phiri
	MaRTHa PHIRI			M PHIRI
	yunisi Phiri			y Phiri
	CHaliwe mwale	270177/54/1	0961916256	C mwale
	tichoke Banda			T Banda
	ARiNess Phiri	241361/54/1	0976414323	A Phiri
	ADiNase Phiri	167351/54/1	0966213574	A Phiri
	tiDaNe Phiri			T Phiri
	GRACE zulu	256251/54/1	0968632520	G zulu
	ALICE BANDA	174364/54/1	0978691335	A. BANDA



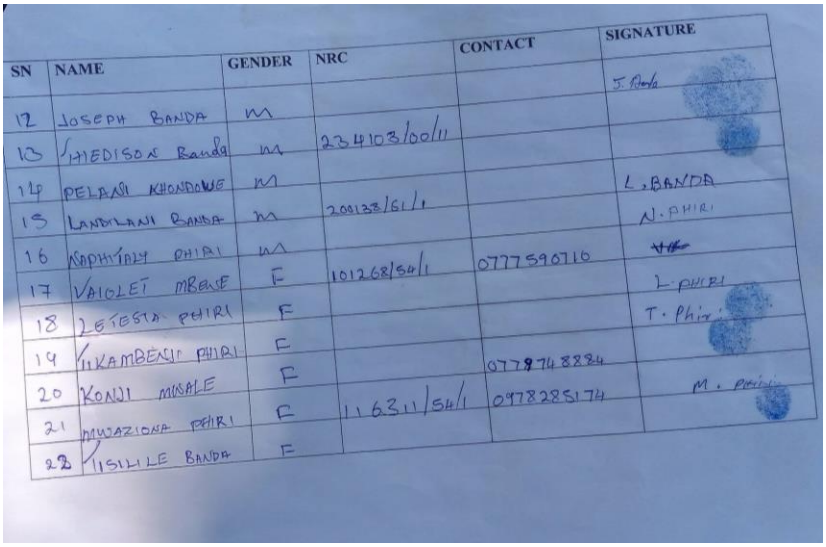
SN	NAMES	NRC NUMBER	PHONE NUMBER	SIGNATURE
	PATRICIA longwe		096595096 0961062743	P longwe
	ESnat Banda			E Banda
	Rozalia Banda			R Banda
	Prisca PhiRi			P Phiri
	RiSta Zulu			R Zulu
	Eunice PhiRi			E PhiRi
	Suzen Banda			S Banda
	MARa PiHi		0761637180	M PhiRi
	miriyam Tembo			M Tembo
	Jaisi Phiri			J Phiri
	meleniya Phiri			M Phiri
	Besi PhiRi			B PhiRi

Validation Meetings

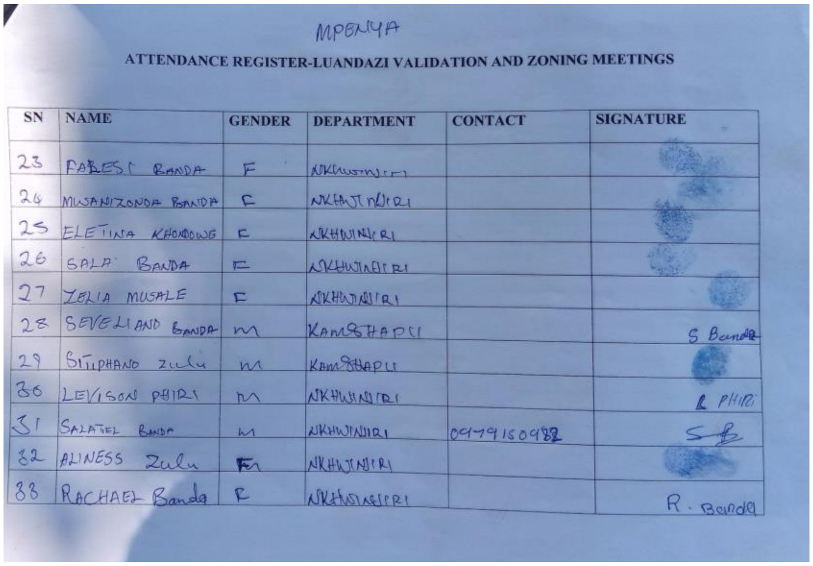


ATTENDANCE REGISTER-LUANDAZI VALIDATION AND ZONING MEETINGS

SN	NAME	GENDER	DEPARTMENT	CONTACT	SIGNATURE
01	michael mbewe	m	KAMUHAPU	0973112595	
02	ELISA PHIRI	m	NKHUSINJIRI	0970660438	
03	FE GISON PHIRI	m	NKHUSINJIRI	0970660446	
04	NAPHTALY PHIRI	m	NKHUSINJIRI	0957214226	
05	MATHEWS MIER	m	KAMUHAPU	0973227855	
06	NYUSI BANDA	m	NKHUSINJIRI		
07	ALICK NKHOMBWE	m	NKHUSINJIRI		
08	WELIZANI BANDA	m	KAMUHAPU		
09	SAMUSON BAKA	m	NKHUSINJIRI	0776180974	
10	MILIMO BANDA	m	NKHUSINJIRI		
11	CHAISON Banda	m	NKHUSINJIRI	0978037790	



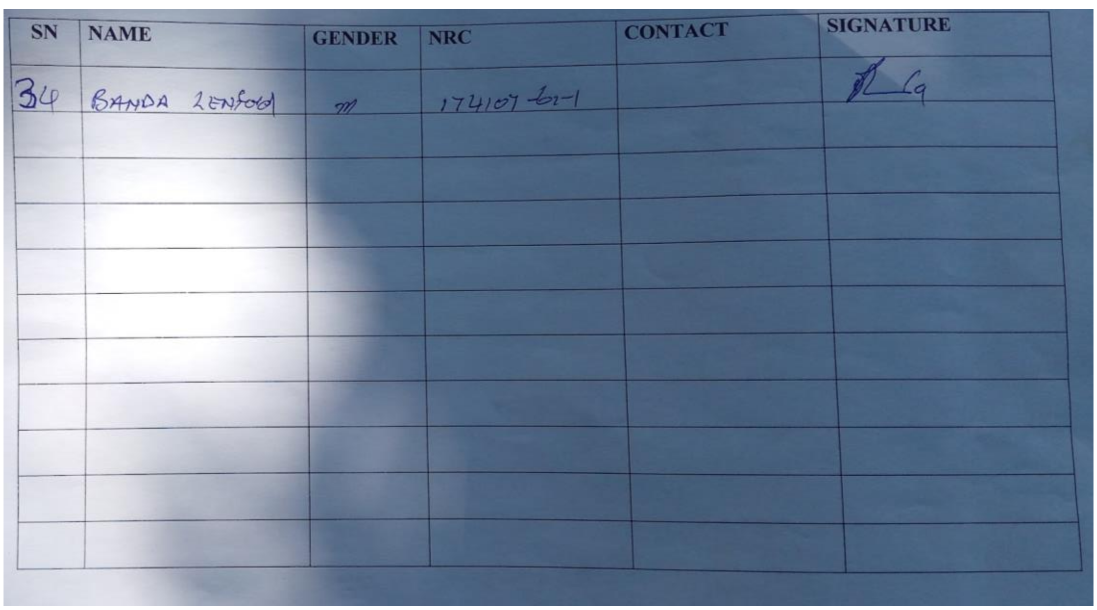
SN	NAME	GENDER	NRC	CONTACT	SIGNATURE
12	JOSEPH BANDA	m			
13	HEDISON Banda	m	234103/00/1		
14	PELANI KHONDOWE	m			L. BANDA
15	LANDILANI BANDA	m	209138/61/1		N. PHIRI
16	NAPHTALY PHIRI	m			
17	VAIOLET MBEWE	F	101268/54/1	0777590710	L. PHIRI
18	LETESIA PHIRI	F			T. Phiri
19	KAMBENJI PHIRI	F			
20	KONJI MWALE	F		0778748884	
21	MWAZIONA PHIRI	F	116311/54/1	0978285174	M. Phiri
22	SILILE BANDA	F			



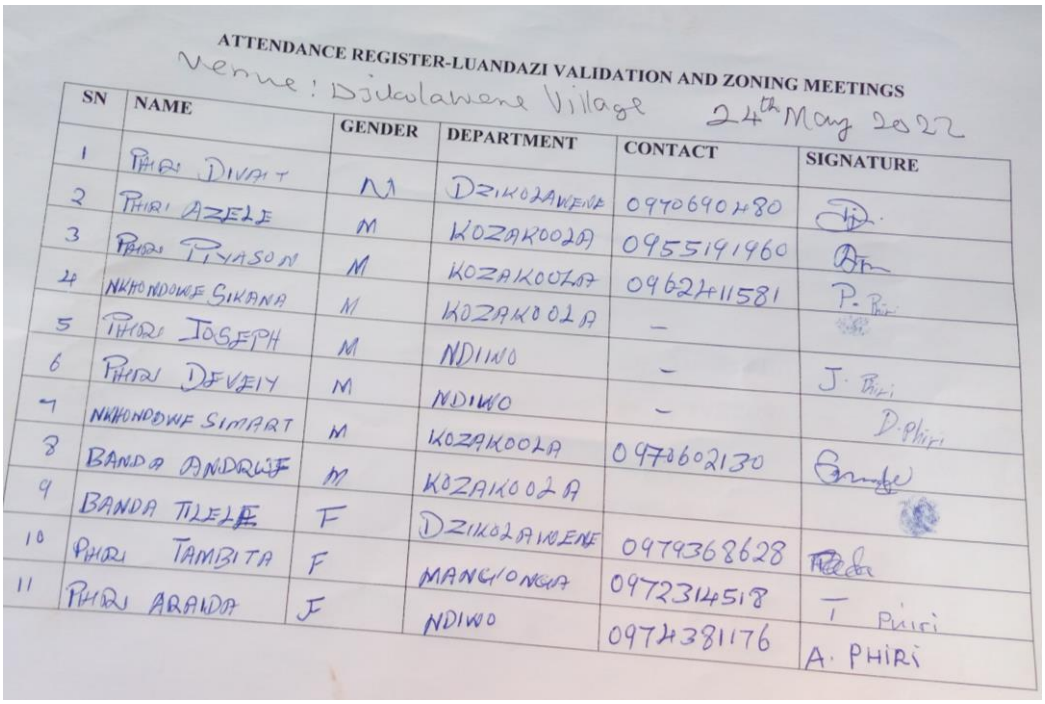
MPENYA

ATTENDANCE REGISTER-LUANDAZI VALIDATION AND ZONING MEETINGS

SN	NAME	GENDER	DEPARTMENT	CONTACT	SIGNATURE
23	FABESI BANDA	F	NKHWINJIRI		
24	MWANIZONDA BANDA	F	NKHWINJIRI		
25	ELETINA KHONDOWE	F	NKHWINJIRI		
26	SALA BANDA	F	NKHWINJIRI		
27	ZELIA MUSALE	F	NKHWINJIRI		
28	SEVELIANO BANDA	M	KAMSHAPU		S Banda
29	SITIPHANO ZULU	M	KAMSHAPU		
30	LEVISON PHIRI	M	NKHWINJIRI		L PHIRI
31	SALATIEL BANDA	M	NKHWINJIRI	0979150982	S B
32	ALINESS Zulu	F	NKHWINJIRI		
33	RACHAEL Banda	F	NKHWINJIRI		R. Banda



SN	NAME	GENDER	NRC	CONTACT	SIGNATURE
34	BANDA LENFORD	M	174107-62-1		



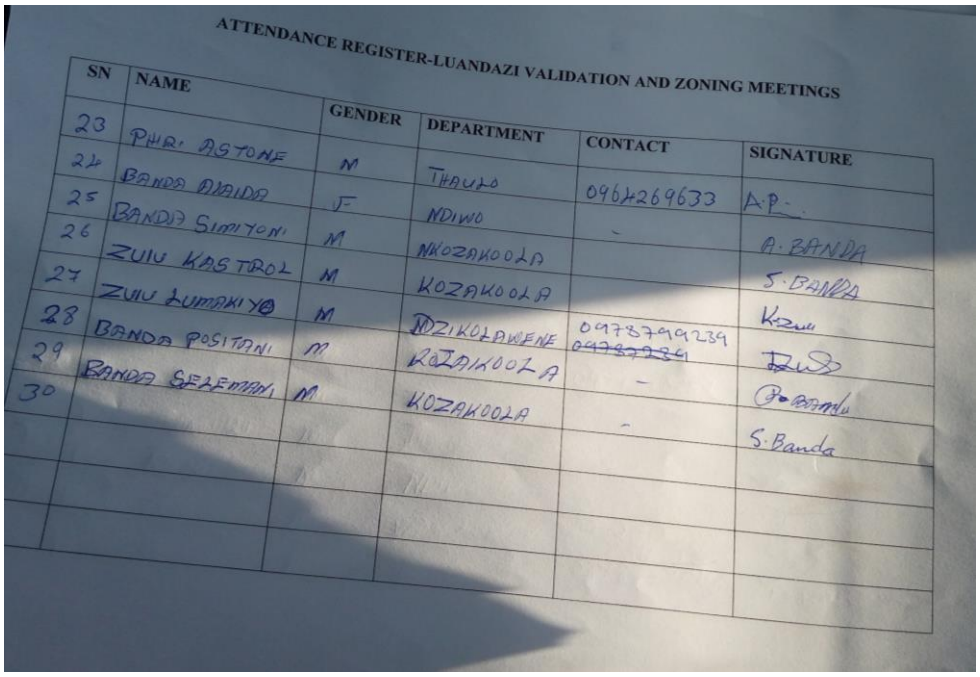
ATTENDANCE REGISTER-LUANDAZI VALIDATION AND ZONING MEETINGS

Venue: Djalalawene Village 24th May 2022

SN	NAME	GENDER	DEPARTMENT	CONTACT	SIGNATURE
1	PHIRI DIVAIT	M	DZIKOLAWENE	0970690780	
2	PHIRI AZELE	M	KOZAKOOLA	0955191960	
3	PHIRI TYASON	M	KOZAKOOLA	0962411581	P. Phiri
4	NKHONDOWE SIKANA	M	KOZAKOOLA	–	
5	PHIRI JOSEPH	M	NDIWO	–	J. Phiri
6	PHIRI DEVEIY	M	NDIWO	–	D. Phiri
7	NKHONDOWE SIMART	M	KOZAKOOLA	0970602130	
8	BANDA ANDREW	M	KOZAKOOLA		
9	BANDA TILLE	F	DZIKOLAWENE	0979368628	
10	PHIRI TAMBITA	F	MANGIONGA	0972314518	T Phiri
11	PHIRI ARANDA	F	NDIWO	0974381176	A. PHIRI

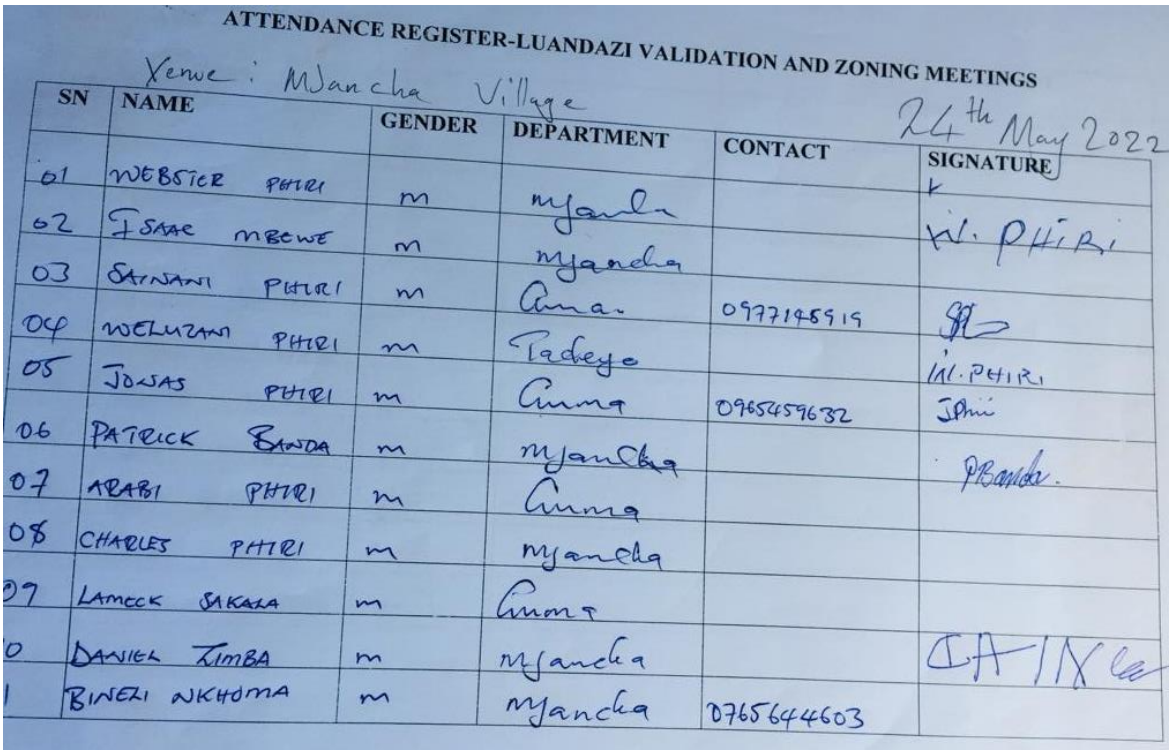
ATTENDANCE REGISTER-LUANDAZI VALIDATION AND ZONING MEETINGS

SN	NAME	GENDER	DEPARTMENT	CONTACT	SIGNATURE
12	BANDA YOSAMU	M	KOZAKOOLA	–	
13	BANDA MAINALA	F	NDIWO	–	
14	NJOVU TAISON	M	MANGIONGA	–	T. Njovu
15	BANDA WILSON	M	KOZAKOOLA	–	W. Banda
16	PHIRI AGRIPA	M	THAUZO	0962410571	
17	BANDA DISMAS	M	DZIKOLAWENE	0979778259	
18	PHIRI NYIRENDA	M	THAUZO	–	
19	PHIRI THAMBAZI	M	THAUZO	0976710620	
20	PHIRI DENJA	M	NDIWO	–	
21	BANDA FRANCEKO	M	DZIKOLAWENE	0972512024	
22	BANDA THOMAS	M	NDIWO	0978307544	T. Banda



ATTENDANCE REGISTER-LUANDAZI VALIDATION AND ZONING MEETINGS

SN	NAME	GENDER	DEPARTMENT	CONTACT	SIGNATURE
23	PHIRI ASTONE	M	THAUZO	0961269633	A.P.
24	BANDA DAIDA	F	NDIWO	-	A. BANDA
25	BANDA SIMIYONI	M	NKOZAKOOLA		S. BANDA
26	ZULU KASTROL	M	KOZAKOOLA		Kzulu
27	ZULU LUMBAKIYO	M	NDZIKOLOWENE	0977879239	
28	BANDA POSITANI	M	KOZAKOOLA	-	S. Banda
29	BANDA SELEMANI	M	KOZAKOOLA	-	
30					



ATTENDANCE REGISTER-LUANDAZI VALIDATION AND ZONING MEETINGS

Venue: Mjancha Village 24th May 2022

SN	NAME	GENDER	DEPARTMENT	CONTACT	SIGNATURE
01	WEBSICK PHIRI	m	mjancha		W. PHIRI
02	ISAAC MBEWE	m	mjancha		
03	SAINANI PHIRI	m	Anna.	0977145919	
04	WELUZANI PHIRI	m	Tadeyo		M. PHIRI
05	JONAS PHIRI	m	Anna	0965459632	
06	PATRICK BANDA	m	mjancha		P Banda.
07	ARABI PHIRI	m	Anna		
08	CHARLES PHIRI	m	mjancha		
09	LAMECK SAKALA	m	Anna		
10	DANIEL ZIMBA	m	mjancha		
11	BINEZI NKHOMA	m	mjancha	0765644603	

SN	NAME	GENDER	NRC	CONTACT	SIGNATURE
12	EUNICE PHIRI	f			
13	LOVENES PHIRI	f			
14	JOSEPHINE PHIRI	f			J Phiri
15	CHAPASI MBEWE	f			
16	TISIYANE BANDA	f			
17	MUTOLENJI NKHOMA	f			
18	TIWONGE BANDA	f			
19	LYDIA PHIRI	f			
20	TISA BANDA	f			
21	NEZIA PHIRI	f		0961947480	N Phiri
22	CHRISTINE NKHOMA	f			

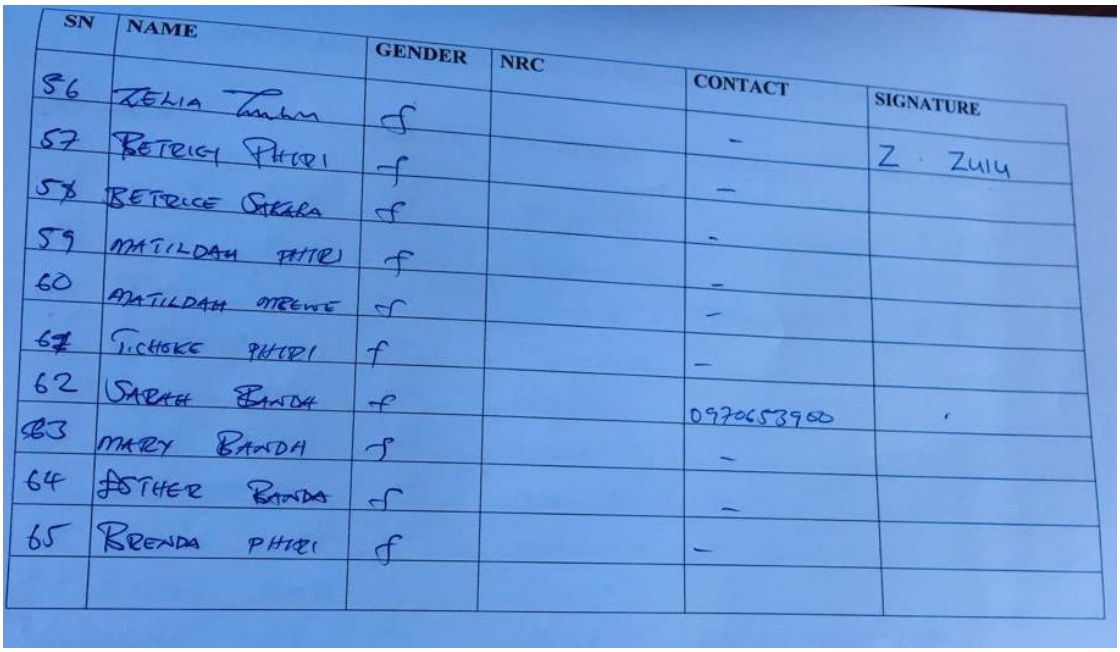
ATTENDANCE REGISTER-LUANDAZI VALIDATION AND ZONING MEETINGS

SN	NAME	GENDER	DEPARTMENT	CONTACT	SIGNATURE
23	ACKSON PHIRI	m	Chuma	0961860030	
24	MERCY MBEWE	f	Nyanja	-	
25	GRACY ZULU	f	Nyanja.	-	
26	MISOZI NJOBVU	f	Nyanja	-	
27	SIMON BANDA	m	Nyanja	0961451262	
28	DAVISON NJOBVU	m	Nyanja	0969800884	
29	WILLIAM PHIRI	m	Nyanja	0968465982	W
30	GODFRE TEMBO	m	Nyanja	-	
31	SAMUEL PHIRI	m	Chuma	0968547153	
32	JOSEPH PHIRI	m	Chuma	0767354740	
33	JOHN PHIRI	m	Nyanja		

SN	NAME	GENDER	NRC	CONTACT	SIGNATURE
34	NJIRA PHIRI	m		0763636713	
35	SIMBILEKO PHIRI	m		-	
36	AGRIPA PHIRI	m	335538/52/1	0977304664	
37	ARON PHIRI	m	470140/52/1	0966988350	
38	MUNGA PHIRI	m		-	
39	ANDREW PHIRI	m			
40	CHRISTINE NSOMA	f		0968642028	
41	TIPEMBE BANDA	f		-	
42	JEREMIAH NKHOMA	m			
43	BELLONI BANDA	m		-	
44	DOMINIC PHIRI	m		-	

ATTENDANCE REGISTER-LUANDAZI VALIDATION AND ZONING MEETINGS

SN	NAME	GENDER	DEPARTMENT	CONTACT	SIGNATURE
45	ALICK PHIRI	m	Mjanda	-	
46	ALISON PHIRI	m	Mjanda	-	
47	KEPHAS PHIRI	m	Luna	0963543525	
48	JOSPHAT BANDA	m	Mjanda	-	
49	SIYANANI PHIRI	m	Luna	-	
50	DAISON PHIRI	m	Mjanda		
51	ARON BANDA	m	Mjanda	-	
52	ABIYEZE PHIRI	m	Mjanda	-	
53	FREEN PHIRI	m	Luna	-	
54	MALESS PHIRI	f	Luna	0969802247	
55	ELITA BANDA	f	Luna	-	



SN	NAME	GENDER	NRC	CONTACT	SIGNATURE
56	ZELIA [illegible]	f		-	Z. Zulu
57	BETRICY PHIRI	f		-	
58	BETRICE SIKAKA	f		-	
59	MATILDAH PHIRI	f		-	
60	MATILDAH MTEWE	f		-	
61	TICHOKE PHIRI	f		-	
62	SARAH BANDA	f		0970653900	
63	MARY BANDA	f		-	
64	ESTHER BANDA	f		-	
65	BRENDA PHIRI	f		-	