MUZARABANI RURAL DISTRICT COUNCIL

DRAFT

REPORT OF STUDY

ON THE

PREPARATION OF MUZARABANI RDC ACCELERATED LEGALLY COMPLIANT MASTER PLAN

(the Mavhuradonha mountains)

MAY 2024

Prepared By P. Potera (May 2024)

LEAD PLANNER

PREFACE

Preparation of the Fast Track Legally Compliant Master Plan (FTLCMP)

The President of Zimbabwe on 1 November 2023 launched the Blueprint *'A Call to Action - No Compromise to Service Delivery: First Stage of Interventions to Modernize the Operations of Local Authorities towards a 2030 Vision'* The Blueprint makes it mandatory for all the local authorities in Zimbabwe to prepare Master Plans, which shall be completed by 30 June 2024. The legal frameworks guiding the preparation of the Master Plans are the Regional, Town and Country Planning Act, Chapter 29:12 (RTCPA) as read with the Master and Local Plans Regulations, (R.G.N No. 248) 1977 as well as the Rural District Council Act Chapter 29:13.

Muzarabani Rural District Council which is one of the 92 local authorities in Zimbabwe has in response to the call, embarked on the preparation of Muzarabani District Master Plan. The Master Plan shall detail the prevailing situation in all sectors of development in Muzarabani Rural District, identify developmental challenges which can hinder the realization of Vision 2030 and propose developmental strategies and policy frameworks to address the identified developmental challenges and guide development in the district for the next 15 years. The implementation of this Master Plan strengthens the roadmap towards Vision 2030, as it aims to provide a spatial location of every economic and social land use proposed in National Development Strategy 1 (2021 -2025). The Master Plan Preparation process is people centered and is being rolled out in the leaving no one no place behind development spirit. This dovetails well with the Muzarabani RDC **Vision** which seeks to attain the highest standard of living and quality of life for the people of Muzarabani in a secure and prosperous environment by December 2025. The implementation of the Master Plan { 2024-2039} will tremendously assist Council to realize its strategic vision.

The Study Report

Muzarabani Rural District is the planning area for purposes of this Master Plan. Section 13 of the Regional, Town and Country Planning Act Chapter 29:12 stipulates that before preparation of a Master Plan, the local planning authority shall carry out a study of the planning area and any other area outside its jurisdiction which might have an impact on the future development or redevelopment of the planning area. The findings of the study of the planning area are presented as a Report of Study. As per guidelines, this document is a Report of Study for Muzarabani Rural District. It shall examine the main Social, Economic and Environmental factors together with Infrastructural services, demographic and related factors through various data gathering strategies. The Report will provide a situation analysis highlighting key development issues. It shall consider the available resources for implementation, climate issues, disaster risk and cross cutting issues such as gender and inclusion of the youth. The contents of the Report of Study will be guided by the provision of Section 13 of The Regional, Town and Country Planning Act Chapter 29:12 (RTCPA) and The Master and Local Plans Regulations, 1977, R.G.N No. 248 of 1977.

ACKNOWLEDGEMENTS

This Plan was prepared in response to the Presidential Call to Action – *No Compromise to Service Delivery: First Stage of Interventions to Modernize the Operations of Local Authorities towards a 2030 Vision.* Using a consultative, participatory, interactive and inclusive approach with a **Leaving No one and No Place behind development spirit mantra** within the whole of Muzarabani District, the Consultant Team engaged led by the Lead Planner, P Potera-Mandishaya acknowledges and gives special thanks to the following district personnel involved especially:

Muzarabani RDC developed the Report of Study as part of the Master Plan with the help of the following drawn from district and provincial stakeholders.

Muzarabani District Development Coordinator: Mr John Chihobo

Muzarabani RDC Office of the Council Chairperson: Ald A Chiweshe

Muzarabani RDC office of the Chief Executive Officer: Mrs Ennie Gwachiwa,

:

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- Assistant DDC: Ms Patience Chipomho

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- Executive Officer Finance Mr Peter Chirape
- Internal Auditor :Mr David Mhambare
- E.O.Human Resources and Administration :Mr Dominic Murongazvombo

- E.O.Lands, Agriculture and Natural Resources :Mr Elmon Kaombe
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Committee Chairpersons:

- Roads, Works and Planning Committee :Cllr Mucheki
- Finance Committee Chairperson :Ald M Munaki
- Lands, Agric and Natural Resources Committee Chairperson :Ald G Sosa
- Audit Committee Chairperson :Ald R Maruziva
- Human Resources Development Committee Chairperson :Ald S Mandizvidza
- Social Services Committee Chaiperson :Cllr O Maramba
- Gender Committee Chairperson :Cllr A Murungweni
- Centenary Area Committee Chairperson :Cllr T.R Chikosha
- The District Government Ministries and Departments,
- Development Partners, NGOs, Chiefs, People of Muzarabani and the Provincial Planning Officer Mrs Chiweda and team.

List of Councillors:

- Cllr G Chavhunga
- Cllr O Ururu
- Cllr Z Rongwe
- Cllr C Samson
- Cllr P Kasambarare
- Cllr C Mahumbunga
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- Cllr R Manyika
- Cllr Mushati
- Cllr T Manyueruke
- Cllr C Nikisi
- Cllr C Nyabune

ACRONYMS

CAMPFIRE	- Communal Areas Management Program for Indigenous Resources
CEO	- Chief Executive Officer
CBM	- Community Based Development
CPU	- Civil Protection Unit
COTTCO	-Cotton Company of Zimbabwe
MSMEs	-Micro Small to Medium Enterprises
DWSSC	- District Water Sanitation Sub Committee
EMA	- Environmental Management Agency
LA	- Local Authority
MoHCC	- Ministry of Health and Child Care
MoWENR	- Ministry of Water, Environment and Natural Resources

NAC	- National Action Committee
RDC	- Rural District Council
PLWD	- People Living With Disability
PHHE	- Participatory Health and Hygiene Education
PWA	- Parks and Wildlife Authority
PWSSC	- Provincial Water and Sanitation Coordinating Committee
SP	- Strategic Plan
SSCF	- Small Scale Commercial Farms
UNICEF	- United Nations Children's Fund
WASH	- Water Sanitation And Hygiene
ZNA	- Zimbabwe National Army
ZINWA	- Zimbabwe National Water Authority
ARDA	- Agricultural Rural Development Authority
CWC	- Community Wildlife Committees
DDC	- District Development Coordinator
DNPWLM	- Department of National Parks and Wildlife Management
ERRP	-Emergence Road Rehabilitation Program
FGD	- Focused Group Discussion
MP	- Master Plan
MWA	- Mavuradonha Wilderness Area
PPP	- Public Private Partnership
PSC	- Public Service Commission
RTCPA	- Regional Town and Country Planning Act
VET	- Veterinary Department
VTC	- Vocation Technical College

ZETDC -Zimbabwe Electricity Transmission and Distribution Company

ZINARA - Zimbabwe National Road Authority

NAC -National Aids Council

ZIMOZA - Zimbabwe –Mozambique-Zambia

TFCA - Transfrontier Conservation Area

NDS1 - National Development strategy 1

CYMMYT - Centro Internacional de Mejoramentio de Maiz y Trigo

RDDC - Rural District development Committee

OVC - Orphans and Vulnerable Children

GBV - Gender Based Violence

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CHAPTER 1 BACKGROUND

1.1 General spatial background

Muzarabani District is located in Mashonaland Central Province of Zimbabwe. The District lies in the Northern part of the country sharing boundaries with Guruve and Mbire districts to the west, Mazowe district to the south, Mt Darwin district to the east as well as Mozambique to the north. It is 145km from Harare the capital city of Zimbabwe. The District is approximately 4300m^2 in area and is divided

into two distinct sections, Lower Muzarabani consisting of Muzarabani, Mukumbura West and Gutsa communal lands in the North and Upper Muzarabani in the South which includes former small to medium and large scale commercial farming areas as well as 3 communal wards and Mavuradonha Wilderness Area. Basing on the latest population census of 2022 the district has a population of 134 076 consisting of 67 552 females and 66 514 males. The percentage of females is 50,38 % and the percentage of males is 49,62 %. Generally, the majority of the population depends on Subsistence Agriculture (crop and livestock production) as a livelihood source. A key Hallmark feature of the district is the Mavuradonha Wilderness Area which is approximately 600 km^2. The Tiangwa Botanical Reserves and the Mavuradonha National Monuments are located in the wilderness. The relief ranges from about 308metres in Lower Muzarabani to 1700 metres in Mavuradonha mountain range. The climate is characterized by low and erratic rainfall in Lower Muzarabani with a longer wet season of higher rainfall ranging from 620mm to 994mm annually. There are 4 Agro-Ecological Regions namely region 2a and 2b in Upper Muzarabani, region 3 in the Wilderness area and regions 4 and 5 in Lower Muzarabani.

The district was borne out of the Amalgamation of former District Council (Lower Muzarabani) and Upper Muzarabani, former commercial farming area (part of former Mvurwi Rural Council)
Centenary. The amalgamation of the two systems was strengthened by promulgation of the Rural District Councils Act Chapter 29:13 (Revised Edition of 1996).

Prior to Amalgamation of part of the former Mvurwi Rural Council {Centenary } Upper Muzarabani was mainly responsible for infrastructure provision such as roads, bridges, schools and health facilities for large- and small-scale commercial farms. The District Council was formerly responsible for the communal lands in lower Muzarabani providing basic infrastructure, education and health services.

The Rural District Councils Act Chapter 29:13 gave the Council powers to plan, implement and manage development within their jurisdiction with the goal of achieving overall national development. Amalgamation of lower and upper Muzarabani resulted in the increase in area of responsibility and diversity of obligations as both Lower and Upper Muzarabani would be covered by one local authority

The District is divided into twenty-nine (29) administrative wards, comprising of 17 communal (*14 from Lower Muzarabani while 3 are in the Upper Muzarabani)*, 8 commercial farming wards, 3 resettlement and 1 urban ward are also in the Upper Muzarabani. Over and above national governance structures these spatial areas are governed by traditional structures led by Chiefs: Chief Muzarabani, Chief Chiweshe, Chief Kasekete and Chief Hwata. Village Heads report to these chiefs.

1.2 PLAN GOAL AND OBJECTIVES

1.2.1 Plan Goal

The key goal of the Muzarabani Rural District Council Master Plan is to improve the quality of life and economic status of residents through promoting and ensuring sustainable coordinated and orderly development and re-development of the District using a participatory consultative and inclusive approach resulting in safe, resilient, and sustainable human settlements .

1.2.2 Aims of the Report of Study

- To map existing natural and man-made features within the district.
- To document the social, cultural, economic, institutional and administrative framework in the study area
- To holistically assess the existing situation against potential future development in the planning area and the immediate surroundings

1.2.3 Objectives

- To identify socio-economic issues affecting the growth and development of Muzarabani District
- To collect data through community engagement, consultation with other stakeholders and use of secondary sources of information.
- To identify any key thematic development problems and formulate development options.
- To analyze development trends in Muzarabani District and lay a basis for future projections.
- To formulate evidenced based and people centered developmental policies which will address the needs and aspirations of the people of Muzarabani District within the spirit of leaving no one, no place behind.
- To propose strategies that promote the efficient use of land to satisfy inter-generational needs and aspirations of the Muzarabani District.
- To promote sustainable and balanced development across the entire district anchored on proper connectivity to ensure that all areas get a sustainable and balanced development across the entire district.
- To formulate strategies to promote environmentally sensitive places and ensure sustainable use of natural resources for the benefit of the current and future generations.
- To produce a Fast Track Legally Compliant Master Plan within the stipulated timeframe.
- To formulate strategies and policies meant to guide the planning processes.

- To ensure the Master Plan preparation process is participatory and speaks to developmental issues across the entire district (Leaving no one, no place behind) clients and stakeholder involvement is widely considered.

1.3 SCOPE, FUNCTION AND UNDERLYING PRINCIPLES

1.3.1 Scope of The Report of Study

The Report of Study details the findings of the study of the planning area. It provides a situation analysis of the study area, highlighting key developmental issues (social, economic, ecological, environmental, geological, governance, legal and technological). It highlights Strengths and Opportunities for development as well as Weaknesses and Threats (SWOT) which hinder development. These were investigated and analysed during the study using data gathered through the primary and secondary data gathering techniques.

As guided by Section 13 of the Regional, Town and Country Planning Act Chapter 29:12(RTCPA) and The Master and Local Plans Regulations 1977. The study encompassed an examination of agriculture, economic, mining, social (demographic attributes included), industrial, institutional, climatic changes and shocks, recreational and environment sectors in Muzarabani District. Sectors such as infrastructure services, population composition and resources available in the planning area and the surrounding areas were also considered. The linkages between Muzarabani and other districts was explored. Present and future challenges, forecasting on land use needs, maps and diagrams indicating the spatial extent of activities' correlation are also included.

The report also includes the Financial streamline i.e. the intended beneficiaries and related cross cutting issues. An examination of the human, financial and organizational capacity of the local authority was examined to evaluate Council's preparedness in the implementation of the Master Plan

1.3.2 Underlying Principle

In line with the terms of reference, the formulation of the Muzarabani Rural District Master Plan 2024-2039 shall be underpinned by the following generic land management and spatial planning principles:

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a) **Sustainability**

- This principle is under pinned by Social, Economic, Environmental, Technological, Legal, Ecological and Governance Issues. The Master plan should ensure that the inclusion and use of economic, natural, political, human and social capital within the district will not deprive future generations through overuse or exploitation. This will be checked by;

i) Ensuring that development and use of the built environment respects and is in harmony with the natural environment and that the relationship between the two is designed to be one of balance and mutual enhancement.

ii) Ensuring the continuous supply of natural resources for present and future generations through the efficient use of land, less wasteful use of non-renewable resources and their substitution with renewable resources where possible.

iii) Preventing or reducing processes that degrade or pollute the environment.

iv) Protecting the regenerative capacity of ecosystems and the maintenance of biological diversity.

iv) Preventing developments that are detrimental to human health and security or which diminish human quality of life.

b) **Efficiency**

- As resources are scarce, achieving best results with minimum resource use is key. The Master Plan shall ensure efficient use of the major productive resource such as land, minerals, human and many other limited resources. The Master Plan shall proffer strategies to increase resource efficiency.

c) **Equality and Equity**

- The Master Plan preparation process should embrace the needs and aspirations of every social group in Muzarabani District through participatory and consultative planning. The policies should be inclusive to ensure everyone benefits during implementation. This shall be done by ensuring use of a fair and all-inclusive planning approach.

d) **Integration**

- There shall be a coordinated multi sectoral planning approach. The Master Plan shall have integrated activities across all development sectors in the district to sporadic developments across the district which may result in isolated benefits to communities.

e) **Quality Assurance**

Although being prepared under accelerated mode, The Master Plan should abide by the provisions of the Rural District Act Chapter 29:13 and The Regional, Town and Country

Planning Act Chapter 29:12 as well as any other Allied Acts of Parliament and Policy Positions already in place.

- Quality will also be assured by adhering to the Muzarabani terms of reference by
- Adhering to the Muzarabani RDC terms of reference by :
    a. Preparing and submitting a people oriented and owned plan
    b. Planning WITH the people for the people
    c. To come up with proposals and objectives that are SMART (*Specific Measurable Attainable Result based Time framed).*

1.1. STATUTORY PROVISIONS

1.1.1. Important Acts relevant to The Master Plan and Council

The Master Plan preparation process will be guided by various Statutes. In this report, Statutes qualified as major will be summarized while Allied Acts of Parliament will just be listed.

1) Constitution of Zimbabwe

- Being the Supreme Law of the land, it sets out the rights of individuals that need to be respected and any law, practice, custom, conduct inconsistent with it is invalid.

- The Provisions of the National Constitution on the rights of individuals will form the anchor of all other legal provisions.

2) **The Regional, Town and Country Planning Act [Chapter 29:12]**

This provides for the legal framework of the production of Master Plans. The Act provides for the planning of Regions, Districts and Local Areas, with the objective of conserving and improving the physical environment, promoting health, safety, order, amenity, convenience, general welfare, efficiency, economy and improving of communication.

3) **Rural District Council Act [Chapter 29:13]**

- This is the law that established Muzarabani Rural District Council and it gives it delegated administrative powers, functions and duties.
- The Council authorised the preparation of The Master Plan through a Council resolution issued in terms of this Act.

4) **Civil Protection Act of 1989 [Chapter 10:06]**

- This is the Principal Law governing disaster preparedness in Zimbabwe. Every citizen of Zimbabwe should assist where possible to avert or limit the effect of disasters. The purpose of this Act is to provide for and ensure optimal emergency preparedness and disaster prevention at individual, community, sectorial and national level through regulatory mechanisms coordinated strategic planning. It is the ideal Act for Muzarabani district which is prone to floods disasters as it provides for establishment of a National Civil Protection Fund to benefit the victims in terms of financial, medical and protection support.

5) **Mines and Minerals Act [Chapter 21:05]**

- This Act defines prospective rights and mining leases. All local authorities' land is open to prospecting (subject to other provisions of the same act protecting other land uses). It is vital for local authorities in terms of mapping mining resources.

6) **Environmental Management Act [Chapter 20:27]**

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The Act provides for the Sustainable Management of Natural Resources and Protection of the Environment. The prevention of pollution and degradation, the preparation of National Environment Plan. The Rural District Council's Local Environment Action Plan (LEAP) is guided by this Act.

7) Communal Lands Act [Chapter 20:04]

- This Act provides for the classification of land as Communal Land and the Alteration of such. Lower Muzarabani with its 14 Wards and the 3 communal wards in the Upper Muzarabani are governed by this Act

8) Water Act [Chapter 20:24]

- This Act is for management of all water sources, ground and surface water and is relevant to the Council for regulation of its water bodies.

9) National Museum and Monuments Act [Chapter 25:11]

- The Minister may declare National Monuments through this Act after the discovery of any Ancient Monument or Relic. The Muzarabani Mavuradonha's Monuments in the Wilderness were declared under this Act.

10) Tourism Act [Chapter 14: 20]

- The Mavuradonha Wilderness area is a tourist destination while there are several tourist areas to be established in the District including Silverstroom Dam Eco-Tourism in the area. With the National Tourism Master Plan identifying Muzarabani's Mavuradonha Wilderness as a key Tourist area in the District with National interest and impact, this Act is relevant for the District.

11) Traditional Leaders Act [Chapter 29:17]

- It provides for the formation of Traditional Institutions at Local Rural level, the Ward and Village Assemblies that guide Local Development and protection of Natural Resources are provided for under this Act.

12) Forestry Act [Chapter 19:05]

- This Act is to provide for the conservation of forestry produce and timber resources. It is relevant to the Council which has vast forested area and resettlement farmers producing tobacco using wood energy in the area.

13) Communal Lands Produce Act [Chapter 19:04]

- This Act regulates the exploitation of and protects forestry produce in the communal areas. It enables the community to manage and sell their produce in a coordinated manner. It is relevant to Muzarabani since Masau, Baobab, Fibre and other forestry produce are common in the area.

14) Parks and Wildlife Act [Chapter 20:14]

- Under the Amendment Act, Council has been given Appropriate Authority (AA) to manage their own wildlife in their Jurisdiction to boost revenue, poaching control and Problem Animal Control. The Community Wildlife Conservation Committee (CWC), the PPPs leasing of wildlife areas are run through this act with the support of statutory instrument 313 of 1998 of Parks and Wildlife (Appropriate *Authorities*) for Communal Lands notice, 1998. The Campfire program and the Authority to manage Wildlife by Muzarabani RDC in their jurisdiction was established under this Act.

15) Housing Standard Control Act [Chapter 29:08]

- This Act is relevant to the Council as it helps to set parameters for building standards required under the building inspectorate. It enables quality in building designs.

16) Public Health Act [Chapter 15:09]

- An Act for the provision of public health. The improvement of health and quality of life and healthcare of the nation.

17) Finance Act [Chapter 23:04]

- Ensures that all financial matters are complied with guiding financial procedures.

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18) Stock Trespass Act [Chapter 19:14]

- An Act to provide for the impoundment of trespassing Stock and the disposal of such stock by the Council, very relevant to Muzarabani because of its high livestock production.

19) Stock Theft Act [Chapter 9:18]

- Basically, for the protection of stock against theft. Muzarabani is a key livestock production area and this act is relevant.

20) Electricity Act [Chapter 18:19]

- It governs the provisions and supply of electricity and related infrastructure and is relevant to guide urban layout plans. The ZETDC grid Master Plan will guide Council in spatial matters related to Electricity Supply.

21) Public Procurement and Disposal of Assets Act [Chapter 22:23]

- Provides for the guidance of procurement within councils relevant to council for transparency, justifiable procurement practices. **22) Labor Act [Chapter 28:01]**
- It guides Council in the Recruitment, Remuneration, Rewarding and Affiliations of its employees

23) Audit Act [Chapter 22:19]

- Provides for the framework for audits for all Councils **24) Official Secrecy Act [Chapter 11:09]**

- It protects the organisation integrity

25) Land Survey Act [Chapter 20:12]

- It enables the acquisition of title deeds and proper demarcation of boundaries.

26) Capital Gains [Act 23:01]

- It is an Act that applies during the sale of real estate or immovable property

27) Trapping of Animal Control Act [Chapter 20:21]

- This Act provides for the control, restriction and regulation of making, possession, use of certain traps on animals thus supporting –Anti poaching practices, it is relevant to Muzarabani with its wildlife population.

28) Protected Places and Areas Act [Chapter 11:12]

- This Act provides for the control of entry persons into certain premises for the protection of control of movement and conduct of persons such as sacred places,

chiefs' shrines very relevant to Muzarabani's Mavuradonha Monumental and Chiefs Shrines.

29) **Public Finance Management Act [Chapter 22:19]**

- This Act provides for the control and management of public resources and the protection and recovery of thereof, very relevant to Muzarabani finance and Audit department

30) **Gazetted Land (consequential provisions) Act [Chapter 20:28]**

- This Act gives the power to Local Authority to acquire land for public interest

The list does not end with the above listed statutes, many more laws and policies guide different sectors within Muzarabani District.

31) **Education Act [Chapter 25:04]**
32) **Shop Licenses Act [Chapter 14:17]**
33) **Burial and Cremation Act [Chapter 5:03]**
34) **Road Traffic Act [Chapter 18:11]**
35) **Land Acquisition Act [Chapter 20:10]**
36) **Cemeteries Act [Chapter 5:04]**
37) **Income Tax Act [Chapter 28:06]**
38) **Provincial Council's and Administrative Act [Chapter 29:11]**
39) **Local Authority's Employee Act [Chapter 20:09]** There are various other Allied Acts that support local authorities.

1.3.3 International Policies and Agreements Related to Muzarabani District

- **Convention of International Trade in Endangered Species (CITES)** It governs and regulates the trade in endangered species. Muzarabani runs a CAMPFIRE PROGRAMME has appropriate authority hence quotas allocated are governed by CITES for endangered species like elephants and leopards.
- **International Union for Conservation of Nature (IUCN)**
- **United Nations Framework Conservation on Climate Change (UNFCC)**
  Muzarabani District suffers extremely from climate shocks as floods ,dangerous winds and heat waves which require adaptation and mitigation policies and strategies guided by this Framework.
- **Zimbabwe Mozambique Zambia Transfrontier Boundary (ZIMOZA)**

Muzarabani District borders with Mozambique in the North hence is part of this frontier

- **Sustainable development goals (SDGs)**

The Master Plan will be guided by the framework of the following national policies.

a) Devolution and Decentralization Policy (2020)

i) Decentralization

Muzarabani Rural District Council being a lower tier of Central Government is charged with ensuring that the needs and aspirations of Muzarabani District residents are effectively and efficiently addressed by a Local Government system close to people. Various functions and powers are delegated through various laws discussed earlier.

ii) Devolution

The district has experienced some form of devolution as most government ministries, departments, parastatals and service providers are located within the district. Devolution funds have been disbursed to the local authorities and have been utilized for capital projects development.

b) Vision 2030 and National Development Strategy 1 (2021-2025)

The Master Plan is an important step towards attainment of Vision 2030 (to achieve an upper middle economy). The provisions of this Master Plan unpack some of the development strategies proposed in NDS1.

c) Presidential Call to Action of November (2023)

This calls for no compromise in service delivery by local authorities. The President sets out a first set of interventions towards service delivery and the preparation of Master Plans to be Operative by June 30 is highlighted as critical. The blueprint service is a call to duty for Local Authorities.

d) New Urban Agenda Nerve Aspects includes

Land Governance permits many decisions on the economy, environmental protection, urban development, demography and sustainable housing in urban areas. Good land governance helps reduce social inequalities thus the new urban agenda will help to shape discussions around land governance at the urban centres in Muzarabani District. Included are the following:

i) Local economic development **ii)** ***Sustainable land use and security of tenure*** e.g. preserving socio-ecological functions of land related resources through inter-alia waste management

iii) ***Appropriate spatial development strategies*** which include densification avoiding urban sprawl and renewing urban settlements

iv) ***Promoting sound socio-economic linkages between rural and urban settlements.*** National and international framework resilience

v) ***Provision for disaster risk assessment and mapping vi) Environmental impact assessment***

c) National ICT Policy (2018)

The provisions of the ICT policy are critical for development of smart economies in settlements like Centenary. The availability of hard and soft ICT facilities ensures easy access by local authorities so that smart settlements can be developed. That ensures ease of doing business such as E-government practices, E-bill payment, E-meetings and E-learning to mention a few.

e) National Youth and Development Policy (2022)

The demographic figures of MRDC have shown that the active population almost doubles the population of the other groups. The active population age groups' needs and aspirations are given priority in the master plan preparation.

f) Agenda 2030 Sustainable Development Goals (SDG's)

The Master Plan in its broad conceptual provisions is aimed at achieving defined sustainable development goals by 2030.

g) The African Union Agenda (2063)

Strategic framework for the socio-economic transformation of Africa

h) National Gender Policy (2017)

Calls for equity in resource distribution and encourages gender-based budgeting. By adopting its provisions, The Master Plan will address some social inequalities existing in Muzarabani District.

i) National Human Settlement Policy(2022)

The policy will regulate land development to ensure coordinated development of safe, resilient, inclusive and sustainable settlements within Muzarabani District. It governs all settlements in Zimbabwe emphasizing a professionally registered board of planners conducting spatial planning for uniformity in planning standards in all local authorities. It speaks to the SDG on human settlements and land governance issues in the new urban agenda. Seeks to achieve SDGs level sustainable cities and communities.

j) National Micro Small and Medium Enterprise(SMEs) Policy (2020 – 2024)

This Policy provides for the capacitation of the SMEs so that they enhance their productivity, quality and attain domestic and export competitiveness thus contributing to increased formal employment. Muzarabani RDC clients and stakeholders in its urban set up are comprised of and dominated by these

SMEs hence a key policy for development

k) National Climate Policy (2021)

Provides for the recognition of climate change as a key issue to consider in Planning and Development and calls for Sustainable practices. This policy needs to be aligned to development activities to be proposed in Muzarabani District because of climate related disasters common within the district. **l) Mining Policy under review**

m) Zimbabwe National Industrial Development Policy (2019 – 2023)

n) Tourism Policy (2021)

o) National Agricultural Policy Framework (2018-2030)

The implementation of National Agricultural Policy Framework is the mandate of the Ministry of Lands, Agriculture, Water, Fisheries and Rural Resettlement .

a) Professional Codes of Practices

Planning as a process is a professional practice which requires a pool of registered professionals with standard operation procedures. Professional code of conduct rules and regulation to protect the integrity of the profession and practice is important. In this case ZiRUP members preparing the master plans are guided by this code and a Competent Planning Department in all local authorities.

1.5. REVIEW OF PREVIOUS PLANS

1.5.1. Current Planning in the District

Plans to address challenges or harness developmental opportunities within different sectors have been prepared and at times implemented. These plans include the MRDC Strategic Plan (2021 to 2025), the Integrated Landscape Management Plan (2023-2033), the Mavuradonha Landscape Plan, the Local Environment Action Plan, Ward Development Plans, District Annual Plans as well as detailed layout plans.

1.5.2 Different purposes of the different plans:

- The Strategic Plan whose main function is to guide council resources to prioritized projects.
- The Integrated Landscape Management Plan. is a land use management plan created to address illegal settlements in the wildlife corridors to curb human wildlife conflict. This plan and the

Leap plan were also created to protect the environment especially wetlands and river catchment areas which were destroyed by anthropogenic activities.

- The Mavuradonha Wilderness Area Management Plan was prepared to regulate and facilitate investment in the tourist and environment of the Mavuradonha Wilderness. The plan was also created to protect the ecologically sensitive areas.
- The Local Environment Action Plan was created to guide environmental management and planning.
- District Development Plans guide growth strategies of local authorities and feed into the Provincial development plans
- District Annual Plans were prepared to show major capital projects implemented annually.
- The rolling plans are also in place showing continuous projects within the districts. Detailed layout plans have been designed and utilized for zoning and land allocation purposes within the districts.
- Through the Ward Development Plans council involves its clients and stakeholders during the identification and implementation ensuring a great degree of ownership of projects and programs.
- Another dimension of planning in operation is planning and management of the district development program. Through the Traditional leaders Act of 1998, Ward and village assemblies contribute to some form of developmental planning in the area. Included in this are the Capital Development Projects (CDP) funded by Public Sector Investment Programs such as Integrated Rural Water Supply and Sanitation Program. There are also other programs such as communal lands programs and Community Wildlife Conservancies (CWC).

The integrated planning process also helps the council to identify areas of potential rural development and how that potential can be harnessed to achieve sustainable development.

1.4 NEED FOR THE PLAN

1.4.1 Pressure on current existing land for Growth Nodes

Shortage of land

Muzarabani district needs more land so as to accommodate current and anticipated demand for various land uses for its growth point Centenary, Muzarabani and business centres like St Alberts, Chiwenga, Chadereka, Hoya, Kairezi, Dambakurima and others. Centenary Growth Point needs more area for expansion. Of the 183ha undeveloped in the current Gazzetted area, 70ha are usable but

inadequate while 113ha hectares are unusable due to wetlands. Muzarabanai Growth Point needs more area for expansion, out of the 498ha undeveloped in the gazzetted area, only 299 hectares are usable but not enough due to potential upcoming projects while 199ha are full of gullies under severe threat..

1.4.2 Rapid degradation of the environment by natural and anthropogenic activities

The environment is generally in a bad state and under threat by illegal settlements. These have resulted in degradation and dilapidation through practices such as deforestation, gully expansion, streambank cultivation, pollution, siltation, poaching, charcoal formation, environmental degradation due to illegal mining, wetlands degradation and veld fires while climatic disasters are also a concern.

1.4.3 Rapid Population Increases

Service Provision has not kept pace with rapid population growth. Problem of rapid population growth unmatching with services provided.

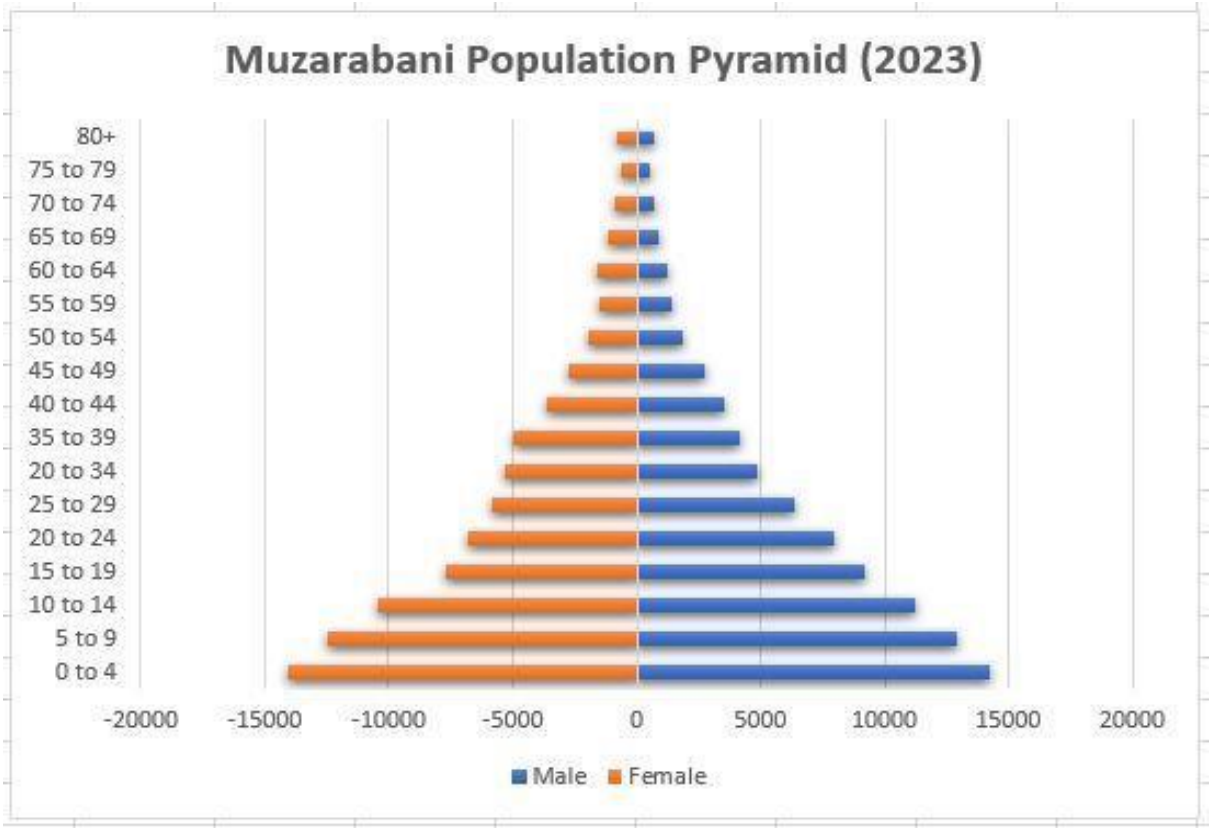

Figure 1.4-A: Population estimates 2023 Muzarabani

Rapid Population Growth increases.

Service provision has not kept pace with the rapid population growth.

- Muzarabani District Population growth depicts that of a pyramid showing a youthful dominance especially in the 0- 14 age groups, a population in need of pre-primary, primary and secondary education.

That also shows there will be pressure on health and education facilities as these are young ones with those in 0-5 years are the majority.

- The population growth for Urban Growth Nodes is expected to rise in the plan period and there is need to expand the boundaries for additional land to meet the needs of the growing population.
- The age group 15 to 49 depicts implications of high pressure on the provision of employment opportunities, housing especially low cost, health, education facilities and public utilities in Muzarabani. There is therefore need to make provision for the servicing of adequate industrial and residential land and the construction of public amenity buildings and utilities to cope with the current and anticipated population increase.
- 57.7% of women population are in the child-bearing age of 15 years – 49 years pointing to the need for more maternity facilities.

1.4.4 EMPLOYMENT

i. There is limited technology and digitalization for these Micro to Small Enterprises (MSMEs) hampering success of these.

ii. The private sector is dominated by emerging MSMEs which are mostly informal.

iii. The average combined household income for sampled respondents is less than or equal to $50 per household indicating a low mark. iv. The rate of unemployment is one of the serious problems in the planning area due to lack of entrepreneurship development.

1.4.5 INDUSTRIAL

- The employment sector is dominated by MSMEs. The challenges include:

a.) Limited ownership as the current workspaces are considered temporary, a hindrance to accessing credit facilities and funds for industry development for these MSMEs.

b.) The harsh and economic conditions continue to hinder industrial projects. Shortages of capital and equipment are a common characteristic leaving it all for MSMEs running light industries mostly not registered

c.) Unmatching skills provided by the host VTC. The limitation is that the skills provided do not match with the key resources and activities of the district or locality. There are skills irrelevant to the available resources in the district. (***Muzarabani is an agro-based district where skills like animal husbandry, agro-processing, crop pesticide production, livestock tanning, scrap pack making for covering fowl runs, mops making from heysen and for***

stock feeds production from motes can be taught). That should enable ease access and affordability for raw materials for local MSMEs.

d.) Major industrial activities in the district are agro-based with no value addition component to diversify and increase revenue. Most farmers sell tomatoes with no one into tomato puree canning, most farmers sell livestock, no abattoir operators or hides tanning industry, most farmers do tobacco, with no tobacco auction floors and so on.

e.) **Poor and obsolete Technology**

Poor use of obsolete equipment and machinery hampering ease of doing business. Small industries like peanut butter making, shoe repairing, tyre mending, and carwash.

UNTAPPED RESOURCES

The district boasts of natural resources such as rivers in Upper Muzarabani that could be potential water sources if dammed, minerals, pristine forests in Mavuradonha Wilderness that could attract Carbon Trading which are untapped, fruits and vegetables that can be canned yet no such , livestock production that could trigger hides tanning as manufacturing industry, but are underutilized, and abundant sunlight for solar energy, all these strengths and opportunities when harnessed can boost economic growth and improve standards of living.

1.4.6 ELECTRICITY SUPPLY

- Power sources used in the district include electricity, gas, paraffin, generator supplied, solar, and wood. Electricity is the major source of power in most parts of the urban centres, (*new neighbourhoods are not yet connected*). Electricity has been singled as the main source of power used by residents. Almost every household uses firewood as a substitute of the main source of power especially in newly developed areas since firewood is cheaper. There is now rampant deforestation.
- There is little or no promotion of cheap, renewable sources of energy such as solar farm developments which is also suitable for industry and commercial areas.

Muzarabani Gas and Oil Invictus Investment

- The Muzarabani gas and oil mining is expected to be the largest mining activity in the district, posing potential massive land utilization, for a potential new plant for works, residential, storage, waste disposal, road development, industrial, water and sewer supply.

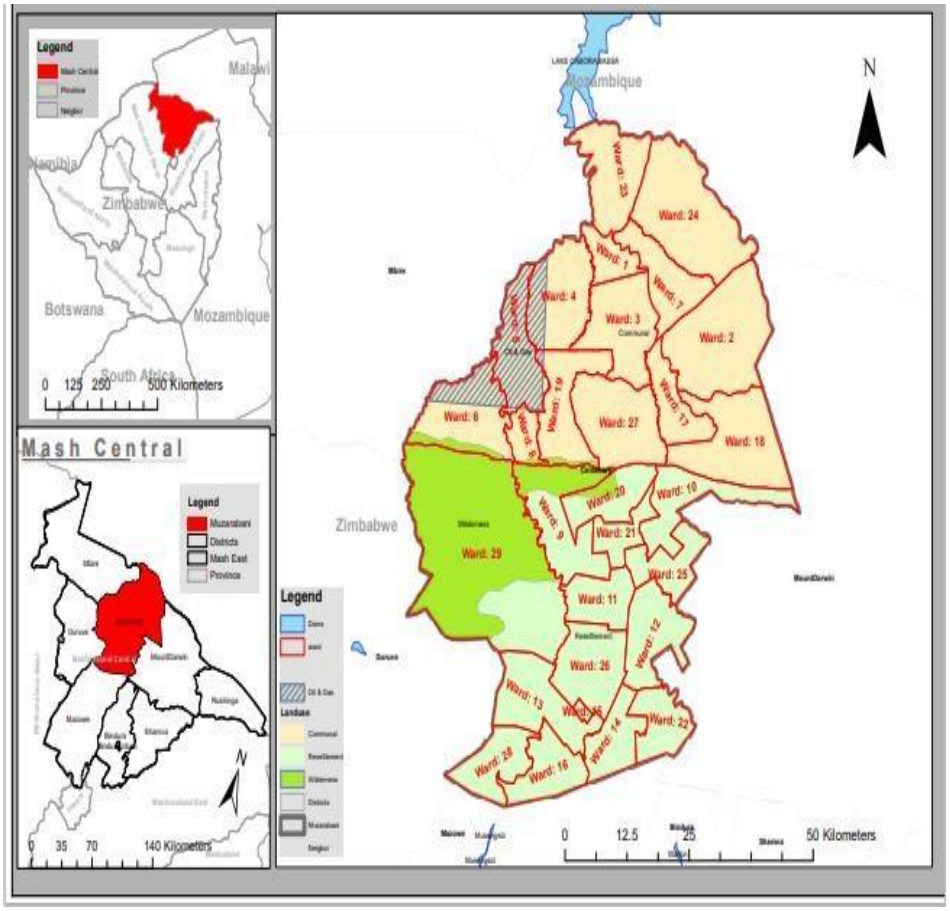

Figure 1.4-B: Muzarabani gas and oil (in black and white stripes) claim in relation to the district.

1.4.7 TELE-COMMUNICATION

- There is poor mobile and internet network coverage in the district. Muzarabani has both posts and telecommunication services which serve the district as well as the surrounding areas which are mostly farms. Mobile network providers, Econet Zimbabwe and NetOne have constructed digital communication boosters in and around the area in an attempt to improve efficiency of telecommunications network systems coverage in the area. However, the terrain and relief is a hindrance to good network coverage and effective communication.
- With the advancement of ICT, the use of Post Offices has declined and use of internet services increased. **The current poor internet and network connectivity is of great concern.**

1.6.4 Negative effects of climate change on livelihoods

More than 90% of the district's livelihoods depend on agriculture related activities. The district is suffering from climate related shocks.

1.6.3 Wildlife Poaching and Human Wildlife Conflict

- There is need for bringing together the environmental and conservation concerns. This should define a conservation related zoning scheme and enhance conservation and biodiversity in the District.
- The plan shall provide Guidance on the preservation of natural areas and heritage sites and zoning of Mavuradonha Wilderness and National Monuments.

1.6.4 Urban choke problems

- The population boom in St Alberts, Centenary and Muzarabani with the demand for stands for schools and residential use calls for further development which has been hindered by lack of land for expansion in the area
- The Plan must enable targeted infrastructure expansion be it Water, Housing or Sewer.
- There is need to regularize and correct planning mishaps that occurred before The Master Plan

1.6.5 Illegal settlements

- In both the villages and resettlement areas are rampant illegal settlements which have caused environmental issues such as deforestation, degradation, wetland destruction, wild life poaching, overgrazing and veld fires among others. The plan must address this.

1.6.6 Shortage of infrastructure Services

Accessibility challenges

- In some areas people are travelling long distances to access socio-economic facilities. Distances travelled to a nearest education facilities are too far in some areas.
- Upgrading and establishing of social economic infrastructure (schools, clinics, dip tanks, Chief's court, judiciary services court, prison centre, commercial centre, office spaces, abattoirs)
- Part of Lower Muzarabani (*Chimoio, Kairezi, Chiwenga)* is inaccessible during the wet season.
- The roads in the lower Muzarabani are porous and muddy, Transport Planning must address the hierarchy of roads for infrastructure development accordingly.
- Shortage of office space for Government and council offices.

- Power Shortages and inadequate energy distribution.
- Shortage of land for
- The plan must facilitate the Integrated Rural Urban-linkage, (Power and energy distribution)
- Plan must facilitate Light industry expansion *(Agri-Processing Masau, Mauyu, Meat, Horticulture products*), there is need to plan for technology hubs, SMEs Workspace and innovation centers.
- Enabling phased expansion of housing and economic nodes.
- Plan must facilitate recreational amenities such as sports and youth centre and other facilities.
- The plan must incorporate Valuation Roll Recommendations. The status of infrastructure in public entities schools, clinics must be addressed guided by The Plan. *Shortage of Community facilities*

- **Open Spaces:** Public open spaces, a minimum requirement of 5% has been spared by Council which is on 8% open space. Currently these open spaces are threatened with open defeacation.
- **Religious Facilities:** There is a continued increase in demand for ecclesiastical sites as more churches are formed and existing ones grow. Currently, religious sites in Centenary are on temporary unplanned sites.
- **Recreational Facilities:** There is a shortage of recreational amenities such as sports stadiums, youth centres and other facilities. There are inadequate sports facilities in the 3 urban centres, Centenary, Muzarabani and St Alberts. At Centenary, there is a disused old Golf Course. There is pressure for sports facilities provision, especially the establishment of a stadium.
- **Cemeteries:** The current urban cemeteries for Muzarabani and Centenary are threatened by bush encroachment as they showed lack of maintenance during the study. There is no cemetery at St Alberts with its growing population as people resort to requesting neighboring villages. For the Resettlement Areas, there is need to reorganize and retain the open spaces that were left after the planning of resettlement areas for villagised, A1 and small-scale set-ups. For the communal areas, plans for organized cemetery sites are already there. People with the support of chiefs are complying in burying their loved ones in the designated communal cemeteries in lower Muzarabani.
- **Heroes Acre:** The district Heroes Acre is based at Centenary. At the time of the study the surrounding grass and bush area covered the roadway.

- **Rehabilitation Centres:** Such a service is only found at St Alberts Community Based Centre, with the remaining of the district having no rehabilitation centres, yet there is increase in substance abuse, social ills like rape and assault.
- **Sacred Places and Shrines**: The traditional institute in Muzarabani District is concerned about the rampant disregard of traditional sites and culture, fake prophecies (tsikamutandas), abuse of traditional practices (Nhaka, Chiramu, Chimutsamapfihwa, Kuripa Ngozi, Sarapavana) and loss and abuse of culture.

Lack of Institutional facilities

The are no banking or financial services in the whole district except for a small CABS agent at Centenary. This is a tough situation for most Government Employees, such as teachers and nurses in the district who have to commute to Mvurwi, over 150 kilometres away for banking services and to get financial services. For the business and the MSMEs, this creates a financial void as they miss opportunities to get loans and other financial services that could be beneficial to them.

There is no Court or Prison in the district hence no Judicial Services. With people commuting for judiciary services in the neighbouring districts, crime rates, delayed and denied justice and other social ills continue to hamper the district.

Transportation issues

Major Road Networks

There are three (3) road Authorities in the district namely; Ministry of Transport and Infrastructure Development, Road Infrastructure Development Agency (RIDA) and Muzarabani RDC

- General condition of most of the roads in the district are untrafficable. Part of Lower Muzarabani (*Chimoio, Kairezi, Chiwenga)* is inaccessible during the wet season resulting in most activities negatively affected. The worst part being most of the bridges are dilapidated. In Upper Muzarabani most of the roads in the resettlement areas are untrafficable, with damaged bridges.
- Potholes are common along all major tarred roads

Urban Centres roads

General condition assessment of the roads in Centenary is bad, except for the feeder road, which intersects with the Centenary-Muzarabani road. The rest of the roads in the urban residential area are

gravel in a bad condition and are not yet named. Some of the gravel roads are in disrepair and will require reconstruction. Insufficient drainage and block drainage is a huge concern. Drainage channels get blocked due to waste dumped into them.

General Summary of Needs Assessment for 3 urban centres Centenary, Muzarabani and St Alberts

- Streetlights to be provided.
- Roads to be named in all 3 centres.
- Residential streets to be widened, cleared of waste and to be tarred.
- The toilets at the bus termini need to be upgraded or appropriately located.
- Need to reorganise where there are incompatible land uses.
- Road signs to be clearly marked.

Public Transport

For most commuters within the 3 urban centres, Centenary, Muzarabani and St Alberts, there is low demand for public transport as most commute on foot to the nearby respective businesses and workplaces and some by their cars, especially Civil Servants and Local Authority Employees. Omnibuses, bus operators and small vehicles operating longer routes within the district and to peri urban centres are the common means of transport. A small number of long distance buses, mainly to/from Harare depart from the district to Harare, Mt Darwin, Guruve and surrounding areas. **During the wet season, most roads in Lower Muzarabani are untrafficable resulting in a seasonal supply of transport for areas like Chiwenga, Kairezi, Chadereka, Hoya, Dambakurima and others.** The bus termini for 3 urban centres have average holding capacity of about 4 buses and about 50 travellers at a time and that is inadequate.

Truck/ heavy vehicles Routes

Currently trucks/heavy vehicles travelling from different parts of the province and beyond towards the district especially those transporting Tobacco, Cotton, Maize, and Wheat cut across Centenary, Muzarabani, and St Alberts urban centres as there is no by-pass roads to avoid the centres. This poses potential accidents if more volumes of these heavy vehicles increase taking note of more from the extraction of Gas and Oil if commercialization starts.

Aerodromes

Currently there are 3 aerodromes in the district: Centenary, Hoya and Muzarabani. The aerodromes are all owned by The Ministry of Defence. The infrastructure is not well maintained. The aerodromes are important for flood disaster evacuations from Lower Muzarabani. These can also be potential facilities for horticulture/fruit/dairy products (*perishables*) quick transportation to markets outside the district in the future.

1.6.7 Waste Management Issues

- There is need to upgrade sewer systems (ponds and pipes) at St Albert's, Muzarabani and Centenary Growth Points.

1.6.8 Health, Water and Sanitation Issues

Water and Sanitation Issues

The problem of unserviced residential development, poor sanitation practices (open defaecation) and sanitation infrastructure is common in urban centres of the district. There is extreme pressure on the existing utilities such as water and sewer infrastructure. These require urgent expansion and upgrading for future requirements.

Current Water Distribution at Centenary

Design Capacity: 100 cubic litres per hour

Current Supply: 70 cubic litres per hour

Storage: 1000 cubic litres per hour

Average pumping time: 16 hours per day totalling 1150 cubic litres.

1 storage tank and 1 pumping main line available

Water tanks available for the three (3) urban centres are inadequate at the moment.

For the remaining parts of the rural service centres and rural areas in communal and resettlement farms, water and sanitation provision is inadequate and non proximal.

This current status quo is inadequate for the current and growing population of Centenary. For Muzarabani and St Alberts centres, the boreholes are the main water supply which are far from adequate. Water rationing is done at the 3 centres.

Sewer systems at Centenary Current Sewer Infrastructure

- **Sewage Treatment and Discharge:**
- Centenary Growth Point uses the conventional sewage treatment process. . Current pipe capacity 110mm instead of 160mm. Sewer ponds are estimated at 3200cubic metres which does not match with the current growing population. However, the sewer treatment plant is not working fully as it is not processing the discharge to other ponds resulting in immature waste disposal into the river which results in water contamination. The lowdensity suburbs use septic tanks and soakaways for sewerage disposal. The high-density areas as well as industrial areas are serviced by a reticulated sewerage system which is inadequate

- The old sewerage system is subjected to high pressures due to increasing population and is prone to frequent blockages.

- Houses at teachers' compounds in Centenary Growth Point Low Density use nonfunctional sewer ponds.

- Muzarabani Growth Point and St Albert septic tanks and blair toilets are being used.
- The people in communal and resettlement areas use septic (those in farm houses),some blair toilets and some bush system.

Solid Waste

Current disposal sites for the three (3) centres are common temporary sites not fit for such activity.

- Muzarabani Rural District Council has received a donation of an incinerator from the Invictus Gas and Oil company to help manage its solid waste disposal where circular economy will be practiced. Once the Environmental Impact Assessment (EIA) process is completed, there is need to identify the appropriate area for the incinerator.

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- The issue of unserviced residential development- and poor or lack sanitation infrastructure.
- Problems of disease control e.g. malaria, dysentry.

1.6.8 Correcting Gender imbalances

Inadequate inclusive infrastructure and facilities.

1.6.9 The need to leverage on Economic Development Plan

- Inadequate Resource mapping to guide investment in the District for the next 15 years taking advantage of Mining Opportunities such as the National Muzarabani Gas and Oil project and other minerals.

1.6.10 Tourism and Cultural Heritage

- Inadequate promotion and establishment of Community Based Tourist facilities (CBT).
- Lack of financing the Preservation of cultural heritage sites

1.6.11 Smart Planning

The Plan will identify centres which would require detailed local developments especially the controlled ones such as the urban nodes in the districts i.e., Growth points and Rural Service Centres. Plan must create an enabling environment for widespread telecommunication technology and infrastructure (internet and mobile networks).

1.6.12 Contribution to Sustainable Development Goals

Inadequate enhancement of socio-economic rights to advance standard of living of people e.g., Health for all by controlling e.g. malaria and cholera

1.6.13 Cross cutting Issues

Inadequate inclusive, participatory, consultative eapproaches to the vulnerable and special groups.

CHAPTER 2 NATIONAL AND REGIONAL CONTEXT

2.1 National and Regional Context

Understanding the regional context is crucial for effective planning, resource allocation, and coordination of development efforts in Muzarabani District, as it allows for consideration of shared challenges, opportunities, and synergies with neighboring regions.

Knowledge of regional functions, linkages, and impacts on Muzarabani District is vital for regional planning, resource management, and collaboration. Cooperation among local authorities, stakeholders, and neighboring regions can help harness the district's potential, address shared challenges and promote inclusive and sustainable development in the wider region.

Muzarabani is contributing to National Priorities areas as follows:

National Priority Area 1- Infrastructure and Utilities National Priority

Area 2 – Governance National Priority

Area 3 – Housing Delivery National Priority

Area 4 – Health and Wellbeing National Priority

Area 5 – Human capital development National Priority

Area 6 Environmental Protection climate resilience and natural resources management National Priority

Area 7 – Devolution National Priority

Area 8 – Social protection National Priority

Area 9 – Digital Economy National Priority

Area 10 – Youth and culture

2.2 GEOGRAPHICAL LOCATION AND SIZE

Muzarabani District is one of the 60 Rural District Councils in Zimbabwe. It is located in Mashonaland Central Province which is one of the 10 provinces in the country. It is predominantly rural, with agriculture being the main economic activity. It is one of the eight Districts in Mashonaland Central and is bound by Mbire and Guruve on the West, Mazoe on the South, Mount Darwin on East and Mozambique border on the North. Muzarabani District is a geographical region located in the northern part of Zimbabwe, within Mashonaland Central Province. The District covers an area of 4 266 km². The district has a latitude of -16°19'37.06 and a longitude of 31°8'22.56. and is characterized by a diverse landscape with two distinct geographic features Upper and Lower Muzarabani

It lies within The Zambezi River Basin and is bordered by the scenic Zambezi Escarpment to the north. The district also forms a border with Mozambique in its Cabora Bassa dam area. The district/national boundary is approximately 5km from the shores of Cabora Bassa Dam and is predominantly rural with vast stretches of fertile land for agriculture and is home to a number of protected areas such as The Mavuradonha Wilderness Area which covers 600 square kilometers. These areas house a number of wildlife speices.

The region receives an average annual rainfall ranging from 650 to 994mm millimeters, which supports agricultural activities such as maize, cotton, tobacco and livestock rearing. Muzarabani District also encompasses parts of the Middle Zambezi Valley, which is known for its rich biodiversity and wildlife. Lower Muzarabani is located in the Zambezi Valley which is a low lying-area with semi-arid climate regions 4 and 5. The region is prone to droughts and has limited water resources which poses a challenge to agriculture and economic activities though the soils are fertile suitable for drought resistant crops. Upper Muzarabani is on the southern side of the district with regions 2a and 2b suitable for agricultural activities. The Wilderness Area in between the Lower and Upper experiences region 3.

Overall, Lower Muzarabani geographic location within the Zambezi River Basin, its fertile agricultural land and its rural setting contribute to its significance in the region's socio-economic landscape

The smaller Map on the bottom left of the page shows the position of Muzarabani district in Mashonaland Province while the top left map insert shows the location of Mashonaland Central Province in Zimbabwe. The district extends approximately 4,266 square kilometres.

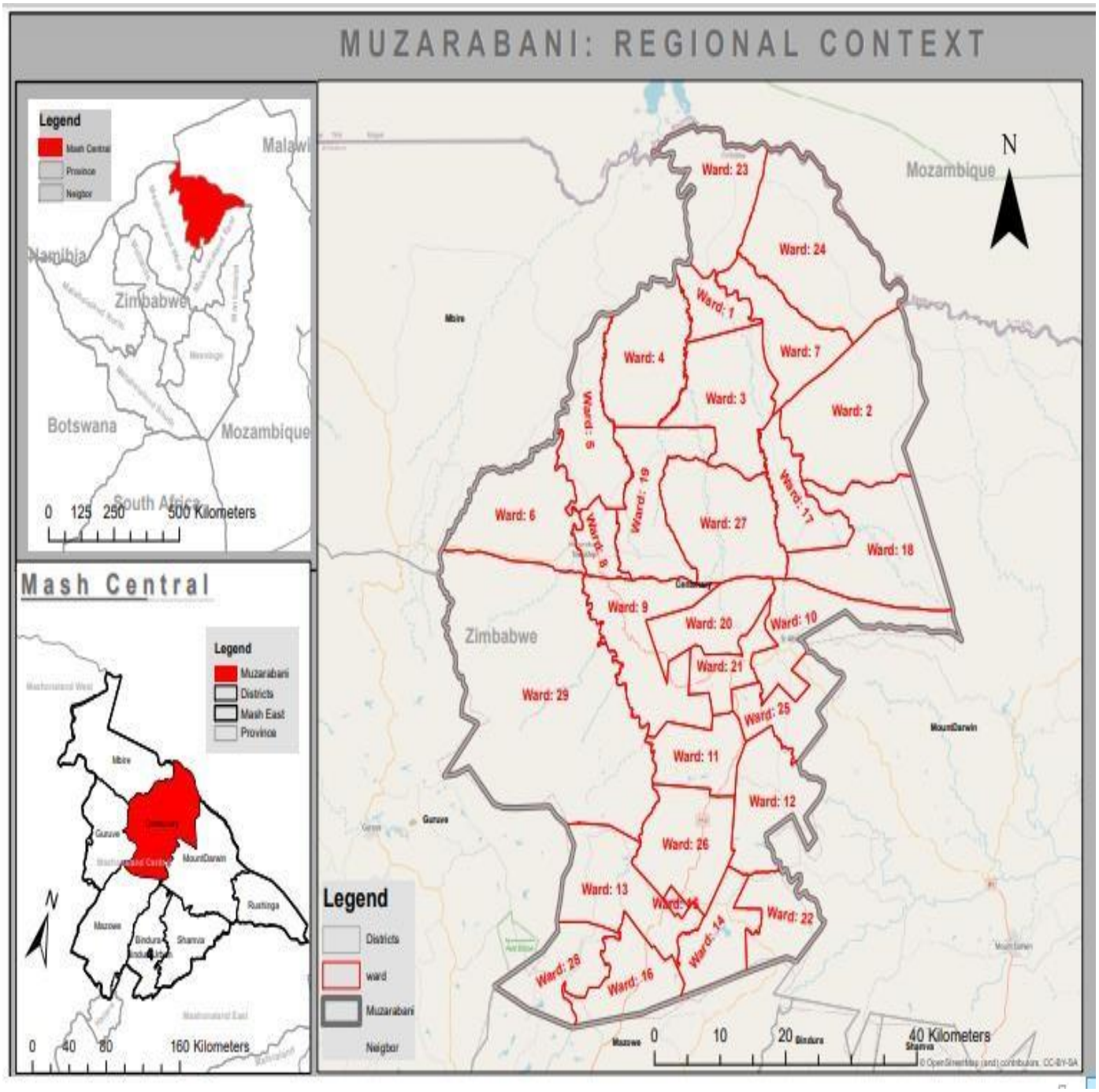

Figure 2.2-A: Regional location of Muzarabani

2.3 REGIONAL FUNCTIONS, LINKAGES AND IMPACTS

Muzarabani District, located in Zimbabwe's Mashonaland Central Province, serves several regional functions and exhibits various linkages and impacts within its surrounding areas. These functions, linkages, and impacts contribute to its regional significance and influence the socio-economic dynamics of the district and beyond. The District is influenced by the broader socio-economic and political dynamics of the region. These districts collectively form an interconnected region with shared resources, infrastructure, and development initiatives.

The regional context also extends beyond the provincial boundaries. Muzarabani District is located in close proximity to other significant regions in Zimbabwe. To the North, it shares a border with Mozambique, facilitating cross-border trade and cultural exchanges. The district is also situated near the Zambezi River, which has the potential to serve as a vital transportation route and a source of irrigation for agriculture.

The regional context of Muzarabani District influences various aspects of its development, including trade, infrastructure connectivity, and resource management. Policies and initiatives at the provincial and national levels shape the socio-economic landscape of the district, while regional collaborations and partnerships contribute to the overall regional development agenda.

2.3.1 Agriculture Hub:

Muzarabani District plays a crucial role as an agricultural hub in the region. The district boasts fertile soils and favorable climatic conditions in the Upper Muzarabani area making it suitable for crop production. Farmers in Muzarabani cultivate a variety of crops, including maize, tobacco, sorghum, cotton, horticultural produce and Runinga/Sesame seed. The agricultural output from Muzarabani District contributes to the regional food supply, supports the livelihoods of local communities, and has an impact on food security in neighboring areas.

i) The presence of the indigenous fruits such as Masau and Baobab has attracted people from all over the Region and beyond. As a value addition onsite industry initiative Bindura University has considered building a Bio- Tech Plant to process these fruits into jam and packaging them at Muzarabani growth point. This is a potential economic value to the District when exporting begins.

ii) The district is also the source for reed (Murara) made products such as hats and baskets sold and trending at various tourist locations such as *Kariba, Harare etc.* in the country

iii) In the Resettlement area there is massive Banana Production at *Oban Farm* and Avocado fruits and soft citrus at Ashdon Farm being exported to countries in Asia, European Union and Middle East**.** There is Honey production at Muzarabani Growth Point for markets in Harare and other districts. iv) It is a district within a region which produces and exports tobacco. Cotton also does well in the district's soils and a Cotton Ginnery is at Muzarabani Growth Point that buys cotton *(supplied by farmers form Mashonaland Central and Mashonaland East, Mutawatawa)*, processes and exports lint to regional and international markets.

v) The community in Lower Muzarabani grows Sesame seeds (Chitowe/ Runinga) which is a drought resistant crop and has an economic value. Communities are exporting it to Mozambique.

vi) Delta Beverages (*Chibuku Harare*) does sorghum *(beer brewing ingredient*) contract farming with the farmers

viii) The district is a producer of small and large livestock for the greater region. The Council has benefitted from this by levying for all livestock sales leaving the district. This is done at boom gates. Most of the livestock is destined for Harare butcheries such as Koala meats and other individuals outside the district.

2.3.2. Trade and Commerce

The district's tourism sector mostly focuses on ecotourism and wildlife-based tourism. Ecotourism is through bird watching and safari walking. The district's main tourist attraction area, The Mavuradonha Wilderness and The National Monuments has a big Regional Economic Impact as it receives International, National and Regional tourists. National Monuments are a potential Historic study and research area for Universities**. Mavuradonha Wilderness is an Important Bird Area {IBA} with one of the largest species of a colony of giant Egyption fruit bats estimated at 28 000, the largest known population south of the equator.**

The district has important linkages for trade and commerce within the region. Muzarabani District benefits from its strategic location near the Zambezi River's Cahora Bassa, which serves as source for fishing industry. This enhances economic integration within the region.

Though there is no formal border point Muzarabani's proximity to the border with Mozambique facilitates potential cross-border trade and economic exchanges. The Chiwenga ward 24 and Kairezi ward 23 border lines serves as a gateway for regional trade, allowing the flow of goods, services, and

people between Zimbabwe and Mozambique. This trade linkage enhances economic activities, creates employment opportunities, and stimulates economic growth in both Muzarabani District and the neighbouring regions.

2.3.3 Transportation and regional Connectivity

There is movement of people among Muzarabani, Harare, Bindura, Guruve, Mbire, Mt Darwin and Chinhoyi right out to neighboring countries as Zambia and Mozambique driven by business, trade and employment.

Muzarabani can be accessed from several nodes and has its own road network within the district and is also connected to surrounding areas by primary and secondary roads. These include Harare – Bindura – Mt Darwin- Muzarabani,

Bindura –Glendale-Consession-Mvurwi- Centenary- Muzarabani

Harare- Mazoe-Glendale- Chiweshe-Centenary – Muzarabani

Harare- Mazoe- Concession- Centenary- Muzarabani

Mbire- Guruve-Mvurwi- Centenary – Muzarabani

Banket – Mutorashanga- Mvurwi –Centenary- Muzarabani.

2.3.4 Socio-economic Interactions

Muzarabani District's socio-economic activities have significant interactions and impacts on neighbouring regions. Employment opportunities, agricultural investments, and infrastructure development in the district attracts migrants from surrounding areas, leading to population movement and demographic changes. These interactions contribute to social and cultural exchanges, economic integration and the sharing of resources among communities in Muzarabani District and its neighboring regions.

Cottco Ginnery employs about 30 Professional people from outside the District though locals are the most among 350plus general workers

Mavuradonha Wilderness Area with is rich Cultural Landscape has attracted a host of professionals carrying studies from regional and imternational destinations.

2.3.5 Cultural, Liberation and Natural Heritage

The historical Mutapa State's archaeological evidence is found in Muzarabani, Mavuradonha Wilderness Area (MWA) Guruve and Mbire districts hence these Districts have one cultural landscape that shares liberation heritage sites. The archaeological evidence can become major tourist heritage sites. A number of liberation heritage sites have been sited, battlefields

2.3.6. Energy Resource Sharing

The Muzarabani district has gas and oil reserves which stretch from Mbire to Muzarabani District. These have potential to create an energy production region with International, National and Provincial linkages. The area can potentially be a gas and oil extraction zone with an extraction, purification and transmitting plant .These potential oil and gas Reserves have attracted an Exploration Australian International Firm jointly named by local company by the name Invictus.

2.3.7. Zimbabwe-Mozambique Zambia Transfrontier Park (ZIMOZA)

i) Muzarabani District is part of ZIMOZA Transfrontier grouping. This area covers about 29 859 km^2 spanning across three countries of Zimbabwe, Mozambique and Zambia.

The TFCA consists of five districts which are Mbire and Muzarabani in Zimbabwe, Zumbo and Magoe in Mozambique and Luangwa in Zambia. The area covers national parks, game management areas, Safari Areas and communal land. The Transfrontier park is an initiative for managing shared vision in relation to natural resources through community-based resource management, infrastructure development and policy formulation and harmonisation. The Muzarabani District forms the eastern border of the TFCA. *Figure 2.3-A*gives an illustration of the district's location in relation to ZIMOZA TFCA.

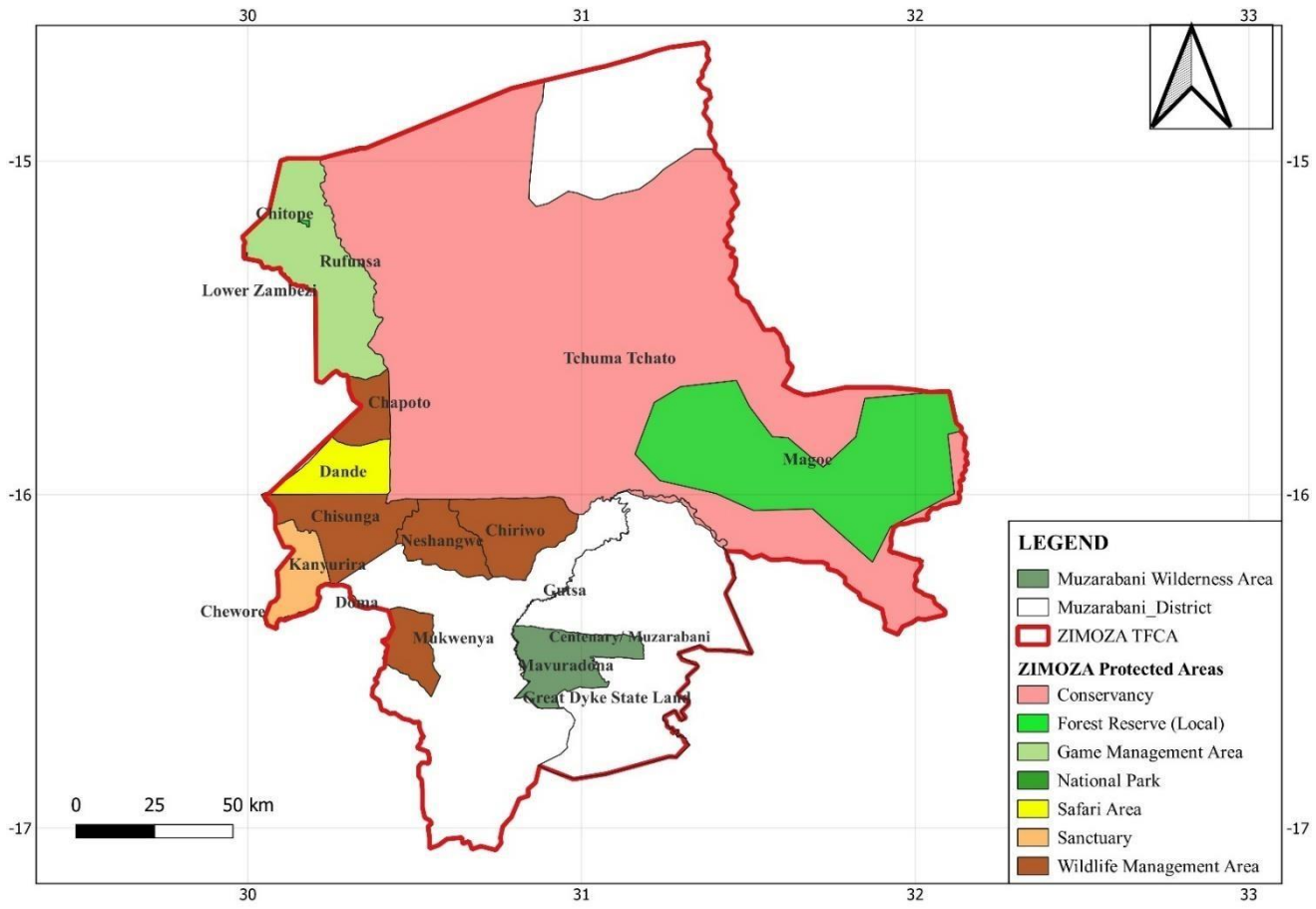

Figure 2.3-A: ZIMOZA TFCA

ii) This development is important in creating an enabling environment for local participation in decision making processes and increasing opportunities for investment in income generating activities for communities to improve local economies resulting in poverty reduction. The TFCA is a landscape approach to wildlife conservation which links protected areas across the landscape through corridors to ensure the continued existence of migratory wildlife species. This allows free movement of elephants across the landscape. The inclusion within ZIMOZA has potential for attracting investment into wildlife conservation in the District a development which can improve biodiversity financing in the MWA.

iii) The Mavuradonha WA is linked by wildlife corridors to other areas (Guruve, Mbire, Mt Darwin) that mainly run along the escarpment. Some wildlife movement has been recorded down to Mozambique and Lake Cabora Bassa but this route is becoming increasingly blocked by settlements and agriculture.

iv) Wildlife Corridors.

a) Corridor 1 runs along the escarpment to neighbouring district.
b) Corridor 2 from the escarpment to Mozambique via Mbire.
c) Musingwa River to Hoya River to Mozambique.
d) Gumba to Chadereka to Chimoio to Kairezi to Chiwenga then Mozambique that is ward 1, 23, 24, 27.

2.3.8 Shared Wildlife Population:

Muzarabani District shares important natural resources with its surrounding areas in Mbire and further west of Hurungwe forming a Zambezi Valley Biodiversity Region managed under the Integrated Landscape Plan. Sustainable land management practices such as reforestation and conservation measures, can have positive environmental impacts not only in Muzarabani but also in the broader region.

2.4 REGIONAL CONSTRAINTS

2.4.1 Infrastructure

The interaction within and involving Muzarabani District are affected by the district's inadequate and dilapidated infrastructure such as roads and bridges. The district has limited access to electricity and internet connectivity especially in some parts of Ward 24 and 23 which are further north and are accessing foreign Mozambican network connectivity. Lack of such has forced some of the people to depend on neighboring regional mobile facilities from Mozambique. Grocery shops that are accessible to locals by road forcing them to fork out foreign currency or unfair barter trade . Moat Bridges along Hoya and Musingwa have dilapidated and during the wet season not passable forcing most people in ward 23,24 and 4 to resort to Mozambique for most services.

2.4.2 Flooding

Lake Cahora Bassa shore in Mozambique is about 5 kilometres from the District such that during wet season back flooding affects the District (Chadereka Ward 1 , Dambakurima ward 4, Chiwenga ward 24, Kairezi ward 23,Kapembere ward 5, Muvamba ward 7 and Hoya ward 17) affecting an estimated households and these are 7 Wards well known for flooding mainly caused by the back flooding of the Zambezi river basin. On the same note if the floods gates in Kariba are opened during the rainy season

when the rivers are also back flooding into the villages from Cabora Bassa , the impact of flooding becomes excessive. This forces constant checking of weather patterns occurring on the neighboring Zambezi basin during the wet season.

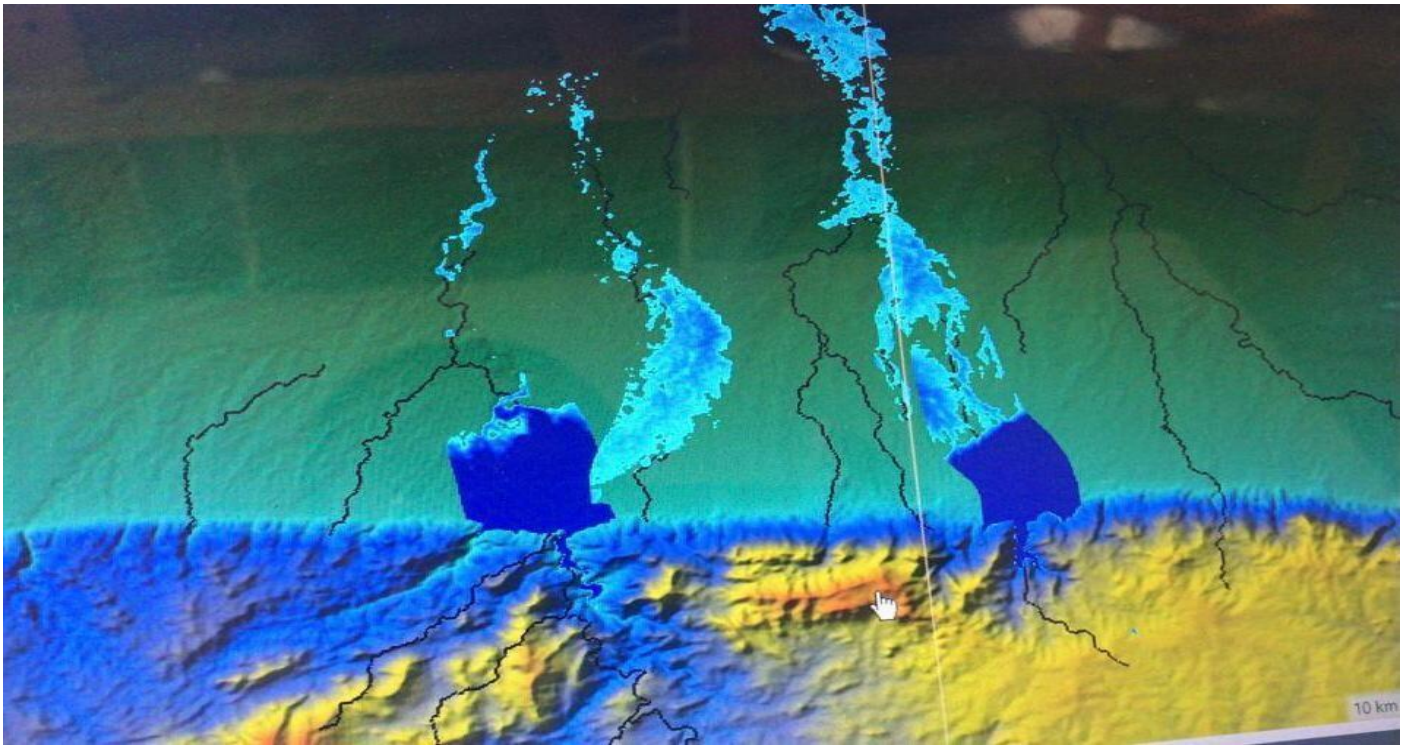

Figure 2.3-B: Flood Inundation map of Lower Muzarabani

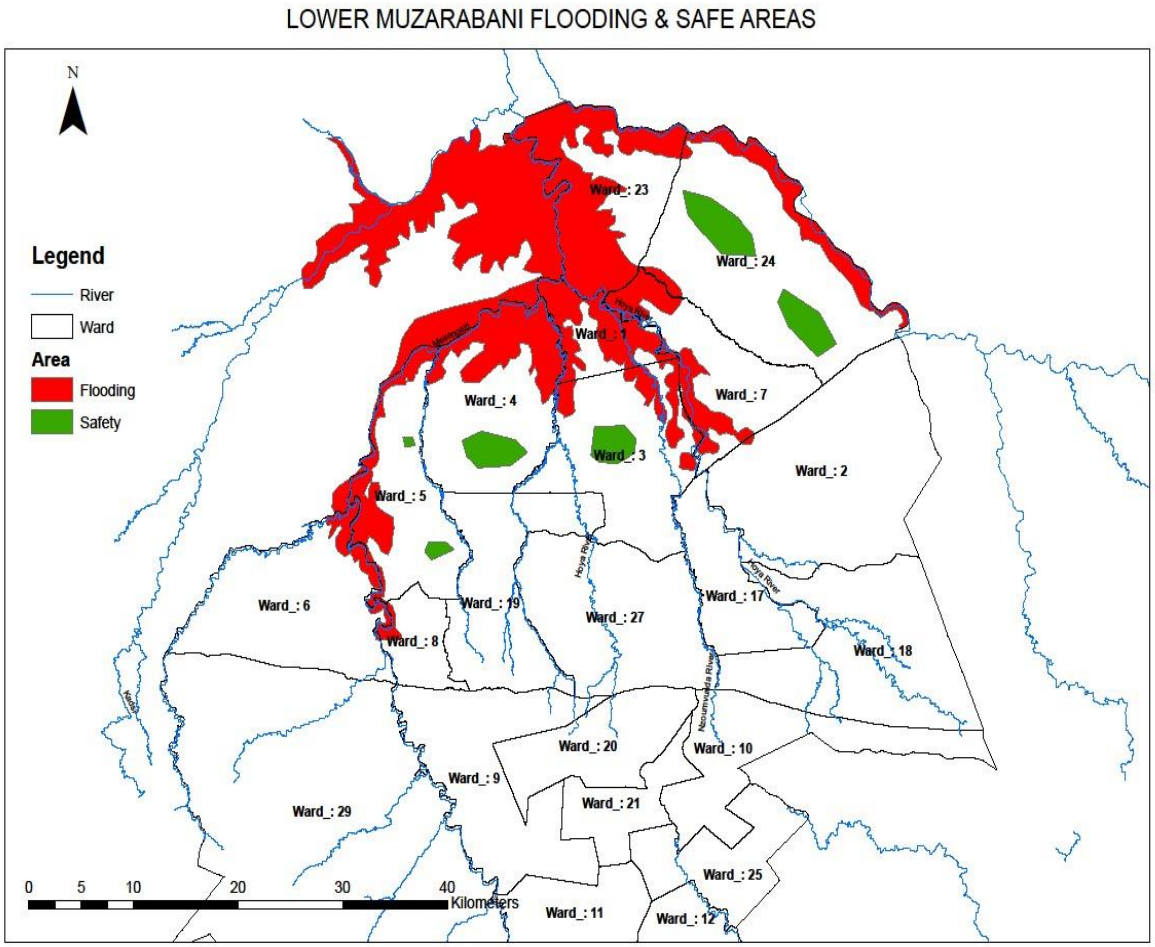

Figure 2.3-C: flooding in lower Muzarabani area wards 1, 4, 5,6,7, 23 and 24

Figure 2.3-D above shows the extent of flooding in lower Muzarabani area wards 1, 4, 5,6,7, 23 and 24 the safe Evacuation Areas in green.

2.4.3. Human/ wildlife conflict

The regional concern is the wildlife population shared on a *resus nullius* policy basis with surrounding districts. If there is a problem animal elephant in neighbouring Mbire district for example, the community of Muzarabani suffers the consequences as the same elephant can migrate to Muzarabani within a short space of time.

2.4.4. Commercial Dependency on neighbouring district as a constraint

On the Southern side Mvurwi Town remained with most of the attractive economic, industrial and commercial linkage after separation from Centenary which then amalgamated with Muzarabani to form Muzarabani Rural District council. The Muzarabani District continued to rely with Mvurwi for services like banking, shopping, monetary transaction services, as a result of this Muzarabani lags far

behind in what is expected in the composition of commercial centres with only a bank agent (Cabs) at Centenary. This is a significant constraint to communities living as far as Lower Muzarabani who have to travel about 200km to get to a bank in Mvurwi which is far outside the district

2.4.5 Lack of judicial services

There are no judicial services in the district. This has resulted in increased costs for communities in terms of accommodation, travelling and time who have to travel to Guruve or Mt Darwin for Court or to visit prisoners. This results in non-reporting of cases due to frustrating distance, court delays hence delayed justice, and Court evasions by culprits. Resultantly crime rates within the district increases. Muzarabani as a district continues to be made to rely on neighboring district and regions for such services which results in the above mentioned constraints.

2.4.6 Absence of a Border Post

The implications of not having a Border Post are vast. Wards 23 Kairezi and 24 Chiwenga share an uncontrolled border with Mozambique. This makes it open to entry and exit by criminals and court evaders. It is also a potential source of spread of diseases such as cholera and diarrhea/ dysentery since no quarantine services.

2.4.7. Negative Environmental Impact

The land use and agricultural practices in areas surrounding Muzarabani District have environmental impacts that extend beyond their boundaries. Such practices as deforestation for agricultural expansion or fuel wood affect water quality and result in soil erosion, as well upset biodiversity in the district. Recently Guruve RDC in the western side was facilitating claims for chrome mining within the Muzarabani s jurisdiction in the Wilderness Area until matter clarified.

2.4.7 Security Matters

The Presence of Amatsanga opposition rebels of Mozambique in the previous years has still instilled fear in some elderly people and women in the borderline wards 23 and 24.

2.4 SWOT ANALYSIS OF MUZARABANI DISTRICT

2.4.1 Strengths

- Good Climatic regions (2a and 2b) in upper Muzarabani
- Good soils
- Permanent and semi-permanent water sources, Musengezi River.
- Rich nutritional vegetation for grazing.
- Little or fewer inputs required for the soil
- Abundant sunlight suitable for solar power
- Organized Structured Small and Medium Enterprises (MSMEs)
- Rich Cultural Heritage in the Holy Baobab tree, Mutapa and Mutota Ruins
- Better management of Forestry through apiculture hence relatively low start- up capital for honey production and ready market for honey in Lower Muzarabani. • Natural Heritage sites in Mavuradonha with Pristine environment
- Not much input required for value addition for fruits.
- Active labour force of between 15 -60 years of age.
- Political Will by the RDC to support NDS 1 Policy and other key legislations.
- Professionally Qualified Council Management
- Internationally Tradeable Natural resources (wildlife trophy products) that are charged in foreign currency, thus hedging against inflation.
- Availability of Government Social Nest (Women's Development Fund and Women's group).
- Abundant and diversity of Livestock for meat as in the table below hardly requiring value addition.

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Table 2.4.1:1: Source District Vet and LPD 2024

Animal	Stock	Average sales per year
Cattle	82,496	7,200
Goats	*129,356*	
Sheep	*3,546*	
Poultry	*29,3886*	

OPPORTUNITIES

- Structured SMEs sector earmarked for growth and development in the economic blueprints Vision 2030.
- Availability of reserved council Land for MSMEs workspace and Industry and Commerce.
- Fruit processing is not laborious therefore more women can participate with ease in the fruit, horticulture and poultry production.
- For agro-production industries and value addition, high potential for youth employment creation through processing centre production such as the earmarked Bindura University BioPlant Centre.
- Horticulture (tomatoe) provides potential for tomato puree processing Plants.
- Potential regional export market source (fruits, tobacco and meat products)
- Value addition opportunities, processing drying, freezing vegetables, fruits and meat.
- Out grower opportunities with small and large scale producers. (inputs for maize and sorghum by ARDA)
- Potential Free Trade across the border with Mozambique (wards 23 and 24)
- The Invictus Oil and Gas discovery in Lower Muzarabani has potential opportunities of downstream employment, use of by -products of oil, social infrastructure development and royalties to Council.
- Upcoming competent Planning Department within the Council will result in organised planning systems.
- Aerodrome at Centenary, Hoya and Muzarabani for potential quick transportation of perishables and attention to emergencies.
- The construction of The Silverstroom Dam is a potential water supply source for irrigation and potable water for Centenary and downstream communities when flood gates are opened. The dam is also a potential source of ecotourism and hydroelectricity. .
- Potential pristine forestry resources in Mavhuradonha Wilderness for Carbon Projects • There are potential mineral resources of gold, chrome and other minerals in the Great Dyke.
- Availability of hides from livestock creates potential for the tanning industry.
- Cattle bones can be used in the production of kitchen ware products.
- Potential energy production (biogas) from cow dung for home use and reducing methane emission. *(from open cow dung)*
- The abundant sun provides potential of solar fields which could assist as there is lack of electrical infrastructure in the district.
- Potential for cultural tourism at Mutapa State/ Mutota Ruins / Holy Baobab tree
- The district is working towards a World Heritage site status in Mavuradonha wilderness for Publicity and Tourism.

- Mavuradonha Wilderness is an Important Bird Area (IBA),with one of the largest species of a colony of giant Egyptian fruit bats estimated at 28 000, the largest known colony south of the equator.

WEAKNESSES

- Limited entrepreneurship training for the MSMEs in skills such as hides tanning
- Lack of diversity in business units.
- Seasonal sector with two harvests per year especially for resettlements
- Inaccessible roads during rainy seasons, coupled with inadequate transport services and facilities
- Unpredictable income from the sectors like Cotton Production in Lower Muzarabani as producers are paid by barter trade using other valueless commodities as food chunks.
- No organized ready markets for produce like wild fruits, horticulture and honey production.
- High staff turnover of public service workers especially the education, health, police and other civil service units in Lower Muzarabani due to lack of social and commercial facilities.
- Inadequate medical facilities.
- Poor internet connectivity in peripheral, areas of the district Chiwenga , Kairezi and wards along the Mavuradonha edges.
- Inadequate energy supply.

THREATS

- Unmatching population increase to service provision
- Charcoal production from Mopane Woodlands in Lower Muzarabani results in deforestation.
- Climate change (*Natural Disasters, flood, drought)* negatively affects humans, livestock and agricultural yield.
- Livestock diseases like January Disease especially in Upper Muzarabani.
- Too much dependency on Murwi Town, Tobacco Auction Floors located in Mvurwi (outside the district) yet there is potential for such floors at Centenary as there is land provided already and this is an inconvinience to local farmers. This is alluded to the lack of banks in the whole district hence much of the income is used out of the district.
- Limited exploration of minerals in the district.
- Cheap products from neighbouring Mozambique affecting small businesses.
- Lack of a Border Post results in culture erosion and spread of diseases

- Human Wildlife conflict (*property damage threats, death threats and injury threats*). Problem animal threats especially Elephants, Crocodiles and Hippopotamus as well as wildlife coming from Mozambique
- Environmental related threats such as wetland degradation, stream bank cultivation, siltation, brick moulding resulting in erosion and gully formation, deforestation for fuel wood to use in tobacco processing, floods, winds , heatwaves droughts and veld fires
- Lowering water table leading to dry boreholes in most of the district.
- Poaching threats especially Plains game.
- Ecosystem Species depletion
- Reduced wildlife trophy quality
- Undulating relief and porous soils difficult for infrastructure development • Urban choke
- Illegal settlements causing disruption in wildlife corridors and water ways.

CHAPTER 3 METHODOLOGY

Most of the data used was obtained from the main stakeholders which include, The Rural District Council Policy Makers and Management, Members of the Rural District Development Committee, Central government Ministries, Chiefs, Farmers, Villagers, Business Community and NGOs/

Development Partners that work in the district. Some was sourced from various global satellite imaging missions. Some of the data was obtained by the research team directly from observing the district landscape and interviewing residents.

Resource specialist professionals were drawn in including:

- Lead Planner
- Hydrogeologist
- Ecologist
- Biodiversity expert
- Gender Expert
- Engineer
- GIS Expert
- Research Writer

3.1 RESEARCH METHODS AND TECHNIQUES

3.1.1 Responsible Authorities for data

Table 3.1.1:1: Responsible authorities for data

Data	Responsible Authority
Regional Context	Surveyor General
Land Classification	Lands/satellite
Drainage	SRTCM Digital Elevation Model
Topographic Features	Surveyor General Topo Maps/ Satellite Imagery
Population Distribution	Zimstats/ZEC
Distribution of Health Facilities	Min of Health
Settlement Hierarchy	Zimstats/Satellite Imagery
Location of Marketing Deports	Council
Livestock Distribution	District Vet
Wildlife Distribution	Parks and Wildlife

Road Network	ZINARA/Council/DDF/Satellite Imagery
Power and Energy Distribution	ZETDC
Geology and Minerals	Min of Mines
Agriculture and Irrigation	Lands/Agritex
Water	Zinwa
Households' data	Satellite Imagery

3.1.1 Key sources of data

Sources of data used to inform the study are listed in Table 3.1.2 below.

Table 3.1.1:2: Sources of data

Data type	Description	Body	Source
Daily Rainfall Data	Daily rainfall data for the five rainfall stations. 1km spatial resolution. The product has been validated in many hydrological studies in the Zambezi Basin.	CHIRPS	https://data.chc.ucsb.edu/products/CHIRPS-2.0
Potential Evapotranspiration	Global Reference Evapotranspiration (GlobalET0) climate grid data for the 1970-2000 period based upon the World Climate 2.0	Global Aridity Index (Global-Aridity_ET0)	http://worldclim.org/version2
Land Use Land Cover	20 m resolution vegetation data. Its 22 global land cover classes are defined within the UN	GlobCover	https://www.esalandcover-
	Land Cover Classification System (LCCS) based on the ENVISAT satellite mission's Medium Resolution Image Spectrometer (MERIS) sensor.		cci.org/?q=node/187.
Digital Elevation Model	30m resolution SRTM data obtained from Earth Explorer	Earth Explorer	https://earthexplorer.usgs.gov/

Soils	250m global Soil Grids raster layer. Provides distribution of soil classes based on the World Reference Base (WRB) and USDA classification systems	Soils Grids	https://soilgrids.org/#!/?layer=ORCDRC_M_sl2_250m&vector=1

3.1.2 Type of Data used

The process of data collection was done by a team of data collectors. Both secondary and primary data was collected. The team held a technical stakeholder meeting and continuously visited or called various offices. Generally consultations were done with the district's management, the district technical stakeholders' team, central government institutions and other NGOs/Development Partners known to have data relevant to the Master Plan Cause in the district.

i) Secondary Data

The team used secondary data mining techniques ie searching through existing data sets and statistics. These were used with very limited processing. Credible online resources were used these included Digital Elevation data, Open Street Map, mapped places and towns.

Hardcopy Cadastral layout plans for business centres were obtained from the Council, rural household and ward boundaries. GIS data from ZEC documents, Farm boundaries from the Surveyor General, wetlands and environmentally sensitive areas data from EMA websites. Hardcopy maps were scanned, geo-referencing, and digitizing those maps into usable GIS data. The internet resources were used in this case in creating GIS data from satellite imagery via digitalizing (vectorizing) and the imagery manually and using the semi-automated methods of satellite image classification and/or map algebraic algorithms.

ii) Primary Data

Primary data was also collected directly from communities using direct interviews and by observation in wards visited.

3.2 METHODS OF COLLECTING DATA

3.2.1 Interviews, Focus group discussions, Experimental measurements, and Field observation methods were used for primary data capturing.

Review of document Method was used to gather Secondary and Tertiary data.

3.2.1 Tools for Data collection

The following tools were employed in gathering data:

i) Questionnaires - ii) Interview guides - for guiding the interviewer iii) Smart Phone/Tablet – for digitalizing the questionnaire iv) Computers – For desktop studies, Mapping and Analysis

3.3 SAMPLING

Redundancy is key in data capturing because data errors in representing features on the ground may result in misplaced policies and plans. After doing the data collection steps above data verification was done for a sample of the data using the same methods prescribed under primary data capturing.

For Data verification, a sample of 5% of the population were used to confirm the given primary data. For geographic data, verification was done by presenting the maps to locals, policy-makers and stakeholders who pointed out areas that they deem to have been incorrectly represented on the map

3.4 DATA ANALYSIS

Map data was analyzed using QGIS and ArcGIS desktop Tools, and the captured and verified data was analyzed using various analytic methods and tools such as overlay analysis, proximity analysis, time series, hot/cold spots check as well as multi-criterion.

For Non-spatial data, Microsoft Excel was used for producing charts and graphs.

The purpose of these analyses is to determine trends, and to make overall sense of the big data sets to make informed, evidence-based decisions on how to allocate resources and plan forward.

3.5 METHODOLOGY LIMITATIONS

Limitations and assumptions Satellite Rainfall Estimates (SREs) were used for this study.

SREs were validated in many hydrological studies in the Zambezi basin and they offer broader and more continuous coverage, thus negating constraints typically found in rain gauge datasets. However reliable, the data cannot be as accurate as rain gauge measurements.

The Gumbel Distribution was used to model flood event probabilities. The method does not account for future changes and dynamic factors that may affect flood occurrence such as land use/land cover change and climate.

Although the research used the USDA (United States Department of Agriculture) soil textural triangle there are too many soil textural classification systems which differ significantly with each other. These include the international standardization 14688-1:2002, the United Kingdom ADAS system, the Unified Soil Classification System (ASTM D2487-92), The Krumbein phi scale (modified UddenWentworth scale and the U.S. Department of Agriculture classification system.

CHAPTER 4 PHYSICAL FEATURES AND LAND COVERAGE

4.1.1 Objective

The objective of this section is to undertake a hydro-geological assessment of the district. It aims to review available data on climate, topography, geology and hydrology The specific objectives are outlined below:

- Characterize baseline conditions for the district area.
- Verify the soil map by testing soil samples on several different soil types.

- Verify the geology map by testing samples on several points.
- Determine potential effects of soils and geology on planning.
- Determine quantitatively the amount of water resources for the dry and wet seasons.
- Quantify flood hazards as far as possible, using existing datasets and hydraulic modelling of rainfall-runoff across the research area.
- To determine water quality and water quality monitoring programmes.
- To characterize ground water in the project area. Water resources, particularly in the Communal Lands are limited. Most of the District relies on boreholes or wells for their primary water supplies. Several small dams exist in the Communal Lands, but these are utilized only as primary water supplies, and currently there are no irrigation schemes in parts of the district – Lower Muzarabani.

4.1.1 Rainfall in Muzarabani

This ranges from 650mm - 994mm, Upper Muzarabani with agro-ecological regions 2a and 2b Mavuradonha Wilderness Area with region 3 and Lower Muzarabani with 4 and 5 having lowest range. The district falls in two catchments namely Manyame and Mazowe. Sub-catchments that are entirely covered by the district are Musengezi and Upper Ruya as shown in Fig.4.1.2a. and 4.1.2b below.

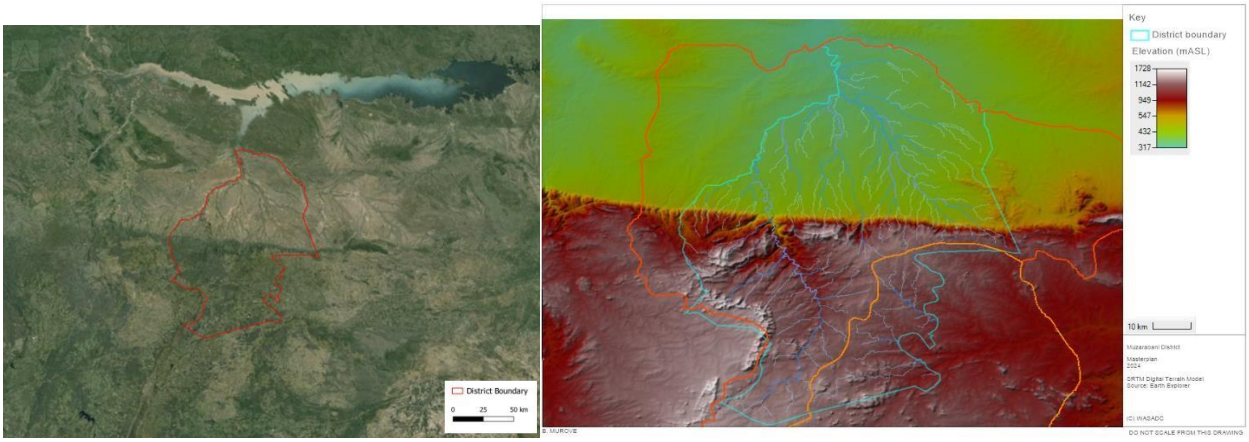

Figure 3.5-A: Muzarabani Rural District location Figure 4.1.2-3.5-B: Catcment and drainage analysis

Catchment councils plan and co-ordinate the development and management of water resources in areas under their jurisdiction. The catchment councils are also responsible for securing equitable access and efficient allocation, distribution and use of water.

The Main Physiographic Characteristics for Manyame and Mazowe catchments are shown in Table 4.1.1.below

Table 4.1.1: Main physiographic characteristics for Manyame and Mazowe catchments.

Location	Area in (km2)	Total Annual Precipitation Range (mm/yr.)	Mean Annual Runoff (mm/yr.)	Dominant vegetation type	Geological formations
Manyame 16.61 S, 30.33 E	40 497	730-820	99.5	Savanna woodland dominated by B. spiciformis and J. globiflora in the upper Manyame and C. mopane, Combretum woodland in the lower Manyame catchment	Pre-cambrian gneiss and young intrusive granite; argillites comprising shales, slates and phyllites; Upper karoo escarpment grit
Mazowe 17.35 S, 32.01 E	34 944	800-900	131	Savanna woodland dominated by B. boehmii, B. spicifomis and J. globiflora	Pre-cambrian gneiss and young intrusive granite; metavolcanics and metasediments (green stone)

4.1.2 Rainfall analysis

The hydrological balance was determined with reference to the district boundary considering the most recent set of meteorological data. A summary of the precipitation and temperature data was used together with the calculated annual mean values of potential evapotranspiration (ETP), actual evapotranspiration for (ETR) according to the Thorthwaite-Mather method, and those of actual evapotranspiration according to the Turc method (ETRt). The analysis was done using a monthly time step and an annual time frame, however there is a limitation to using discrete time steps. They are less representative of the actual processes. Actual evapotranspiration is higher than observed rainfall for most part of the year within the region as shown in Fig.4.1.2-A. This implies the area is generally dry most of the time throughout the year. Loss of vegetation is likely to increase actual evapotranspiration further upsetting the water balance and promoting dry conditions.

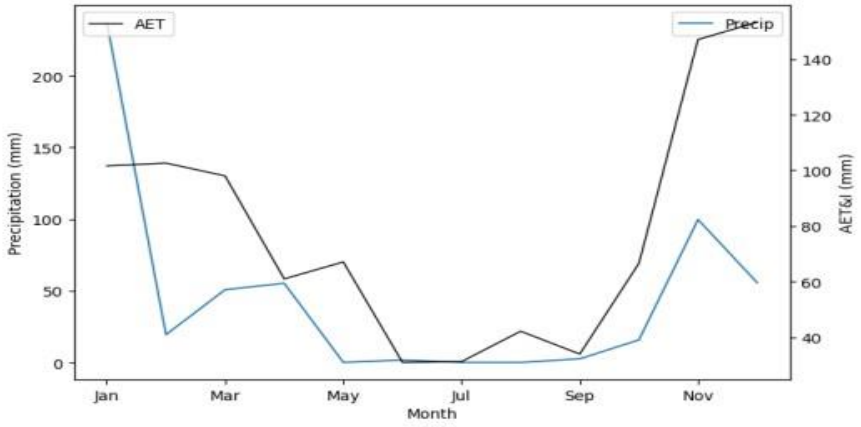

Figure 3.5-C: Precipitation and evapotranspiration

4.1.3 CLIMATE GEOLOGY AND SOILS

Soils

Soils were classified using the USDA (United States Department of Agriculture) soil textural triangle (USDA, 1999), which defines soil texture classes according to the distribution of size classes of mineral particles less than 2 mm in diameter. The USDA soil textural triangle is shown in Figure 4.1.3A. below.

Textural characteristics of the soil are determined to enable one to make an informed assessment of the importance of infiltration and erosion susceptibility. Figure 4.2.1a: USDA soil textural triangle Soils were obtained from Soil Grids website. The Soil Grids provide global predictions for standard numeric soil properties (sand content, clay content, silt content, bulk density) at seven standard depths (0, 5, 15, 30, 60, 100 and 200 cm), in addition to predictions of depth to bedrock and distribution of soil classes based on the World Reference Base (WRB) and USDA classification systems (ca. 280 raster layers in total) (Hengl et al., 2017). Dominant soils for the district are sandy loam at 5cm depth (actual to be determined. See Figure 4.2.1b: Soils in the district in g/kg

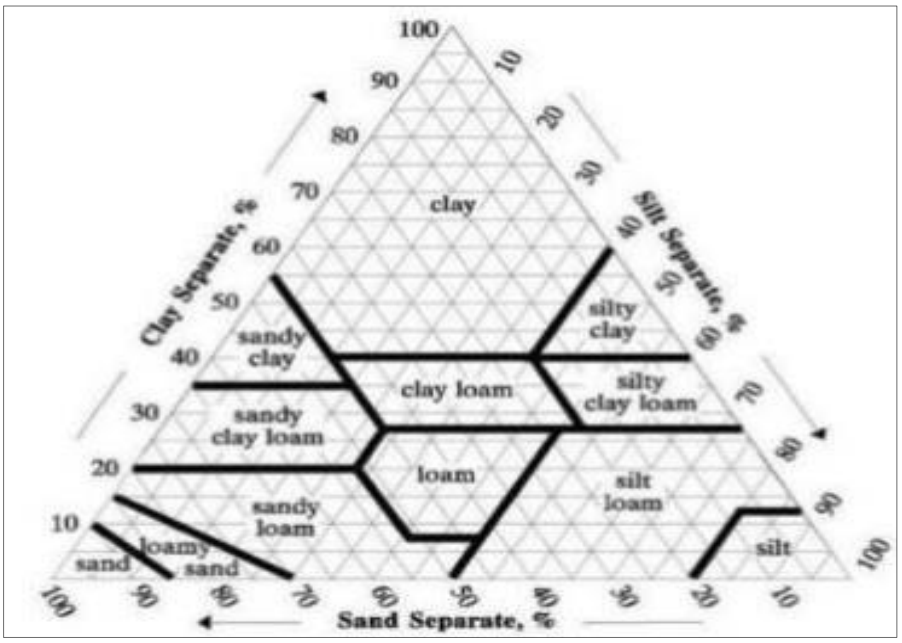

Figure 3.5-D: USD A Soil textural triangle

The SoilGrids provides global predictions for standard numeric soil properties (sand content, clay content, silt content, bulk density) at seven standard depths (0, 5, 15, 30, 60, 100 and 200 cm), in addition to predictions of depth to bedrock and distribution of soil classes based on the World Reference Base (WRB) and USDA classification systems (ca. 280 raster layers in total) (Hengl et al., 2017).

Figure 3.5-E: Soils in g/kg

The dominant soils in Muzarabani are Lithosols, Fersiallitic and Siallitic/Sodic groups. Details figures of coverage are shown in table 4.1.3:1 below.

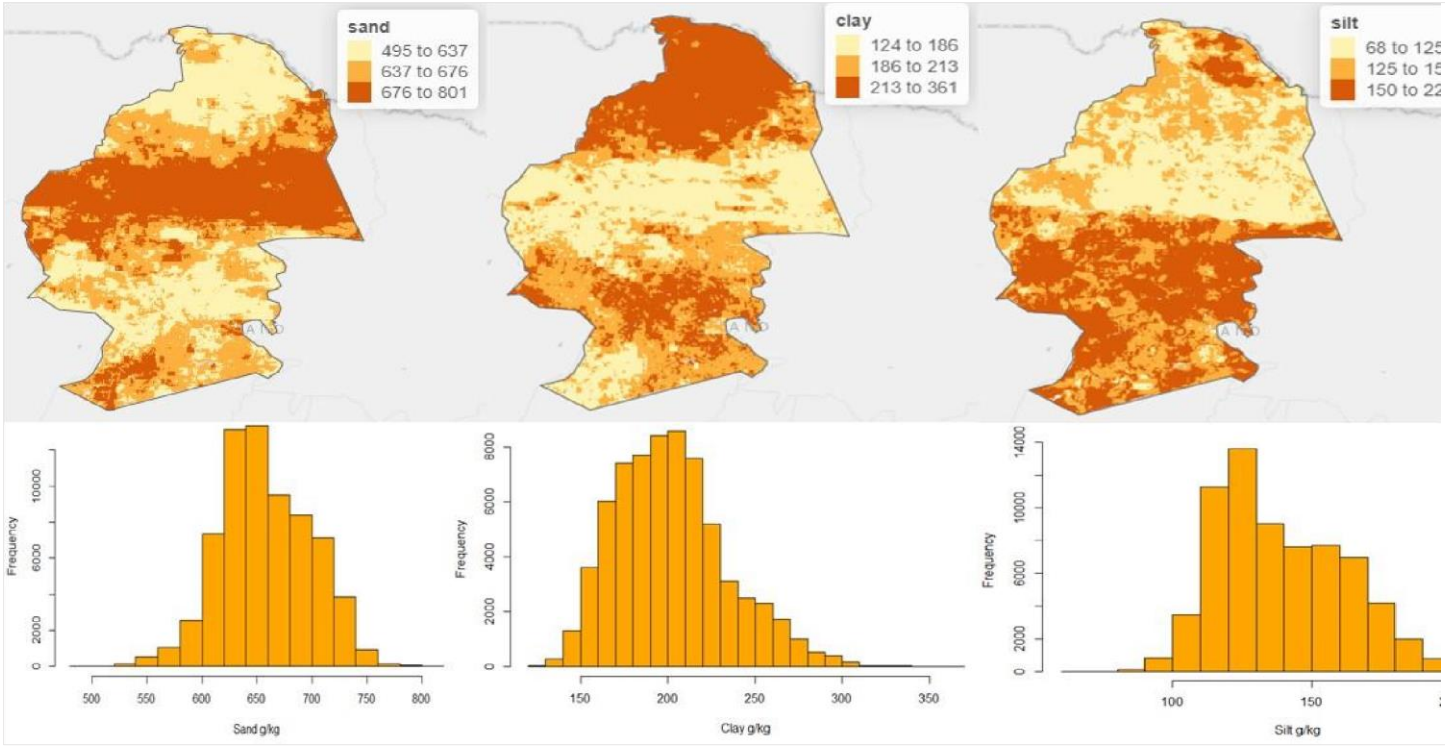

Table 4.1.3:2: Soil types in Muzarabani

Code	Type of soil	Area m^2	Percentage of area in district
2	Lithosols Group (Shallow, less than 10in)	68.30	29.32
3S	Vertisol (Grey to black)	153.52	3.60
4M/8	Siallitic/Sodic Group	1066.51	25.00
5G/5P	Fersiallitic Group	1207.35	28.30
4M/4C	Siallitic Group	588.11	13.78

Figure below shows coverage of the soils by soil type

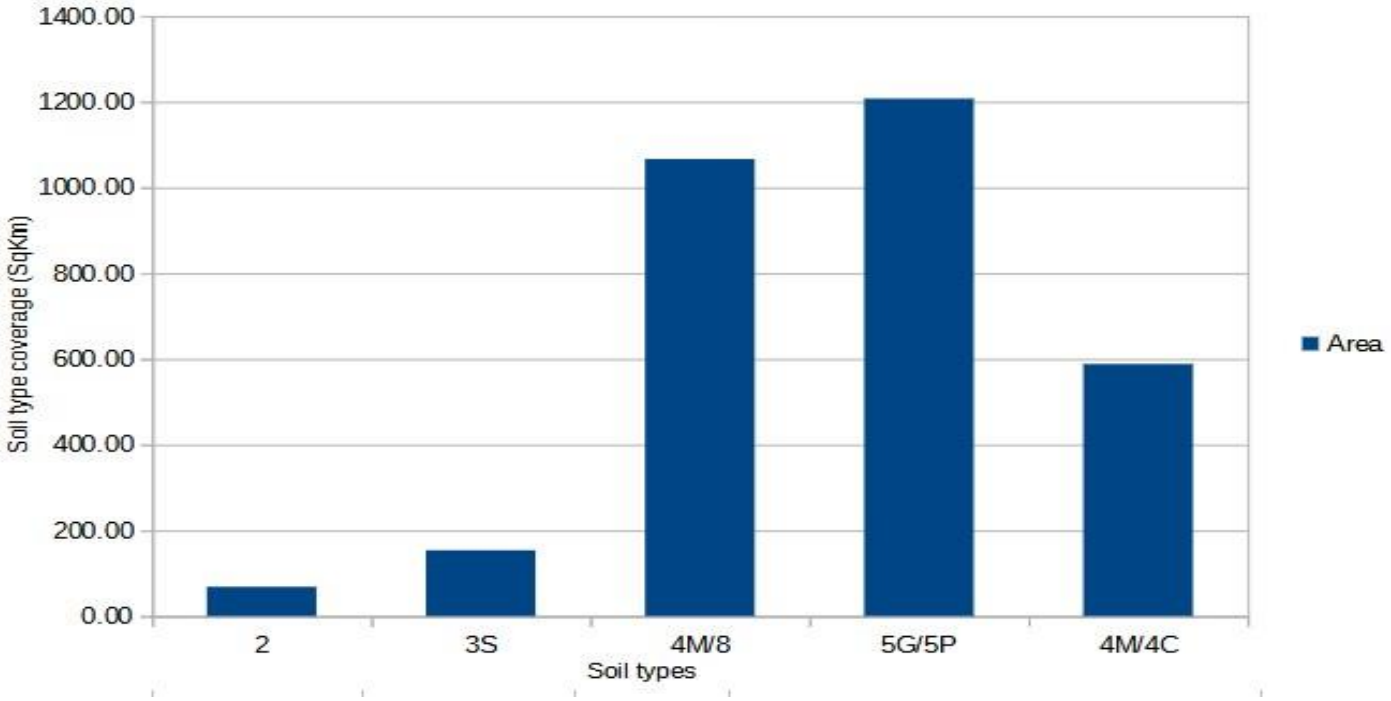

Figure 3.5-F: soil type coverage

This graph should be read in conjunction with Figure 3.5-G.

The map below gives a spatial view of how the soils are distributed in the district

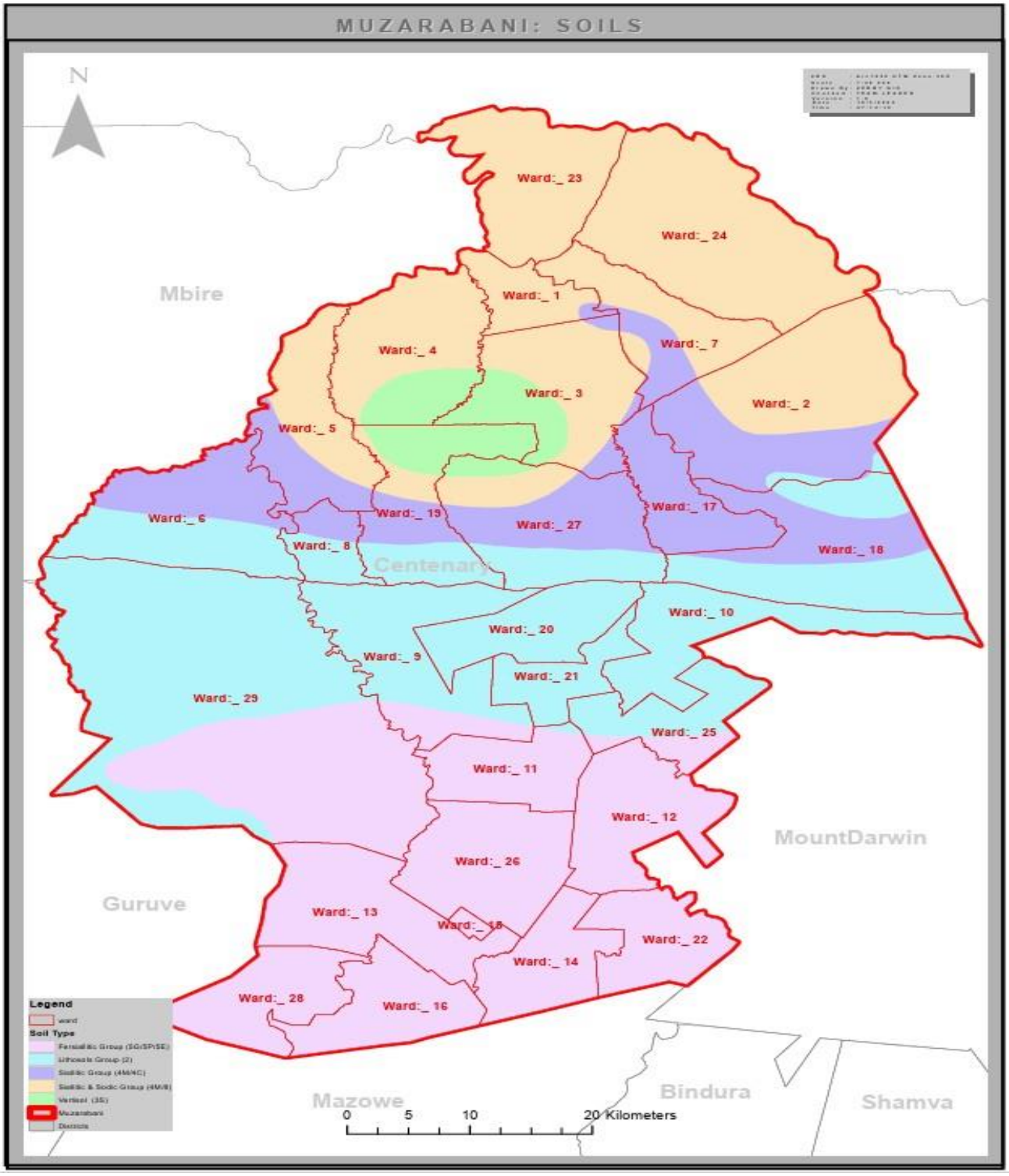

Figure 3.5-H: Muzarabani soils spatial distribution Threats to soils

The most significant threat facing the soils in the district is from erosion by water. Tonnes of topsoil are eroded annually, significantly affecting the productivity of soils and impacting on water quality and aquatic ecosystems through the silting up of water courses. Climate change may magnify these

threats. Hotter drier summers lower soil moisture levels and lead to greater levels of wind erosion. Wetter warmer winters and more regular extreme rainfall events increase erosion through water runoff

Plate 3.5-1: Erosion gully at Hoya business center

Farmers and other land managers have an essential role to play in managing agricultural soils sustainably. Developers, planners and construction companies must play their part in ensuring soils are adequately protected during development and soil functions are maintained wherever possible.

The district is characterised by very dry soils as shown in Fig.3.5.I The lowest water state within the district at 10kPa 5cm depth is 204 whilst the highest is 363. At 100cm depth the range is more or less the same for both 10kPa and 33kPa. The upper part of the district which covers Centenary is relatively covered by better dryness as compared to the lower part, however, both areas of the district are classified as dry taking into account evaluation at all depths of the soil profile. This implies water quickly drains through the soil profile and quickly evaporates from the soil owing to very high evapotranspiration rates in Lower Muzarabani.

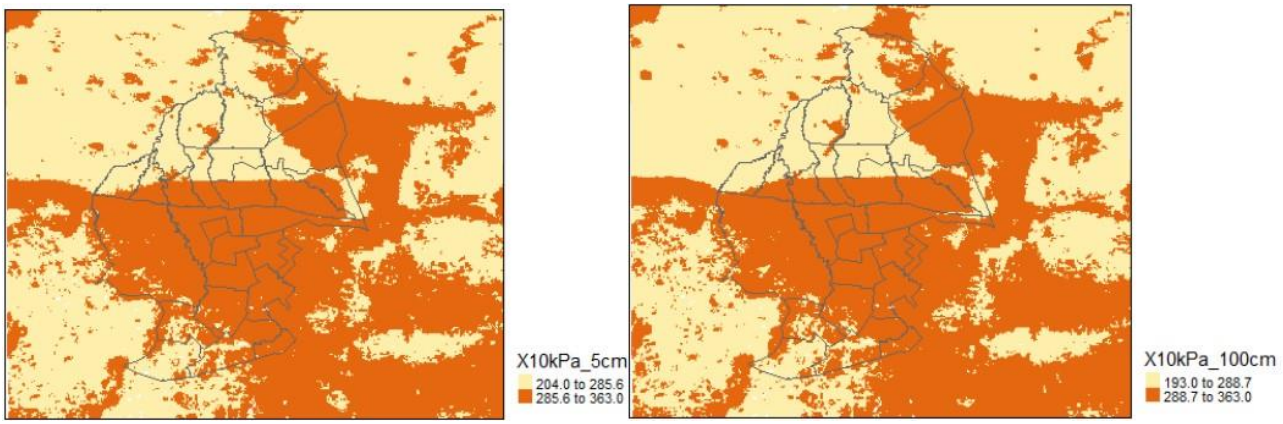

Figure 3.5-I: Soil Dryness at 10k Pa 5cm Depth

Using the 1500kPa data the soils are also showing very dry conditions as shown below in Figure 3.5-K. The lower part of the district which covers areas such as Lower Muzarabani is characterised by relatively drier condition as compared to the upper part of the district. Excessively drained. Water is

removed very rapidly. Internal free water occurrence commonly is very rare or very deep. The soils are commonly coarse textured and have very high saturated hydraulic conductivity or are very shallow.

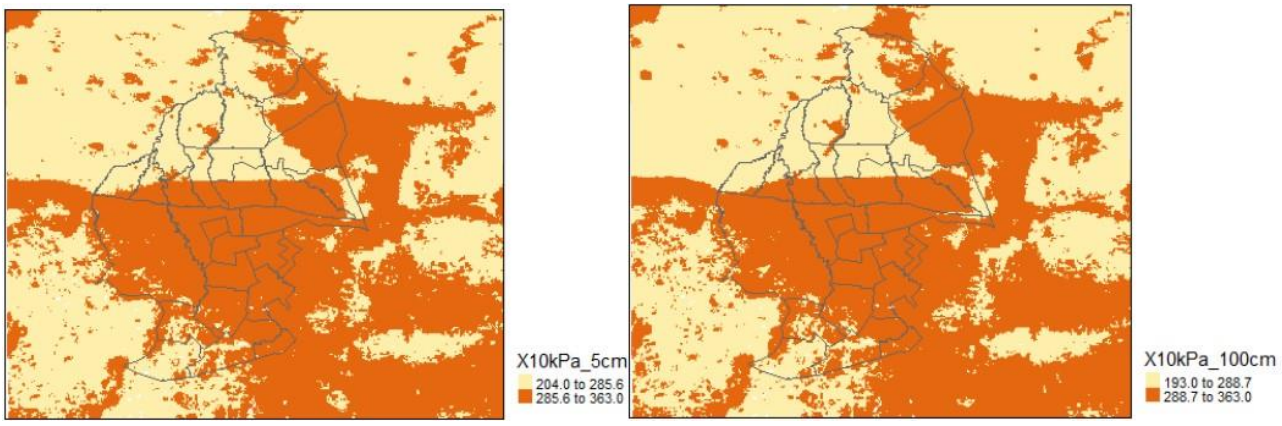

Figure 3.5-J: Soil dryness at 1ok 5cm Depth and 100cm

4.1.4 Elevation, Potential Evapotranspiration and Mean Annual Rainfall

General district characteristic Elevation ranges from a low of 308m to a high of 1733m above sea level. The district has Potential Evapotranspiration ranging from as low as 1423mm/year to 2064mm/year whilst Mean Annual Rainfall ranges from a low of 620.8mm/year to 994mm/year. Potential Evapotranspiration is negatively skewed and Mean Annual Rainfall is showing a close to normal distribution as shown by the histograms

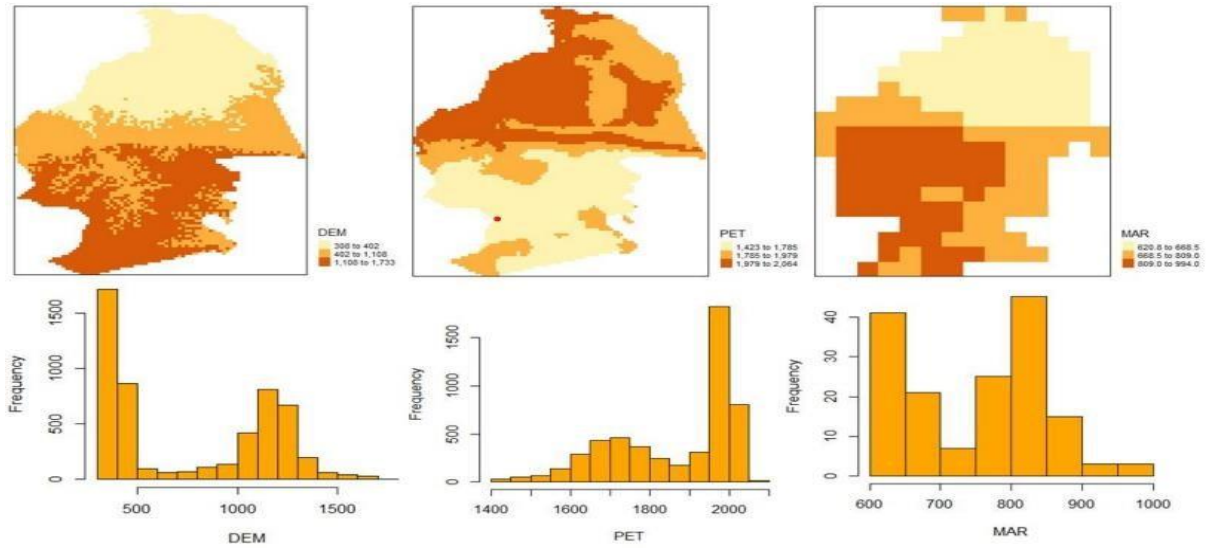

Figure 3.5-K: Elevation, Potential Evapotranspiration and Mean Annual Rainfall

4.1.5 Geology

The following lithologies exist in Muzarabani district. Cretaceous mudstone has the highest occurrence covering approximately 1581 Square Kilometers amounting to 37% of district area. It is followed by

the Mm Pre-Cambrian (Zambezi belt) which covers 32% of the district. The least are Upper Karoo (Ba), Great Dyke covering and Bulawayo 0.75% and 0.87% and 0.91% respectively. Table 4.1.5:1 below gives detail to the Lithological coverages.

Table 4.1.5:2: Lithological coverage

Lithology code	Area m^2	% coverage	lithology description
Ba	31.76	0.75	Upper Karoo. Basalt
Bv	38.82	0.91	Bulawayan. Mainly mafic metavolcanics with subordinate metasediments
C	1581.40	37.23	Cretaceous mudstone, conglomerate, and sandstone bands
Mm	1366.97	32.18	Pre-Cambrian. Various paragneisses of the Zambezi mobile belt of the post African and Pliocene surfaces
N	37.05	0.87	Great dyke norite, gabbro, serpentine and pyroxenite alkali ring complexes
Ps	182.28	4.29	Great dyke norite, gabbro, serpentine and pyroxenite alkali ring complexes
S	511.54	12.04	Recent and older alluvial deposits comprising gravel, sand and silts
Yg	337.23	7.94	Pre-Cambrian. Younger intrusive granites of the Craton of the post African and Pliocene Surfaces
Z	161.09	3.79	Pre-Cambrian. Various paragneisses of the Zambezi mobile belt of the post African and Pliocene surfaces.

The graph fig 4.2.3b shows the area of distribution of the Lithology

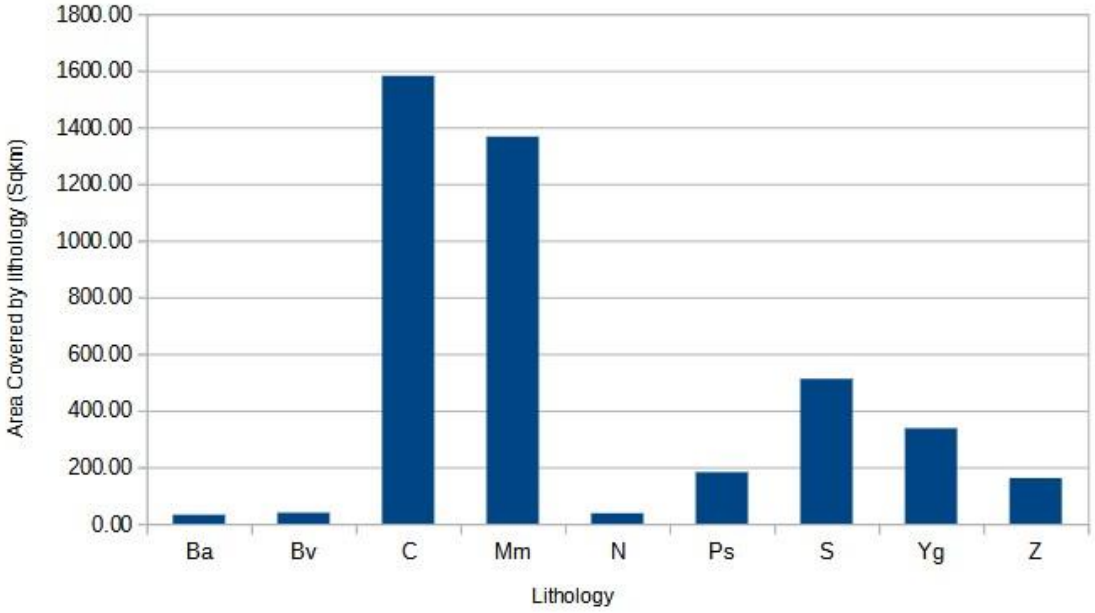

Figure 3.5-L: Area covered by Lithology

Figure 3.5-M below gives the spatial distribution of the described lithologies. The codes on the map legends may be interpreted as per table Table 4.1.5:3 above.

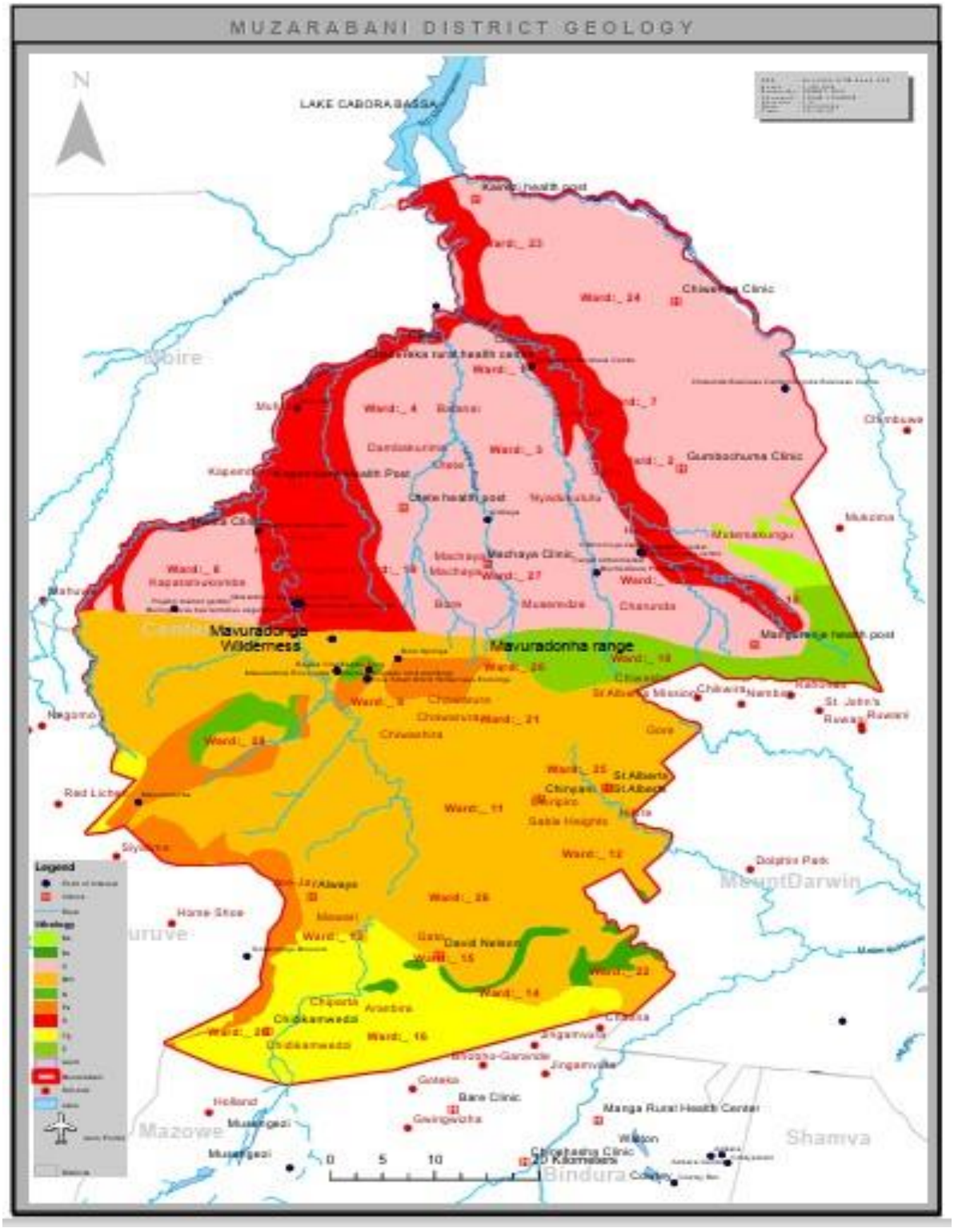

Figure 3.5-N: Spatial Distribution of Lithologies

Muzarabani is characterized by rocks of various ages, Triassic, Early Precambrian, Jurassic, Pleistocene and Late Precambrian rocks. Rock types and their respective groups are shown in Figure 3.5-O. The lowest limit of the district is characterized by unconsolidated sedimentary aquifer with high productivity and this covers very small portions of wards 23 Kairezi, 24 Chiwenga and 2 Maungaunga. The

greater part of the low-lying areas covering Muzarabani is characterized by aquifers with significant Inter granular and Fracture Flow or Consolidated Sedimentary Intergranular/Fracture (CSIF-L). The upper part of the district which denotes higher altitude areas and covers Centenary is characterized by Basement Aquifers with a low productivity (B-L). Approximate range of borehole yield is very low or both basement aquifers and consolidated sedimentary aquifers, about 0.1-0.5 liters per second. In general, the district is characterized by low productivity aquifers.

Aquifer Productivity Levels

Table 4.1.5:4: Aquifer Productivity Levels

Aquifer	Productivity level
Very High Yields	>20liters/sec
High	5-20litres/ sec
Moderate	1-5litres /sec
Low moderate	0.5- 1litre /sec
Low	0.1-0.5litres/sec
Very low	<0,1litres/sec

Muzarabani general productive yield is 0.1-0.5litres per sec which is low. The lowest limit of the district characterised by unconsolidated sedimentary aquifers with higher productivity cover ward 23 Kairezi Chiwenga ward 24 and ward 2 Maungaunga

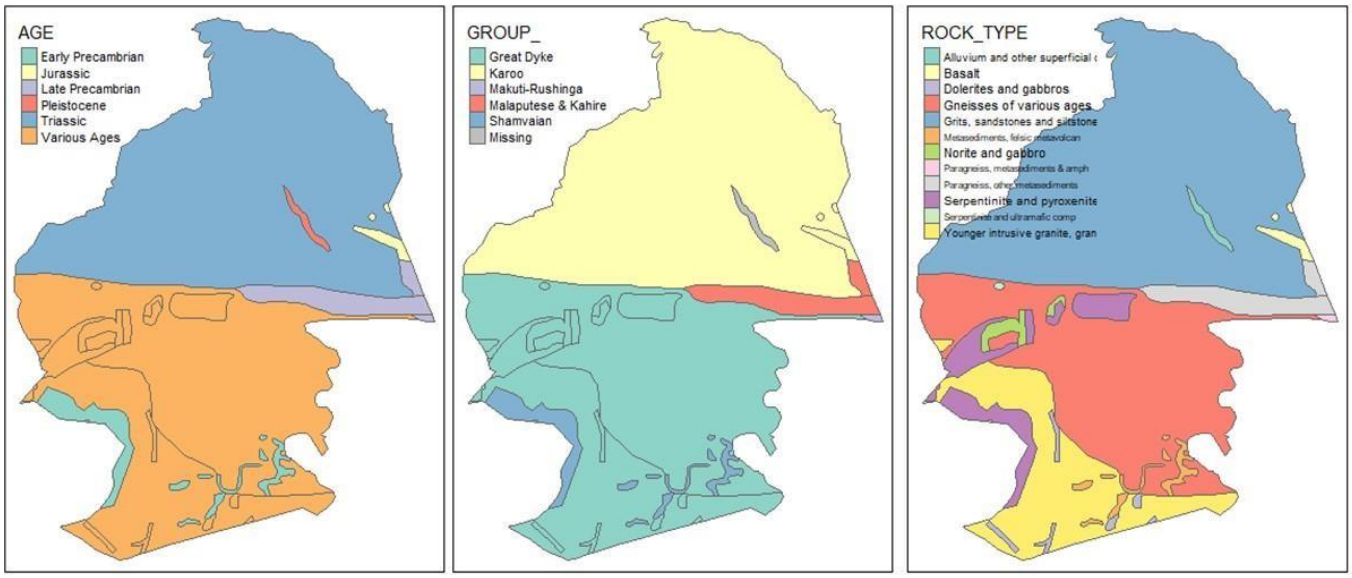

Figure 3.5-P: Schematic geological maps.

4.2 LAND

4.2.1 Land Cover

Land-cover across district has been analyzed using satellite imagery and site photographs obtained from site visits. The vast majority of the district site is bare earth with sparse herbaceous vegetation and bare earth used for subsistence farming by local people. Other land-covers within the district include a network of unsurfaced tracks and footpaths. The ESACCI-LC dataset provides the greatest level of agreement with photos of the site and surrounding areas, and therefore has been used as a basis to represent the land-cover.

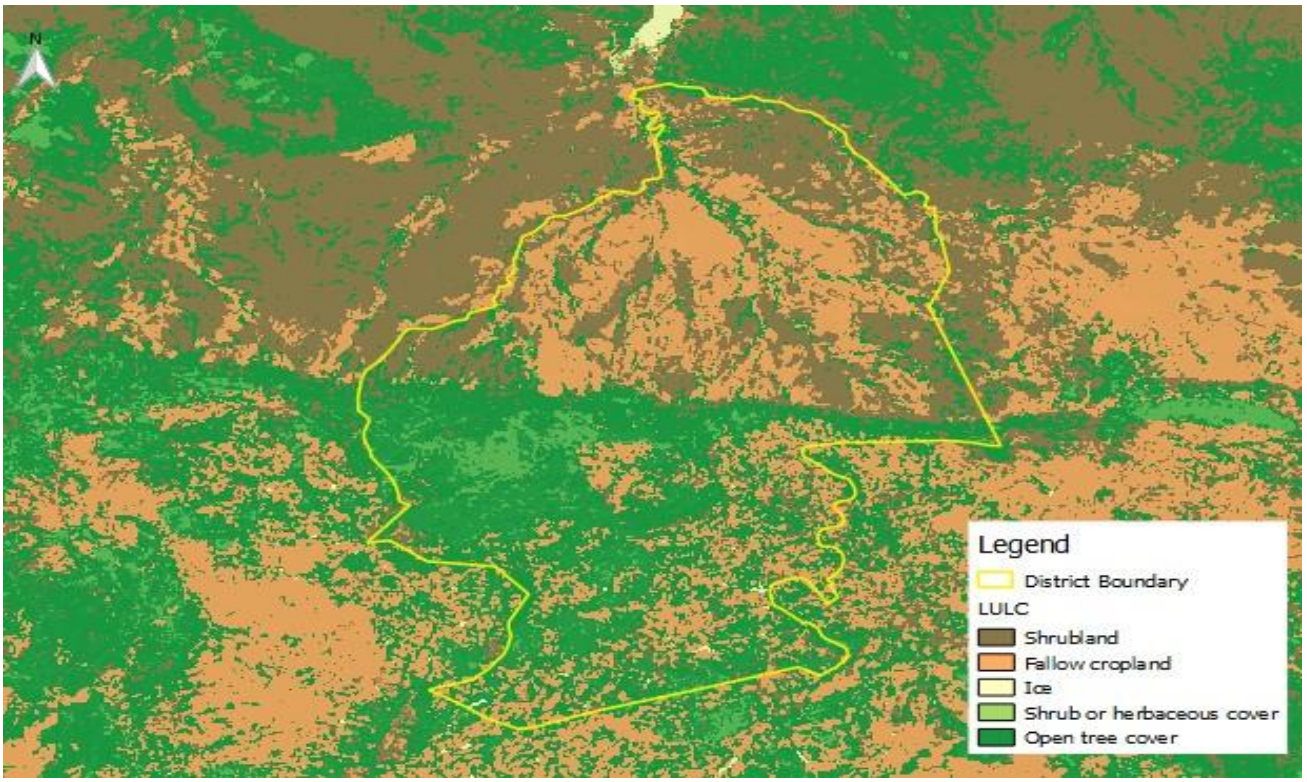

Figure 4.2-A: ESACC-LC Land-cover

4.3 TOPOGRAPHY AND DRAINAGE

4.3.1 Topography

Detailed drainage and catchment analysis were undertaken to identify key runoff pathways and delineate the extent of the contributing rainfall-runoff catchments intersecting the district. This was carried out using Integrated Land and Water Information System (ILWIS) tool. The combined topographic model was conditioned to fill sinks and depressions, allowing for the continuous drainage of water to be modelled. The analysis confirmed the location of the ephemeral watercourses identified

from the aerial imagery analysis draining in a north-western direction across the site. The extent of the contributing catchments and drainage pathways can be seen in Figure 4.3-A

A 30m spatial resolution Shuttle Radar Topography Mission Digital elevation model (DEM) was obtained from the www.glovis.usgs.gov website. GIS techniques were used to derive topographic and catchment attributes such as elevation, slope and catchment area, main drainage path length, slope and elevation along the main drainage path which serve as inputs into hydrological analysis.

As part of the analysis, flow accumulation is analyzed whereby each elevation grid cell is assigned a flow accumulation value relating to the number of cells upstream of that cell that drain into it. The contributing sub-catchments and drainage lines have been generated using the default flow accumulation value, representing 1% of the maximum recorded flow accumulation within the area of interest.

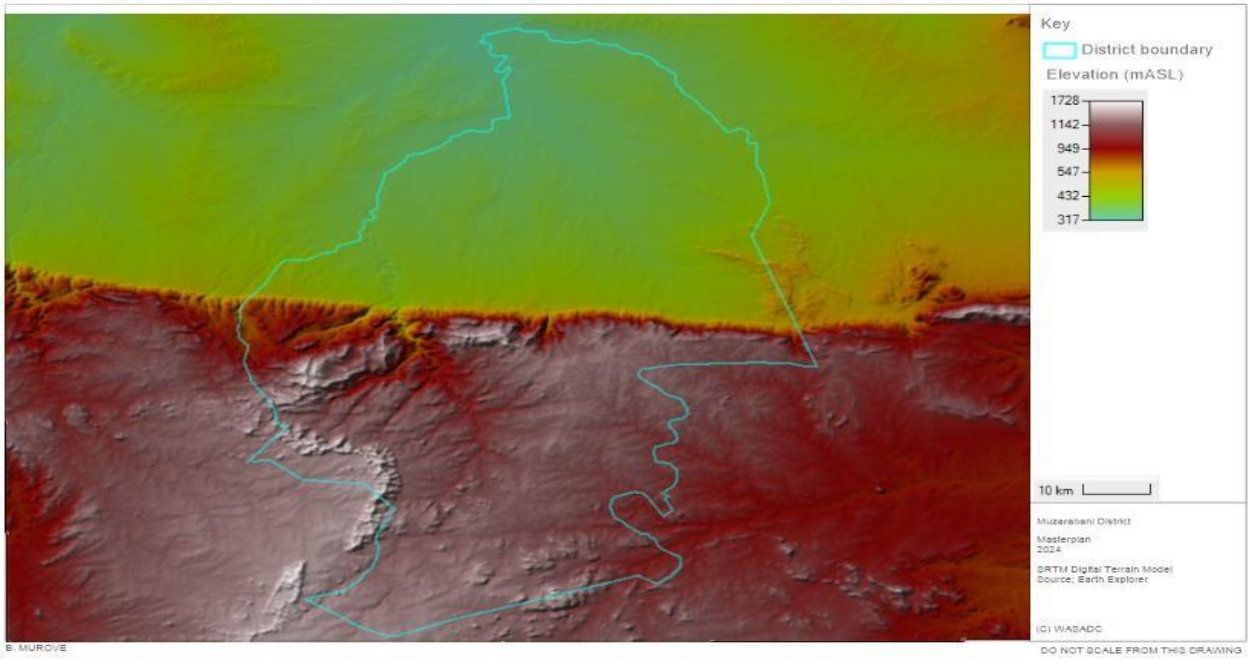

Figure 4.3-B: Topographic overview of muzarabani

Figure 4.3-C: key topographical features in the area

4.3.2 Slopes

The district is characterized by steep slopes and gentle slopes as seen in Figure 4.4.2 with the Majority being in Upper Muzarabani resulting in high expenses for infrastructure development. Simple soil conservation measures are not sufficient to curb problems on steep slopes.

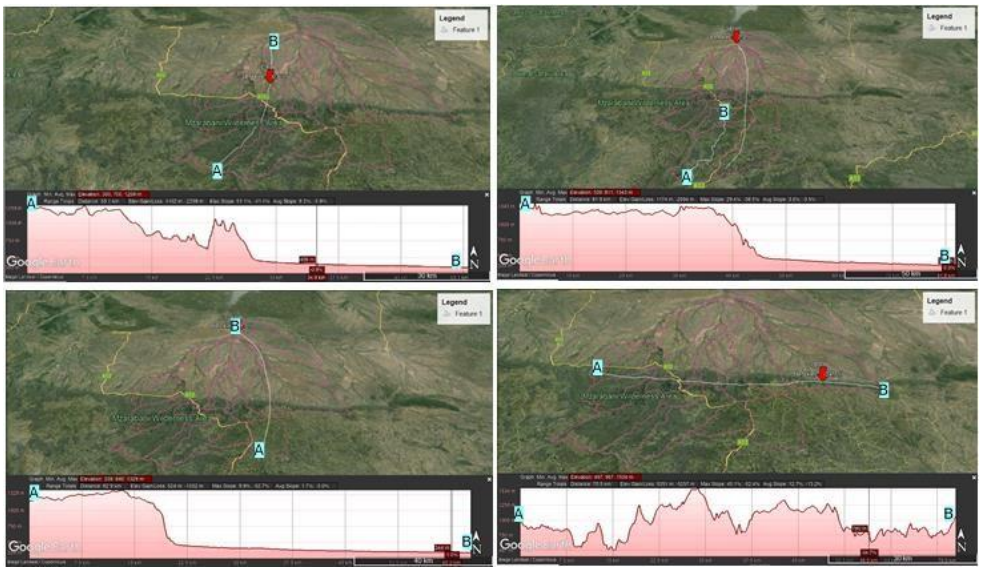

Figure 4.3-D: Sample of slopes in the district

4.3.3 Climate change

A significant shift has been observed in Zimbabwe over time, where rainfall that used to start around September to October, has shifted to November and December, as well as the 2-3 weeks mid dry spell used to be experienced in January, has shifted into February in the last 2 rainfall seasons (GoZ, 2013a).

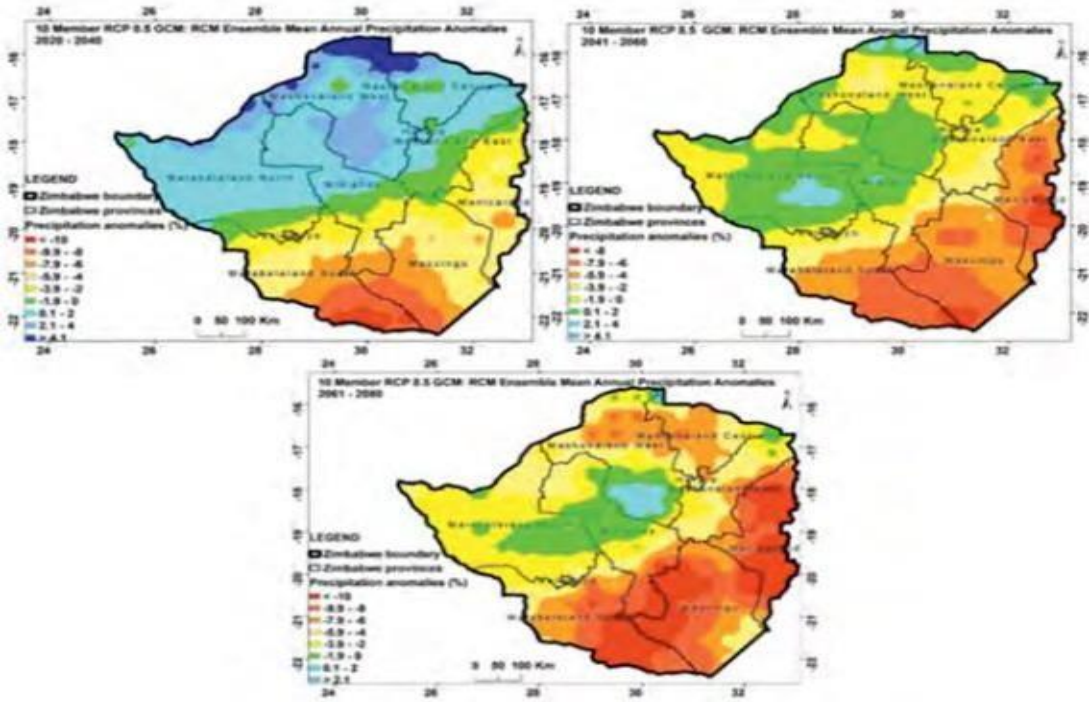

Figure 4.3-E: Projected rainfall for the three epochs 2020-2040 (a), 2041-2060 (b) and 2061-2080 (c).

4.4 FLOOD MODELLING

4.4.1 Overview of approach

In addition to the use of the land for agriculture and economic development, the land in watersheds and flood plains should be managed to reduce flooding, reduce flood damage and ameliorate effects of drought. Soil water holding capacity should be improved, water runoff in uplands under saturated moisture conditions should be managed whilst minimizing severe scour erosion and sand deposition during extreme rainfall events.

Flooding can be caused by several different sources, including:

- Rivers and watercourses;
- Groundwater emergence;
- Artificial sources such as reservoirs, tanks, culvers, pipelines and sewers;
- Runoff caused by heavy rainfall.

The analysis of the topography and underlying geology suggest that the risk of groundwater flooding is low. The only significant source of flood risk to the site is considered to be pluvial, from runoff arising from extreme rainfall.

Due to the nature of risk to the district, the modelling approach focuses on pluvial flood risk. The model simulates the runoff generation process by applying design storm hyetographs to a 2D surface, including properties such as surface roughness and runoff coefficients, to route the resulting runoff over the surface of the site. A range of scenarios of differing probabilities of occurrence were selected for assessment through the hydraulic model. These consist of the following AEP storm events:

- 1 in 10 years (10% AEP);
- 1 in 25 years (4% AEP);
- 1 in 50 years (2% AEP); and
- 1 in 100 years (1% AEP).

4.4.2 Hydraulic model build

i) Software

The U.S. Army Corps of Engineers' River Analysis System (HEC-RAS) Hydrologic Engineering

Center - River Analysis System was used to determine flood inundation. The HEC-RAS system contains the one-dimensional steady flow water surface profile computations, one-dimensional and or two-dimensional unsteady flow simulation, quasi unsteady or fully unsteady flow movable boundary sediment transport computations. All components use a common geometric data representation and common geometric and hydraulic computation routines. HEC-RAS also has an extensive spatial data integration and mapping system (HEC-RAS Mapper). Steady flow water surface profile is intended to calculate water surface profiles for steady gradually varied flow. The system can handle a full network of rivers that is major river and their tributaries.

ii)Surface roughness

A surface roughness coefficient (referred to as Manning's n) is used in HEC-RAS to express the resistance of the land surface to overland flow. A land-use layer from the ESACCI-LC global land-use cover was used to assign roughness coefficients. The land-cover and survey data has been further augmented by digitalizing main footpaths and tracks identified during site visit.

Table 4.4.2:1: Roughness coefficients for Land Use types

ESACCI-LC land cover	Roughness coefficient (Manning's n)
Shrub land	0.05
Grass land	0.02
Mixed tree cover	0.025
Open tree cover	0.025
Survey land cover	
Tracks	0.02
Water	0.04

4.4.3 Runoff coefficients

A runoff coefficient expresses the proportion of incident rainfall which is converted to surface runoff. This is dependent on a number of factors including soil texture, vegetation cover, slope and antecedent soil moisture condition. US (erstwhile) Soil Conservation Service CN method has been used in several models in both rural and urban catchments. This was also used for this research and it follows the equation;

Equation 4.4.3-1: Curve number method for determining overland flow

$$Q = \frac{(P - I_a)^2}{(P - I_a) + S}$$

where (all in L for given time interval)

- Q = average OLF
- P = precipitation
- I_a = 'initial abstraction' = all losses before OLF begins, including interception, infiltration, and depression storage
- S = maximum retention of water after OLF begins

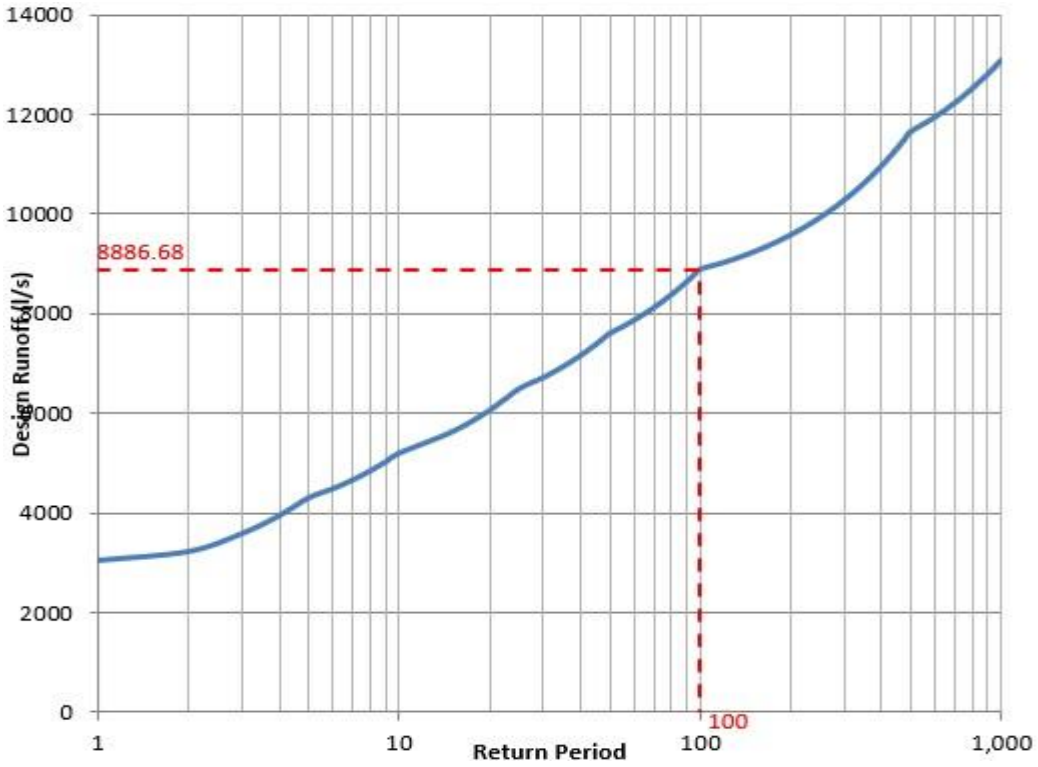

Figure 4.4-A: Return period and runoff for the upper part of the district. Catchment ID 22

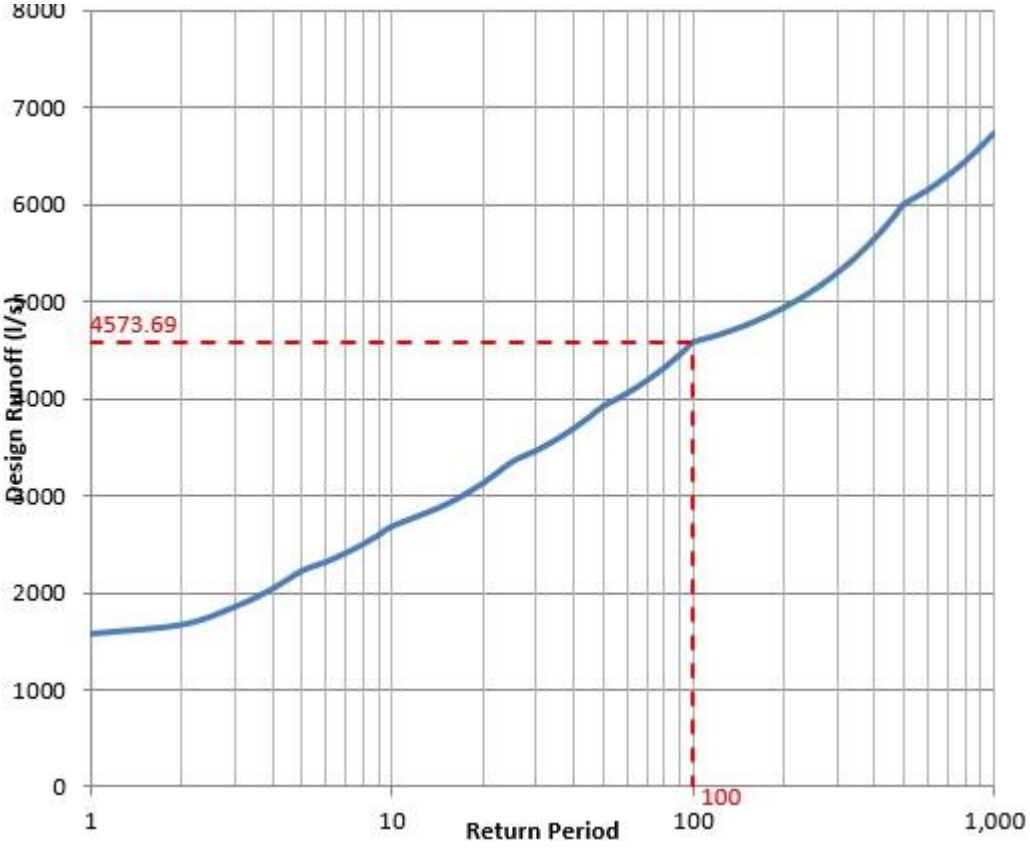

Figure 4.4-B: Return period and runoff for the lower part of the district. Catchment ID 12

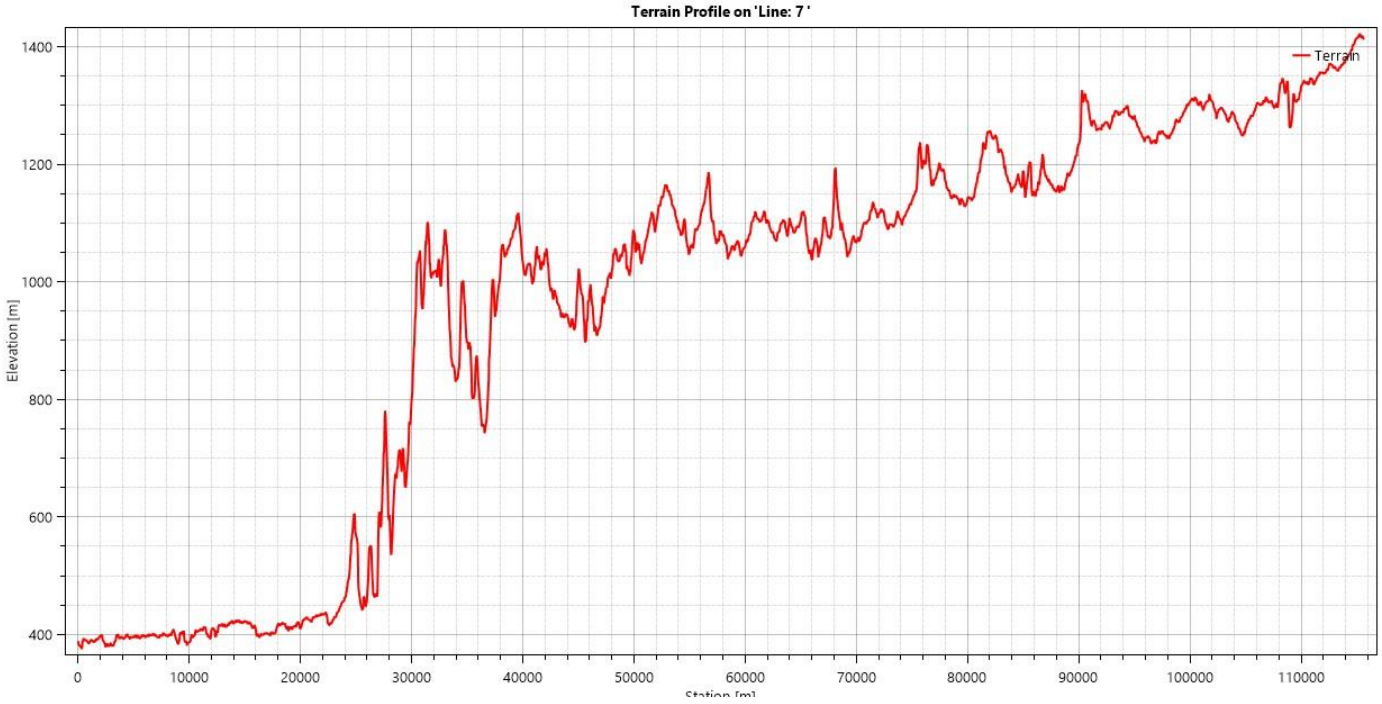

Figure 4.4-C

4.5 Flood Risk Summary Findings

A broad scale HEC-RAS modelling as well as Gumbel method approach has been employed to provide an overview assessment of flood risk across the district. The modelling outputs have demonstrated that the majority of the district is typically at high risk of flooding, with predominantly 6m depth of flood out of the river channel.

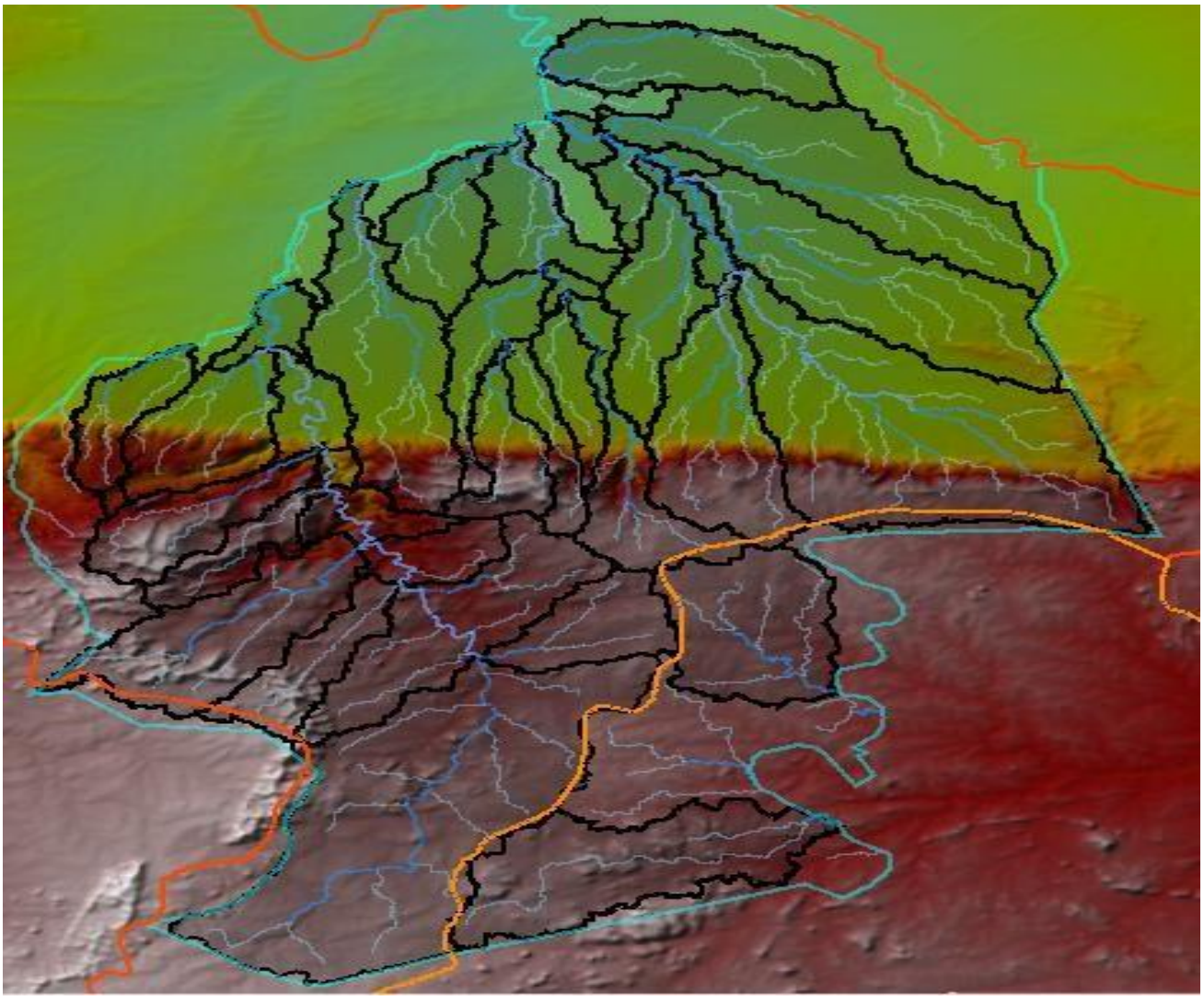

Figure 4.5-A: Catchment delineation and flood inundation modelling

Flood inundation Figure 4.5-B are presented above. The modeling outputs have demonstrated that the majority of the district is at risk of flooding.

4.5.1 Ground Water

Groundwater is any water that is found underground surface and can still be polluted if places like dumpsites and riverine waste disposals are not monitored. Groundwater resources for rural development have been investigated by Interconsult (1985) and Owen (1989). Interconsult (9 185) classified the main lithologies of Zimbabwe into regional hydrogeological units,

Plate 4.5-1: Dumpsite threat to Groundwater in Centenary

Ground water can be polluted by such open dumpsites

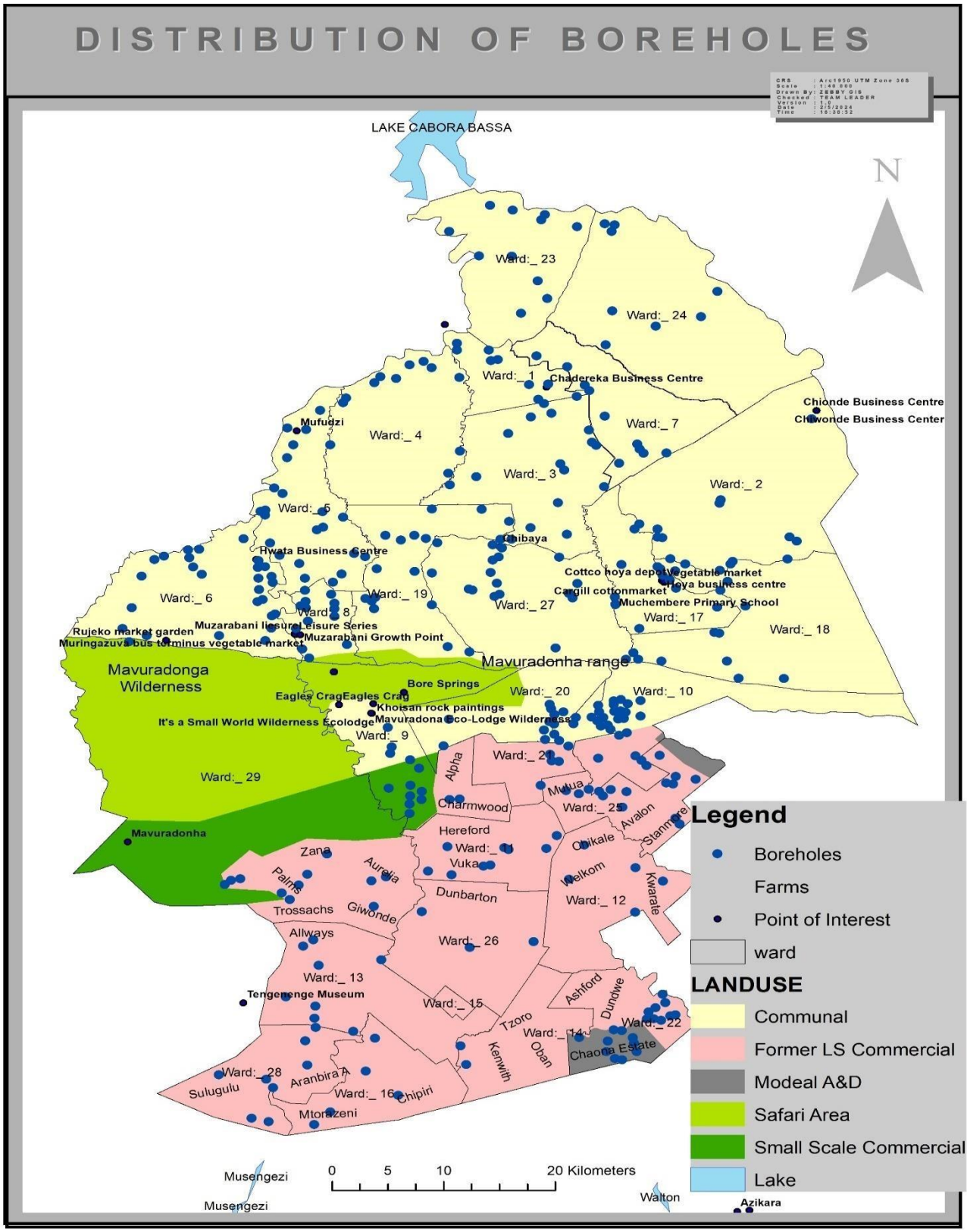

Figure 4.5-C: Underground Water (Boreholes Distribution in the district)

4.5.2 Surface Water

Some rivers in Muzarabani District retain surface water throughout the year, but a few have perennial flow (Interconsult, 1985). In order to utilize surface water as a reliable source storage is necessary. For the purpose of storing water in small dams, it is important to decide whether significant runoff may be expected every year. Despite this variability in annual runoff, it seems that there is considerable potential for harnessing and utilization of surface water in small dams in the Resettlement areas in Upper Muzarabani but the problem in Lower Muzarabani is evapotranspiration and massive seepage due to the sodic soils. (Agritex, 2024).

Upper Muzarabani is located in natural ecological region 2a and 2b thus the upper part of the district does not have any water problems. The Mavuradonha Mountains act as a water tower for the water stressed areas in lower Muzarabani. During the dry season, livestock in lower Muzarabani faces challenges related to water access and community members have to pump water for the cattle to drink. However, the lower Muzarabani section hosts several Gambwes which are natural surface water reservoirs. Gambwes are mainly used for providing drinking water, laundry and irrigation. However, the Gambwes normally dry up before the onset of the rains.

Plate 4.5-2: Gambwe providing drinking water for livestock. Ward 8, Mushinye Village

Surprisingly Dams suffer from high evapotranspiration and massive seepage or infiltration due to dryness of soil type discussed earlier but for these natural pools Gambwes it is a bit different as they can reach almost to the next rain season without drying. These Gambwes are believed to be Sacred and besides just using water for domestic and animal drinkingT points the community is not allowed by Traditional Leaders .to temper with Gambwes. Research is needed to explore ways to increase the water holding capacity of Gambwes to ensure that they can be a perennial source of water in the villages. There are other Gambwes distributed across the valley, ward 23 has 6 Gambwes.

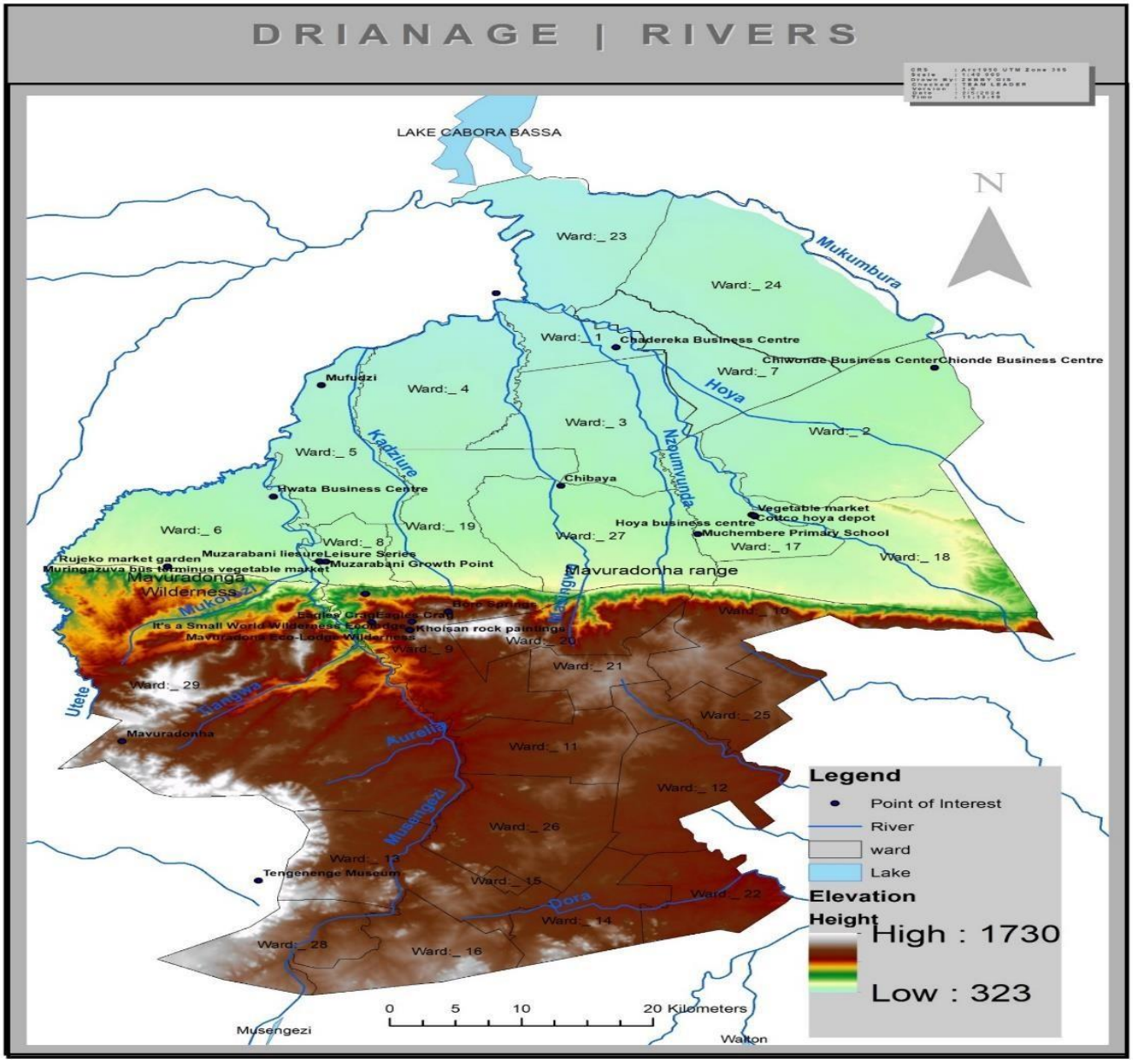

Figure 4.5-D: Drainage and Rivers

The status of dams has a huge impact on the Infrastructure Plan.

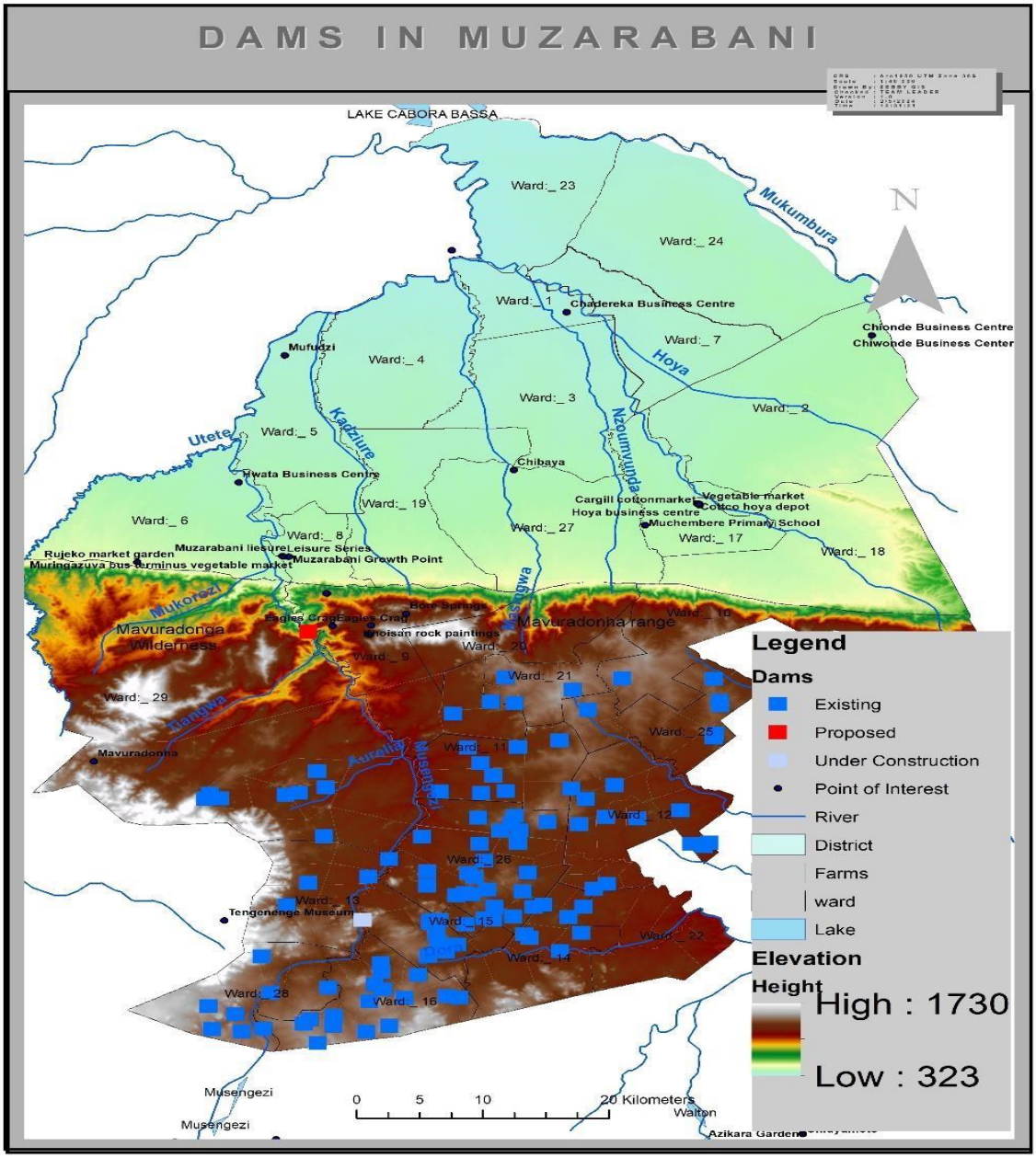

Figure 4.5-E: Distribution of Dams in the District

Most of these mapped Dams are believed to be Private and owned by Resettlements Farmers,In Lower Muzarabani no single dam exists.

Table 4.5.2:1: Summary of big Dams in the District all in Upper Muzarabani

Name of Dam	Capacity in ML
Lochnaga	70523
Tsatsivale	950
Oban	80234
Centinary	875
Clear morning	729
Silverstroom	1025

4.5.3 Drainage Impact

Much of the district drains falls in the Musengezi sub-catchment of the Manyame catchment. This catchment generally drains northward and all rivers eventually become tributaries of Musengezi which in turn empties in lake Cabora Bassa. This means that any pollution of water in Muzarabani South (Upper Muzarabani) will be felt by water consumers in the North. A few rivers and streams in the southeastern parts of the district falls in the Upper Ruya sub catchment of the Mazoe Zinwa catchment.

The heights do not change much in the Muzarabani North making it prone to flooding especially considering that much rainfall from the south collects here and proximity to the Cabora Bassa lake .

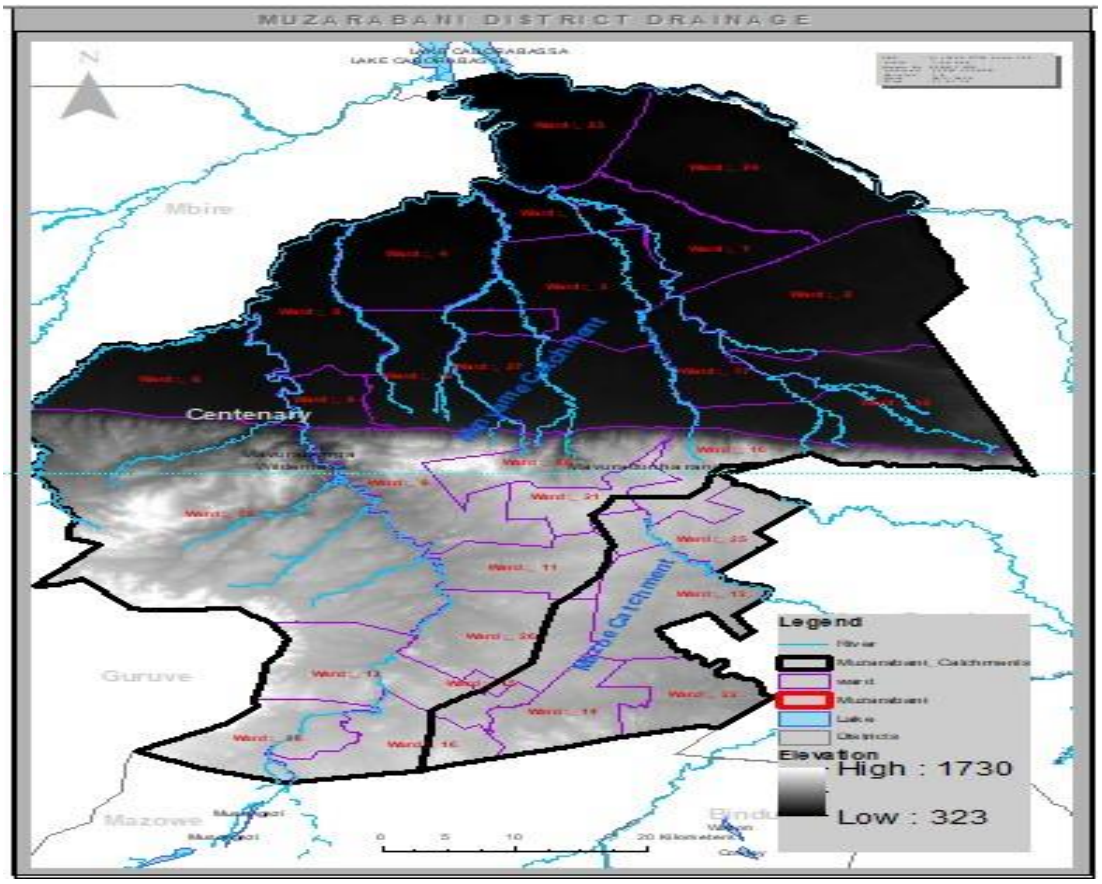

Figure 4.5-F: Drainage in the District

4.5.4 AQUATIC ECOLOGY, LIMNOLOGY AND WILDLIFE

The district hosts the Mavuradonha Wilderness Area a region of high conservation status brimming with untapped potential due to its majestic landscapes, rich cultural heritage and diverse ecosystems. The Wilderness area is a critical resource in the district providing key ecosystem services and goods for the district. The Mavuradonha Wilderness Area is quite extensive in terms of its spatial extent, it is the only formally protected area in Muzarabani District. The MWA occupies approximately 14% of the Muzarabani District, thus, it is a vitally an important ecological unit for the District. It represents the last remaining undisturbed Miombo woodlands in the District and it protects the northern end of the Great Dyke characterized by serpentine grasslands and a high endemic species count. It is also an important cultural and historical site and, as such, has been awarded added protection status of a National Monument, protected by the National Museums and Monuments of Zimbabwe. A draft application for World Heritage status has been prepared and is under consideration by UNESCO.

The Wilderness area acts as an important “water tower” for the downstream areas of the Musengezi River, which passes through water stressed areas that are likely to be adversely affected by climate

change. In addition, it is an important carbon repository that can provide valuable ecosystem services for the District. This makes the protection of the Wilderness area and the district's general environment even more critical.

The wilderness has in recent years faced severe threats due to competing interests from Mining Syndicates and encroachment. The District is also host to the Great Dyke, a mineral rich geological formation. The cumulative effect of mining and settlement developments, in the adjacent areas has seen the wilderness of the District being eroded. Without the aesthetics, the wilderness area is in danger of becoming degraded which will have serious environmental and social impacts in both the lower and upper Muzarabani. This means that the Rural District Council is under pressure to continue to ensure that the wilderness area is protected at the same time ensuring development of the district. It is important that the District maintains its Wilderness Values.

4.6 Ecological Baseline

Vegetation

Broad Description and Woody Cover

Essentially three main vegetation types cover most of the Wilderness Area with Miombo woodland as the dominant vegetation type throughout the wilderness area. These and other, less extensive types (e.g. riverine and grassland), are briefly outlined below and the extent shown on Fig 4.6 A below. The rest of the district, outside of the Wilderness area, in Lower Muzarabani is dominated by Mopane woodland. A mixture of species is found in lower Muzarabani regions which includes the dominant *Colophospermum mopane*, *Ziziphus mucronata* and *Adansonia digitata*. The ecosystem goods derived from *Adansonia digitata* and *Ziziphus mucronata* provide an alternative income generating source for women in Lower Muzarabani. This has also improved their adaptive capacity to extreme climate shocks such as droughts.

Table 4.5.4:1: Summary of main vegetation types in the study area

Vegetation Type	Brief description
Miombo Woodland Occupying Upper Muzarabani and also covering the Mavuradonha	*Brachystegia boehmii-Brachystegia allenii* woodlands, *Brachystegia speciformis-Julbernadia globiflora* woodlands and Andropogon spp dominate grasslands dominate the greater part of the wilderness area.

Wilderness Area.	The grasslands are more common in the western sections, while the woodlands dominate the wilderness's central, eastern and southern parts.
Mopane woodland	This type is dominated by mopane (*Colophospermum mopane*) with Combretum shrubs. Many areas show browsing damage from elephants. The lower Muzarabani also shows the dominance of *Ziziphus mucronata* and *Adansonia digitata* which provide livelihood support and income generating activities from the fruits for Women in the lower part of the district.
Acacia woodlands and riparian zones	Most of the lower part of the district is dominated by drought resistant species such as Acacia Species.

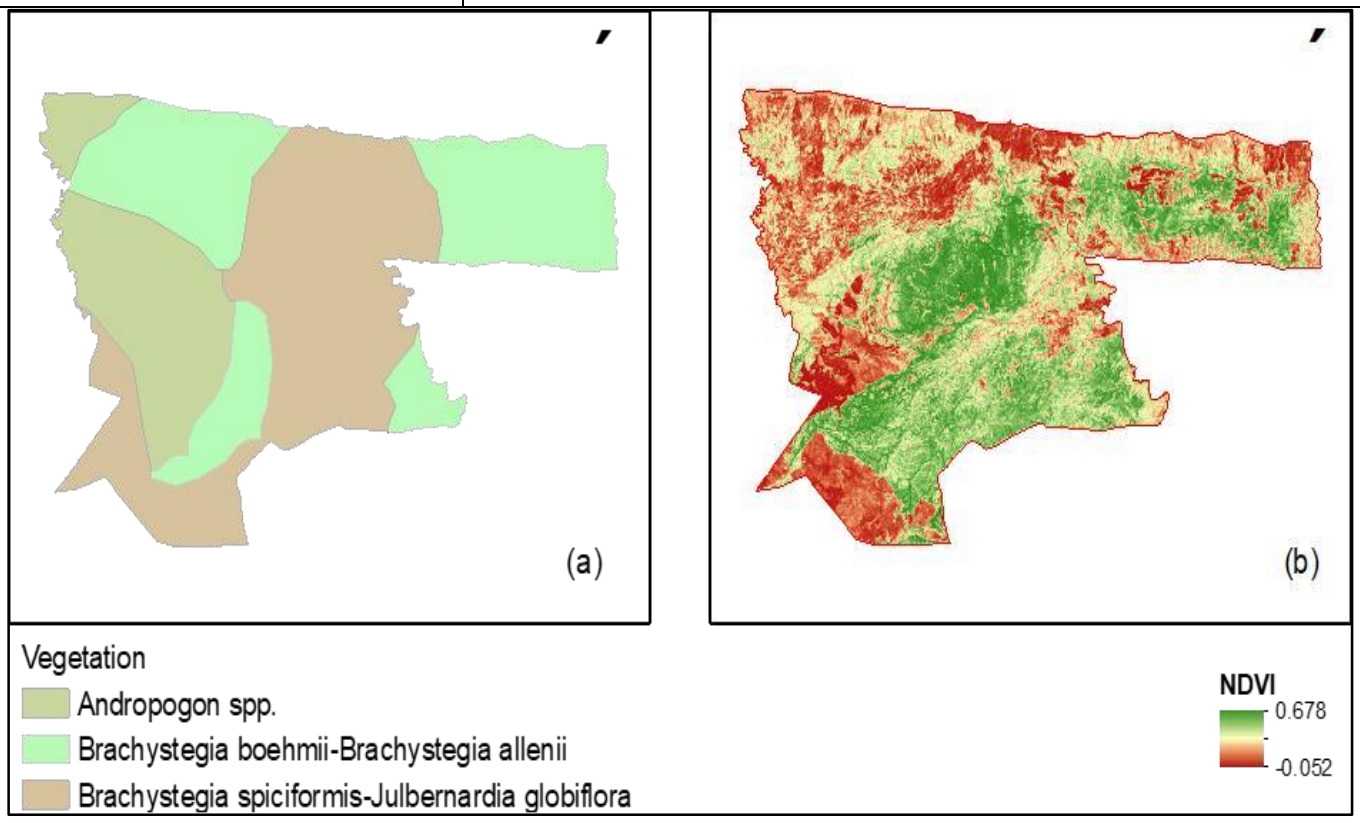

Figure 4.6-A: Vegetation distribution within the Mavuradonha Wilderness area.

Loss of woody cover has obvious implications for decreased carbon sequestration, changes to micro and macro-climate and decreased biodiversity leading to decreased ecosystem functioning and resilience to extreme events such as drought and disease.

Importance of SDGs in planning

There has always been an inextricable link between human development and the environment since time immemorial. Thus, the environment is the single most important factor since it is the base on which human life and development depends. Various international treaties and conventions recognize the role that is played by the environment in development and poverty eradication as indicated in global Sustainable Development Goals. SDG11 underscores the need to make cities and human settlements inclusive, safe, resilient and sustainable which is one of the principles underpinning the need for the integration of biodiversity in development planning. SDG 13 emphasizes the need to take urgent action to combat climate change and its impacts. Lower Muzarabani is susceptible to extreme weather events and the associated climate shocks and this Development Master Plan will provide a road map for improving the District's resilience and adaptive capacity. The integration of biodiversity in the development process will improve the district's resilience to climate change. Upper Muzarabani and the Mavuradonha wilderness are key resources in providing key ecosystem services that will improve the district's adaptive capacity.

SDG 15 "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss". Currently Lower Muzarabani is facing challenges from land degradation and gully formations particularly in Hoya Rural Service Centre. Some infrastructures (a business shop) have been affected by the spreading of Gullies. Some of the gullies are not visible from the surface, they are undercutting infrastructure from the ground resulting in the collapse of some buildings. Hoya Secondary school is under severe threat from gullies spreading towards the school infrastructure. This development master plan will contribute to SDG 15 by providing solutions for halting the spread of gullies at the service center. Deforestation and biodiversity loss are serious threats facing the district due to tobacco farming, mining and encroachment into protected areas like the Wilderness area particularly in the Upper Muzarabani area where climatic conditions are conducive for farming. By protecting and promoting the sustainable use of biological diversity, the district's plan will also contribute towards the attainment of SG15.

Muzarabani District also shares boundary with Guruve District and this has presented challenges to the District in terms of protection of the wilderness area. There is lack of coordination between the two districts during Environmental and Social Impact Assessments (ESIA) studies for Mining projects which has resulted in serious problems. There are instances where Guruve District approves projects that overlap into the Muzarabani district and most of these chrome mining projects have resulted in biodiversity loss within the Wilderness area. Whilst the study area for the plan was restricted to

Muzarabani District, it is important to recognize the cumulative impacts of activities in the adjacent Guruve District :

- There has been rapid deforestation due to land reform and redistribution which in some cases has resulted in the encroachment of the Wilderness Area.
- There has been rapid growth in chrome mining initiatives in Guruve District which have overlapped into the Wilderness Area and part of Upper Muzarabani. Of concern, is the fact that most of the mined-out areas are lagging behind in terms of rehabilitation. Thus, mining has also resulted in unprecedented rates of environmental degradation
- Expansion of settlements and subsistence agriculture involving tobacco farming. The curing process of tobacco is the main cause of deforestation in the district as there is no alternative source for the process. Farmers encroach into the wilderness area resulting in the destruction of sensitive ecosystems.

All of this development has meant extensive tree cutting and land clearing with:

- an increased potential for soil erosion and siltation of rivers
- increased pollution from inorganic fertilizers and pesticides,
- increased potential for the spread of livestock diseases into wildlife populations,
- reduced corridors and habitat for wildlife
- Biodiversity loss

4.7 Wildlife

4.7.1 Quotas and utilisation

Hunting occurs in Mavuradonha Wilderness Area. Table 4.7.1:1 shows the historical data on Mavuradonha Wilderness Area quota. The general indication is that there are not enough animal populations to provide an attractive quota to attract trophy hunters to the Mavuradonha Wilderness Area. There is need to restock more and build the wildlife population in the wilderness area for a competitive trophy hunting product. Photographic tourism can provide better returns and help finance developing the desired tourism product.

Table 4.7.1:2: Data on previous quota, 2001 to 2010. (Post 2010 was restocking period)

SPECIES	PREVIOUS QUOTAS	Recommended

		Quota 2015

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015

Baboon	20	20	20	20	20	20	20	20	20	20	20

Buffalo (f)	0	0	0	0	0	0	0	0	0	0	0

Buffalo (m)	0	0	0	0	0	1	1	1	1	1	1

Bushbuck (m)	2	2	2	2	2	2	2	2	2	2	2

Bush pig (m)	1	1	1	1	1	10	10	10	10	10	10

Civet	1	1	1	1	1	1	1	1	1	1	1

Crocodile	2	2	2	2	2	1	1	1	1	1	1

Ducks/Geese	10	10	10	10	10	5	5	5	5	5	5

Duiker	5	5	5	5	5	5	5	5	5	5	5

Eland (m)	1	1	1	1	1	1	1	1	1	1	1

Eland (f)	0	0	0	0	0	0	0	0	0	0	0
Elephant (m)	4	4	4	4	4	4	4	4	4	1	1
Elephant (T/L)	0	0	0	0	0	0	0	0	0	0	0
Francolin	100	100	100	100	100	100	100	100	100	100	100
Genet	2	2	2	2	2	2	2	2	2	2	2
Giraffe (m)	0	0	0	0	0	1	1	1	1	1	1
Grysbok (m)	2	2	2	2	2	2	2	2	2	2	2
Guineafowl	100	100	100	100	100	100	100	100	100	100	100
Hippo	0	0	0	0	0	1	1	1	1	1	1
Honey badger	1	1	1	1	1	1	1	1	1	1	1
Impala (m)	1	1	1	1	1	4	4	4	4	4	4
Jackal (m)	5	5	5	5	5	5	5	5	5	5	5
Klipspringer (m)	2	2	2	2	2	2	2	2	2	2	2
Kudu (m)	3	3	3	3	3	6	6	6	6	6	6
Leopard (m)	2	2	2	2	2	2	2	2	2	2	1
Lion (m)	0	0	0	0	0	1	1	1	1	1	1
Nyala (m)	0	0	0	0	0	0	0	0	0	0	0
Pigeons/Doves	250	250	250	250	250	250	250	250	250	250	250
Porcupine	3	3	3	3	3	3	1	1	1	1	1
Reedbuck (m)	0	0	0	0	0	0	0	0	0	0	0
Sable (m)	6	6	6	6	6	6	6	8	8	6	4
Sand grouse	100	100	100	100	100	100	100	100	100	100	100
Serval	1	1	1	1	1	2	2	2	2	2	2
Spotted Hyena (m)	1	1	1	1	1	2	2	2	2	2	3
Vervet Monkey (m)	25	25	25	25	25	25	25	25	25	25	25
Warthog (m)	3	3	3	3	3	4	4	4	4	4	4
Waterbuck (m)	0	0	0	0	0	1	1	1	1	1	1
Wildcat	1	1	1	1	1	1	1	1	1	1	1
Wildebeest (m)	0	0	0	0	0	0	0	0	0	0	0
Zebra (m)	2	2	2	2	2	4	4	4	4	4	4

Source: Mr. Seremwe Nzou Safaris

There is only trophy data for 1 male elephant killed in 2015. Right tusk had a weight of 24kgs and length of 158cm whilst the left task had 23kg and length measuring 155cm. whilst this is an indication of good trophy. Table 4.7.1:3 shows animals killed for trophy hunting in 2015.

Table 4.7.1:4: Available Trophy utilisation data

SPECIES	SEX	CONCESSION	GRID REF	DATE SHOT	SCI	TROPHY FEE
Zebra*	M	Muzarabani 1	TS682654	18/8/2105	N/A	350
Zebra*	M	Muzarabani 1	TS731673	23/08/2015	N/A	350
Baboon	M	Muzarabani 1	TS780629	26/08/2015	N/A	
Bushbuck	M	Muzarabani 1	TS727681	26/08/2015	38.5	400
Leopard	M	Muzarabani 1	TS715661	26/08/2015		2500

Source: Nzou Safaris

4.7.2 Trophy trends

Analysis of trophy trends to infer population trends from data captured at the parks and RDC offices, where copies of the TR2 are retained have shown that it is a young and small population quota . The data recorded on the TR2 forms include the sex of the hunted animal, age, trophy size (using the SCI scoring scheme), number of hunting days, location of kills.

4.7.3 Mammals

Table 4.7.3:1: Population estimates obtained from Feasibility Report for MWASpecies Reintroduction. Source Zimparks.

Species	Population Estimates (2013/14	Introduced Populations 2013/14
Blesbok	-	5
Bushbuck	-	12
Eland	50	55
Giraffe	5	-
Impala	40	86
Kudu	40	-
Sable	90	3
Tsessebe	-	30

Waterbuck	5	16
Wildebeest	-	129
Zebra	200	508

4.7.4 Birds

Mavuradonha is an Important Bird Area (IBA), hosting over 290 bird species. Among them are several large eagles, Dickinson's kestrel, the racket-tailed roller, and the melodious Miombo wren-warbler. The Mavuradonha IBA hosts a rich avian diversity, including the rare Meave's starling, the kurrichane thrush, and the striking white-breasted sunbird. Other rare avian species such as the boulder chat, the Miombo rock thrush, and the broad-tailed paradise whydah can also be viewed.

A colony of giant Egyptian fruit bats, estimated at up to 20,000 bats can also be found in the wilderness area, the largest known colony south of the equator. The status as an IBA places the MWA as a potential haven for bird watchers.

4.7.5 Human-wildlife conflicts

Table 4.6.2d below shows historical human wildlife conflict (HWC) incidents data for the period January 2019- October 2019. Generally, elephants make more than 80% of the human wildlife conflict incidents.

Table 4.7.5:1: Muzarabani HWC incident reports 2019-October 2021

Species	Wards	Incidents	Killed
Elephant	16	70	2
Buffalo	8	12	3
Crocodile	5	12	2
Hippo	6	9	1
Pigs	1	1	
Kudu	1	1	
Total		**105**	**8**

Source: Zimbabwe Parks and Wildlife Management Authority

Various routes utilized by elephants were mapped out through a participatory mapping process. However, elephant movement seems to follow riparian zones from the Wilderness area, through communities to Mozambique and other surrounding wildlife areas. According to Zimparks Ranger Starman Mazonde, who is also born and raised in the area, elephant movement in the area follows mainly three routes. The first route is (movement corridor) follows Musingwa River to Hoya River then connects to Mozambique leading into Mozambique. The main route involves movement through Gumba to Chadereka to Chimoyo to Kairezi to Chiwenga then Mozambique. Thus wards 1, 23, 24 and 27 are the wards mainly affected by HWC due to elephant movement. There are 5 groups of elephants mainly sighted in the area with group size of +60 individuals.

There is a general increase in the number of problem animal control (PAC) is the district. The period under analysis is also the growth season when most crops are ripening. This shows seasonal variations in reported HWC cases.

The data from council shows an increase in the cases. Table 4.6.2e below shows trends in HWC for January 2024 to March 2024.

There are various non-lethal methods of mitigating human-wildlife conflict that have been introduced in the district. These include beehive fences and chilli fences. These have proved effective to some extent because the elephants only seem to avoid the areas with bio-fences and affect the next. The district is in the process of developing chilli guns as a way to augment current efforts. Challenges involved also include water availability to have extensive areas of chilli fences. The chilli and beehive fences are also making significant contributions to the socio-economics of the area. The Beehives support approximately 400 farmers who are mainly women. There are various value addition projects which include honey processing, chilling processing, baobab fruit processing in jam and processing of Masawu into jam and beer which have incentivized wildlife conservation and protection and contributed towards the reduction of HWC.

There is also law enforcement personnel to effectively respond to HWC incidents. There are three (3) base camps at Museredza established by the RDC to respond to HWC reports. Apart from manpower requirements, the Museredza base does not have very high frequency (VHF) radios and connectivity is poor which negatively impacts on response rate to HWC reports. It is difficult to respond to HWC reports at night using motor bikes, thus there is need for vehicle support. Thus, there is need to consider these challenges for effective response to HWC and PAC.

Table 4.7.5:2: Human Wildlife Conflict incidents for the period January 2024 to March 2024.

Month	Species	Frequency	Affected area/ward	Nature of the problem	PAC/Action
January	Elephants	2	Museredza and Utete	Crop damage	Elephants driven back into the Wilderness by rangers.
	Hippo	1	Utete	Crop damage	Killed by the villagers in retaliation
February	Elephants	7	Museredza, Utete, Runga,	Crop damage	Non-lethal methods involving gunshots in the air, fire, beating drums and driving the elephants back into the wilderness.
	Crocodiles	1	Muringazuva	Livestock predation	Awareness campaign to villagers on safe watering sites.
	Buffalos	1	Muringazuva	Interaction with	Scared with gunshots
				livestock in grazing lands	
	Jackals	1	Palms ward	2 wounded children	Escaped into the Wild.
March	Elephants	6	Museredza, Runga	Crop damage	Non-lethal methods involving gunshots in the air, fire, beating drums and driving the elephants back into the wilderness.
	Jackals	1	Palms Ward	3 dogs attacked and wounded	Dogs were killed to mitigate the spread of rabies. The Jackals escaped into the wild.

Source: Muzarabani HWC Reports

4.7 ENVIRONMENTAL ISSUES PROFILING

4.7.1 Wetlands threats

A total of 15 wetlands were mapped in the district. An estimated 40% of the wetlands in the district are preserved by cultural beliefs. Spectacular wetlands recharged by springs for example Palms wetlands and Sohwe falls were observed in the district. Wetland cultivation is the major threat to wetlands in the area.

Palms wetland was noted to be in a stable condition and is along the great dyke. The wetland is recharged by a spring situated on a rock that is on the foot of the great dyke. The Sohwe falls are located in the wilderness area being continuously recharged by the mountain streams.

Fig 4.7.1a Palms wetland

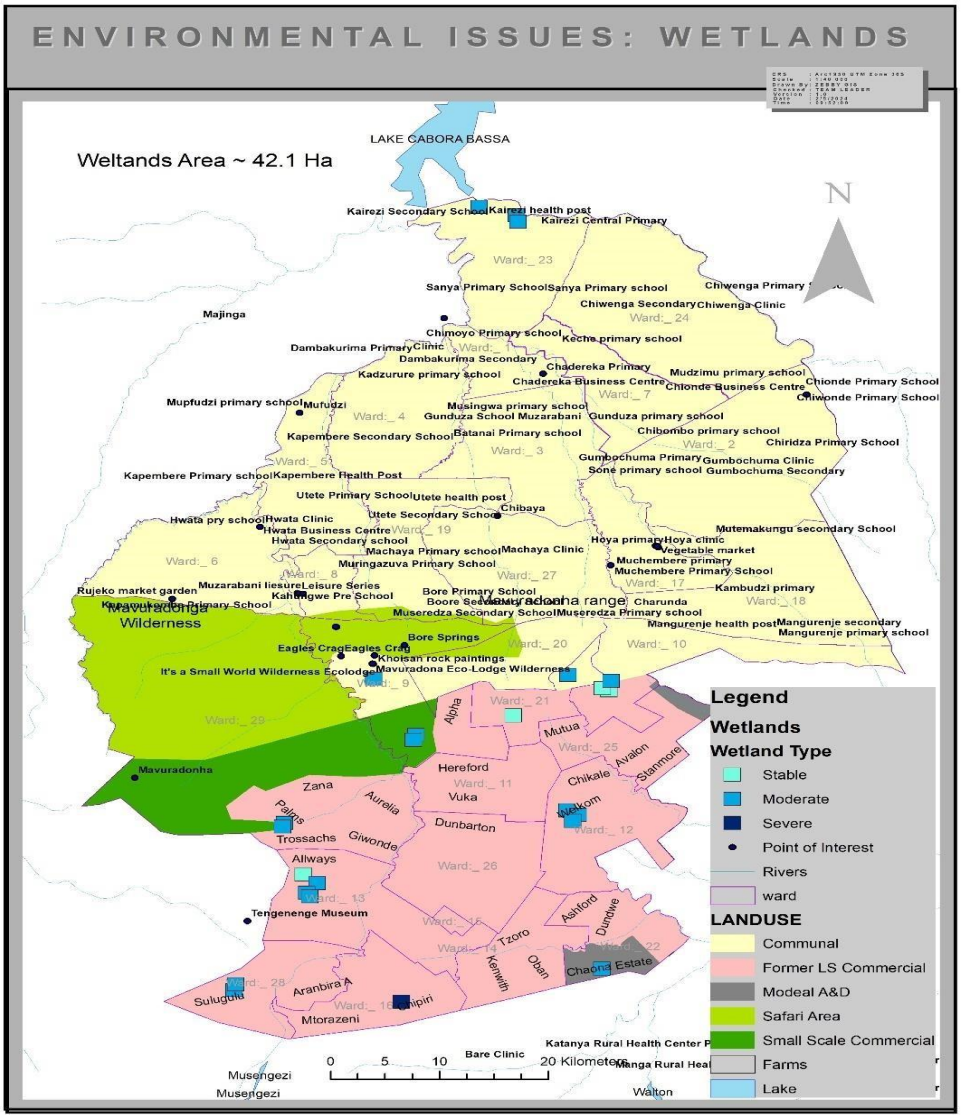

Figure 4.7-A: Distribution of wetlands and level of threats in the district

4.8 Gullies

A total of 48 gullies were mapped in Muzarabani with Hoya gully being the outstandingly large one. It is the worst case of land degradation scenario in the district with a depth of 5m and stretches for about a kilometre. Chemical erosion is the main cause of gully development due to the sodic type of soils which are dominant in the Muzarabani area thus making it difficult to rehabilitate the gully.

Ever increasing human and livestock population in the area has also put a lot of pressure on the environment due to land cleared up and opened for grazing of livestock, wind blowing soil away and heavy rains and floods forming and increasing sizes of gullies.-

Plate 4.8-1: Hoya Gully

Plate 4.8-2: Extent of damage being caused by Hoya gully

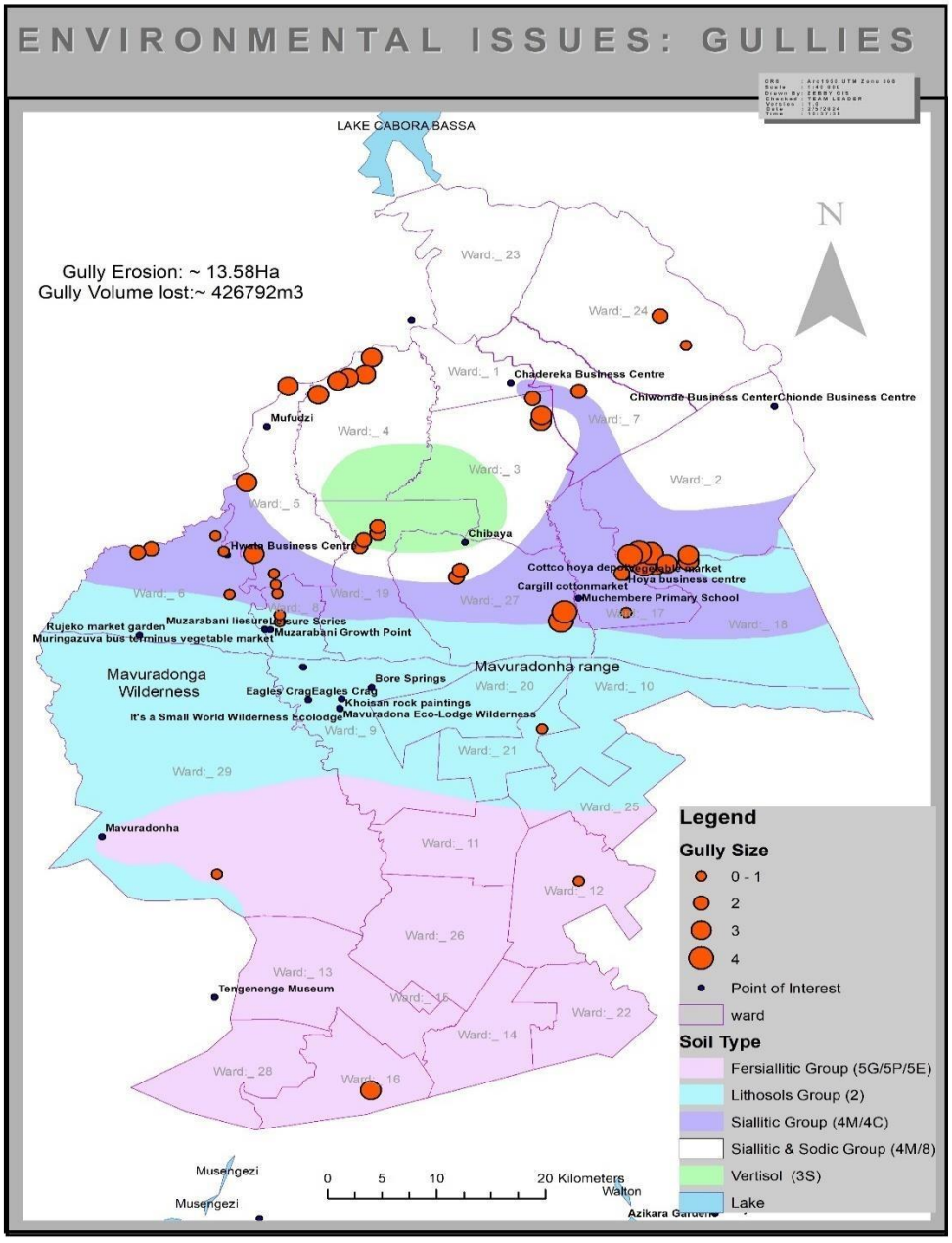

Figure 4.8-A: Size and distribution of gullies in the district.

Siltation

About 90 % of the rivers in Lower Muzarabani are severely silted since the area lies on a flat land therefore much of the silt originate from upstream. **Kalahari soils are dominant in most areas, these are fragile that the river keep changing its course and creating more flood plains where farming activities take place ,the common Matimba type of farming which is river bed farming practised as far back as early 1940s by original Dande Korekore tribe. Mostly affected are Msengezi, Dande, Hoya, Kadzi and Nzoumvunda Rivers.** Due to low rainfalls the locals try and move closer to water sources to avoid a situation of crops drying up.in

some areas people practise river bed cultivation whereby their crops are planted right on the river bed and crops like green mealies and vegetables are available all year round .***{Matimba an old indigenous farming method dating back to the 1940s***.**Matimba farming method supports majority livelihood and might require further research**

4.9 Deforestation

Centenary soils support the growth of crops like tobacco maize and soya beans therefore tobacco is the main cash crop in the district with about 70% commercial, resettled and communal farmers growing the crop mainly in Upper Muzarabani. Tobacco farming has contributed so much to deforestation of indigenous trees which are the source of fuel for tobacco curing. As farmers try to escape the cost of electricity and the lack of proper equipped barns to use coal deforestation becomes rampant.

4.10 Streambank cultivation

Streambank cultivation is prevalent in Lower Muzarabani with an estimated 47.5 km of river/streams being affected by cultivation within 30m of the banks. In Upper Muzarabani there is stream bank cultivation of tobacco seedbeds.This is totally not allowed as it causes massive siltation severely. General assessment has noted that streamback cultivation is totally the major cause of greater siltation as most of all the soils within 30m will end up in the river. This is different from Matimba cultivation where the practice is already done in the fertile flood plain where the river course has already diverted away just like the flood plains of China or Bangladesh where rice is grown.

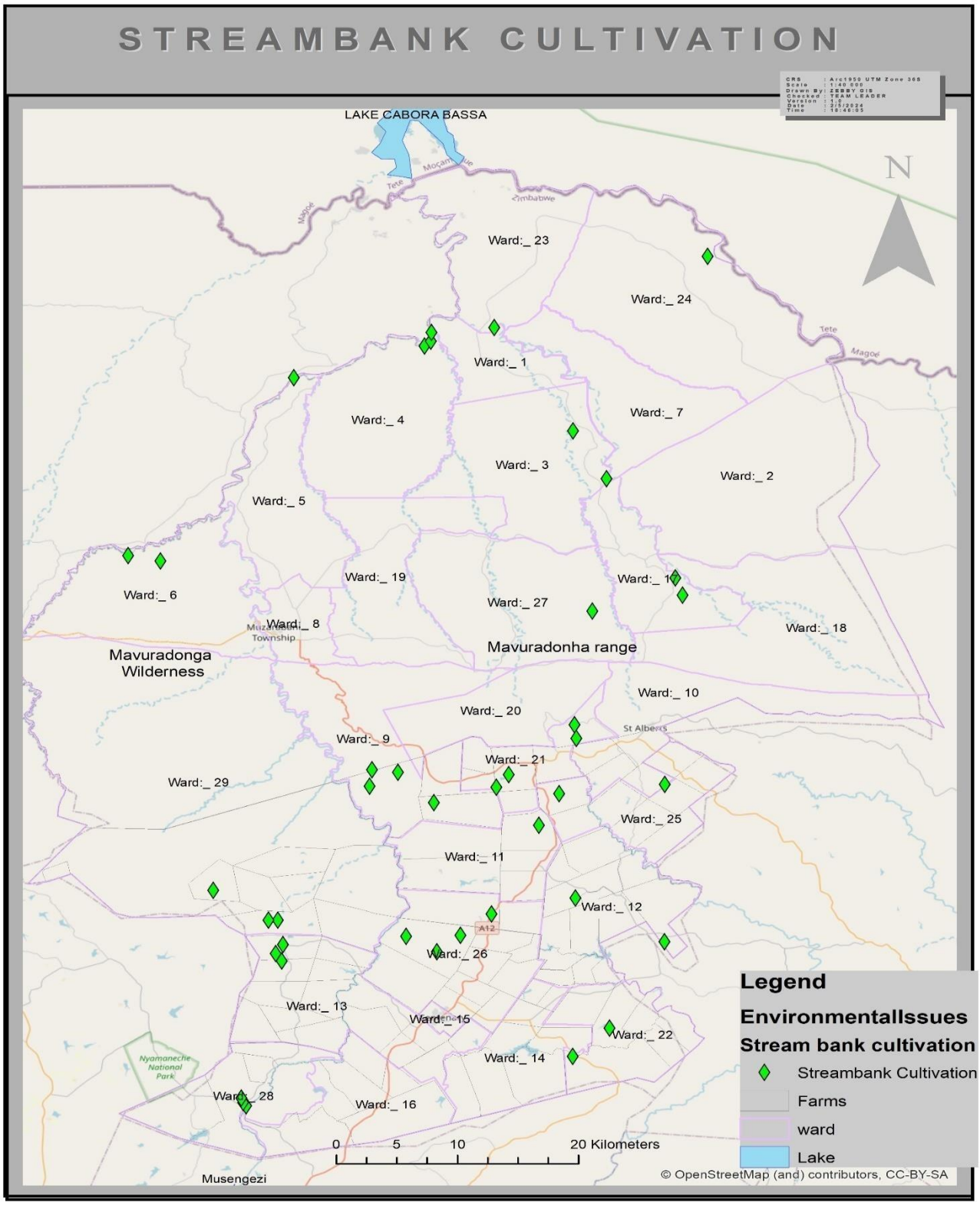

Figure 4.10-A:Streambank Cultivation

4.11 Veld fires

Centenary is a fire prone area consisting of Hyperaemia grasses which can grow very tall thus increasing the levels of biomass. About 60% of farmers in the area are reluctant to construct fireguards and fight fires during the fire season which makes it easier for fire to travel over a long distance causing serious damage to the environment. Most of the veld fires are believed to originate from Mazowe District.

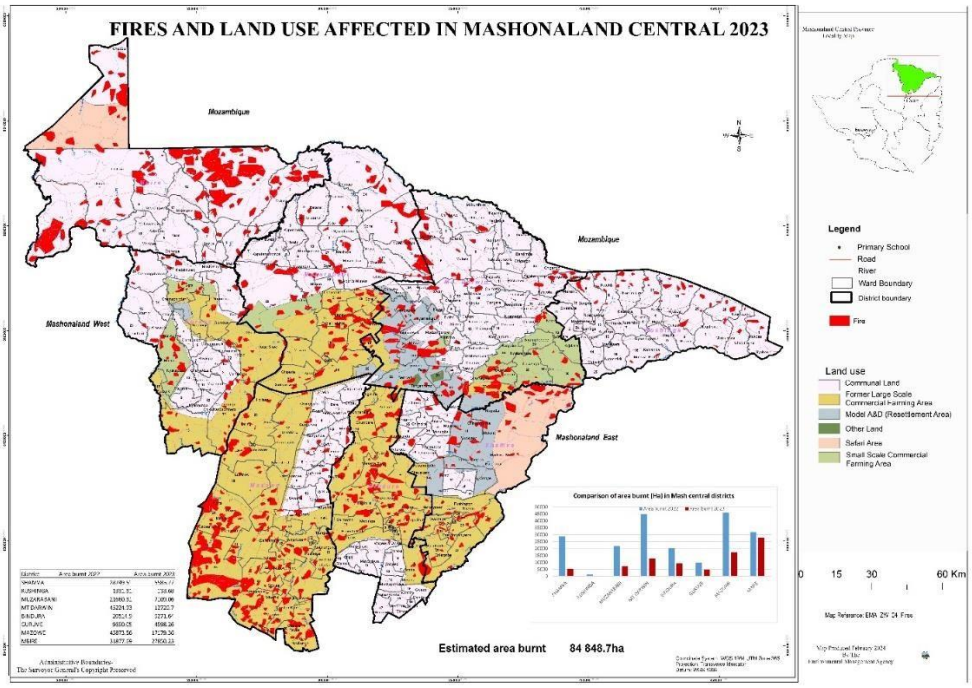

Figure 4.11-A: The map shows the distribution of veld fires in the province

Fire is a natural phenomenon in all savannahs, but the incidence and timing of fires has changed markedly over the past century with the increase in human population and activities. The land redistribution in the Upper Muzarabani area commercial farms not only led to rapid deforestation in land clearing and tobacco curing, but there was also a great increase in bush fires. The Map in Figure 4.11-B shows high fire prevalence in the Upper Muzarabani area where tobacco farming is a common activity. Increased fire leads to a shift in dominance from fire sensitive species, to those that are more resistant, e.g. Terminalia sericea. The effects of fire, fire management and control measures have been debated at length, but most managers agree that fire control is vital to the continued existence and rehabilitation of the District's Vegetation. This is particularly applicable to any long-term or 'sustainable' utilization forestry programs and should be borne in mind when planning any community based natural resource management projects.

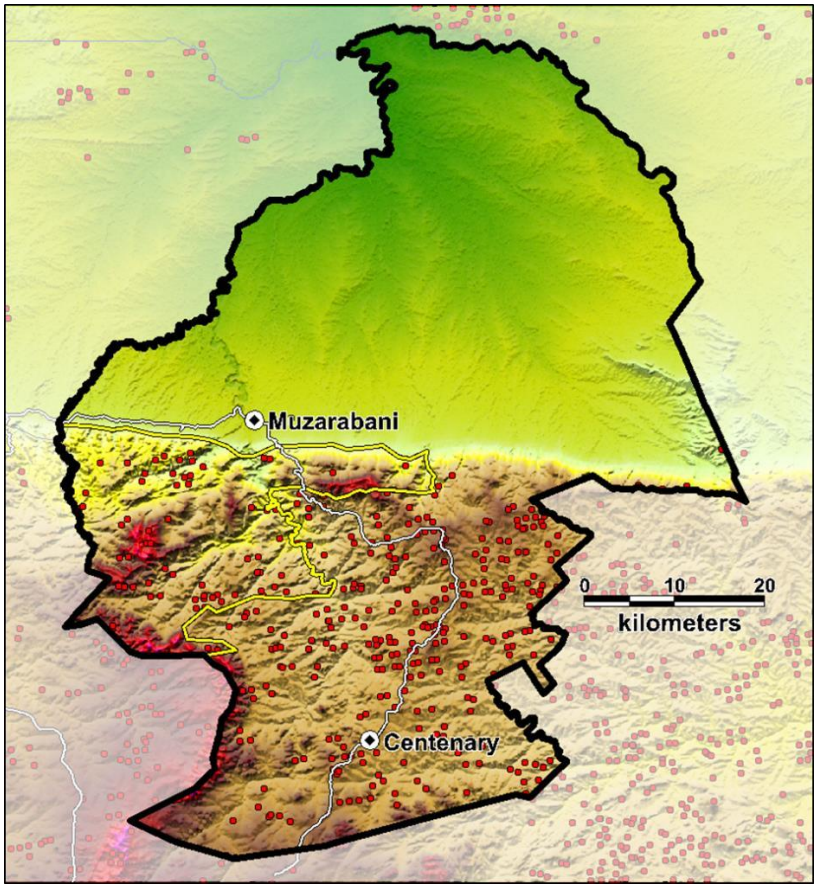

Figure 4.11-C: Fire incidents distribution in the district in 2021

Source: Environmental Management Agency database

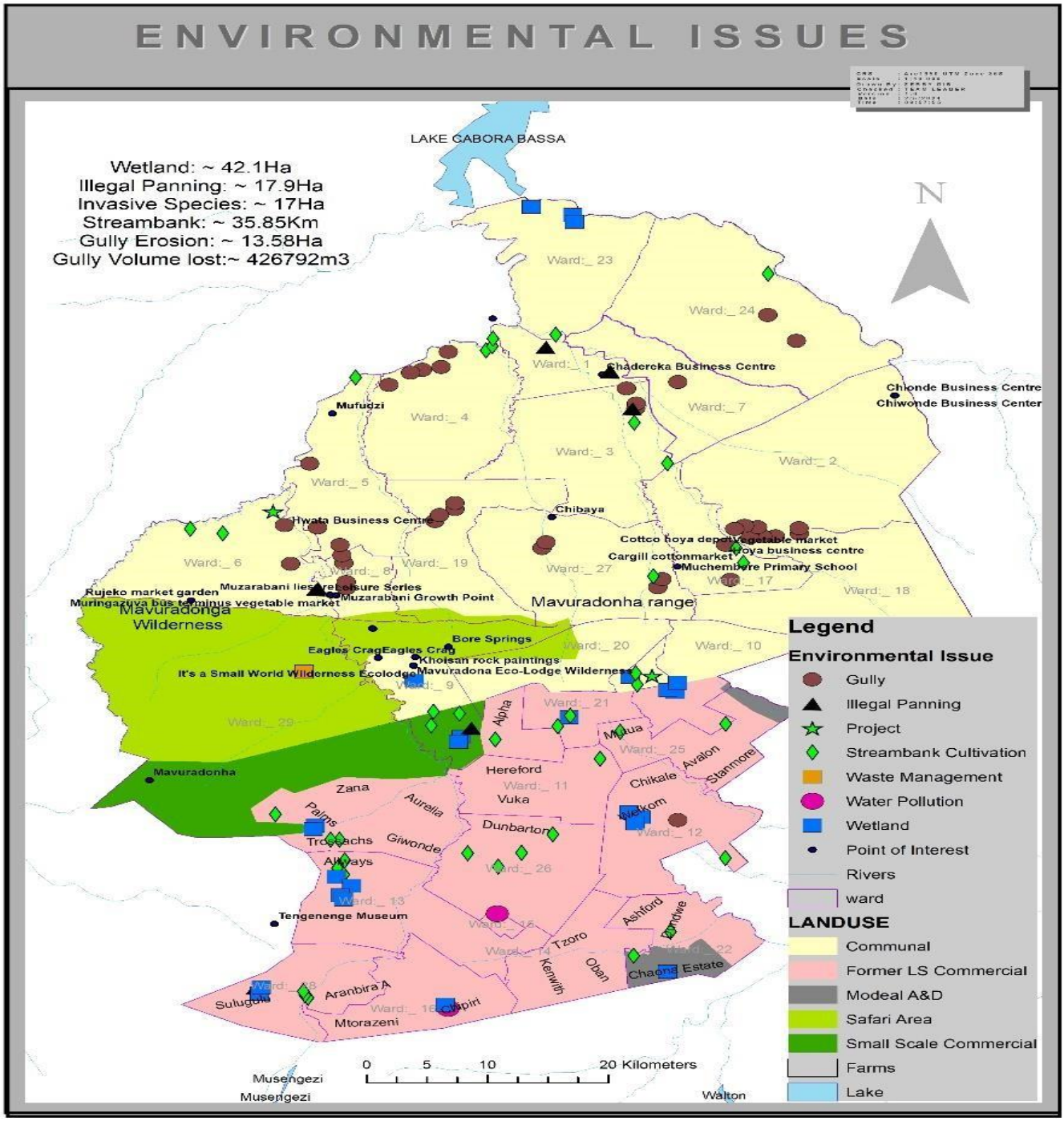

Figure 4.11-D:
Districbution of major environmental problems in the district

CHAPTER 5 LAND USE AND LAND OWNERSHIP

5.1 Major Land uses in the area

The district has 4 main land uses which are communal, resettlements, conservation area and urban land which are approximately 49%, 35%, 14% and 2% of the district respectively. The Invictus energy company discovery of oil and gas may end up taking significant portions of the communal lands. Urban land use is made up of urban settlements in the main service centres of Centenary, Muzarabani and St Alberts and other various business centres Chiwenga Hoya Chawarura Kairezi Chadereka Dambakurima Chimoio.

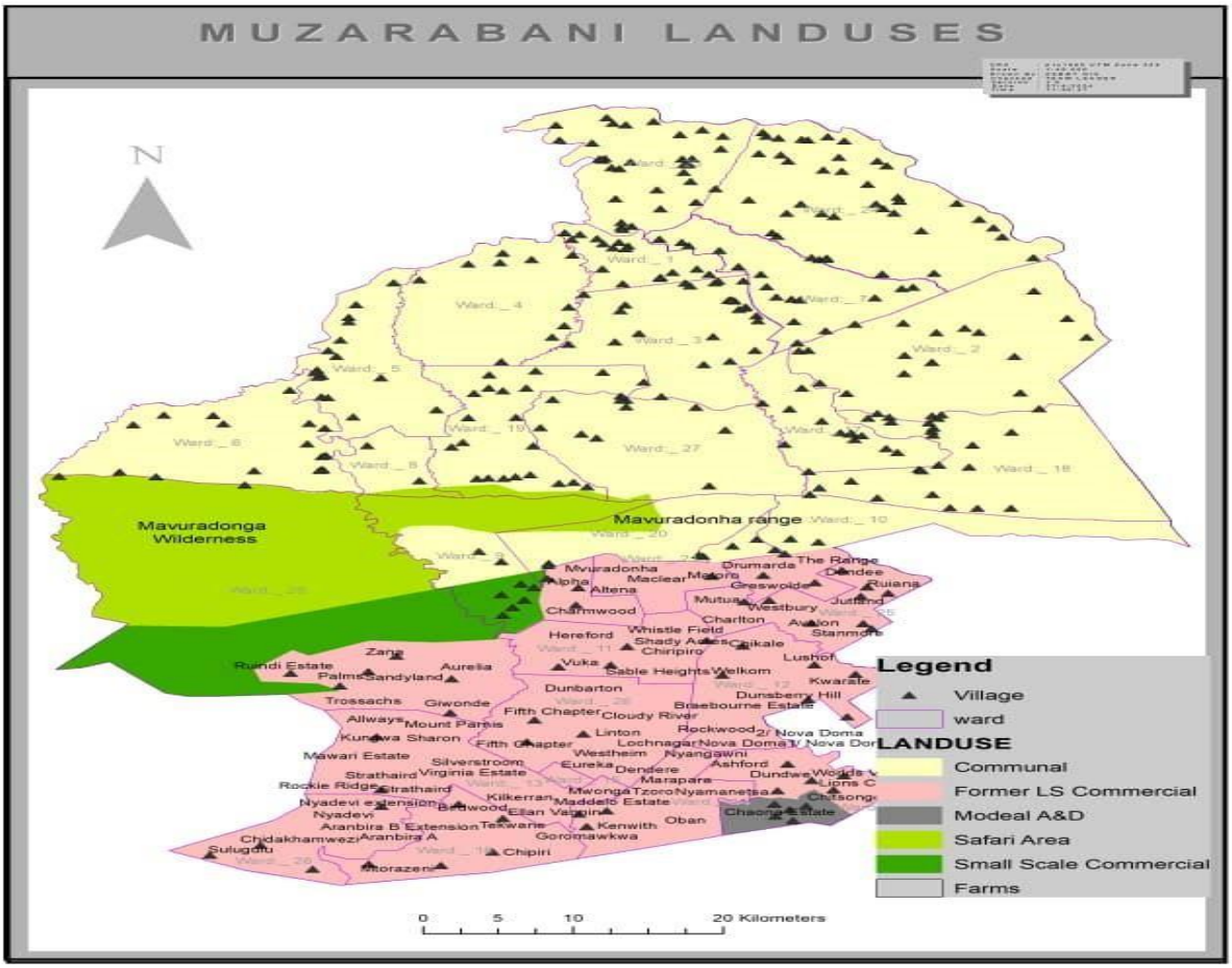

Figure 5.1-A: Muzarabani Land use zones

LAND USES AND ZONATION IN THE DISTRICT

5.1.1 Muzarabani District Zonation

The zoning follows the broad zoning for the whole Zambezi Valley. The District has three zones. Two of these zones are in the upland areas (i.e. above the 700 m contour) and one is in the lowlands. There are significant ecological and climatic differences between the area above the escarpment and that below, in the Valley. Table 5.1.1:1 shows the broad zonation of Muzarabani District.

Table 5.1.1:2: Table 5.1.1a. Settlement zones for ILMP

Zone	Description
Upland Farming 1,475 km^2	Land above 700 m. above sea level rising to around 1,200 m above seas level in the south (Great Dyke intrusion). Previously commercial farming land the area is now resettled with both A1 and A2 model farming systems. Falling mostly into Natural Region 2and b with an average rainfall of 800-900 mm per annum (with higher levels in the south), the area has potential for extensive farming.
Core Conservation 600 km^2	The core conservation zone for Muzarabani District is the Mavuradonha Wilderness area. Very broken, rugged terrain that includes the intrusive Great Dyke and falls under region 3
Lowland Farming 2,200 km^2	The land in the Zambezi Valley is all in Natural region 4 and 5 with an annual rainfall between 700-800 mm. The rainy season is shorter and generally more erratic than in the uplands. There is also a moisture deficiency and soil gradation in this area with the north being drier and with poorer soils than the south.

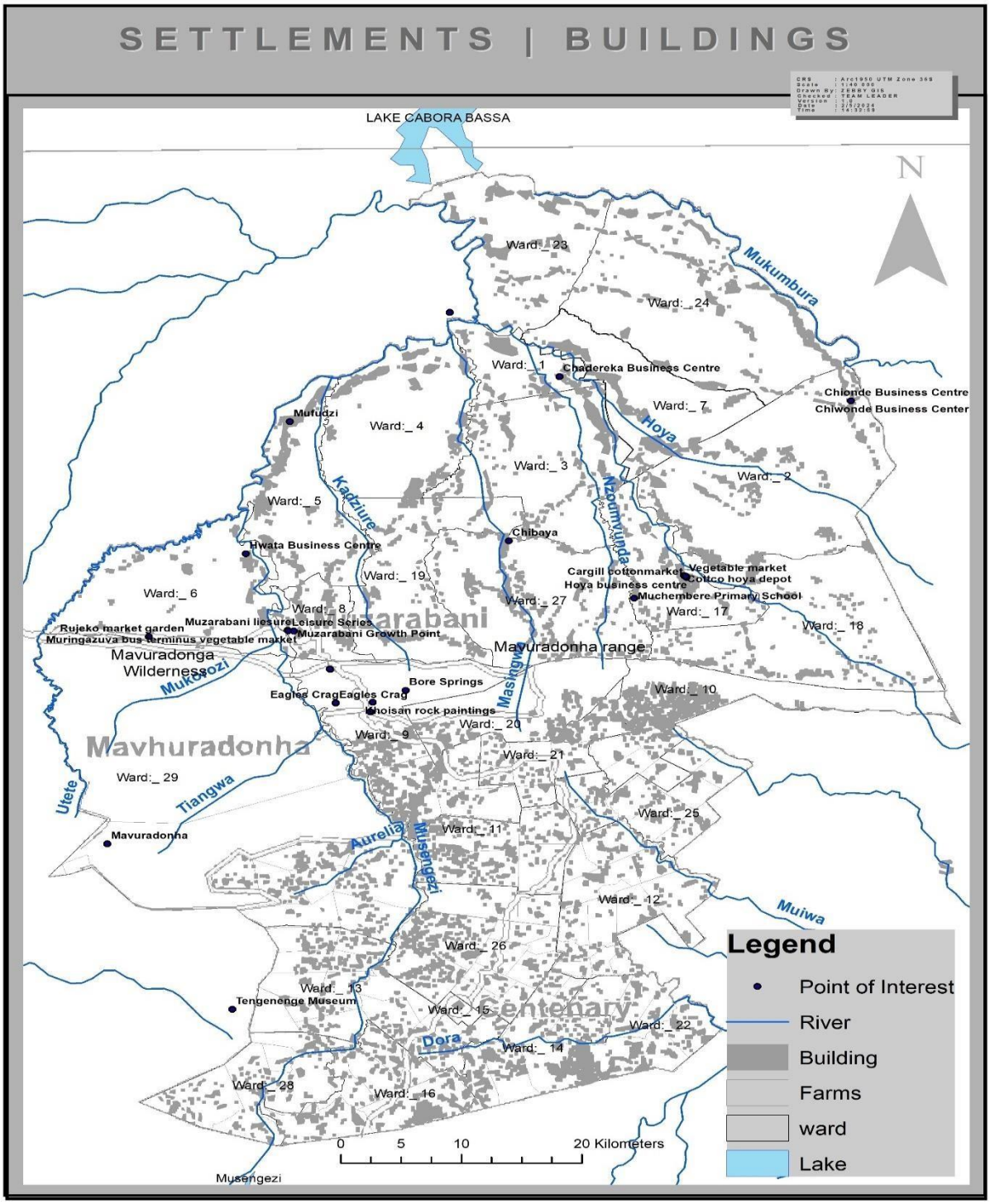

Figure 5.1-B: Settlement and buildings

The map shows that settlements have covered almost the whole district except the conservation area. This implies that any new project will displace people, shrinking grazing land and encroachment to environment sensitive areas as waterways, wetland, etc.

Settlement pattern and hierarchy

Muzarabani District has a well-defined settlement hierarchy. It has villages, business centres, rural service centres, and district service centres (growth point). Each level in the settlement hierarchy plays particular functions in the socio – economic development of the district. There were several factors which influenced settlement patterns in the district.

5.1.2 Rural settlements

Village settlement patterns and concentration were influenced by geographical and historical factors. Some people who were moved from the large-scale commercial farming area during the settler occupation period settled to the North of the district.

Nucleated villages are common in Muzarabani Communal lands and Gutsa communal lands. Linear settlement and dispersed settlements along river valleys are common in Hoya , Chadereka, Dambakurima, Utete and Kapembere communal lands. These settlements are on marginal land characterised by high temperatures and dry land and low crop agricultural productivity.

Most commercial farms which are now resettlement areas are located in the South or in Upper Muzarabani area from where indigenous communities were moved during the colonial era. These areas have favourable geological and climatic conditions suitable for better agricultural production.

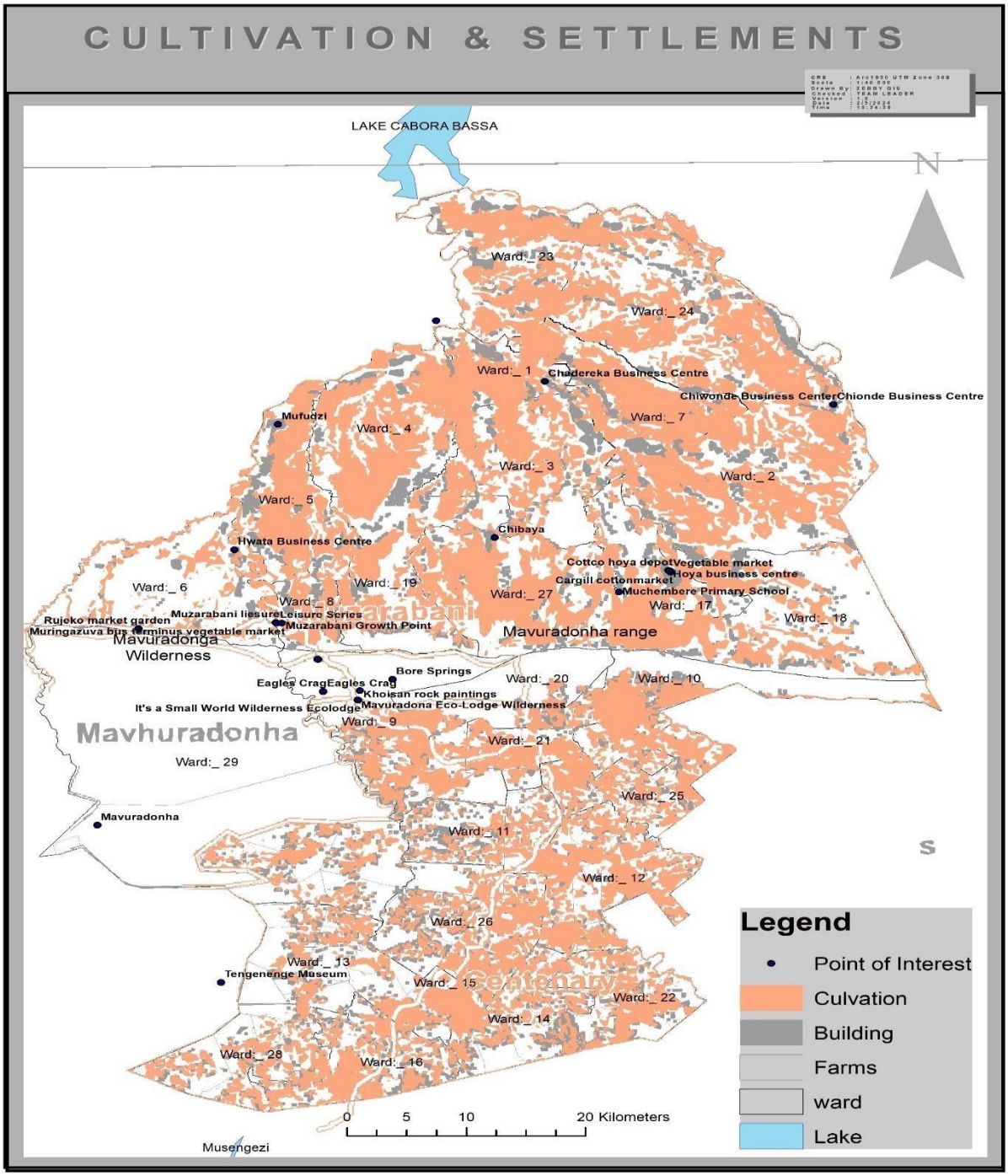

Figure 5.1-C: Cultivation and Settlement

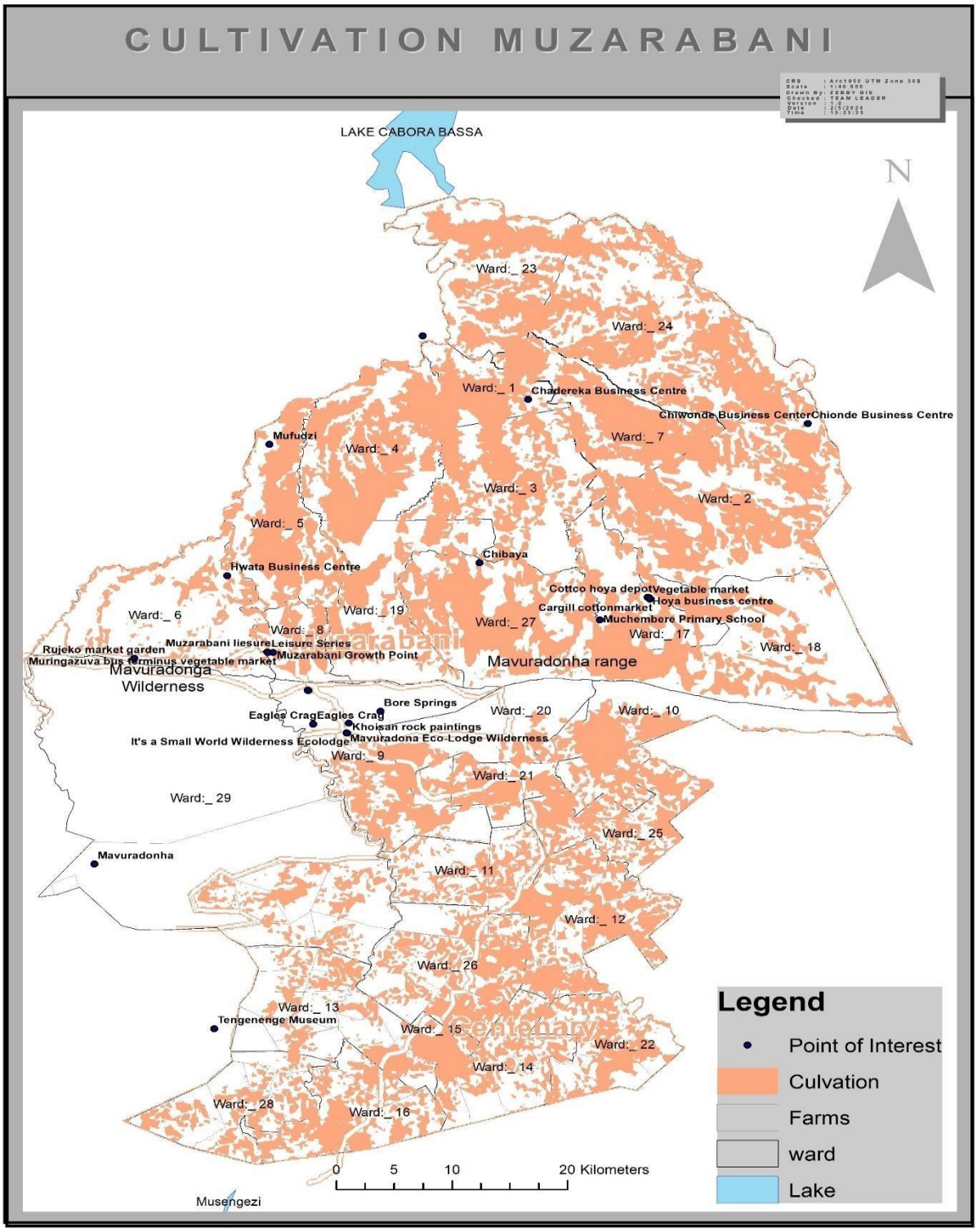

Figure 5.1-D: Area under Cultivation

Subsistence Agriculture

Subsistent agriculture is mainly practiced in the communal areas in Lower Muzarabani with sorghum, millet and maize being the main crops. This is due to the harsh conditions in the area.

Matimba Cultivation

This practice is both subsistence and mini commercial. During the dry spell this has become an important livelihood activity in Lower Muzarabani. This type of farming had been practiced as far back as 1940s. River-bed cultivation to describe it due to the broad river beds that form during flooding as these river banks are widened and the river meanders and diverts. Most watermelons, fresh Okra, vegetables green Mealies and Sweet potatoes that are produced during the dry spell have attracted markets from as far as Harare, Mozambique and neighboring Districts.

[Further Research on this can help}

5.1.3 Resettlements

5 Main types of Resettlements exist in the District as follows

a}A2Small Scale b}A2

Large Scale c}Commercial

Farming areas d} A1 Model

e} Madel A-D old Resettlement

There are large scale farms which are highly capital intensive and have a large output in terms of crops such as tobacco, maize, soya beans, cotton, coffee and livestock fruit production. Some of the farms use the latest farm technology and have a highly advanced marketing network with maize and cotton being delivered to the markets. There is also fruit production and dairy in these areas as mentioned in Chapter 2 on the regional impact of Agriculture d1A1 Model

These are 6ha plots with shared grazing area in most cases e}Old

Model Villagised

These have been modelled to create area of residence separated from zoned grazing land sand cemetery sites and cultivation fields.

5.1.3iii) Livestock Farming

Livestock farming is a key activity of Muzarabani District as the type of pastures are nutritious for cattle and small livestock.

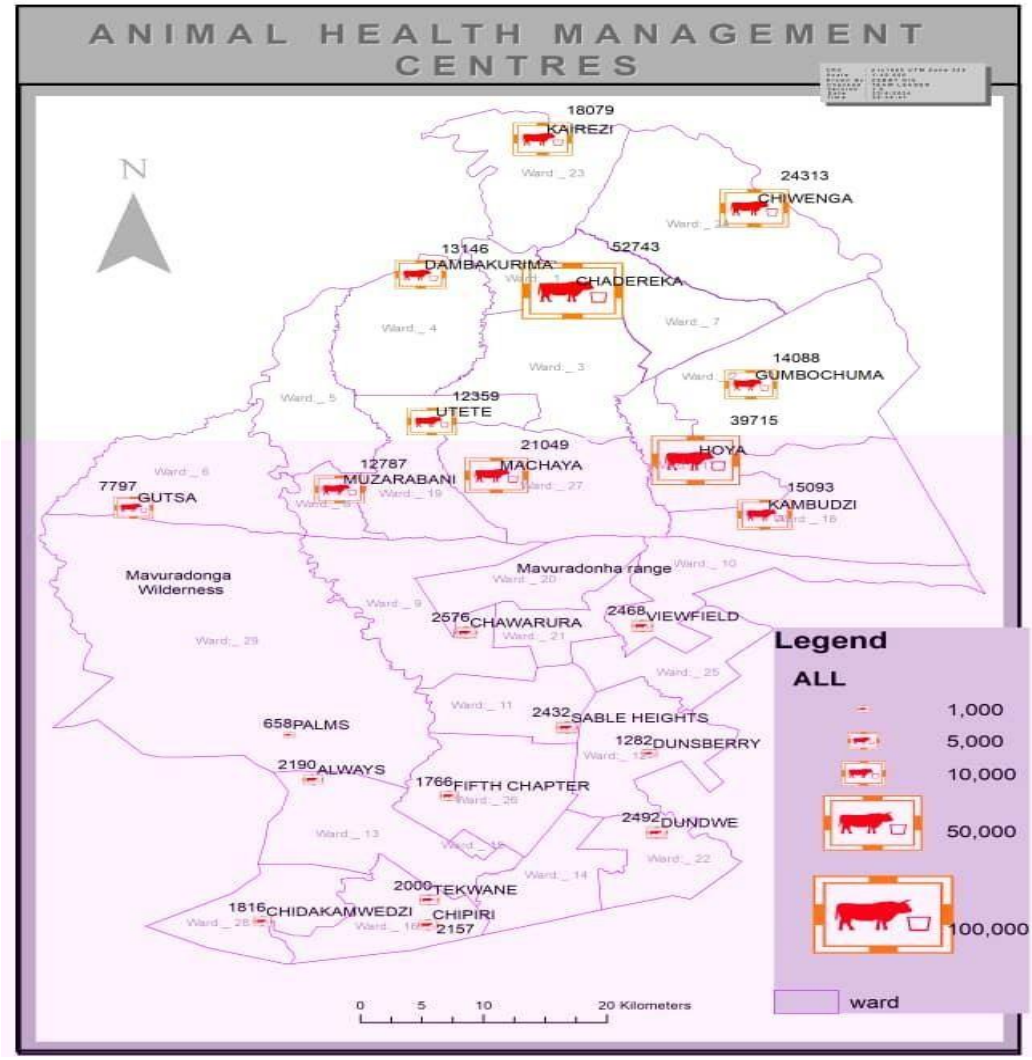

Figure 5.1-E: Animal health Management Centres

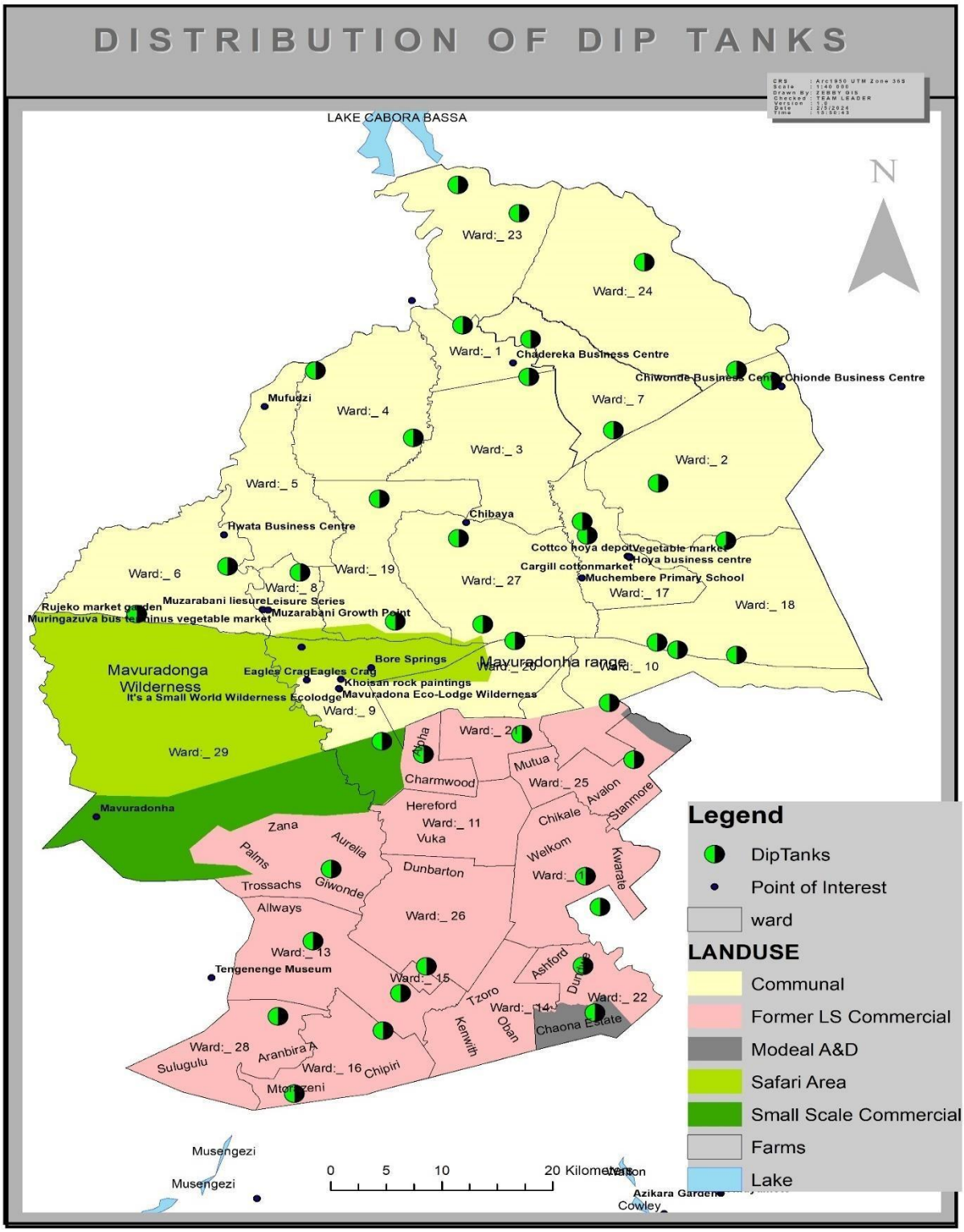

Figure 5.1-F: Distribution of dip tanks, resettlements, small scale, large scale, communal and conservation area

5.1.4 Business Centres and Rural Service Centres

The main business centers in the district are St Alberts, Chiwenga, Chadereka, Hoya, Dambakurima, Kairezi, Chawarura, Chimoio and others depicted on the below. Centenary and Muzarabani are the Growth Points in t he district. The map below shows distribution of these urban and business settlements in the district.

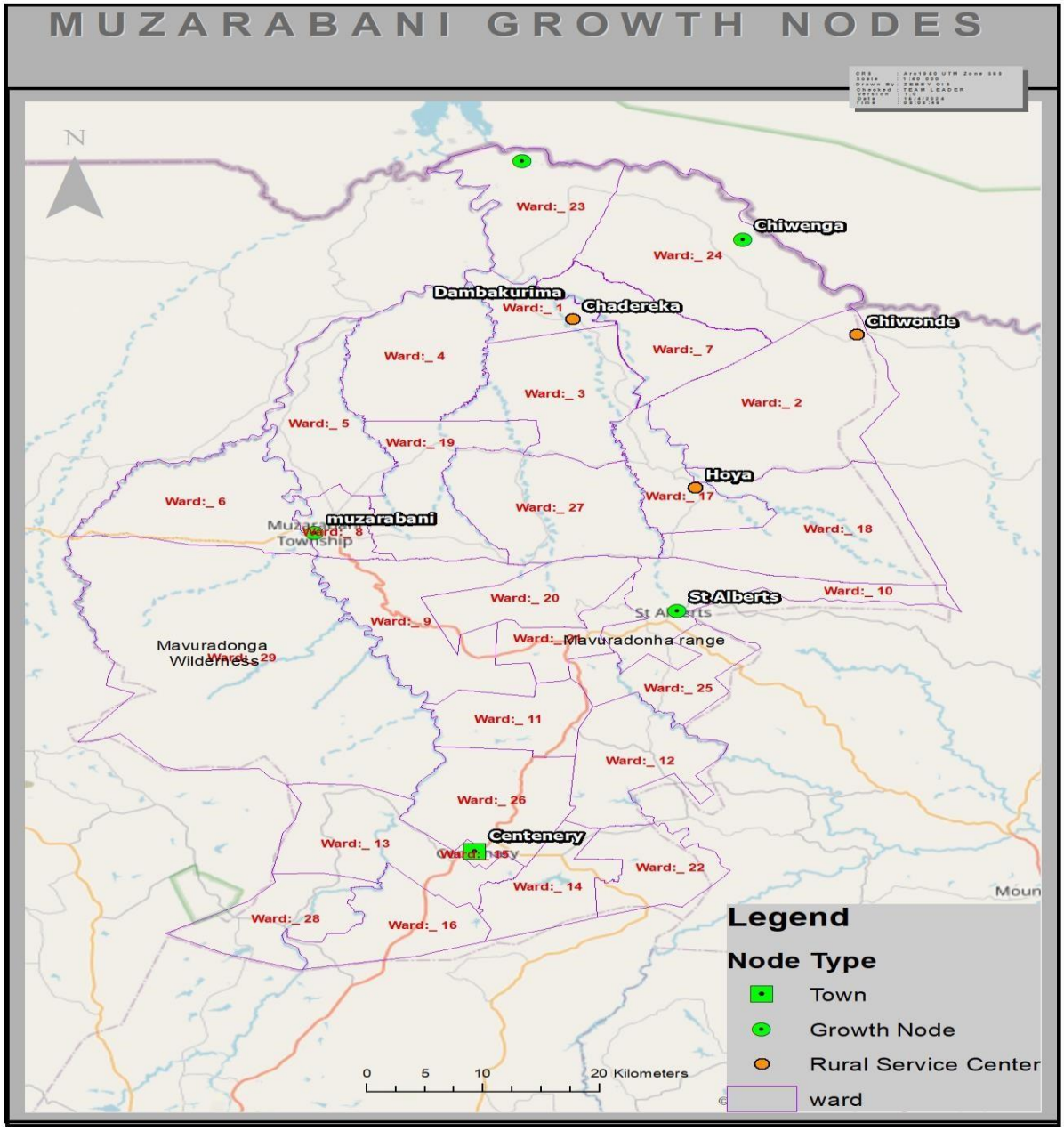

Figure 5.1-G: Growth Points, Business Centres and Rural Service Centres

5.1.5 Housing as a landuse

Housing types in rural and urban areas

There are distinct differences between housing provision in rural areas and urban areas. Houses in Centenary and Muzarabani growth point are more modern with variations in quality and durability depending on income levels. Only three stands have title deeds in Centenary the rest are on Council land and therefore on Lease/ cessations. This is affecting residence access to meaningful credit facilities from banks. There are no building codes to ensure that minimum building standards are adhered to. There is inadequate land for low cost residential stands in the business centres.

Houses in the communal areas are mostly traditionally built and constructed of local materials and round in shape. Most of the houses are not durable as they are constructed of pole and dagga and roofs are thatched with grass. The dependence on local materials in the rural areas is a cause for concern as this results in the depletion of natural resources.

The difference in urban and rural houses is a reflection of status and standard of living of the communities.

5.1.5a) Housing, Commercial and Industrial Landuse stock in Centenary

The status and stock of Centenary housing, residential, commercial and industrial stands are as follows:

Table 5.1.5a Centenary Housing ,Commercial, Industrial Stock

Area Name	Land use	Quantity (stands)	Developed	Undeveloped	Size range (square metres)
Gatu Township	Residential Institution Commercial	359 2 33	326 0	23 2	98- 498 2601/746
Gatu Garikai/Hlalani Khuhle	Residential Institution	117 2			350- 750
Gatu High Density General	Residential Institution	276 1	145	131	200- 363
Hillside Medium Density	Residential Commercial Institutional Unlabelled	836 10 4 1			
Centenary Low Density extension	Residential Commercial	960 10		All	974 - 1735

The table indicates that construction in the low density suburbs is slower than in the high density ones. Council revenue inflow is shuttered as it is losing on inspection stage fees.

Table 5.1.5b) Distribution of households by tenure.

Type of Tenure	Title deed/ freehold	Council Lease/cession	Institutional Government	Institutional GMB	Institutional council
Quantity	**3**	**2 517**	**44**	**6**	**13**

5.1.6 Conservation zone

Mavuradonha Wilderness Area is the core conservation area in the district. Wildlife is confined to the wilderness area, although Elephants migrate through communities occasionally, Mavuradonha Wilderness area is the only legally recognized conservation area in the district.

Wildlife is one of the fundamental features that has the potential to contribute to Muzarabani District's tourism and economic growth An estimated investment of 1,2million of Infrastructure development was done. This include roads, water supply, lodge and camps, electric fencing 48km and also equipment . The wildlife resources should therefore be treated as an important economic asset to the area

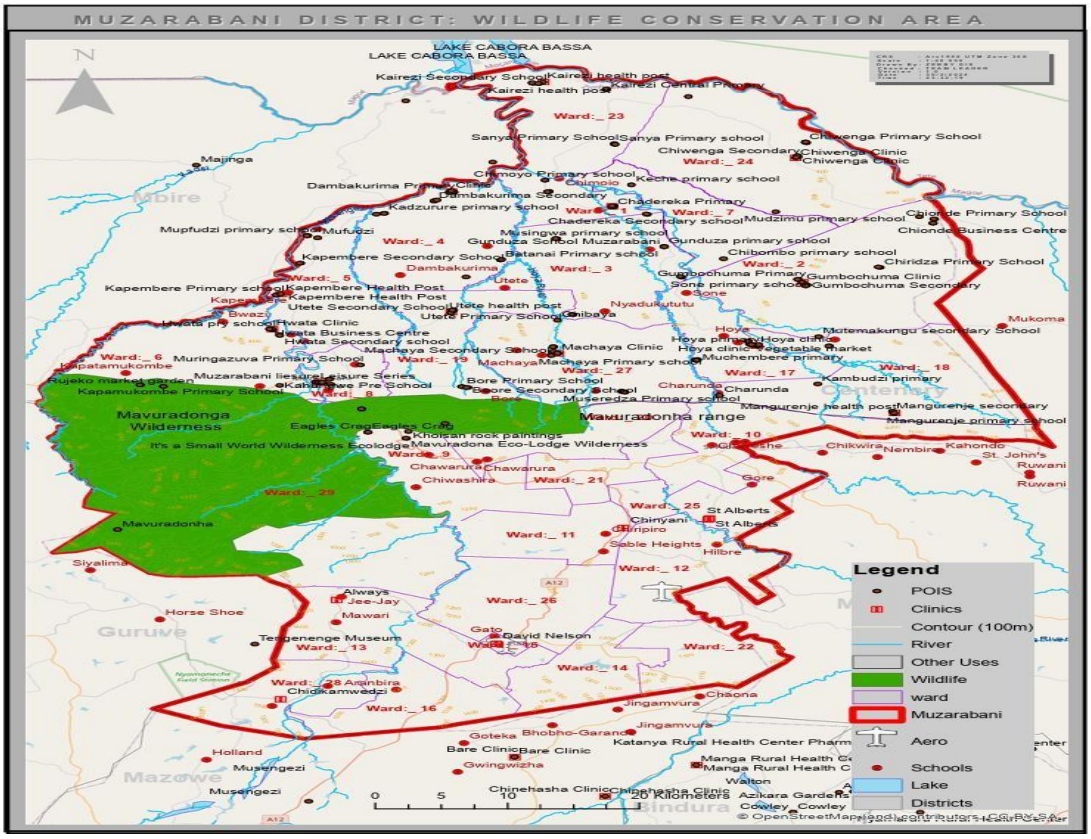

Figure 5.1.6a wildlife conservation area in green and other uses

5.1.6b) Mavuradonha the Wilderness zone

The Mavuradonha Wilderness Area is located in the Muzarabani Rural District Council (MRDC), bounded by wards 6, 7, 8, 19 and 27 to the north, ward 10 to the east, and ward 21 to the south and the Guruve District to the west. It stretches from west to east along the Zambezi escarpment and covers large sections of wards 9, 20 and 29 (Figure 5.1.6a) It is a unique area rich with natural and cultural heritage

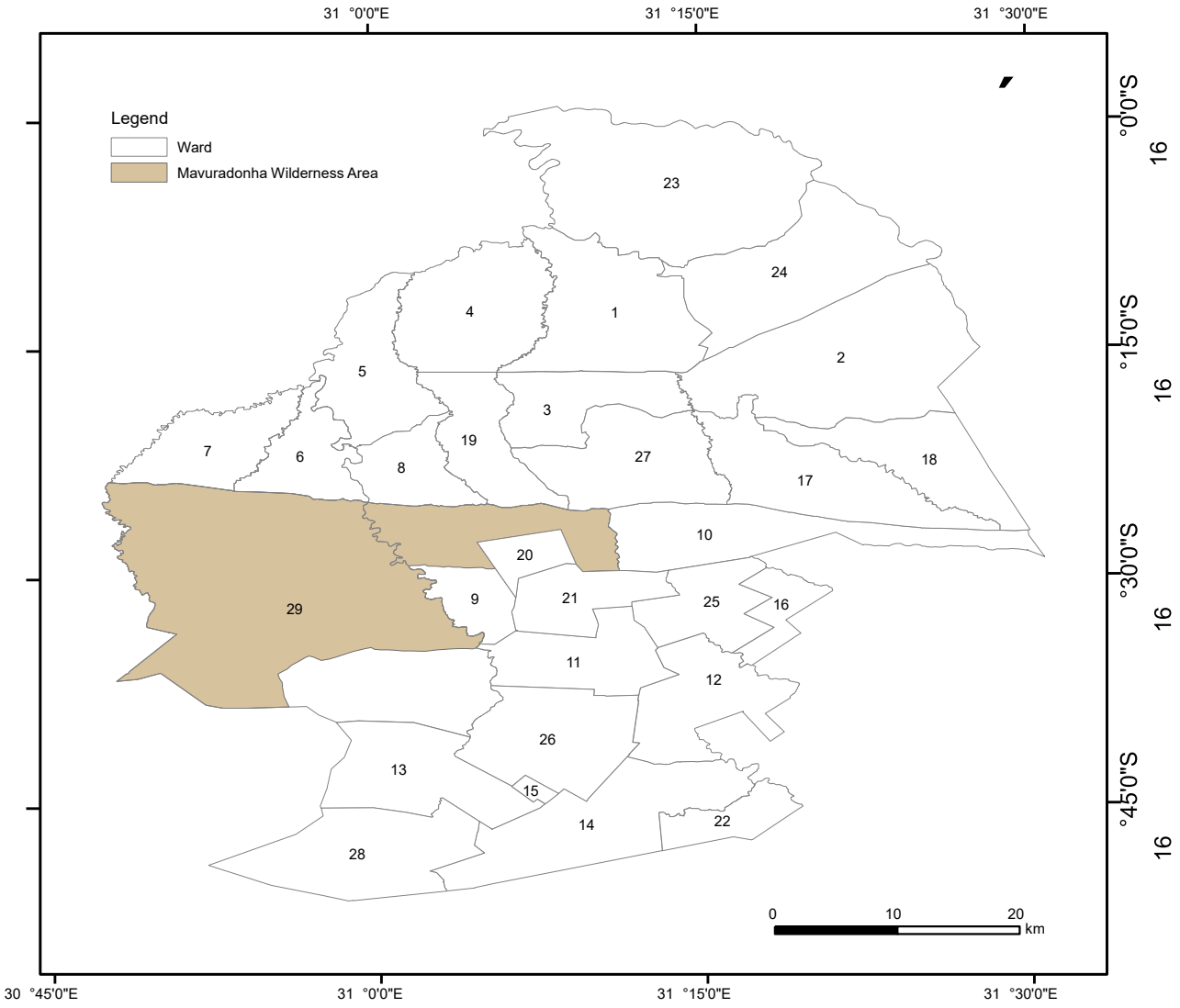

Figure 5.1.6b : Location of the Mavuradonha Wilderness Area in Muzarabani District.

5.1.6c Wildlife Movements and Corridors

Disturbance of traditional migration routes has resulted in animals moving into unsuitable or marginal areas and changing their drinking and feeding habits, which leads to an increase in stress and the likelihood of animal-human conflict. Various routes utilised by elephants were mapped out through a participatory mapping process

Elephant movement in the area follows mainly three routes.

Route Corridor 1. Elephant movement seems to follow riparian zones from the Wilderness area, through communities to Mozambique through other surrounding wildlife areas.along the Mavuradonha mountains exiting through Pfura RDC in the East or Mbire and Guruve in the West

Route corridor 2 follows Musingwa River to Hoya River then connects to Mozambique leading into Mozambique.

Route Corridor 3 The main route involves movement through Gumba to Chadereka to Chimoyo to Kairezi to Chiwenga then Mozambique. Thus ward 1, 2, 17,6 ward 23, ward 24 and ward 27 are the wards mainly affected by Human- Wildlife conflict due to elephant movement.

5.1.6d) Archaeological and Cultural Characteristics landuse

The Mavuradonha Wilderness Area is designated as a National Monument and an application was submitted to UNESCO for World Heritage Site status. This development is likely to attract funding in to the wilderness area and also presents opportunities for the development of cultural tourism as a major potential landuse boost.

CHAPTER 6 POPULATION

6.1 General background

People are the centre for development. It is very important to understand the existing population characteristics and growth patterns which have been witnessed over time so as to shape future development strategies. This section of the report presents the demographic attributes of

Muzarabani District population such as population size, composition, spatial distribution, and changes experienced over the years. Socio-economic attributes like employment are also presented as this has an effect on economic opportunities that can be attracted into the district. These demographic attributes will be derived from the National 2022 Census by ZimStats. For the purpose of establishing the population trends, the National 2012 Census by ZimStats will be used as a base year. Development of socio-economic programs and efficient land utilization strategies is based on satisfying the needs and aspirations of the population of a locality, making it imperative to understand the population characteristics and transitions.

6.2 POPULATION DISTRIBUTION OF MUZARABANI DISTRICT

6.2.1 Population size

According to the National 2022 Census report, 9.1% of the Mashonaland Central population is resident in Muzarabani District. Relative to other districts within Mashonaland Central Province, Muzarabani District was ranked 6th in terms of population size after Mazowe, Mount Darwin, Bindura Rural, Shamva and Guruve Districts. The district has a total of 134 076 people of which 50.3% are females and 49.6% are males *(ZimStat 2022).*

6.2.1 Population Distribution

According to the 2012 Census, 2.9% of the population was resident within the semi-urban centres while 97.1% is resident within rural areas. Figure 6.2-A below shows the district population distribution by ward and by gender.

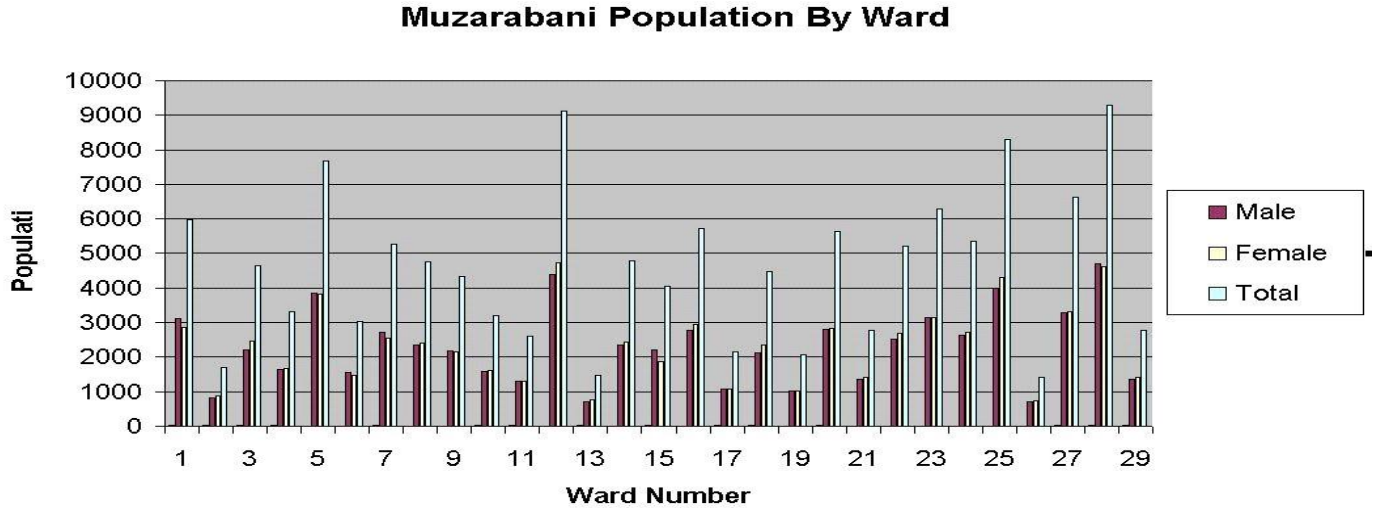

Figure 6.2-B: Population distribution by ward - Females dominate in numbers

6.2.2 Population Density

The Muzarabani district population density average is 49 people per square kilometre. Figure 6.2.2-B *below*

The densely populated area is Ward 15 with the District Centre known as Centenary. There are 724 persons per km^2. People are attracted to Centenary because of its urban characteristics and anticipated benefits. Ward 1 and Ward 8 are also densely populated with 150pple/km^2 (Ward 1) and 132pple/km^2 (Ward 8) respectively.

There are wards with population densities of 84pple/km^2 (Ward 14), 71pple/km^2 (Ward 10) and very low densities of 11pple/km^2 (Ward 6), 9pple/km^2 (Ward 18), and 6pple/km^2 (Ward 29). The disparities are attributed to the major land use in the ward. Ward such as ward 29 and ward 6 covers the Mavuradonha Wilderness have more Wildlife and vegetation than people justifying its low population density.

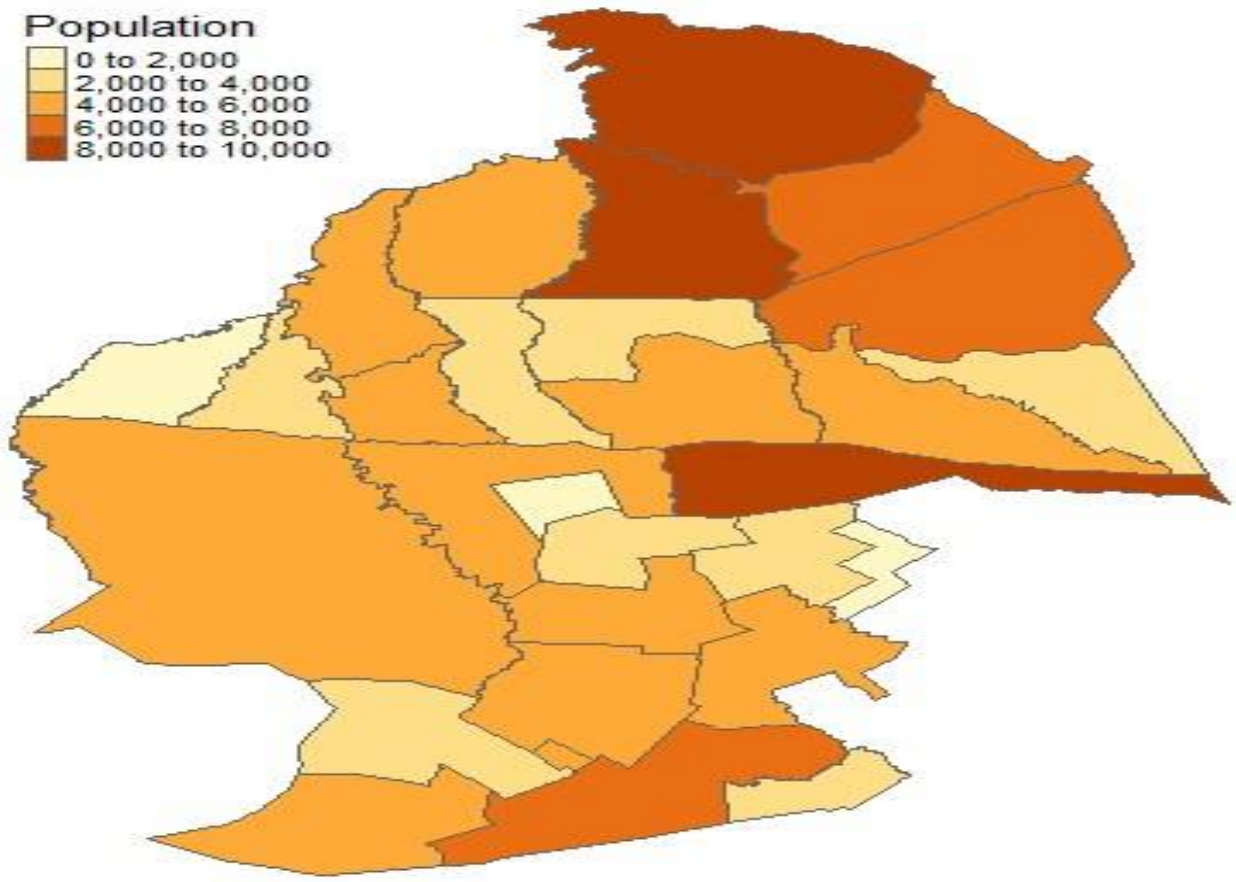

Figure 6.2-C: Population density in Muzarabani

6.2.3 Demographic composition of Muzarabani Population

The district has a higher proportion of children and adults in the rural populations. The proportion of the youthful population cohorts is significant implying there is implied demand for age preferences services and infrastructure.

The aged populations in rural areas are generally vulnerable to poverty as they are incapable of making independent use of productive resources such as land. In many cases, the older people are not able to farm effectively.

The aged rural population can serve as invaluable sources of knowledge on traditional agricultural practices, indigenous approaches to coping with various challenges in food production and resource conservation.

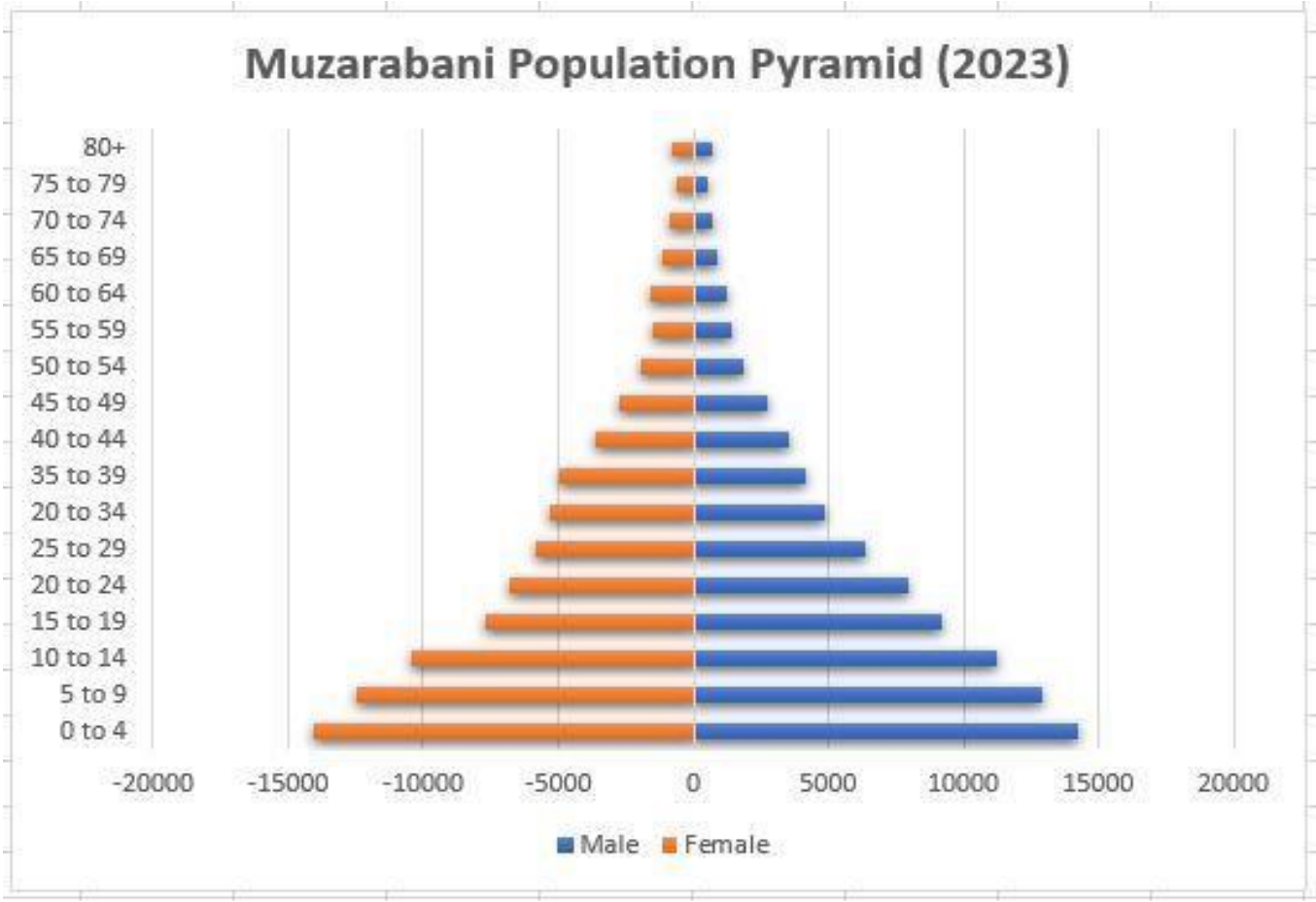

Figure 6.2-D: Muzarabani Population Pyramid

The causes of high birth rates could be because the 15-49 age group, amount to 57,7% which are a reproductive threshold hence high birth rate. Also early childhood marriages are rampant adding to the statistics.

High death rate could be a result of recorded accidents deaths which occur in the Mavuradonha range which are at-east 5 fatalities per month during peak period of cotton deliveries.

Also malaria cases and the common dysentery that is prone to 0-5 age groups in the district can be the cause of high birthrate. The incidences of cholera caused by the boarder links with Mozambique also a reason.

6.2.4 Gender/sex ratio Of Muzarabani district

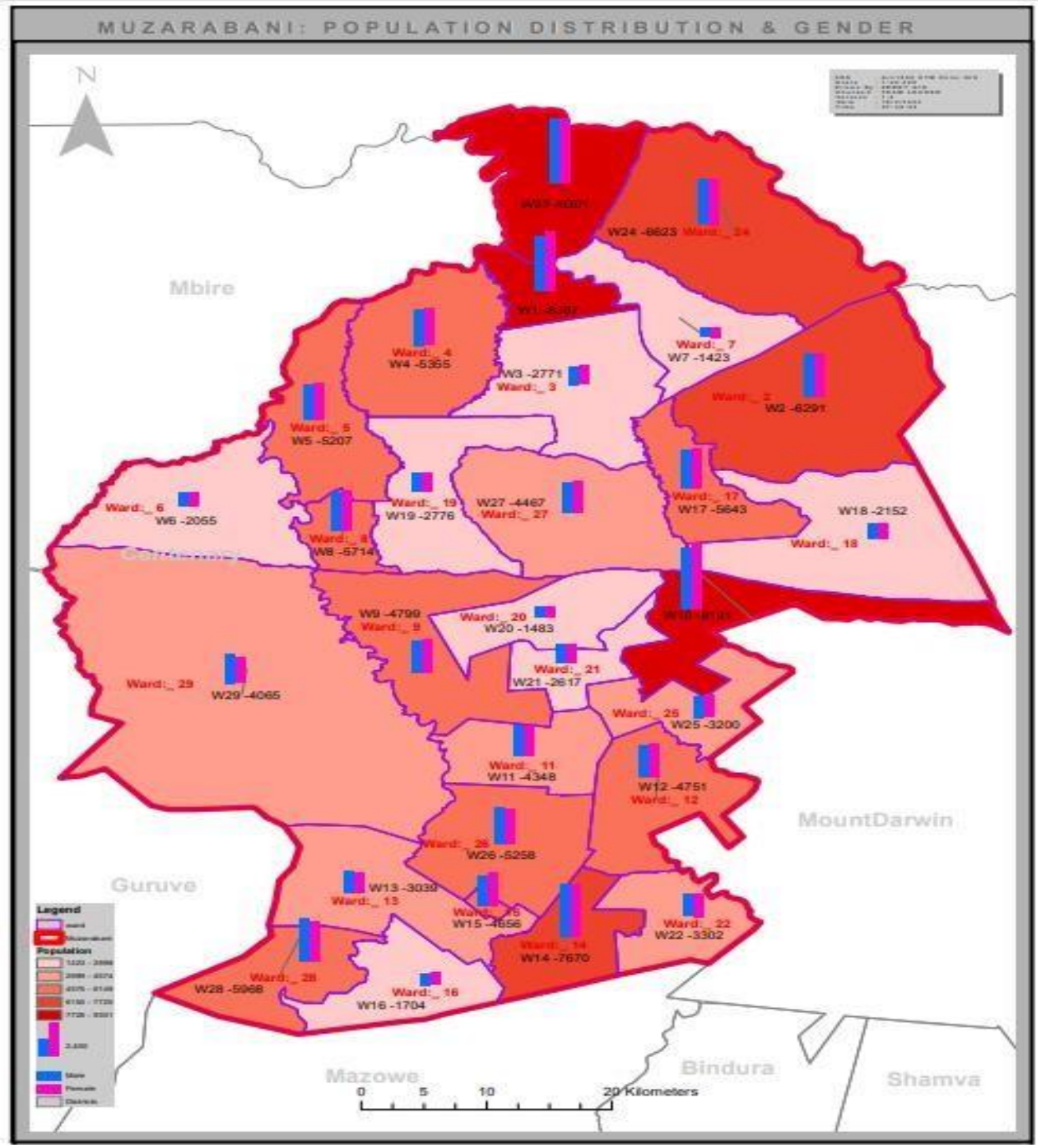

Figure 6.2-E: Muzarabani population distribution by gender

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Table 6.2.4:1: Below shows absolute figures of gender distribution by ward

Ward	Male	Female	Total	Households
Ward 01	4 001	4 306	8 307	1 864
Ward 02	3 145	3 146	6 291	1 378
Ward 03	1 355	1 416	2 771	639
Ward 04	2 644	2 711	5 355	1 202
Ward 05	2 517	2 690	5 207	1 150
Ward 06	1 022	1 033	2 055	515
Ward 07	695	728	1 423	342
Ward 08	2 776	2 938	5 714	1 476
Ward 09	2 353	2 446	4 799	1 133
Ward 10	4 390	4 741	9 131	2 157
Ward 11	2 194	2 154	4 348	982
Ward 12	2 340	2 411	4 751	1 174
Ward 13	1 562	1 477	3 039	745
Ward 14	3 851	3 819	7 670	1 856
Ward 15	2 200	2 456	4 656	1 297
Ward 16	826	878	1 704	393
Ward 17	2 814	2 829	5 643	1 320
Ward 18	1 069	1 083	2 152	491
Ward 19	1 370	1 406	2 776	645
Ward 20	719	764	1 483	349
Ward 21	1 313	1 304	2 617	609
Ward 22	1 641	1 661	3 302	732
Ward 23	4 690	4 611	9 301	1 958
Ward 24	3 298	3 325	6 623	1 413
Ward 25	1 589	1 611	3 200	748
Ward 26	2 706	2 552	5 258	1 237
Ward 27	2 119	2 348	4 467	1 006
Ward 28	3 113	2 855	5 968	1 389
Ward 29	2 202	1 863	4 065	900
Total	**66 514**	**67 562**	**134 076**	**31 100**

Source: ZimStat 2022 Census

6.2.5 Birth and death rates

Births and death rates have shown an increase.

6.2.6 Immigration and emigration

The population density of urban and semi-urban centres is very high signifying a continued migration into these centres thus straining the service delivery capacity of these centres. The primeadult-age cohort (15 - 49years) comprise of more women in rural areas because of men migrating to bigger urban centres in search of economic activity.

Population not usually resident in Muzarabani	
2012	
2819 (Harare - major contributor with 1 358 people	

6.2.7 Population Growth trends

The population of Muzarabani is on an upward growth trend, See *table 6.2.7.1* below. This trend exerts pressure on existing resources such as land (both agriculture and for settlement), community facilities, natural resources and infrastructure. The challenge is on how to continue providing adequately for the growing population without depleting these resources which would deprive future generations.

Table 6.2.7:1:Population growth trends

6.2.8 Employment status of the population

The District's major employment sector is agriculture with Livestock Production intense in Lower Muzarabani.

Population	2012 Census	2022 Census
District Population	122 791	134 076
Growth Rate	(10.7%)	(8.4%)
Females	61 631 (50.2% of total population)	67 562 (50.3% of total population
Males	61 160 (49.8% of total population)	66 514 (49.6 % of total population)
Density per km^2		49 persons per km^2
Number of Households	**26 928**	**31 100**

CHAPTER 7 SOCIO- CULTURAL AND ECONOMIC ACTIVITIES

7.1 EDUCATION

7.1.1 General Education context

Muzarabani has a mix of different types of schools across the district. There are however, some areas which have fewer schools than required. The distribution of schools is depicted in fig 7.1.1A below. Education in Muzarabani district is based on the Zimbabwean Education Act Chapter 25:04 which defines the goals and objectives of education in the country. Muzarabani District education

aims to provide quality education for all children with a focus on literacy, numeracy and life skills. It seeks to promote gender equality and address the needs of children with disabilities. Education which is guided by policy is implemented through a variety of programs and initiatives such as:

a) Heritage- based curricula
b) Non- formal education
c) Inclusive education.
d) Infant, junior and secondary education
e) Infant education
f) Basic Education Assistant Module BEAM

Committees that run include school School Development Committee (SDC) and Parent- Teacher Association.

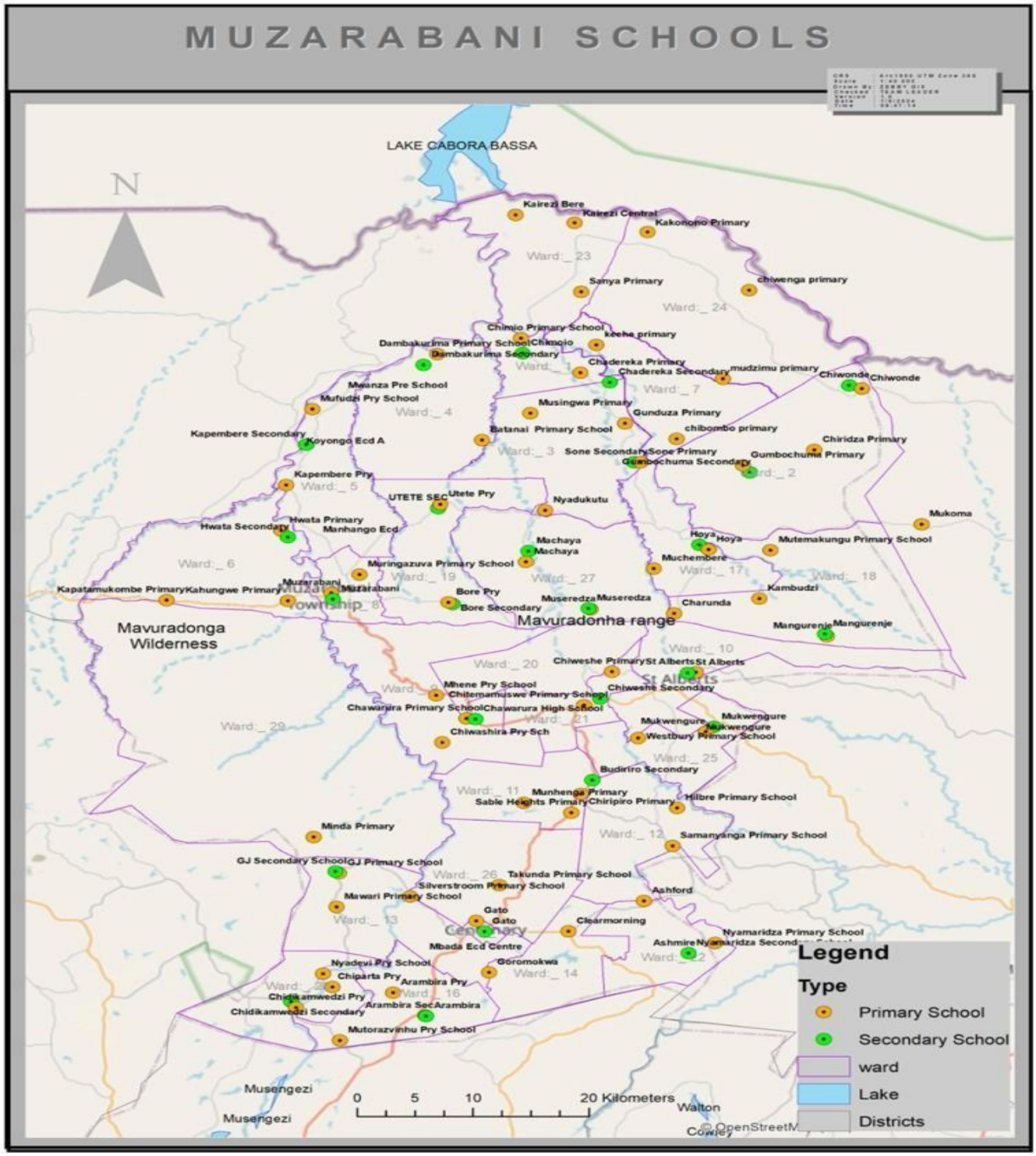


Figure 7.1-A: Distribution of schools in Muzarabani

7.1.2 Infant Education

Every primary school has an ECD centre which provides care and education for 3 – 5 year old children with an average Teacher: Pupil ration of 1:20. These are staffed by qualified teachers and

follow a standard curriculum. There are also community based ECD Centres that are manned by para-professionals and monitored by mother schools. 13 are private owned which are mostly found in Centenary and Muzarabani Growth Points.

7.1.3 Primary education

There are 66 primary schools in the District with an average teacher pupil ratio of 1:55 for infants' level and 1:50 for junior level. These schools are located as per the map figure 7.1.3a. There are also private schools in the district. The primary schools' students are assessed using a combination of continuous assessment and national examinations.

At primary school level there are some who travel long distances of up to 15km to the nearest school daily. This makes it costly to go to school. See fig 7.1.3a below which shows the distances which the children travel.

The Primary educations system is not well equipped to meet the needs of children with disabilities. Most of the disabled children in the district do not receive formal education.

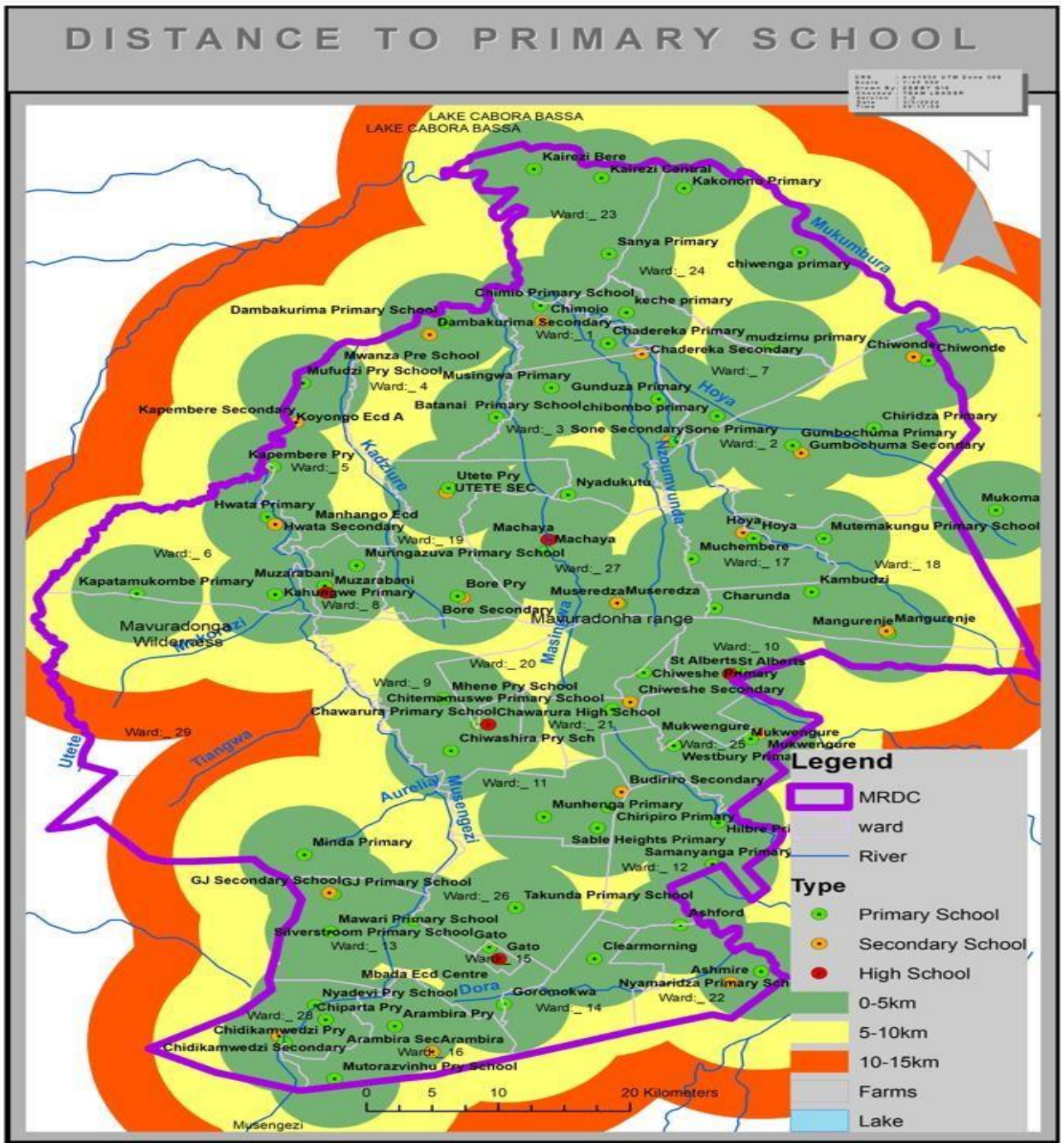


Figure 7.1-B: Distance travelled to primary school kids

Areas in Green depict those travelling 0-5km, Yellow 5-10km, and Red 10-15km for Primary Schools with focus inside the purple boundary which is Muzarabani District.General assessment has shown that deficit sites those travelling 5-10km and 10-15km require priority for new primary schools

Muzarabani District Education

The district generally has inadequate secondary schools and only one boarding school. Some of the secondary schools in the area have drop outs due to long distances. There is need to provide accommodation for staff, upgrading and building more blocks for classroom functions. Currently, the following schools have pole and dagga structures which does not match with the Vision 2030 mantra: Towards a middle economy society, Leaving no one and no place behind .

Schools of pole and dagga construction

Table 7.1.3:1: Schools of Pole and Dagga

WARD	SCHOOL
2 Maungaunga	Kahombe
4 Dambakurima	Kadzurure
24 Chiwenga	Mudzimu
24 Chiwenga	Kakonono
17 Hoya	Muchembere
7 Muvamba	Keche

Priority for infrastructure development to be given to these schools.

The district has schools with pole and dagga structures as shown below.

Plate 7.1-1: above pictures: Kahumbe school ward 7

Table 7.1.3:2: Muzarabani Primary school level enrolment statistics

Year	Males	Females	Total
2021	15 301	15 246	30 547
2022	16 159	15 714	31 873

2023	16 156	15 745	31 899
2024	114 460	14 385	28 845

7.1.4 Secondary Education

There are 29 secondary schools in the district of which only 5 are High Schools *(St Alberts, Centenary and Chawarura in Upper Muzarabani while Machaya and Muzarabani are in Lower Muzarabani.)* The secondary education curriculum is designed to prepare students with skills for employment. It includes subjects such as Mathematics, Science, History, Geography, Agriculture among others. Learners are also encouraged to take a course in vocational skills such as woodworking, metal working or home economics. Life skills such as communication skills, critical thinking and problems-solving are part of the curriculum.

Some pupils travel up to 15km to the nearest secondary school as shown in fig 7.1.4-A below.

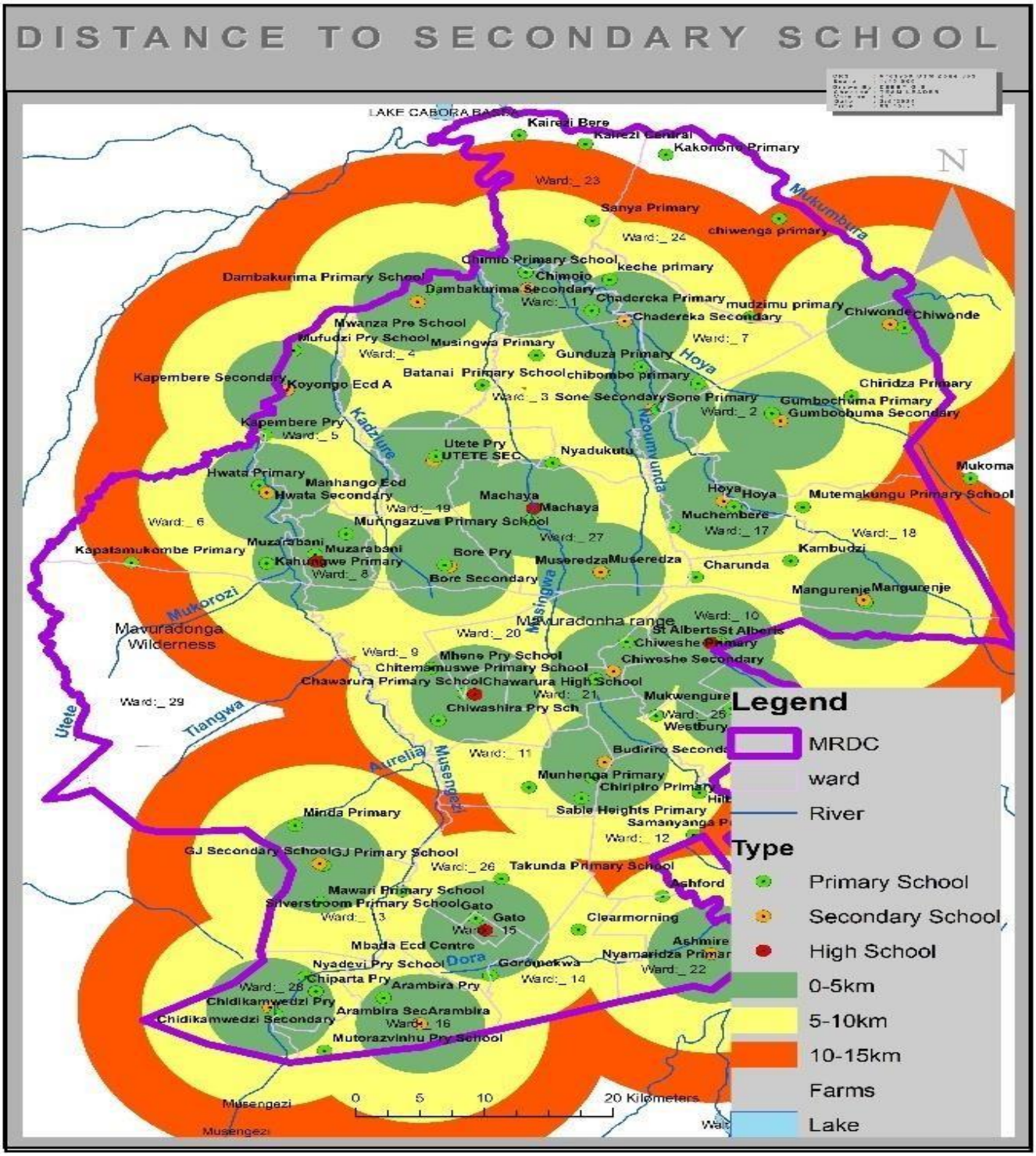


Figure 7.1-C: Muzarabani distance to secondary schools

The yellow prevalence shows those travelling 5-10km for secondary pupils, more secondary schools are needed in all those areas with Yellow and red

Table 7.1.4:1:Muzarabani District Secondary school level enrolment

Year	Males	Females	Total
2021	3 889	3 765	7 654
2022	3 591	3 548	78 139
2023	3 599	3 488	7 087
2024	3 019	3 137	6 098

Table 7.1.4:2: Teacher Deficit

Level	Teacher deficit
Primary	**88**
Secondary	**36**
Total	**124**

This huge teacher deficit is alluded to the high staff turnover as teachers move to Greener pastures as they cannot cope up with harsh weather conditions and poor infrastructure such as untrafficable roads plus lack of facilities as banks nearby

7.1.5 School Drop outs

Increasing numbers of the leaners drop out before completing studies per year. Overall, there is gender imbalance in secondary education as more boys are attending school than the girls who drop out more quickly than the boys. The gender parity index is 0.81 meaning for every 100 boys attending school, there are only 81 girls which is almost 1 girl in 20 boys. This imbalance is attributed to several factors such as cultural attitudes and poverty. The dropout rate is high. There are also inadequate schools in Muzarabani, only 5 of the secondary schools are high schools.

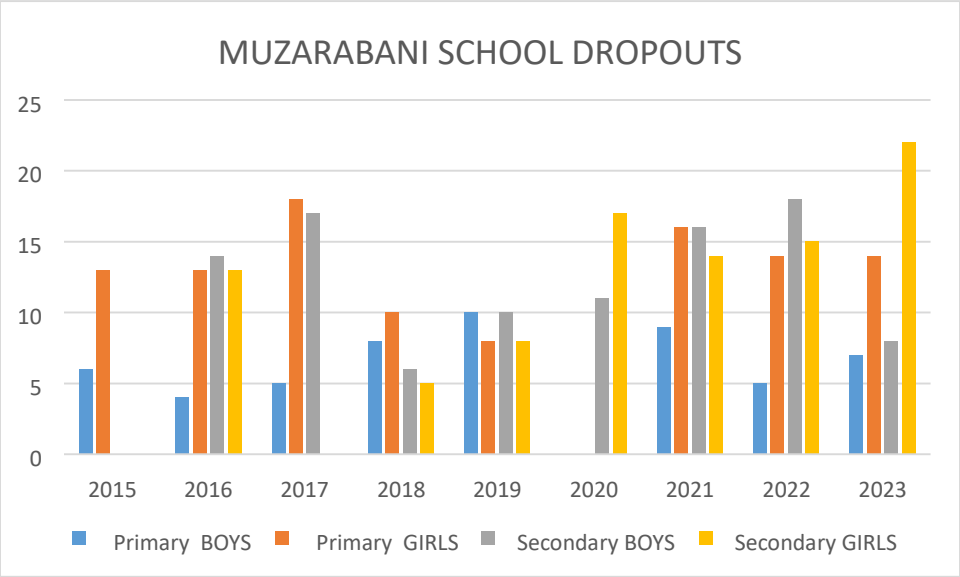


Figure 7.1-D: School Dropout statistics (2005 – 2023)

7.1.6 Tertiary Education

There is one Vocational Training Centre (VTC) (named Chawarura) The VTC however does not offer the diversity **of courses appropriate to the district available resources. For example there is a Cotton Ginnery in Muzarabani that throws away products that can make chicken Mesh or Cleaning Mops, courses to make mops and chicken mesh can be taught to the locals who would just collect** raw materials locally It has an inadequate number of lecturers.

Chawurura Vocational Training Centre

Administration of The VTC

One acting principal in charge seconded from Rushinga

1 accountant seconded from ministry

2 voluntary teachers from community.

Infrastructure

The administration block need revamping after getting burnt.

The 2 halls act as conference rooms that can accommodate 100 people each.

Challenges of The VTC

It's still considered as satellite.

No establishment table meaning staff is seconded.

Equipment is down the tractor and the pump needs attention.

The VTC is sitting idle on a 20ha plot with a dam on site.

Only 32 students on enrolment yet capacity can take around 70 students per semester

Among the 32 about half are working for school fees and about 10 are not locals

The courses are per the table below:

Table 7.1.6:1: Chawarura Vocational Training courses

Current Courses	Potential Courses
Motor Mechanics	Building
Agriculture	Carpentry and Joinery
Clothing and Textiles	Hair Dressing
Tourism and Hospitality	Leather Technology
	Metal Fabrication
	Agriculture specializing in Tobacco
	Electrical Engineering
	Auto Mechanics
	Panel Beating and Spray Painting
	Interior Deco
	Horticulture
	Honey Production

	Mop Design
	Fowl Run Manufacturing
	Fruit and Jam Vegetable Making
	Meat Processing
	Meat/Sausage Making
	Cookery
	Baking

Plate 7.1.2 Below is the conference centre for the VTC. It has an unroofed rondavel kitchen and conference rooms. Next to these are staff hostels.

Plate 7.1-2: conference centre for the VTC. It has an unroofed rondavel kitchen and conference rooms. Next to these are staff hostels.

Plate 7.1-3: semi detached staff houses block

Plate 7.1-4: Gazebo and water tank for staff houses

Plate 7.1-5: Dilapidated workshop

The above building is a workshop with offices. It is now old with no roof. The roofed section is being used as a storeroom otherwise it is uninhabitable.

Administration block

Plate 7.1-6: Administration building

The building above is an administration block but some rooms are being used as classrooms. The building has old wooden trusses which are prone to termite infestation and are now weak. These trusses are carrying concrete roof tiles which have now become too heavy. There is a danger that the trusses can yield to the weight of the tiles anytime.

Accommodation

Plate 7.1-7: Principal's house

Plate 7.1-8: One of the 3 semi -detached Staff houses

Water source

Plate 7.1-9: Dam

The dam above is located in the VTC farm and is the source of water for irrigation and consumption. It is also used by neighboring plot holders. The farm is 20 hectares in size.

7.1.7 Educational facilities general issues

The schools are inadequate and have inadequate infrastructure *(toilets, classrooms, unequipped science laboratories, sports facilities).* This has resulted in hot sitting mostly in Centenary. Other issues include delays and non-payment of levies due to high poverty levels, poor teacher accommodation, floods causing children to stop going to school during rainy seasons, wind and storms destroying school structures, delays in the process of school registration, teachers rate of turnover is very high due to poor living conditions resulting in shortage of teachers in schools, voluntary teachers in community ECDs are not paid and teachers replacement is taking long.

7.2 HEALTH

7.2.1 Hospitals and Clinics in the district

Currently there is no Government District hospital in Muzarabani though there are plans to build a 65-bed hospital at Muzarabani Growth Point. A privately owned hospital named St Alberts Mission Hospital that has 150 beds is currently serving the District. The district has 10 Council clinics plus 3 Health Posts **(***Mangurenje , Utete, and Kapembere)* and 5 government clinics *(Hoya, Machaya, Chadereka, Muzarabani and Chawarura)* and 4 government Health Posts which are still work in progress but have been opened to augment the work load. The Government Health Posts

are *Dhundwe, Palms/Minda, Kairezi and Gumbochuma* each with a resident Nurse, Nurse Aid and a General Hand. There is a District ambulance from Government which carries patients from within the district to St Alberts Hospital. St Albert ambulance then transfers patients from St Alberts to Harare if need be. The Health centres are unevenly distributed *Figure 7.2.1* with inadequate facilities in some wards. Access to health facilities is still a problem in the district and the main modes of transport are foot, scotch carts, motor bikes and sometimes seasonal buses. People in some wards such as Chiwenga to Chadereka and Benya near Mt Darwin travel for 12 to 20 kilometers to the nearest health Centre.

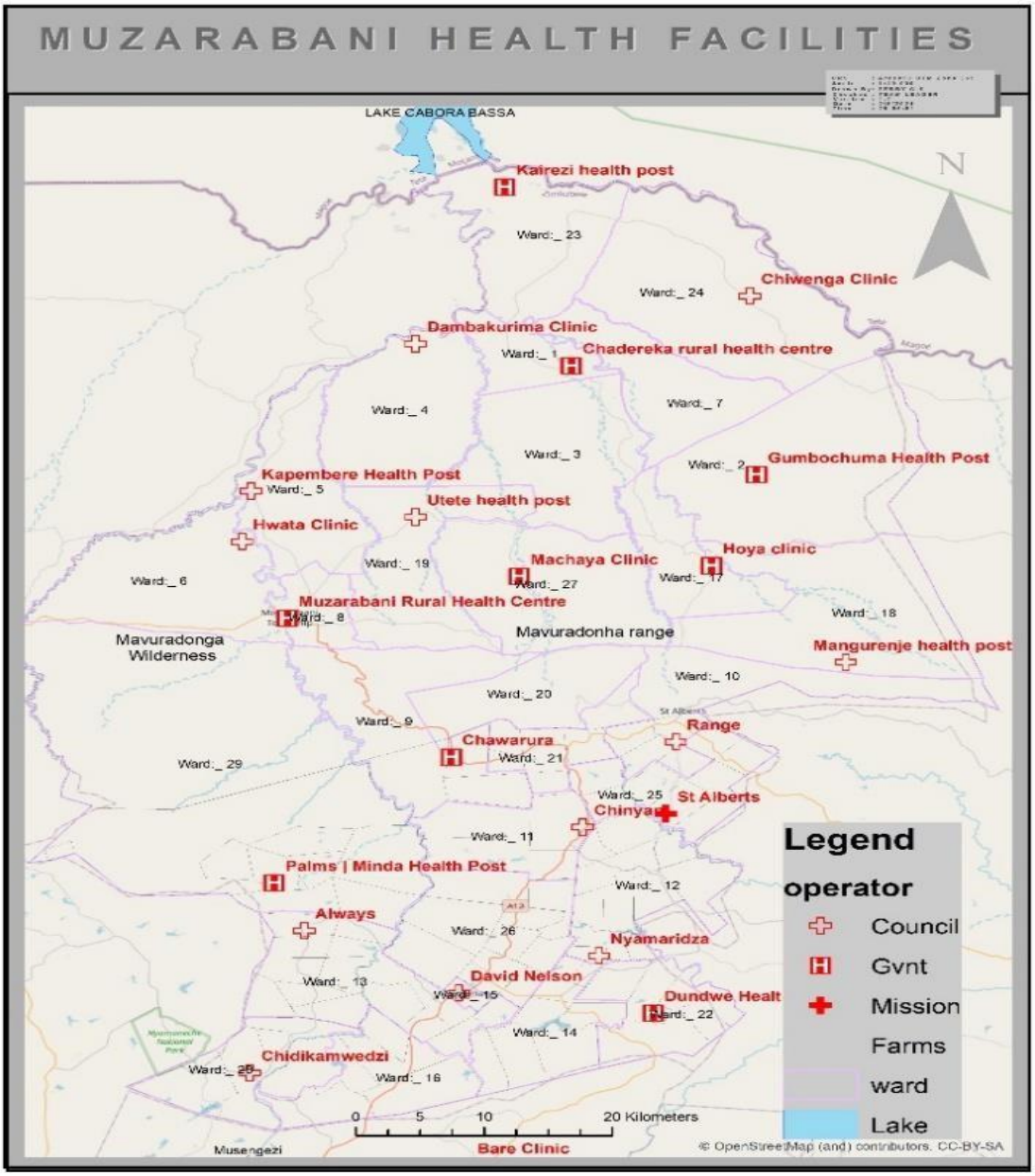


Figure 7.2-A: Location of Health centres in Muzarabani

All the health centres have inadequate staffing levels. The requisite Nurse Patient Ratio is 1:10 but the current is 1:20/30. This has an unfortunate impact of compromising the quality of service delivered to the patients as the health staff is over stretched and tired.

The Doctor Patient Ratio is 1:20/30 but the required is 1:10 and the resident doctor is stationed at St Alberts Mission Hospital. There are 4 doctors currently.There are Primary Care training facilities with an average intake of 20 per year and they take about 10% of the local people.

There is a vast difference in terms of facilities between health centres, with those in growth points having better facilities than those in the rural areas. This discrepancy in terms of resource allocation

has to be addressed when planning and formulating budgets for the district. The district has a critical shortage of transport for patients. Communal people rely on public transport, scotch carts and motor bikes which at times are not available when faced with emergencies. Some people have to travel distances of up to 15 km to access the nearest health facility making it costly as shown in *fig 7.2.1.b*

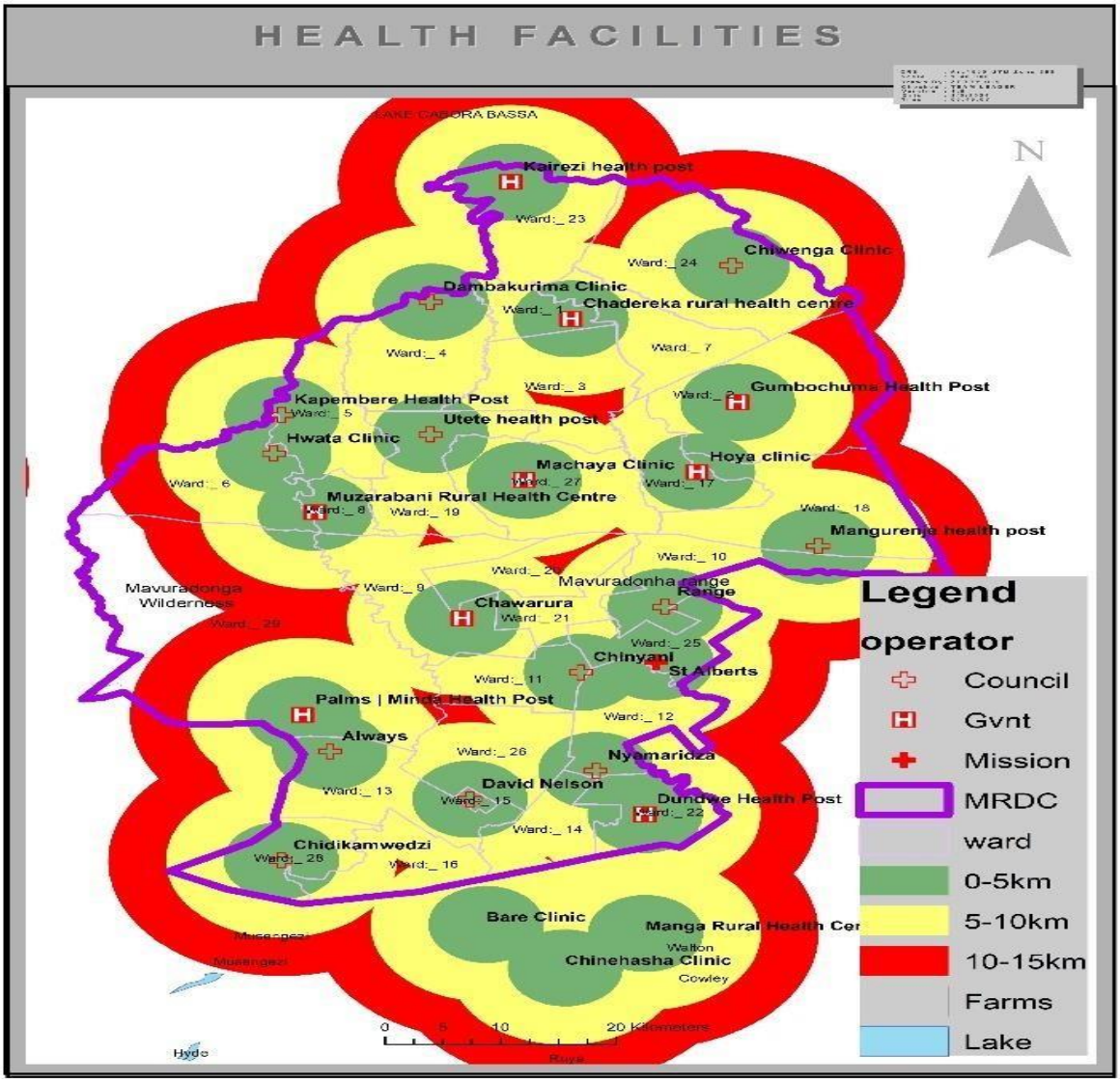


Figure 7.2-B: Distribution of Clinics and distance to health facilities Those in yellow and red areas need clinics in the short term

7.2.2. Disease Prevalence

The most prevalent diseases are listed below in hierarchical order

i. Malaria

ii. Diarrhoea/ dysentery

iii. Upper Respiratory Infection iv. HIV

v. TB

vi. STIs

vii. Road traffic accidents injuries

viii. Bilharzia

ix. cholera

Diarrhoea/dysentery is a common disease for the under 5s with more STIs prevalent in the over 15 age group.

7.2.2(i) HIV and AIDS in the district

- The district has an estimated 12 000 people living with HIV.
- HIV prevalence for 15 – 49 years age group stands at 6.61% (National HIV and AIDS Estimates)
- HIV prevalence for all age groups is at 4.3%
- Number of people living with HIV on Anti-retroviral therapy (ART) is 7 200.
- Estimated new HIV infections stands at 74 per year.

(Source: National HIV Estimates 2023)

The HIV and AIDS cases have severely strained the health budget as more resources are now being spent on the procurement of drugs. There is a serious shortage of drugs at all Health Centres and supply is erratic. Drug shortage has seriously affected the health delivery service in the district. The other problem facing the people especially those in communal areas is the requirement that all people below 65 years pay their medical bills. Most people cannot afford to pay medical bills and hence they are suffering at home.

F*ig 7.2.2*a below shows the spatial distribution of HIV hotspots in the district

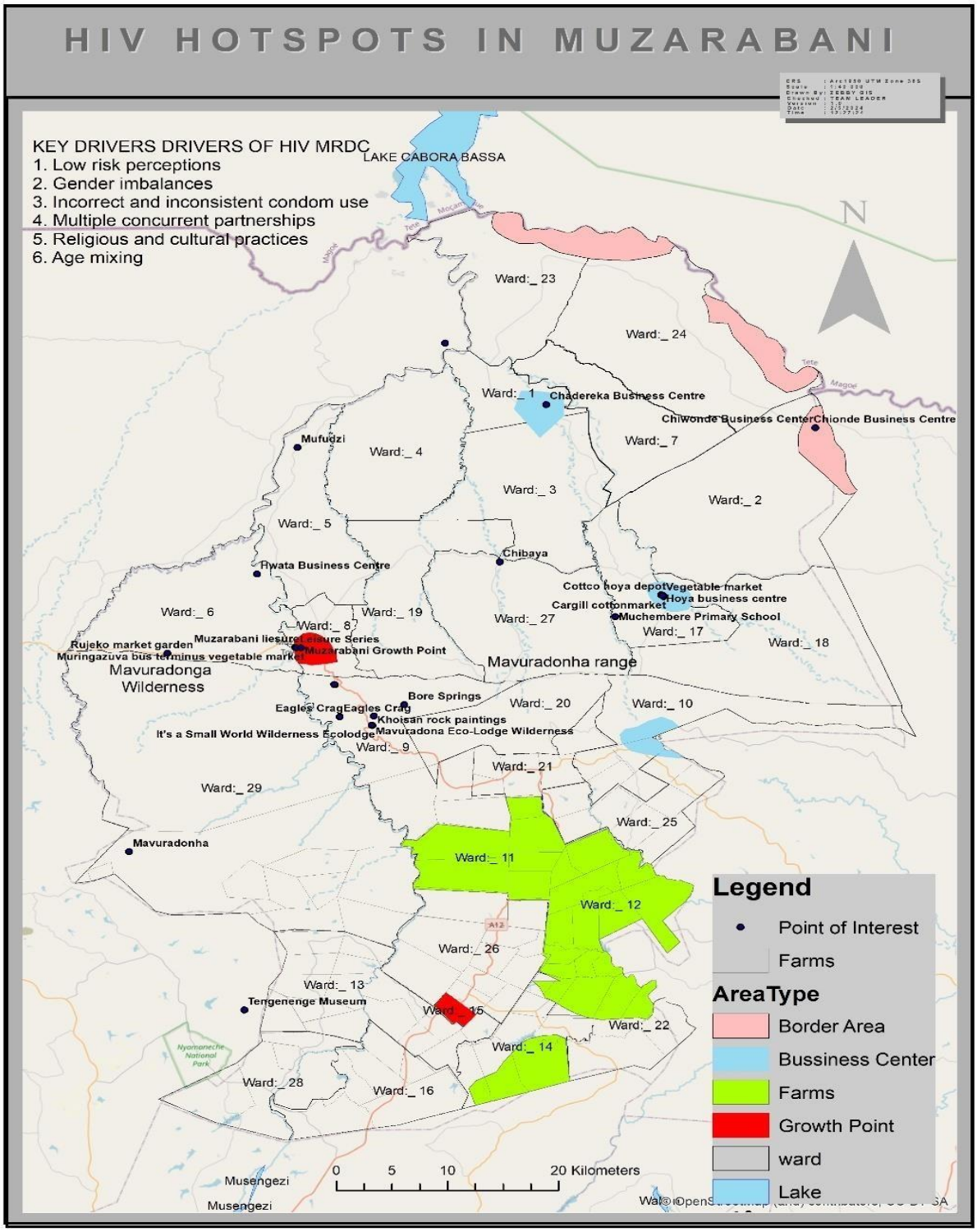


Figure 7.2-C: HIV Hotspots in Muzarabani

Table 7.2.1:1: General reasons why some areas are HIV hotspots

Hotspot Area	Reason
Centenary (Ward 15)	Influx of night clubs, social life, night activity.
Muzarabani (Ward 8)	Convergence of several people for social life and business hotspot. Presence of sex workers
Farm compounds(Ward 11, 12 & 14)	Child marriages, sexual abuse, multiple concurrent partners
Borderline centers(Wards 23 & 24)	Multiple concurrent partners, presence of sex workers. High rate of child sexual abuse and child marriages.

7.3 / SANITATION

7.3.1 Management of sanitation

- Inadequate sanitary conditions

Management of sanitation is under the Department of Social Services. Sewer reticulation and waste is under the management of the Department of works at council. The social services department is responsible for septic tank clearance, effluent tank monitoring. Sanitation is a shared responsibility as shown in Table 7.3.1:1 below.

Table 7.3.1:2: departmental responsibilities for sanitation

Responsible Department	Sanitation activity
Works	Solid Waste Management Infrastructure Sewer reticulation monitoring Distribution of treatment works Septic clearance and efficient monitoring
Social Services	Sanitation awareness/Promotions

7.3.2 Sewer pipe bursts

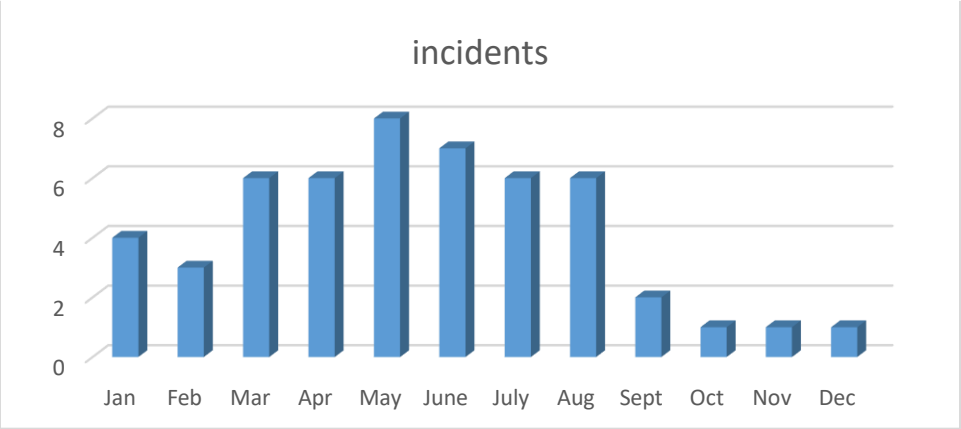


Figure 7.3-A: incidents sewer pipe bursts

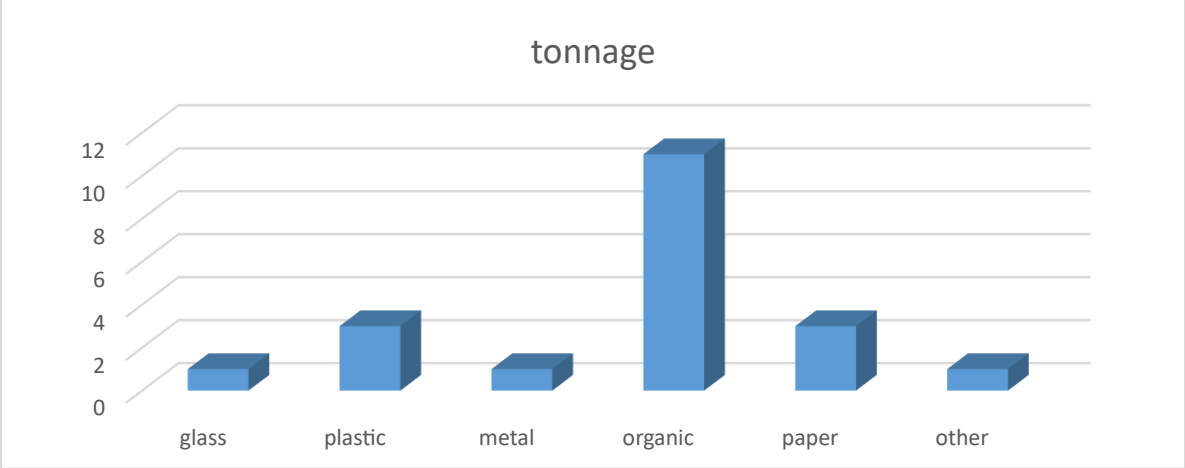


Figure 7.3-B: shows monthly Waste Collection tonnage.

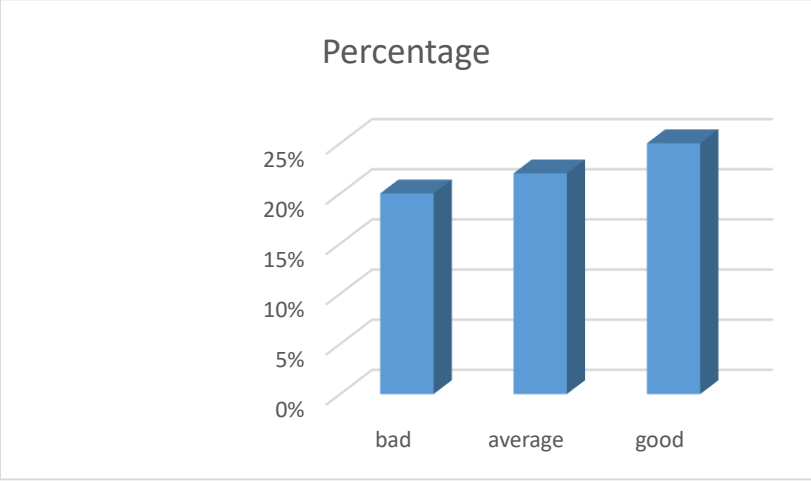


Figure 7.3-C: shows how the Community rates waste collection at Centenary

7.4 WATER

7.4.1 Water sources

Water supply in the 3 Growth Points is the responsibility of ZINWA. Centenary source of water is Musengezi River while Muzarabani and St Alberts sources are boreholes.

7.4.2 Water Problems

- Inadequate water supply to existing urban settlements and or rural service centres
- Inadequate dams and irrigation schemes.
- Shortage of potable water to resettlement and communal areas

Silverstroom dam project ○ The following is the scope of the dam

- ○ Construction of the main dam: a 70m high and 360m length double-curvature concrete arch dam.
- ○ Construction of a 102 m long drop inlet spillway.
- ○ Construction of outlets comprising of two 900mm diameter steel pipes encased in concrete, construction of an intake tower and a valve box.
- ○ Construction of diversion works.
- ○ **Construction of 800kw Mini hydro**.

Proposed water supply project ○ Rehabilitation and upgrading of the abstraction point at Musengezi. ○ Construction of 1km x 250mm raw water pumbing main to treatment plant. ○ Construction of a 100 cubic meter per hour treatment plant.

- ○ Construction of 7km x 315 mm clear water mains to Centenary Rural Service Centre ○ Construction of 2x 2280 cubic meters reinforced concrete reservoirs for storage.

7.5 SOCIAL WELFARE AND PUBLIC ASSISTANCE

7.5.1 Social Welfare Programs

Socio-economic planning in the district is spearheaded by development Partners through PPPs (Public Private Partnerships and government departments implementing specific projects some national projects under NDS1. These partnerships are usually guided by the works of the Zimbabwe Vulnerability Assessment committee on Rural Livelihoods ZimVac whose mandate is

to promote multisectoral response to food insecurity and nutrition problems in a manner that ensures everyone is covered. Ministry of Women Affairs Communities Small and Medium Enterprise which helps through the Zimbabwe Community Development Fund and Women Development Fund. The Department of Social Development which helps through Public Assistance Maintenance Allowance, Child Protection and Assisted Medical Order.

Generally Public assistance for the district has been from various government and non-governmental organisations: such as HelpAge Zimbabwe, World Vision. The department of social welfare also plays a pivotal role through its sectoral plans and programs in the district. The Social Welfare office is located at Centenary and is responsible for offering support to those in distress.

The total number of orphans and vulnerable children(OVCs) in the district is 27 054 which is 20.1% of the total population. 582 females have been assisted at Gender Based Violence(GBV) safe shelters from 2021 to date.

Several Development Partners play a key role in the district.

The following are the active development Partners:-(NGOs) in Muzarabani:

No	Name of NGO	PVO REG No	WARDS	ACTIVITIES	TARGET GROUP	SECTOR	OUTPUT/OUTCOME
1	World Vision Zim (WVZ)	26/79	Chadereka Dambakurima Utete Muringazuva Kapembere Kairezi Chiwenga	• Utete secondary school c/b constructed • Utete secondary school semidetached house constructed • Utete secondary school perimeter fencing constructed Muzarabani primary school perimeter fencing constructed • Dambakurima primary school borehole drilled •	All Ages	Education Health WASH	-One C/B constructed -One semidetached house constructed -Two sch perimeter fences erected -One sch borehole drilled
2	Red Cross	Act Chap 17:08 of 1981 or WO 52/67	Chadereka Dambakurima Chiwenga Kairezi	• Chiwenga primary school c/b construction (WIP) • Chiwenga clinic Mothers shelter • construction (WIP) Chiwenga clinic PWS repair (WIP)	All Ages	Education Health WASH	-One sch c/b under construction -One clinic mother1s home being constructed -One PWS repaired
3	St Alberts CHBC	Works under St Alberts hospital Reg H02307 as CB0	District	• 18 Survivors were admitted at Safe house (15 SGBV & 3 GBV) • Safe house equipped with furniture and child friendly equipment • 30 Foster parents were trained (4M & 26F) • Back to School Education campaign • A 4 day psychosocial camp in Marondera held with Children who faced various abuses	All Ages	SGBV	-18 SGBV survivors assisted -Furniture bought for the Safe House -30 Foster parents trained
4	CAMFED	49/16	District	-Payment of school fees for the girl child -Provision on menstrual packs to girls -Out of sch girls empowerment	In and out of school Girls	Girl child educated	
5	Rotary Club of Highlands	34/73	Chadereka	-Resource mobilization for Musingwa primary school -Site plans and designs for Musingwa prim sch structures	Musingwa primary school	Education	-USD 120K for Musingwa prim sch development mobilized -Designs for Musingwa prim sch completed and shared
6	MDP	11/96	District	-Leadership engagement -ECD -ECD policy dialogue meeting	ECD development	Education	-Social services committee and Stakeholders training on ECD held -ECD Pass on poultry project implemented

7	FACT	17/89	District	-Construction of SGBV house - Purchase of furniture for the safe house -Offering services to SGBV	SGBV survivors	SGBV	-Safe house constructed -Furniture for the safe house purchased -57 SGBV survivors accessed

				survivors			service at the safe house
8	WHH	21/2003	District	-7 New boreholes drilling -Schools toilets at 15 school -Incinerators at 15 school -Group handwashing stations at 15 sch -PWS	15 Primary schools	WASH	-7 New boreholes drilled at 7 sch -Toilets built at 15 sch -Incinerators built at 15 sch -Group handwashing facilities built at 15 sch
9	CFHD	71/20	District	-Community Based Planning (CBP) launch -Training of District Action Team (DAT) -Capacity building of all Councillors	Councillors, Chiefs, Village heads, Community based committees, CBOs, FBOs, Extention workers etc	Leadership Capacity building	-CBP launched in district -All 29 , Executive and Stakeholders trained -20 member DAT trained
10	No Barriers Education Foundation	A44395	Muringazuva Gutsa	-Delivery of 8 tonnes of maize -Delivery of menstrual hygiene kits to all girls, female teachers and wives of male teachers for Hwata secondary school & Muzarabani High school	All girls and teachers at the 2 schools	Education	-Operational school feeding programme at 2 schools -Hand over of hygiene kits to all girls and teachers at the 2 schools
11	Apostolic Women Empowerment Trust (AWET)	30/18	Maungaunga, Utete, Muringazuva	-Mobilisation of women and girls in churches on SGBV	Women and girls in churches	SGBV	-Women and girls in churches using the hotline
12	Childline	7/2001	District	-Support to line Ministries -Referral services	Children	Child protection	-Dept of Social service supported with fuel for outreach services -Abused children referred to services

13	Help Age Zimbabwe	W.O 11/89	District	-Cataract surgical services -Capacity building of eye health personnel -Support provision of pediatric and adult surgical services -Social inclusion and awareness raising -Correction of refractive errors and distribution of spectacles -Procurement of project equipment, inclusive project vehicle for Provincial hospital	Older persons (All ages)	Advocacy Eye Health care WASH Shelter Nutrition HIV and AIDS Emergency and drought relief Positive livelihoods and social protection	1.Number of cataract surgeries performed 2.At least 80% of targeted beneficiaries have post operative (cataract surgery) visual outcome of at least 6/12 3.The proportion of VA correction of at least 6/9 post-re –correction 4.Increase in proportion of people accessing services at secondary and tertiary institutions 5.Number of persons with disabilities accessing eye care services
14	LGDA/FACHIG		1,**5**, 8, 9, 10, **11**,19, 20, 23, 24 and 27		All Ages		

15	Open Heart Disability Care Trust	Trust	District		All Ages	•	
16	ADRA	24/1968	Chadereka 1 Maungaunga 2 Gutsa 6 Machaya 3 & Chiwenga 24			• • •	

						•	
17	CODAID		District	RBF	All Ages	• •	Improved health services

18	ZAIFO	CBO	District		All Ages	•	
						•	
						•	

						• •	
19	PSIZ		District		All Ages	• •	
20	PSZ		District		All Ages	•	

						•	
21	AfricAid	09/2007	DNC (15), St Alberts (10), Muzarabani (8), Chawarura (20) &Chinyani (11).			•	
22	CARITAS	25/2014	Dambakurima, Chadereka, Kairezi, Chiwenga & Hoya			•	

23	ZiCHIRe-BC	Trust Number MA000797/2009	St Alberts 10, Muringazuva 8, Chinyani 11, Always 13, Hoy 17, DNC 15, Chadereka 1, Dambakurima 4, Machaya 3 & Chawarura 20.			•	
24	ZimApiCulture		Wards 27,29,21,10,7			•	

25	ZipScope		Wards 20,29,13,6 and5			•	

26	Dan Church Aid		Wards 5,7,9,10,18,19,21,27			• •	

Table 7.5.1:1: Development Partners in the District

7.5.2 Social Security Services

The District has a limited number of Police bases with some areas having no police base at all. Muzarabani and Centenary Growth Points are headed by each, an Officer- In- Charge with the district head being in Guruve. Policing area of Centenary is approximately 62316 square kilometers. Police bases are required at Ruwindi ward 28, Gihonde, Chidakamwedzi and Chaona.

7.5.3 Culture

Spiritual Wards

Traditional Spiritual Wards have been identified in the Western Mavuradonha Wilderness Area. Wilderness is regarded as a sacred spiritual cultural landscape with cultural resources that include rock paintings, Stone Age sites, Iron Age sites and Refuge sites. Historically, The Mavuradonha Wilderness cultural landscape is connected to the story of Nyatsimba Mutota, the founder of The Mutapa State. Orature has it that Nyatsimba Mutota was buried at Tuuyu Tusere and his descendants performed their traditional Practices at the Holy Baobab tree in Lower Muzarabani. These historical sites retain their sacred value among the Korekore people in the area. The Mavuradonha Cultural Landscape is rich in liberation heritage where battle sites, massacre sites, protected villages which were used during the Liberation War were sited.

Cultural heritage comprises of sacred water sources (wetlands, natural springs and pools), sacred hills, farming communities, settlement sites, dry stone structures, Stone Age sites rock painting, refuge archeology, liberation heritage.

Cultural and Natural Heritage sites

Table 7.5.3:1 ***Source Dr Marufu online chats 2024***

Cultural and Liberation Heritage	Natural
Ancient Granaries	Pristine Vegetation
Battle sites	Natural Springs{Palms in MWA
Massacre Sites	Wetlands
Protected Villages	12 Gambwes natural pools of water in Lower Muzarabani that hold water without much seepage and remain intact till yet Dams dry .
Refugee Sites	Holly Baobab Tree
Rock Paintings	Sohwe falls in MWA
Madzimbahwe Dry Stones	

Altena Farm (Battle Site Second Chimurenga starting Point and bullets showing on the building)	
Mutapa empire	
Sacred Places and Spiritual sites	
Spiritual zones in the Widerness	

7.6 ECONOMIC ACTIVITIES

7.6.1 General information

Muzarabani is among 8 Districts in Mash Central. The district is endowed with various rich natural resources, lower Muzarabani has enabling conditions that are conducive for animal production, the upper side soils are fertile for farming all cash crops.

7.6.2 Cotton processing

The Muzarabani Cottco ginnery plant has a significant regional importance as it purchases seed from cotton grown by contract farmers in other districts in Bindura, Mt Darwin (Pfura), Rushinga, Mutoko, Guruve, Mbire and home grown in Muzarabani District. The ginnery processes and exports lint and ginned seed to oil expressers. This ginnery has about 350 employees comprising of 60% youths (80% of these being males and 20% female). The employees are categorized into fixed term, seasonal and permanent contracts. About 30% employees are permanent. The cotton ginnery's regional significance is enhanced by the fact that it has employees out of the district who have been provided with accommodation of 13 residential stands at the growth point. Those with no accommodation occupy rented accommodation .

Because the source of cotton transcends boundaries it has to be transported to the plant for processing and export. This has an implication on the transportation network or linkages with

other districts. *Table 7.6.2.1* below shows farmers contracted Cottco who supply cotton to the district.

Cotton Contracted Farmers

Table 7.6.2:1: Cotton Contracted farmers by district

Source District	Number of Farmers
Muzarabani	20 000
Mbire	2 000
Guruve	3000
Bindura	1300
Mt Darwin	3500
Rushinga	5000
Mutoko	7000

7.7 AGRICULTURE

7.7.1 Agricultural Production.

The district grows tobacco, cotton, fruits, sorghum, wheat, potatoes and has honey production sites. *Table 7.7 1* shows the estimated average production of crops per season

Average Production by season

Table 7.7.1: Estimated average production of crops per season

TYPE	YEAR/Season	ESTIMATED AVERAGE PER PRODUCTION SEASON	ANALYSIS
Tobacco	2020/2021	3 789 200 kg	

	2021/2022	2 736 400 kg	The low yield in 2022/2023 season due to the current drought.
	2022/2023	4 261 400 kg	
	2023/2024	2 675 250 kg	
Cotton	2020	1,467 tonnes	Export (Europe, Asia) Regional and local oil processors
	2021	2,788 tonnes	
	2022	874 tonnes	
	2023	1,100 tonnes	
Maize			As per food balance sheet (Fig 7.3.1b below)
Wheat	2023	1 375. 5 tonnes	
Sorghum			As per food balance sheet(Fig 7.3.1b below)

7.7.2 District agricultural Yield

Table *7.7.2* below summarizes estimated yield, from each ward per crop production per hectare. It further gives the requirements as well as any surpluses or deficit per ward for the year 2023. The overall analysis is that, in the resettlement areas, there is a lot of surplus produce that could balance the deficit in lower Muzarabani. This shows that farmers in resettlement areas have the potential to grow crops for commercial use while those in the Lower Muzarabani mainly grow for subsistence though livestock production and the sale of produce *from matimba (fertile flood plain cultivation where okra, beans, green mealies, sweet potatoes and vegetables are produced during dry season)*to buyers from across the region and outside contribute . **Table 7.7.2:1: a) Food Balance Sheet for maize, millet, sorghum and wheat**

a) shows total estimated production per ward against population calculated per household requirement per season .Any deficit is a sign of distress and this table guides food allocation by social welfare department.

Food Balance Sheet			Food Balance Sheet			Food Balance Sheet			Food Balance Sheet		
Ward	Populatio	Maiz Ha	Prodn t	sogh Ha	Production	P/millet ha	Pron t	Tot grain	rqmt/p/yr	reqment	def/surp
1	8406	1148.067	574.0335	1273.467	636.7335	39	7.8	1218.567	0.15	1260.84	-42.273
2	7161	952.999	476.4995	1429.999	643.4996	45	11.25	1131.249	0.15	1074.192	57.05705

3	3091	290	145	500	250	37	7.4	402.4	0.15	463.68	-61.28
4	5756	560	280	638.4672	351.157	54	16.2	647.357	0.15	863.352	-215.995
5	5609	391.9204	195.9602	458.3804	275.0282	99	35.64	506.6284	0.15	841.344	-334.716
6	2396	201	70.35	562	337.2	17	8.5	416.05	0.15	359.352	56.698
7	1453	198	118.8	410	200.9	26	11.7	331.4	0.15	217.896	113.504
8	6395	922.0327	276.6098	1285	771	10	2.5	1050.11	0.15	959.28	90.82981
9	4537	267.8862	241.0976	0	0	0	0	241.0976	0.15	680.568	-439.47
10	9109	1060.893	1007.848	0	0	0	0	1007.848	0.15	1366.344	-358.496
11	3597	613.9	828.765	0	0	0	0	828.765	0.15	539.616	289.149
12	5443	1412.58	2118.87	0	0	0	0	2118.87	0.15	816.48	1302.39
13	3151	1219.95	1219.95	0	0	0	0	1219.95	0.15	472.584	747.366
14	9258	1332.493	1865.49	0	0	0	0	1865.49	0.15	1388.688	476.8022
15	3752	238.4016	286.0819	0	0	0	0	286.0819	0.15	562.8	-276.718
16	1858	233.7488	210.3739	0	0	0	0	210.3739	0.15	278.712	-68.3381
17	6700	655.64	295.038	1336	467.6	70	21	783.638	0.15	1004.976	-221.338
18	2626	475.0523	237.5262	900	270	83	29.05	536.5762	0.15	393.96	142.6162
19	3268	356.3461	106.9038	743	371.5	25	7	485.4038	0.15	490.224	-4.82017
20	1159	680.5242	612.4718	0	0	0	0	612.4718	0.15	173.88	438.5918
21	2532	534.495	801.7425	0	0	0	0	801.7425	0.15	379.848	421.8945
22	2111	276.8543	249.1689	0	0	0	0	249.1689	0.15	316.68	-67.5111
23	10461	900.6768	540.4061	1357	882.05	0	0	1422.456	0.15	1569.12	-146.664
24	6651	700.16	315.072	1587	1348.95	0	0	1664.022	0.15	997.584	666.438
25	3173	872.6896	1134.496	0	0	0	0	1134.496	0.15	475.944	658.5525
26	4577	929.3553	1347.565	0	0	0	0	1347.565	0.15	686.616	660.9492
27	5180	508.5862	254.2931	992	446.4	19	5.7	706.3931	0.15	777	-70.6069
28	5995	1073.168	1395.118	0	0	0	0	1395.118	0.15	899.304	495.8144
29	3123	455	409.5	0	0	0	0	409.5	0.15	468.384	-58.884
total	138528	19462.42	17615.03	13472.31	7252.018	524	163.74	25030.79		20779.25	4251.543

River bed farming Matimba *(Requires more research) approximately 75% of households of the following wards participate in matimba farming*

Table 7.7.2:2:Farmers doing Matimba agriculture in Lower Muzarabani.

Area	Estimated households	Type of crop	Market
Ward 23 Kairezi Mzengezi river	1470	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals
Ward 24 Chiwenga Mzengezi river, Mukumbura Hoya	1060	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals
Hoya ward 17 Hoya river	990	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals
Kapembere ward 5 Mzengezi river near bridge	863	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals
Muvambo ward 7	257	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals
Chadereka ward 1 Hoya	1398	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals
Ward 19 Utete Utete	484	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals

Ward 3 Machaya Musingwa	479	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals
Ward 27 Museredza, Muzingwa river, Chenhuwi river	755	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables,	Harare, Mozambique, Locals
Ward 8 Murigazuva Mzengezi	1107	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables, Mbande Bute Fodya	Harare, Mozambique, Locals
Ward 4 Dambakurima, Mzengezi river Hwata area	902	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables, potatoes, Mbande/Bute plant for bute fodya	Harare, Mozambique, Locals, Mbare Musika
Ward 6 Utete River	386	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables, potatoes, Mbande/Bute plant for bute fodya	Harare, Mozambique, Locals, Mbare Musika
Ward 2 Maungaunga Hoya river Mukumbura	1034	Sweet potatoes, water melon, maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables, potatoes, Mbande/Bute plant for bute fodya	Harare, Mozambique, Locals, Mbare Musika
Ward 18	368	Sweet potatoes, water melon,	Harare,

Mutemakungu, Hoya river		maize, okra (derere), green mealies, tomatoes, cucumbers, vegetables, potatoes, Mbande/Bute plant for bute fodya	Mozambique, Locals, Mbare Musika
Total estimated households	**11 553**		

Below is a pictorial representation of matimba/ river bed farming

Plate 7.7-1: Matimba Farming

Plate 7.7-2: Matimba a type of farming by the Dande people dating back as far as 1940s

Farmers in the small livestock and Poultry Production

Most households in the district are involved in small livestock and poultry production. These cushion farmers during financial and economic macro shocks.

Poultry and small livestock production

Table 7.7.2:3

Activity	Estimated household
Turkey production +/-20%	6220
Ducks production +/-10%	3100
Chicken production +/-85%	26435
Goat production +/-80%	27000
Total households	**62755**

Plate 7.7-3: Pictures of Small Livestock Goats and Lambs

Plate 7.7-4: Small livestock Kraal

Such types of kraals have security issues as stock theft is also a challenge in the District.

7.7.3 Agricultural Inputs

Some inputs are available through the Government programmes such as the Pfumvudza Scheme earmarked for conservation farming and also through the ARDA Scheme. There is Contract farming where farmers are provided with inputs by companies such as Cottco Mashonaland Tobacco Company (MTC) and other Tobbacco contracting companies which give seed for tobacco mostly in the resettlement areas of the district and Delta Beverage contracts Sorghum farmers in Lower Muzarabani.

7.7.4 Agricultural Markets

a) Grain Marketing Board Depots

There is one GMB Marketing Depot Class 2 at Centenary and a Collection Point at Muzarabani Growth point which has eased access for farmers. The purposes of the GMB are for buying and selling grain, dispatching inputs for government social welfare and grain food security. **b) Cottco Ginnery**

A Cottco Ginnery is at Lower Muzarabani that exports as discussed earlier. **c) Council Livestock Auction Markets**

These markets are too far for Lower Muzarabani Communities in areas like Kairezi, Chiwenga, Denya, Attempts were made to have organized livestock markets in these areas but that failed.**c) d) Mvurwi Tobbacco Auction Floors**

The farmers grow tobacco but do not have tobacco auction floors locally but they deliver to Mvurwi. Some buyers buy directly from farmers.

e)Markets Stalls at Business Centres ,Rural Service Centres and Growth Points act as markets for Agricultural produces within the District as vendors are the active takers. **f) Harare Mbare Musika Market**

Most produce from Matimba and other horticultural sources and fruit gathered are destined to this important market in Harare. **g) Exports Markets**

Fruits produced at Oban Farm ie Bananas and Ashford Farm ie Avocados and soft Citrus are exported to European and Asian Markets

Cotton Lint processed at the Ginnery in Muzarabani is exported regionally and Internationally

Plans are under way to export processed Masawu, Baobab and honey Tobbacco

and wheat are also exported regionally and internationally **h)Agricultural Labour Market**

The district with its active population age group 18 to 49 is a big source of the labour market in Agricultural activities whether self employed or employed. About 80% of this age group is employed in Agricultural related activities. The Agricultural labour market is thus the biggest .

7.7.5 Agricultural Extension Services

The key objective of the extension service is to stimulate the adoption of agricultural production, management and conservation practices leading to increased and profitable production on a sustainable basis. Agritex services concentrate on the following: extension services aim to raise crop yields through better timing of ploughing, planting, fertilizer's application and post - harvest technologies. Improved animal husbandry/Livestock production and increased sustainable farming methods . Evaluate the grazing situation and investigate the possibility of improvement. In Lower Muzarabani adequate extension coverage is very important ensuring that cultivation is not carried out on stream banks and that where necessary and adequate conservation measures are employed as the erosion hazard in most of the area is high. This is already leading to severe erosion in some areas. The management aimed for sustainable Agricultural practices is the joint effort done by Council, EMA, Forestry, Agritex and Ministry of Lands.

7.7.6 Agricultural activities in Resettlement Areas

Land resettlement is the planned movement of people to areas of agricultural potential. This is done to alleviate population pressure in the communal areas and concurrently improving the base for productive agriculture in the peasant farming sector through both individuals and co-operatives. This also provides opportunities for people who are unemployed with no land to become economically productive. The resettlement programmes was also aimed to bring abandoned or under-utilised land into full production as one facet of implementing an equitable policy of land redistribution and infrastructural rehabilitation in the areas

Agricultural production in the resettlement schemes varies across the natural regions of the district as well as from scheme to scheme. There has been a steady annual rise in production for most crops in resettlement areas. Production emanating from the resettlement areas has also been expanding from year to year as discussed earliar. This has increasingly contributed to growth in national production. Upper Muzarabani is where most resettlements wards are. These are Wards 9 10, 11, 12, 13, 14, 15, 16, 20, 21, 22, 25, 26, 28and 29

7.7.7 Honey Production in the District.

Honey production is mapped in 5 wards namely ward 7, 10, 21, 29 and 27. and comprises ofestimated 427 farmers. The farmers produce honey for the honey processing plant at Muzarabani Growth Point .

a) Markets for honey

Local markets include pharmaceuticals like Varican and Datlabs Pharmacies and supermarkets. Through GEF, the Honey Production Farmers Association is making strides to explore foreign markets with the help of ZIMTRADE.

b) Value Addition

By-products of honey are used to make other products. Beeswax is processed and used in the production of skin lotions, candles, shoe polish, floor and skin ointments.

c) Exhibition

The farmers exhibit and compete at Agricultural shows and ZITF.

7.7.8 Fruit and dairy Production

Table 7.7.8 below shows where the fruit and dairy are grown/ produced and how much employment is generated in the district. It also shows where the markets for the products are found.

Where future plans are known it states what these are.

Agricultural diseases

Fall Army worm is common in crops and January disease in livestock.

Producers	Area	Type of fruit	Quantity Volumes	Market	Exhibition	Employment	Gender	Future Plans
Villagers	Communal and resettlement	Masawu	X	Local Regional.	Local shows	30 %	90% women	To form an Association

Commercial Farmer	Ashford Farm	Soft Citrus, Avocados, Nartjies	+/- 300 tones Avocado 800tones soft Citrus	EU, Middle East , Asia.	Local Warehouse	+/- 30 0	80% women and 20% men people.	Lateral Expansion by incorporating about 10 neighboring farmers on contract type avocado production scheme
Commercial Farmer	Oban Farm	Bananas	X	Local and regional	Local Warehouse	+/- 30 0	80% men and 20 %men	X
Small Scale farmer	Mawari Farm	Dairy Products	x	Local and Regiona l	Farm exhibition	X	X	X

7.8 TOURISM

Muzarabani has nature and game reserves as well as wildlife conservation areas. It also has cultural heritage sites as discussed earlier. All these have the potential to make the district an active tourist area. The table below shows the potential opportunities.

7.8.1 Muzarabani District Recreation Opportunity Spectrum

Table 7.8.1:1: Mavuradonha Recreational Opportunity Spectrum

Goods and Services	Potential Source of Income
1) Nature & Game Viewing (Sites with Rare & Endemic species of plants, animals, amphibians, birds	– Entrance Fees
2) Trophy hunting and citizen hunts	– Trophy fees – Permits
3) Photography and Aesthetic Scenery within Mavuradonha Wilderness Area	– Entrance Fees
4) Wildlife Filming and Documentaries	– User Fee and licenses

5) Outdoor Adventure Attractions (Walking & Hiking Trails, Quad Bikes, Cable Train, Zipline etc.)	– Recreational User Fee – Operator lease fees
6) Spiritual and Cultural Attractions (Within MWA)	– Entrance Fees
7) Eco tourism and accommodation services (camp site, rest camp, chalets, and lodges)	– Bed-Night fees – Lease fees
8) Event Venue (conferences, workshops, private event - weddings etc.)	– Hire Fees
9) Curio Shops and Supply Shops in Target Areas	– Items Sold
10) Permits (fishing, boating etc). Development of fisheries in small dams	– Licensing, User Fees
– Tailored School & Educational Excursions	– Participation Fees
– Mavuradonha Music and Arts Festival	– Entrance Fees

7.9 MINING

7.9.1 Minerals

Not much of the district has been explored in terms of mining though there are deposits of chrome, gold, oil and gas. The following map, Fig 7.9. Shows mineral deposits which present potential mining opportunities in the district.

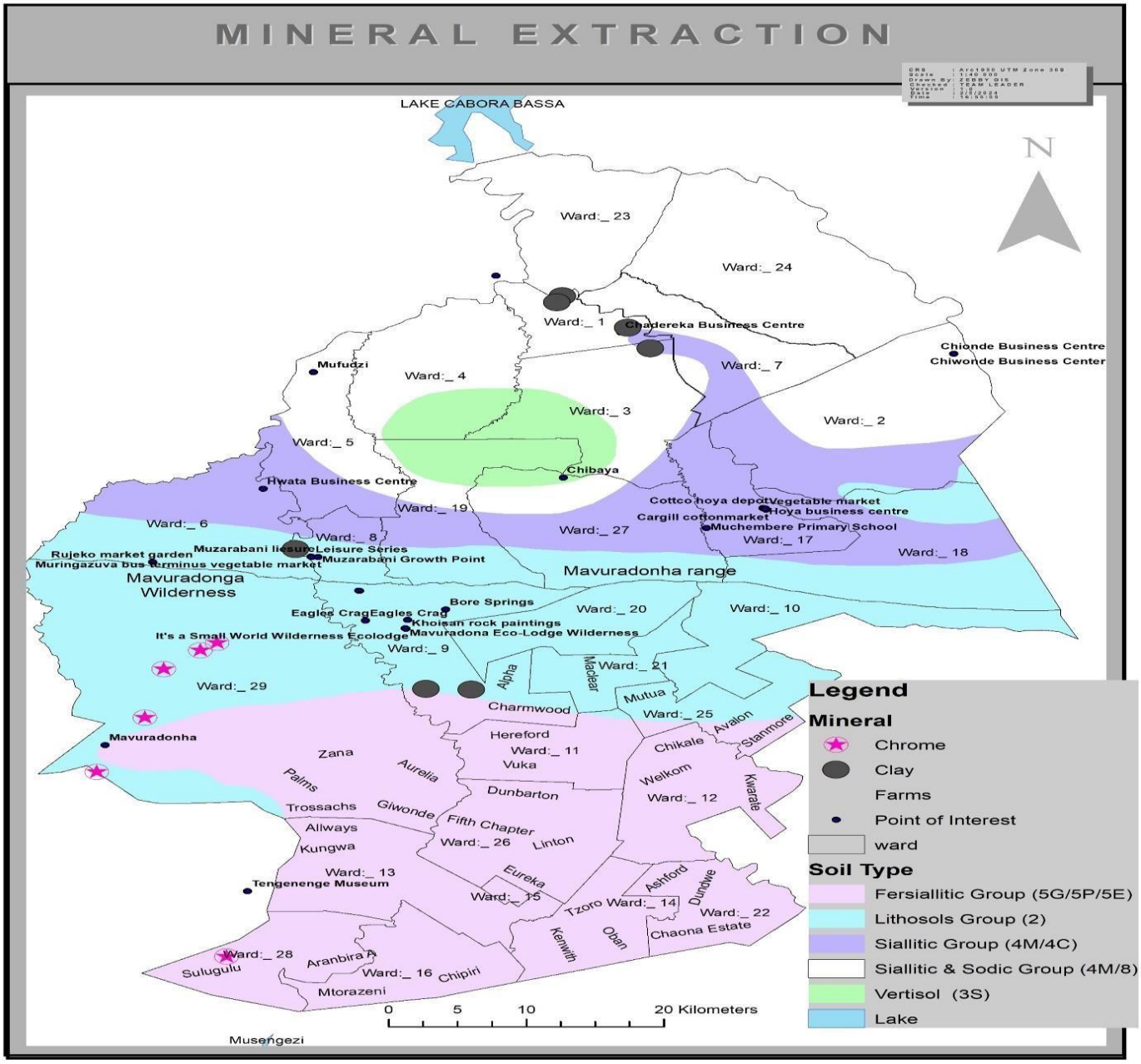


Figure 7.9-A: Muzarabani mining profile

7.9.2 Muzarabani Gas and Oil

i) **Exploration** for oil and gas is still underway on the Muzarabani side in Lower Muzarabani.The map shows potential gas and oil sites.

Figure 7.9.2

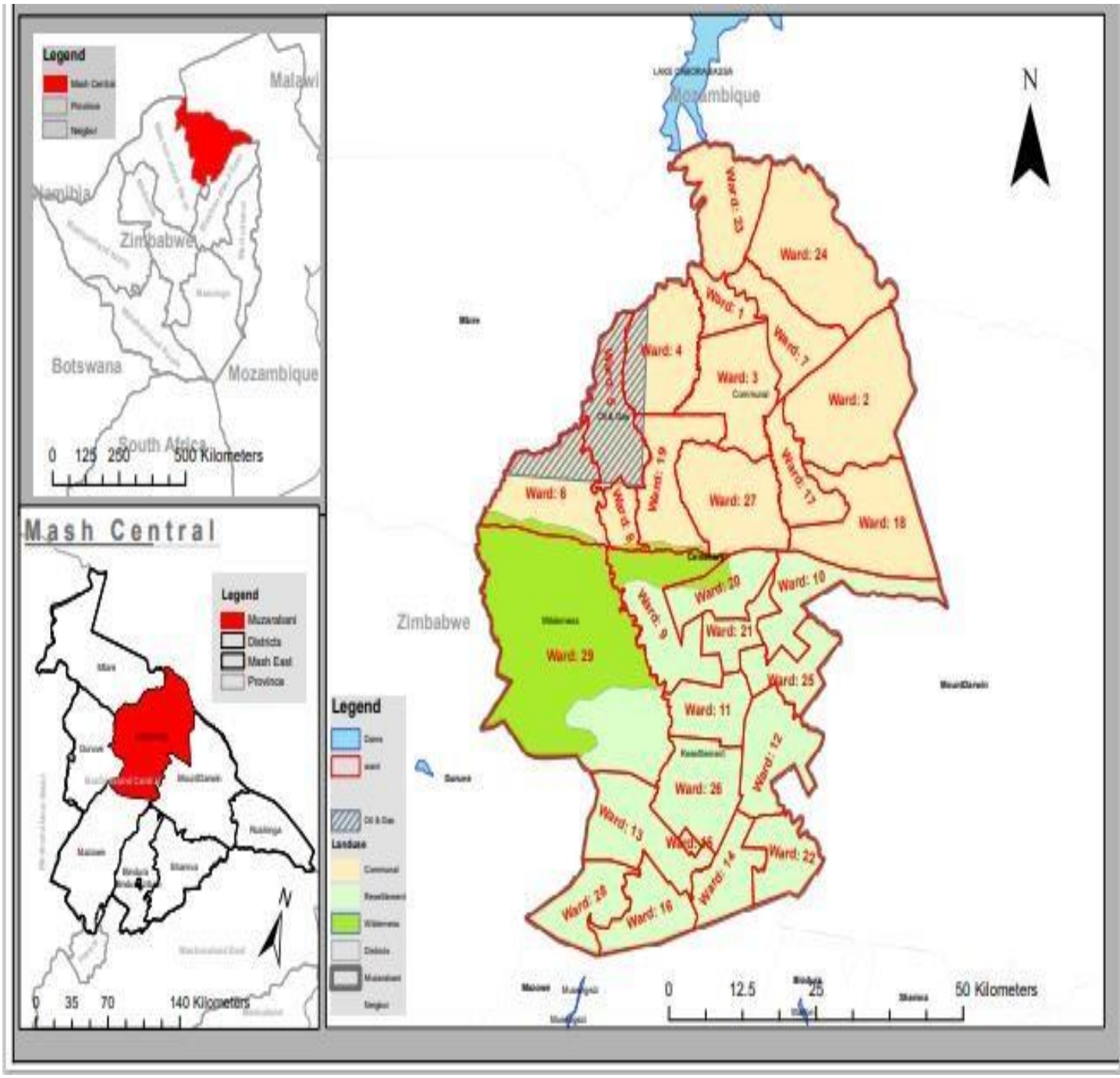


Figure 7.9-B: Muzarabani Gas and Oil in relation to other land uses

According to the investors and Invictus company, the following is already underway: a)

Further exploration

b) Continuous Feasibility Study

c) Mapping of the oil fields
d) Assessments and determination of the product
e) Corporate Social Responsibility (CRS) where:
    - Employment of locals is being considered
    - Upgrading of infrastructure services, the roads, schools.

Council plans to reserve areas for expansion and establishment of the plant but they are awaiting the environmental impact assessment certificate and document to guide its operational management pertaining to the gas and oil policy and mines and minerals Act .

ii) **Gas and Oil Production Sharing Agreement**

Muzarabani District benefits will be based on the Production Sharing Agreement which will rely on the following:

a) The new Mining Act that is under review which will provide legal guidance on the operations.
b) A Production Sharing Agreement governing the returns to ensure certainty, predictability for a 25-year production period and large capital investment.
c) Geo Associates and Invictus to have updated Mobile PSA to include gas terms and simplified production sharing formula
d) Existing legislation which enables GoZ to enter into Production Sharing Agreements
e) The essential characteristic of a PSA is that the state has ownership of the resources and the contractor receives a share of the production for the services performed.
f) The minimum work program obligations governed by the PSA which the contractor is required to fulfil to maintain the license.
g) The state not being required to contribute to capital expenditure or assumes any risk. Also on the fact it has no equity in the joint venture in order to reduce exposure to a highly capital intensive industry that has low probability of success.
h) Government essentially being a risk free joint venture partner.
i) The PSAs being able to provide a fair proportion of the revenue stream from the resources to the state whilst providing a fair return to the investors.
j) Geo Associates identifying a provision in the legislation which will enable GoZ to enter into a PSA.

7.10 ENERGY SERVICES

i) Energy types

The district is mainly a rural communal district and therefore relies heavily on wood for fuel for use in most activities. Usage of reticulated electricity is mainly found in the district's urban centres. Even in the connected area connection to electricity is sometimes being done through Customer supplied material methods to accelerate connection time making it a hindrance to the low cost income earners. A customer advisory committee is in place to serve as grievance handling platform but it is not visible. Table 7.9.2:1 below shows distribution status of electricity usage in the district.

Table 7.9.2:2: Energy Distribution Share by land use

Land use	Type of energy	Coverage/ ZESA distribution share.	Reason
Communal	Wood gas and solar	+/- 0.02%	No zesa grid in certain parts of lower Muzarabani Low income earners
Rural Service Centres	Wood Gas Electricity and solar Generators	2%	Most RSCs have no housing or accommodation services hence closed at night
Growth points	Wood,Electricity Generators, Gas and solar	17.08%	Muzarabani and Centenary have prepaid meters and smart meters for housing units, offices, business community.

Resettlements	Wood,gas ,generators ,solar and electricity	About 80% electricity	Smart meter post payment systems in the farms enables them to use adequate electricity supply for irrigation or as energy sources and most are connected to the Zesa grid

Provision of electricity is through:

Customer supplied material

This is when the customer provides all the materials needed for installation and this seems to be a quicker way of accessing electricity in the homesteads. If materials are supplied by ZEDTC the process seems to take longer. Vandalism of electrical infrastructure is a challenge especially in upper Muzarabani where transformers and cables are stolen. In lower Muzarabani the challenge is destruction of poles due to floods and winds.

Payment methods

Pre-paid meters.In the residential townships prepaid meters are the common payment methods while in the resettlement especially large-scale farms post-payment is common. Smart metering is also at Centenary. Estimated total electrification in the district is 40%. Management of Zesa issues is through customary advisory committee

7.11 COMMUNICATION SERVICES

The presence of post and telecommunications coverage lines for telephone lines is invisible as most areas have mobile telephone usage. Communities rely heavily on private cell phones whose coverage is better at urban centres but very poor in the more remote areas of the district.

7.12 TRANSPORT SERVICES

Public transport provision in the district includes:

a) Long distance buses provision which are seasonal due to the nature of the roads in the district. Places like Chadereka, Chimoio, Kairezi and Chiwenga people have to travel about 30km to catch public buses.

b) Private owned commuter omnibuses and cars: These include kombis and mostly illegal

(mushikashikas) which are very common in the Muzarabani- Centenary highway route

c) For the transportation of goods, farm produce (tobacco, cotton), livestock and other commodities, the common mode of transport include trucks, lorries and pickups**. Its high time for bulky transport as rail services to centenary from Concession especially when farming booms and gas and oil mining commences.**

7.13 MICRO SMALL AND MEDIUM ENTERPRISES LIVELIHOOD ACTIVITIES

7.13.1 Background to the development of MSMEs

The economy is largely driven by agriculture with 90% of the population's livelihood directly dependant on this sector. A combination of domestic and external factors led to an economic melt down from 2000 to 2008 culminating in massive hyper-inflation and cumulative loss in most social sectors such as Education, Health, Finance leading to dysfunctional social protection programs e.g. pensions, unemployment rates of over 80% among the youth pushing them to shift into the informal sector. This is what led to the establishment of Small – Medium enterprises as well as Micro enterprises (which are usually individuals who sell products, and do not employ anyone). In this category in Centenary/Muzabarani particular, are informal traders such as vendors, Flea markets operators, shoe repairers etc. Small Enterprises include those in stock feeds, light scale processing e.g. maputi making, wholesale selling and Engineering. There is no medium in Muzarabani and Centenary according to definition .

These small enterprises are regulated through government ministries. MWACSMED is also part of Ministries offering services such as social and economic empowerment of Women, communities, gender equality in all sectors of the economy. In particular, the Ministry has a department that offers essential services to MSME's and Cooperatives. The Government through the department of MSME's urges Micro-Small to Medium Enterprises to embrace compliance standards to tap into the global export market. Surveys conducted in 2021 revealed that the sector has 8000-10000 businesses operating in Muzarabani and provides employment to over 10000

households. According to national survey conducted in 2022, MSMEs throughout the country contributed USD 8.2 Billion to national GDP. It is estimated that Muzarabani MSME's are contributing slightly close to 1.1 million to national GDP. Statistically women are dominating in employment opportunities created by MSME's. Given their versatility, if supported adequately, MSMEs have potential to significantly contribute towards the country's productive capacity and the targeted exports of USD 14 billion by 2030. MWACSMED called on MSMEs to continue leveraging on technology and digitalisation as it has become an important catalyst for enterprise growth and transformation. Table 7.13.1a below shows the current informal sector livelihood activities in the district for three major centres while 7.13.1b shows the activities occurrence in *Centenary only.*

Table 7.13.1:1: Centenary, Muzarabani and St Albert livelihood activities

Type of MSMEs	Centenary	Muzarabani	St Albert	Other
Horticulture Vendors	40	28	14	24
Flea markets	80	50	12	18
Shoe repairs	4			6
Phone repairs	13	4	<1	7
Car wash	1	2	<1	0
Internet café	1	2	0	0
Bakery	1	0	0	0
Meat Processors	1	2	0	0
Sewing	4	3	1	5
Take away	2	1	1	0
Food outlet	9	7	4	8
Milling	2	3	3	8
Metal fabrication	5	3	2	2
Maputi making	1	1	0	0
Gas filling	3	3	2	5
Panel beating and spray painting	1	2	0	0
Carpentry	6	6	4	7

Saloon and barber	8	5	3	3
Stationery and printing	2	2	1	2
Tuck-shop	102	36	14	23
Hardware	13	4	1	5
Garment fabrication	1	2	0	2
Freezit making	1	2	0	0
Water bottling	1	2	0	0
Peanut Butter manufacturing	1	2	1	3
Pesticide manufacturing	1	2	0	0
Chemical Manufacturing	1	2	0	0
Motor repairs	3	3	2	4
Tillage services	6	1	4	0
Stock feeds making	0	2	1	0
Confectionery	0	0	0	0

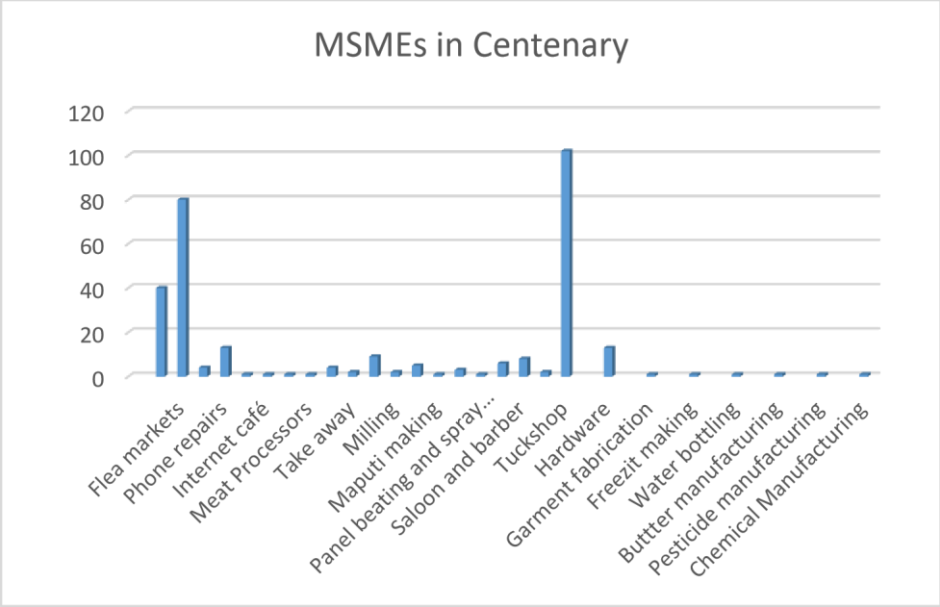


Figure 7.13-A:MSMEs in Centenary

a) **SMES in Communal areas**

- **Livestock production**

Most farmers are in the sale and production of livestock in all the communal wards and resettlements.

Total population of household Estimated livestock 90%

Estimated Monthly sales 600 cattle

Per year estimated 7200 cattle

- Small Grain Producers contracted by Delta. About 30% of the farmers in Lower Muzarabani are contracted by Delta.

b) **SMES in Farming.**

- Tobacco farmers registered under TIMB approximately 1000 and some are not registered.
- 90%Maize producers supplying to GMB. Most of these are from the Ressetlement Areas in Upper Muzarabani.

Going by the definition of MSMEs and according to the ministries all these farmers registered or not are the listed informal activities in the study report are all MSMEs.

d) Informal trade activities

1. Matemba and fish trading

   Cahora Bassa dam is just 5km from the border of Muzarabani hence this activity is rampant. It is popular with young age groups of 25-45 years selling to Mbare Musika traders. These come Kairezi, Chiwenga-Chionde and Chadereka and are about 150young unregistered traders selling to Mbare Musika Traders.
2. Charcoal production

   There is a lot of illegal charcoal production from mopane deforestation in ward 23 and Ward 24, Kairezi and Chiwenga respectively.

e) **MSMES registered under the Ministry of Women Affairs, Community, Small and Medium Enterprises.**

Table 7.13.1:2

Name of Group	Address	Year Funded	Amount Funded
Zvataishuva Cattle Fattening	Nyabonde Village, Maungaunga ward 2	2020	$300 00
Takashinga Gardening	Mutwa ward 25	2020	$300 000
Sunrise Fishing	Museredza ward 27	Carried over from 2020	$600 000
Greenlight Fishery	Museredza ward 27	2021	$300 000
Thabani Goat keeping	Chiwashira ward 10	2021	$300 000
Arise and Shine Poultry	Sharon farm, Mawari ward 13.	2021	$300 000
Ruvara Bakeries	Chiweshe ward 10	2022	$800 000
Tatenda broilers	Chiweshe ward 10	2022	$533 341,36
Ruzivo bakeries	Matanda Ward 13	2023	$13 499 353.50

MSMEs in Matimba are estimated at 11 553 households as per (see table 7.7.2.2)

MSMEs in poultry and small livestock are estimated at 62 755 households (see table 7.7.2.3)

7.14 CROSS CUTTING ISSUES

The crosscutting themes in this study report focus on particular areas that address individual, group or general vulnerability issues such as disaster shocks and gender issues. Each theme is described in some detail.

7.14.1 Disaster Shocks in the District

i)Disaster is an event that is concentrated in time and space in which a community undergoes severe danger and incurs such losses to its members and physical and social infrastructure is disrupted to an extent that the fulfilment of all or some of the essential functions of the community is prevented.

ii)Exposure is the degree to which the element at risk are likely to experience hazard events of different magnitudes. The topography of Muzarabani is a flat terrain dissected by a system of rivers that channel into the Zambezi river which eventually discharges in to the Indian Ocean. Throwbacks known as backflow flooding due to intense precipitation causes intense flooding in Muzarabani. Water piles up at river confluences and wards like Chadereka which lies on the confluence of Hoya and Nzoumvunda are at high risk of flooding. Muzarabani District has done flood mapping exercises in the past plus this study's hydrogeological Asssessment has alluded to that. Assessment of household vulnerability to flooding results indicated a very high degree of vulnerability to flooding. This indicates that almost all the households in Lower Muzarabani are vulnerable to flooding. The impact on the communities is severe because; a) The capacity to respond to flooding is very low.

b) Most of households rely on rain fed small holder farming that is susceptible to the damaging effects of flooding.

c) High Poverty Prevalence Rate ZIMVAC report is 88.4% *(2019 ZIMVAC Report*) with ward 24, Chiwenga having the highest Poverty Prevalence rate of 95%.

d) Transient food insecurity. Acute malnutrition due to repeated exposure to shock and stresses.

e) Deteriorating Sanitation.

iii) **High risk flooding areas**

As shown in the *Fig 7.14.1* below Chadereka, Chiwenga, Dambakurima, Kairezi, Kapembere, Muvamba and Hoya wards are highly vulnerable to risk of flooding. It has been noted and concluded that the intensity of flood is high on most communities. This is a result of low resilience as a result of:

a) Weak Community capacity to respond

b) Poverty and illiteracy resulting poor response mechanisms

c) Settlements in unsafe flood plains resulting in siltation which reduces river capacity. d) Physical Vulnerability

e) Poor Infrastructure

Populations of the following wards are prone to flooding

Table 7.14.1:1

Ward number	Total population	Households
Ward 24 Chiwenga	6623	1413
Ward 20 Kairezi	9301	1958
Ward Kapembere	5207	1150
Ward 1 Chadereka	8307	1864
Ward 4 Dambakurima	5355	1202
Ward 7 Muvamba	1423	342
Ward 17 Hoya	5643	1320
Total	**35 236**	**9249**

Plate 7.14-1: Pictures above show the effects of floods and hurricane like winds and storm in lower Muzarabani Keche school Ward 7 Muvamba

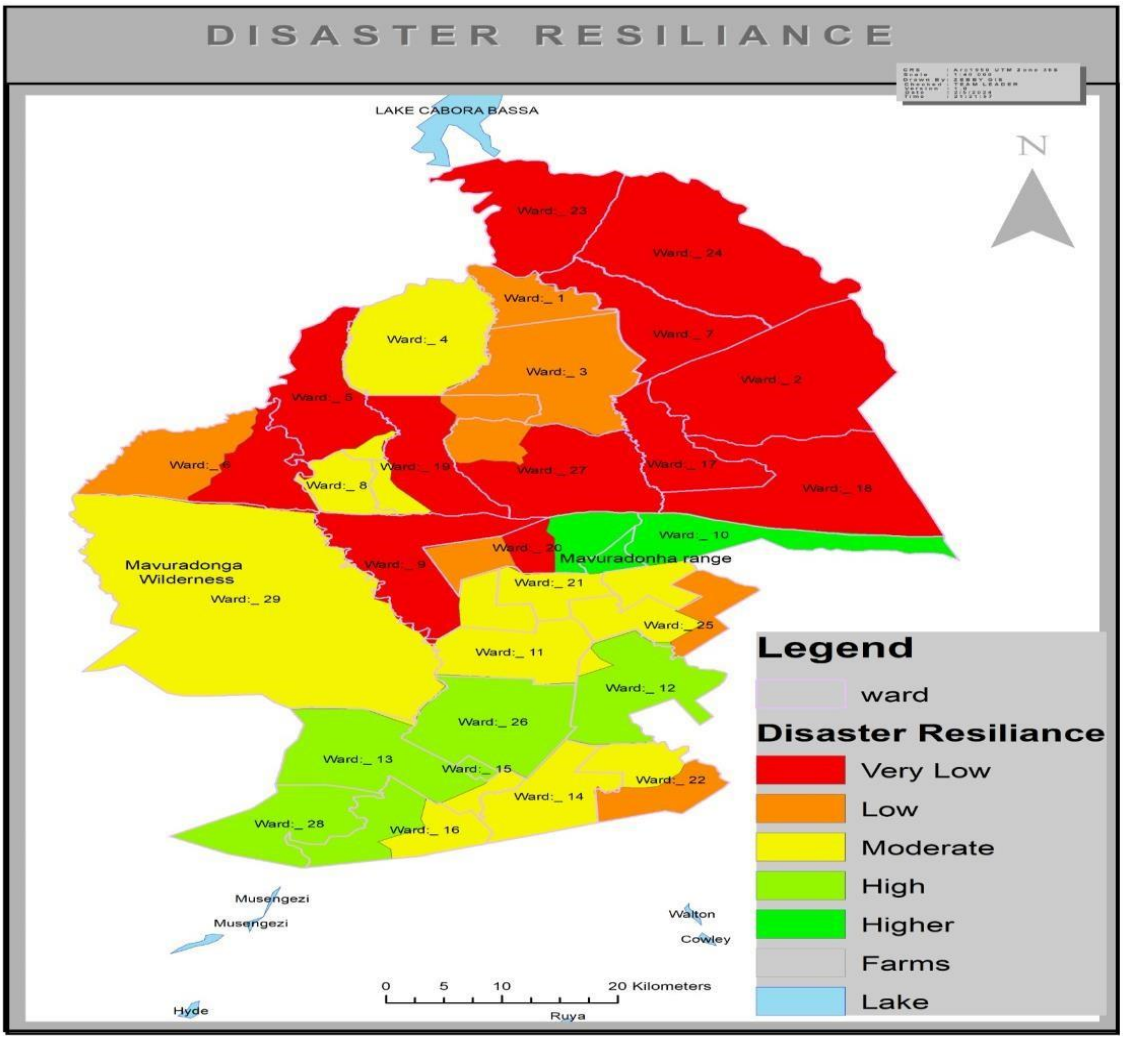


Figure 7.14-A: District resilience intensity old wards map source Zimvac.

Disaster Resilience

Lower Muzarabani is prone to harsh climatic conditions such as drought and floods and indicates very low disaster resilience.

7.14.2 Gender issues

a) General Gender issues

This refers to the fact that people experience a situation differently according to their gender. People have different needs determined by sex, age and other capabilities. Women and men have the same entitlement to Development services, to respect for their human dignity, to acknowledge their equal human capacities. These capacities include making of choices, equal opportunities to act the same level of power to shape the outcome of their actions. Gender studies done have unearthed that there are gender disparities which need to be corrected. A gender analysis is

necessary to understand who is excluded and marginalized and to scrutinize how these people were excluded by designing programs to overcome multiple barriers faced by the excluded using socially inclusive models to identify barriers to accessing development services. It is critical to analyse the impact of NDS1 and its call to action on Gender and decision making. This will result in inclusive decision making in rural development especially since the district has Dejure households which are male headed versus de-factor household which are women (due to divorce, widowhood or has never married). The voices of those households managed by women on behalf of the men eg in diaspora or in towns have an impact on the implementation of Projects in the district. Gender statements alone are not enough without mainstreaming it into development programs as it helps the planning process in balancing needs and aspirations of all. The principle of equality between men and women was recognized under the UN Charter and UN Declaration of human rights in 1948. The master plan process recognise that gender is a development issue .

b) Gender barriers

Some barriers have however been noted which result in gender imbalances as shown in *table 7.14.2* below.

Table 7.14.1:2: examples of types of Gender Barriers and in Muzarabani

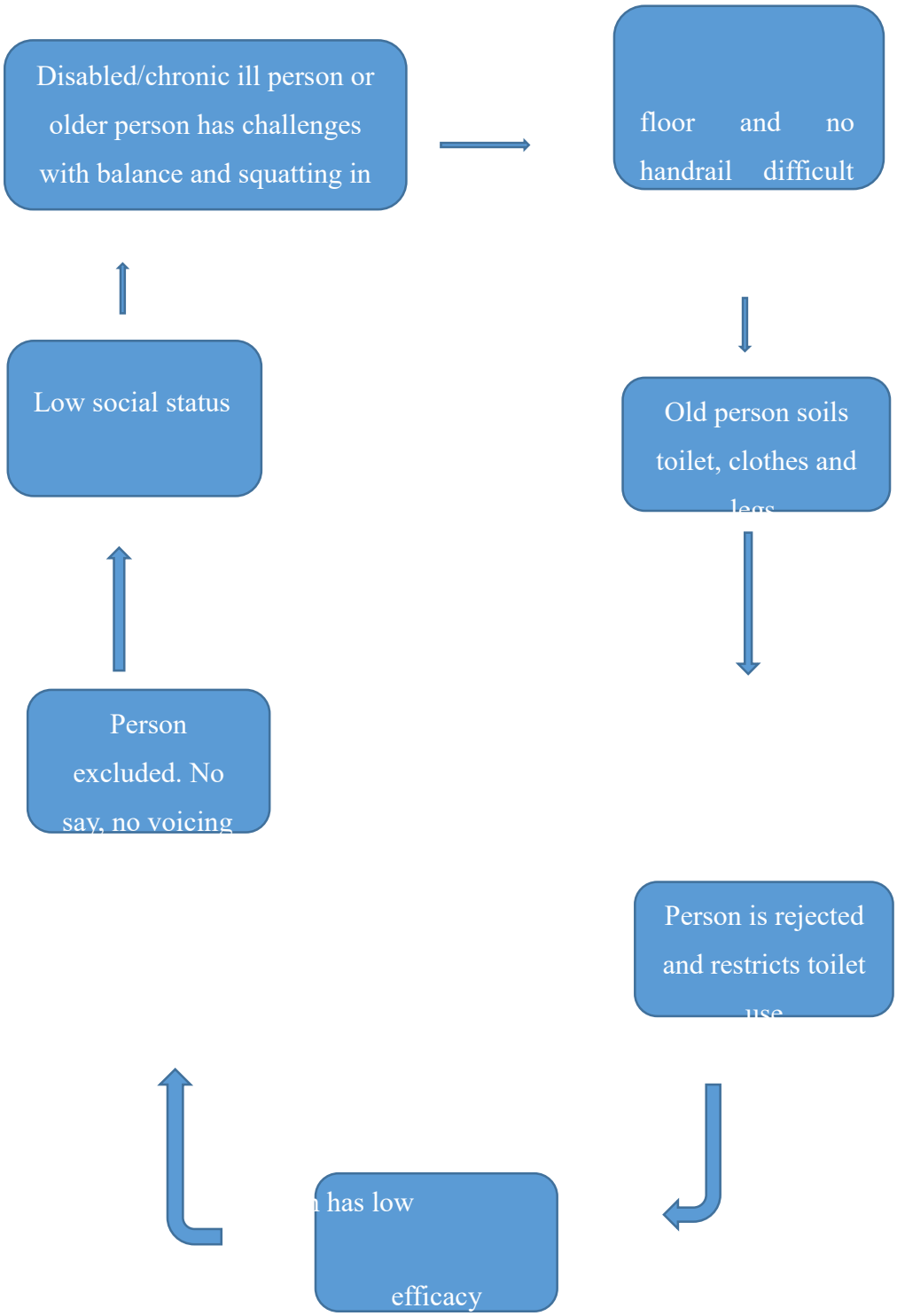
TYPE OF BARRIER source/type	**EXAMPLE**	**Most Affected gender**
Physical	Long distance to schools, clinics	Young children ,pregnant women
Natural and built environment	Rough, muddy areas like Denya where the nearest clinic is 15km. Chadereka is about 15km from its residents.	Young children women
Boreholes	Heavy pump boreholes almost all in the district and some Long distances	Children/old age Women The disabled

Ablutions	Narrow entrances on back Mothers have to leave babies outside No facilities for disposal of menstrual materials all toilets even blair in rural	Disabled the blind and wheel chaired pregnant women
Communal Public toilets at rank Centenary Muzarabani/business centres	Slippery/Dirty floors No doors. No privacy	Women Kids Disabled Old age
Communal toilets at all public places and home	A bit far from household, scary at night No lighting inside Difficult seats Security not safe	Children Women pregnant Disabled Old age
Institutional/ Organizational barriers Lack of ergonometrics	Lack of equity in Policies Non-implementation of laws National Disability Policy requires Public Facilities to make them access to disabled Building Minimum Standards do not cater for the disabled No guidelines for inclusive designs.	Disabled
Social/ Cultural Attitudinal Barriers	Lack of information on social exclusion among residents and society. Traditional belief on reluctance to speak up by women Overprotection Stigma Prejudice Shame Pity Misinformation about pregnancy esp religious sects, Menstrual disability	Women, girl child Boy child Women women women

	Old age believed to be witches Old age squatting in the chamber Gender based violence drives hike of HIV infection and early child marriages. Mental Illness and epilepsy resulting in users being detested and excluded. Marrying off minor girls common in Muzarabani Girls not being allowed to inherit their parents wealth culture abuse	Old aged women & men Mostly women and young girls Both men and women

Depiction of Societal norms as a barrier

There are some compound societal norms in which women, children and other groups are systematically sidelined and ignored in decision making and resource allocation. These barriers form a self-reinforcing cycle as represented in *Fig 7.14.2b* below:



This is very common in most household especially urban areas of the study are Centenary as an old colonial urban centre developed by former commercil farmers there are so many old aged estimated at 28 who do not have rural homesteads living in centenary

7.14.3 Theories of Gender Development applicable in the district:

a) Women in Development Approach (WID)

This is the integration of women into Global Processes of economic, political and social growth and change. WID emphasis is on the transfer of technology, Provision of extension services and credit facilities. Once women and children are productive and bring income, development is guaranteed. An example of how women can be integrated into development initiatives in Muzarabani is the Women Development Fund which is earmarked for women projects

b) Women and Development Approach (WAD)

This approach focuses on the relationships between women and development processes like WID. above it also concentrates on integrating women into development without considering too many qualification factors.

c) Gender and Development Approach (GAD)

This focuses on linking the relations of production to the relations of reproduction taking into account all aspects of women's lives. It is concerned with the Social Construction of Gender and the assignment of Specific Roles, responsibilities and expectations to women and men. GAD welcomes the contribution of men who share a concern for issues of equity and social justice.

Governments' participation in Women's emancipation and sees as a duty of the state to provide social services. An example is the Zimbabwe Community Development Fund (for both men and women) by the Government.

The GAD Approach sees women as agents of change rather than passive recipients of Development Assistants and stresses the need for women to organize effective political voices. It demands a degree of commitment to structural change and power shifts within societies**. In all these theories applied there is some form of empowerment in terms of capacitating the women who are mostly under-privileged and important majority users of councils service delivery**

7.14.2 Gender and HIV

People living with HIV are vulnerable to and disproportionately suffer from adverse effects of inadequate service delivery due to their immunosuppression (source NAC Muzarabani). Persistent diarrhoea, insufficient water and sanitation access is a serious burden that compounds the difficulty

of living with HIV. Lack of such has given rise to morbidity and mortality among people living with HIV and AIDS.

The prevalence of dry boreholes to water points within the district has compounded to and worsened the situation. People living with HIV in the district suffer from Diarrheal diseases often caused by poor sanitation as they suffer more severely they are more likely to die from it. Recent studies show that people living with HIV need more volumes of water per day to wash soiled clothes and bedding.

7.14.3 Efforts by Council to include Gender issues in Muzarabani district

In its endeavour to become the Local Government Centre of Excellence, Muzarabani Rural District Council has focused on mainstreaming gender in Council in line with the Gender barometer.

Findings of researches previously done were that today the majority of planners or development markers do not fully address the different gender needs in the development process. In most cases, planning is assumed that as long as one section of society benefits, it will trickle down to the women, old aged, youth or disabled hence supporting Baserrup's 1970, Rodger 1980 assertion.

Gender Policy and Sexual Harrassment Policy at Council

The councils has made a conscious effort to include gender in its development programs There is now a Gender Policy in Council which includes a Sexual Harassment Policy and a Gendered Budgeting Program.

The Council has partnered with Commonwealth, Local Government and Municipal Development partners for financial support for projects earmarked for women and youth.

In some wards eg Ward 15, Gato. The elderly are given priority in disbursement of social assistance e.g. Pfumvudza inputs. **The Climate Change Fund Allocation** also considers gender.

There is still a lot of work to be done in Muzarabani in respect of gender issues though. eg a total of 12 clinics and 4 health posts are in existence benefitting both men and women the old age and the disabled. The council needs to now include proper baby changing rooms, and a waiting mother's shelter for pregnant mothers. The health posts needs a resting place for the elderly, proper ablutions and a good water supply system as these use toilets. Lacking is a youth rehabilitation center, and a physio center for the youth especially since now a lot of youths abuse drugs.

The statistics for Clinic visit indicated that the majority of the people served by the clinic were women and children which is a key gender plus. This was noted for the boreholes. From the survey conducted, the majority of borehole users were women and children. Inclusion of such statistics in the reporting system of local council is vital as an attempt to measure key development provisions. This means that the proper provision for accessible roads to these premises by Council will have a downstream advantage as these users of borehole clinic facilities can enjoy the services timeously.

For the resettled farmer in the Upper Muzarabani, who are into Tobacco . Farming- for the dejure and defacto households the provision of auction floors only in Harare is burdening the other gender. The tobacco floors elsewhere have cost implication and womanhood deprivation in terms of bathing and safe accommodation services.

Junior Council

Council has a Junior Council meant to sensitize the youth and involve them in development issues. The composition of this is inclusive and in the meantime, a new council is to be formed as the past term expired. This plays an important role as youth issues are captured in the development process. **Gender Based Violence Safe Shelter** donated by Council freely - serves as shelter for rape victims ready for court or doctors inspection. This stand was donated free by the Council to the Department of Women Affairs as a way of mainstreaming gender projects. Basically, the three approaches to the Gender and Development are at play in the district.

7.14.4 National gender related programs

The presence of women's quota by the government has resulted in the extra policy decision making body the current drawback being that key posts for decision making like finance committees, social services committees and roads committees are male dominated even at council level. Some national gender related programmes have fitered down to district level. These include: First Lady's Agriculture for She Program. Ministry of Women Affairs empowering programs for the low income groups through their Women Development Fund(WDF) for income generating projects, Poultry Zimbabwe, Zvataishuvira Cattle Fattening Ward 2 Nyabonde Village. Community Development Fund Youth and women are given loans for income generating projects, horticulture, poultryFish Project at Museredza.

Registry Offices

The Department of the Registrar has established centres for births and death registration in the following Dambakurima, Hoya and Muzarabani with Mobile registration at certain times. This has helped the registration of newly delivered babies within the locality serving transport costs and time. In this cause, women and youth are recognized.

Guided by the Human Settlement Housing Policy which emphasizes 10% allocation of stands to women, 10% to youth,10%for Disabled etc. Stands are provided equitably and incusively.

Gender in MSMEs

The issue of gender imbalance is also found in MSMEs. From the table 7.14.7a below and fig 7.14.7b, women are found mostly in the horticulture and flea market showing an inclination to Agricultural related sector. Flea market is sometimes barter trading of agriculture products

Table 7.14.4:1: Distribution of SMEs activities by gender and activity (Centenary)

Type of SME	Male	Female	Total
Horticulture Vendors	3	37	40
Flea markets	12	68	80
Shoe repairs	4	0	4
Phone repairs	13	0	13
Car wash	1	0	1
Internet café	0	1	1
Bakery	1	0	1
Meat Processors	1	0	1
Sewing	2	2	4
Take away	1	1	2
Food outlet	3	6	9
Milling	2	0	2
Metal fabrication	5	0	5
Maputi making	1	0	1

Gas filling	3	0	3
Panel beating and spray painting	1	0	1
Carpentry	6	0	6
Saloon and barber	3	3	8
Stationery and printing	2	0	2
Tuck shop	93	9	102
Hardware	13	0	13
Garment fabrication	1	0	1
Freezit making			1

	1	0	
Water bottling	1	0	1
Butter manufacturing	1	0	1
Pesticide manufacturing	1	0	1
Chemical Manufacturing	1	0	1

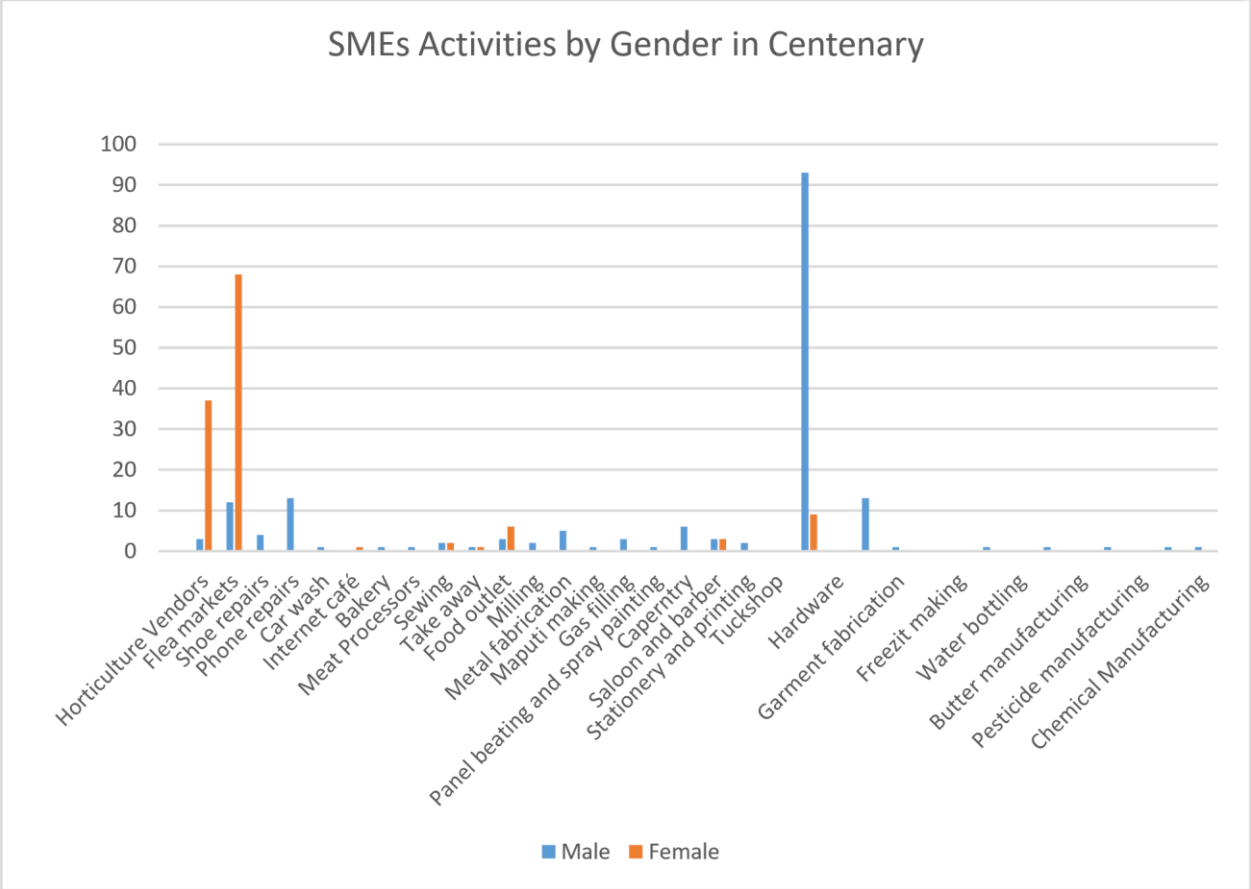


Figure 7.14-B: shows the distribution of vendors by gender

Consideration of Gender issues is important in development planning because as users of service delivered each person has specific needs

CHAPTER 8 CHAPTER ECONOMIC INFRASTRUCTURE

8.1 INFRASTRUCTURE

8.1.1 Road Networks and Bridges

The district has sodic soils as such the roads are affected by gully formation in Lower Muzarabani in the valley. Although Muzarabani District communities are using dilapidated and almost non-existent bridges the road network covers the district quite extensively. It also has linkages with other external areas such as Mahuhwe, Chiweshe, Guruve, Mt Darwin and Mvurwi. Through these linkages there's convenient access to most significant places in the country. The Map below shows major road linkages in the area

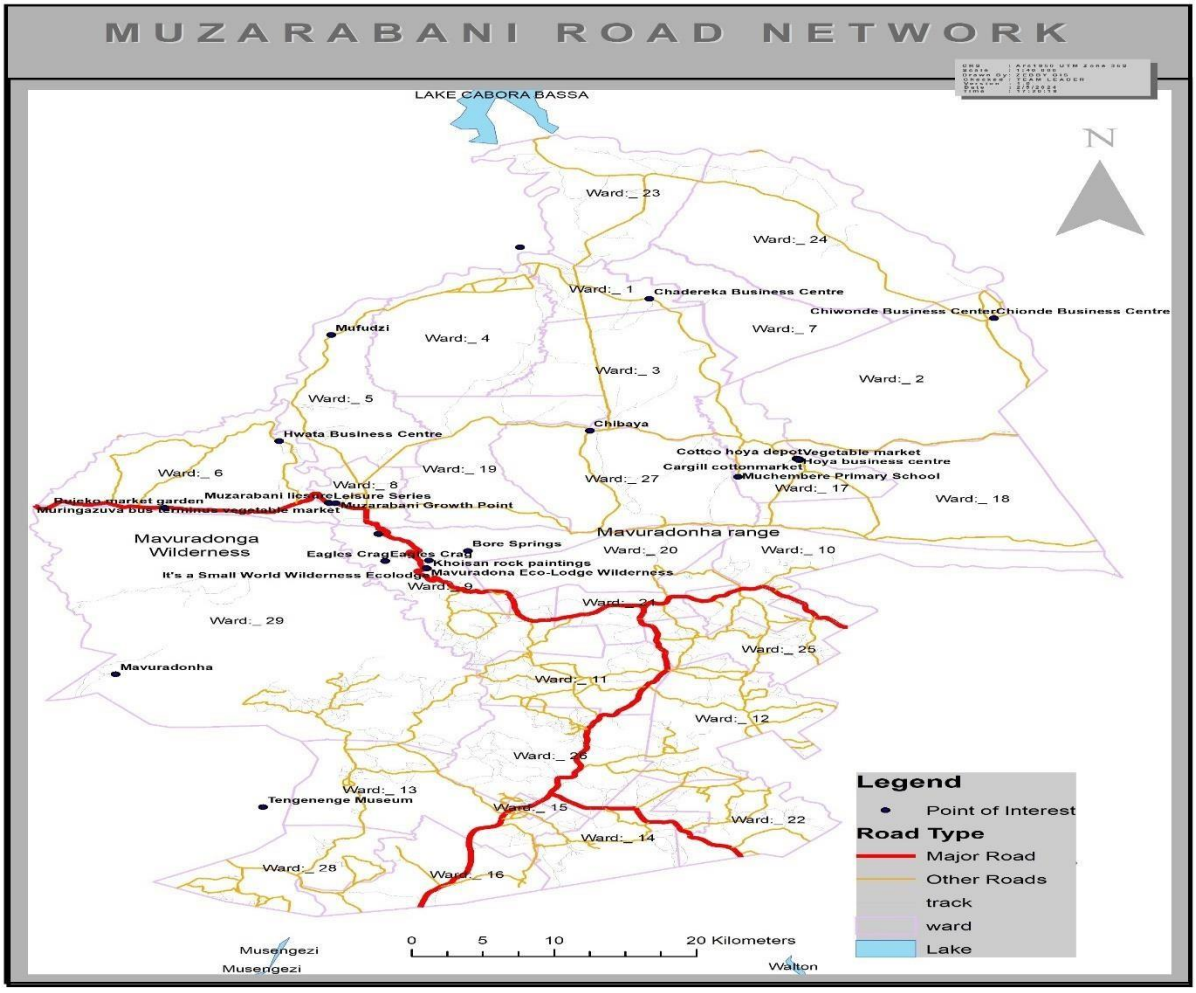


Figure 8.1.1a. Muzarabani Road Networks

Major district linkages to neighboring areas are shown in the Map 8.1.1b below.

Figure 8.1.1b Major district linkages to other important neighboring areas

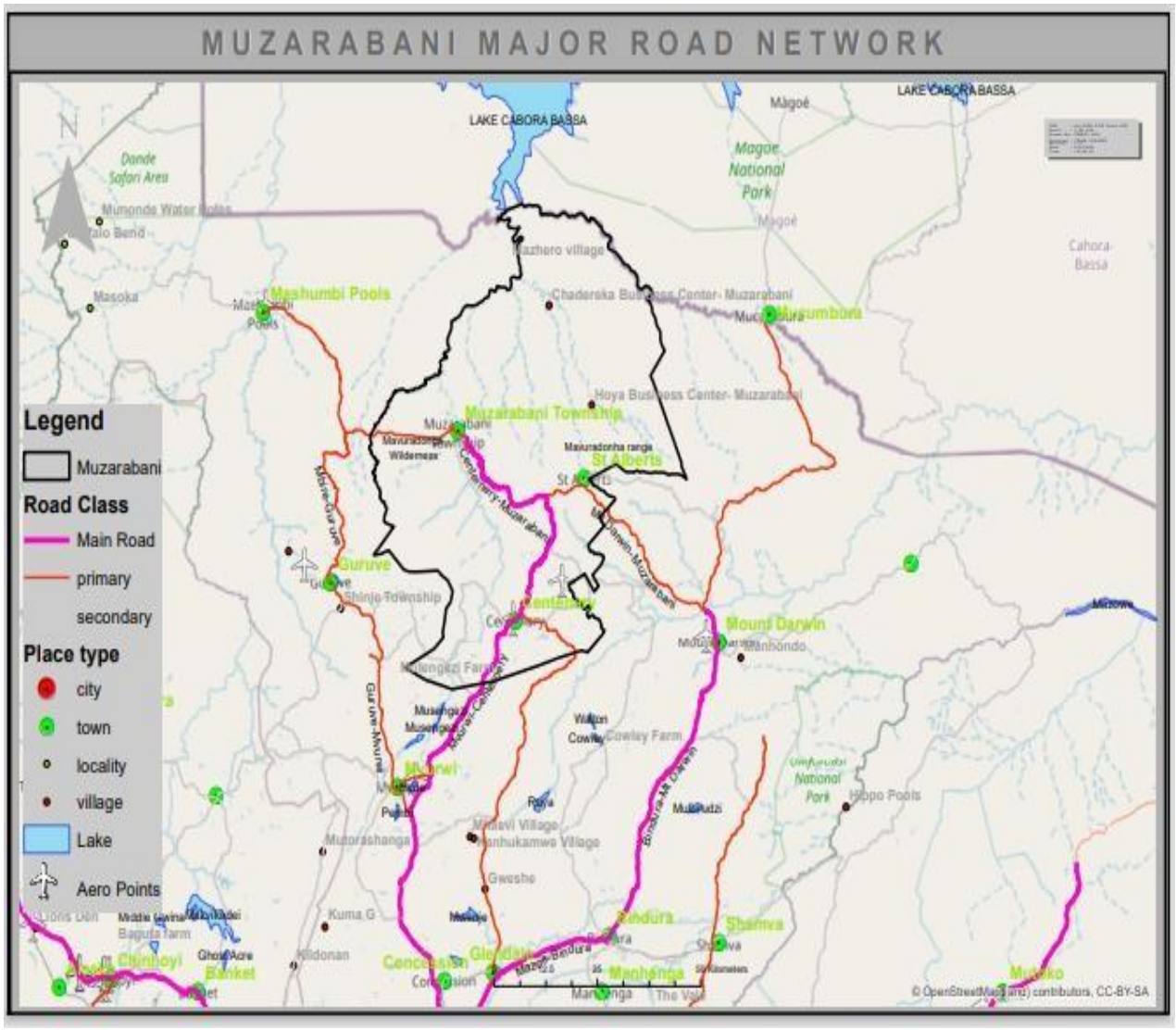


Figure 8.1-A: Table 8.1.1.1b . road linkages with neighboring districts Table 8.1.1:1: below shows the existing Ministry of Transport and Infrastructure bridges and length

	BRIDGES	KM (kilometers)	ROUTE NUMBER
1	Kadzi	120.8	154
2	Utete	117.5	154
3	Kapatamukombe	113.3	154
4	Musengezi	96.3	154
5	Kadzurure	81.8	154
6	Utete	74.8	154
7	Musingwa	68.5	154

8	Nzou Mvunda	59.0	154
9	Hoya	53.0	154
10	Musingwa	23.5	154
11	Senga	6.5	154
	BRIDGES	**KM (kilometers)**	**ROUTE NUMBER**
1	Kadzi	120.8	154
2	Utete	117.5	154
3	Kapatamukombe	113.3	154
4	Musengezi	96.3	154
5	Kadzurure	81.8	154
6	Utete	74.8	154
7	Musingwa	68.5	154
8	Nzou Mvunda	59.0	154
9	Hoya	53.0	154
10	Musingwa	23.5	154
11	Senga	6.5	154

Source Min of Transport and Infrastructure Development

8.1.2 Telecommunication infrastructure

There are 2 mobile network service providers in the district which are Econet and Netone which have installed transmission towers. These seem to be inadequate as network coverage is bad throughout the district. This has forced some villagers in the borderline areas of ZimbabweMozambique to use foreign network services. This is same with radio and television coverage.

Improved telecommunication infrastructure is necessary.

Total base stations operating in the Muzarabani wards

Area	Econet	Netone	Telecel
Upper Centenary	1	1	1(not functional)
Lower Muzarabani	1	0	0

Wards not covered or poorly covered by Econet and netone network coverage

Chiwenga ward 24

Kairezi ward 23

Chadereka ward 1

These are accessing Mozambique network. Wards at the edge of the Mavuradonha mountain range are badly affected by this relief in terms of network coverage.

8.1.3 Energy Infrastructure

The district has a Zimbabwe Electricity Transmission and Distribution Company (ZETDC) substation at Centenary, in Upper Muzarabani. In Lower Muzarabani, solar provision by ZETDC in few selected wards like Ward 23, 24 and 1 has not yet been fed into the grid. Alternatives such as:

- solar fields,
- windmills,
- hydropower stations on dams such as the recently started Silverstroom,
- biodigesters

should be planned for. With potential gas and energy from Muzarabani Gas and oil likely to resume the district is likely to an energy powerhouse.

8.1.4 Institutional Infrastructure

The District lacks judicial services, banking services and other institutional services like registrars offices and Police Services due to the lack of infrastructure such as offices and accommodation for relevant officers. Only 4 sub offices exist for registrar services in the district. Inadequate institutional infrastructure services in the district include: Judicial Court Rooms, Prison Accommodation, Banks, Chiefs Courts, Government Complex Office, Police Bases Accommodation, Government Accommodation at Designated Rural Service Centres for Vet Officers.

8.1.5 Commercial Infrastructure.

a}With such high production yields of tobacco in the district there are inadequate facilities for tobacco sales floors. Road development and expansion in all the urban centres, Muzarabani, Centenary and St Alberts is necessary.

b} Inadequate commercial facilities such retail shops ,food outlets shopping boutiques chain supermarkets with variety of goods c}Temporary MSMES workspaces d}temporary and inadequate Market Stalls

8.1.6 Water and Sanitation Infrastructure.

The increase in the population for all three urban centers, Centenary, Muzarabani and St Alberts is giving pressure on water and sewer infrastructure as evidenced by several incidences of burst pipes and water rationing times. The current three dumpsites (Muzarabani, Centenary and St Alberts) are not structured and well designed

8.1.7 Growth Points and Business centres

The Council has district service centres and rural service centres that serve as business centres. Distribution of these centres has been shown in chapter 5.
The hierarchy of these start with Centenary as the commercial district headquarters followed by Muzarabani, St Albert's Chiwenga, Hoya, Chadereka, Kairezi, Dambakurima, Chawarura and Chiwonde

Infrastructure in the proposed nodes

INSERT A : Centenary

Centenary is surrounded by Farms- Dendere, Mwonga, Westheim, Fifth Chapter, Silverstroom and Maddalo Estate. The portion of Land that was originally Centenary township is almost fully planned, a portion of the remaining area to the northwest of the township is hilly & rocky as we approach the hills (see contours on map) and therefore difficult/cost intensive to develop. As such it is imperative to propose the incorporation of some of the farms into Centenary to cater for the growing population and the already high demand for housing and economic activities in the area.

Road network, cemetery, Heroes Acres, Institutions, bank, aerodrome, housing, communication networks, water, solar grid, ZESA grid, judiciary service infrastructure

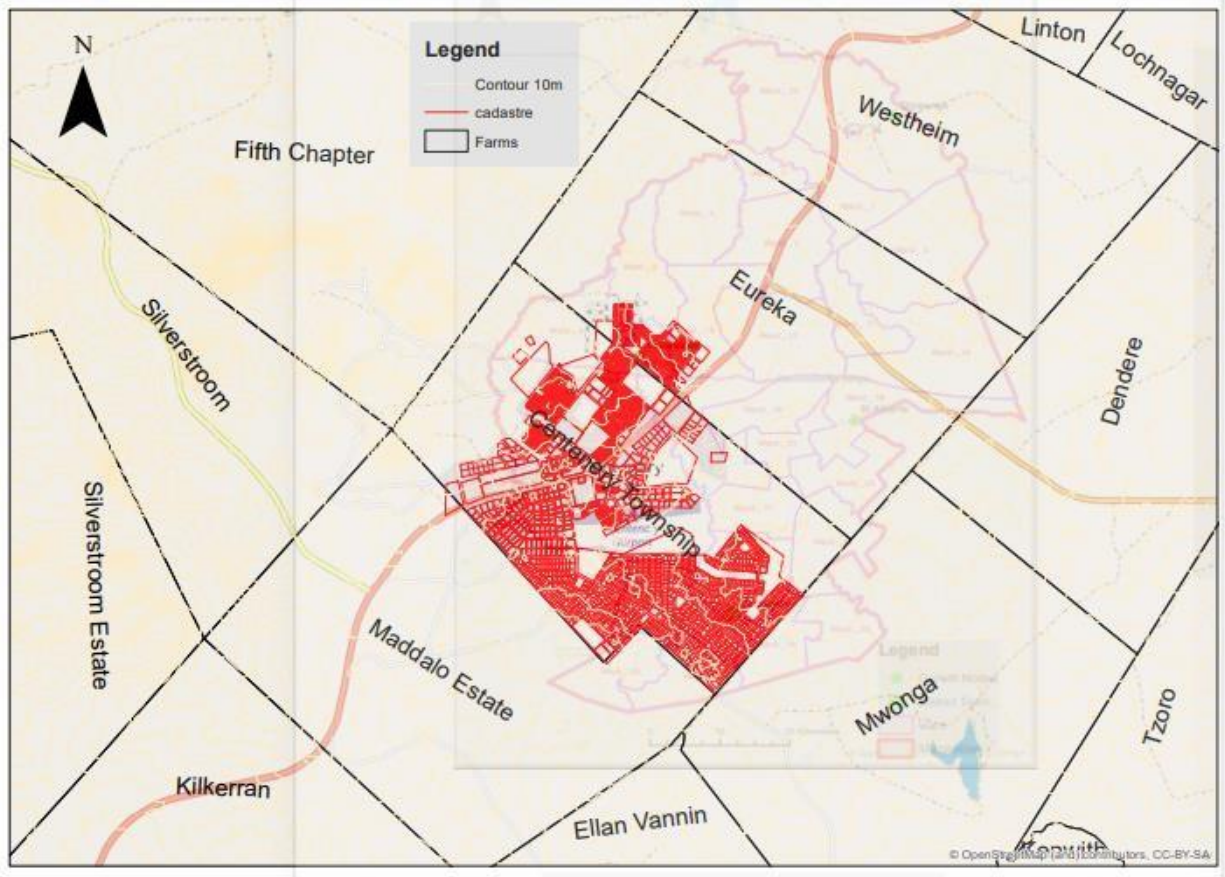


Figure 8.1-B: Centenary Growth Point current status

Centenary is the largest urban settlement in Muzarabani district. It is situated along the Harare - Muzarabani state road about 55 km from Mvurwi, and 145 km from Harare and 55km from Bindura

Centenary was created in the early 1940s when the surrounding commercial farms were occupied by white settlers. It was developed as a service and administration centre for the surrounding farming community. It has now assumed the role of a district capital which is being managed by a Chief Executive Officer. It has four land use zones . These are medium and high-density residential (Gatu township), the low density residential Fenton, Medium density Hillside ,the commercial centre and the industrial area.

Social services, which are part of supportive services to any urban economy, are found in convenient locations throughout the town. At the moment Centenary is the main centre for

economic activities in the district. Its industry comprises of grain and cotton handling, storage and distribution facilities (G.M.B) light engineering. transportation of goods and services, construction, packaging ,baking and service garages. Recent studies carried out reveal that it has more than 30 Small and Medium Enterprises and 5 formal industrial establishments. These are located in two industrial nodes. The first node consists of mainly light industrial activities situated between Gatu Township high-density suburb. The second node is a general industrial area on industrial site. Commercial activities are concentrated in the centre such as retail shops, supermarkets, hardware's, restaurants, food outlets and guest houses. Offices for Muzarabani Council and some Government Departments are located at the centre. People from surrounding farms in the district converge in the centre to conduct their business although Mvurwi town next door is most preferred for commercial retail and banking .

The informal sector or small enterprises sector in Centenary is slowly becoming an important player in commercial and industrial development. More job opportunities are being created in this sector. About 43% of the unemployed economically active population in were estimated to be working in the informal sector. As employment opportunities in the formal sector are slim, more, people including school leavers are joining the informal sector. Growth in this sector is eminent and will undoubtedly provide a new lease of life.

Main informal sector activities are vegetables and fruits vending, sale of cooked food, watch repairs, welding, spray painting, carpentry, tailoring, maker repair and hairdressing. In most cases the location of informal enterprise conflict with town planning provisions in the centre. The main impediment being lack of financial resources for servicing land for different housing schemes.

Industrial and commercial developments are affected by depressed economic conditions which are experienced nation-wide. However, the farming community supports the centre's economy. Therefore any positive changes in the agricultural industry will automatically benefit Centenary.

Muzarabani Growth Point

Muzarabani Growth Point is located 68 km North of Centenary is the second biggest Service centre for the District. The centre has a fairly large population which is estimated at ….and is growing steadily. Muzarabani is known in respects. Firstly, it is the administrative headquarters of Muzarabani Rural District Council. Secondly, it is the main centre for collection and distribution

of agro - divisible inputs to the subsistent farmers in the Lower Muzarabani communal areas. thirdly, it is also a prominent marketing centre for agricultural produce from the communal lands in Lower Muzarabani. Livestock clearance activities are prominent at the police centre at Muzarabani Growth Point Police Station. The role of Muzarabani as a market centre is evidenced by the location of Grain Marketing Board collection point, cotton Ginnery collection depots owned by COTCO and others such as Alliance.

Agro -processing industries such as milling packaging and oil processing. A big plant for Bindura University Bio -Tech Plant under the initiative of Bindura University to promote Agro-processing industry is underway. Agriculture is the main economic base for the district service centre. The commercial and informal industrial sectors at Muzarabani are thriving well although much is to be done to stimulate the development of light and general industries which generate more business and employment opportunities. Predominant commercial activities are supermarkets, wholesalers, general dealers and bookshops. Office accommodation is mainly for public institutions such as Muzarabani Rural District Council, Government Departments and parastatals.

Industrial development is mainly in the form of service industries. Typical examples are service garages, tailoring shops, carpentry shops, welding shops and bakeries. The major constraints in the expansion of Muzarabani are the shortage of water and lack of a reticulated sewage disposal system.

INSERT C: Muzarabani Growth Point

The left-hand side is a smaller scale while the right-hand side is a larger scale of Muzarabani Rural Service Center locality.

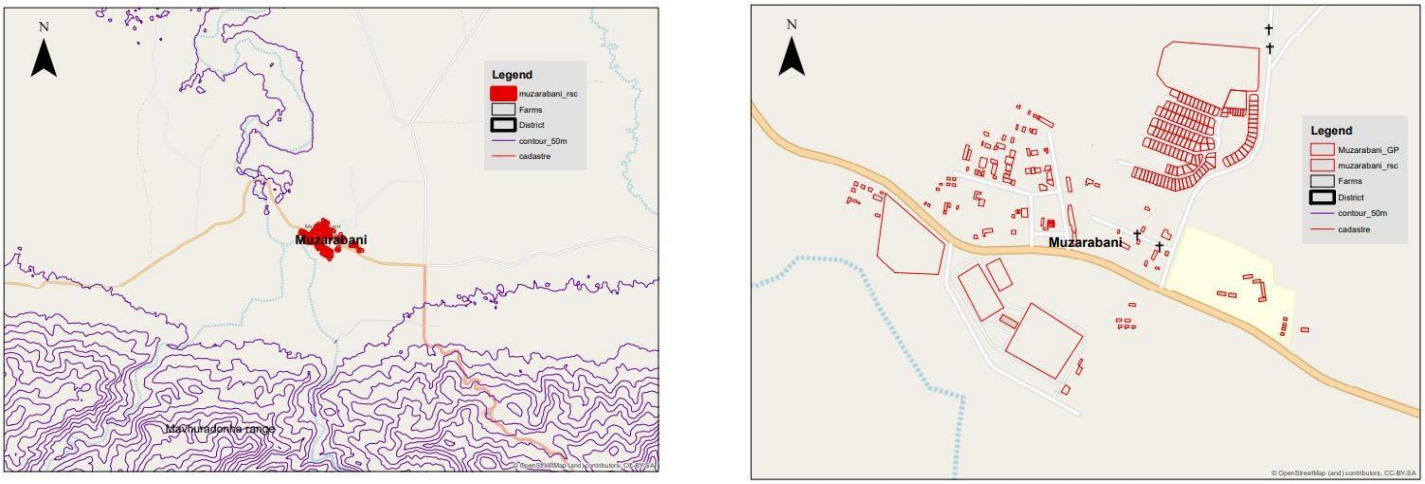


Figure 8.1-C: Muzarabani Growth Point current Rural Service Centres status

Planning and development of rural service centres is aimed at promoting the growth of rural based industrial and commercial enterprises thereby increasing functional linkages with the urban settlements and creating employment for local school leavers.

The district has 7 rural service centres namely St Alberts, Chiwenga , Hoya, Chadereka, Dambakurima, Kairezi, Chawarura. These are centres for local markets and distribution of services mainly agricultural inputs and a variety of social services, clinics, schools and people's markets. There are also numerous business centres below the rural service centres.

INSERT B: St Alberts

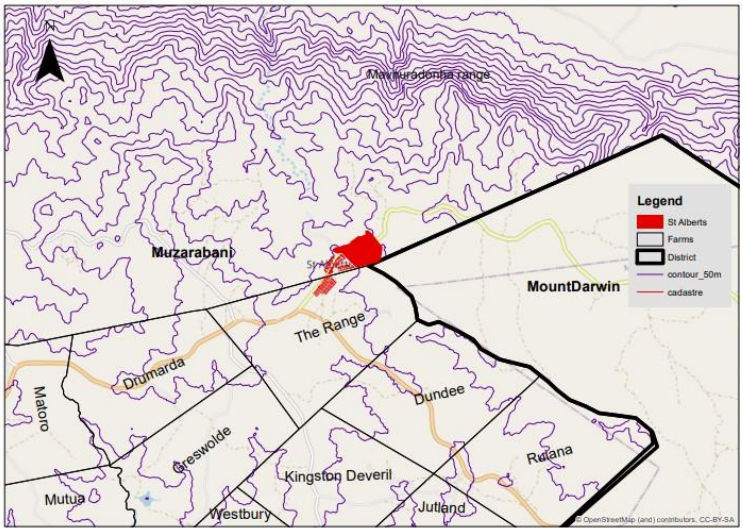
To the left is St Alberts zoom to a smaller scale, the right-hand side is St Alberts Zoomed to a larger scale. Contour lines to the North of the area shows that the slope is starting to rise and expanding in that direction may result in failure of development due to high development costs. Therefore, expansion of St Alberts May be proposed going south and/or west. The Eastern side is also not feasible as we are now approaching boundary with Pfura RDC.

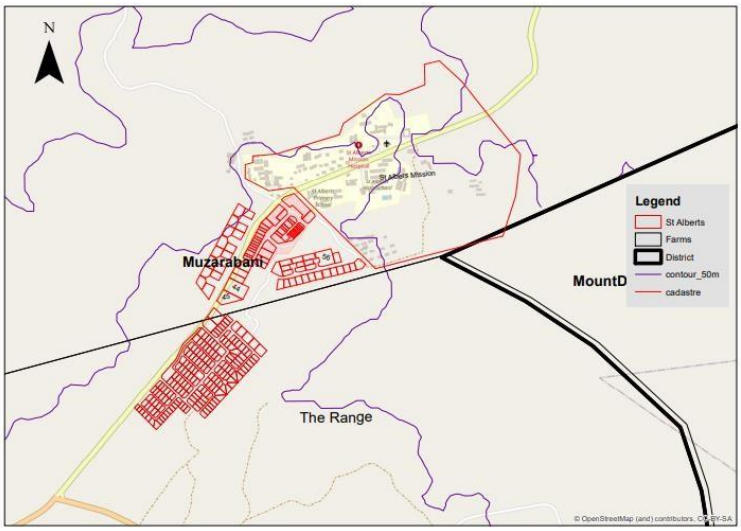
S

Figure 8.1-D: St Alberts Rural Service Centre

Chiwenga Rural Service Centre Chiwenga is a border centre situated in the Zambezi Valley at the border between Zimbabwe and Mozambique. It lies right in the middle of Zambezi Valley. It has a population of comprising of males and females (2022 census). It is the 4th large urban settlement in Muzarabani as such it has high demand for commercial, institutional and other specialist

services other than those peculiar to border region settlements. The centre economy 1s based on





passing trade and fishing.

Chiwenga consists of informal border facilities. Other institutions located at Chiwenga are Zimbabwe Republic Police, Posts and, health (clinic) and education (Chiwenga Primary and Secondary School). Apart from potential border facilities, the main economic resources for Chiwenga are wildlife and the waters of the Mukumbura river. Chiwenga has the potential to grow as a border town and such spatial growth should be emphasised due to the following reasons

- The greater numbers in population is due to the attraction of this border
- Its proximity to Cahora Dam, Mukumbura and Msengezi supplying water for the whole ward is force to reckon.
- Trade and barter trade between the two countries enabling environment for cheaper commodities for Ward locals and neighbouring Mozambique.

8.1.8 Dams

A total of 135 dams were mapped in Upper Muzarabani majority being in the former commercial Farms. The major dam infrastructure is the Silverstroom under construction with following development Aspects including a major economic provision of Hydropower all funded under PSIP

.

The following dams are threatened by siltation

Table 8.1.8:1: Dams threatened by siltation

WARD	DAM NAME	STATUS
8	SOHWE	SILTED
13	MBADA	SILTED
16	STANMORE 1	SILTED
16	STANMORE 2	SILTED
16	DABI A2	SILTED
16	DUTY LAND	SILTED
20	MHENE	SILTED
21	CHARMWOOD	SILTED
21	CHAMWOOD	SILTED

Aerodromes

The 3Aerodromes at Centenary ,Muzarabani and Hoya could save as commercial sites for the transportation of perishables in the district

8.1.9 GMB and cotton market depots

These in Centenary and Muzarabani are important economic infrastructure{*These have already been discussed in the previous chapter 7}*

8.1.10 Lodges and Hotels

Series Hotel, Arda Lodge in Lower Muzarabani offer hotel standard accommodation. In the wilderness lodges and campsites add to this stock of recreational economic infrastructure.

Table 8.1.10

Name of Hotel/Lodge/Guesthouse	Location	Capacity
Series lodge	Muzarabani growth point	40 beds
Arda Estate Lodge	Mavuradonha mountain edge, lower Muzarabani, Arda estates	10 beds

Changas Guest House	Centenary Growth Point	10 beds
Ngoshi Guest House	Centenary Growth Point	10 beds
Small world Lodge Carew Hiuse	Mavuradonha Wilderness Area	16 beds
Kopje tops Safari Lodge	Mavuradonha Wilderness Area	16 beds
Piri's Garden	Centenary Growth Point	3 bedroomed
Hungwe's guesthouse	Muzarabani Growth Point	8 beds

8.1.11 Dip-tanks and Spray Races

These can be considered as economic infrastructure since livestock production in the district is dominantly for commercial services

8.1.12 Boreholes Infrastructure

Boreholes are the main sources of water for economic activities in the rural areas as these supply Dip Tanks ,Business centres, Livestock and Horticultural activities.

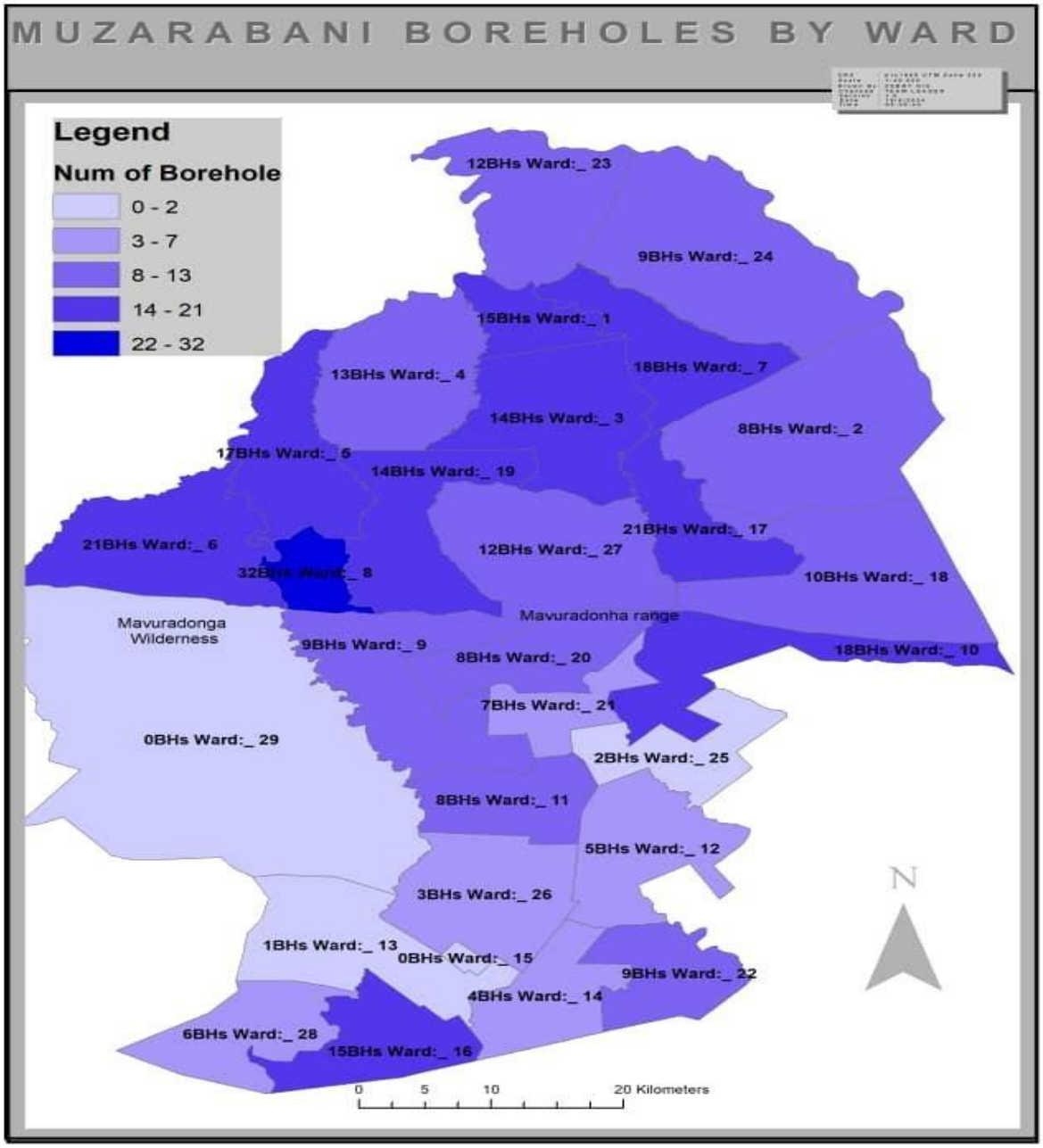


Figure 8.1-E:Borehole Distribution in Muzarabani

Table 8.1.12:1: Boreholes Types and Status per ward

WARD	NAME OF PWS	SOURCE	TYPE	AUTHORITY	STATUS
1	Chadereka Clinic DDF Unit 1 (Chadereka) Chadereka Primary School Chadereka Secondary School	Bore hole Bore hole Borehole Borehole	Submersible Pressure h/ pump Submersible Submersible	Health centre DDF School School	Functional On break down Functional Functional
2	Kamudyariwa Katsande	Borehole Borehole	Submersible Submersible	Community Community	Functional Functional
3 3, 19 & 27	Machaya Clinic Machaya Museredza	Bore hole Spring	Submersible Gravity	Health centre Health centre	Functional P/functional
4	Dambakurima Clinic Dambakurima Sec School Dambakurima Pry & Sec School	Bore hole Borehole Borehole	Submersible Submersible Submersible	Health centre School School	Functional On b/down Functional
5	Patsikamambo village	Borehole	Submersible	Community	Functional

6	Hwata Sec School Hwata Clinic	Borehole Deep well	Submersible Submersible	School Health centre	Functional Functional

	Gutsa Mufunga	Borehole Borehole	Submersible Submersible	Community Community	Functional Functional
7	Dzapasi	Borehole	Submersible	Community	Functional
8	Muzarabani (ZINWA) Muzarabani Clinic Sohwe DDF Old Camp DDF Unit 2 (Muzarabani)	Bore hole Bore hole Spring Borehole Bore hole	Submersible Submersible Gravity Mono Submersible	ZINWAa Clinic Community DDF DDF	Functional Functional P/functional On break down On break down
10	Chiweshe Primary School St Albert Business Centre St Albert Mission Hospital St Albert Primary School	Bore hole Bore hole Bore holes Bore hole	Submersible Submersible Submersible Submersible	School MRDC Church School	Functional On b/down Functional Functional
11	Chinyani Clinic Chiripiro Primary	Bore hole Bore hole	Submersible Submersible	Health centre School	Functional Functional

	School				
13	Always clinic Geejay Primary & Sec School	Bore hole Borehole	Submersible Submersible	Health centre School	Functional Functional
14	Centenary High School	Borehole	Submersible	School	Functional
15	David Nelson Clinic Gatu Primary School Silver stroom (ZINWA Z R P Centenary	Borehole Borehole River Boreholes	Submersible Submersible Submersible	Clinic School Zinwa ZRP	Functional Functional Functional Functional
16	Mukwengure Secondary School	Borehole	Submersible	School	Functional
17	Hoya (ZINWA) Hoya clinic	River Bore hole	Sand abstraction Submersible	Zinwa Health centre	On break down*** Functional
3, 19 & 27	Machaya Museredza	Spring	Gravity	Health centre	P/functional
20	Chawarura Clinic Chawarura V T C	Bore hole Bore hole	Submersible Submersible	Health centre Institute	Functional Functional

23	Kabaira Kairezi Central Primary School Kakonono Primary School	Borehole Borehole Borehole	Submersible Submersible Submersible	Community School School	Functional Functional Functional
24	Chiwenga (Clinic& Primary School)	Bore hole	Submersible	Health centre	Functional
3, 19 & 27	Machaya Museredza	Spring	Gravity	Health centre	P/functional
28	Chidikamwedzi Clinic	Boreholes	Submersible	Health centre	Functional

8.1.13Anticipated Muzarabani Gas and Oil Mining Claim

The Claim has already been mapped in the previous chapter 7.

With the discovery of gas and oil in the district the plant could serve as an economic development hub with massive economic infrastructure development

8.1.14 Tobacco Auction Floor Site at Centenary

This site is going through tender and could ease business for the tobacco farmers in the District

8.1.15 Seed Research Stations.

CYMMT and SEEDCO stationed in lower Muzarabani for the purposes of seed research and development are major economic research institutes.

CHAPTER 9 ADMINISTRATION AND FINANCE

9.1 Governance

Function

Muzarabani Rural District Council is a body corporate with powers to sue and be sued comprising of:-

- Policy Makers who are 29 elected Councillors and 9 from Women's Quota.
- The Executive Staff thus 39 Employees
- The Community who are the Clients, Stakeholders and others within the jurisdiction ***This Tri-Partite is well illustrated below: Figure 10.1***

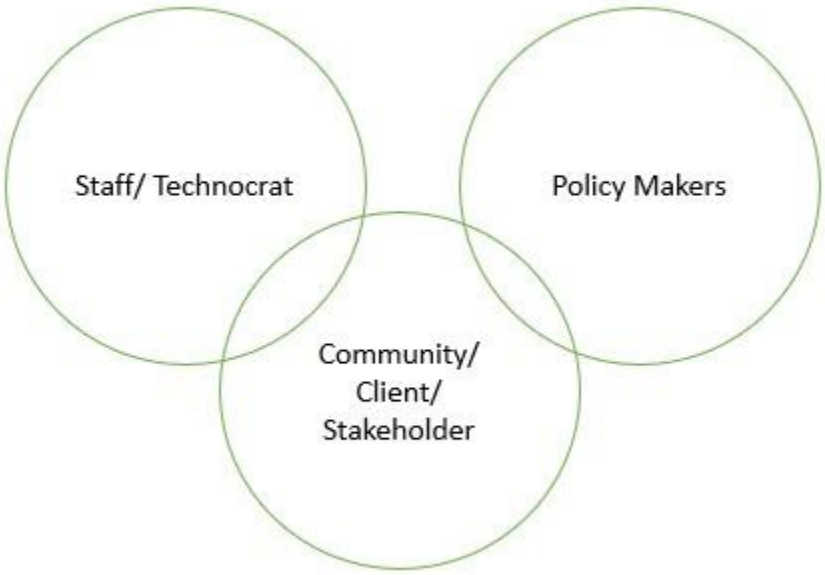


Figure 9.1-A: The Tripartite template indicates that while a Councilor can be a stakeholder or client, he she cannot be a staff member at the same time and vice versa for staff members

However a staff member is an internal stakeholder

The District is divided into twenty-nine (29) administrative wards, comprising of 17 communal (*14 form Lower Muzarabani while 3 are in the Upper Muzarabani)*, the rest 8 commercial farming, 3 resettlement and 1urban ward are also in the Upper Muzarabani The institution of traditional

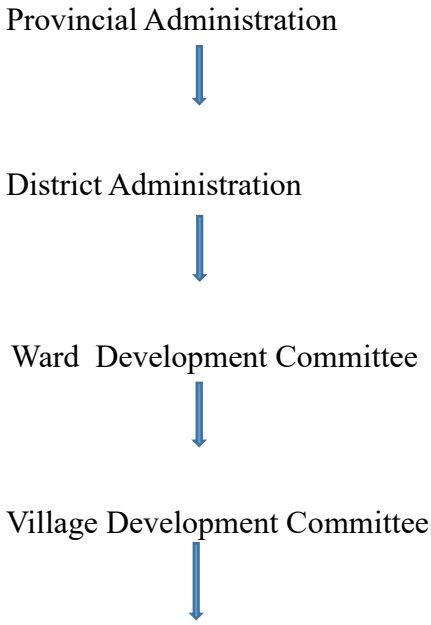
leadership as represented by Chiefs: Chief Muzarabani, Chief Chiweshe, Chief Kasekete and Chief Hwata and village heads exists in Muzarabani District.

Muzarabani Rural District Councils overall mandate is to provide suitable service delivery to its inhabitants in a transparency, consultative and accountable manner complying with the provisions of the Rural District Council Act Chapter 29:13. The master plan preparation process code named – *FAST TRACK LEGALLY COMPLIANT , SPATIAL MASTER PLAN* shall be guided by Part IV of the Regional Town and Country Planning Act chapter 29:12 together with the regional town and country planning (master and local plans) regulations 1977 and a statutory instrument.

A Statutory Instrument shall be enacted to support, facilitate and guide the fast track legally compliant Spatial Master Plan preparation process. After the adoption of the draft Master Plan and publication, Muzarabani RDC is expected to have an Operative Master Plan in place.

Muzarabani Rural District Council being a lower tear of Central Government is charged with ensuring that the needs and aspirations of Muzarabani District residents are effectively and efficiently addressed by a Local Government system close to people. Various functions and powers are delegated through various laws discussed earlier. This is done through a Local Government System hierarchy depicted below. **Local government System hierarchy**

Ministry of Local Government



Decentralization and Devolution

The district has experienced some form of devolution as most government ministries, departments, parastatals and service providers are located within the district. Devolution funds have been disbursed to the local authorities and have been utilized for capital projects development.

The Rural District Council has corporate goals and objectives fogging closer linkages between administrative staff and the respective council and communities, thus fostering a reciprocatively working culture.The Council has a mission statement and departmental objectives.

Vision:

To attain the highest standard of living and quality of life for the people of Muzarabani in a secure and prosperous environment by 2025.

Mission:

To be a leader in the provision and promotion of goods and services through good and efficient local governance.

Core Values:

- Commitment

- Accountability
- Quality Service
- Client Oriented
- Professionalism
- Teamwork and Team Spirit
- Openness and Transparency

This was done in the spirit of perfecting and refocusing the operations of the corporate body. There are terms of references for the various committees of council and the institutions corporate objectives.

The executive consisting of 7 departments implements council policies and programs. This is the wing of technocrats employed to advance council's aspirations in line with its policies and vision for district socio - economic policies and political development. The 7 departments of Council are Finance, Administration and Human Resources, Roads and Works, Social Services, Planning, Audit and the Land, Agriculture and Natural Resources. The executive is headed by the Chief Executive Officer who is the key person, Accountable Officer, and Chief advisor to council and backed by the Council Chairperson. Each of the Departments is headed by a departmental head who is an expert in the field of operation of such particular department. Below the departmental heads have been a host of supportive staff consisting of skilled, semi - skilled and the general hands. The Rural District Council operates on the basis of committees and subcommittee which report to full council. Council has 7 committees namely, Finance, Administration and HR ,Audit, Roads and Works, Planning , Health and Social Services and Lands, Agriculture and Natural Resources. The link persons are the chairpersons of the committees and the respective departmental heads. This kind of arrangement enables the smooth flow of council operations.

With regard to the above, all Heads of Departments are professionals. Council committees and departments work closely in drawing up departmental budgets and control of expenditure through review meetings Council is keeping pace with appropriate technology has set up an efficient management system. Internet connectivity and a 24\7 Soler Powered System is available. Council's top management will utilise the system to share basic information and use the network for monitoring staff performance. Commitment and corroboration among the staff is a crucial ingredient in uplifting the corporate objectives of the Rural District Council. **In this respect,**

efforts made in answering to the Call of Action by The President included the following activities by Council.

a) **Institutional Strengthening of The Planning Department**

Efforts are underway to improve the Planning Department to be a competent one so that it will be able to implement the operative Master Plan together with other departments after the 30 June deadline**.**

b) other activity within Council has been aligned to The Call To Action. Be it Council way of doing business to implementation of Council Duties.
c) The valuation of Properties for the 3 major urban centres: Centenary, Muzarabani and St Albert's has been done.
d) The preparation of The Master 2024- 2039 is underway
e) The continuos sensitisation of the Call to Action to everyone everywhere everytime and anywhere by council .

Clients Charter

Council has a clients Charter, Gender Policy, Sexual Harassment Policy in place.

Clients and stakeholders of Muzarabani Rural District Council

- The clients of Muzarabani Rural District Council are residents, business community industrialists and any person who might seek the service of Muzarabani Rural District Council.
- Farmers
- Categorized into A1 farmers, A2 small scale farmers, A2 large scale farmers, Villagized resettlement farmers and Indigenous Commercial farmers.
    - Stakeholders
- Parastatals and Service Providers These include ZETDC, TelOne, GMB, Zimpost, ZINWA, Mining Companies, RIDA, COTTCO, Public Service Commission , EMA,

  Forestry Commission, Educational Institutions, St Alberts's Hospital.

- Other Stakeholders in The District

- These include Traditional Medical Institutions, Traditional Leaders (Chiefs and Village Heads), Farmers Association, Rate Payers, Vendors Association and Residents Associations etc.

9.2 Public Participation

9.2.1 Stakeholder Analysis Grid

In order to view the people organizational link landscape and relationships between the different Muzarabani RDC stakeholders and issues related there off. A door to door survey was done with the following stakeholders interviewed:

i)Government Ministries ii) Government Department Parastatals (GMB, EMA, FORESTRY, Agritex, ARDA, ZRP)

i) War Veterans ii) Religious Organizations.

This was to develop a Master Plan that leaves **no one and no place** to give input.

To guide a participatory consensus-building process

To come up with a stakeholder management strategy plan for the Master Plan.

Table 9.2.1 Governance Functions Checklist Table for Muzarabani RDC.

Checking sound local governance Provision

Function	**Available**	**Not Available**
Land use Planning	√	
Compliance with Layout, Local and Master Plans	√	
Maintenance of Land Registers	√	
Maintenance of waiting list	√	
Vetting of applicants	√	
Compliance with Lease conditions	√	
Requisition for Survey	√	

Proper conveyancing procedures	√	
Employment of competent planning officers	√	
Pegging	√	
Valuation of property	√	
Proper land allocation	√	
Priority consideration for allocation of land	√	
Consideration of exceptional circumstances(Cross cutting)	√ Offered free land to GBV Centre	
Allocation of prime land through a competitive tender	√	
Commonage respect	√	
Proper handling of Leases	√	
Monitoring of development	√	
Budget reviews	√	
Proper cessioning process	√	

Service of notices	√	
Legally compliant lease agreements	√	
Enforcement procedures	√	
Respect of tenure	√	
Respect of way leaves	√	

Expansion of urban settlements through: • purchase of land • compulsory acquisition • incorporation of land • Excision of communal land	X √ X NA	
Development Control	√	
Gender Equity and sensitivity	√	
Strategic human resources management	√	
Policy Formulation	√	
By- laws on the following: a) Temporary structures b) Servicing standards c) Building standards d) Parks recreational grounds, caravan and camping grounds e) Protection of Roads servitude f) Use of buildings g) Water supplies h) Drainage and sewer	 X X X X X X X X	

provisions i) Plans specification a structural detail j) Excavation k) Regulation and control of occupation of land and buildings l) Removal of unauthorized development m) Permits for certain activities**list n) Livestock Management o) Environmental Protection p) Pollution Control q) Poaching control r) Hazardous substances	X X X X √ √ X X √ X	
Financial Systems compliance	√	
Loss control systems	√	
Audit trail	√	
Systems audit	√	
Customer feedback system	**X**	
Management of proper meeting procedures	√	
Resolution compliance	√	
Policy compliance	√	

Table 9.2.1:1:Internal Stakeholder's demands and characteristics. Muzarabani RDC 2024

Stakeholder	Demands Expectation	Characteristic Extend			
		High Influence	Low Influence	High Importance	Low Importance
Councilors	Service Delivery	√		√	
Top Management	Efficient use of resources	√		√	
General Workers, Workers Committee, Works Council	Good industrial relations, Tools for the job, to be consulted.	√		√	
Junior Council	Youth friendly services		√	√	
Works Committee	Service delivery(Water works, sewer provision, waste management, infrastructure	√		√	
	provision)				

Social Services Committee	Good Service delivery in health provision, Housing and Education.	√		√	
Admin and Human Resources Committee	Efficient and effective Administration	√		√	
Audit Committee	Good governance	√		√	
Land, Agriculture and Natural Resources Committee	Sustainable Management of natural resources	√		√	
Value addition Committee	Improved Economic Status	√		√	
Food and security committee	Food security	√		√	
Gender Committee	Gender Sensitive facilities, Equity and equality.	√		√	

Table 9.2.1:2: External Stakeholders Demands and Characteristic matrix. Muzarabani RDC 2024 This is meant to determine stakeholder engagement and mapping by council to ensure no one is left no matter how less influential or lowly important as service delivery knows no boundary within the council jurisdiction

Stakeholder	***Demands Expectation***	***Characteristic Extend***			
		High Influence	*Low Influence*	*High Importance*	*Low Importance*
Ministry of Local Government, Rural and Urban Development	*Compliance of Council with the Blueprint on* ***Call to Action by The President*** *on Service delivery towards attainment of Vision 2030, compliment NDS1, good corporate governance, follow directives*	√		√	
Other Key Ministries	*Compliance with the laws*	√		√	
Disabled Community	*Ergonometric considered.*		√	√	

Housing cooperatives	*More low cost housing and service delivery*		√	√	
Land developer	*Water, sewer and utility services*		√	√	
Industrialists	*Water: Waste water treatment services, energy supply*		√	√	
DDC	*Implementation of good service delivery and policies. NDS1*	√		√	
Resettled farmers	*Energy, water and sanitation, infrastructure development, roads.*	√		√	
Livestock Production Farmers	*Well planned grazing, pastures, cattle markets, stray pounds, police bases, Veterinary centers*	√		√	
Tobacco Farmers	*Woodlots, alternative tobacco curing energy sources*	√		√	
Cotton Farmers	*Road infrastructures, Sub-depots.*		√	√	
Honey producers	*Materials, collection points and markets.*		√	√	

Muzarabani gas and oil producers.	*Reserved space for a plant*	√		√	

Political Parties	*Fulfillment of the government manifesto.*	√		√	
Small and Medium Enterprises.	*Work space, capital, knowledge capacity, specific nodes*	√		√	
Women and Youth Groups, Old and Orphans, Persons with underlying issues (HIV, Cancer, Albino)	*Convenient and inclusive service delivery*	√		√	
Development Partners	*Efficient use of resources, nonduplication feedback, good working relations*		√	√	
Community Wildlife Committees (CWCs)/ CAMPFIRE Communities	*Problem Animal Control(PAC), Revenue sharing, Sustainable practices of wildlife management.*	√		√	
Chiefs	*Cultural preservation, proper cemetery sites, shrines preservation of monuments and culture. Proper well-built chiefs court*	√		√	

Other traditional leaders(Village Heads)	*Proper boundary delimitation, proper development levy collection points*	√		√	
ZRP	*Police base sites infrastructure, roads improvements*	√		√	
Religious Sects	*Proper serviced sites*		√	√	
Government Employees	*Good coordination, service delivery*	√		√	
Residents(Gatu, Muzarabani, St Alberts and others)	*Proper sewer and service delivery*	√		√	
Transporters	*Proper roads services*		√	√	
Tourism and safari operators	*Proper road services and service delivery.*		√		√

9.3 FINANCIAL STREAMS FOR MASTER PLAN

The legal Provision governing financial operations of Council are contained in the:

1) Zimbabwe Constitution Section 298
2) Public Finance Management Act Chapter 22:19 as read with Public Finance Management Regulations of 2011
3) Rural District Council Act Chapter 29:13

Where there is any contradiction of the Acts, The Public Finance Management Act shall take precedence. The Public Finance Management Act outlines the roles of Council and those of the Accounting Officer who is the CEO to have the following responsibilities:

a) Ensuring Public Resources are used in accordance with the budgets ad Acts in a transparent, accountable, effective and efficient manner.

b) Reviewing budgets, annual audited accounts, performance reports.

c) Incurring expenditure, making reallocations of expenditure according to budgets and regulations.

d) Contract for goods and services in accordance with the annual budget, procurement laws, regulations, directives, manuals, instructions and notifications.

e) Earn revenue from sale of goods and services and operate bank accounts in accordance with the law.

f) Manage the assets and staff in accordance with the law.

Sources of Council Revenue:

i) **Grants**: Money received from Government for specific activities usually not paid back

ii) Donations: Money received from other people or organizations usually not paid back

iii) Rates: Money raised by residents of Council and is often attached to land or building

iv) Levies: Money raised against a specific group of people for example Development Levy

v) Special Rates: Money raised for a specific purpose from the people who will benefit from it for example money to build a new classroom, money to tar growth points paid by residents

vi) Fees and service charges: Money charged for a service offered by Council for example bus parking fees or refuse removal fees

vii) Rent and hire charges: Money raised by Council from payment made from using Council Buildings or equipment for example Council Hall for meetings.

viii) Licenses and permits: Money paid to Council for being allowed to do certain businesses or activities within Council Area for example shop license, vendor permits.

ix) Loans: Money borrowed from Government or registered financial institution

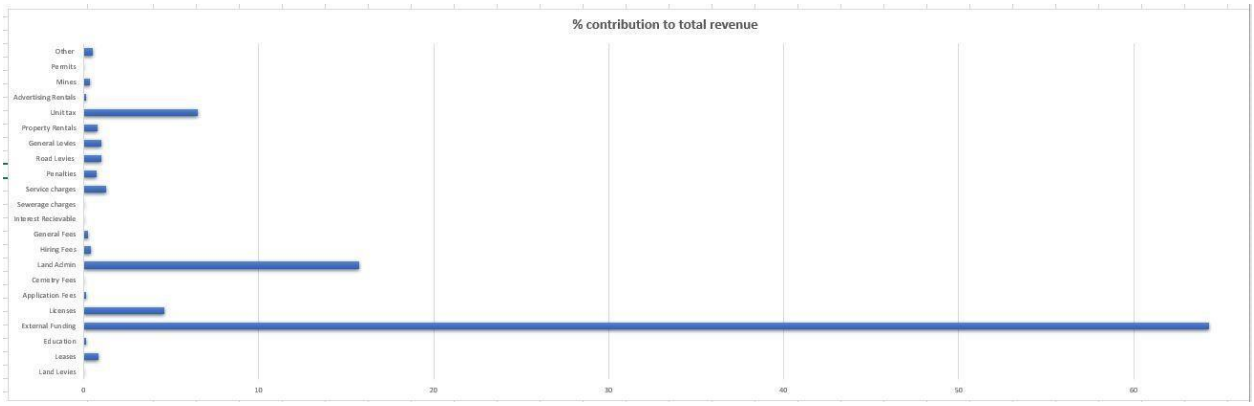
x) Profits: Money from Council's Income generating projects for example beer halls and farms.

xi) Utilization of natural resources: Money received from using natural resources or from allowing others to exploit the resource sand paying council to do for example hunting lease fees, and royalties from timber, mining

xii) Interest: Money received from investing Council funds in registered financial institutions

xiii) Sale of Council assets: Money received from selling Council Property e.g. vehicles, broken property, land etc

Council remains reasonably solvent besides the challenges of Hight inflation rates. **Although, in actual terms, the increase in accumulated surplus may not be statistically significant owing to high inflation, council books are all in order**. Furthermore, this local planning authority is able to deliver efficient services to its residents when given adequate resources. Absolute figures on the performance of the 2023 budget were availed during the period of study, nevertheless the table below gives a clue to how council's revenue source is like.



From the table above, the major source of income is external funds mostly due to the devolution funds and ZINARA funds. Following is income from the administration of land, unit tax and licenses. Council having insignificant low income from cemetery charges and sewerage indicates its social welfare priorities so that everybody, rich or poor benefits from these services. The zerointerest receivable indicates the macroeconomic factors as inflation rates in the whole country.

Expenditure Pattern of Muzarabani RDC

In an inflation environment like the time of research study indications were that expenditure pattern was way above receivable income always showing deficit accounts. It is a real fact that at

amalgamation the Rural District Council assumed responsibility over a large spatial area with a lot of development needs, is imperative that the Rural District Council widens is its resources base to meet the over increasing demand for its key service

Potential Income Boosts

With the coming in of such investments as

a) Potential Muzarabani Gas and Oil
b) Increased Tourism and Ecotourism in the Mavuradonha Wilderness
c) Chrome Mining in the area Chidikamwedzi sites
d) The new valuation role where property is going to be charged according to its value
e) The New Gatu Extension CBD stands to be sold
f) The value addition of the Bindura Biotechnology Plant
g) The Tobacco Auction Floors establishment
h) The Competent Planning Department Boost which is expected to ensure revenue collection increase in the: i) Maximum coverage of inspection fees collection. Timeous Pegging of proposed stands. Timeous processing of application of stands etc. and others Council might realise more revenue.

9.4 MANAGEMENT OF EXISTING BUSINESS CENTERS, PRODUCTION HUBS AND NODES.

Muzarabani RDC is managing affairs of Centenary through an area Committee called Centenary Area Committee which attends full council meetings and as committee reports its mandates delegated by council. The local Councilor for ward 15 chairs the Centenary Area Committee. Its mandate is to help bring out all socio economic issues of the growth point with the aim of effectively and efficiently deliberating issues closer to the people.

If resources permit Muzarabani and St Alberts will soon have such area committee

CHAPTER 10 SUMMARY OF KEYS ISSUES AND KEY DEVELOPMENTAL ISSUES

10.1 KEY ISSUES

Urban Structure

Incompatible land uses in Old Gatu Centre (bottle stare facing primary school)

St Alberts has back-to-back buildings **Land,**

Agriculture and Environment Issues

- Crop and animal diseases.
- Climate change effects
- Floods, erratic rain, drought.
- A variety of illegal settlements threaten wildlife resources of the communal lands of Muzarabani District.
- The district's livestock production (hub) was partly affected by January Disease resulting in restrictions in cattle movement hence low revenue sales.
- Land available to wildlife is becoming increasingly restricted and this trend is likely to continue as pressure for land increases
- As restrictions of wildlife movement increase the potential for human-wildlife conflict increases significantly
- A number of human fatalities caused by wildlife have been recorded in the District

- Damage by animals to houses and property also occurs
- Eventual closure of wildlife access to the rivers is imminent
- The Wilderness area has hard edges, there is no adequate buffer zone which exposes the core conservation area to threats. In some areas, the buffer zone is not clearly defined and the buffer area is not consistent. This presents management challenges.
- The fire guards in the Wilderness area and buffer zone are poorly maintained which exposes the area to frequent fires. The fire management plan needs to be reviewed and updated and also implemented according to the plan.
- The restoration of mined out areas still lags behind and there is need to monitor compliance of miners to the Environmental Management Plans provided in the ESIA

reports.

- Pegged areas for alluvial chrome in the district need to be mapped out for proactive planning and protection of key ecosystem components. There is therefore a need for engagement with the Ministry of Mines for the data.
- Land available to wildlife is becoming increasingly restricted and this trend is likely to continue as pressure for land increases
- As restrictions of wildlife movement increase the potential for human-wildlife conflict increases significantly
- A number of human fatalities caused by wildlife have been recorded in the District
- Eventual closure of wildlife access to the river
- Deaths of wildlife on major roads is significant but not recorded properly
- Key species habitat disturbed (birds)
- There is serious encroachment into the wilderness by illegal settlers.
- Rampant fires especially in Muzarabani South.
- Remote farming/ cell phone farming could be a major problem with most of these resettlements being leased or underutilized.
- The provision of non-farm employment is an aspect where Settlement schemes seem to have failed Six hectares allocated, as gross arable is initially adequate to provide a minimum income for the family utilising family labour and to satisfy the desire for land ownership. Resettlement rules prohibit subdivision of the arable plot because fragmentation creates uneconomic holdings. Because the resettlement programme has not been able to provide other employment opportunities during the agricultural slack season, the settlers are unemployed or underemployed for a larger part of the year. Moreover, with settler families, the allocated holdings have not been large enough to ensure families a livelihood. In the district as a whole, there is some fragmentation of land in the resettlement projects which has led to the emergence of landless families or families with inadequate land in the resettlement areas.

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- Land concentration results from the leasing of land by "failed" settlers. Some settlers obtain a plot, clear it, work it fora few years and then lease the improvement including the homestead. This has led to social tensions as such people are seen to have larger pieces of land and thus have more access to grazing land in particular. Tension often arises when the livestock of those with less land encroach on the grazing of those with larger plots. This is an issue that the action plan suggested above should also address.
  There are a number of factors that are promoting or retarding the development of Muzarabani district. Expanding Population and Settlements. The numbers of people in the district are growing rapidly both through natural growth and the influx of settlers from outside the district. Human settlement is expanding into marginal areas i.e. Mavuradonha Wilderness. The areas are totally unsuitable for cultivation mainly due to excessive slopes. Clearing of the natural vegetation will be companied by extensive soil erosion. The Muzarabani RDC has little control over movement of people due to lack of support from the traditional village heads but should build its capacity to act against the recent immigrants.
- There are village land use plans which are not supported by effective by-laws to deter land degradation practices and illegal encroachment.
- The Veterinary Department is trying to eliminate January Disease from Muzarabani District using a combination of target traps and insecticidal dip though there is inadequate facilities and staff.
- Currently the district has no timber extraction.
- A resettled household continues to overlap the boundaries causing illegal encroachment and continues to subdivide the plots against the concept of small scale holding making the
-

- resettlement ineffective in terms of decongestion. There is no Land Resettlement and Management by-law that is effective to deter this encroachment and continuous subdivision of plots.
- There could be threat of wood fuel deficit in the district in the near future in some resettlement areas due to increased settlement and deforestation.
- Environmental degradation- gulley formation, siltation, erosion, inadequate health and educational facilities inadequate water supply- dry boreholes, no adequate boreholes, congested villages leading to illegal settlement and Insufficient grazing land.

The challenges facing Muzarabani District Council in its endeavour to stimulate meaningful development in the centres is the provision of economic infrastructure, particularly roads ,bridges, water and sewage disposal systems.

The other challenge is for the local authority and other development agencies to put in place mechanisms for supporting entrepreneurship development in the district.

Such mechanisms should also reflect each of the centre's potential for development and economic base. For example, Chiwenga can be supported by the wildlife resources and proximity to border facilities while St Alberts by the presence of the Mission Hospital and school prominence.

- Land degradation *(veld fires, deforestation, stream bank cultivation, gulleys, pollution, siltation)*

Communication

- The network challenges hinder financial transactions to Council by residents.

Infrastructure

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- Untrafficable Roads and the transport is seasonal
- Dilapidated Infrastructure roads, bridges, school buildings, inadequate power supply to service centres
- No capital to provide meaningful infrastructure such as water and sewage disposal systems

Finance

- The lack of financial institutions hinders convenient connectivity between Council and its clients and ratepayers
- Micro and macroeconomic fundamentals affecting the exchange rate
- Suppliers of goods and services demand payments in USD against local currency.
- Rate payers reluctance in paying to Council.

  Delayed Devolution funds and ZINARA funds.

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-
  Coordination: There is a DDC which supports Council's efforts. There are some members in the DDC with inadequate resources to support Council and this is a challenge.
  The capital account which receives sale of stands funds is receiving money at very staggered rate due to the fact that the available stands as of now are the low density with a of low cost housing shortage.
- The biodiversity offset targets for miners and offset fees based on ecosystem services are lost due to mining.

Energy

- Vandalism of ZESA wire, poles and transformers
- Vandalism of transformers, polls, wiring and other things.
- Accessibility problems to attend to faults during the rainy season especially in Lower Muzarabani
- Poor technology advancements, absence of drones to access areas of concern
- Poor network availability challenge to sim card billing at Centenary
- Labor shortage
- Agricultural Production Hubs such as Tobacco producing resettlements are facing problems of shortage of wood fuel for curing tobacco due to deforestation

Social

- Early childhood marriages
- Rampant school dropouts
- Increase in illiteracy rates
- Gender based violence
- Social ills such as crimes, theft of property and livestock.
- Accident incidences in the Mavuradonha escarpment.
- Gender Programs, though considered have not been measured in terms of how they impact on men, women and children.
- Loss of culture cognisance

-

Works

Expanding population thereby giving pressure to sewage and waste management systems resulting in burst pipes .

Governance and Administration

- Lack of border post
- Illegal Settlements
- Illegal business centres
- Lack of clear roles in administration of business centres in resettlements

10.2 Key developmental issues

Noted from the findings are the following key developmental issues:

Land availability

Land suitable for urban development expansion includes surrounding farms for Centenary and St Alberts as well as surrounding communal areas for Muzarabani and other centres of which one is a Bippa Farm.

The potential expansion areas for the Master Plan area expansion needs approval from The Minister of Local Government for the land they require.

The expansion is absorbing into agricultural land and there is need to balance by reaching a consensus at some point with the surrounding farm owners

There is urgent need to provide infrastructure services, water, sewage, solar electricity, traffic and transportation systems.

Population

The population of Muzarabani has increased as compared to the previous years. Women in child bearing age, 15- 49 years are almost 53% of the population highlighting the need for maternity centres, creches, primary schools. The economically active group accounts for over 50% highlighting the need for employment creation hence need for SMEs workspace.

Employment

90% of the employed are in informal sector highlighting the need to increases vocational training courses and MSMEs workspace provision. Value addition of by- products of livestock such as tanning industries, abattoirs, meat processing since the district has a high population of livestock as compared to the region. Projects like honey production, fruit processing, agro-processing need to be supported coupled with training programs to ensure sustainability. **Housing**

There is greater demand for low costs housing as shown by the waiting list.

Traffic and transportation

The roads are in poor condition and are inadequate. Residentials access roads in Gatu, Muzarabani, St Alberts urban centres remain dilapidated and as gravel roads.

Collapsed and inadequate public transport system most respondents using commuter omnibuses and private mushikashikas especially manning Centenary- Gaturoad/ Muzarabai Highway junction.

The presence of the aerodrome, which is mainly used during flooding disasters not much of significance

Infrastructure Services

Development of more stands for low cost housing

Development of MSME workspace.

New CBD construction,

Building and upgrading schools, Clinics and accommodation facilities, roads and bridges, dip tanks, sub- offices and accommodation for key Ministries e.g. Registrar, Vet, Agritex, Police, Government Office Complex.

Water supply for Gatu is directly sourced from Musengezi River with no much security and protection.

Water rationing is still on in for Gatu and Muzarabani besides Musengezi River being perennial.

Sewage treatment and solid waste management

Gatu High Density business centre and industrial centre is serviced by a sewerage system which is under pressure, overloaded and the increasing population in Gatu is giving pressure on sewer pipes which continuous burst and blockages.

The refuse disposal site for Gatu is inadequate and inappropriate location.

Electricity supply

Centenary, St Alberts are connected to the national grid. Power sources used in these centres include electricity, gas, paraffin, solar and wood with wood being on the increase due to blackouts and loadshedding causing deforestation.

Some newly developed areas are not yet connected to ZESA. Solar users are not much in these areas. Provision of more clean energy such as Construction of Solar Gids, biodigesters

Communication

Centenary and Muzarabani have both post and telecommunication services which are now obsolete for postal services. Mobile network providers, Econet and Netone have constructed digital communication boosters in the district but the network is still bad for those in the peripheral border areas like Chiwenga.

Focus should be now be on ICT mobile centres since the use of mobile phones now dominates communications across all people.

Commercial Services

Centenary, Gatu and Muzarabani have no much retail and commercial services such as Banks(Financial Institutions) , chain stores, chain supermarkets, or other commercial services such that people go to Mvurwi.

A new CBD has been zoned for Centenary.

Industrial

The industrial stands sizes are not affordable by most of the MSMEs. Need to provide for small scale industrial sites for Centenary and for Muzarabani**.**

Community facilities

Sports facilities such as stadiums and youth game centres are required. The local team in division 1 has to use facilities elsewhere as home ground. The dilapidated golf facility and stadium needs to be upgraded while planning sites for sports facilities.

Chiefs Courts

Infrastructure for the 4 chiefs in the area is urgently required to avoid abuse of school furniture properties that are currently used as Chiefs courts

Open spaces in and around Centenary have to be maintained and upgraded to guard against (open defecation and urination) create aesthetic and recreational spaces.

Religious facilities

There is an increased number of unplanned and temporary church sites hence need for permanent allocation of church stands.

Cemeteries.

The cemetery site needs a layout plan and upgrading. Demarcated boundary and capacity established. Currently, little maintenance is with capacity unknown.

Heroes acre.

There's need to upgrade the heroes acre and maintain periodically

Environmental Issues

Waste management, Deforestation, sand mining, wetlands degradation, siltation, veld fire, erosion, gully formation, stream bank cultivation are issues to be monitored.

Administration and finance

Sources of funds for Muzarabani RDC are its internal clients who are hesitant to pay their rates in time especially those in business centres who mostly require follow up measures. The external sources include Zinara and devolution funds which are delayed disbursement at some point.

Conclusion

The assessment of socio economic aspects of the distict in different thematic areas which influence direction of development in the district has thus been done in this report of study.

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Land cover data was obtained at 20 m resolution from GlobCover website https://www.esalandcover-cci.org/?q=node/187.

Its 22 global land cover classes are defined within the UN Land Cover Classification System (LCCS) based on the ENVISAT satellite mission's Medium Resolution Image Spectrometer (MERIS) sensor. Different land cover types affect runoff values (Dunne and Leopold, 1998).

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Mavuradonha Wilderness Landscape Plan

Muzarabani Strategic Plan