



MWINGI INTEGRATED URBAN DEVELOPMENT PLAN (IUDeP)

SEPTEMBER 2024

Prepared for :
Mwingi Municipal Board



Certificate

I certify that this plan has been prepared and published as per the requirements of the Physical and Land-Use Planning Act No. 13 of 2019

Prepared

Sign.

Date

Plan.
REGISTERED PHYSICAL PLANNER

Forwarded

Sign.

Date

CHIEF OFFICER,
MINISTRY OF LANDS, HOUSING, AND URBAN DEVELOPMENT

Approved

Sign.

Date

COUNTY EXECUTIVE COMMITTEE MEMBER,
MINISTRY OF LANDS, HOUSING, AND URBAN DEVELOPMENT

List of abbreviations

CBO	- Community-Based Organisation
CGK	- County Government of Kitui
CLT	- Community Land Trust
EPRA	- Energy and Petroleum Regulatory Authority
KTB	- Kenya Tourism Board
NEMA	- National Environment Management Authority
NGO	- Non-Governmental Organisation
NLC	- National Land Commission
PPD	- Physical Planning Department
WEDF	- Women Enterprise Development Funds
YDF	- Youth Enterprise Development Funds

TABLE OF CONTENTS

Certificate	2
List of abbreviations	iii
List of tables	x
List of figures	xi
List of abbreviations	xiii
Foreword.....	1
Acknowledgement.....	2
CHAPTER ONE.....	4
1. INTRODUCTION.....	4
1.1. OVERVIEW.....	4
1.2. BACKGROUND INFORMATION	5
1.3. OBJECTIVES OF MWINGI MUNICIPALITY.....	6
1.4. THE MUNICIPAL BOARD AND ITS FUNCTIONS.....	7
1.5. OBJECTIVES OF PREPARATION OF INTEGRATED DEVELOPMENT PLAN	8
1.6. SCOPE OF WORK	9
1.7. METHODOLOGY	17
1.7.1. Overview.....	17
1.7.2. Plan preparation process	18
1.7.3. Socio-Economic Data Analysis and Presentation Process	22
1.7.4. Draft report preparation	23
1.7.5. Final draft report preparation and submission for consideration	23
1.7.6. Execution Methodology	26
1.8. STAKEHOLDER ENGAGEMENT AND PUBLIC PARTICIPATION	26
1.8.1. Importance of Public Participation and Stakeholder Engagement	27
1.8.2. Stakeholders Mapping and Engagement.....	28
CHAPTER TWO	31
2. LOCATIONAL CONTEXT	31
2.1. Location.....	31
2.2. Historical development	32
2.3. Administrative units.....	32
2.3.1. Area Coverage by the Sub-Counties and Wards Administrative Units	32
2.4. Urban nodes within the municipality	33

CHAPTER THREE.....	34
3. CONSTITUTIONAL, POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK	34
3.1. Overview.....	34
3.2. IDeP linkages with Policy Frameworks	34
3.3. Legal Framework.....	35
3.3.1. Constitution of Kenya, 2010	35
3.3.2. Physical and Land Use Planning Act (PLUPA) 2019 (Amended 2022)	36
3.3.3. Urban Areas and Cities Act (UACA) of 2011 (Amended 2019, 2022)	37
3.3.4. Environmental Management and Coordination Act (EMCA) of 1999 (Amended 2022)	37
3.3.5. The Climate Change Act, 2016 (Amended 2022)	38
3.4. Existing County Government Policy Documents, Strategies and Plans	38
CHAPTER FOUR.....	40
4. SITUATIONAL ANALYSIS	40
4.1. Overview.....	40
4.2. Natural and physical environment	40
4.2.1. Climate.....	40
4.2.2. Temperatures	41
4.2.3. Clouds.....	43
4.2.4. Precipitation	43
4.2.5. Rainfall.....	44
4.2.6. Length of sunshine	45
4.2.7. Humidity	47
4.2.8. Wind speed and direction	48
4.2.9. Solar Energy	50
4.2.10. Geology and soils	51
4.2.11. Hydrology and Drainage	51
4.2.12. Topography.....	51
4.2.13. Agro-ecological Zones	52
4.2.14. Vegetation	53
4.3. Population	53
4.3.1. Population Projection	56
4.4. Municipal social services and amenities	59
4.4.1. Education.....	59

4.4.2. Recreational facilities	64
4.4.3. Health Facilities	66
4.4.4. Religious Institutions	67
4.4.5. Security.....	67
4.4.6. Storm water drainage.....	68
4.4.7. Water and sanitation.....	69
4.5. Economic analysis	71
4.5.1. Urban Economy	71
4.5.2. Municipal Revenue Base	72
4.6. Urban infrastructure and services.....	72
4.6.1. Transportation Infrastructure	73
4.6.2. Water Supply	74
4.6.3. Sanitation.....	75
4.6.4. Solid Waste Management	75
4.6.5. Energy.....	76
4.6.6. Information and Communication	77
4.7. Urbanization trends	78
4.7.1. Urban housing.....	79
4.7.2. Urban social issues and marginalized groups	80
4.7.3. Urban disaster and risk management	80
4.7.4. Urban land tenure	81
4.7.5. Existing municipal institution framework.....	81
4.8. Summary of the emerging issues	83
CHAPTER FIVE	87
5. SECTORAL DEVELOPMENT STRATEGIES AND IMPLEMENTATION FRAMEWORK.....	87
5.1. Overview.....	87
5.2. Economic development strategies.....	87
5.3. Urban infrastructure improvement strategy.....	88
5.3.1. Transport Improvement Strategy	88
5.3.2. Transport improvement strategies.....	89
5.3.3. Health improvement strategies	89
5.3.4. Education strategies.....	90
5.3.5. Energy.....	90

5.3.6.	Information Communication Technology (ICT)	91
5.3.7.	Community facilities	91
5.4.	Water supply improvement strategies.....	92
5.5.	Disaster management strategies	92
5.6.	Housing improvement strategies	93
5.7.	Urban planning and development control.....	93
5.7.1.	Urban Sprawl and Urban Decay Strategies.....	94
CHAPTER SIX	95
6.	LAND USE SUITABILITY.....	95
CHAPTER SEVEN	100
7.	SPATIAL DEVELOPMENT FRAMEWORK	100
7.1.	Overview.....	100
7.2.	Structuring elements.....	101
7.2.1.	Transportation Network.....	101
7.2.2.	Existing urban nodes	104
7.2.3.	Natural Features.....	106
7.2.4.	Land-use and zoning policies.....	107
7.2.5.	Informal forces.....	108
7.3.	Proposed structure plan	111
7.3.1.	General principles and guidelines for various zones.....	111
7.3.1.1.	Geography and Spatial Analysis	111
7.3.1.2.	Urban Planning.....	113
CHAPTER SEVEN	116
8.	MONITORING AND EVALUATION MECHANISM.....	116
8.1.	Overview.....	116
8.2.	Key components of the monitoring and evaluation mechanism for the current IUDeP	116
8.2.1.	Setting clear M&E objectives and indicators	116
8.2.2.	Data collection and management	116
8.2.3.	Roles and Responsibilities	116
8.2.4.	Carry out regular monitoring.....	117
8.2.5.	Evaluation	117
8.2.6.	Reporting and communication.....	117
8.2.7.	Learning and adaptation	117

8.2.8. Implementation steps.....	118
8.2.9. Institutional framework for implementation of the plan	118
REFERENCES.....	120

List of appendices

Appendix i: Notice of intention to plan	121
Appendix ii: Minutes of the first stakeholder’s consultative meeting and visioning...	122
Appendix iii: Catchment areas of existing primary schools	129
Appendix iv: Catchment areas of existing secondary schools	130
Appendix v: Catchment areas of existing water infrastructure	131
Appendix vi: Areas vulnerable to climate change-induced flooding	132
Appendix vii: Ribbon development along the main transportation corridors	133
Appendix viii: Transport infrastructure.....	134
Appendix ix: Nodal development.....	135
Appendix x: Digital elevation model	136
Appendix xi: Nodal development.....	137
Appendix xii: Proposed urban form of mwingi municipality	138

List of tables

Table 1-1: Summary of activities to be undertaken to deliver the IUDeP.....	13
Table 1-2: Stakeholder representation in the preparation of Mwingi IUDEP.....	19
Table 1-3: Summary of project activities, methodology and expected outputs.....	25
Table 1-4: Stakeholder analysis and engagement.....	28
Table 4-1: The 2019 Population Breakdown by division, ward, and sub-location.....	54
Table 4-2: Population projection by division, ward, and sub-location.....	56
Table 4-3: Percentage composition of age-cohorts.....	58
Table 4-4: Reasons for immigrating to Mwingi Municipality.....	79

List of figures

Figure 1-1: The technical planning approach.....	20
Figure 1-2: Planning workflow.....	24
Figure 1-3: Stakeholder engagement in visioning	26
Figure 1-4: Stakeholder Discussion Groups.....	30
Figure 2-1: Mwingi Town in the national and regional contexts	31
Figure 2-2: Planning area in its local context.....	32
Figure 2-3: Emerging nodal development in Mwingi Municipality.....	33
Figure 4-1: Monthly temperature variation in Mwingi.....	41
Figure 4-2: Monthly temperature variation in Mwingi.....	42
Figure 4-3: Compact characterisation of the entire year of hourly average temperatures	42
Figure 4-4: Monthly variation in cloud cover in Mwingi	43
Figure 4-5: Variation in percentage of days in which various types of precipitation are observed	44
Figure 4-6: Sliding 31-day period centred on each day of the year	45
Figure 4-7: Seasonal variation in the length of day in Mwingi	45
Figure 4-8: Seasonal variation in sunrise and sunset in Mwingi	46
Figure 4-9: Solar elevation for every hour of the day	47
Figure 4-10: Solar elevation for every hour of the day.....	48
Figure 4-11: Monthly variation of wind speed	49
Figure 4-12: Wind direction	49
Figure 4-13: Average daily incident shortwave solar energy	50
Figure 4-14: Catchment areas of existing primary schools.....	60
Figure 4-15: Distance travelled to the nearest primary school	61
Figure 4-16: Poor and inadequate physical infrastructure remains a key challenge to many schools	62
Figure 4-17: Factors hindering access to quality secondary school education.....	62
Figure 4-18: Catchment areas of existing secondary schools	63
Figure 4-19: Factors hindering access to quality tertiary education	64
Figure 4-20: Groups not provided with recreational facilities	65
Figure 4-21: Top 12 reasons for making hospital visits.....	66

Figure 4-22: Distance travelled to access nearest health facilities	67
Figure 4-23: Narrow roads and clogging hinder effective storm water drainage	68
Figure 4-24: Sources of water for Mwingi remain fragile vulnerable to the effects of climate change	69
Figure 4-25: Existing water infrastructure does not serve the western side of the municipality	70
Figure 4-26: Areas vulnerable to climate change-induced flooding	80
Figure 6-1: Ribbon development along the main transportation corridors	102
Figure 6-2: The spatial form of Mwingi Municipality lacks a clear network character	104
Figure 6-3: The influence of outlying urban nodes in shaping the spatial form of Mwingi Municipality	105
Figure 6-4: Urban informality actively structures the spatial form of Mwingi Municipality	109
Figure 6-5: The extant urban form of Mwingi Municipality	111
Figure 6-6: Managing urban sprawl through deliberate decentralisation	114
Figure 6-7: The proposed urban form of Mwingi Municipality	115

List of abbreviations

CBO	- Community-Based Organisation
CGK	- County Government of Kitui
CLT	- Community Land Trust
KTB	- Kenya Tourism Board
NEMA	- National Environment Management Authority
NGO	- Non-Governmental Organisation
NLC	- National Land Commission
PPD	- Physical Planning Department
WEDF	- Women Enterprise Development Funds
YDF	- Youth Enterprise Development Funds

Foreword

Mwingi Town is at a crucial point in its development, following its recent conferment of municipal status. There is need to enhance the quality of life of the residents, promote economic growth and foster sustainability. The Integrated Urban Development Plan (IUDeP) is a blueprint for the municipality’s long-term growth and development. It outlines strategies for infrastructure, housing, environmental conservation, social amenities and economic opportunities.

The preparation of this plan has been a collaborative effort involving multiple stakeholders, including the local administration, special interest groups, business operators and the residents, who all share a common vision of transforming Mwingi into a centre of excellence in sustainable urban development, management and service delivery.

I express my sincere gratitude to all those who contributed to the development of this plan and look forward to working together to bring to life the strategies put in place for Mwingi Municipality.

.....

Hon. Fredrick Kisong’e Kimanga

COUNTY EXECUTIVE COMMITTEE MEMBER (CECM)

Acknowledgement

The completion of this Integrated Urban Development Plan (IUDeP) for Mwingi Municipality would not have been possible without the support and contributions of many individuals and organizations.

First and foremost, I am grateful to the leadership of Kitui County Government, led by H.E Dr. Julius Makau Malombe, the Governor, for providing the strategic direction and resources necessary to develop this plan. The contribution of the municipal leaders led by the Municipal Manager, Mr. Alex Mutemi do not go unnoticed, and I appreciate their efforts, especially in coordinating stakeholder engagement meetings and providing vital information that has shaped this plan. I also acknowledge the invaluable contributions of the County Department of Lands, Housing, and Urban Development, whose technical expertise and dedication were instrumental in shaping this document.

I extend my sincere thanks to the local community, who actively participated in stakeholder consultations, providing critical insights and feedback that ensured the plan is responsive to the needs of Mwingi residents. We also appreciate the role played by various development partners and civil society organizations, whose support has been invaluable.

Finally, I express my gratitude to the Charrette Planning Group and technical team led by Plan. Dr. Walter Alando, who worked tirelessly to compile this comprehensive plan. The other team members included Plan. Emmanuel Midheme, Severiano Odhiambo Annet Wagaki Kiama, Natalie Aketch, Bob Yugi, Daniel Ouma Asaka, Zachary Nyabayo, Sizdel Mukudi. Their commitment to excellence and attention to detail have made this plan a tool for guiding the future development of Mwingi Municipality.

Thank you all for your invaluable contributions.

.....

Evans Mutemi Mutua

Chief Officer, Urban Development

EXECUTIVE SUMMARY

Mwingi Municipality is on a transformational journey, that is driven by rapid urbanization, economic growth, cultural diversity and increasing population. The Integrated Urban Development Plan (IUDeP) serves as a framework designed to guide the municipality's growth over the next 10 years, ensuring that development is sustainable, inclusive and responsive to the needs of its residents.

This plan has been prepared within the existing legal and policy frameworks. They include: Kenya Vision 2030, National Spatial Plan (2015-2045), Sessional Paper No. 1 of 2017 on National Land Use Policy (NLUP), Constitution of Kenya 2010, Physical and Land Use Planning Act (PLUPA) 2019, Urban Areas and Cities Act (UACA) 2011, Environmental Management and Coordination Act (EMCA) 1999 and the Climate Change Act 2016.

This plan outlines key strategies across various sectors to address critical challenges and leverage opportunities within the municipality. Key focus areas include Urban infrastructure, water supply, disaster management strategies, waste management, housing, urban planning and development control.

This plan also outlines an implementation framework that will guide the implementation of the proposed strategies and an institutional framework. The roles and responsibilities of different actors are clearly spelt out and regular monitoring will be instrumental in the realization of this plan. There is need for strong partnerships between the county government, private sector, development partners and the local community.

Ultimately, this IUDeP is designed to create a vibrant, resilient, and sustainable urban centre, offering improved quality of life for all its residents while fostering economic growth and environmental sustainability.

.....

Sammy Kathike

County Director of Physical Planning

CHAPTER ONE

1. INTRODUCTION

1.1. OVERVIEW

This current Integrated Urban Development Plan has been prepared within the context of the provisions of the Urban Areas and Cities Act of 2011 (Rev. 2019, 2022) to provide an integrated framework for socio-economic development of Mwingi Municipality. Section 36 of this Act expressly provides that every city and municipality established under the Act shall operate within the framework of integrated development planning. Integrated development planning is an approach that not only gives effect to the development of urban areas; it also strives to achieve the objects of the devolved government, contribute to the protection and promotion of fundamental rights and freedoms, and provide a basis for the preparation of subsequent sectoral plans that are all geared to the development of urban centres.

The plan covers Mwingi Municipality, an area that is strategically located along the A3 Road that connects Nairobi City, Thika Municipality and Garissa Municipality. The municipality is located some 47km to the north of Kitui Municipality, the headquarters of Kitui County. The exact planning boundaries for the assignment has generally been described to be the physical area of the part that is within 5KM radius from the KCB Mwingi Branch roundabout.

The strategic location of the Mwingi municipality, its recent elevation to municipal status, and the opportunities afforded by devolution under the Kenya Constitution 2010, create a unique development opportunity for Mwingi. These opportunities, if not properly managed, may lead to unsustainable urbanisation characterised by urban sprawl, overcrowding, development of informal settlements, insecurity and even lost economic opportunities. The availability of land where the municipality currently lies also offers the opportunity for pre-planned urban development, which will require close monitoring and control through establishment of local administration and governance structures.

The County Government of Kitui recognises that the elevation of Mwingi town to municipal status implies an inevitable trajectory of growth that necessitates the

formulation of an integrated development plan. This plan should therefore guide the growth and development of the municipality in line with, not only the vision of the County Government of Kitui, but also other national priorities and international development obligations that Kenya as a whole is signatory to. Among these are the Agenda 2030, the 2063 Agenda, and a number of international agreements on the protection of the environment and reduction of the pace of global climate change. The plan will serve as a blueprint for achieving economic advancement, social progress, climate resilience, and physical transformation that will be beneficial to the municipality. Its successful implementation should therefore see the municipality attract both local and global attention, investments, and urban programs that encourage new employment opportunities that will contribute to its sustainable and well-managed urban development.

1.2. BACKGROUND INFORMATION

Over the years, Mwingi Town has expanded in uncontrolled manner. The last few decades have seen rapid land use conversion from agriculture to urban development, albeit without any systematic land use planning and development control. The last spatial plan of the town was prepared in May 1973¹. However, the plan was never officially approved, meaning its provisions could not be legally enforced. Besides, a weak development control mechanism has further made it impossible to ensure orderly spatial development.

In the meantime, there are many problems currently bedeviling the the municipality, which include but are not limited to a lack of an adequate system of spatial management which is evident in uncontrolled urban sprawl. Given its stature, there are rather few roads serving Mwingi Town, limiting both internal and external circulation. Moreover, the few roads that serve the town are either heavily encroached upon or completely blocked, leading to unplanned cul-de-sacs or just missing links in the circulation network. Besides, owing to long periods of development devoid of proper spatial management, there has been a lot of haphazard development which do not muster planning standards.

¹ Mwanzia, C. V. (2014) Application of GIS in Physical Planning: Case Study, Part of Mwingi Town. MSc Thesis, Department of Geospatial and Space Technology, University of Nairobi.

Today, Mwingi Municipality is experiencing rapid growth. There is a rapid change of land use from the original agricultural land use to other forms of land use, mainly commercial, institutional and residential. This change occurs haphazardly without a proper means to guide it. This situation can be attributed to several reasons. To begin with, there is no land use plan to guide the spatial development of the rapidly transforming urban centre. This is further complicated by inadequate technical capacity for land use planning and development control at the Mwingi Municipality. The process of peri-urban land conversion is fuelled by unregulated subdivision of agricultural land into urban lots, devoid of the necessary provisions for circulation, public utilities and other amenities. The other challenge is connected to freehold land ownership in the peri-urban zone that leaves little leverage for land use control by municipal planners².

These planning challenges are further manifested in inadequate water supply and sanitation facilities, sub-standard housing and community facilities, inadequate public transportation and poor environmental management. By and large, the development of the municipality has been slowed down by a lack of a deliberate plan to guide it.

1.3. OBJECTIVES OF MWINGI MUNICIPALITY

The objective of the Municipality is to enhance urban governance through the effective and efficient provision of municipal services. To facilitate this objective, the Municipality is guided by a clear vision, mission statement and goals³. These are as outlined below:

Vision

A centre of excellence in sustainable urban development, management and service delivery

Mission

To sustainably develop and manage Mwingi Municipality through ensuring stakeholder engagement, controlled land development, and delivering quality socio-economic, infrastructural and environmental services to the traders in, residents of, and travellers

² Mwanzia, C. V. (2014), op cit.

³ County Government of Kitui (2023) Kitui County Integrated Development Plan 2023-2027.

through the municipality.

Goals

Mwingi Municipality's objectives and priorities include, to:

- Promote a safe and healthy environment in Mwingi Town;
- Promote and undertake infrastructural development and services within the town;
- Monitor the impact and effectiveness of any services, policies and programs or plans, and
- Strengthen the economic competitiveness of Mwingi Town.

To facilitate the achievement of these objectives, Mwingi Municipality is composed of five functional departments, namely:

- Finance and Revenue Assurance;
- Trade, Commerce and Industrialization;
- Physical Planning, Infrastructure, Transport and Development Control;
- Administration and Corporate Services; and
- Environment, Culture, Recreation and Community Development.

1.4. THE MUNICIPAL BOARD AND ITS FUNCTIONS

Mwingi Municipality has just constituted its Municipal Board in line with the provisions of Section 14 of the Urban Areas and Cities Act of 2011 (Rev. 2019). The functions of the Municipal Board are outlined in Section 20 of the Urban Areas and Cities Act of 2011 (Rev. 2019). Accordingly, these functions include:

- a) Oversee the affairs of the municipality;
- b) Develop and adopt policies, plans, strategies and programmes, and may set targets for delivery of services;
- c) Formulate and implement an integrated development plan;
- d) Control land use, land sub-division, land development and zoning by public and private sectors for any purpose, including industry, commerce, markets, shopping and other employment centres, residential areas, recreational areas, parks, entertainment, passenger transport, agriculture, and freight and transit stations within the framework of the spatial and master plans for the city or municipality as may be delegated by the county government;

- e) As may be delegated by the county government, promote and undertake infrastructural development and services within the city or municipality;
- f) Develop and manage schemes, including site development in collaboration with the relevant national and county agencies;
- g) Maintain a comprehensive database and information system of the administration and provide public access thereto upon payment of a nominal fee to be determined by the board;
- h) Administer and regulate its internal affairs;
- i) Implement applicable national and county legislation
- j) Enter into such contracts, partnerships or joint ventures as it may consider necessary for the discharge of its functions under this Act or other written law;
- k) Monitor and, where appropriate, regulate city and municipal services where those services are provided by service providers other than the board of the city or municipality;
- l) Prepare and submit its annual budget estimates to the relevant County Treasury for consideration and submission to the County Assembly for approval as part of the annual County Appropriation Bill;
- m) As may be delegated by the county government, collect rates, taxes levies, duties, fees and surcharges on fees;
- n) Settle and implement tariff, rates and tax and debt collection policies as delegated by the county government;
- o) Monitor the impact and effectiveness of any services, policies, programmes or plans;
- p) Establish, implement and monitor performance management systems;
- q) Promote a safe and healthy environment;
- r) Facilitate and regulate public transport; and
- s) Perform such other functions as may be delegated to it by the county government or as may be provided for by any written law

1.5. OBJECTIVES OF PREPARATION OF INTEGRATED DEVELOPMENT PLAN

The objectives of the plan derive from Section 36 of the Urban Areas and Cities Act of 2011 (Rev. 2019). The Section recognises that apart from mandating municipalities to operate within the framework of an Integrated Urban Development Plan, the plan should form the basis of the following tasks:

- i. The preparation of environmental management plans;
- ii. Provision of physical and social infrastructure and transportation;
- iii. Preparation of annual strategic plans for a city or municipality;
- iv. Disaster preparedness and response;
- v. Overall delivery of service including provision of water, electricity, health, telecommunications and solid waste management;
- vi. Nurture and promote development of informal commercial activities in an orderly and sustainable manner;
- vii. Provide a framework for regulated urban agriculture; and,
- viii. Be the basis for development control.

1.6. SCOPE OF WORK

The specific tasks shall include the following:

- i. Carry out a desk review of documents relevant to the understanding of the mandate, legal framework, and context of the town. These will include the existing development and action plans; legislation governing the municipality and national legislation relevant to urban development plan;
- ii. Review other current relevant policy frameworks, laws, approaches and national implementation plans on urban issues;
- iii. Review all relevant plans for the town i.e. the CIDP, County Investment Profile, the Physical Development Plans and site plans (if any) for the course of streamlining the development plan;
- iv. Develop an understanding of the current situation of development in Mwingi Municipality, paying special attention to issues of sustainable development, investment promotion, and urban development;
- v. Conduct a needs assessment of the town;
- vi. Develop a comprehensive methodology and work plan for a participatory process of the development of the urban plan with a view to achieving both support, concrete co-operation and programming with relevant agencies such as the department for natural resources, the department of finance, and other relevant agencies, and external funders;

- vii. Hold consultations and facilitate interviews with relevant stakeholders including but not limited to: relevant government departments, national government agencies within Mwingi Municipality; private sector companies, industry associations, chambers of commerce, security agencies and other private sector organizations and the donor community and civil society/NGOS. At all stages, the county physical planning section will be closely involved for oversight and technical review role. The plan should include participatory vision and mission statements, priority programmes and sector sub-strategies, baselines and targets, timelines and resource allocations and a monitoring plan and communications plan.
- viii. Develop an advanced draft for discussion with stakeholders and the methodology for the consultation process;
- ix. Together with the county government, lead a thorough programme of consultations to receive feedback on draft plan;
- x. Finalize the IUDeP, including a detailed implementation plan, and a Capital Investment Plan;
- xi. Ensure that the IUDeP is professionally costed and includes a plan for how to integrate the development proposals and strategies contained in it to the sub-sectors and the priorities of the agencies that operate in Mwingi Municipality.

The scope of work included, but not be limited to:

- i) Undertaking stakeholder mapping, analysis and engagement. At least four engagements are expected with the stakeholders during the kick-off meeting, scoping meeting, visioning meeting, and validation meeting;
- ii) Undertaking an analysis of the existing development situation through a consultative process and application of an appropriate tools of analysis, identify focus areas of development and develop strategic objectives and key result areas for the same;
- iii) Site visits to Mwingi Municipality for proper understanding of the planning area, its boundary and other features that would have planning implications.
- iv) Carrying out thorough data collection and analysis of the development phenomena in the area and also make recommendations on the boundary extents.

- v) Undertaking a detailed study of the following topical issues
- **Existing scenario**; climate and vegetation, topography and land features, existing land use pattern, existing land ownership pattern
 - **Existing amenities and facilities**; roads and circulation network, institutional establishments and offices, heritage, religious structures and sacred sites, existing housing, social amenities, workshops and industries.
 - **Existing utilities and services**: drinking water supply and distribution, storm water drainage system, sewerage and solid waste disposal system, electricity, street lighting, telecommunication and other services
 - **Analytical study**; slope, aspect, contour and hazard analysis
 - **Settlement studies**
 - Land-to-built form relationship
 - Vital building elements
 - Building heights
 - Settlement patterns
 - **Demographic studies and planning standards**
 - Demographic studies and carrying capacity
 - Existing population studies
 - Population projection
 - **Socio-economic studies**
 - Economic basis of the proposed plan
 - Major ongoing and proposed projects
 - Potential for industrial, agriculture, commercial, tourism, institutional or other development and establishments
 - **Environmental studies**
 - Eco-fragile or sensitive areas studies
 - Rivers and streams
 - Conservation areas
 - Climate resilience and disaster management studies
- vi) Making proposals for action that include but not limited to the following:
- a. Land use plan- this plan, once completed, will show the future land use of each zone in the town. In each type of land there will be a schedule of

permissible and allowed activities. It will identify and delineate zones needing special protection, including surface and ground water supply sources and catchments; soil erosion, forests, agricultural area. It will also identify the measures required to mitigate hazards and to protect assets in all protection zones, including permitted /prohibited development and uses.

- b. Road network and transportation plan-it will include new and existing roads, possible and viable strategies for water transport, pedestrian networks, on and off street parking facilities; public transport system including bus routes, taxi stands, pull over, non-motorised transport and related facilities.
- c. Open spaces.
- d. Proposed infrastructure and urban services, maps-the following will be mapped based on the projected population, capacity, proposed addition for additional networks and distribution facilities etc.
- e. Water supply and distribution
- f. Firefighting facilities
- g. Solid waste collection and disposal system
- h. Utilities network (electricity, telecom, etc.)
- i. Street lighting
- j. Housing and shelter systems
- k. Development control regulation-this document shall contain detailed information on the land use and building construction, procedure for building permits and regulations on aspect such as the plot coverage, building heights, FAR etc. For different land use zones / precincts with clear 3d illustrations and sections
- l. Density patterns
- m. Urban design guidelines
- n. Capital Investment plan for the proposed infrastructure development
- o. Implementation plan with sequencing and prioritization of infrastructure development works
- p. Environmental protection and climate change adaptation and disaster mitigation measures

- vii) Compilation of a draft local physical and land use development plan.
- viii) Validation of the draft plan by stakeholders
- ix) Prepare a final draft plan and submit the same to the County Executive Committee Member responsible for urban development.

Table 1-1 presents a summary of the activities that have been undertaken to deliver the Integrated Development Plan for Mwingi Municipality.

Table 1-1: Summary of activities to be undertaken to deliver the IUDeP

Step	Narration	Activities
1	Inception	<ul style="list-style-type: none"> • Review of terms of reference • Stakeholder engagement • Reconnaissance of the area • Undertake desktop and background study • Formulate a methodology
2	Scoping	<ul style="list-style-type: none"> • Identification of key areas of study • Engage stakeholders in the scoping process • Undertake in-depth studies including: <ul style="list-style-type: none"> ▪ Population dynamics including: Population size, Growth rates, Distribution, Migratory trends, Human development conditions and population trends. ▪ Urbanization and Human settlement including: Patterns and trends, Conditions of the settlement, Urbanization growth rates, Availability of infrastructure, Functions of settlement, Factors that contribute to urbanization and challenges of human settlement. ▪ Economy including: Main economic drivers; Agriculture and Trade, Contribution, Performance, Prospects and Constraints ▪ Transportation and infrastructure including: existing transportation network, Conditions of the modes, missing links, functions of different modes, transportation gaps and challenges, existing infrastructural services, distribution of the various

		<p>infrastructural facilities, the capacity and the challenges.</p> <ul style="list-style-type: none"> ▪ Land and natural resources including: land use, availability, potential i.e. agro, mineral, tourism and energy, suitability and land constraints ▪ Environment including: identify environmental assets, ecosystem functions of the environment, establish the conditions, conditions of the assets and establish threats and constraints to the assets ▪ Governance and institutional framework including: identifying the governance issues i.e. access to services, coordination between different sectors, capacity of the sectors, marginalization, gender and climate change, establish the impacts of the issues on development, identify key institutions necessary for the implementation of the plans, establish the capacities and challenges faced in performing their duties, formulate and present recommendations, ▪ Prepare and present a situation analysis report for validation by stakeholders
3	Mapping	<ul style="list-style-type: none"> • Establishment of ground control points for rectification of satellite images • Establishment of twelve Horizontal and vertical controls tied on the national network • Establish geospatial database • Provide and Use high resolution satellite image at least 75cm minimum • Analyse image to determine land cover • Acquire cadastral data to analyse land subdivision and add to database • Establish existing extent and projected urban areas for a period of 10 years • Undertake land suitability assessment • Digital elevation model • Thematic maps;

		<ul style="list-style-type: none"> • Model trends in urbanization, deforestation and land degradation
4	Visioning and Identification of planning issues	<ul style="list-style-type: none"> • Undertake visioning at the ward level in the municipality • Organize and engage the stakeholders to understand the existing situation • Getting their vision in thematic format • Identify the constraints that will limit the achievements of the vision • The different ways of overcoming the challenges • Analyse the vision statement presented; harmonize to come up with a common vision for validation • Prepare a visioning report for validation by the technical team
5	Land optimization	<ul style="list-style-type: none"> • Identify the land available for relevant use • Land suitability • Urban land demand assessment for fast growing towns • Modelling and scenario building zoning options • Validation by stakeholders
6	Zoning	<ul style="list-style-type: none"> • Undertake a selection of preferred zoning plans for major and upcoming market centers and other social economic activities
7	Formulation of land-use and land management policies	<ul style="list-style-type: none"> • Review land challenges and develop land use and land management policies and present to the technical team for validation
8	Preparation and validation of draft land use plan	<ul style="list-style-type: none"> • Stakeholder engagement • Prepare and validate land use plan • Integrate different land use zones to produce a composite plan • Presenting a composite plan for validation
9	Formulation of development strategies	<ul style="list-style-type: none"> • Urbanization and human settlement • Economic development in agriculture, industrialization and tourism • Integrating transport • Provision of appropriate infrastructure • Rural development and regional balance

		<ul style="list-style-type: none"> • Identify necessary projects for implementation of each of the strategies • Capital investment plan for the implementation of major projects in the county • Formulate implementation mechanism • Provide monitoring and evaluation mechanisms
10	Prepare a draft plan	<ul style="list-style-type: none"> • Prepare a county spatial plan consisting of inception report, situation analysis report, soft copy of database, land cover maps, Thematic maps, mapping reports on the control points, visioning report, land optimization report, land use plans, land use and land management report, composite plan, models, Development strategy reports. All the maps presented shall be accompanied with the corresponding shape files.

1.7. METHODOLOGY

1.7.1. Overview

The terms of reference of this assignment provide, within the framework of the studies to be conducted, the production of an Integrated Urban Development Plan for Mwingi Municipality that contains the following elements:

1. A situational analysis report providing an assessment of the current social, cultural, economic and environmental situation in the municipality's area of jurisdiction;
2. A shared Vision for the development of the municipality and that of the county as a whole;
3. An Integrated Urban Development Plan that provides development strategies along specified thematic areas of environment, physical and social infrastructure, transportation, housing, local economic development, disaster management and cultural heritage preservation;
4. Implementation strategy indicating prioritization of projects and programmes;
5. Strategic projects to unlock development potential;
6. A capital investment plan with associated costs and responsibilities for implementation of agreed sector-wise priorities with a realistic and affordable financing plan budget;
7. Resilience and disaster management strategy;
8. Institutional Framework for plan implementation;
9. Urban Agricultural strategy

The assignment shall be presented in the form of a written statement, maps, interactive geodatabase, diagrams and graphical illustrations of policies and development strategies and actions and measures and not limited to the following activities:

- a) Study the planning area environment and analyse the development trends over time;
- b) Conduct a prior review to determine the most effective and efficient land uses for better functioning of the town;
- c) Produce a strategic review report that presents the detailed findings of the review and provides solid proposals for transforming of the town;

- d) Advice on the appropriate boundary extents for the municipality;
- e) Develop a data base for all government and private lands within the gazette municipal boundary;
- f) Advise on appropriate land uses distribution necessary for the town within the plan;
- g) Advise on possible areas of public projects investment within the plan
- h) Define all road networks in the update;
- i) In developing plans for managing the recommended change for the town, the consultant will develop a change management strategy to effect the needed change in the municipality;
- j) Recommend measures necessary for smooth development of Mwingi Municipality as a strategic urban area

Considering the foregoing terms of reference, this plan adopts a methodology that is founded in the Physical and Land-Use Planning Act No. 13 of 2019 to deliver the expectations of the terms of reference. Specifically, Section 54 of the Act provides that all plans formulated under the Urban Areas and Cities Act, 2011 shall, with necessary modifications, be prepared and approved in accordance with the provisions of the Physical and Land-Use Planning Act. Accordingly therefore, the current plan has been delivered through broad-based stakeholder consultation, existing situation analysis, geo-spatial and environmental investigation to inform the implementation of the urban development plan. Deliberate efforts have been made to ensure that the planning process and in deed the proposals contained in it remain relevant, modern, cost effective, competitive, futuristic and most importantly environmentally friendly.

1.7.2. Plan preparation process

Deliberate efforts have been made to ensure that the preparation of this current Integrated Development Plan for Mwingi Municipality is inclusive, multi sectoral and participatory. The process enlisted the participation of representatives from different institutions and interest groups in Mwingi. These were drawn from government, Mwingi business community, Kenya Chamber of Commerce, the civil society, informal sector traders, residents, political representatives, special interest groups. **Table 1-2** details the membership of these stakeholder groups.

Table 1-2: Stakeholder representation in the preparation of Mwingi IUDEP

S/No.	Stakeholder category	S/No.	Stakeholder category
1.	Office of the Municipal Manager	18.	Mwingi Muslim community
2.	Municipal Environment Office	19.	Garages and auto-spares
3.	Municipal Fire Department	20.	Boda boda
4.	Municipal Trade Office	21.	Mwingi business community
5.	Municipal Planning office	22.	Members of the County Assembly
6.	Municipal Revenue Office	23.	Residents
7.	County Physical Planning Office	24.	Mwingi specialist hospitals and doctors
8.	County Survey Office	25.	Kiosks
9.	County GIS Office	26.	National government
10.	County Enforcement		Informal sector traders
11.	County Social Development Office		Civil society
12.	County Children’s Office		Mwingi taxi operators
13.	Kitui Water and Sanitation Company		Transporters
14.	Kenya National		
15.	Kenya Power		
16.	Kenya Commercial Bank		
17.	Equity Bank		

The stakeholders were engaged through a consultative process at different stages right from the visioning through to the review and validation of the plan (**Figure 1-1**). At the same time, the stakeholders were afforded the opportunity Thematic and targeted consultations were made and consensus built in line with the constitutional requirements on participation of stakeholders in the planning process. The preparation of the IUDeP was steered by the Municipal Manager, Mwingi Municipality. Sensitization and public awareness meetings were held across all the neighbourhood level with representations across all the wards in the municipality.

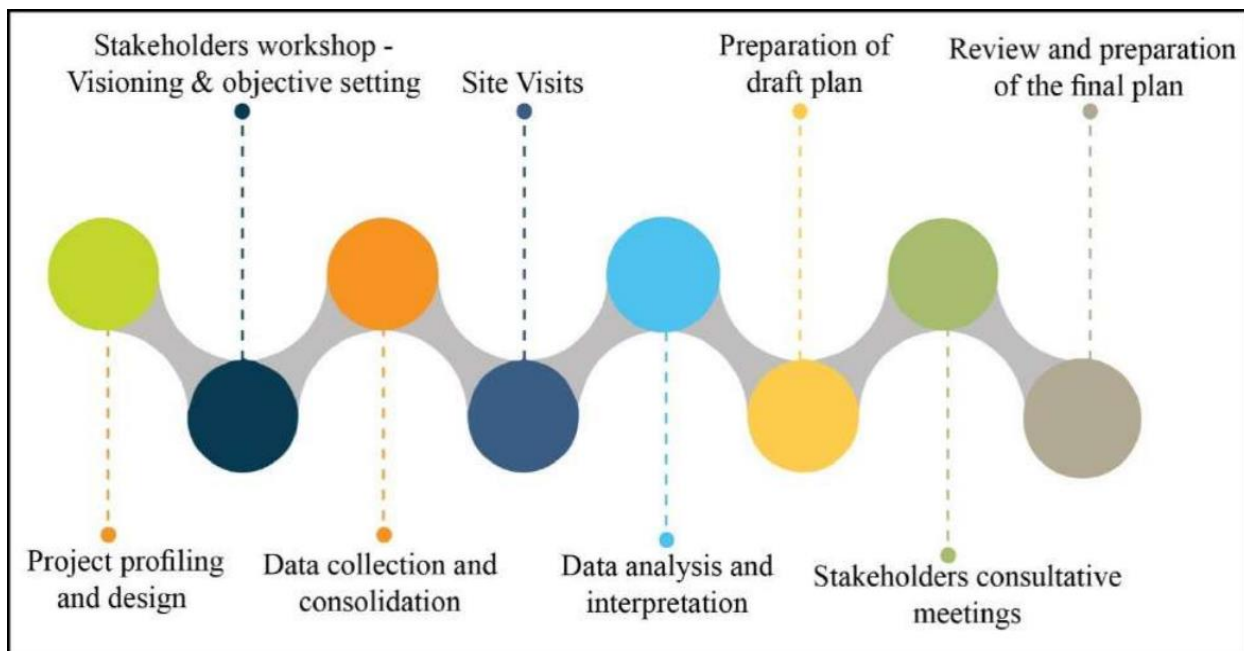


Figure 1-1: The technical planning approach

The planning process followed a 5-staged approach as explained in the next sections:

Stage 1: Project profiling and design

The project’s RFP contains the broad problem statement, project Terms of Reference (TOR) and the project goals and objectives. The TOR specifies, among other things the client, sources and disbursement of project funds, time frame, specifications on professional staff requirements and project administration/management structure. The information contained in the RFP and the TOR has been used to carry out preliminary project profiling and design.

Stage 2: Data collection and consolidation

This involved detailed stakeholder engagement, field surveys, key informant interviews with representatives of both government and non-government organisations, and sample household interviews. The focus of data collection was to enable the acquisition of data that would form the basis of understanding the existing development situation, within the municipality together with its development challenges and the possible interventions that the IUDeP should explore. Appropriate data collection tools, such as interview schedules, observation checklist, and household interview schedule were

prepared to aid in data collection.

On the other hand, spatial data was obtained from the Lands Office as well as using the state of the art technologies such as the Geographic Positioning System (GPS) and satellite imagery. The data from these sources was used to develop the base map and to generate thematic maps that were needed to support various sectoral analyses.

Secondary data was collected from government reports, policy and plan publications as well as working documents of other non-government actors that operate in the area. A key data source in this case was the National Housing and Population Census reports. This source gave the population data, which forms the basis for planning.

Stage 3: Site Visits and ground truthing

These were employed for the purpose of familiarising with the sites and general direction on the scope of the work. The site visits covered the entire municipality. Photography and observation was used during the site visits as complementary tools for data collection.

Stage 4: Spatial Data Analysis and Interpretation

The activities here included linking the data collected from the household interviews, secondary sources, and key informants with the spatial data. The main purpose was to produce accurate and up to date maps for planning and infrastructure development in the county. Tools such as proximity analysis and accessibility analysis, have been used to evaluate accessibility to municipal services.

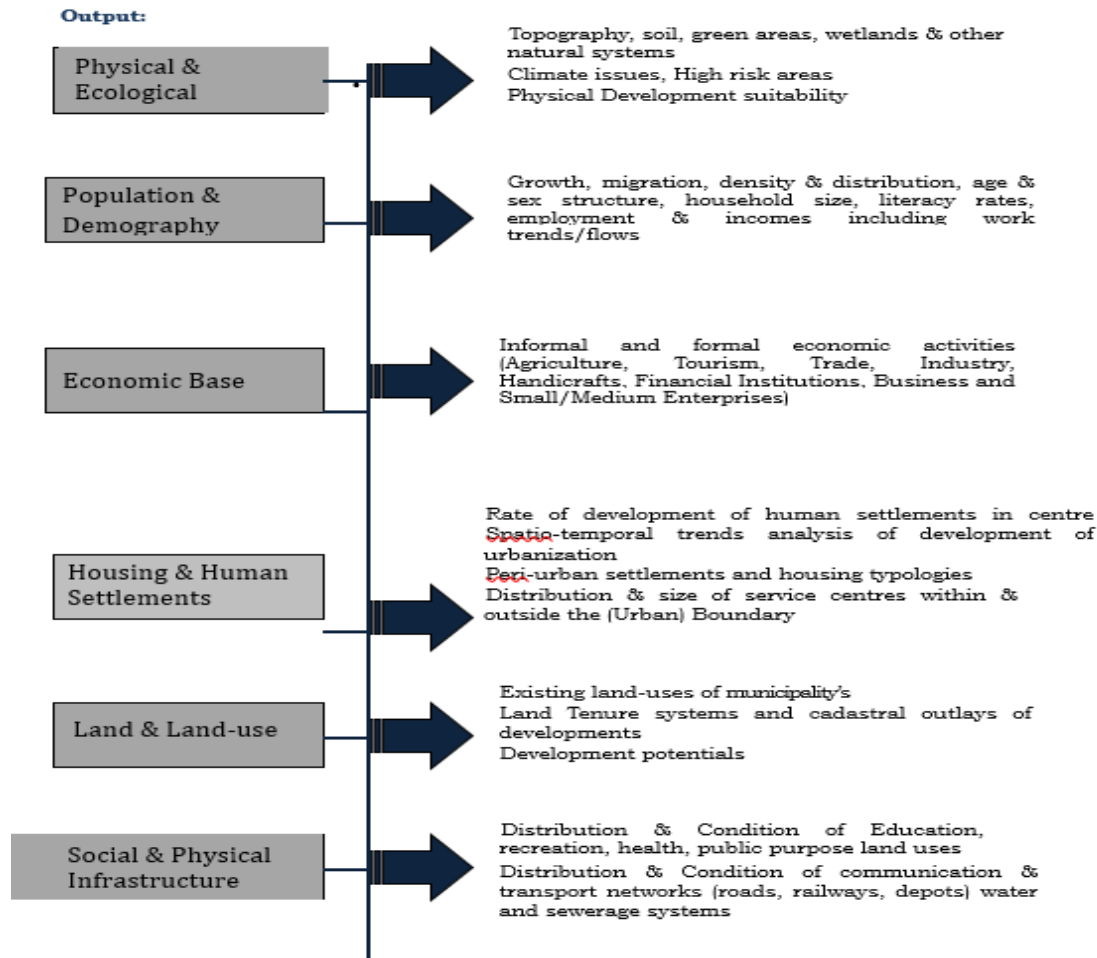
Other tools included hotspot analysis, cluster analysis, and centrality analysis among others. By and large, these tools have been applied to find out how municipal services and infrastructure are accessible to the residents of Mwingi Municipality and to assess the supply gap when it comes to these services. It is this gap that the IUDeP responds to by proposing various intervention strategies.

Stage 5: Preparation of the Base Map.

The activities here have included: compilation of an accurate base map using Arc GIS.

1.7.3. Socio-Economic Data Analysis and Presentation Process

The focus of the socio-economic data analysis was to aid thematic diagnosis of the development potentials and challenges within the following six core aspects.



Socio-economic data analysis and presentation was done through various methods outlined below:

- Content analysis and report writing to summarise government policy statements, government priorities, legal context of development, and other international development standards that the plan must strive to midwife
- Qualitative data analysis of data obtained from key informants, government documents, field observations, and other qualitative sources
- Quantitative data analysis was also employed to understand the quantitative aspects of development of the municipality. It was carried out on KNBS data to

understand the population growth together with population dynamics, such as densities, literacy levels, income levels, and migration among others. This analysis was also employed to project the population of different age cohorts for purposes of proactive planning that responds to different developmental needs of different age cohorts.

- Quantitative data analysis was also be carried out to understand the economic development patterns of the municipality and to model its possible economic development and the contribution of various sectors to this growth. The contribution of the informal and formal economic activities (agriculture, tourism, trade, industry, handicrafts, financial institutions, business and small/medium enterprises) to the economic growth and development of Mwingi Municipality shall be analysed quantitatively. The Statistical Package for Social Sciences (SPSS) was used to analyse the socio-economic data.

The analysis covered all the sectors identified in the TOR. Among these are:

- Physical, environmental and natural resources
- Population and demographic characteristics
- Land use and socio-economic activities
- Transportation, infrastructure and utility services
- Housing and community facilities
- Development and management institutions

To obtain a detailed account of the same, diagnosis will be done thematically, around the following six core aspects.

1.7.4. Draft report preparation

A draft report was prepared, which has then been presented to the key stakeholders through at least two technical workshops before it is finally submitted to the client for consideration as stipulated by the relevant laws

1.7.5. Final draft report preparation and submission for consideration

The final report was then prepared and presented to the client for endorsement. The report has been submitted through the prescribed form and with all the materials stipulated therein.

Figure 1-2 presents the planning workflow while **Figure 1-3** summarises the project activities, the methodologies and the expected output(s) from each project activity. The workflow derives from Schedule 11 of the UACA 2011 (Rev. 2019).

Figure 1-2: Planning workflow



Table 1-3: Summary of project activities, methodology and expected outputs

Activity	Methodology	Output
Interpreting the TOR	<ul style="list-style-type: none"> • Desktop review • Key informant interview with client • Site visit 	<ul style="list-style-type: none"> • Inception report
Stakeholder mapping Preliminary field visits/ reconnaissance	<ul style="list-style-type: none"> • Key informant interviews with government officials and opinion leaders 	<ul style="list-style-type: none"> • Verified stakeholder list • Delineated preliminary boundary • Preliminary planning issues • Minutes of stakeholder engagement.
Data Collection and verification	<ul style="list-style-type: none"> • Key informant interviews • Field surveys • Stakeholder workshops • Household interviews • Satellite imagery • Reference to government reports • Ground trothing/ transect walks 	<ul style="list-style-type: none"> • Verified data files • Identified data gaps • Updated preliminary planning issues • Collected data to bridge the data gaps • Base map
Situational Analysis and Visioning Workshop	<ul style="list-style-type: none"> • Stakeholder workshop • Desktop reviews of existing plans • PESTEL analysis • Gap analysis 	<ul style="list-style-type: none"> • Situation analysis report and the vision statement • Stakeholder meeting report • Visioning workshop report
Plan Proposal formulation	<ul style="list-style-type: none"> • Scenario building • Spatial analysis • Sectoral analysis • Demographic analysis and population projection • Land budget and Land use projections • Socio-economic analysis • Land suitability analysis • SWOT/PESTEL analysis • Gap analysis 	<ul style="list-style-type: none"> • Draft thematic maps • Draft land cover maps • Draft sectoral development strategies, programmes and projects • Draft land use plans • Draft IUDeP • Draft CIP • M & E framework
Draft plan validation	<ul style="list-style-type: none"> • Validation workshop • Technical presentation • Designed charrettes • Consensus building • Scenario building and 	<ul style="list-style-type: none"> • Minutes of validation workshop

Activity	Methodology	Output
	negotiations	
Final draft plan preparation	<ul style="list-style-type: none"> Incorporation of comments from the validation workshop Technical analysis of viability of proposals from the validation workshop 	<ul style="list-style-type: none"> Final draft thematic maps Final draft land cover maps Final draft sectoral development strategies, programmes and projects Final draft land use plans Final draft IUDeP Draft CIP M & E framework
Final draft plan submission	<ul style="list-style-type: none"> Physical and electronic copies delivered to the client 	<ul style="list-style-type: none"> Physical and electronic copies of the Base Map, 1st and 2nd Stakeholder meeting report, Situational analysis report and the IUDeP.

1.7.6. Execution Methodology

1.8. STAKEHOLDER ENGAGEMENT AND PUBLIC PARTICIPATION

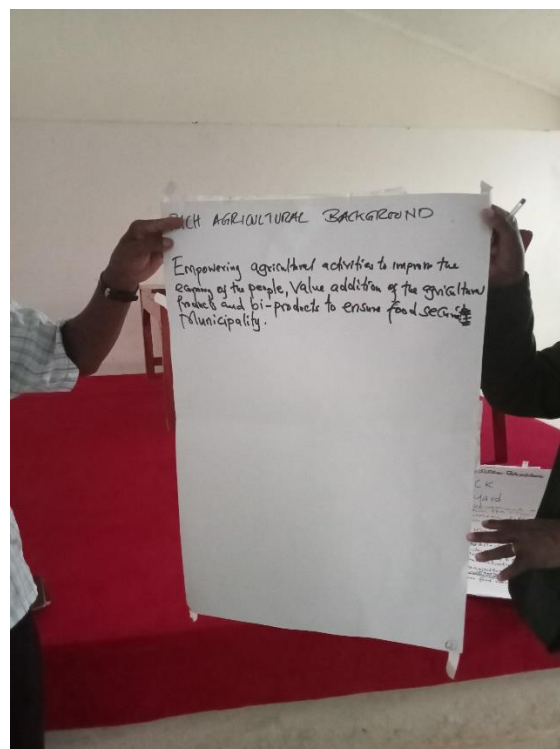


Figure 1-3: Stakeholder engagement in visioning

1.8.1. Importance of Public Participation and Stakeholder Engagement

Public participation is a crucial aspect of governance and development in Kenya, with several important benefits and implications.

To begin with, public participation enhances democratic governance by allowing citizens to contribute to decision-making processes. This involvement ensures that government policies and actions reflect the needs and desires of the people.

It also enhances accountability and transparency. When citizens are engaged in governance, it promotes accountability among public officials. Participation ensures that leaders are answerable to the populace, which can reduce corruption and increase transparency in government operations.

Further, public participation enhances social inclusion. In this context, public participation provides a platform for diverse voices and marginalized groups, including women, youth, and other minorities, to be included in development processes. This inclusion helps to ensure that different societal perspectives are considered in decision-making.

Enhanced policy formulation is also achieved through public participation. Engaging the public in discussions and consultations can lead to better policy outcomes. Citizens can provide valuable insights and feedback that can help shape policies more effectively to address community needs. This then translates to community ownership and empowerment. When people are involved in decisions that affect their lives, they are more likely to feel a sense of ownership over those decisions. This empowerment can lead to increased community involvement and initiative in local development projects.

Studies have also shown that public participation leads to improved service delivery. It enables citizens to articulate their needs and preferences, which then find their ways in the design of solutions to development challenges. When local communities are involved in identifying issues and solutions, the services provided can be more relevant and effective.

Other benefits of public participation include conflict resolution, sustainable development, and building trust in institutions. To begin with, in a diverse society like

that of Mwingi, public participation can serve as a mechanism for dialogue, fostering understanding and cooperation among different groups with different ethnic and socio-economic backgrounds. This can help in mitigating tensions and resolving conflicts at the community level. Engaging the public in sustainable development initiatives ensures that local knowledge and practices are incorporated into planning and execution thereby engendering development whose outcomes are environmentally sustainable, socially equitable, and economically viable. Lastly, trust among the members of the public also increases when citizens see their input valued and reflected in policies. This trust can lead to higher levels of civic engagement and cooperation between the government and its citizens.

1.8.2. Stakeholders Mapping and Engagement

Stakeholder engagement is an important component of any public policy making process like this current plan. A stakeholder mapping and analysis was therefore carried out in consultation with the county staff, the municipal administration, and the residents to identify the stakeholders in Mwingi and to engage them in the preparation of the plan. **Table 1-4** gives a breakdown of the interests of these stakeholders, their impacts on the plan and the importance they bear to the planning process. These stakeholders were then engaged through various methods that are enumerated in the last column of the table.

Table 1-4: Stakeholder analysis and engagement

S/No.	Stakeholder group	How much does the plan impact on them (low, medium, high)	How much influence do they have over the plan (low, medium, high)	Importance of the stakeholder to the planning process/ outcomes	Strategy for engaging the stakeholder
1.	Area Members of the County Assembly	Low	High	<ul style="list-style-type: none"> • Political support • approval of the plan at the County Assembly 	<ul style="list-style-type: none"> • Consultation
2.	Revenue officer	Low	Low	<ul style="list-style-type: none"> • Space for locating the office 	<ul style="list-style-type: none"> • Consultation
3.	Local residents	Low	Medium	<ul style="list-style-type: none"> • Safe places to reside and play 	<ul style="list-style-type: none"> • Consultation • Community charrettes
4.	Mwingi Professionals	Low	High	<ul style="list-style-type: none"> • Professional influence on 	<ul style="list-style-type: none"> • Consultation

S/No.	Stakeholder group	How much does the plan impact on them (low, medium, high)	How much influence do they have over the plan (low, medium, high)	Importance of the stakeholder to the planning process/ outcomes	Strategy for engaging the stakeholder
				the development of the town	
5.	Business community	High	High	<ul style="list-style-type: none"> • Tenure security/ business spaces 	<ul style="list-style-type: none"> • Consultation
6.	Persons with Disabilities	High	High	<ul style="list-style-type: none"> • Barrier-free proposals 	<ul style="list-style-type: none"> • Consultation
7.	Street traders	High	High	<ul style="list-style-type: none"> • No evictions and harassment by county inspectorate 	<ul style="list-style-type: none"> • Consultation • Awareness creation
8.	Land owners	High	High	<ul style="list-style-type: none"> • Tenure security • Releasing land for urban development 	<ul style="list-style-type: none"> • Consultation • Awareness creation
9.	Kenya Police Service	High	High	<ul style="list-style-type: none"> • Provision of security to the centre 	<ul style="list-style-type: none"> • Consultation
10.	County Physical Planning Department	High	High	<ul style="list-style-type: none"> • A tool for development control 	<ul style="list-style-type: none"> • Consultation
11.	County Department of Survey and GIS	High	High	<ul style="list-style-type: none"> • A basis for land survey 	<ul style="list-style-type: none"> • Consultation
12.	Ministry of Health	High	High	<ul style="list-style-type: none"> • Secure land to offer health services • Site planning of current land 	<ul style="list-style-type: none"> • Consultation
13.	Ministry of Education	High	High	<ul style="list-style-type: none"> • Access to education services 	<ul style="list-style-type: none"> • Consultation
14.	Kenya National Highways Authority	High	High	<ul style="list-style-type: none"> • Avoidance of encroachment on road reserve 	<ul style="list-style-type: none"> • Consultation
15.	Kanyangi Market Committee	High	High	<ul style="list-style-type: none"> • Well-functioning market 	<ul style="list-style-type: none"> • Consultation • Awareness creation
16.	Area Chiefs	High	High	<ul style="list-style-type: none"> • Delivery of national government services at the lowest level 	<ul style="list-style-type: none"> • Consultation • Awareness creation

S/No.	Stakeholder group	How much does the plan impact on them (low, medium, high)	How much influence do they have over the plan (low, medium, high)	Importance of the stakeholder to the planning process/ outcomes	Strategy for engaging the stakeholder
17.	Area Ward Administrators	High	High	<ul style="list-style-type: none"> • Delivery of county government services at the lowest level 	<ul style="list-style-type: none"> • Consultation • Awareness creation
18.	Bodaboda riders	High	High	<ul style="list-style-type: none"> • Safe roads • Waiting sheds 	<ul style="list-style-type: none"> • Consultation
19.	Matatu transporters	High	High	<ul style="list-style-type: none"> • Bus Park 	<ul style="list-style-type: none"> • Consultation
20.	Freight transporters	High	High	<ul style="list-style-type: none"> • Accessible roads • Parking/ resting place 	<ul style="list-style-type: none"> • Consultation
21.	Petrol service outlet operators	High	High	<ul style="list-style-type: none"> • Safe siting 	<ul style="list-style-type: none"> • Consultation • Awareness creation
22.	Religious institutions/ groups	High	High	<ul style="list-style-type: none"> • Location of religious buildings 	<ul style="list-style-type: none"> • Consultation • Awareness creation



Figure 1-4: Stakeholder Discussion Groups

Source: Field Data, June 2024

The stakeholders were engaged through various strategies. Among these were consultations, presentation of memoranda, identification of development challenges facing the municipality and participatory analysis of these challenges, community visioning among other methods. **Appendix ii** exemplifies the process that was followed to ensure the inputs of the stakeholders.

CHAPTER TWO

2. LOCATIONAL CONTEXT

2.1. Location

Mwingi Municipality is located in Kitui County, in the Eastern Region, of the republic of Kenya. The municipality has an urban population of 80,803 people⁴. The town is located along Nairobi-Thika-Garissa A3 Highway. It lies 47 Kilometers north of Kitui, the county headquarters, and 144 kilometers east of Nairobi, Kenya’s capital. The town lies within latitude 55° 59’999”S and longitude 38°40’120”E, at an altitude of 1037 meters above the sea level⁵. **Figure 2-1** below shows the location map of Mwingi Town in the national and regional contexts.

The town is located on the Northern Transport Corridor connecting Kitui and Isiolo. It is the biggest commercial centre in former Mwingi and Kyuso districts and thus the nerve point of government and development activities in the dry region.

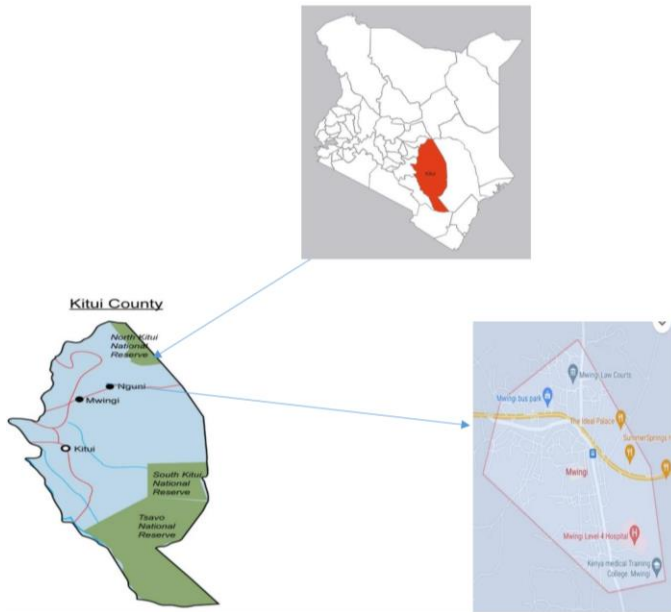


Figure 2-1: Mwingi Town in the national and regional contexts

⁴ Kathanzu, M. K. (2023) Contributions of Governance to Water Availability in Mwingi Town. MA Thesis, Department of Architecture, University of Nairobi.

⁵ Mwanzia (2014), op. cit.

2.2. Historical development

The present day Mwingi Town started back in the early 1940s as a trading post and stopover for long-distance vehicles. This is due to its strategic location along the Nairobi- Garissa highway. The town serves as the main center for the larger Mwingi region, having being the headquarters of the former Mwingi District. The town's development was also spurred by the trading activities between the native Kambas and Arabs from the Kenyan coast. Until 1990, Mwingi was recognized as an Urban Council, with its first Chair having been elected in 1993. With the review of the Kenya Constitution in 2010 ushering in a new architecture of urban governance, Mwingi was assigned a Town Administrator by the County Government of Kitui in 2013. In May 2021, Mwingi was conferred municipality status, with a Municipal Manager appointed from January 2022. The town is the second largest urban center in Kitui County and the only other designated municipality after the Municipality of Kitui.

2.3. Administrative units

2.3.1. Area Coverage by the Sub-Counties and Administrative Units

Administratively, Mwingi Town area lies at the confluence of Mwingi Central and Mwingi West sub-counties. The urban area covers Mwingi Central and Kivou wards (in Mwingi Central sub-county), and parts of Kiomo/Kyethani and Kyome/Thaana wards (of Mwingi West Sub-county). The areal coverage by sub-locations and wards is as shown in **Error! Reference source not found..**

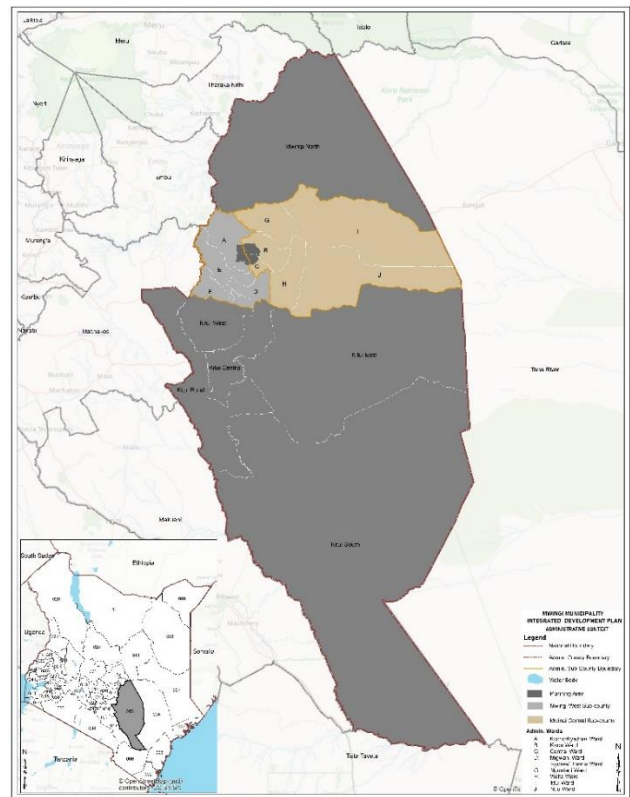


Figure 2-2: Planning area in its local context

2.4. Urban nodes within the municipality

There are three main upcoming urban centres in the planning area. These are Ikuuni in Waita ward, Kalisasi in Mwingi central ward, Ngethi No Undu in Kiomo ward. It is expected that these upcoming urban centres will form the main urban nodes during the planning period.

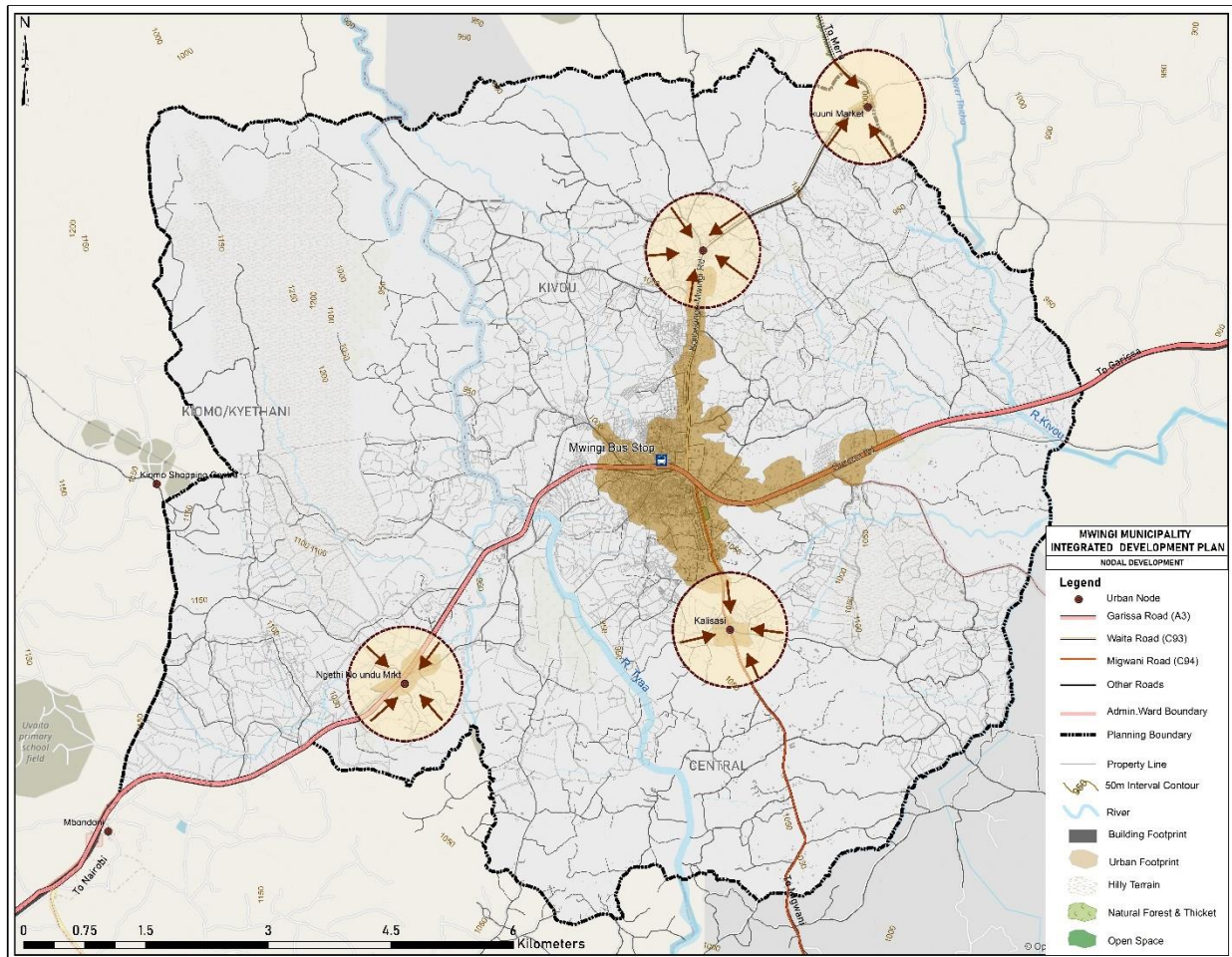


Figure 2-3: Emerging nodal development in Mwingi Municipality

CHAPTER THREE

3. CONSTITUTIONAL, POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

3.1. Overview

This chapter puts the plan in its policy, legal context. It also anchors the plan in the context of the development priorities of the County Government of Kitui.

3.2. IDeP linkages with Policy Frameworks

Kenya Vision 2030

The Kenya Vision 2030 is the country's long-term development blueprint aimed at transforming Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030. It is based on three pillars: economic, social, and political. The Economic Pillar emphasizes economic growth through infrastructure development, manufacturing, and trade. This IUDP for Mwingi Municipality aligns with these objectives by promoting local economic development, creating business zones, and enhancing transport and communication infrastructure. The Social Pillar focuses on investing in people through education, health, and social protection. Guided by this, the plan focuses on providing social infrastructure like schools, hospitals, and community centres to improve residents' quality of life. The Political Pillar aims at achieving a democratic political system that respects the rule of law and protects the rights and freedoms of every individual in society. This reinforces the importance of participatory planning, good governance and informs the vision of the Centre, where there are accountable, transparent and efficient government institutions.

National Spatial Plan (2015-2045)

The National Spatial Plan (NSP) provides the spatial vision that guides the long-term development of the country over a 30-year period (2015-2045). The plan covers the entire territory of Kenya and defines the general trend and direction of spatial development for the country. It aims to optimize the use of land and natural resources. It broadly zones the country into areas of urban growth, rangeland, and mixed potential zones and encourages efficient land use and management practice. Kitui County is generally zoned as a rangeland area with a system of urbanisation by this plan. Mwingi

Municipality falls within this system of urbanisation and requires a an IUDP to designate appropriate land uses for residential, commercial, industrial, and agricultural purposes in order to ensure that the use of land is optimised. The plan should therefore support the development of key infrastructure to improve connectivity and economic integration. The plan should also incorporate the development of roads, utilities, and public amenities. The NSP also underscores the need for sustainable environmental practices and conservation. In this regard, the plan for Mwingi Muicipality must strive to ensure that the environmental integrity of the area in which the Municipality lies is maintained.

Sessional Paper No. 1 of 2017 on National Land Use Policy (NLUP)

The National Land Use Policy (NLUP) provides guidelines for sustainable land use and management across the country. It aims to ensure optimal land use while protecting the environment and promoting equity. It emphasizes the need for sustainable land use planning and management requiring the IUDP for Mwingi Municipality to ensure that land is used efficiently and sustainably, balancing development needs with environmental conservation. The policy promotes equitable access to land and resources and advocates for the protection of natural resources and ecosystems. The plan therefore integrates environmental protection measures and promotes green infrastructure following those provisions.

3.3. Legal Framework

3.3.1. Constitution of Kenya, 2010

The Constitution of Kenya 2010 is the supreme law of the land that provides the overarching legal framework guiding all development planning and governance in Kenya. Articles 174-176 on Devolution and Governance, establish the principles of devolution, which empower county governments to plan and manage local development. It is under this mandate that the County Government of Kitui has taken to preparing land use plans for various Centres in the county, including Mwingi Municipality. This current IUDP structures the socio-economic development of the municipality within a spatial context.

Article 42 on Bill of Rights grants every person the right to a clean and healthy environment and: (a) attainment of the highest standard of health which include the

right to health care services, including reproductive health care; (b) access to adequate housing and reasonable standards of sanitation; (c) freedom from hunger and access to adequate food of acceptable quality, (d) access to clean and safe water in adequate quantities; (e) access to social security; and (f) access to education as outlined in Article 43(1). This IUDP for Mwingi Municipality addresses the needs of the residents of Mwingi, by allocating infrastructure and services such as health and education, among others.

Articles 60-72 on Land Use and Environment, outline principles of land use and environmental conservation, emphasizing sustainable development and equitable access to land. This gives the mandate to regulate the use of any land and property in the interest of land use planning. This IUDP provides a framework for regulating land uses and the actualization of these principles in Mwingi Municipality.

3.3.2. Physical and Land Use Planning Act (PLUPA) 2019 (Amended 2022)

The Physical and Land Use Planning Act (PLUPA) 2019 provides a comprehensive framework for land use planning in Kenya. It promotes integrated planning at both national and county levels, ensuring coordination and consistency in land use (Sections 15-17). Section 45 of the act states that the purpose of a Local Physical and Land Use Development Plan is to: Carry out zoning, urban renewal or redevelopment; guide and co-ordinate the development of infrastructure; regulate land use and land development; provide a framework for coordinating various sectoral agencies; and provide a framework and guidelines on building and works development in the Centre. This section further explains that such a plan should consist of a survey report, GIS-based maps and descriptions that indicate the manner in which the land in the area may be used.

The Act further explains the process of approval of an LPLUDP, which requires the publication of a notice in at least two newspapers in national circulation, within thirty days of preparation of the plan, to inform the public of the plan's availability and give opportunity for any objections to be presented. If approved, a notice should be published within fourteen days for inspection, that the plan has been approved with or without modification.

This IUDP for Mwingi Municipality will follow the guidelines and principles stated in the act, to ensure that it aligns with the national and county development goals, promoting orderly and sustainable land use. Section 54 of the Physical and Land-Use Planning Act further provides that all plans formulated under the Urban Areas and Cities Act, 2011 shall, with necessary modifications, be prepared and approved in accordance with this the Physical and Land-Use Planning Act of 2019.

3.3.3. Urban Areas and Cities Act (UACA) of 2011 (Amended 2019, 2022)

The Urban Areas and Cities Act (UACA) 2011 governs the management of urban areas and cities in Kenya, focusing on promoting good governance and sustainable urban development. The Act classifies urban areas and defines criteria for their management and development (Sections 4-10). It mandates the establishment of boards to oversee the management of municipalities and Centres, ensuring accountability and efficient service delivery (Sections 12-21). UACA requires integrated development planning, ensuring that all urban areas, including Mwingi Municipality, have an Integrated Development Plan (Section 36). The UACA also supports the creation of IUDP by providing a framework for urban governance and participatory planning.

3.3.4. Environmental Management and Coordination Act (EMCA) of 1999 (Amended 2022)

The Environmental Management and Coordination Act (EMCA) 1999 provides the legal framework for environmental management in Kenya. It mandates Environmental Impact Assessments (EIAs) for projects likely to have significant environmental impacts, ensuring that development activities are environmentally sustainable (Sections 58-68). The Act sets out environmental quality standards and regulations to control pollution and protect natural resources (Sections 71-92). It also emphasizes the importance of public participation and access to environmental information (Sections 9-16).

This IUDP for Mwingi Municipality recognizes that the municipality is a rapidly growing urban centre whose environment requires careful planning and management. Following the guidelines stated in the act, this plan will play a major role in promoting sustainable development and conservation of natural resources.

3.3.5. *The Climate Change Act, 2016 (Amended 2022)*

The Climate Change Act provides a legal and institutional framework that guides sustainable development and climate resilience in the country. The act requires the incorporation of climate change considerations into development plans, building resilience for communities against climate change, promotion of low-carbon development, utilization of climate change governance structures in the administrative units in the country, and inclusive and participatory planning processes.

Integrating the Climate Change Act into the IUDP for Mwingi Municipality is essential for promoting sustainable and resilient development. By mainstreaming climate considerations, building resilience, reducing emissions, aligning with national action plans, and ensuring public participation, Mwingi Municipality can effectively address the challenges posed by climate change.

3.4. Existing County Government Policy Documents, Strategies and Plans

It is important that a plan like this of Mwingi Municipality aligns itself with the existing development vision of the county as outlined in the county-wide development plans. This vision is generally offered by a County Spatial Plan and a County Integrated Development Plan. Kitui County does not have a County Spatial Plan at the moment. The implication is that its overall vision is only afforded by the existing County Integrated Development Plan 2023-2027 and the Governor's Manifesto. At the same time, there is a general lack of a vision on how to put land resource to optimum and integrated use to support socio-economic development across the entire county.

The County Integrated Development Plan 2023-2027 is a document prepared within the framework of the provisions of Section 107-108 of the County Government Act of 2012 (Rev. 2022) as one of the key documents that inform budgeting and spending by county governments. It outlines the development goals of a county, the implementation plan, the monitoring and evaluation framework, and reporting mechanism. The CIDP aims to transform Kitui into a prosperous county with vibrant rural and urban economies whose people enjoy a high quality of life. This transformation is anchored on six pillars that the preparation of the plan for Mwingi Municipality must aim to facilitate. The pillars include food security, access to water, healthcare, aggregation and industrial parks, appropriate human capital, and planned urban development. The

plan also recognises the role of infrastructure, energy, ICT, and peace and security as enablers of development. The plan for Mwingi Municipality must therefore also put in place strategies to ensure that all these enablers are developed to their functional standards. It must also provide a spatial framework for realizing the following targets of the CIDP: i) increased access to safe water for domestic use, irrigation and for livestock use, ii) the establishment of an Economic and Investment Zone, iii) commercialization of livestock farming through breeds improvement, vertical and horizontal value chain integration, iv) managing the potential ballast crushing sites established, sand and building stones, and v) tap onto the potential of sustainable irrigation systems, using solar powered and/or drip systems.

The Governor's Manifesto cements the commitment contained in the above County Integrated Development Plan 2023-2027. It underscores the importance of realizing the collective developmental goals on the basis of the plans and strategies formulated and implemented in the next five years. The manifesto further emphasizes the need for unity of purpose of the hardworking, resilient and optimistic people of Kitui County, to resolve and commit themselves to engage, consult, plan, implement and deliver development that empowers the people, sustainably transforms and improves the living standards and livelihoods for all. The role of spatial development planning in integrating the development agenda presented in the 16 sectors cannot therefore be overemphasized. It is only through careful spatial planning that the county would avoid disjointed sectoral planning that lacks the overarching spatial framework to guide the utilization of land in a coordinated manner to facilitate development.

CHAPTER FOUR

4. SITUATIONAL ANALYSIS

4.1. Overview

The location, size, topography and climate of an area have an important bearing on its development. These natural factors directly determine population distribution, food systems, transport and communications systems, demographical features and, to a large extent, resource endowment. This section describes the geographical characteristics of Mwingi Town and their effects on development in general.

4.2. Natural and physical environment

4.2.1. Climate

Mwingi Town is situated in an arid and semi-arid zone and its climate is hot and dry for most of the year. The area has unreliable rainfall regime. It receives a bimodal pattern of rainfall with long rains being received between March and May and short rains being received from October to December. The short rains are more reliable than the long rains. Because of the unreliability of rainfall, the district is faced with recurrent droughts that lead to livestock deaths and severe food shortages.

The area's climate is generally hot and dry for the greater part of the year. The maximum mean annual temperature ranges between 26°C and 34°C whereas the minimum mean annual temperature ranges between 14°C and 22°C. This translates into an average annual temperature of 24°C. Generally, the area is characterized by long stretches of dry, hot seasons between the months of August and September and again in the months of January and February⁶.

The planning area records a bi-modal rainfall pattern with long rains locally known as *Wuuu*, falling in the months of March to May. These are usually erratic, though. The 66% reliability during this first rainy season is only 80–100mm. The short rains, which are locally known as *Mwatho*, form the second rainy season and fall between October and December. These are normally more reliable; their 66 per cent reliability being between 130 and 150mm. Overall, rainfall ranges between 250 mm and 780 mm per

⁶ TANATHI Water Services Board (2017) Executive Design and Completion of Works for Rehabilitation of Water and Sanitation Systems of Kiambere Basin and Capacity Building.

annum. The highlands, found mainly in Mumoni Division, receive more rainfall than the lowland parts of Tseikuru and Kyuso divisions. The annual average rainfall ranges between 500 mm and 700 mm⁷.

4.2.2. Temperatures

Over the course of the year, the temperature typically varies between about 16°C and 31°C and is rarely below 15°C or above 33°C. **Figure 4-1** shows the monthly temperature variation in the municipality.

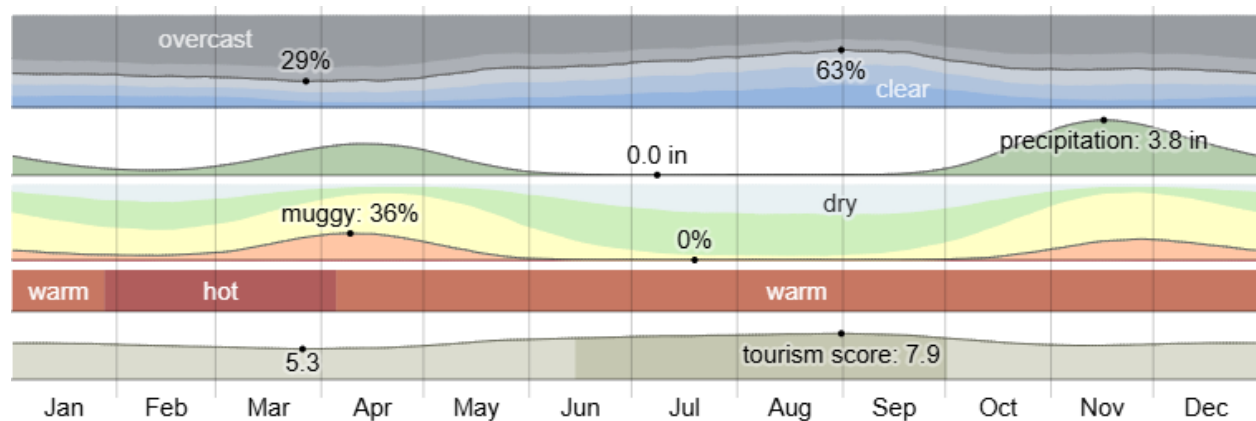


Figure 4-1: Monthly temperature variation in Mwingi

The hot season typically lasts from the end of January through to the end of March. During this period, the average daily high temperature above 30°C. The month of March is the hottest, with an average high of 31°C and low of 19°C. The cool season lasts from mid-June to the end of August, with an average daily high temperature below 27°C. The coldest month of the year in Mwingi is July, with an average low of 17°C and high of 27°C. **Figure 4-2** summarises the temperature variation in the municipality.

The above present a development potential, not only in the tourism sector but also in the sustainable energy that relies on the abundant sunshine.

⁷ TANATHI (2017), op. cit.

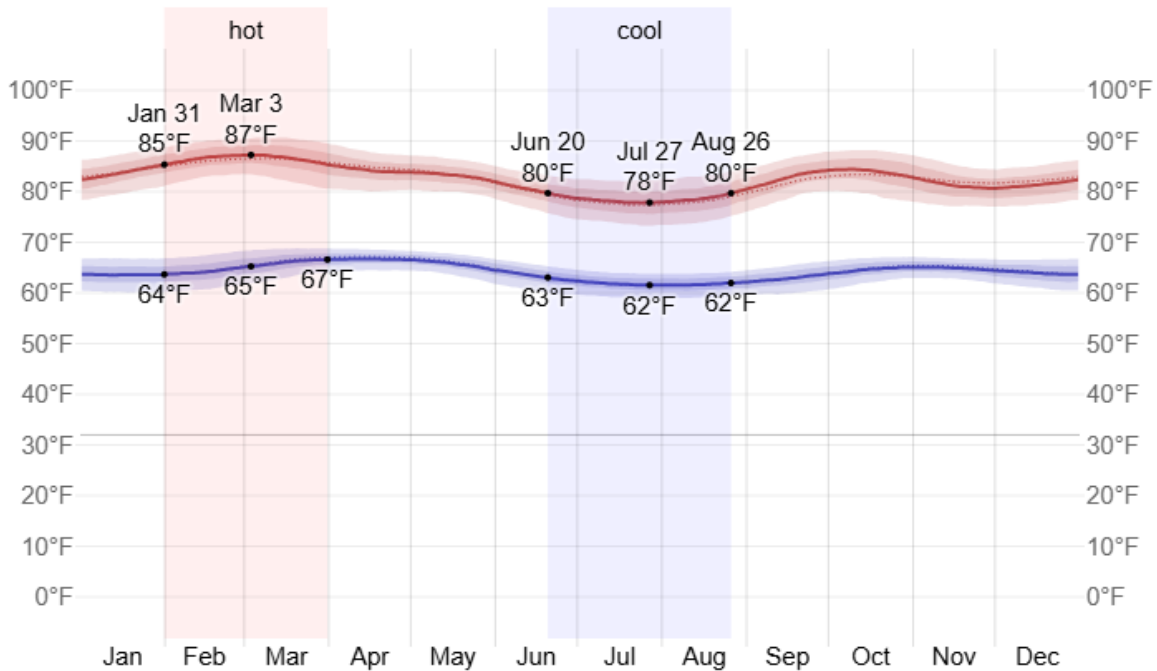


Figure 4-2: Monthly temperature variation in Mwingi

In the above figure, the daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures.

Figure 4-3 shows a compact characterisation of the entire year of hourly average temperatures. The horizontal axis is the day of the year, the vertical axis is the hour of the day, and the colour is the average temperature for that hour and day.

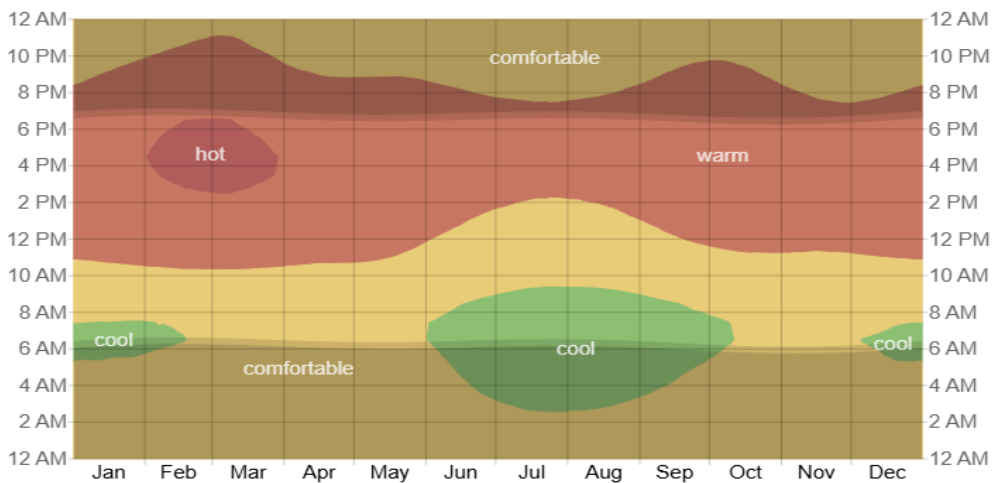


Figure 4-3: Compact characterisation of the entire year of hourly average temperatures

4.2.3. Clouds

The average percentage of the sky covered by clouds experiences significant seasonal variation over the course of the year. The clearer part of the year begins towards the end of June and lasts till mid-October. The clearest month of the year is September, during which on average the sky is clear, mostly clear, or partly cloudy 59% of the time. The cloudier part of the year begins around mid-October and lasts till around the end of June. The cloudiest month of the year is April, during which on average the sky is overcast or mostly cloudy 70% of the time (**Figure 4-4**).

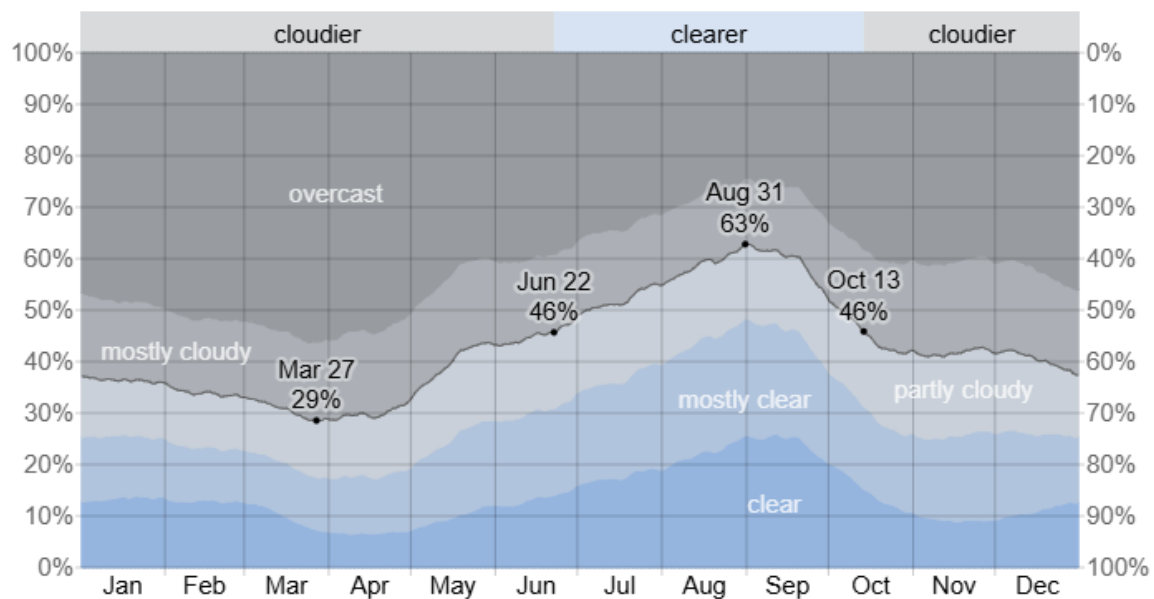


Figure 4-4: Monthly variation in cloud cover in Mwingi

The percentage of time spent in each cloud cover band, categorised by the percentage of the sky covered by clouds.

4.2.4. Precipitation

A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in Mwingi varies very significantly throughout the year. The wetter season lasts from the end of October to early May, with a greater than 26% chance of a given day being a wet day. The month with most wet days is November, with an average of 14.4 days with at least 0.04 inches of precipitation. The drier season lasts from early May to late October. The month with the fewest wet days is July, with an average of 0.2 days with at least 0.04 inches of precipitation. Among wet days, we distinguish between those that experience rain alone or due. The

month with the most days of rain alone in Mwingi is November, with an average of 14.4 days. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 51% on November 16 (**Figure 4-5**).

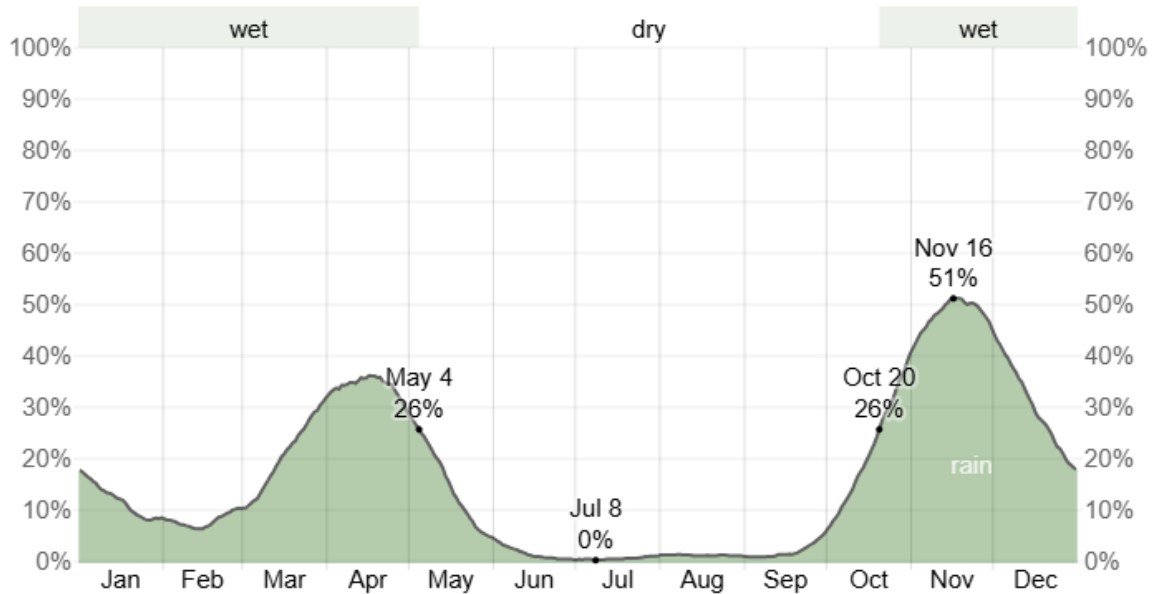


Figure 4-5: Variation in percentage of days in which various types of precipitation are observed

4.2.5. Rainfall

Mwingi experiences significant seasonal variation in monthly rainfall. Showing the rainfall accumulated over a sliding 31-day period centred on each day of the year enables a better demonstration of the variation within the months and not just the monthly totals. The rainy period of the year lasts for about 8 months from early October to the end of May. During this period, a sliding 31-day rainfall of at least 0.5 inches is experienced. The month with the most rain is November, with an average rainfall of 3.8 inches. The rainless period of the year lasts from late May to early October. The month with the least rain is July, with an average rainfall of 0.0 inches.

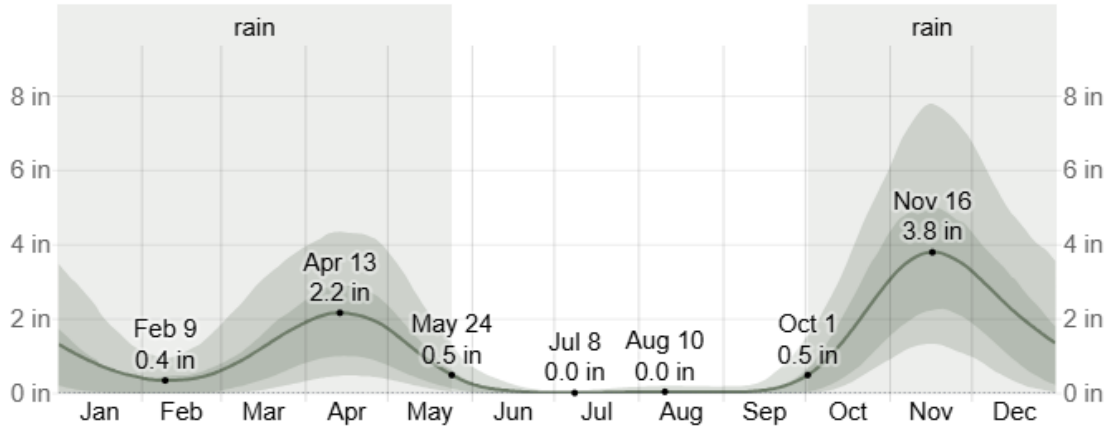


Figure 4-6: Sliding 31-day period centred on each day of the year

The average rainfall (solid line) accumulated over the course of a sliding 31-day period centred on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall.

4.2.6. Length of sunshine

The length of the day in Mwingi does not vary substantially over the course of the year. As a result, Mwingi experiences almost equal length of sunshine of about 12 hours per day all throughout the year (**Figure 4-7**).

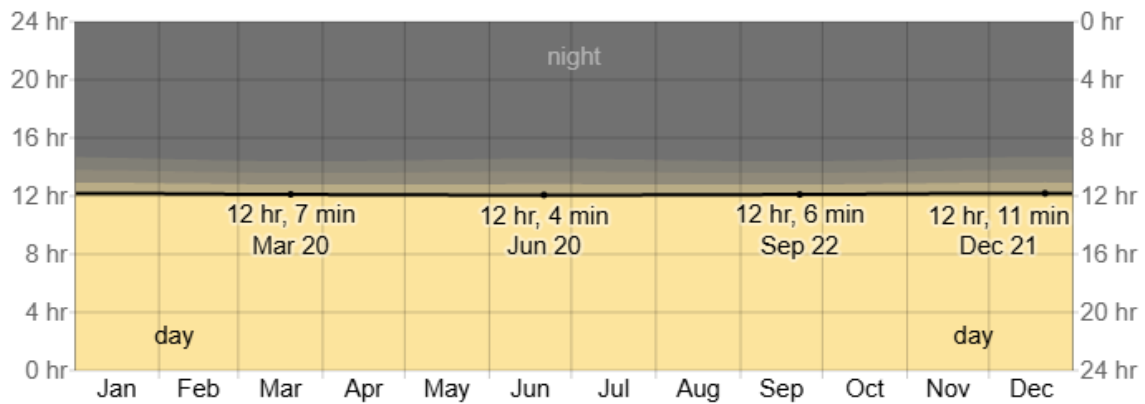


Figure 4-7: Seasonal variation in the length of day in Mwingi

The above figure shows the number of hours during which the sun is visible (black line). From bottom (most yellow) to top (most gray), the colour bands indicate: full daylight, twilight (civil, nautical, and astronomical), and full night. Although the length of the day remains at about 12 hours on average, the month of December has the longest days that last about 12 hours, 11 minutes, while the month of June has the shortest

days that last about 12 hours, 4 minutes.

The earliest sunrise is at 6:06AM on November 5, and the latest sunrise is 31 minutes later at 6:37AM on February 1. The earliest sunset is at 6:15PM on October 31, and the latest sunset is 31 minutes later at 6:46PM on February 10 (**Figure 4-8**).

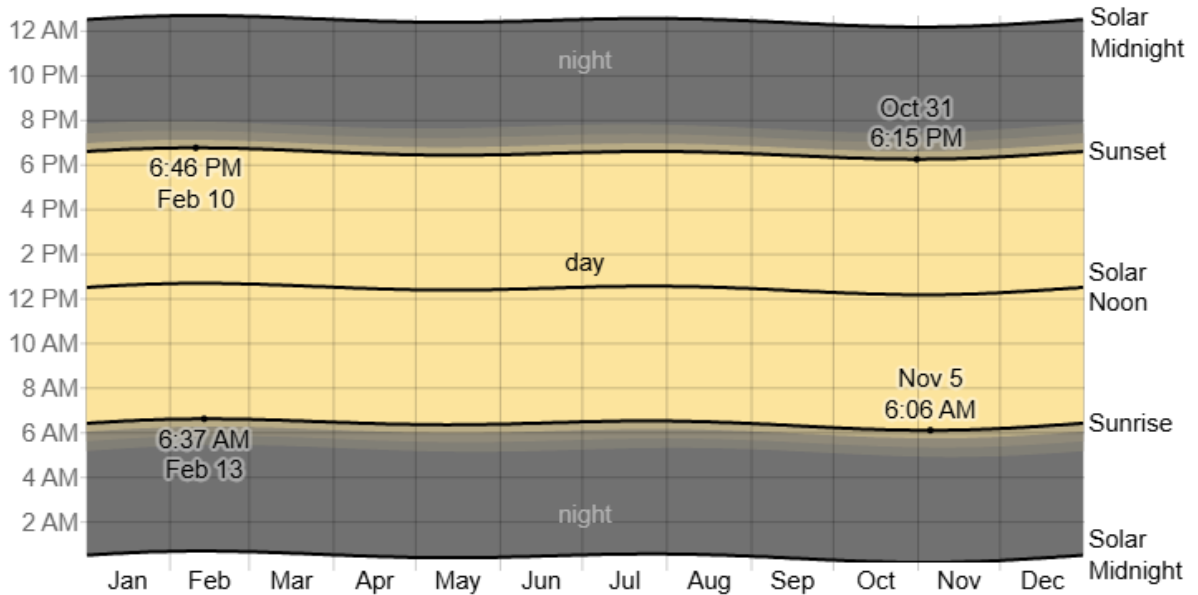


Figure 4-8: Seasonal variation in sunrise and sunset in Mwingi

The solar day over the course of the year 2024. From bottom to top, the black lines are the previous solar midnight, sunrise, solar noon, sunset, and the next solar midnight. The day, twilights (civil, nautical, and astronomical), and night are indicated by the colour bands from yellow to gray. **Figure 4-9** presents a compact representation of the sun's elevation (the angle of the sun above the horizon) and azimuth (its compass bearing) for every hour of every day in the reporting period. The horizontal axis is the day of the year and the vertical axis is the hour of the day. For a given day and hour of that day, the background colour indicates the azimuth of the sun at that moment. The black isolines are contours of constant solar elevation.

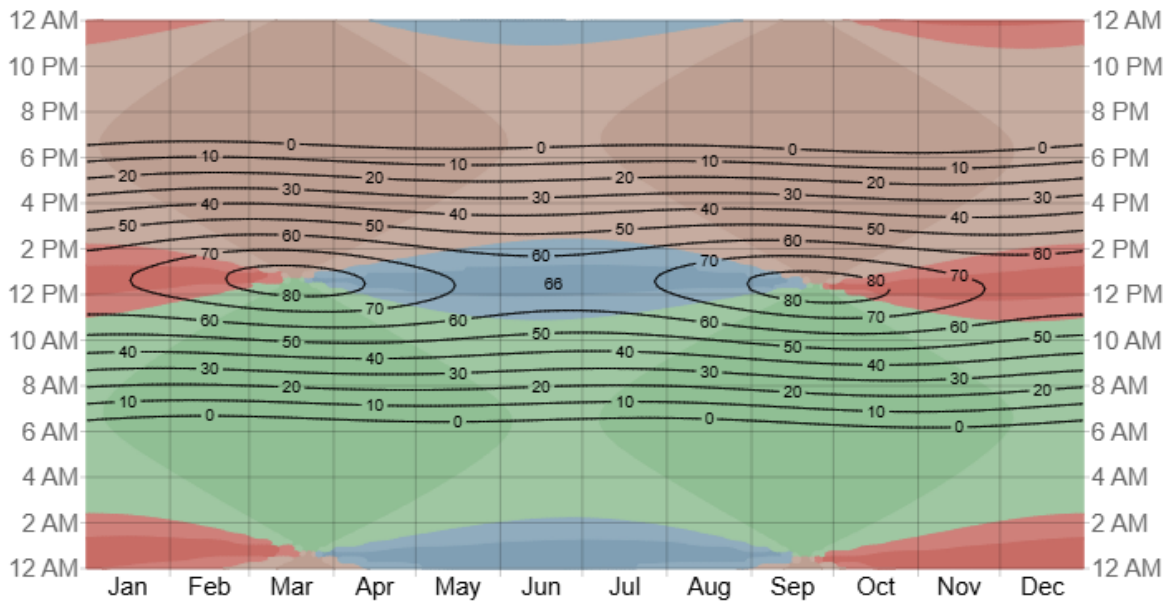


Figure 4-9: Solar elevation for every hour of the day

In the above figure, the black lines are lines of constant solar elevation (the angle of the sun above the horizon, in degrees). The background colour fills indicate the azimuth (the compass bearing) of the sun. The lightly tinted areas at the boundaries of the cardinal compass points indicate the implied intermediate directions (northeast, southeast, southwest, and northwest).

4.2.7. Humidity

We base the humidity comfort level on the dew point, as it determines whether perspiration will evaporate from the skin, thereby cooling the body. Lower dew points feel drier and higher dew points feel more humid. Unlike temperature, which typically varies significantly between night and day, dew point tends to change more slowly, so while the temperature may drop at night, a muggy day is typically followed by a muggy night.

Mwingi experiences significant seasonal variation in the perceived humidity. The muggier period of the year lasts from late October mid-May, during which time the comfort level is muggy, oppressive, or miserable at least 9% of the time. The month with the muggiest days in Mwingi is April, with about 10 days that are muggy or worse.

The month with the fewest muggy days is August, with 0.0 days that are muggy or worse.

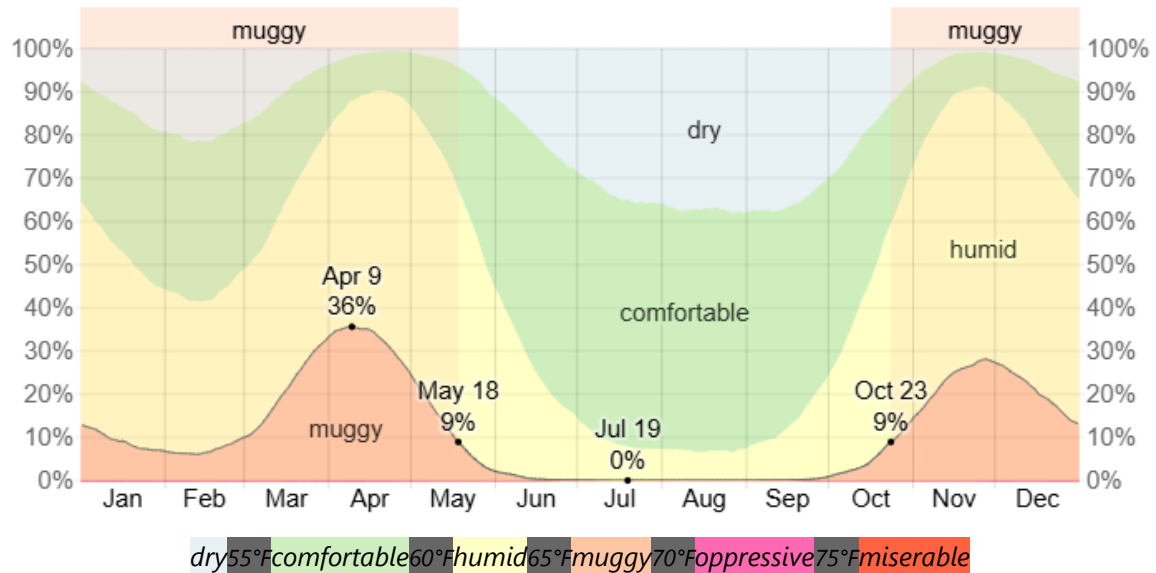


Figure 4-10: Solar elevation for every hour of the day

4.2.8. Wind speed and direction

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages. The average hourly wind speed in Mwingi experiences significant seasonal variation over the course of the year (**Figure 4-11**). The windier part of the year lasts from mid-June to mid-October, with average wind speeds of more than 10.3 kilometres per hour. The windiest month of the year is August, with an average hourly wind speed of about 14 kilometres per hour.

The calmer period of the year lasts from mid-October to mid-June. The calmest month of year is December, with an average hourly wind speed of about 7 kilometres per hour.

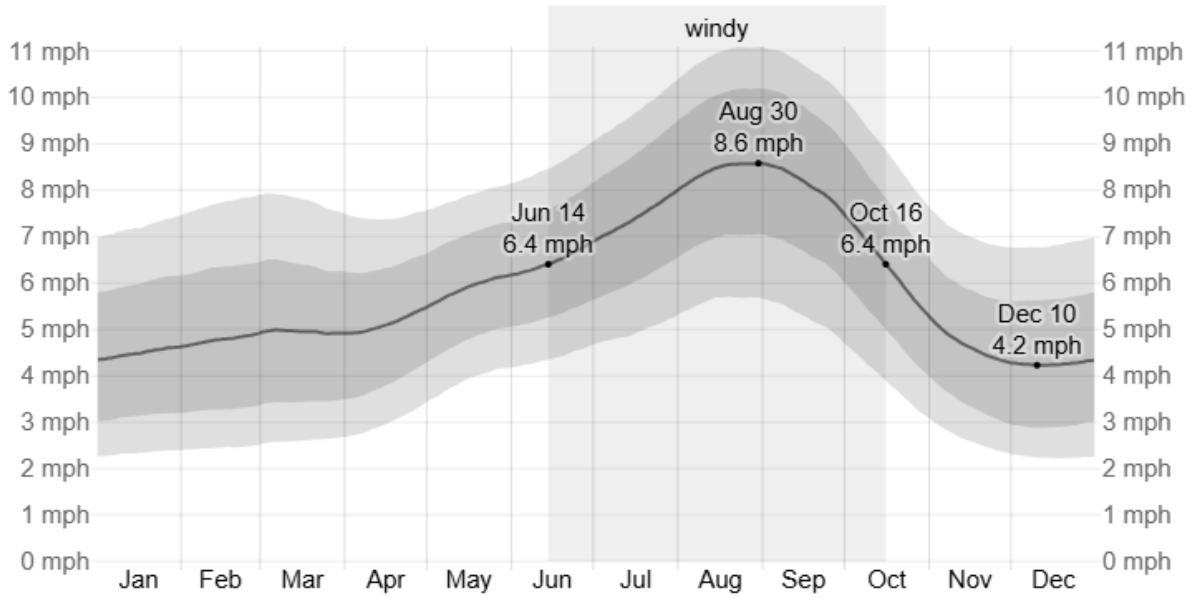


Figure 4-11: Monthly variation of wind speed

As indicated in **Figure 4-12**, the wind is most often from the south for from mid-April to mid-October, with a peak percentage of 93% towards the end of July. On the other hand, the wind is mostly from the east from mid-October to mid-April, with a peak percentage of 75% on January 1. The implication of this wind direction is that activities that produce stench, such as waste handling facilities and slaughterhouses should be located to the north-western side of the municipality.

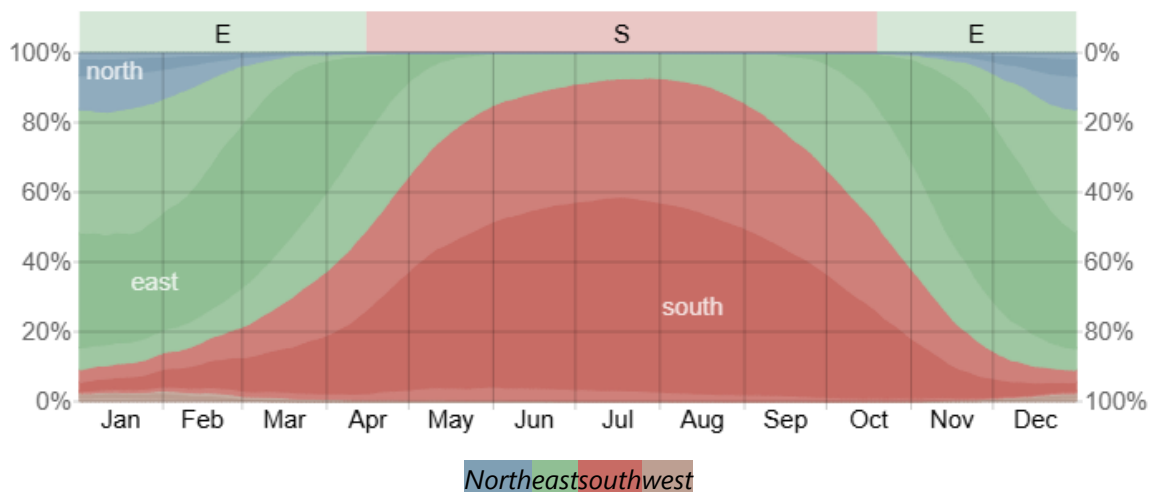


Figure 4-12: Wind direction

The percentage of hours in which the mean wind direction is from each of the four cardinal wind directions, excluding hours in which the mean wind speed is less than 1.6 kilometre per hour (1.0 mph). The lightly tinted areas at the boundaries are

the percentage of hours spent in the implied intermediate directions (northeast, southeast, southwest, and northwest).

4.2.9. Solar Energy

This section discusses the total daily incident shortwave solar energy reaching the surface of the ground over a wide area, taking full account of seasonal variations in the length of the day, the elevation of the sun above the horizon, and absorption by clouds and other atmospheric constituents. Shortwave radiation includes visible light and ultraviolet radiation. The average daily incident shortwave solar energy experiences some seasonal variation over the course of the year (**Figure 4-13**). The brighter period of the year lasts from early September to mid-October, with an average daily incident shortwave energy per square meter above 7.3 kWh. The brightest month of the year is September, with an average of 7.4 kWh. The darker period of the year lasts from mid-May to the end of July, with an average daily incident shortwave energy per square meter below 6.5 kWh. The darkest month of the year is June, with an average of 6.3 kWh.

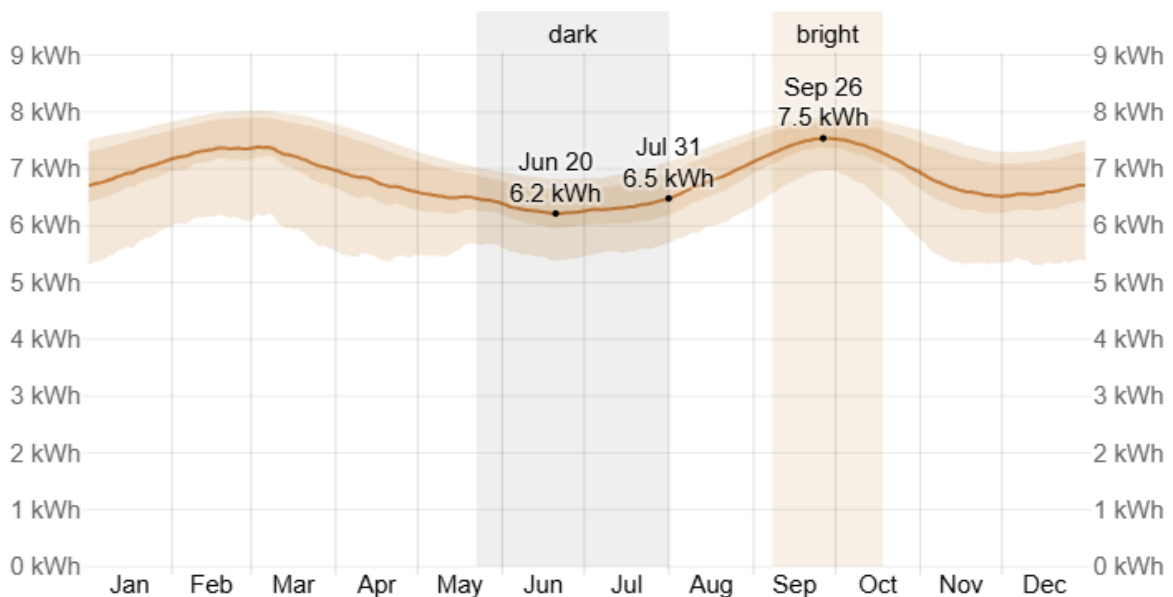


Figure 4-13: Average daily incident shortwave solar energy

The average daily shortwave solar energy reaching the ground per square meter (orange line), with 25th to 75th and 10th to 90th percentile bands.

4.2.10. Geology and soils

The geology of the area is composed of basement metamorphic rocks with high productive aquifers that form the south of the larger former Mwingi District whose various gneisses are exposed in the hills found in that area. The soils, which are of various types, occur in wide zones running north-south, as determined by parent materials and climate. These include red sandy soils, loamy sandy soils and patches of black-cotton soils. In addition, river valleys have saline alluvial soils of moderate to sometimes high fertility. In general, soils of the area are of low fertility and prone to erosion. Moreover, soils of the hills are shallow and stony rendering them unsuitable for crop farming. The soils have very poor water holding capacity and most of the rainwater percolates immediately it rains. The basement system in this area is also porous, a situation that has variously led the poor moisture content of soils in the area.

4.2.11. Hydrology and Drainage

Generally, the drainage system of the larger Mwingi region is controlled by the Tana River catchment. The seasonal rivers within the region flow in a general north, north-west direction and drain into Tana River. The region has a few permanent streams, which flow from Mumoni and Nuu hills (several permanent springs being tapped now and some more still untapped). These run for a few kilometres and disappear, leaving dry beds. The Nuu Hill Complex has most springs in the region. Other hill complexes like Endui also have permanent springs and are in danger of drying up if present trends of land clearing on the hill slopes continue.

The groundwater potential is low due to the low water table and low rainfall received. The level of salinity is also high, hence limiting its uses. Boreholes and wells in many cases produce saline water, even more so in the lower and drier areas towards the north and the east of the region. Some under used sources of water are the slow-moving flows of seasonal rivers, Nthunguthu and Katse. Kithyoko and Tyaa rivers are more saline.

4.2.12. Topography

Mwingi town is located at an altitude of approximately 1,050m above sea level. It lies on a ridge forming the water divide of two divergent sub-catchments of the Tana River. The Kitui-Mwingi-Isiolo water divide cuts the town into two parts. The western side of

the town discharges to a different basin catchment different from the eastern side. Consequently, the drainages from the two drainage areas drain into Tyaa River Valley, while the Western areas drain into Kivu River Valley. The catchments cannot meet on ground level unless deep under surface excavation works are undertaken. The Eastern two river valleys finally drain to into Tana River. The town is generally well drained due to the prevailing soil types and the general ground slopes.

Mountains and rivers, with hills and streams running across the town, characterize topography in Mwingi. The town is home to Kautha Rock (the tower for KIMWASCO tank), Kyanika Rock and Ivia iu Rock. The town also has a section of River Tyaa crossing in southeast to the west with approximate of 3 kilometers and Kivou River to the east with approximate 2 kilometers. The typical weather in the town is 24°C, Wind NE at 13 km/h, and 69% humidity. The rocks can be utilized as water towers for storage tanks.

4.2.13. *Agro-ecological Zones*

Kitui County has seven agro-ecological zones namely: Upper-Midland 3-4; Upper Midland 4; Lower-Midland 3; Lower-Midland 4; Lower-Midland 5; Inner Lowland 5; and Inner Lowland 6 (see Table 1). Mwingi Town falls in the LM4 Zone where sorghum, millet, maize, green grams, groundnuts, cow peas, sunflower, vegetables and dolichos are the main crops grown.

Table 1: Agro-Ecological Zones by Sub-County

S. No	Zone	Sub-County	Agricultural Development Potential
1	UM 3-4	Kitui Central, Kitui East, Mwingi West, Kitui Rural	Coffee, Maize, Sunflower, Vegetables, Sorghum, Avocado, Millet, Sweet Potatoes, Cabbage, Pawpaw
2	UM4	Kitui Central, Kitui Rural, Kitui West, Mwingi West, Mwingi North	Coffee, Maize, Sunflower, Vegetables, Sorghum, Avocado, Millet, Sweet Potatoes, Cabbage, Pawpaw, Bananas, Mango, Fodder And Pasture
3	LM3	Kitui East, Mwingi North	Cotton, Dry Land Maize Varieties, Sweet Potatoes, And Beans
4	LM4	Kitui Central, Kitui Rural, Kitui West, Kitui East, Kitui South, Mwingi Central, Mwingi West, Mwingi North	Sorghum, Millet, Dry Maize Varieties, Green Grams, Ground Nuts, Cow Peas, Sunflower, Vegetables, Dolichos
5	LM5	Kitui East, Kitui South, Kitui Rural, Kitui Central, Kitui West, Mwingi Central, Mwingi North	Livestock, Millet, Sorghum, Fodder And Pasture
6	IL5	Kitui East, Mwingi North, Mwingi Central	Livestock, Millet And Sorghum
7	IL 6	Kitui South, Kitui East, Mwingi Central, Mwingi North	Livestock, Millet And Sorghum

Source: Kitui County Statistical Abstract 2016

4.2.14. Vegetation

Woodlands and pastures occur mostly in areas that are changing from trust land status towards freehold and will be subject to agriculture in the future. Forests and hills are gazetted areas, or those set aside for forestry (some hills are plain rock outcrops). The vegetation usually consists of more than 10-meter-tall trees with interlocking canopy cover of between 80% and 100%. There exist plantations of exotic and indigenous species with few naturally occurring trees and shrubs. The plantations of exotic species are mainly *Cupressus lusitanica*, *pinus patula* and *eucalyptus tereticornis* among others. Cypress and pine do not do well because of prolonged droughts.

4.3. Population

According to the Kenya National Housing and Population Census of 2019, the total population of Kitui County stood at 1,136,187 inhabitants. It is estimated that 549,003 of this population are males while 587,151 are females. Official statistics estimate that urban population accounts for 13.8% of the population of the county. About 17 urban settlements contribute to this percentage share of urbanisation. It should however be pointed out that, just like it is the case in other Kenyan counties, urban population figures remain difficult to estimate given that the urban boundaries remain unclear.

The result has been conflicting population data reported by different documents for the same geographical and political units. Kitui County is not an exemption in this regard. In this case, the Kitui County Integrated Development Plan 2023-2027 reports urban population figures that are higher than those provided by the census report for the same periods. For instance, the urban population of Kitui Municipality alone is estimated to stand at 88,802 inhabitants as at the year 2019 alone. This population figure is more than 3 times that of the official statistics.

The planning area is to be found in Mwingi Central sub-county. It has been delineated to cover a distance of 5km radius from the central part of the municipality. This area covers parts of Central, Kiomo and Mumbuni Divisions. Central Division comprises Enziu, Kavuvwani, and Kivou wards, which in turn comprise of Enzui and Kanzui sub-locations; Kavuoni, Kavuvwani and Mwingi sub-locations; and Kisama and Kivou sub-locations respectively. Kiomo Division on the other hand comprises Kairungu, Kiomo, and Kyethani, which comprise Kairungu and Kakongo sub-locations; Kiomo and Mbondoni sub-locations; and Itendeu and Karura sub-locations respectively. Lastly, Mumbuni Division comprises Kalisasi ward, which is home to Kalisasi and Mateta sub-locations. **Table 4-1** shows the distribution of population across these administrative units.

According to data constructed from the KNBS 2019 data, the planning area is home to about 86,433 inhabitants that comprises 41,755 males and 44,678 females. This population is spread across 21,764 households (**Table 4-1**).

Table 4-1: The 2019 Population Breakdown by division, ward, and sub-location

Sub-county	Division	Ward	Sub-location	Total	Sex*		Households
					Male	Female	
MWINGI CENTRAL	Planning area			86,433	41,755	44,678	21,764
	Central			47,353	22,982	24,371	13,143
		Enziu		7,462	3,599	3,863	1,620
			Enzui	4,798	2,345	2,453	1,049
			Kanzui	2,664	1,254	1,410	571
		Kavuvwani		18,484	8,899	9,585	5,990

				Total	Sex*		Households
Sub-county	Division	Ward	Sub-location		Male	Female	
			Kavuoni	2,132	1,024	1,108	525
			Kavuvwani	2,805	1,335	1,470	645
			Mwingi	13,547	6,540	7,007	4,820
		Kivou		7,596	3,712	3,884	1,580
			Kisama	2,883	1,382	1,501	604
			Kivou	4,713	2,330	2,383	976
		Mwingi		13,811	6,772	7,039	3,953
			Ithumbi	4,529	2,237	2,292	1,028
			Kyanika	9,282	4,535	4,747	2,925
			Kiomo	22,663	10,908	11,755	4,955
		Kairungu		5,828	2,770	3,058	1,224
			Kairungu	3,468	1,640	1,828	744
			Kakongo	2,360	1,130	1,230	480
		Kiomo		6,601	3,202	3,399	1,546
			Kiomo	4,196	2,059	2,137	948
			Mbondoni	2,405	1,143	1,262	598
		Kyethani		10,234	4,936	5,298	2,185
			Itendeu	2,072	980	1,092	458
			Karura	2,689	1,339	1,350	581
			Kyethani	2,340	1,104	1,236	536
			Wikithuki	3,133	1,513	1,620	610

Sub-county	Division	Ward	Sub-location	Total	Sex*		Households
					Male	Female	
	Mumbuni			16,417	7,865	8,552	3,666
		Kalisasi		2,168	1,064	1,104	471
			Kalisasi	1,123	544	579	248
			Mateta	1,045	520	525	223

4.3.1. Population Projection

Kitui County in general county experiences different urbanisation rates across its urban centres. Kitui Municipality, with about 3.5% annual growth rate, registers the highest urbanisation rates in the county. This rate is even higher than the county average rate of urbanisation, which is estimated to be 1.2% per annum. Due to absence of data, this current IUDeP assumes that the population of Mwingi Municipality will continue to grow at the average rate of the county. Consequently, it is projected that the planning population will stand at about 97,383 inhabitants by the end of the planning period. **Table 4-2** presents the population projections by division, ward, and sub-location. It is this population that will require services and infrastructure during the planning period.

Table 4-2: Population projection by division, ward, and sub-location

Sub-county	Division	Ward	Sub-location	Total 2019	Total projected 2029	Male	Projected Males	Female	Projected Females
	Planning area			86,433	97,383	41,755	47,045	44,678	50,338
	Central			47,353	53,352	22,982	25,894	24,371	27,459
MWINGI CENTRAL		Enziu		7,462	8,407	3,599	4,055	3,863	4,352
			Enzui	4,798	5,406	2,345	2,642	2,453	2,764
			Kanzui	2,664	3,002	1,254	1,413	1,410	1,589
		Kavuvwani		18,484	20,826	8,899	10,026	9,585	10,799
			Kavuoni	2,132	2,402	1,024	1,154	1,108	1,248
			Kavuvwani	2,805	3,160	1,335	1,504	1,470	1,656
		Mwingi	13,547	15,263	6,540	7,369	7,007	7,895	

Sub-county	Division	Ward	Sub-location	Total 2019	Total projected 2029	Male	Projected Males	Female	Projected Females
		Kivou		7,596	8,558	3,712	4,182	3,884	4,376
			Kisama	2,883	3,248	1,382	1,557	1,501	1,691
			Kivou	4,713	5,310	2,330	2,625	2,383	2,685
	Mwingi			13,811	15,561	6,772	7,630	7,039	7,931
			Ithumbi	4,529	5,103	2,237	2,520	2,292	2,582
			Kyanika	9,282	10,458	4,535	5,110	4,747	5,348
	Kiomo			22,663	25,534	10,908	12,290	11,755	13,244
		Kairungu		5,828	6,566	2,770	3,121	3,058	3,445
			Kairungu	3,468	3,907	1,640	1,848	1,828	2,060
			Kakongo	2,360	2,659	1,130	1,273	1,230	1,386
	Kiomo			6,601	7,437	3,202	3,608	3,399	3,830
			Kiomo	4,196	4,728	2,059	2,320	2,137	2,408
			Mbondoni	2,405	2,710	1,143	1,288	1,262	1,422
	Kyethani			10,234	11,531	4,936	5,561	5,298	5,969
			Itendeu	2,072	2,335	980	1,104	1,092	1,230
			Karura	2,689	3,030	1,339	1,509	1,350	1,521
			Kyethani	2,340	2,636	1,104	1,244	1,236	1,393
			Wikithuki	3,133	3,530	1,513	1,705	1,620	1,825
	Mumbuni			16,417	18,497	7,865	8,861	8,552	9,635
		Kalisasi		2,168	2,443	1,064	1,199	1,104	1,244
			Kalisasi	1,123	1,265	544	613	579	652
			Mateta	1,045	1,177	520	586	525	592

It is of importance to understand the distribution of the above population within the various age cohorts for better targeting as each of these cohorts presents cohort-specific development demands and by extension demand for infrastructure and services. In order to do this, the plan has again assumed the county averages to distribute the

above projected population figures into the various age cohorts. **Table 4-3** presents the results of this distribution based on the data available in the Kitui County Integrated Development Plan for the year 2020.

Table 4-3: Percentage composition of age-cohorts

Age Cohort	M_County	Percentage Composition	M_Mwingi	F_County	Percentage Composition	F_Mwingi	T_Count y	Percentage Composition	T_Mwingi
0-4	75,302	12.937	6,086	75,038	12.425	6,254	150,340	12.674	12,342
5—9	72,727	12.494	5,878	73,957	12.246	6,164	146,834	12.379	12,055
10—14	70,999	12.197	5,738	72,177	11.951	6,016	143,176	12.070	11,754
15-19	70,274	12.073	5,680	70,335	11.646	5,862	140,629	11.855	11,545
20-24	58,289	10.014	4,711	60,363	9.995	5,031	118,652	10.003	9,741
25-29	52,958	9.098	4,280	53,969	8.936	4,498	106,927	9.014	8,778
30-34	39,255	6.744	3,173	42,836	7.093	3,570	82,091	6.921	6,739
35-39	29,037	4.988	2,347	32,063	5.309	2,672	61,100	5.151	5,016
40-44	23,724	4.076	1,917	28,373	4.698	2,365	52,097	4.392	4,277
45-49	21,253	3.651	1,718	23,912	3.959	1,993	45,165	3.808	3,708
50-54	16,368	2.812	1,323	17,127	2.836	1,428	33,495	2.824	2,750
55-59	10,789	1.854	872	11,486	1.902	957	22,275	1.878	1,829
60-64	9,579	1.646	774	9,633	1.595	803	19,212	1.620	1,577
65-69	8,652	1.486	699	8,971	1.485	748	17,623	1.486	1,447
70-74	7,560	1.299	611	7,607	1.260	634	15,167	1.279	1,245
75-79	5,811	0.998	470	5,846	0.968	487	11,657	0.983	957
80+	9,508	1.633	768	10,248	1.697	854	19,756	1.665	1,622
All Ages	582,085		47,045	603,941		50,338	1,186,196		97,383

The implications of the above population projections for the current plan are various and dependent on the age structures. These implications are discussed under the various age cohorts below:

0-4 years: The projections show that this cohort will increase to a total of 12,342 that will comprise 6,086 males and 6,254 females. This means that the plan will need to put in place adequate facilities to support pre-primary education and to deal with the child mortality concerns of the age below five. Among the risks are malaria, pneumonia, and diarrhoea.

5-9 years: It is projected that this cohort will increase to 12,055. These will hence be a need to provide adequate lower primary educational facilities to support this population. Currently, there are over 100 primary education facilities in the

municipality (see section 4.4.1).

10-14 years: The population of this cohort is projected to stand at 11,754 persons. This age cohort will require adequate facilities to support upper primary education as well as the Junior Secondary education.

15-19 years: This is the age that is to be found in secondary schools. It is expected to increase to 11,545 by the end of the planning period. The implication is that there will be a need to invest in facilities that support secondary school education in general and subsidised day secondary education in particular.

15-44 years: This cohort is particularly relevant in the case of the female as it presents the reproductive age. It is projected that its population will increase to 23,999 by the end of the planning period. There should therefore be facilities that support reproductive health services, including affordable maternal health.

15-64 years: This cohort represents the workforce. It is projected that it will increase to a total of about 55,961 by the end of the planning period. This plan therefore needs to identify and create avenues for increase employment opportunities to absorb this labour force.

65+ years: This is categorised as the aged population. It is projected in this plan that the aged population shall stand at 5,270 persons. This presents a need for the plan to identify programs that will support the aged and vulnerable in terms of housing, healthcare, food security, and cash transfers for the old.

4.4. Municipal social services and amenities

4.4.1. Education

There are over 120 primary schools and about 19 secondary schools in the municipality. The major ones in Mwingi Town include Mwingi Boys' High School, St. Joseph's Junior Seminary, Kathonzweni Secondary School, Kyanika Secondary School, Mwingi Central Primary, Kasina Primary School, Kivou Primary, Kasevi Secondary, Kasevi Primary School, Mboru Primary School, Tyaa Secondary and Tyaa Primary School. Among private education facilities are Mwingi Eastview Academy, St. Gabriel Academy, Victors Academy and Muthainga Academy, among others.

When considered against the projected population of 23,809 pupils (i.e. 12,055 of the age 5-9 and 11,754 of the age of 10-14), it is arguable that each of the existing 120 primary schools can comfortably accommodate an average of less than 200 pupils. This is below the capacities of such schools even if they were of single streams only. The spatial distribution question that this plan therefore deals with is the physical access, quality of services and infrastructure that support learning and staffing.

By and large, physical access to primary schools seems satisfactory given the distribution of the schools across the planning area (**Figure 4-14**).

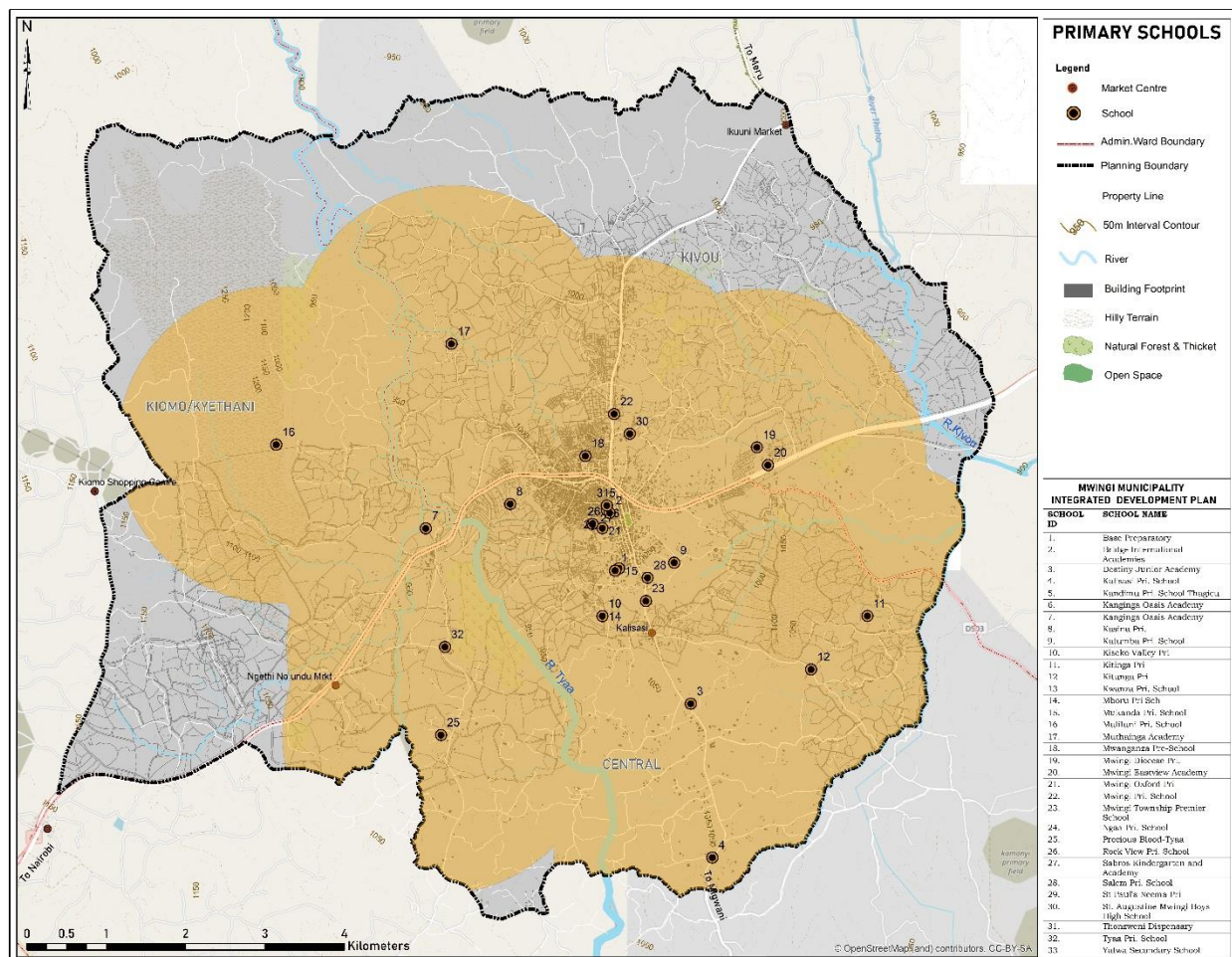


Figure 4-14: Catchment areas of existing primary schools

However, the northern parts of the planning area in Kyanika, Syomikuku, Ikuuni, and Kwa Muli are comparatively disfavoured in terms of the distribution of primary schools. It is no wonder therefore that this northern region accounts for the majority of

households whose children have to walk more than 300m to access education (**Figure 4-15**). Children from about 41% of the households have to walk more than 300m to access primary education. This, in contrast to the provisions of the Physical Planning standards, which stipulate that a primary school should be accessible within 300meters from the household. Therefore, additional schools need to be developed in this northern area in order to shorten the distance that school children have to walk to access education.

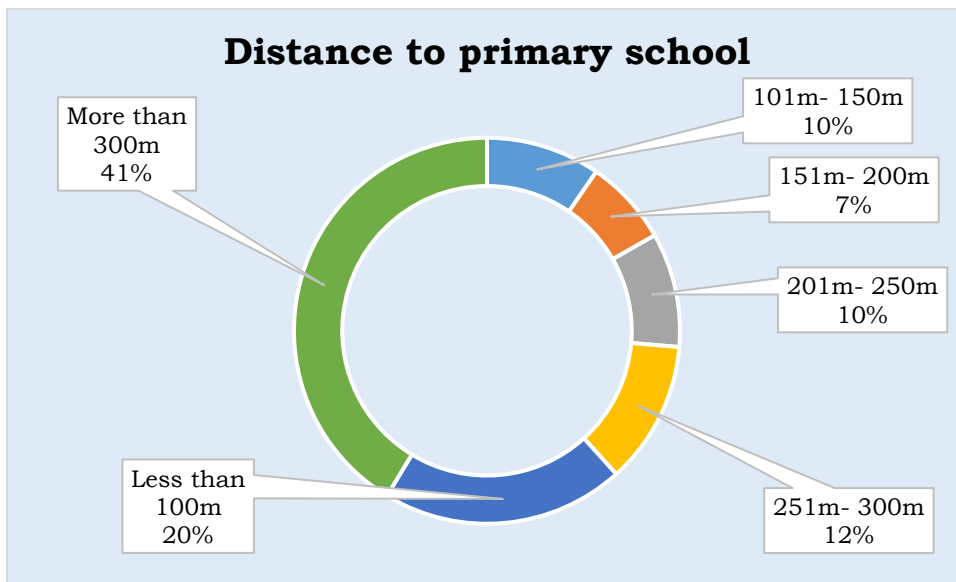


Figure 4-15: Distance travelled to the nearest primary school

At the same time, the quantity and quality of the physical infrastructure in many schools remains a major concern, not only for the schools in the peripheries of the municipality but also those within it alike. Many of the classrooms remain dilapidated, poorly maintained and sometimes with limited desks (**Figure 4-16**).

Other challenges that bedevil access to quality education include lack of school feeding that poses a challenge to 21% of the households, understaffing (17%), high fees (14%), lack of water (9%), long distances between home and the schools (8%), overcrowding at school and in the classrooms (3%), and insecurity (2%).

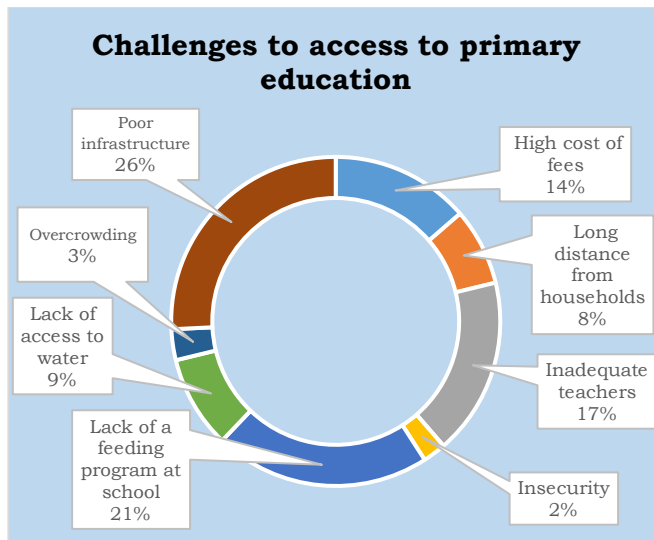


Figure 4-16: Poor and inadequate physical infrastructure remains a key challenge to many schools

Source: Tyaa Kamuthale Primary School (thewaterproject.org)

When it comes to access to secondary school education, the same factors that inhibit access to quality primary school education again seem to be at play albeit in different order. In this case, high education levy remains a concern for over 43% of the households. This is only followed closely by a lack of food and water (20%), understaffing (14%) and long distances to school (13%). Other factors that stifle access to quality secondary school education include high transport cost, poor school infrastructure and a lack of boarding facilities at school (**Figure 4-17**).

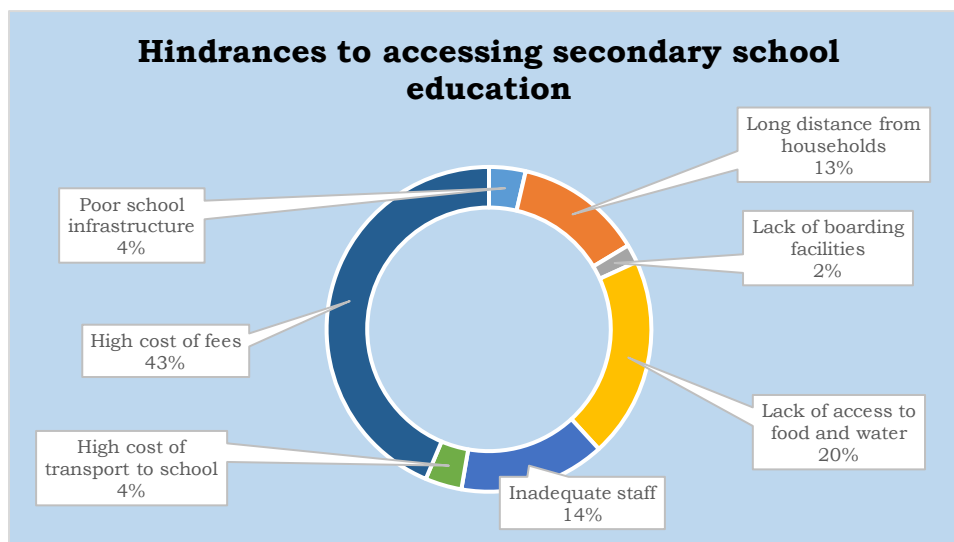


Figure 4-17: Factors hindering access to quality secondary school education

Again, the western part of the municipality remains unserved when it comes to the

provision of secondary schools. This situation is partly attributable to the fact that the side sits on a steep escarpment that needs protection rather than the construction of school in it.

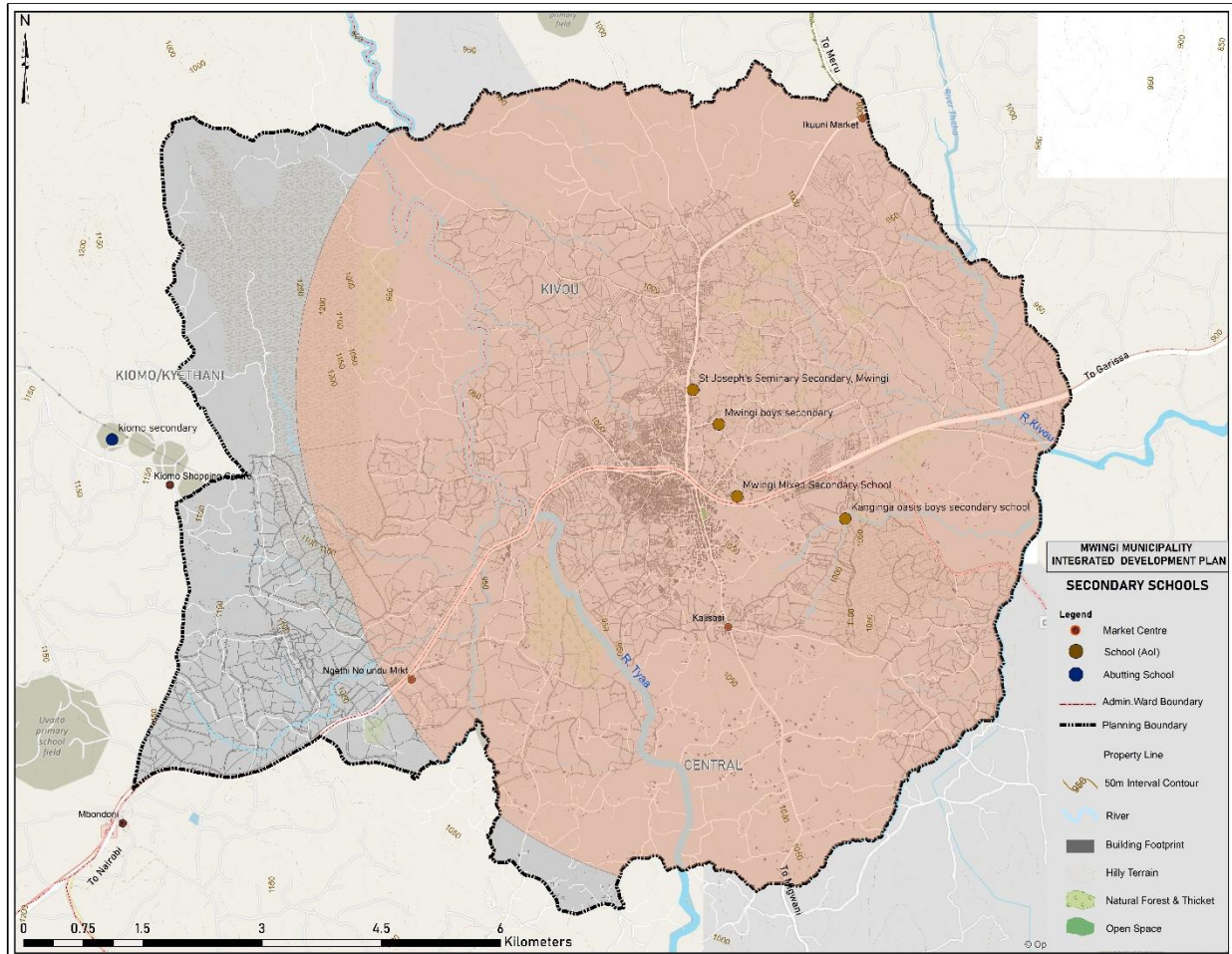


Figure 4-18: Catchment areas of existing secondary schools

For tertiary education, the main hindrance is the high cost of education. Other major factors are understaffing and a lack of water. That the colleges are currently at the Central Business District of Mwingi also means that students from the outer part of the municipality are disadvantaged as they have to travel longer distances to access tertiary education (**Figure 4-19**).

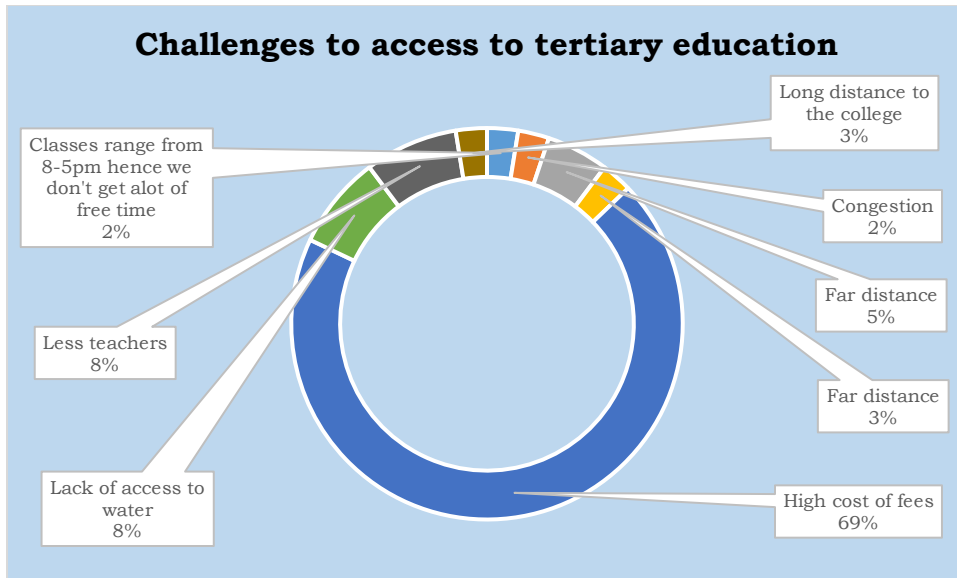


Figure 4-19: Factors hindering access to quality tertiary education

In order to improve access to quality education at all levels, there will therefore be a need to improve staffing, improve the quality of the physical facilities at the learning institutions, install water tanks at the facilities and also construct new learning institutions in areas that are currently disadvantaged.

4.4.2. Recreational facilities

The municipality has two main recreational facilities, namely Mwingi Sport Grounds (Musila Gardens) and Kiima Kiu Gardens both located optimally within the urban core. In spite of these, the recreational needs of some groups remain unserved when one considers the distribution of the only recreational facilities within the municipality (**Figure 4-22**). Adults are particularly not served in this context. This is not to say that the children are doing any better. In fact, a lack of provision for them has resulted in the use of the dry riverbeds as the playing areas during the dry seasons. There is hence a need for a deliberate provision of playing grounds within the neighbourhoods.

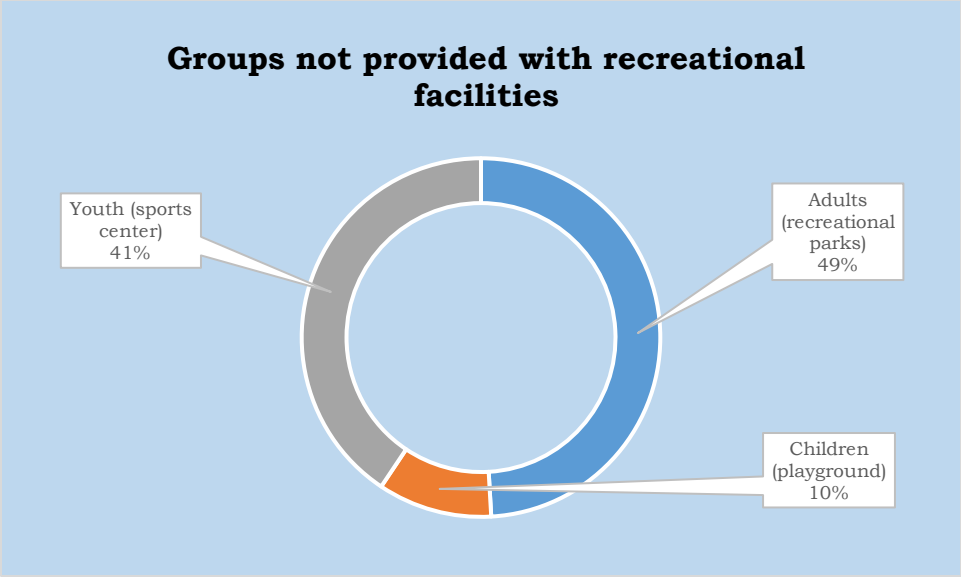
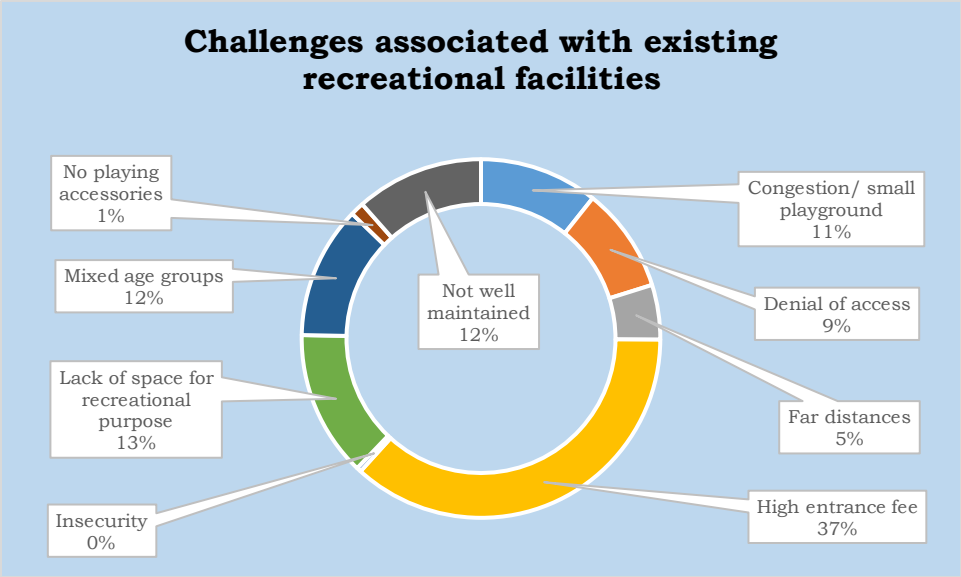


Figure 4-20: Groups not provided with recreational facilities

The few recreational facilities are not without their challenges though. A major one relates to the charges that are levied to use the facilities. This, the residents find way to high and unaffordable. Other challenges associated with the existing recreational facilities include denial of access, congestion in the facilities, a lack of maintenance and the fact that the facilities are used by all age groups – a fact that limits the freedom of the older generations to use the facilities.



4.4.3. Health Facilities

Health services play a critical role in promoting and maintaining the well-being of individuals and communities. This role can only be played well when there are adequate health facilities and personnel to deal with issues of access to health services, preventive and early intervention, management of chronic conditions, emergency care, mental health support among other health challenges.

Cold, flu and fever remain the top reason why residents of the municipality visit hospitals. It remains conspicuous that the second most popular reason for visiting the hospital is stomach-ache. This can be attributed to the water scarcity that seems to remain a perennial problem that the municipality has to deal with. Other reasons why people go to the hospitals include malaria, body aches, maternal services and postnatal care, and pneumonia and high blood pressure. Accidents that involve motorcycles have also been reported, leading to injuries and broken limbs (**Figure 4-21**).

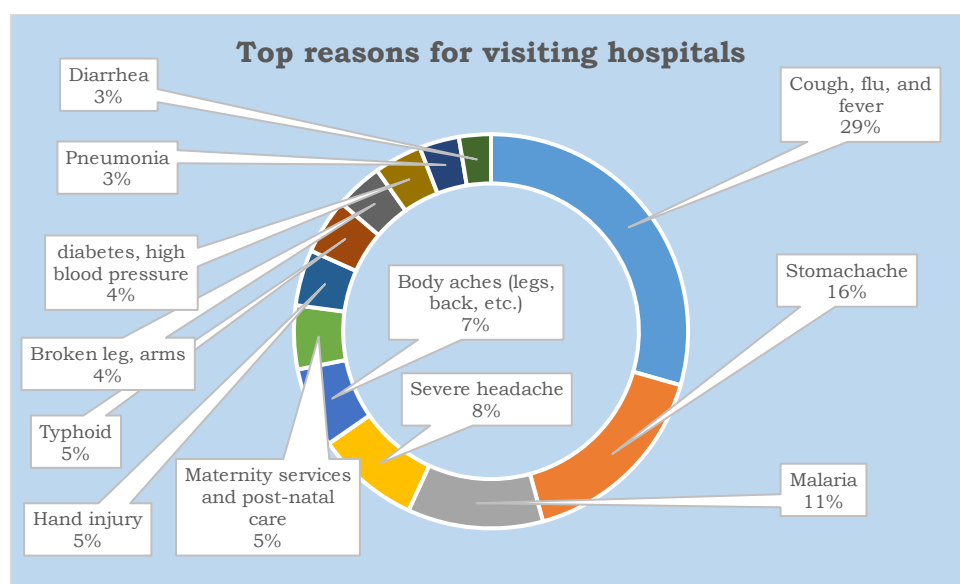


Figure 4-21: Top 12 reasons for making hospital visits

Majority of the residents still have to walk longer distances to seek health services (**Figure 4-22**). About 57% of the households have to walk for more than 500m to access health services.

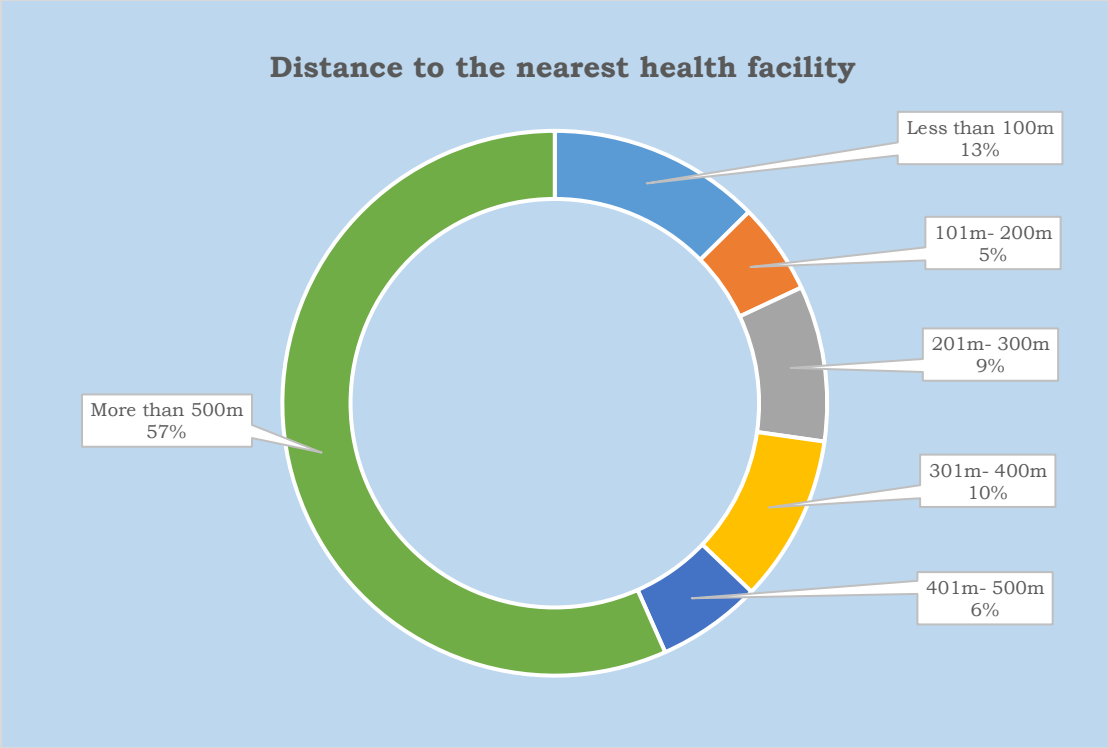


Figure 4-22: Distance travelled to access nearest health facilities

Mwingi municipality has both public and private health facilities – Mwingi Level IV Hospital, which is a public facility and a number of private medical facilities. Among the latter are Mwingi Medicare, Mwingi Specialist Hospital, Family Nursing Home, Tahidi Nursing Home, and Mumbuni Nursing Home, among others. This is in addition to several private clinics.

The Level 4 facility is the largest, yet it still faces challenges of inadequate staff and a mortuary that has no equipment.

4.4.4. Religious Institutions

The town houses residents who are majorly of two religious persuasions: Christians and Muslims. Accordingly, there are several churches like the Catholic Church, AIC Church, Full Gospel, Baptist Church, among others. There are also two main mosques that serve the town’s Muslim population.

4.4.5. Security

Insecurity within the town remains a major challenge. In the recent past, the Al

Shabaab group has infiltrated Mwingi Town and its environs with the sole aim of recruiting young people to join the militant group. In this regard, Mwingi, has been a key target for recruitment drives by illegal groups, sending panic among local residents. In this regard, police have intensified surveillance along the Nairobi-Mwingi-Garissa highway in a bid to boost security along the major road. There are also frequent security threats posed by camel herders who invade the surrounding areas seeking pasture during the dry season. Within the town itself, night-time security has been a challenge owing to lack of streetlights in some parts of town. To achieve the goal of a 24-hour economy in Mwingi Town, plans are underway to install street and flood lights in the town to enhance security at night.

4.4.6. Storm water drainage

The planning area continues to face various challenges related to drainage and water management. As a growing urban centre, effective drainage system critical for managing storm water, preventing flooding, and ensuring proper sanitation. Poor drainage can lead to waterlogging, which can in turn negatively affect infrastructure, health, and local livelihoods.

The compounding effect of narrow roads that leave no space for any use other than movement and a lack of maintenance where the facilities exist have rendered storm water drainage ineffective in many parts of the planning area.



Figure 4-23: Narrow roads and clogging hinder effective storm water drainage

Considering the above, there will be a need to improve storm water drainage infrastructure. This calls for upgrading the existing drainage channels and constructing

new ones to handle heavy rainfall more effectively. In doing this, a deliberate effort has to be made to ensure that solutions are implemented that not only address drainage concerns but also mitigate environmental impacts, such as protecting local waterways and ecosystems.

4.4.7. Water and sanitation

Access to water in Mwingi remains a significant issue due to the location of the municipality in an Arid and Semi-Arid area. The region often experiences water scarcity due to limited rainfall and high evaporation rates. Residents typically rely on rivers, boreholes, wells, and water pans (small reservoirs) for their water supply. The quality and availability of these sources vary significantly.



Figure 4-24: Sources of water for Mwingi remain fragile vulnerable to the effects of climate change

The main challenges include seasonal fluctuations in water availability, contamination of water sources, and inadequate infrastructure for water distribution. These challenges have been exacerbated by the ongoing impacts of climate change. Currently, there are various governmental and Non-Governmental Organizations that have been working in Mwingi to improve its water access. The initiatives have included drilling boreholes, establishing water supply systems, and promoting water conservation techniques.

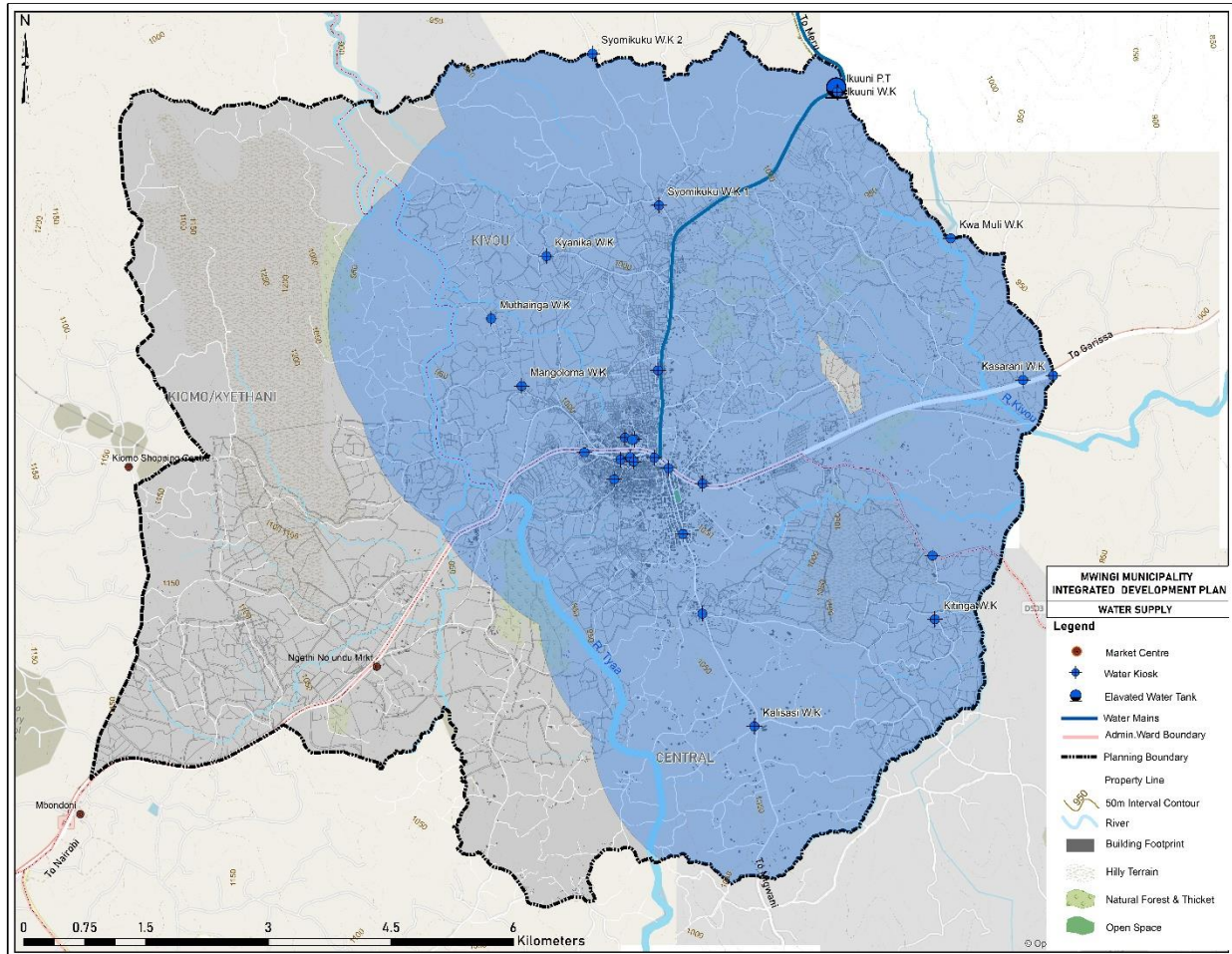


Figure 4-25: Existing water infrastructure does not serve the western side of the municipality

With regards to sanitation, the availability of public toilets and proper sanitation facilities in homes and communities is critical in reducing pollution and promoting hygiene practices. Initiatives to improve toilet facilities in schools and public areas have also had significant impact on community health.

Mwingi, like many other towns, faces sanitation challenges that range from limited resources to population growth, and infrastructural issues. All these hinder effective sanitation efforts. Improving sanitation will thus involve a collective effort from the community, the Municipal Board, the County Government of Kitui, and its development partners to create a healthier environment for all residents.

4.5. Economic analysis

4.5.1. Urban Economy

Mwingi Town is the second largest town in Kitui County. It is also the centre and leading economic hub for the larger Mwingi region. The economic activities in Mwingi are trading, boda boda, hardware, hotels and restaurants, guesthouses, supermarkets, hawking activities, rental housing, and light industrial activities. The town has two modern open markets and one main bus stage. The town serves as the main economic hub for neighbouring areas, with the main market day being Wednesday. The town is fairly well served with tarmacked roads to enhance mobility and spatial interactions.

Despite Mwingi's economic importance and strategic location, the town's industrial base is rather weak because of the small number of manufacturing concerns. Some of the industries include Mwingi Tiles Industries, Saab Enterprises Ltd., Mwingi Flour Mill, Mwingi Eco Honey and Mwingi Multipurpose Ltd., among others.

The municipality has financial institutions like banks, including Equity, KCB, Cooperative Bank, Faulu Bank and Post Bank, as well as several micro-finance institutions. Following its designation as a municipality, it is envisaged that Mwingi will grow into a commercial and financial services hub that will promote business and entrepreneurship in the wider Mwingi region. This will ultimately create jobs as well as facilitate economic growth and development in the zone and the county at large.

Although data on informal sector activities is not available, observations indicate that the sector is playing an important role in the town as far as employment creation is concerned. The informal sector activities include *jua kali* operations, *boda boda* operations, barber services, shoe repair, shoe-shining, radio and watch repair, blacksmith, tailoring, furniture making, leather works and welding. Most of these activities are concentrated in the urban core of the town. Those activities that seem to grow fast, employing the youth in the process, are welding, tailoring, furniture making and shoe repair. It is very hard to quantify the income generated from the informal sector because most of the participants do not keep records. Nevertheless, the sector generates employment for school leavers, graduates from technical institutions and retirees. Land for the development of *jua kali* sheds has, been set aside to promote the growth of the sector.

Since its creation in 1993, Mwingi Urban Council and its successor entities has opened market stalls, constructed slaughterhouse and established a market at Kasovin, and prepared a physical plan for Mwingi Town. However, the town faces land control problems leading to uncontrolled urban development. There is hardly any land for industrial development in Mwingi Town since all the land in town is privately owned.

4.5.2. Municipal Revenue Base

Own source revenue mobilization in the Municipality is underpinned by the Constitution of Kenya (CoK) 2010, the Public Finance Management (PFM) Act 2012, the County Government Act 2012 and the Urban Areas and Cities Act 2011. Article 209(3) of the CoK 2010 allows counties to impose property tax, entertainment taxes and any other tax authorized by an Act of Parliament, as well as charges for the services they provide. The PFM Act provides guidelines for management of county revenues including banking arrangements and appointment of revenue receivers and collectors. To give effect to Article 209(3) of the CoK, counties enact specific laws such as the annual county finance acts that authorize tax collection and receipt of other revenues. Counties also enact sector or source specific legislation such as trade licensing, liquor control and property rating/valuation laws that allow them to regulate various sectors through licensing and permits that are acquired at a fee. The municipality's revenue base is rather limited owing to a constricted manufacturing base. Nevertheless, the informal sector is a major source of own source revenues in the form of trading licenses, fees and charges.

4.6. Urban infrastructure and services

The original town of Mwingi was defined by the Nairobi-Thika-Garissa Highway. The town was thereby confined to a strip along the highway. Over the years, Mwingi has witnessed marked growth into the outlying areas originally classified as agricultural areas. The agricultural land parcels have been subdivided into small pieces and sold as commercial plots. Large parts of Kalisasi Sub-Location in Kanzanzu Location and Kyanika in Mwingi Location have effectively been developed into urban settlements. The additional areas are estimated to account for almost 30% of the town's total population. As a result, there lacks adequate access roads and way leaves for the construction of services i.e. communication, power, water infrastructure.

4.6.1. Transportation Infrastructure

Mwingi Municipality is a major commercial and transportation hub, which serves not only Kitui but also the neighbouring counties in former Northeastern Province. The municipality has a vibrant commercial and service sector, which is projected to grow with increased trade and mining in the Mui Basin. As can be expected, transportation infrastructure is essential in promoting the growth and development of Mwingi Municipality. Despite its role in enhancing connectivity, one of the major planning challenges is poor state of the roads and support infrastructure. Congestion, lack of or poor state of pathways for pedestrians and cyclists, non-designated parking, inadequate terminal facilities and lack of designated pedestrian crossing are some of the other challenges identified. Within the town's residential neighbourhoods, there are several missing road links, complicating circulation across settlements. Additionally, encroachment on road reserves, coupled with unregulated building practices and widespread street vending impact economic development and impedes mobility.

Under the Kitui Vision 2025, there is a proposal to upgrade, to all-weather standards, the Tharaka–Kyuso–Mwingi Road, linking the zone to the Thika–Garissa Highway (A3). If implemented, this proposed road project will open up the region and enhance farmers' access to markets in Mwingi, Thika, Garissa and Nairobi, particularly boosting the operations of the town's food system. The other important link road is the Tseikuru-Mumoni-Mwingi Road. The Kitui 2025 Vision also proposes the construction, expansion, rehabilitation and maintenance of town roads. As Mwingi Municipality continues to grow, there will be need to expand the existing town roads to enhance local circulation and catalyse local commerce, socio-economic activity and other urban functions. In this regard, several roads across the municipality will be upgraded to accommodate both motorised and non-motorised traffic. At the same time, town roads linking different activities and land uses will be rehabilitated and new ones constructed where none exists. Besides roads, a number of other transportation infrastructure are envisaged during the plan period. These include the proposed Mwingi Municipal Bus Park, as well as a Roadside Station. The completion of these two projects is expected to achieve a regulated, modern transportation environment.

The Kitui Vision 2025 further proposes a number of intra-county link roads that will link up the Mwingi Municipality Economic and Investment Zone to the other economic

and investment zones in the county. These roads include Mwingi-Kabati-Kitui Road, Mwingi-Mui-Voo-Muthakanziko-Ikutha Road, and Mwingi-Mui-Mutito Road. The plan further envisages the rehabilitation and expansion of the Mwingi Airstrip to accommodate medium sized airplanes and ultimately enhance connectivity, especially with the envisaged investor and passenger traffic in the Mui Basin.

Despite the many challenges identified, Mwingi Municipality is poised to develop into a future transit city given its location near the LAPSSET corridor as well as its position along the Garissa–Mwingi–Thika Highway. The town is also strategically located to serve as a gateway to the other areas of the wider Kitui County, and a vital link to the north and eastern regions of Kenya.

4.6.2. Water Supply

Water supply is undertaken by the Kiambere-Mwingi Water and Sanitation Company (KIMWASCO), a limited liability company crated under CAP 486 of the Companies Act. The existing water infrastructure in the town was commissioned in 1999 under the Tana and Athi Rivers Development Authority (TARDA). Currently, the Tana and Athi Water Works (TANATHI) is tasked with development of water assets in the areas of jurisdiction (covering the wider Kitui, Kajiado, Machakos and Makueni counties). KIMWASCO was incorporated in May 2009, after the transfer of ownership of Kiambere-Mwingi Water project assets to TANATHI Water Services Board as per the requirements of the Water Act 2002. As a utility company, KIMWASCO is mandated to provide potable water and basic sanitation services to Mwingi Municipality and the greater Mwingi region. The company currently produces 2,700 m³ of water per day. It serves mainly Mwingi Municipality and major shopping centres along the 54 km distribution pipeline that begins at Kyoea Hill and ends at Mwingi Town. The treatment works are situated at Kiambere, 66 km north-west of Mwingi Town. KIMWASCO currently has 4,500 water connections and serves approximately 60,000 (18%) of the population within its service area. The Tana and Athi Rivers Development Authority (TARDA) is mandated to protect the water catchment hat serves Mwingi Municipality and its hinterland.

The water demand in Mwingi Municipality currently stands at 11,000m³ per day, which is way beyond the supply of 2,700m³ per day (KIMWASCO, 2021). The rapid population growth and inadequate governance capacity and paucity of resources have all

orchestrated the unmet demand for water, resulting in inadequate water supply in the town. The municipality is covered by adequate water transmission and storage system to meet the estimated ultimate water demand. The distribution system is however insufficient and requires expansion to increase coverage through individual connections. Up to 30% of the residents fetch water from the six water kiosks in the town. Some of the residents in town also collect water from other sources (mainly) from scooping subsurface wells from the Tyaa Riverbed. The low and unevenly distributed rainfall with a mean annual of 300mm-350mm further depresses the natural water provision in the area, making water such a scarce commodity in Mwingi. The status of water infrastructure is largely inadequate. Besides, they are minimally and irregularly maintained, which increases the unaccounted-for water and reduces the quantities supplied to the target consumers in the town and its environs. The unaccounted-for water includes unmetered water for bulk and individualized water supply.

4.6.3. Sanitation

Sanitation services in Mwingi Town are mainly on-site. The main facilities are VIP latrines (33.3%), pit latrines (58.8%) and flush toilets connected to septic tanks (2%)⁸. When they fill up, the septic tanks and pit latrines are emptied by use of truck exhausters normally hired from the County Government at plot owners' costs. Due to lack of a centralised sanitation system, the effluent from these facilities is discharged into open spaces in the outskirts of the town. In some instances, liquid waste is discharged into open ditches and left to drain into natural gullies thereby posing risks of disease. The high population densities in the town means most of the pit latrines and septic tanks in use fill up rather fast. Moreover, the town has no de-sludging equipment for emptying the pits. The site set aside for sewage treatment works in the towns' development plan is not used as such, as it already falls within the developed area owing to lack of development control.

4.6.4. Solid Waste Management

Solid waste management within the town is unstructured, with much of the garbage strewn in public spaces. There are several actors in the local solid waste value chain. However, their activities are not coordinated breeding inefficiencies. Residents employ

⁸ TANATHI (2017), op. cit.

various methods to handle solid waste generated from their households. The most common method reported is open dumping, used by 34.9% of the respondents. Following this, 21% of respondents rely on burning their waste. A significant number (20.5%) use a combination of open dumping and burning. Additionally, 7.2% of the population practices a combination of open dumping, burning, and composting.

The most frequently mentioned solid waste management issue is the presence of non-decomposable plastics, noted by several respondent households. The disposal of baby diapers and female sanitary towels pose a particular challenge to local waste actors, in the absence a proper handling mechanism. Another common challenge is the lack of dust bins and designated dumping sites, leading to fly-tipping and other improper waste disposal practices.

Even where solid waste is collected and brought to a central place, infrequent garbage transfer by relevant authorities is another significant concern, causing waste to accumulate at aggregation points over extended periods. To cope with infrequent garbage collection, residents might stagger their waste disposal and use methods like composting organic waste to reduce the overall waste volume. The town has a solid waste dump site located some 2 kilometres from the town centre. However, it is not professionally managed and might run out space anytime soon.

4.6.5. Energy

The municipality is connected to the national grid which supplies the bulk of electric power used mainly for lighting. Electricity connection within the municipality is at 95%. While Mwingi Municipality and its immediate hinterland still relies heavily on wood fuel for cooking, the region is in danger of depleting its traditional sources of wood fuel energy due to deforestation, opening up of new land for cultivation or crop production and unfavourable weather patterns that do not favour regeneration. The use of solar energy is still very low, but the area has potential for this energy source, if harnessed well. Currently, solar use is only limited to a few households and institutions with solar panels. No feasibility study has been done on its sustainability though there is plenty of insolation that remains constant all year round.

⁹ Kathanzu (2023), op. cit.

A primary concern for many respondents is the high cost associated with various energy sources. This issue is particularly pressing as it affects the affordability and accessibility of essential energy for daily activities such as cooking and lighting. In addition to the prohibitive costs, spatial accessibility also presents another major challenge. For instance, some respondents noted that the sources of firewood, which is a common energy source for cooking, are located far away. This distance makes it difficult and time-consuming for residents to access wood fuel, thereby complicating their ability to cook certain foods efficiently. Furthermore, the reliability of electricity is a notable problem in Mwingi Municipality. Many respondents highlighted frequent power outages as a significant challenge. These blackouts, precipitated by an unstable energy supply, disrupt daily activities. Additionally, there are concerns about the increasing costs of electricity, which further strains the financial capacities of many households, particularly those residing in low-income neighbourhoods.

4.6.6. Information and Communication

Households, institutions and businesses in Mwingi Municipality utilize a mix of broadcast media, print media, and the internet to access information. Each source has its strengths and caters to different segments of the population, ensuring a diverse flow of information within the community. The increasing use of the internet, in particular, highlights a shift towards more digital and real-time information access, complementing the traditional broadcast and print media channels. The Municipality has a fairly good connectivity to the internet, which is provided by the main service providers, including Safaricom, Airtel and Telkom.

Challenges in this sector emanate from disruptions in telecommunication services, which can significantly impact daily life, communication, access to information, and economic activities. One primary challenge is the inconsistent network coverage across different areas. While the core urban area has good connectivity, the immediate hinterland often suffers weak or no signal, making it difficult for residents to make calls, send messages, or access the internet. This disparity creates a digital divide and limits opportunities for those in less connected areas. For these disadvantaged areas, even when network coverage is available, the quality of service can be poor. Issues such as dropped calls, slow internet speeds, and poor voice quality are frequent complaints.

These problems can hinder effective communication and reduce the overall user experience, leading to frustration and dissatisfaction among users.

Frequent service interruptions and network downtimes are common problems, caused by factors such as maintenance work, technical faults, or environmental conditions like heavy rains and storms. These interruptions affect the reliability of telecommunication services and can lead to significant inconveniences for users who rely on these services for both personal and professional purposes. Another barrier is the high cost of telecommunication services, including mobile data, call rates, and internet services. High costs often limit the usage of these services, especially for low-income households. This financial barrier restricts access to essential communication tools and information, further exacerbating socio-economic inequalities.

Currently, the existing telecommunication infrastructure in Mwingi Municipality is yet to be fully developed. Limited infrastructure, such as insufficient cell towers or outdated technology, contribute to poor service quality and coverage gaps particularly in areas beyond the urban core. Investing in modernizing and expanding infrastructure is essential to improve service delivery.

4.7. Urbanization trends

Mwingi municipality has experienced phenomenal increase in its urban population in the recent past. This growth is attributable to its pre-existing role as a district headquarters before the promulgation of the Kenya Constitution 2010, the subsequent administrative function as a sub-county headquarters, and its strategic location along Thika-Garissa Road. The municipality continues to serve as the principal town in Kitui North. With its recent elevation to Economic Investment Zone alongside Waita, Kyome/Thaana, Nguutani and Kiomo/ Kyethani (EIZ003), Mwingi will witness even a more accelerated growth and development. The interplay between these factors have transformed Mwingi into a hub for administration, trade and commerce, attracting immigrants from the neighbouring counties and even farther away.

About 33.6% of the individuals who responded to the household interview questions had emigrated from various parts of the country to the municipality. The main reasons why Mwingi attracts this immigrant population include employment and business

opportunities that the municipality offers. These two accounted for over 63% of the reasons why people moved to Mwingi from other parts of the country. Other reasons include better services such as education, health, and generally better quality of life when compared to the hinterlands. This accounted for 6%. About 42% of the respondents moved to Mwingi for social reasons that included marriage and joining family members and friends. **Table 4-4** presents the reasons for emigration to the municipality.

Table 4-4: Reasons for immigrating to Mwingi Municipality

Reasons for moving to Mwingi Municipality	Percent
Business opportunities	24.32
Education and better services	5.41
Employment	32.43
Marriage	35.14
Presence of family and friends	2.70
Total	100

The implication of the above immigration patterns is that Mwingi Municipality will continue to bear the pressure of creating employment opportunities to match up the demand posed by the incoming population. At the same time, the municipality will need to invest more into providing the social services such as education, health and others that make it attractive in order to deal with the pressure posed by this population on the existing facilities. Lastly, there will also be a need to strengthen social and psychological support to families that are formed out of mixed ethnicities should there be challenges in such marriages.

4.7.1. Urban housing

Like many of its contemporaries, Mwingi Municipality faces a shortage in the supply of affordable housing units, a situation that has given rise to the proliferation of informal settlements, as households seek alternative accommodation. The situation has precipitated a rapid land use conversion within the peri-urban zone as residents buy and convert agricultural parcels into urban residential plots. The town is thus marked by urban sprawl which has been made worse by a lack of weak development control regime. That the municipality has to rely on an old urban development plan that was not even approved does not help this situation.

4.7.2. Urban social issues and marginalized groups

Marginalized groups include women, persons with disability, widows, children, the old and ethnic minorities. These groups face differentiated forms of marginalization that impede their full participation in the town’s development affairs.

4.7.3. Urban disaster and risk management

The major disasters in Mwingi are associated with flash floods, resource conflicts and urban fires. Cases of school fires have also been reported in the past. Mwingi also sits in a region that is highly susceptible to the vagaries of climate change that are occasioned not only by prolonged droughts but also heavy rains.

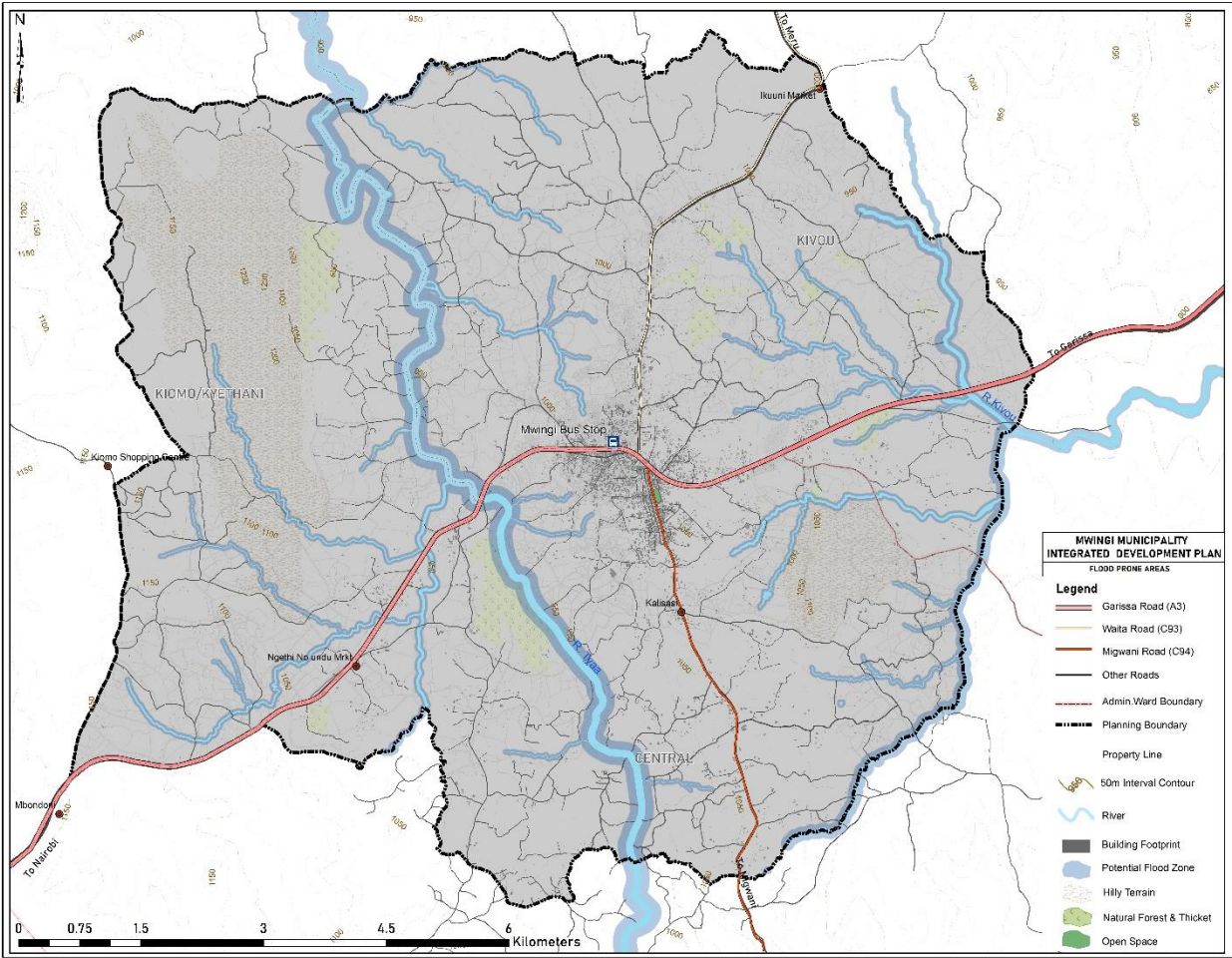


Figure 4-26: Areas vulnerable to climate change-induced flooding

Climate crises disproportionately affect communities that may already be vulnerable, many of which are located in ‘hotspots’ of climatic change such as Mwingi Town and its

wider hinterland where residents often lack the means to cope with an increasingly hostile environment. Depletion of natural resources which are used for subsistence or income generation may lead to antagonism between different communities and often exacerbate pre-existing tensions across communal identity lines, leading to violent conflict. This creates a complex and dynamic interplay between climate change and other root causes of displacement. There are already conflicts between residents and camel herders who invade the town from time to time in search of pasture.

To improve on the town's disaster preparedness, a disaster and emergency response centre will need to be established to serve not just Mwingi Town but also its immediate hinterland. Such a facility will be equipped with ambulances and fire fighting machinery that can respond to these disasters as soon as they arise. With the proposed expansion of town there is need to increase the number of disaster management equipment and personnel to cater adequately for the ever-rising population. To reduce disaster risks and vulnerabilities it will be necessary to undertake systematic identification, monitoring and assessment of disaster risk and enhance early warning systems. Ultimately, it will be necessary to mainstream disaster risk management into sustainable development policies, strategies and plans of the town.

4.7.4. Urban land tenure

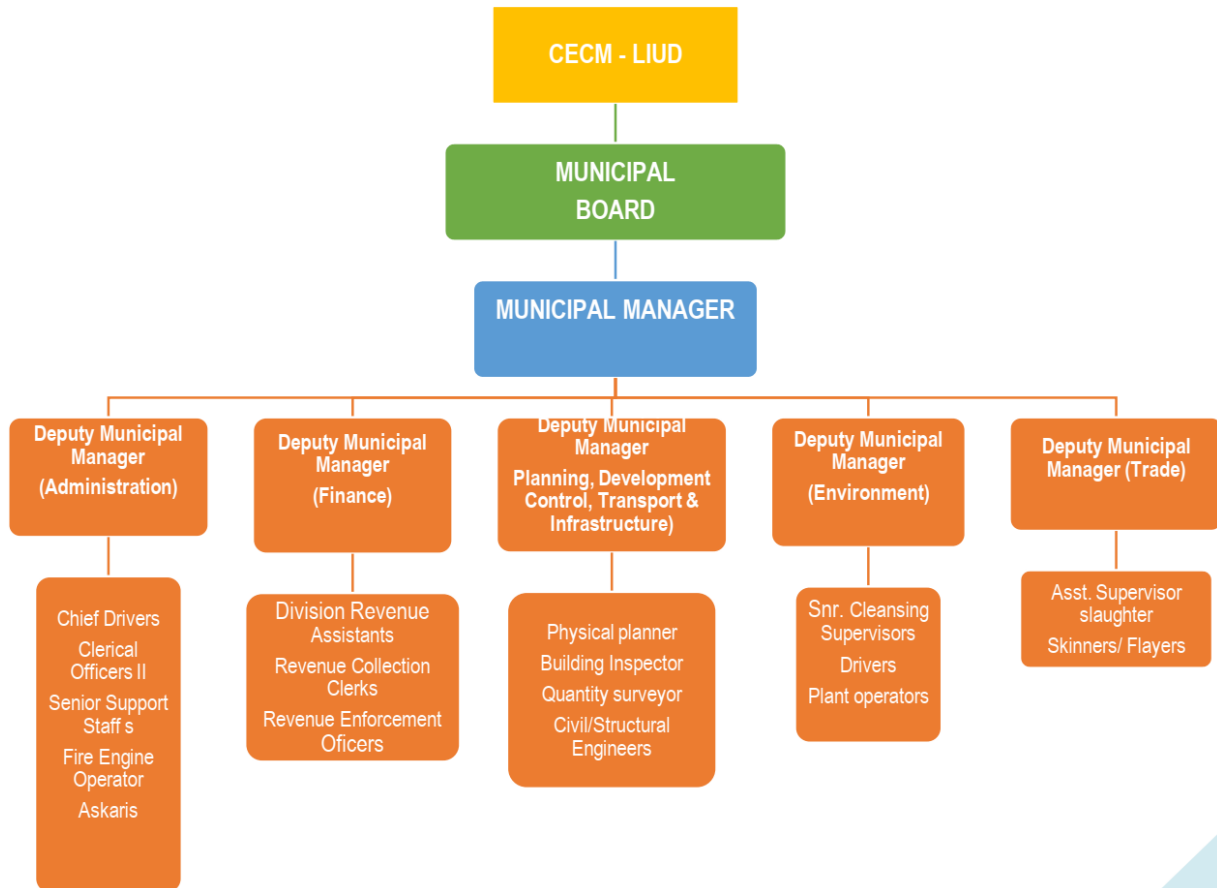
There is very little public land in Mwingi Town, particularly that which can be put to urban development in future. The bulk of the land is in private hands by way of freehold tenure. This complicates land assembly for major public projects that require huge pieces of land. Freehold tenure presents a further problem by complicating the land conversion process through which peri-urban rural land is haphazardly converted into urban residential and institutional plots without the necessary planning interventions. In the upshot, the town is facing unrepresented urban sprawl as residential developments crop up without the necessary infrastructure and community facilities to support the new developments.

4.7.5. Existing municipal institution framework

Mwingi Municipality is headed by a Municipal Manager who is supported by a number of technical officers in functional departments, namely:

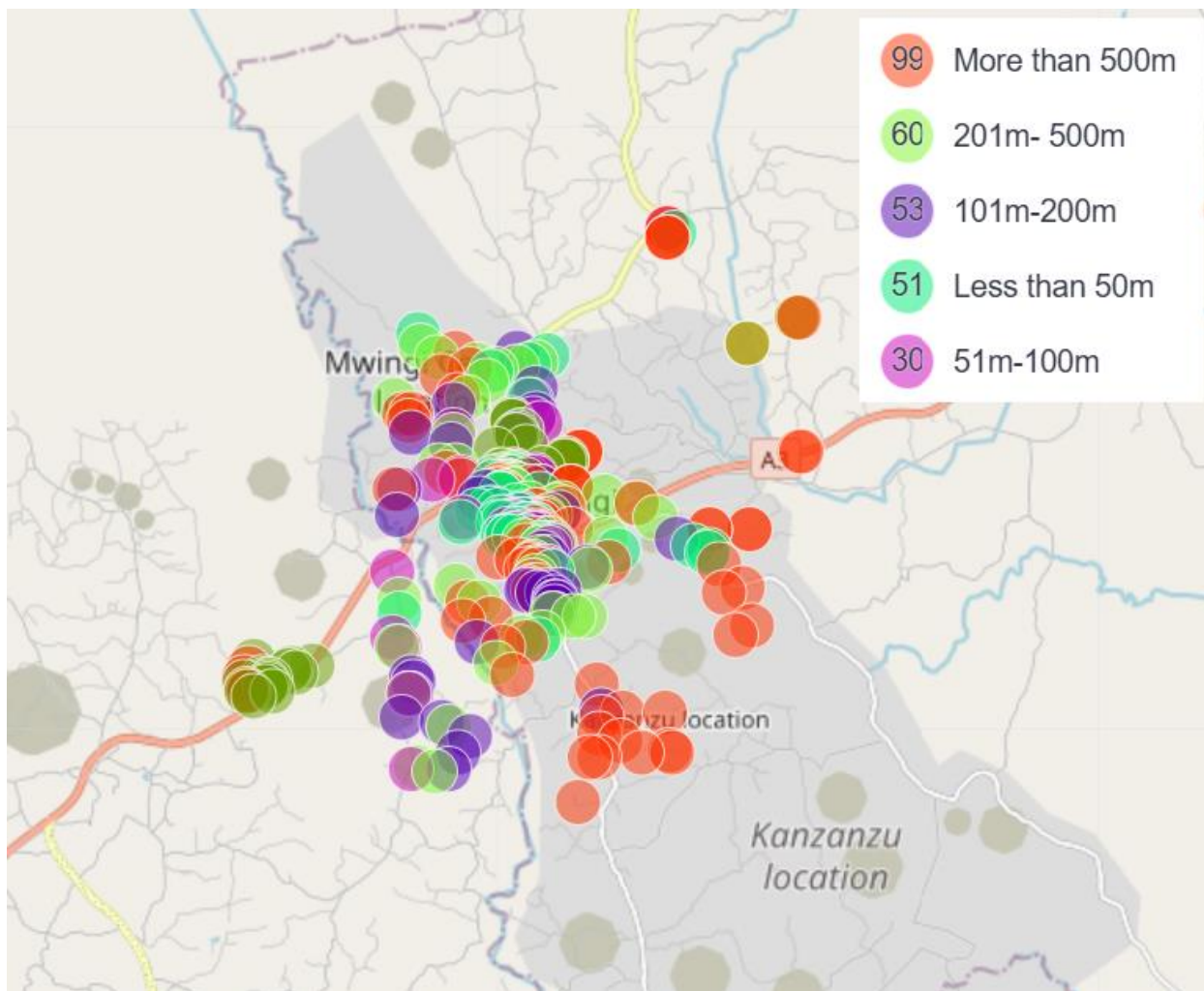
- Finance and Revenue Assurance;
- Trade, Commerce and Industrialization;
- Physical Planning, Infrastructure, Transport and Development Control;
- Administration and Corporate Services; and
- Environment, Culture, Recreation and Community Development.

The following is a diagrammatic presentation of the Mwingi Municipality organogram.

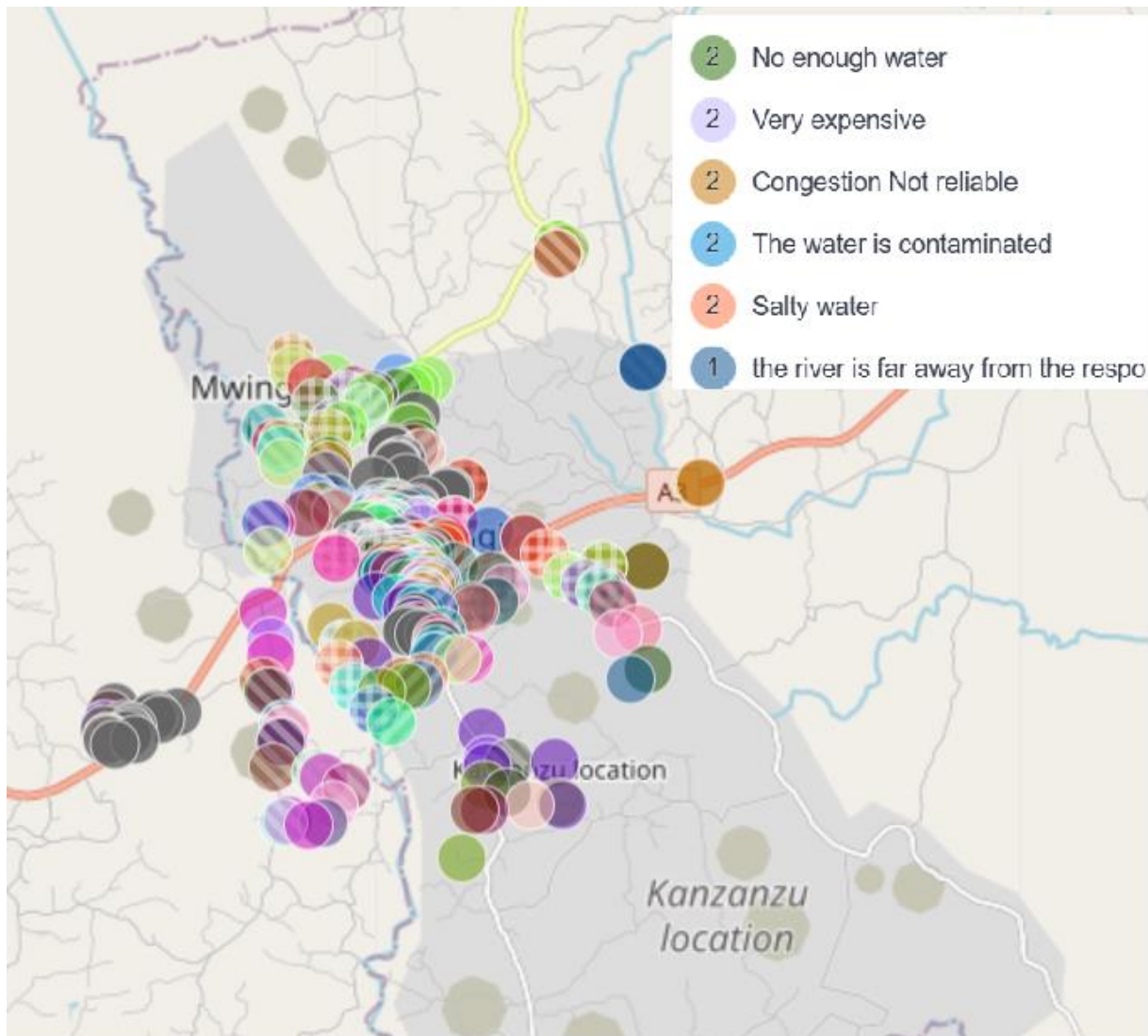


4.8. Summary of the emerging issues

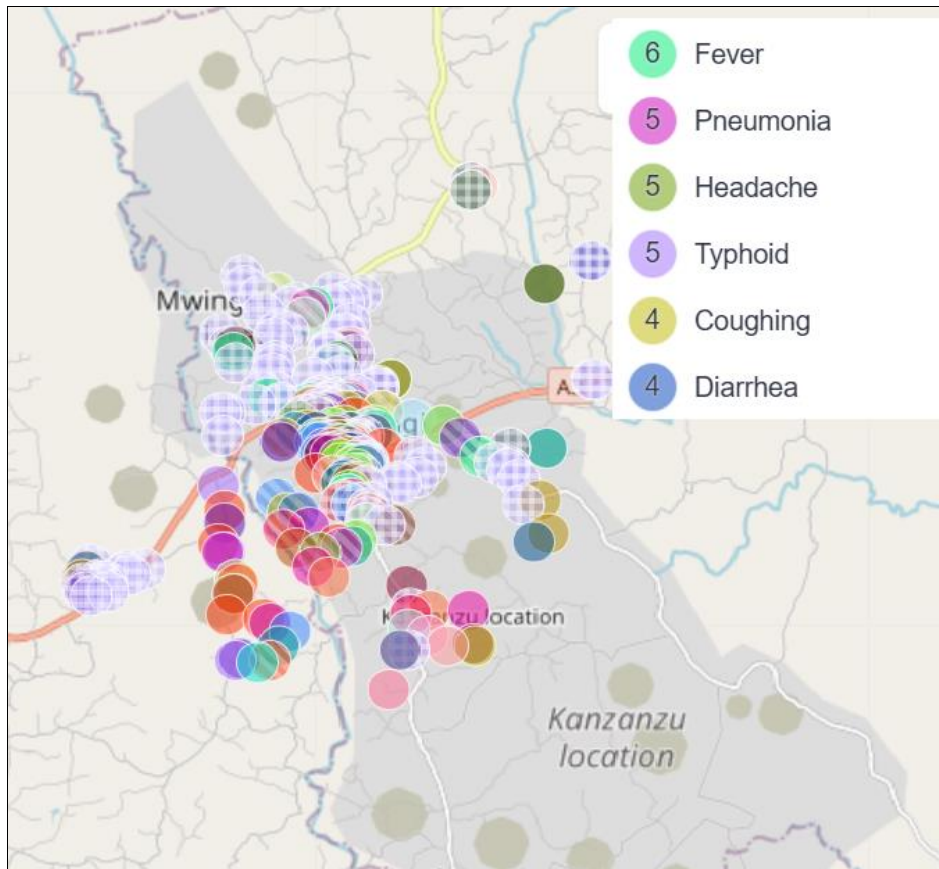
i.) Long distances to water sources, especially in the outer parts of the municipality.



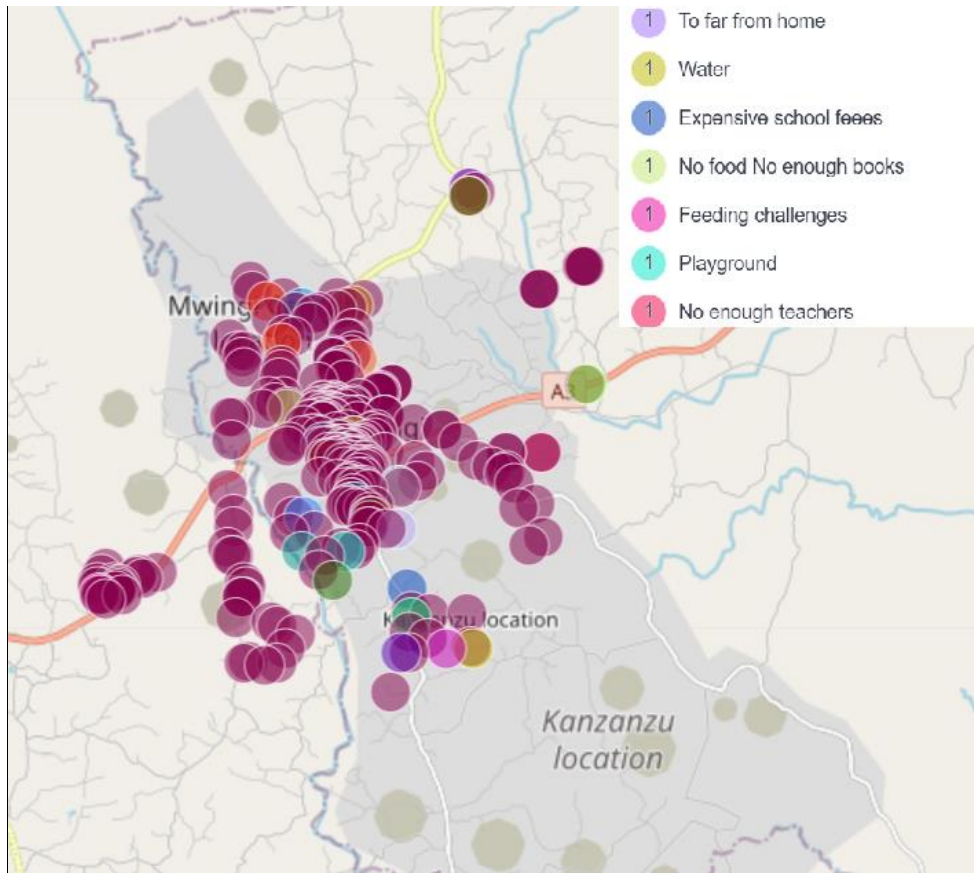
ii.) Water scarcity, expensive water, long queues and congestion at the water kiosks, salty water and contaminated water remain some of the key water challenges.



iii.) Fever, pneumonia, malaria, typhoid and cough are some of the common diseases



iv.) Access to education is stifled by long distances to schools, lack of water at school, unaffordable school fees, feeding challenges, inadequacy of books and a lack of physical facilities such as play grounds.



CHAPTER FIVE

5. SECTORAL DEVELOPMENT STRATEGIES AND IMPLEMENTATION FRAMEWORK

5.1. Overview

This Chapter discusses the key municipal development priorities, strategies and programmes identified and prioritised during the preparation of this Integrated Development Plan.

5.2. Economic development strategies

The planning area faces various economic challenges that can be addressed through targeted development strategies. In this section, the plan presents some potential economic development strategies that could be implemented in Mwingi to help alleviate these economic development challenges. This IUDeP recognises that a large part of the planning area will remain under agricultural use even though they have been designated for urban use in future. At the same time, the population in these areas will continue to practice agriculture as a source of livelihood. In this context, the proposals in the table below are made to help the active farmers to improve their economic status.

Problem	Strategy	Projects	Actors
Lack of a designated industrial zone to tap on local economic potentials	Develop an industrial park to tap on the local economic development potentials	<ul style="list-style-type: none"> • Develop an industrial park at the designated area to tap on the existing economic development potential of Mwingi 	<ul style="list-style-type: none"> • Board of Mwingi Municipality • County Government of Kitui • Ministry of Trade
Unexplored potential for Public-Private Partnerships	Collaborations for infrastructure projects	<ul style="list-style-type: none"> • Foster partnerships between the government and private investors to develop critical infrastructure that is needed for economic production 	<ul style="list-style-type: none"> • Board of Mwingi Municipality • County Government of Kitui • Ministry of Trade
Falling agricultural productivity	Diversification of crops	<ul style="list-style-type: none"> • Climate smart agriculture • Invest in high-value cash crops including mangoes, avocado, vegetables and legumes 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Agriculture • Veterinary department • Farmers in areas that are still agricultural in nature • Development partners that
	Agricultural training	<ul style="list-style-type: none"> • Training on best agricultural practices • Sustainable farming • Use of modern technology 	
	Business training	<ul style="list-style-type: none"> • Organise annual workshops on entrepreneurship, business management and marketing for farmers such as those currently engage in beekeeping 	

	Access to finance	<ul style="list-style-type: none"> • Create microfinance programs and partnerships with banks to provide loans to MSMEs 	work on climate smart agriculture
	Veterinary services	<ul style="list-style-type: none"> • Enhance access to veterinary services and vaccination to boost livestock health 	
Limited markets for local products	Establish local markets	<ul style="list-style-type: none"> • Develop market infrastructure in the urban nodes at Kalisasi, Ikuuni, Nge No Undu 	<ul style="list-style-type: none"> • Ministry of Trade • County Government of Kitui • Development partners
	Improve the existing market in central Mwingi	<ul style="list-style-type: none"> • Expand the existing market in Mwingi Central to accommodate more traders 	<ul style="list-style-type: none"> • Board of Mwingi Municipality • County Government of Kitui
	Value addition processing	<ul style="list-style-type: none"> • Establish value addition processing plants for local produce, such as honey and art work at the designated industrial park 	<ul style="list-style-type: none"> • Ministry of Trade • Local investors • Development partners
Limited participation of youth in entrepreneurship	Skills development programs	<ul style="list-style-type: none"> • Implement programs that aim to equip the youth with vocational skills like tailoring, crafts, beekeeping, and technology 	<ul style="list-style-type: none"> • Ministry of Trade • The youth • Local investors • Development partners
Lack of support for women-led enterprises	Support women entrepreneurship	<ul style="list-style-type: none"> • Support women-led enterprises through trainings, loans, and exchange programs 	<ul style="list-style-type: none"> • Ministries responsible for trade, gender, women affairs
Limited investment in renewable energy	Enhance solar energy use	<ul style="list-style-type: none"> • Promote the use of solar energy to reduce dependence on wood fuel and improve access to energy in the rural parts of the municipality 	<ul style="list-style-type: none"> • Ministry of Energy • Development partners • Local communities
	Biogas development	<ul style="list-style-type: none"> • Encourage biogas production from agricultural waste to provide sustainable source of energy 	
Unexplored potential of technology	Investment in technology	<ul style="list-style-type: none"> • Organise investors from within the county and beyond to invest in mobile banking, e-commerce, and other digital platforms that can enhance local commerce 	<ul style="list-style-type: none"> • Ministry of Trade • Development partners • Local investors

5.3. Urban infrastructure improvement strategy

5.3.1. Transport Improvement Strategy

One of the major planning challenge is poor state of roads and support infrastructure. Congestion, lack of or poor state of pathways for pedestrians and cyclists, non-designated parking, inadequate terminal facilities and lack of designated pedestrian crossing are some of the other challenges identified. Within the town's residential neighbourhoods, there are several missing road links, complicating circulation across

settlements. Additionally, encroachment on road reserves, coupled with unregulated building practices and widespread street vending impact economic development and impede mobility. The roads linking Mwingi to other parts of the county need upgrading as is the Mwingi Airstrip, given the projected development in the Mui Basin.

The goal of the transportation sector is the *“the provision of quality roads for reliable and efficient movement of people, goods, and services”*.

5.3.2. Transport improvement strategies

Problem	Strategy	Projects	Actors
Poor state of urban access roads	Upgrading of the main road arteries in the town	<ul style="list-style-type: none"> • Several local roads 	<ul style="list-style-type: none"> • County Government of Kitui • KURA • KeRRA • KISIP • KUSP
	Improving the state of NMT infrastructure	<ul style="list-style-type: none"> • All major roads within the municipality 	
	Provision of terminal facilities	<ul style="list-style-type: none"> • Construction of a modern municipal bus park • Construction of a Roadside Station at the designated location on the plan 	
	Clearance of encroachment on road reserves	<ul style="list-style-type: none"> • All roads within the municipality • Step up development control to stem encroachment of road reserves 	
Poor link to the wider Mwingi region and beyond	Opening up of link roads	<ul style="list-style-type: none"> • Mwingi-Kabati-Kitui Road, Mwingi-Mui-Voo-Muthakanziko-Ikutha Road, Mwingi-Mui-Mutito Road, as well as Tharaka-Kyuso-Mwingi Road, and Tseikuru-Mumoni-Mwingi Road 	<ul style="list-style-type: none"> • County Government of Kitui • KENHA • KeRRA
	No designated land for the development of ring roads/ future by-passes	<ul style="list-style-type: none"> • Acquire land for the development of the future by-passes in the designated areas 	<ul style="list-style-type: none"> • County Government of Kitui • KENHA • KeRRA

5.3.3. Health improvement strategies

Problem	Strategy	Projects	Actors
Poor access to healthcare services	Expansion of healthcare infrastructure	<ul style="list-style-type: none"> • Construction of additional healthcare facilities 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Health
	Improve the capacity of the mortuary at Mwingi Level 4	<ul style="list-style-type: none"> • Equip the mortuary at Level 4 with facilities and staff 	
	Enhancing affordability and access to healthcare services	<ul style="list-style-type: none"> • Enhance mother and child healthcare services at the existing Level 4 and in the designated urban nodes in this plan • Upscaling access of universal healthcare for vulnerable groups 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Health • Various NGOs

5.3.4. Education strategies

Problem	Strategy	Projects	Actors
Poor access to quality education	Expansion of educational infrastructure	<ul style="list-style-type: none"> • Construction of additional primary schools and ECD centres 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Education • CDF
	Enhancing affordability and access to education	<ul style="list-style-type: none"> • Enhancing access to bursaries for needy students 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Education • CDF
	Increasing capacity in education service delivery	<ul style="list-style-type: none"> • Audit the staffing levels in all school in the planning area • Employment of teachers to address the challenge of understaffing 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Education
	Improve the quality of physical infrastructure and facilities	<ul style="list-style-type: none"> • Rehabilitate degraded classrooms and desks • Construct new classrooms and purchase new desks where there is a shortage 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Education • CDF
	Provide incentive to learner retention	<ul style="list-style-type: none"> • Implement school feeding program to retain the learners at school • Invest in high capacity water tanks at all schools to improve access to water 	
	Shorten the distance to learning facilities		<ul style="list-style-type: none"> • Construct an additional primary school and day school in the northern part of the municipality in Syomikuku and Kyanika to reduce the distances that learners have to travel to access education

5.3.5. Energy

Problem	Strategy	Projects	Actors
Depletion of traditional sources of wood fuel energy	Targeted afforestation program	<ul style="list-style-type: none"> • Discourage charcoal burning • Reforestation/ revegetation programs 	<ul style="list-style-type: none"> • County Government of Kitui • Kenya Forest Service • Kenya Forestry Research Institute
Low uptake of alternative/green energy sources	Sensitization and awareness creation on alternative energy sources	<ul style="list-style-type: none"> • Step up community sensitisation on alternative energy sources • Develop demonstration projects • Enable access to clean energy funding 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Energy • NGOs and CBOs in the municipality
High cost of various energy sources	Adoption of alternative energy sources	<ul style="list-style-type: none"> • Diversity to solar energy • Support community to access clean energy 	<ul style="list-style-type: none"> • County Government of Kitui

			<ul style="list-style-type: none"> • Ministry of Energy • Residents
Unreliable electricity connection	Enhanced electricity connection	<ul style="list-style-type: none"> • Increase the number of transformers (of higher capacities) • Increase the capacity of the power substation at Ngethi Ne Undu • Encourage the use of cheaper and cleaner alternatives • Installation of streetlights in Mwingi central and the 3 upcoming urban nodes • Installation of solar security lights in Mwingi central, Kivou, and Kyome 	<ul style="list-style-type: none"> • County Government of Kitui • Kenya Power • Rural Electrification Authority • EPPRA

5.3.6. Information Communication Technology (ICT)

Problem	Strategy	Projects	Actors
Poor connectivity to telecommunication networks	Enhanced connectivity in outlying areas	<ul style="list-style-type: none"> • Increase the number of telecommunication base stations in areas around Kiomo, Kalisasi and Ikuuni 	<ul style="list-style-type: none"> • County Government of Kitui • Communication Authority • Telecommunication service providers
Frequent service interruptions and network downtimes	Improvement of ICT service quality	<ul style="list-style-type: none"> • Increase the diversity of telecommunication service providers • Lower the cost of internet connection • Instal boosters and modern technologies for improved network coverage 	<ul style="list-style-type: none"> • County Government of Kitui • Communication Authority • Telecommunication service providers
High cost of telecommunication services	Reduction in ICT costs	<ul style="list-style-type: none"> • Facilitate access to fibre optic infrastructure in government offices and private sector entities 	<ul style="list-style-type: none"> • County Government of Kitui • Communication Authority • Telecommunication service providers

5.3.7. Community facilities

Problem	Strategy	Projects	Actors
Poor access to community facilities	Expansion of community infrastructure	<ul style="list-style-type: none"> • Construction of 4No. social halls and community libraries at the neighbourhoods in the central Mwingi and the upcoming urban nodes 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Culture • CDF
	Enhanced maintenance and equipping of community	<ul style="list-style-type: none"> • Regular maintenance of existing community facilities • Equipping of community libraries and social halls 	<ul style="list-style-type: none"> • County Government of Kitui • Ministry of Culture • CDF • NGOs

5.4. Water supply improvement strategies

Problem	Strategy	Projects	Actors
Poor access to water services	Expansion of existing water supply network	<ul style="list-style-type: none"> • Construction of new supply networks to connect the eastern part of the municipality • Increase the capacity of the Mbeere water project to store more water and supply through gravity 	<ul style="list-style-type: none"> • County Government of Kitui • KIMWASCO • Ministry of Water
	Enhanced maintenance of existing water supply network	<ul style="list-style-type: none"> • Regular maintenance of existing water supply network • Improve water and sanitation services in the municipality 	<ul style="list-style-type: none"> • County Government of Kitui • KIMWASCO • Ministry of Water
	Enhanced water access by the urban poor	<ul style="list-style-type: none"> • Targeted, pro-poor programs o water supply • Provision of water supply kiosks • Map out water kiosks that are no longer functional with a view to improving them 	<ul style="list-style-type: none"> • County Government of Kitui • KIMWASCO • Ministry of Water
Unaccounted for water	Upgrading of old pipe networks	<ul style="list-style-type: none"> • Replacement, overhauling and upgrading of water supply lines • Regular community sensitisation on water accountability • Random checks to ward off illegal water connection 	<ul style="list-style-type: none"> • County Government of Kitui • KIMWASCO • Ministry of Water
Encroached water catchments	Protection of water catchments	<ul style="list-style-type: none"> • Environmental conservation in the Mwingi region • Regulation of sand harvesting • Establishment of refuse collection and recycling centre 	<ul style="list-style-type: none"> • County Government of Kitui • Kenya Water Towers Authority • Ministry of Water

5.5. Disaster management strategies

Problem	Strategy	Projects	Actors
Widespread flash floods	Enhanced environmental protection	<ul style="list-style-type: none"> • Conservation projects to protect environmentally sensitive areas • Relocation of population resident in environmentally fragile areas • Control of sand harvesting 	<ul style="list-style-type: none"> • County Government of Kitui • NEMA • Ministry of Environment
Increased climate-induced disasters and conflicts	Enhancing climate-resilient development practices	<ul style="list-style-type: none"> • Promotion of alternative livelihood practices • Adoption of climate-smart agriculture • Adoption of alternative dispute resolution strategies 	<ul style="list-style-type: none"> • County Government of Kitui • NDMA • Ministry of Environment
Inadequate disaster	Building a modern disaster response capacity	<ul style="list-style-type: none"> • Establishment of a modern disaster response and recovery centre at Ngethi Ne Undu 	<ul style="list-style-type: none"> • County Government of Kitui • NDMA

response systems		<ul style="list-style-type: none"> • Employing qualified disaster management personnel • Creating a disaster response management budget • Develop a fire station at the space next to the social hall to serve the strategic government installations around the area and the entire municipality 	<ul style="list-style-type: none"> • Ministry of Environment
------------------	--	--	---

5.6. Housing improvement strategies

Problem	Strategy	Projects	Actors
Ineffective land use planning	Enhanced land use planning and development control	<ul style="list-style-type: none"> • Preparation of the Mwingi Local Physical and Land Use Development Plan • Preparation of zoning and development control regulations • Recruitment and deployment of adequate planning and development control personnel 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands • Board of Mwingi Municipality
Inadequate land for the development of public facilities	Land acquisition and banking	<ul style="list-style-type: none"> • Identification and acquisition of suitable land for public facility development 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands • National Land Commission
Inadequate public participation in the planning process	Enhancing public participation in planning process	<ul style="list-style-type: none"> • Institutionalising public participation processes in urban governance • Establishing a municipal budget to finance public participation 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands • Board of Mwingi Municipality
Inadequate housing provision	Enhancing the provision of affordable housing	<ul style="list-style-type: none"> • Streamlining infrastructure provision to open up areas for housing development • Development of public housing units • Development of public housing to accommodate government staff 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands

5.7. Urban planning and development control

Problem	Strategy	Projects	Actors
Ineffective land use planning	Enhanced land use planning and development control	<ul style="list-style-type: none"> • Preparation of the Mwingi Local Physical and Land Use Development Plan • Preparation of zoning and development control regulations • Recruitment and deployment of adequate planning and development control personnel 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands

			<ul style="list-style-type: none"> • Board of Mwingi Municipality
Inadequate land for the development of public facilities (e.g. cemetery, land fill etc.)	Land acquisition and banking	<ul style="list-style-type: none"> • Identification and acquisition of suitable land for public facility development 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands • National Land Commission
Inadequate public participation in the planning process	Enhancing public participation in planning process	<ul style="list-style-type: none"> • Institutionalising public participation processes in urban governance • Establishing a municipal budget to finance public participation 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands
Inadequate housing provision	Enhancing the provision of affordable housing	<ul style="list-style-type: none"> • Streamlining infrastructure provision to open up areas for housing development • Development of public housing units • Development of public housing to accommodate government staff 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands

5.7.1. Urban Sprawl and Urban Decay Strategies

Problem	Strategy	Projects	Actors
Ineffective land use planning	Enhanced land use planning and development control	<ul style="list-style-type: none"> • Preparation of the Mwingi Local Physical and Land Use Development Plan • Preparation of zoning and development control regulations • Recruitment and deployment of adequate planning and development control personnel 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands
Inadequate land for the development of public facilities	Land acquisition and banking	<ul style="list-style-type: none"> • Identification and acquisition of suitable land for public facility development 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands
Inadequate public participation in the planning process	Enhancing public participation in planning process	<ul style="list-style-type: none"> • Institutionalising public participation processes in urban governance • Establishing a municipal budget to finance public participation 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands
Inadequate housing provision	Enhancing the provision of affordable housing	<ul style="list-style-type: none"> • Streamlining infrastructure provision to open up areas for housing development • Development of public housing units • Development of public housing to accommodate government staff 	<ul style="list-style-type: none"> • County Government of Kitui • KISIP • Ministry of Lands

CHAPTER SIX

6. LAND USE SUITABILITY

CODE	LAND-USE	CRITERIA	ANALYSIS	• PROPOSALS
0	RESIDENTIAL i.) High Density	Population	<ul style="list-style-type: none"> Should accommodate 40-60 dwelling plots. 	<ul style="list-style-type: none"> Envisioned to accommodate persons who will be working at the industrial park, the CBD and the Northern urban nodes (Ikuuni Market and Kwa Mulei).
		Access	<ul style="list-style-type: none"> Should be near places of work at the CBD and the industrial area. 	<ul style="list-style-type: none"> Proposed at the Northern part of the planning area.
		Environmental consideration	<ul style="list-style-type: none"> Location on wetlands and vegetation clearance should be avoided. 	<ul style="list-style-type: none"> There are no wetlands in the area, existing vegetation has been maintained and additional green spaces are proposed.
	ii.) Medium Density	Population	<ul style="list-style-type: none"> Should accommodate 64- 74 dwelling plots. 	<ul style="list-style-type: none"> Envisioned to accommodate persons who will be working at the CBD and in Kalisasi.
		Access	<ul style="list-style-type: none"> Should be located near places of work at the CBD. 	<ul style="list-style-type: none"> Proposed at the Southern, Eastern and Central part of the planning area.
		Environmental consideration	<ul style="list-style-type: none"> Location on wetlands and vegetation clearance should be avoided 	<ul style="list-style-type: none"> There are no wetlands in the area, existing vegetation has been maintained and additional green spaces are proposed.
	iii.) Low Density	Population	<ul style="list-style-type: none"> Should accommodate 80-90 dwelling plots 	<ul style="list-style-type: none"> Envisioned to accommodate persons who will be working at Ngethi No Undu market.
		Access	<ul style="list-style-type: none"> Should be located near places of work at the CBD. 	<ul style="list-style-type: none"> Proposed at the Western part of the planning area.
		Environmental consideration	<ul style="list-style-type: none"> Location on wetlands and vegetation clearance should be avoided. 	<ul style="list-style-type: none"> There are no wetlands in the area, existing vegetation has been maintained.
1	INDUSTRIAL i.) Heavy Industries	Land requirement	<ul style="list-style-type: none"> Should be allocated 202.3-485.6ha ha of unsettled land. 	<ul style="list-style-type: none"> Proposed to occupy 200ha.
		Access	<ul style="list-style-type: none"> Require access to labour, communication routes and ample supply of power and water and sewage disposal facilities 	<ul style="list-style-type: none"> The proposed industrial park is accessible via the proposed 60m and 25m wide road.
		Population	<ul style="list-style-type: none"> Should provide 20,000 to 50,000 jobs 	<ul style="list-style-type: none"> Envisioned to create job opportunities for part of

CODE	LAND-USE	CRITERIA	ANALYSIS	• PROPOSALS
			at an average density of 40 workers per acre.	the working population (persons aged 18-60), estimated at 55,961 persons.
		Wind direction	<ul style="list-style-type: none"> Should be sited downwind of the prevailing wind direction. 	<ul style="list-style-type: none"> Proposed at the North-Eastern part of the planning area near Ikuuni Market, downwind of the prevailing wind direction.
		Environmental considerations	<ul style="list-style-type: none"> Buffers should be created between these zones and settlements to protect them from harmful emissions and noise. 	<ul style="list-style-type: none"> There are existing and proposed green spaces to buffer industrial zone from air and noise pollution.
2	EDUCATIONAL i.) Primary Schools	Land Requirement	<ul style="list-style-type: none"> Should occupy an area of at least 3.25ha 	<ul style="list-style-type: none"> The proposed primary day school to the northern side of the municipality
		Population	<ul style="list-style-type: none"> Should accommodate a max. of 4000 students. 	<ul style="list-style-type: none"> The existing 120 primary schools are sufficient for a projected population of 23,809 primary school students.
		Access	<ul style="list-style-type: none"> Should be located within residential areas related to principle pedestrian networks. Should be within a 250-300m walking distance. 	<ul style="list-style-type: none"> A proposed primary day school has been sited in Northern part of the planning area in the proposed high-density residential area.
	ii.) Secondary Schools	Land Requirement	<ul style="list-style-type: none"> Should occupy an area of at least 4.5ha. 	<ul style="list-style-type: none"> The proposed secondary day school the northern side that is currently underserved
		Population	<ul style="list-style-type: none"> Should accommodate a max. of 8000 students. There is need for a day mixed gender secondary school. 	<ul style="list-style-type: none"> The existing 19 secondary schools can accommodate a projected population of 11,545 students.
		Access	<ul style="list-style-type: none"> Should be located within residential areas related to principle pedestrian networks. A day school should be within a 500-600m walking distance. 	<ul style="list-style-type: none"> A proposed secondary day school has been sited in Northern part of the planning area in the proposed high-density residential area.
	iii.) Tertiary Institutions	Population	<ul style="list-style-type: none"> Should accommodate up to 20,000 students and lecturers 	<ul style="list-style-type: none"> To be located to the eastern side of the municipality
		Land Requirement	<ul style="list-style-type: none"> At least 4000 acres 	
		Access	<ul style="list-style-type: none"> Should be accessible to the main road 	

CODE	LAND-USE	CRITERIA	ANALYSIS	• PROPOSALS
3	RECREATIONAL i.) Stadium	Land Requirement	<ul style="list-style-type: none"> • Should be allocated a minimum of 5ha. 	<ul style="list-style-type: none"> • A stadium has been proposed occupying 5ha of land.
		Spatial Equity	<ul style="list-style-type: none"> • The stadium should be located where it can be accessed from all parts of the planning area. 	<ul style="list-style-type: none"> • The stadium is located in the eastern side of the planning area
	ii.) Playing Ground	Land Requirement	<ul style="list-style-type: none"> • At least 1.5 hectares in all residential neighbourhoods 	<ul style="list-style-type: none"> • Proposed playing grounds occupy 19.5ha of land in total.
		Spatial Equity	<ul style="list-style-type: none"> • There should be playing grounds within a walking distance of all residential areas. 	<ul style="list-style-type: none"> • The proposed playing grounds have been sited at the high, medium and low residential areas.
4	PUBLIC PURPOSE i.) Cemetery	Land Requirement	<ul style="list-style-type: none"> • A minimum land size of 1 ha would be sufficient for burial plots, and additional space for parking areas, pathways, landscaping and administrative/visitor facilities. 	<ul style="list-style-type: none"> • A cemetery has been proposed to occupy 10.5ha.
		Location	<ul style="list-style-type: none"> • Should be sited away from sources of groundwater, where the soil is permeable enough to allow natural decomposition and to avoid excessive water retention. 	<ul style="list-style-type: none"> • To be located to the northwestern side of the municipality
5	COMMERCIAL	Access	<ul style="list-style-type: none"> • Should have geographical centrality. • Should be easily accessible by vehicles and pedestrians. • Have ample parking space 	<ul style="list-style-type: none"> • Expansion of the already existing commercial zone by 269.65ha. • The proposed commercial area is accessible via the Nairobi-Garissa Highway and a proposed 40m wide ring road
		Population	<ul style="list-style-type: none"> • Should serve a catchment population of 3,500-15,000 persons. 	<ul style="list-style-type: none"> • Is envisioned to create job opportunities for part of the working population (persons aged 18-60), estimated at 55,961 persons.
6	PUBLIC UTILITIES i.) Disaster Risk Management and Response Centre	Location	<ul style="list-style-type: none"> • Should be located near regions prone to disasters for quick response, but not in highly vulnerable areas. 	<ul style="list-style-type: none"> • A proposed Disaster Risk Management and Response Centre has been proposed at the South-Western part of the planning area.
		Land Requirement	<ul style="list-style-type: none"> • Requires enough space for administrative offices, storage for relief 	<ul style="list-style-type: none"> • The centre has been allocated 20ha.

CODE	LAND-USE	CRITERIA	ANALYSIS	• PROPOSALS
			supplies and equipment, training areas, parking spaces etc.	
		Accessibility	<ul style="list-style-type: none"> It must be easily reachable via major roads, to facilitate the movement of people, equipment and supplies. 	<ul style="list-style-type: none"> The proposed centre is sited along the Nairobi-Garissa Highway.
	ii.) Sewer Treatment Plant	Population	<ul style="list-style-type: none"> Sewage collection and treatment plans should be considered for settlements with a population of 3,000 persons or more. 	<ul style="list-style-type: none"> A sewer treatment plant has been proposed to cater for liquid waste produced by an estimated population of 97,383 persons.
		Location	<ul style="list-style-type: none"> A treatment plant should be located as far as is practicable from the boundaries of the planning area. Should be sited downwind of the prevailing wind direction. 	<ul style="list-style-type: none"> The proposed sewer treatment plant has been sited in the Northwest, near the boundary of the planning area and downwind of the prevailing wind direction.
		Land Requirement	<ul style="list-style-type: none"> Should be provided with a min. of 20ha. 	<ul style="list-style-type: none"> The sewer treatment plant has been proposed to occupy 20.5ha of land.
		Environmental considerations	<ul style="list-style-type: none"> A surrounding tree belt as a buffer is desirable for protection against blowsand 	<ul style="list-style-type: none"> The proposed sewer treatment plant has been provided with a buffer zone between it and River Tyaa.
	iii.) Landfill	Population	<ul style="list-style-type: none"> Required for a settlement of 50,000 persons or more within a radius of 25km. 	<ul style="list-style-type: none"> A landfill has been proposed to cater for an estimated population of 97,383 persons.
		Location	<ul style="list-style-type: none"> Should be located outside residential settlements. Should be sited downwind of the prevailing wind direction. 	<ul style="list-style-type: none"> The proposed landfill has been sited at the North-Western part of the planning area, downwind of the prevailing wind direction.
		Land requirements	<ul style="list-style-type: none"> Should be provided with 2 ha of land. 	<ul style="list-style-type: none"> Allocated 20ha of land.
		Environmental considerations	<ul style="list-style-type: none"> Buffers should be created between these zones and settlements to protect them from harmful emissions. 	<ul style="list-style-type: none"> The proposed landfill has been sited next to an existing green area (hill range) which will act as a buffer.
	iv.) Abattoir	Land Requirement	<ul style="list-style-type: none"> Requires adequate space for the slaughtering and processing area, the cold storage areas 	<ul style="list-style-type: none"> An abattoir of 6ha has been proposed.

CODE	LAND-USE	CRITERIA	ANALYSIS	• PROPOSALS
			and waste management facilities.	
		Location	<ul style="list-style-type: none"> • Should be located away from residential areas and the CBD to minimize odors, noise and pollution. • Should be sited downwind of the prevailing wind direction. 	<ul style="list-style-type: none"> • The proposed abattoir has been sited at the outermost part of the planning area to the North, downwind of the prevailing wind direction.
		Access	<ul style="list-style-type: none"> • Should be located near well-connected roads for easy movement of animals and meat products. 	<ul style="list-style-type: none"> • The proposed abattoir has been sited near a proposed 60m wide road.
7	TRANSPORTATION i.) Roadside Station (RSS)	Land Requirement	<ul style="list-style-type: none"> • Should be large enough to accommodate parking areas, restrooms and showers, retail shops, food services, waste management facilities and utility areas. 	<ul style="list-style-type: none"> • The proposed RSS occupies 6ha of land.
		Location	<ul style="list-style-type: none"> • Should be located along a major highway and positioned at a safe distance from the road, with clear entry and exit points, to minimize congestion and reduce the risk of accidents. 	<ul style="list-style-type: none"> • The proposed RSS is located along the Nairobi-Garissa Highway at the farthest point of the planning area, to the East.

CHAPTER SEVEN

7. SPATIAL DEVELOPMENT FRAMEWORK

7.1. Overview

This chapter outlines how land within the planning area will be used and developed over the next 10 years. The aim of the chapter is to provide a spatial representation of the envisioned growth and development of the area, ensuring that land use is well-coordinated and aligned with broader social, economic, and environmental goals. To do this, it begins by establishing a clear vision for the spatial development of the area. This vision aligns with the long-term goals of not only Mwingi Municipality and its residents, but also that of the County Government of Kitui.

The chapter is the culmination of Community Engagement processes that enlisted the participation of various stakeholders that included local residents, Mwingi businesses community, as well as representatives of both the national and county government in the planning process to ensure that the framework reflects the needs and desires of the community

Different types of land-uses are framed in this chapter to structure the solutions to the planning challenges that have been analysed in chapter 4 and to support sustainable development. These include land-uses include residential, commercial, industrial, agricultural, recreational.

The necessary infrastructure development that is required to support growth of the municipality are also identified. These include transportation systems, utilities, community facilities, and services.

Environmental Considerations are also included by incorporating strategies for environmental sustainability, including green spaces, biodiversity conservation, and resilience to climate change. The plan recognises that climate change is a reality that is already in Mwingi and thus the need to put in place deliberate strategies to deal with it.

The highlight of the chapter is its presentation of the proposed structure plan in which the plan recommends the zoning Regulations that will help in ensuring that land use

policies support the desired spatial development outcomes.

7.2. Structuring elements

The structuring elements refer to the various components and features that will shape the physical and social fabric of urban environments. Together, these elements will contribute to the organisation, functionality, and aesthetic quality of Mwingi Municipality. Here are some key urban structuring elements:

7.2.1. Transportation Network

Transportation network in Mwingi comprises the streets and roads, the transit systems, as well as the informal pedestrian and bicycle infrastructure. The layout of streets, roads, and pathways serves as the fundamental framework for urban movement and connectivity. The hierarchy of streets plays a key role in traffic flow and accessibility. Transportation network in Mwingi municipality is defined by regional roads that connect the municipality to other towns in Kitui County and beyond and internal municipal roads.

The first category consists of *i*) the main A3 Road that connects the municipality to Thika to the Western side and Garissa to the Eastern side, *ii*) C93 Mwingi town - Waita Road through Kyulungwa shopping centre to the Northern side of the municipality, and *iii*) C94 Mwingi – Migwani Road through Nzeluni to the Southern side of the municipality.

These three roads have rendered land located along them to be the most accessible when compared to land located in other interior parts of the municipality. Improved accessibility attracts the provision of public transportation services by *matatus* and motorcycles by enabling mobility along the roads. The result has been to structure a ribbon pattern of development along these roads (**Figure 7-1**).

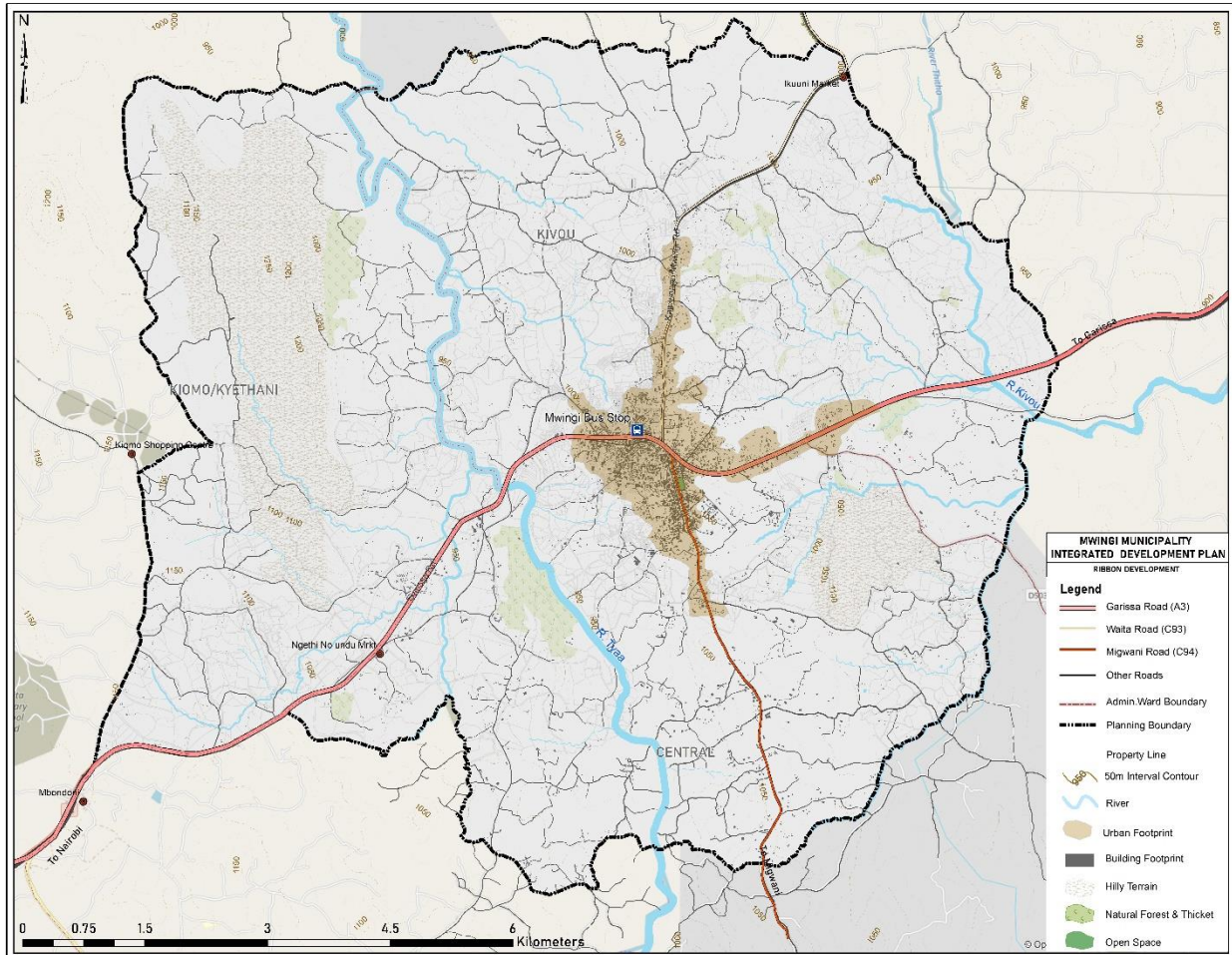


Figure 7-1: Ribbon development along the main transportation corridors

The above pattern of spatial development makes it difficult to provide infrastructure and services as it leads to sub-optimal use of land and space. At the same time, it makes land-uses that attract large pedestrian traffic around such highways predisposed to the risks of traffic accidents. While this is the case, efficient transit options can reduce congestion and improve urban sustainability. The challenge to this IUDeP therefore is how to improve strike a trade-off between transportation and land-use in a way that will improve accessibility in areas that do not engender inefficient use of land.

The second category of transport networks in Mwingi Municipality consists of numerous internal roads within the municipality itself. These comprise both formal and informal networks that serve vehicular, pedestrian and bicycle transport. The planned internal roads run parallel to the Mwingi-Migwani Road and serve as the service lane to the plots

of land created along the main road. These roads reinforce the ribbon development already established by the existing main roads.

Most roads in the municipality are created through either unapproved land subdivision or partially approved subdivisions that do not meet the minimum development standards. As a result, the municipality is characterised by roads that lack uniform widths and that terminate at dead ends for the most part. This is especially the case in the central part of the municipality. The implications of these roads for this IUDeP is the need to open up these roads and widen them to facilitate efficient movement and accessibility as well as the provision of utility services like water, electricity, drainage and communication networks that all make use of the road reserves.

There is also generally a lack of well-designed walkways, bike lanes, and pedestrian-friendly areas that can encourage non-motorised forms of transportation and enhance the overall walkability of the municipality.

The implications of these internal transport networks for the spatial form of the municipality is that it is characterised by makeshift routes that serve non-motorised modes of transport. These make the municipality to lack a clear spatial character when it comes to its transport network (**Figure 7-2**). The municipality therefore suffers poor transport connectivity, incoherent network, poor network completeness, and poor network integration among other challenges.

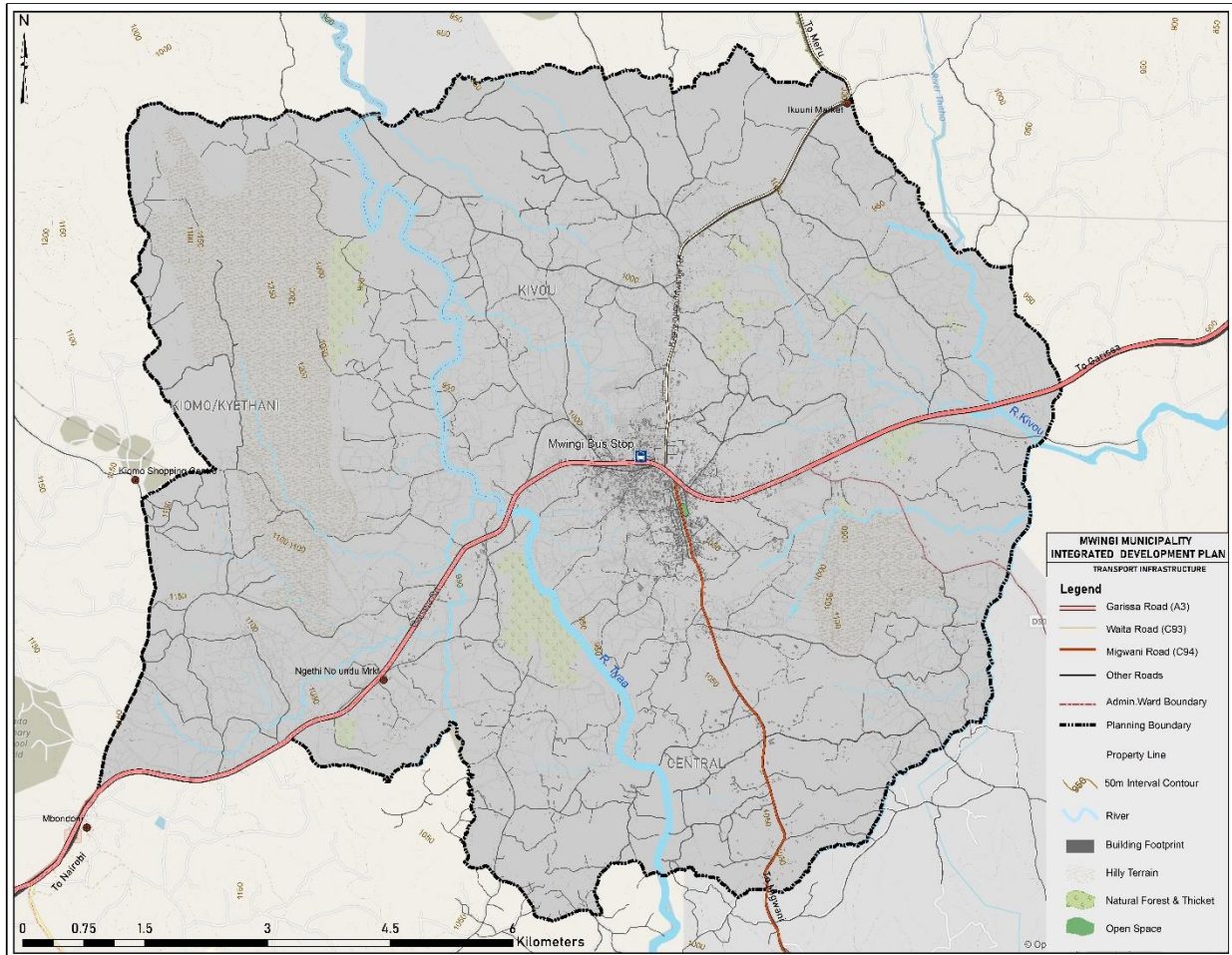


Figure 7-2: The spatial form of Mwingi Municipality lacks a clear network character

7.2.2. Existing urban nodes

The planning area features several urban nodes that serve as centres for trade, and social services. Key among these are:

- i.) **Ikuuni market:** A market located to the northern part of the planning area along the C93. The central hub for economic activities, with markets, shops, schools, and government offices.
- ii.) **Kalisasi market:** An emerging urban centre that plays an important role in commerce and social services in the south eastern side of the planning area.
- iii.) **Ngethi No Undu market:** An upcoming market to the South Western side of the planning area on A3 Road to Thika Town.

iv.) **Muliluni upcoming market:** Another upcoming urban centre to the western side of the planning area that serves the surrounding rural areas with various services, including a dispensary.

The above urban nodes support the surrounding communities through infrastructure, education, health services, and commerce. The nodes present the centres that will attract various investment opportunities in the planning area and therefore the centres from which further urbanisation of the planning area will radiate. Considering that these centres are located along the major roads that are responsible for ribbon development, this plan considers that accessibility in the interior parts of the centres should be improved in order to slow down the pace of urban development.

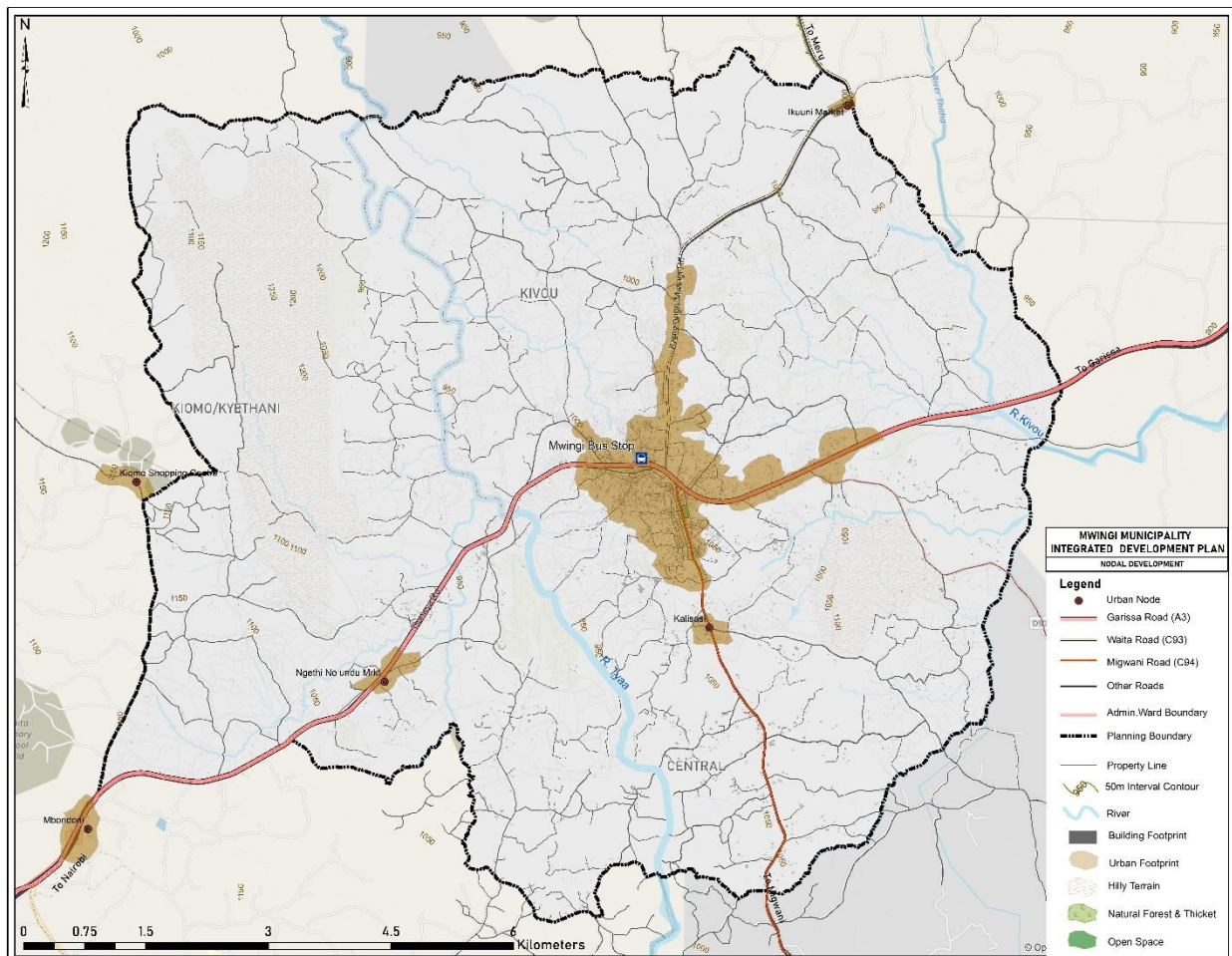


Figure 7-3: The influence of outlying urban nodes in shaping the spatial form of Mwingi Municipality

7.2.3. Natural Features

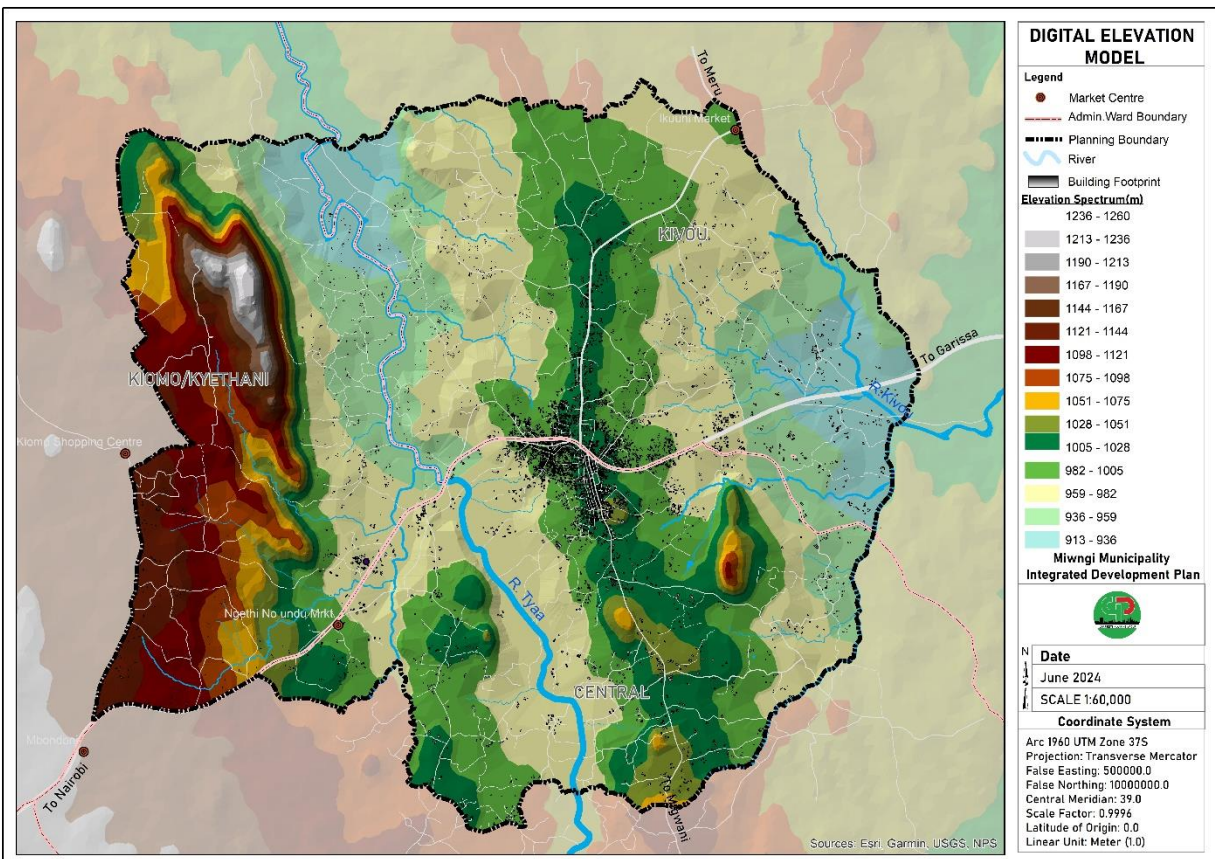
The spatial form of Mwingi Municipality will also be shaped by a number of natural features. Among these are:

Topography: Mwingi is characterized by a rolling landscape, with hills and valleys that affect land use patterns, settlement areas, and infrastructure development. The hilly terrain will restrict urban expansion and impact accessibility to the western side of the planning area. This includes the location of utility services like waste management (dump sites) in such areas that have steep slopes into the rivers.

- i.) **River Systems:** The presence of rivers like the Tana River and its tributaries will influence settlement patterns, as communities typically settle near water sources for agriculture, drinking water, and other needs. These rivers also impact irrigation and agricultural practices in the region.
- ii.) **Soil Types:** The types of soils found in Mwingi affect agricultural productivity, which is a critical aspect of the local economy. Fertile soils enable the cultivation of various crops, influencing land use and settlement patterns.
- iii.) **Vegetation and Ecosystems:** The natural vegetation, which includes savannah and wooded areas, will influence land availability for development, agriculture, and conservation areas. Regions with dense vegetation may also limit urban expansion.
- iv.) **Climate:** Mwingi experiences a semi-arid climate, which affects agricultural practices, water availability, and overall settlement patterns. Areas with better rainfall are more likely to be developed for farming and habitation, while drier areas may be less populated. This plan will hence need to develop strategies to restrict this expansion of urban settlement into potential agricultural land.
- v.) **Natural Reserves and Conservation Areas:** Any nearby wildlife reserves or conservation areas can restrict urban development and shape land use practices, prompting a focus on sustainable development.
- vi.) **Geological Features:** The geological characteristics of the area can influence construction practices and the types of materials available for building, impacting urban development styles.
- vii.) **Wind direction:** Wind in Mwingi is most often from the south from mid-April to mid-October and mostly from the east from mid-October to mid-April. The

implication of this wind direction is that activities that produce stench, such as waste handling facilities and slaughter houses should be located to the north-western side of the municipality.

These features collectively influence how socio-economic activities in Mwingi municipality shall be located in space. These factors therefore affect everything from urban planning to infrastructure to agricultural practices and settlement patterns.



7.2.4. Land-use and zoning policies

There exists an old plan that has guided the spatial development of Mwingi town over the past 30 or so years. This plan was prepared in the year 1990 to designate various land-use zones, including residential, industrial, educational, recreational, commercial, public land, public utilities, and parking areas. Although it was never approved, it nonetheless gave Mwingi town its extant spatial form. This form designates the administrative zone to the northern part of the old town, commercial zone along the A3

and C94 to Migwani, the residential zone to the north of the A3 as well as between A3 and C94 to Migwani. There are also spots of greenspaces provided in this plan. An outstanding one is the Musila Gardens.

The spatial form of Mwingi Municipality will continue to be structured by this old plan. In addition, there will also be other zoning requirements that would dictate the location of green infrastructure such as trees, urban forests, and community gardens, which contribute to biodiversity, climate resilience, and the overall liveability of urban areas.

7.2.5. Informal forces

One of the key structuring elements in the context of the developing world is the informal processes. These include activities that are not criminal but nonetheless operating without being sanctioned by the state. They include informal trading, informal housing, street vending, informal food vending, among others. All these informal activities play an important part in sustaining the social fabric of urban settlements in general and Mwingi Municipality in particular. These fabrics include neighbourhoods, community organizations, and informal networks that are crucial for urban vitality and resilience.

Although urbanisation in many Kenyan cities in general and Mwingi Municipality in particular remains informal in nature, urban planners have tended to ignore this informality. The result of this inattention to the informal sector is that the sector remains unsupported even through it is the source of livelihood, municipal infrastructure and services for over 60% of the urban residents in Kenya. At the same time, the informal sector provides housing and other forms of infrastructure and services to over 60% of the urban population. The question that this IUDeP therefore grapples with is how to cater for this urban population.



Figure 7-4: Urban informality actively structures the spatial form of Mwingi Municipality

Considering the above structuring elements, the spatial form of Mwingi Municipality can thus be described as consisting of the follows:

1. **Urban Core:** This includes the main commercial area that is to be found at the intersection of A3 and C93 and C94. This urban core of Mwingi has the main market, government offices, and a number of commercial establishments that include banks, supermarkets, pharmacies, and restaurants among others. It is the focal point for economic activities in Mwingi Municipality.
2. **Residential Zones:** Surrounding the urban core are the residential areas that can be categorized into three different socio-economic statuses even though they are of mixed typologies. They include the high-income and medium-income neighbourhood that is generally to be found to the eastern side in Kivou area around Thorn Tree Hotel and generally the northern side of the municipality. On the other hand, low- and medium-income residential neighbourhoods are to be found just around the central part of the municipality, on the rows after the commercial establishments along the C94 Road that leads to Migwani. This is the area around Musila Gardens and the Level 4 Hospital on the eastern side and to the southern part of the area defined by A3 and C94. These neighbourhoods have mixed development densities and building typologies, making Mwingi Municipality to lack a definite spatial character when it comes to residential development.
3. **Transportation Networks:** Mwingi Municipality will continue to grow radially from the confluence of C93/C94 and A3 Roads. These three form the major roads

that dictate the movement of people and goods from the urban centre to the other parts of the municipality and beyond.

4. **Rural-Urban Interface:** Mwingi is surrounded by agricultural land, with a significant portion of the population engaged in farming. This rural-urban interface is crucial for food supply and economic exchange between the urban centre and surrounding villages. Among the rural parts of the municipality are Kivou to the North and the North Eastern side, Kiomo/ Kyethani to the Western side, the areas around Ngethi No Undu and Kalisasi markets to the Southern side, and along River Kivou to the Eastern side.
5. **Social Services:** The spatial distribution of schools, healthcare facilities, and other social services also plays a role in the town's structure, impacting accessibility for residents. This distribution has resulted in developments around the nodes where services are to be found. Generally, these are areas around health facilities, schools, water kiosks, and markets, religious institutions.
6. **Cultural Sites:** The presence of cultural and historical landmarks contributes to the community's identity and can influence the spatial dynamics of the town.
7. **Economic Activities:** Besides agriculture, local businesses, trade, and informal markets also do shape the economic landscape, affecting land use and development trends. These activities have resulted in not only the urban core of Mwingi Municipality but also outlying urban nodes at Kalisasi, Ngethi No Undu, Ithumbi, Ikuuni, and Muliluni. It is expected that, through the process of conurbation, these upcoming urban centres will form one large Mwingi Municipality in future. It is therefore important to plan for how to sustain and link them before that time comes.

The resulting urban form is presented in **Figure 7-5**.

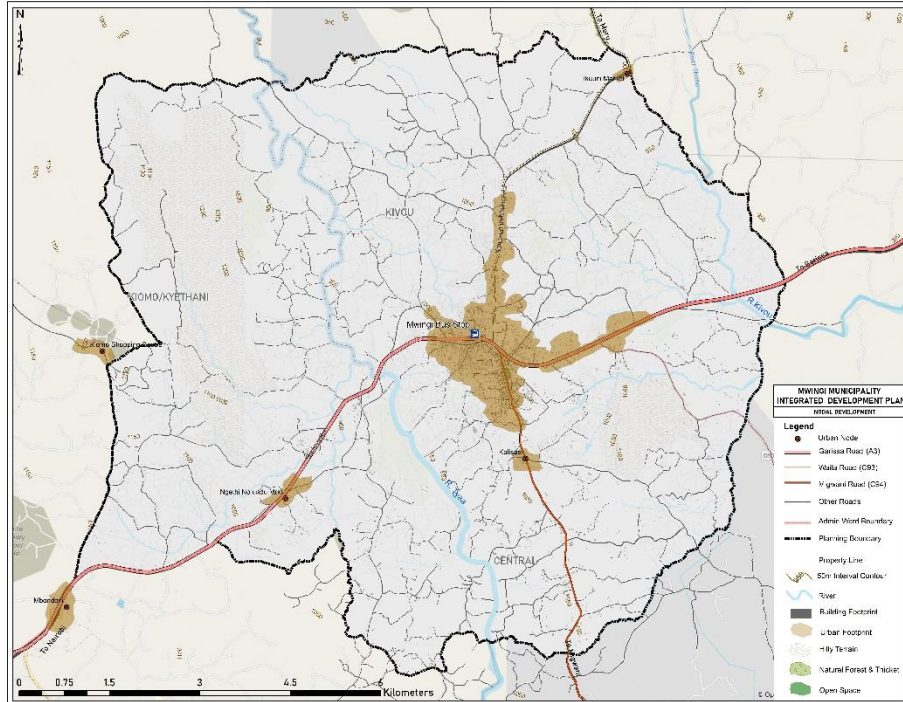


Figure 7-5: The extant urban form of Mwingi Municipality

Considering the extant urban form of Mwingi presented in **Figure 7-5**, its development challenges and potentials, and the governor’s manifesto, which emphasises the important role that urban centres play in terms of service provision and therefore the need to plan them well, this plan therefore proposes the spatial structure of Mwingi to take the form that is now explained in the next section.

7.3. Proposed structure plan

7.3.1. General principles and guidelines for various zones

This plan relies on a number of principles and guidelines to come up with the proposed location of various land-uses that will give Mwingi Municipality its spatial form. This spatial form is expected to structure the socio-economic development strategies proposed in Chapter 7 of this plan. Among the planning principles and guidelines are geography, real estate, urban planning, logistics, and marketing. These are explained in the proceeding sections.

7.3.1.1. Geography and Spatial Analysis

Proximity: This principle dictates that a place needs to be close to other important places that either render services that are required for its sustenance or that are

mutually interdependent with those that it renders. The principle has been applied in this current plan to give effect to the provisions of Section 3.3.4 of the Physical Planning Handbook that relate to tolerable distances to services such as education, basic health care, and government services among others. It also gives effects to tolerable distances to water and sanitation facilities that are recommended by the WHO's Guidelines for drinking-water quality. Buffer analyses were carried out to identify the areas that did not enjoy proximity to services. On the strength of these analyses, this plan proposes an additional primary school near Ikuuni market and also between Kiomo Shopping Centres and Ngethi No Undu market to cater for the population that currently has to travel longer distances to access education in those areas.

Accessibility: This principle dictates that activities should be located in a manner that makes it easy to reach them. It is influenced by the interplay between land-uses and transportation networks. On the strength of this principle, this plan proposes the decentralisation of basic education services and other lower level services, such as clinics to the neighbourhoods that are to be found around the emerging markets at Kalisasi, Ngethi No Undu, Ikuuni and others. At the same time, employment opportunities that are based on the local resources can also be decentralised to these emerging urban centres to improve accessibility to employment. In doing this, different parts of the municipality will be enabled to benefit from these services without the need for moving to the urban core and raising motorised traffic, which is not environmentally sustainable.

Site and Situation: Site refers to the physical characteristics of a location, while situation describes its relative location. This guideline has been used in this plan to restrict development from Kiomo/Kyethani and a better part of the western side of the municipality that lies on the steep slopes. This guideline has also been employed to restrict development from riparian areas. In this case, a road is proposed along the existing rivers to act as a buffer that would restrict human activities from encroaching the riparian reserves. The guideline offered by site and situation is buttressed by topography, which refers to the physical features of the land, which can affect usability and settlement patterns.

7.3.1.2. Urban Planning

Zoning Laws: These are municipal regulations that dictate how land can be put to uses such as residential, commercial, and industrial among others. Mwingi Municipality does not have any zoning laws. However, there exists an old unapproved land Use Plan, which was prepared in the year 1989. Although this plan was never approved, it nonetheless attempted to strategically organise and design urban spaces to optimise land use. Elements of this plan are evident in the extant organisation of the urban core. This current plan proposes to retain the land-use pattern already established by this old plan with a number of improvements.

To begin with, the roads in the urban core have been seriously encroached thus compromising accessibility and circulation in the urban core. These roads will need to be opened up to at least 12m to improve accessibility, circulation and connectivity to various parts of the municipality. In order to further improve circulation, this plan proposes a 20m primary collector ring road that runs parallel to the boundaries of the municipality on the outer side. Another primary collector road of 20m is also proposed to enable connectivity from Kalisasi, - Ngethi No Undu - Ikuuni and other emerging markets that form the middle ring of the municipality. A final ring road is proposed to connect the outer part of the existing urban core. All these roads will cross the A3, C93, and C94, thereby enabling traffic from these major arterials to be distributed to the residential areas and other urban nodes that are already emerging in the municipality. In contrast to the grid-iron road pattern, this proposed ring road minimises junctions thereby enabling faster mobility and its attendant reduction in air and noise pollution that often occur because of traffic snarl-ups. Local access roads will then run radially from the urban core to the edge of the municipality. The Municipal Board of Mwingi will need to formulate by-laws to ensure that public service vehicles and traffic is guided to support this proposed structure.

The western side of the municipality around Kiomo/ Kyethani is proposed to be preserved as a green area to protect the steep slopes in that part. This plan proposes to the development of activities that produce stench, such as waste handling facilities and slaughter houses should be located to the north-western side of the municipality. This decision is informed by the predominant westward wind direction, which would then carry any possible stench away from the municipality. The plan also proposes the

development of a cemetery in that side, considering the sparse human settlement densities in that part and the possibility of obtaining adequate amount of land there. The western side of the municipality will also be developed as the industrial area of the municipality for the same reasons of wind direction.

Mwingi Municipality does not have a municipal stadium at the moment. This absence of a stadium not presents a loss of sports revenue for the municipality, it also stifles the development of sporting talent. The youth are currently forced to play in the dry riverbeds due to a lack of adequate sporting facilities. Suffice it to mention that the only sporting facility is Musila Gardens, which is not in a good physical state due to a lack of maintenance.

This plan proposes that the current urban core will continue to develop as a commercial zone. However, there will be new commercial nodes in the upcoming markets at Kalisasi, Ngethi No Undu, Ikuuni and others (**Figure 7-6**). These will serve lower order services and other services that do not require their consumers to travel long distances.

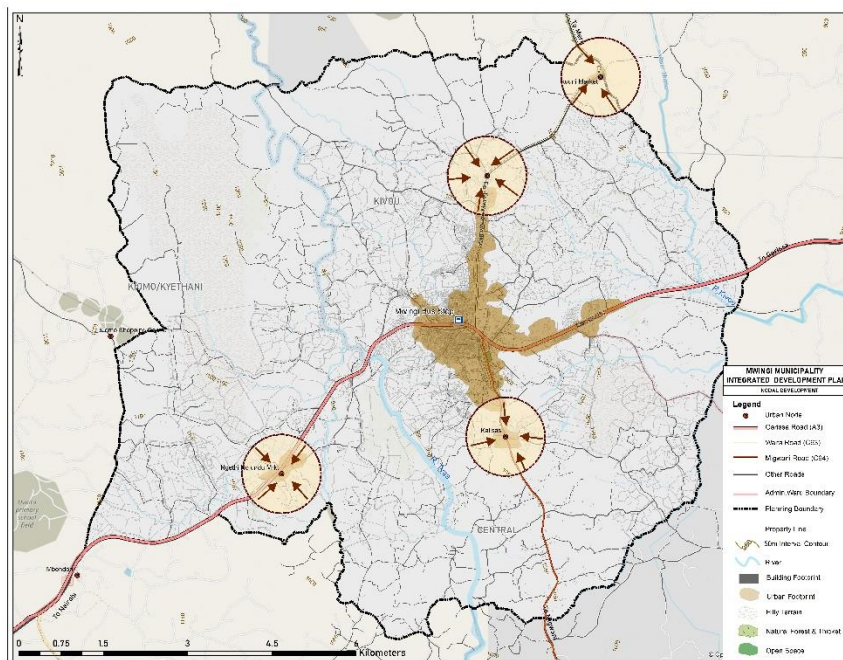


Figure 7-6: Managing urban sprawl through deliberate decentralisation

The areas to the north-eastern (Muthaiga and Mangaloma), eastern (Kwa Muli, Kitinga), south-eastern (Kitinga, Kalisasi), and southern side (Kalisasi) of the municipality are

proposed for residential development.

Sustainability and climate change resilience: These guidelines consider the environmental impact and seeks to promote sustainable development and to make the municipality capable of mitigating against the impacts of climate change.

Community Needs: This guideline is anchored in the assessment of population densities, demographics, and community services. It emerged that the municipality needs a cemetery, waste handling facility, stadium, and juvenile prison among other facilities. This plan proposes the development of these facilities at various parts of the municipality.

Figure 7-7 now presents the proposed urban form of Mwingi Municipality.

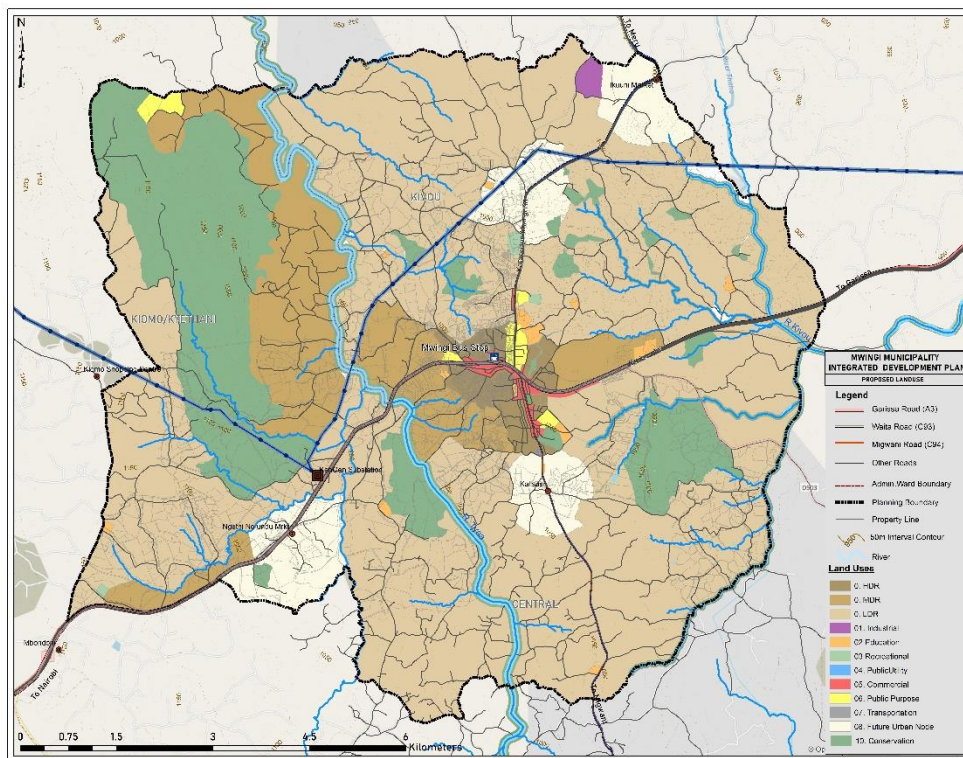


Figure 7-7: The proposed urban form of Mwingi Municipality

CHAPTER SEVEN

8. MONITORING AND EVALUATION MECHANISM

8.1. Overview

Monitoring and Evaluation mechanisms are essential processes that will enable the Municipal Board of Mwingi to assess the implementation and effectiveness of the development plans, policies, and programs contained in this IUDeP. An efficient Monitoring and Evaluation mechanism will help ensure that objectives are met, resources are used effectively, and that the desired development outcomes are achieved.

8.2. Key components of the monitoring and evaluation mechanism for the current IUDeP

8.2.1. Setting clear M&E objectives and indicators

- a. **Define Objectives:** Clearly outline the goals of M&E, ensuring they are specific, measurable, achievable, relevant, and time-bound (SMART).
- b. **Develop Indicators:** Establish quantitative and qualitative indicators to measure progress toward the objectives. These should be relevant, feasible, and aligned with the overall goals of the municipal plan.

8.2.2. Data collection and management

- i.) **Data Sources:** Identify and utilize reliable data sources, including administrative records, surveys, community feedback, and other relevant data.
- ii.) **Data Collection Methods:** Implement various data collection methods, such as interviews, focus groups, observation, and statistical analysis, to gather comprehensive information.
- iii.) **Data Management:** Ensure that data is stored and managed effectively, with proper protocols for data quality, security, and accessibility.

8.2.3. Roles and Responsibilities

- a. **Assign Roles:** Clearly define roles and responsibilities for various stakeholders involved in the M&E process, including staff of the Board of Mwingi Municipality/ County Government of Kitui, community members, and external evaluators.
- b. **Capacity Building:** Provide training and resources to enhance the skills of staff and stakeholders involved in M&E.

8.2.4. Carry out regular monitoring

- a. **Ongoing monitoring:** Implement a routine monitoring schedule to assess progress toward objectives. This should be quarterly in line with the provisions of the government.
- b. **Use of technology:** Utilize information and communication technology (ICT) tools for real-time data collection and monitoring, such as Geographic Information Systems (GIS) and mobile data collection applications.

8.2.5. Evaluation

- a. **Mid-term and final evaluations:** Conduct periodic evaluations to assess the effectiveness, efficiency, and impact of municipal plans. Mid-term evaluations can provide insights for adjustments, while final evaluations assess overall success.
- b. **Participatory evaluation:** Involve community stakeholders in the evaluation process to gather diverse perspectives and enhance ownership. The Urban Areas and Cities Act and other relevant public participation laws already provide the framework for doing these participation.

8.2.6. Reporting and communication

- a. **Transparent reporting:** Develop regular reports that summarize findings from monitoring and evaluation activities. These should be shared with stakeholders and the public to promote transparency and accountability.
- b. **Feedback mechanisms:** Establish channels for stakeholders to provide feedback on M&E findings, which can inform future planning and decision-making.

8.2.7. Learning and adaptation

- a. **Lessons learned:** Analyse the M&E results to identify lessons learned and best practices.
- b. **Adaptation:** Use the insights gained from M&E activities to make informed adjustments to policies, programs, and future planning efforts.

8.2.8. Implementation steps

1. **Design the M&E framework:** Outline the M&E process, including objectives, indicators, data collection methods, and roles.
2. **Develop an M&E plan:** Create a detailed plan that includes timelines, resources, and specific activities for monitoring and evaluating each element of the municipal plan.
3. **Conduct training:** Train relevant stakeholders on the M&E framework, practices, and tools to ensure effective implementation.
4. **Implement the M&E activities:** Start the monitoring and evaluation activities according to the planned schedule.
5. **Review and revise:** Periodically review the M&E process and make necessary adjustments based on feedback and changing conditions.

By establishing a robust monitoring and evaluation mechanism, the Board of Mwingi Municipality shall be able to enhance its accountability, improve governance, and better serve its communities.

8.2.9. Institutional framework for implementation of the plan

This IUDeP will be reviewed bi-annually by the Board of Mwingi Municipality taking stock of internal and external environment changes. The process is aimed at identifying opportunities for improvement and challenges with an ultimate goal to inform strategic direction and budget formulation in the course of implementation of the plan. The review will be based on evidence and data collected during implementation.

Regular evaluations shall be undertaken throughout the plan period in line with the Board of Mwingi Municipality evaluation schedule. The Board of Mwingi Municipality is expected to develop this schedule once it has started its operations. Evaluations shall be continuous to determine levels of implementation of the plan. This will enable the leadership of Board of Mwingi Municipality to take corrective action where necessary and ensure public accountability.

Evaluation input will be founded on the examination of performance contracts and departmental work plans.

Key direction during both monitoring and evaluation shall be to determine the following:

- i) Whether goals and objectives are being met;
- ii) Whether timelines in the implementation of proposed activities are being met;
- iii) Whether there is a need to readjust timelines;
- iv) Whether personnel and infrastructure are available to meet strategic plan requirements;
- v) Whether the resource base is adequate to complete the strategic plan; and
- vi) Whether the strategic goals require revision.

REFERENCES

- World Health Organization.** (2022). *Guidelines for drinking-water quality: Fourth edition incorporating the first and second addenda.* World Health Organization: Geneva
- Government of Kenya.** (2010). *The Constitution of Kenya 2010.* Government Printer: Nairobi
- Government of Kenya.** (2007). *Kenya Vision 2030.* Ministry of Planning and National Development: Nairobi
- Government of Kenya.** (2016). *National Spatial Plan 2015-2045.* Ministry of Lands and Physical Planning: Nairobi
- Government of Kenya.** (2017). *Sessional Paper No.1 of 2017 on National Land Use Policy (NLUP).* Ministry of Lands and Physical Planning: Nairobi
- Government of Kenya.** (2019). *Physical and Land Use Planning Act (PLUPA) 2019.* Government Printer: Nairobi
- Government of Kenya.** (2011). *Urban Areas and Cities Act (UACA), 2011.* Government Printer: Nairobi
- Government of Kenya.** (1999). *Environmental Management and Coordination Act (EMCA) 1999.* Government Printer: Nairobi
- Government of Kenya.** (2007). *Physical Planning Handbook 2007 version.* Ministry of Lands and Physical Planning: Nairobi
- County Government of Kitui.** (2023). *Kitui County Integrated Development Plan (CIDP) 2023-2027.* County Government of Kitui: Kitui
- County Government of Kitui.** (2023). *The Kitui Promise.* County Government of Kitui: Kitui.
- Kenya National Bureau of Statistics.** (2019). *Kenya Population and Housing Census Volume I.* KNBS: Nairobi
- Kenya National Bureau of Statistics.** (2019). *Kenya Population and Housing Census Volume II.* KNBS: Nairobi
- Kenya National Bureau of Statistics.** (2019). *Kenya Population and Housing Census Volume III.* KNBS: Nairobi
- Kenya National Bureau of Statistics.** (2019). *Kenya Population and Housing Census Volume IV.* KNBS: Nairobi

NEWS GENERAL

MISSION FINANCING

'America pledges Sh14bn to support Kenya Police in Haiti

A series of meetings are planned in Kenya to discuss the way forward

CVRUS OMBATI
@TheStarKenya

The US government will provide Sh14.5 billion (\$100 million) to the Kenya Police-led peacekeeping effort in Haiti.

Secretary of State Antony Blinken indicated Friday that the Biden administration is keen on ensuring that the police mission is successful.

The support will include logistics, intelligence, communication and medical assistance.

"The people of Haiti cannot wait much longer. Improved security must be accompanied by real progress to resolve the political crisis," Blinken said.

Blinken told a ministerial meeting that the Biden administration would ask Congress for \$100 million to support the mission, which includes both troops and police.

"With our support, this mission can deploy within months, and we really have no time to lose," he told the meeting, which included Haitian Prime Minister Ariel Henry.

He said the mission could create "space" for Haiti to resolve its political crisis. The country has not held elections since 2016. "The support mission will not be a substitute for political progress," Blinken said.

The peacekeepers will not oper-



Haiti Prime Minister Ariel Henry and President William Samoil Ruto at the Kenyan Mission in New York, US. /PCS

ate under a UN flag, but the United States is leading efforts for a Security Council resolution to authorise the effort.

A resolution co-sponsored by the United States and Ecuador should be finalised next week, said officials, who expected "very strong support" on the Security Council.

The announcement by the Biden administration was made hours after Blinken held a meeting with Kenyan Foreign Affairs CS Alfred Mutua alongside other officials from the United Nations (UN) at the sidelines of the UN General Assembly (UNGA).

Blinken hinted that the purpose of the meeting was to increase support for the Kenya-led expedition, which has not yet received approval from the UN Security Council.

The focus of the behind-closed-doors conference was on the officers' logistical needs and the early findings of the Kenyan police team's visit to Haiti in August.

This comes as a series of meetings are planned in Kenya to discuss the issue.

A National Security Council meeting will be needed and a motion in Parliament to approve the plan to deploy the police.

The Dominican Republic has agreed to offer assistance to the proposed UN Security Mission to Haiti.

President William Ruto made the revelation Tuesday last week after meeting with the Dominican Republic president Luis Abinader while in New York. "Resolved to work together to bring peace and stability to Haiti. Grateful Dominican Republic will establish a mission in Nairobi," Ruto said.

US President Joe Biden commended Ruto's willingness to deploy police officers to Haiti to support and train the Caribbean nation's law enforcement in their efforts to restore stability to the troubled nation.

Speaking at the 78th edition of the United Nations General Assembly in New York on Tuesday, which Ruto was in attendance, Biden underscored that the international body must continue to preserve peace, prevent conflict and alleviate human suffering globally.

"We embrace nations stepping up to lead new ways and to seek new breakthroughs on hard issues," Biden said.

"For example, on Haiti, the Caribbean communities facilitated a dialogue among the Haitian society. I thank President William Ruto of Kenya for his willingness to serve as the lead nation of a UN-backed security support system."

He also urged the UN Security Council to authorise the mission to the Caribbean nation, further noting that "the people of Haiti cannot wait any longer".

Last month, a Kenyan security team on an assessment mission to Haiti visited the Caribbean nation and briefed Ruto on their findings.

A series of events are planned if a decision is made to send police to combat the gang violence that has wrecked the Caribbean nation.

These include identification of the team to be recruited, training them, kitting the team, funding them and dispatching them to Haiti.

While in Haiti, the team met Henry, members of his government and leaders of the High Council of the Transition (HCT) on their tour of the country.

Kenya will lead an international police force aimed at the mission, set to begin probably in a month.

The delegation also visited the top brass of the Haitian National Police for a working session on the security situation and weakness of the agency, officials said.

They also on August 22 met the police chief Frantz Elbe. The Haitian media said the team was also taken around the capital in Port-au-Prince and other sites affected by the gangs. The force is meant to assist Haiti's understaffed and under-resourced police department, with only about 10,000 officers for the nation's more than 11 million people.

Deputy Inspector General of Administration Police Noor Adabw led the team.

From January 1 until August 15, more than 2,400 people in Haiti were reported killed, more than 950 kidnapped and another 902 injured, according to the most recent UN statistics.

GET FREE

Plea deal saves killer man lifetime in jail

GORDON OSENI A 20-year-old man who hit the head of another matanga in 2020 is lucky after a court released him in a plea bargain arrangement with the prosecution.

Boniface Nyakundi, alias Kamani, attended the night vigil at a neighbour's home where there was a funeral. As the night wore on, some fracas emerged but it got contained quickly and the dance continued.

At around 4am, amid the biting cold of the night, his victim Kennedy Ajuri, 24, sat among others around a bonfire that was lit.

Then Nyakundi suddenly emerged from nowhere and struck his head with a stick.

Ajuri fell on the fire and a melee ensued as the people around him struggled to save his life.

Meanwhile, Nyakundi took to his heels as others pursued him. He disappeared into the darkness.

It was on the night of January 30, 2020, and Nyakundi was 17 years old at the time, while his victim was 24.

A post-mortem examination of

the body of the deceased revealed that he died of severe head injury secondary to blunt trauma.

When Nyakundi was later arrested, he entered into a plea bargaining deal with the prosecution, in which he pleaded guilty to the crime of murder.

The prosecution then downgraded his crime to a lesser charge of manslaughter, which would attract a maximum of life sentence.

High Court judge Wilfrida Okwany on Thursday gave him a three year non-custodial sentence, meaning he will not be in jail.



Disco matanga /FILE

The probation report supported the sentence, saying that the man has been in remand prison since the offence occurred and has since learnt a lesson.

Being a first offender, Nyakundi's lawyer told the court he was remorseful and regrets his actions, and that he was a young man and the sole breadwinner of his family.

"I note that the accused pleaded guilty to a lesser charge of manslaughter, thereby saving this court the time and resources that would have been spent on a lengthy trial," the sentence said.

COUNTY GOVERNMENT OF KITUI



DEPARTMENT OF LANDS HOUSING & URBAN DEVELOPMENT

MWINGI MUNICIPALITY

NOTICE OF INTENTION TO PREPARE MUNICIPAL INTEGRATED DEVELOPMENT PLAN (IDDP) FOR MWINGI MUNICIPALITY (PHASE ONE)

Notice is hereby given to all residents and stakeholders in Kitui County Government that pursuant to the provisions of the County Government Act 2012 and the Urban Areas and Cities Act (No. 13 of 2011, amended, 2019) that the County Government of Kitui through Mwingi Municipality intends to prepare the Municipal Integrated Development Plan for Mwingi Municipality in Kitui County. The scope of work will cover 50.24KM².

The purpose of the Municipal Integrated Development Plan is to ensure orderly, coordinated, harmonious and progressive development and guide the development of infrastructural facilities and services and for specific control of use and development of land for socio economic development. The plan will be valid for an initial period of 5 years and is subject to periodic review.

The County Government of Kitui shall hold adequate stakeholder meetings in the jurisdiction of the Municipality before the completion of the plan. Any comments, enquiries or suggestions on the same may be done in writing within [14] Fourteen days of the publication of this notice to:

County Executive Committee Member,
Lands, Housing and Urban Development,
P.O Box 33 - 90200 Kitui
County Government of Kitui

Appendix ii: Minutes of the first stakeholder’s consultative meeting and visioning

STAKEHOLDER ENGAGEMENT CONCERNS

The visioning meeting brought together all key stakeholders in Mwingi Town. The consultant informed the stakeholders that vision was based on “what we have or what we desire to have”. The main issues that were listed by the stakeholders were as follows;

That Mwingi has;

- Land for development
- Rich agricultural background
- Natural resources such as gases and sand
- Skilled human resource
- Game reserves

Out of the listed issues, the meeting focused them into three main foundation areas of;

- Socio-cultural Diversity
- Strategic Location
- Agricultural Background



Plate 1: Chamber of commerce lady contributing during visioning meeting

The vision of Kitui was read out as ‘*Prosperous County with vibrant rural and urban economies where people enjoy high quality of life*’. This was to guide the groups to come up with vision for each of the three categories of socio-cultural, strategic location and rich agricultural background. The groups went into their groups to answer; *What Mwingi do you envision?*

Group work outcomes and Plenary

Group	Items	Vision
Group 1: Strategic Location	<ul style="list-style-type: none"> • A3 Road • Northern corridor • Mui Basin • GAI Limestone Mines • Connection with Nairobi and Mombasa Cities 	<ul style="list-style-type: none"> • Good and friendly business environment • A municipality that is able to accommodate different investors and accessible to all • A municipality offering efficient and effective services where its residents and investors enjoy quality of life drawing from its strategic location • Mwingi municipality a source of creation of wealth for every type of investor • A dynamic and cosmopolitan hub of economic growth and innovation, leveraging our strategic location and fostering climate change and sustainable development and a high quality of life for all residents • A transformed municipality to a dynamic hub of commerce and connectivity capitalizing on its strategic location to drive regional economic growth, evaluate transportation network and promote sustainable development for the prosperity of all its citizens.
Group 2: Socio-cultural Diversity	<ul style="list-style-type: none"> • Incorporating other cultures such as Arabs and Somalis to integrate 	<ul style="list-style-type: none"> • An inclusive and cohesive urban area that promotes economic development • An enabling municipal environment that is inclusive

	<ul style="list-style-type: none"> • Inclusivity in our society • Cohesion of all the other tribes • Accommodative • Enabling environment • Equal opportunity, equity • Multi-ethnic/cultural-cohesiveness • Safeguards to preserve our own cultures • Talent development/ Art centres-promotion of talents, Kamba talents and trade • Encourage intermarriages • Documentation of heritage centres, ICT hub, vernacular station 	<ul style="list-style-type: none"> • A symbiotic municipality that accommodates all diverse cultures • A symbiotic municipality where diverse socio-cultural mix and ecosystem coexists in dignity and in harmony
<p>Group 3: Rich Agricultural Background</p>	<ul style="list-style-type: none"> • Livestock yard • Controlled movement of livestock within the municipality • Increase veterinary officers • Increase security on livestock • Zest to controlled keeping of livestock whose products and bi-products will be of nutritional value, economics value and value addition • Empowering agricultural activities to improve economy of the people and 	<ul style="list-style-type: none"> • Empowering agricultural activities to improve the economy of the people, value addition of the agricultural products and bi-products to ensure food secure municipality

	value addition of the products to ensure food secure municipality.	
--	--	--

Group Members per Foundational category

Group	Names
Group 1: Strategic Location	1. Simon Mutwi
	2. Kasati Kioko Mailu
	3. James Matei
	4. Samuel Mutemi
	5. Bryan Kosyama
	6. Carole Kamote
	7. Domnic Nguu
	8. Mary Sume
	9. John Kyalo
	10. Geoffrey Musyoka
	11. Muthengi Musyoka
	12. Mary Nzilani
	13. Beatrice Malulo
	14. Lewis Mutati
	15. Ngiwi Mwsya
	16. John Syengo
	17. Paul Muriithi
	18. Moses Musyoka
	19. George Musyoka
	20. Peter Munyoki
	21. Julia Simon
	22. Rosy Mwasi
	23. Francis Mutua
	24. Rhoda Mwende
	25. Charles Mungao
	26. Aaron Kasyoki
	27. Bernard Oyugi
	28. Roland Kimotho
	29. Stephen Muvergei
	30. Japheth Nzara
	31. Sammy Munyithia
	32. Jacob Kimanzi
	33. Stephen Kitheka
	34. Herick Mwangangi
Group 2: Socio-cultural Diversity	1. Kalekye Kavali
	2. Tabitha Mwende
	3. Elizabeth Kasali
	4. Kyalo Makau
	5. Dorcus Katila

	6. Annah Kimanzi
	7. Peter Ngei
	8. Mwikali Mwenga
	9. Felisters Mwindu
	10. Jane Kanini
	11. Serah Muui
	12. Carolyne Kyandui
	13. Dorcus Nzakyu
	14. Eliza Mungai
	15. Faith Mkoni
	16. Sharon Kimanzi
	17. Denis Zakayo Simon
	18. Kenneth Mutia
	19. Mwikya Matiti
	20. Hon. Harrison Maoki
	21. Kimanzi Mwendwa
	22. Geoffrey Mukulo
	23. Julius Kitengu
	24. Maluki Mutunga
	25. Esther Nziu
	26. Samuel Mburi
	27. Agym Mwaniki
	28. Charles Mwavoki Muli
	29. Faith David
	30. Moses Kiteme
Group 3: Rich Agricultural Background	1. Pastor Timothy Kilonzo
	2. Mwikali Muli
	3. Carole Kitheka
	4. Kimanzi Maluki
	5. Archbishop Nyerere
	6. Charles Mulatya
	7. Peninah Ndanu
	8. Ally Mutuku
	9. Simon Kaviu
	10. Abdalla Ngonga
	11. Dorcus Mwendwa
	12. Hon. Ben Sila
	13. Peter Nguli
	14. Rachel Kiteme
	15. Jacob Munyoki
	16. Stephen Munene
	17. Nelson Kilonzi
	18. Mutinda Katuku
	19. Wycliff Kioko
	20. Peter Musyo
	21. Munyoki Kilonzi

	22. Grace Wambwa
	23. Elizabeth Mulei
	24. Raphael Mbuvi
	25. Julius Muneeni
	26. Gideon Kithendu
	27. Pastror Peter Kenza
	28. Mbiti Kasiva
	29. Domnic Nthenge
	30. Philip Nthumo
	31. Alice Mumba
	32. Isaac Mutati
	33. Titus Kivuva
	34. Joan Kavutha
	35. Kyamata Felix
	36. Roffu Mulwa
	37. Michael Kamwele
	38. Anne Kyendwa
	39. John Mbai

Memorandum Presentation



Plate 2: *Memorandum by Mwingi Professionals*

The visioning exercise ended with different sectors presenting their memorandum to be included in the IDeP of Mwingi. The following sectors were present;

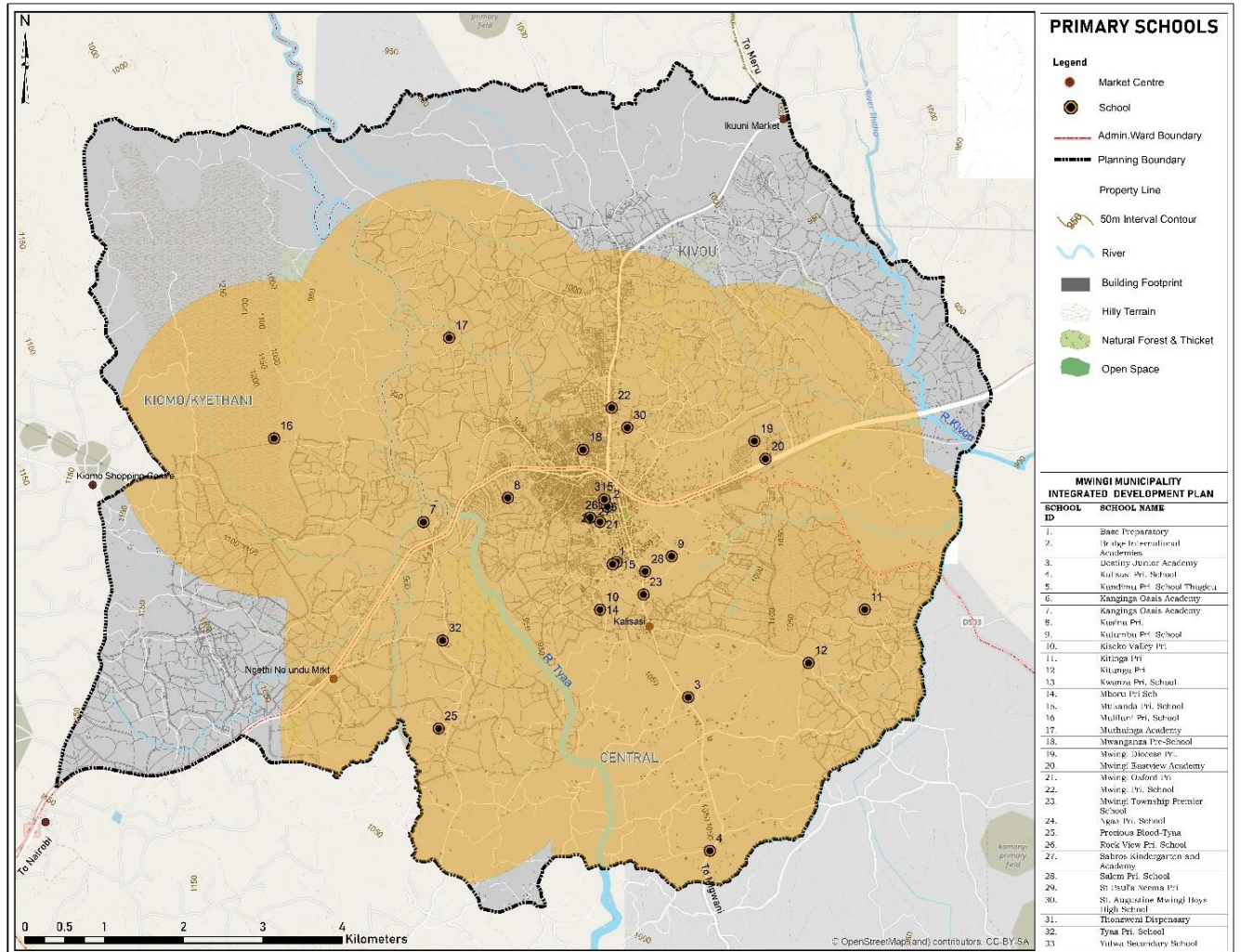
- Hawkers
- Retails shop owners
- Chemists
- Garage/ Jua Kali
- Boda Boda
- Saloons

- Mwingi Professionals

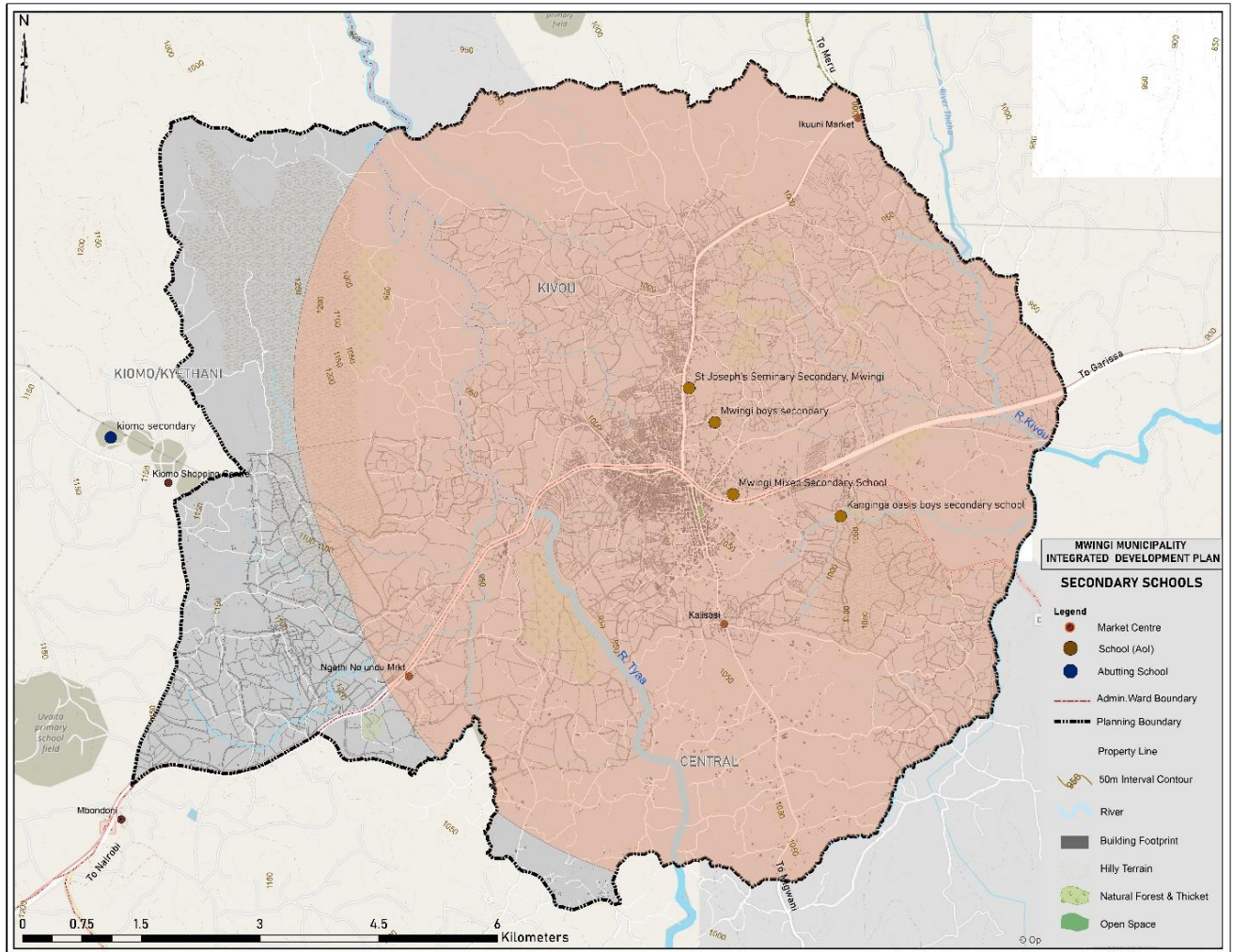
Closing Remarks and Way forward

- Consultant assured the stakeholders that the visions from the three areas will be combined to come up with one all-encompassing vision for Mwingi municipality
- Data collection to be conducted at the household levels involving demographic characteristics to help in knowing different needs for different categories of people for example an old man with white stick will be helped by inclusion services. There will also be key informant interviews with the sector heads.
- Data collection to commence on 7/6/2024 and maximum cooperation is requested from the Mwingi community members and all the stakeholders. The collection will be done in three wards of Kivou, Mwingi Central and Kyome.

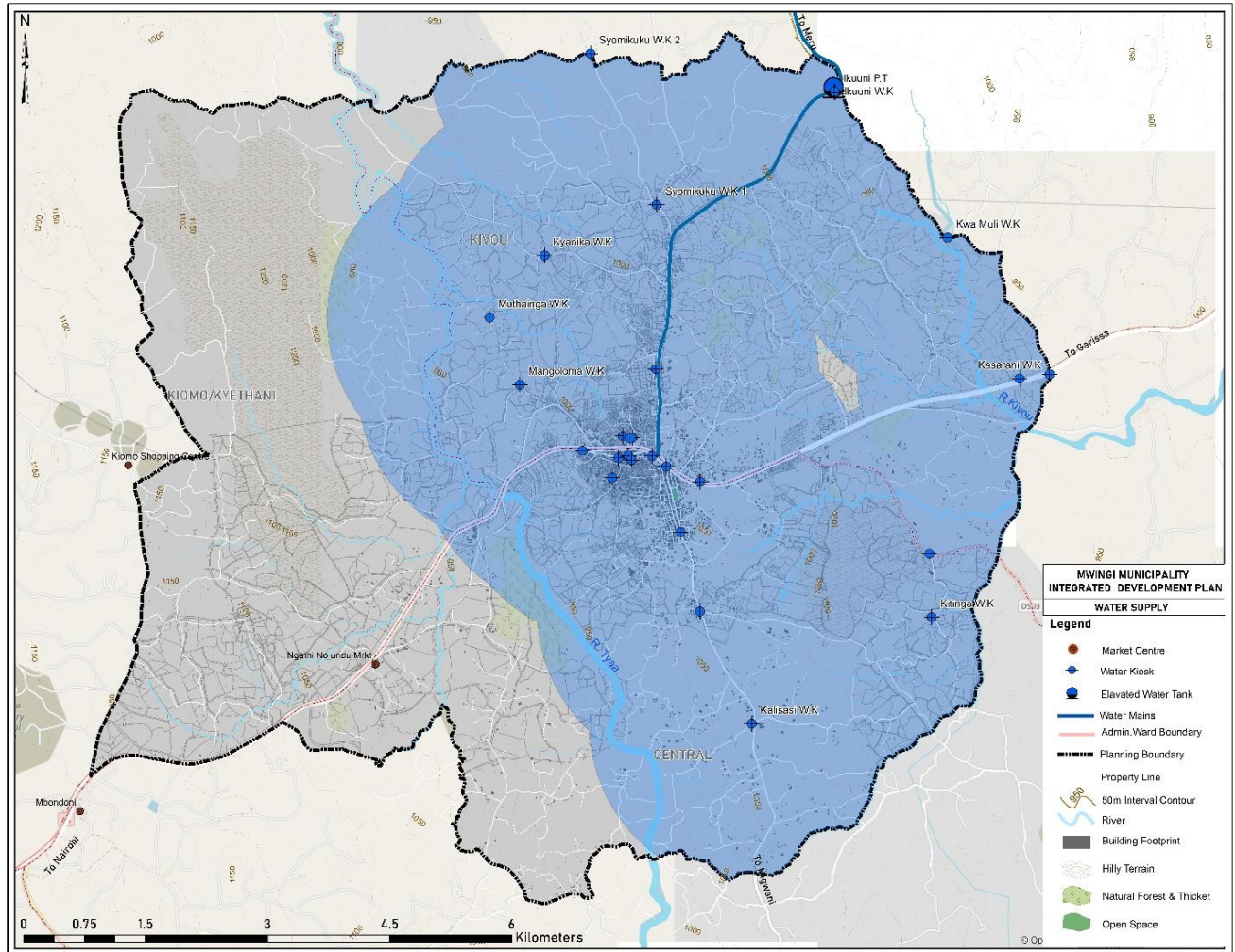
Appendix iii: Catchment areas of existing primary schools



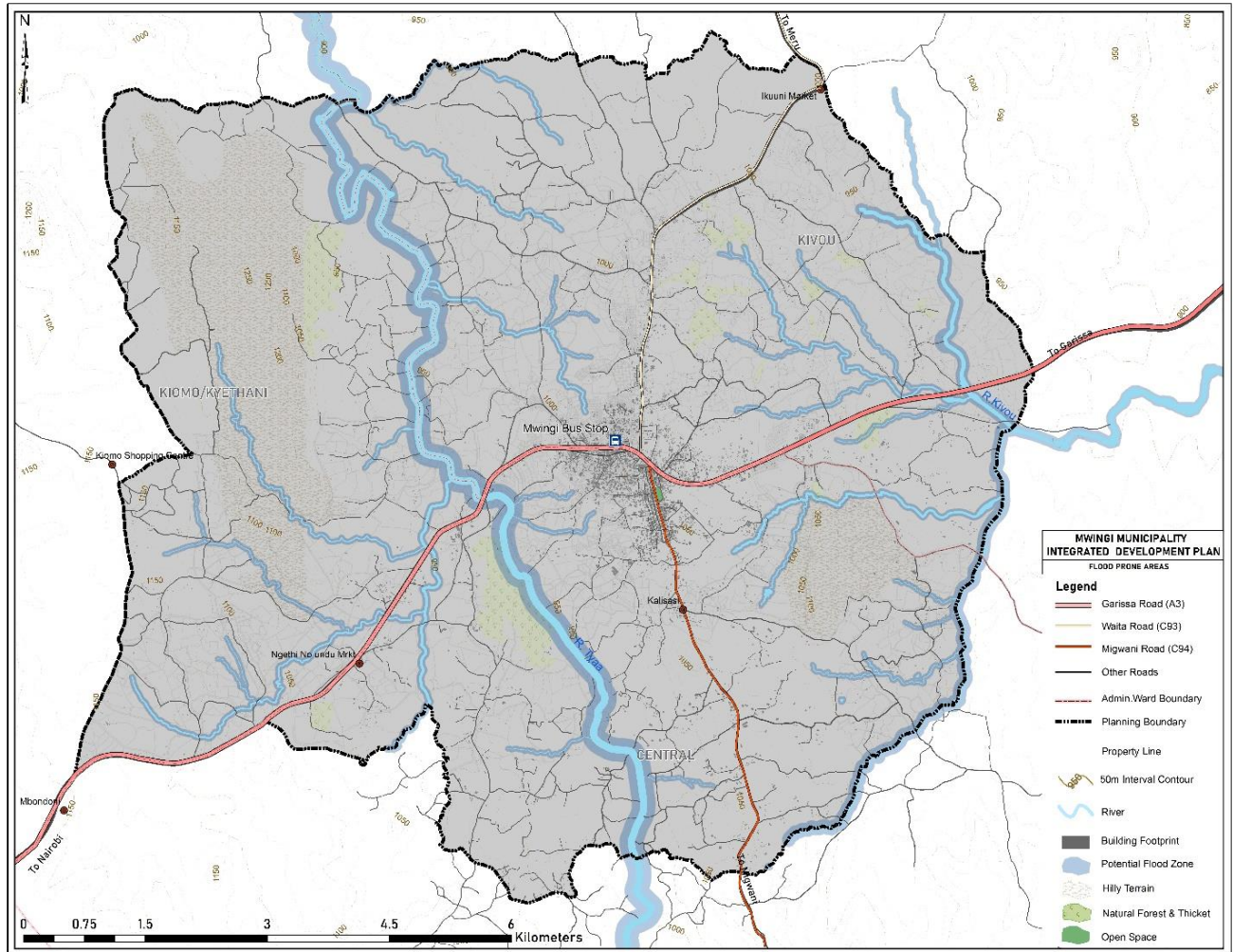
Appendix iv: Catchment areas of existing secondary schools



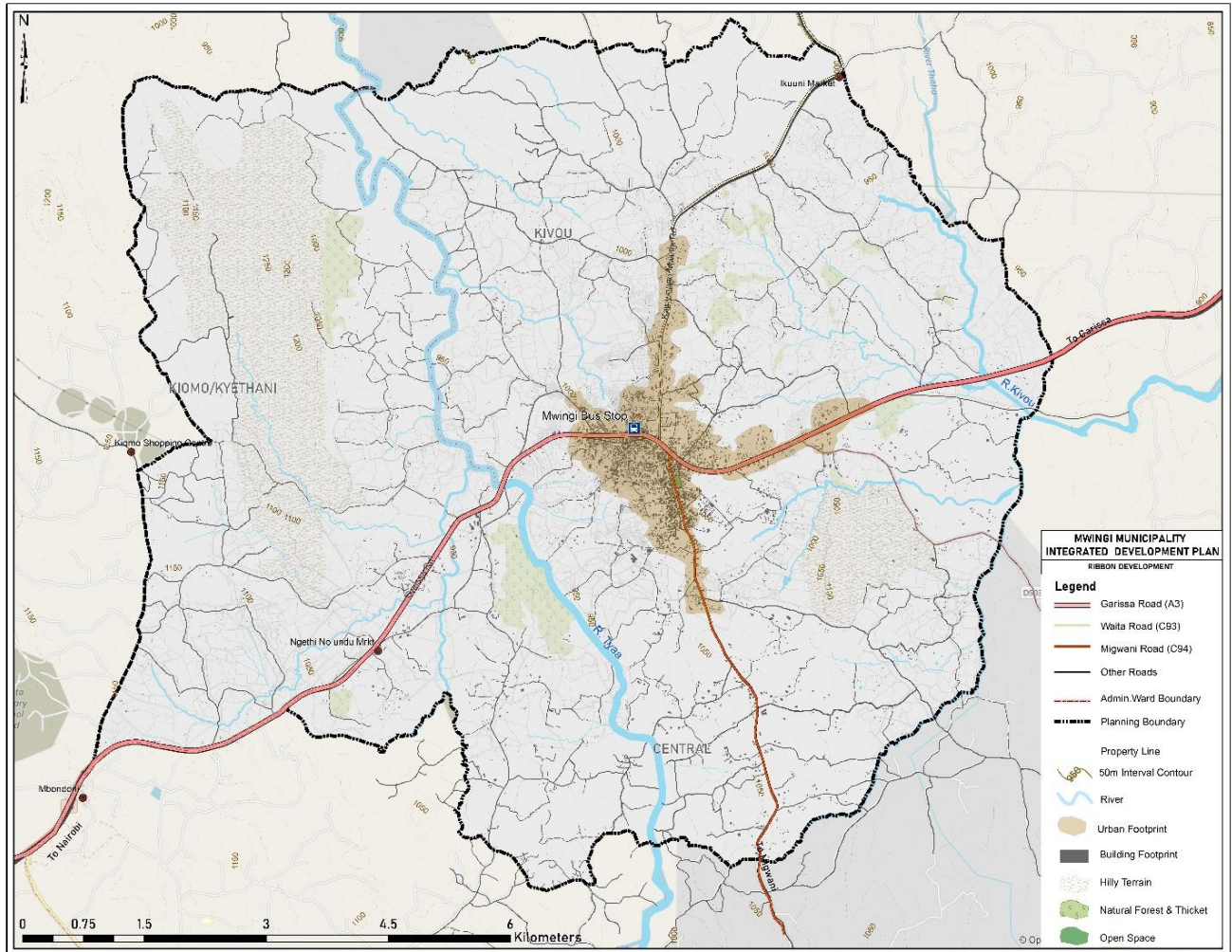
Appendix v: Catchment areas of existing water infrastructure



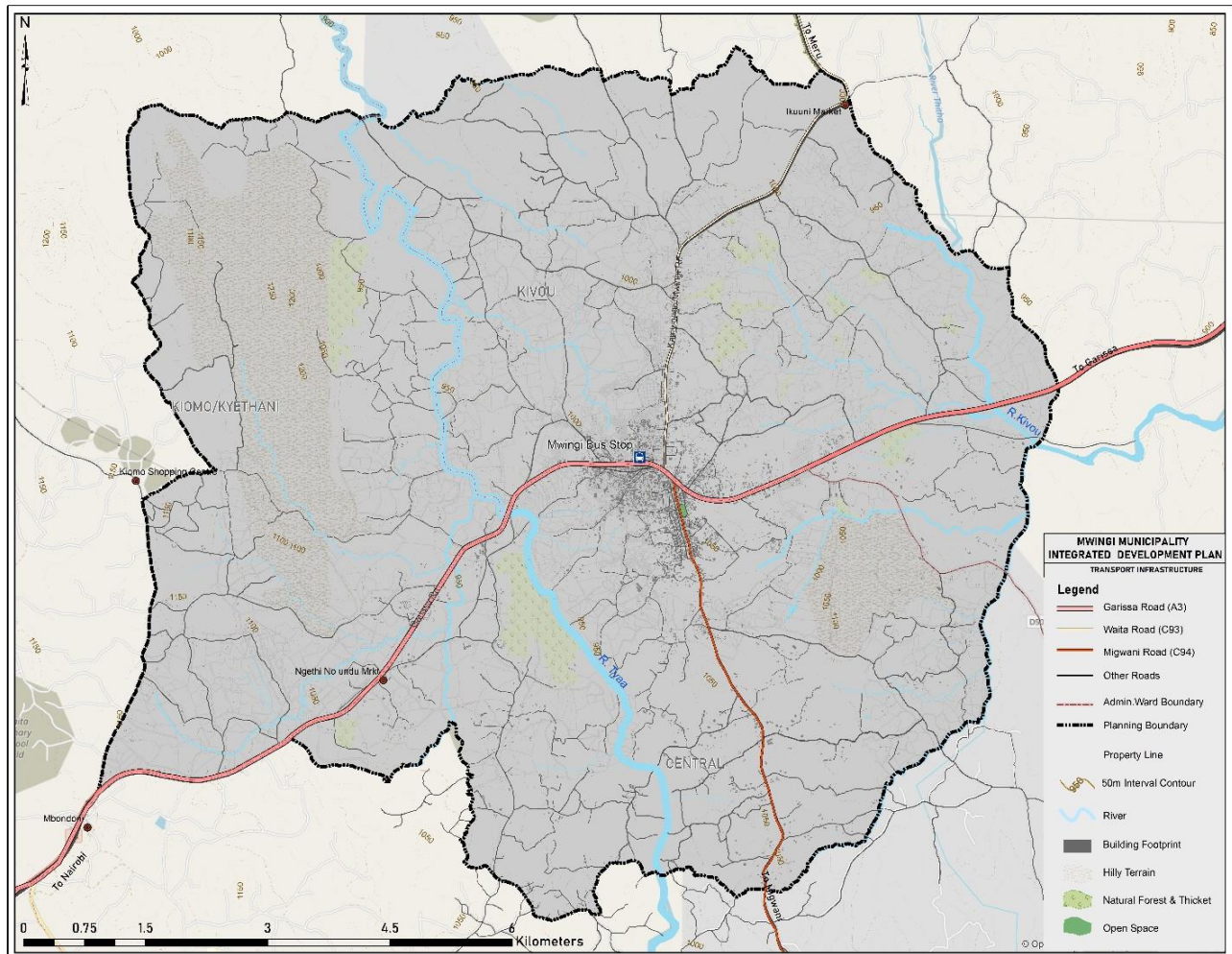
Appendix vi: Areas vulnerable to climate change-induced flooding



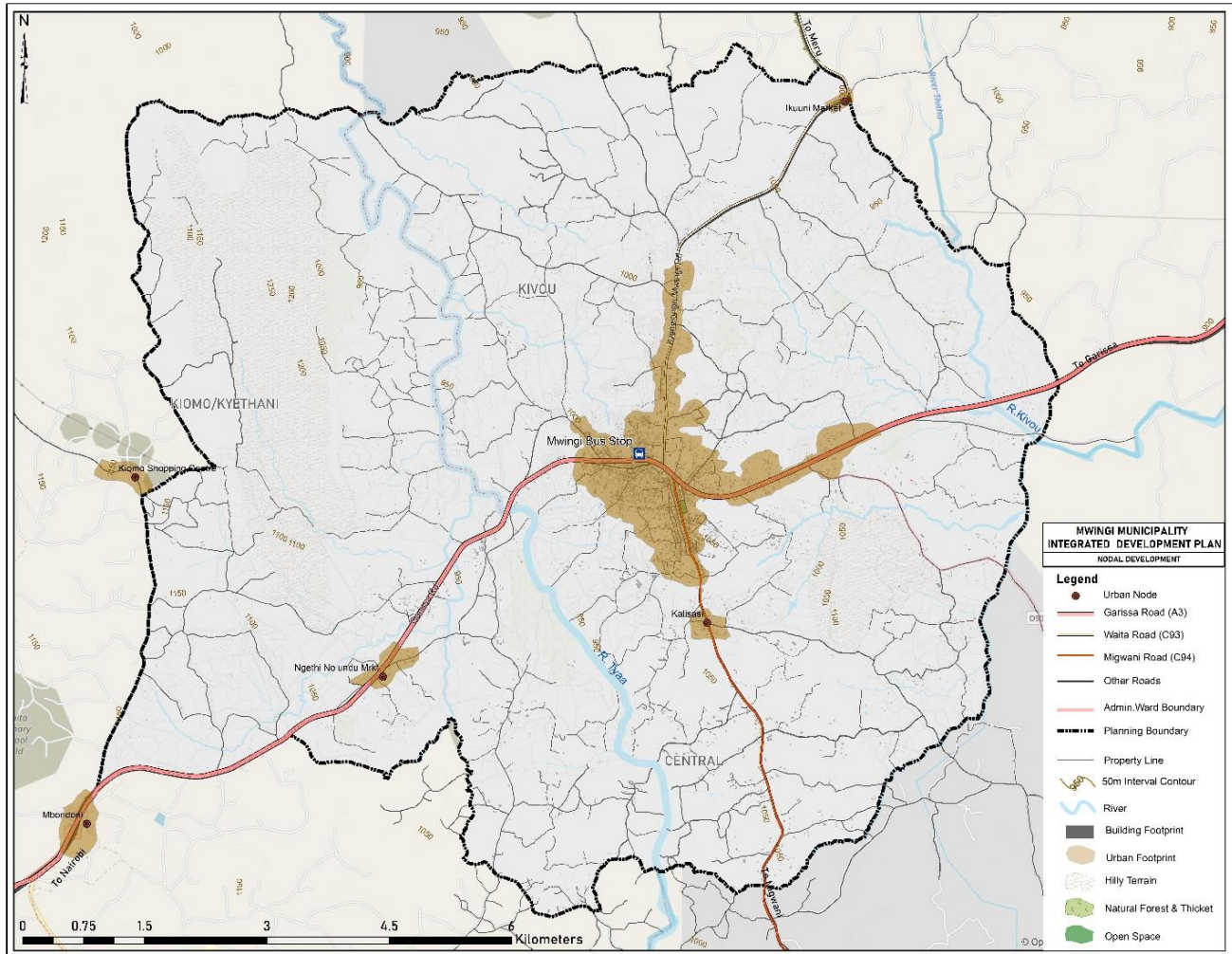
Appendix vii: Ribbon development along the main transportation corridors



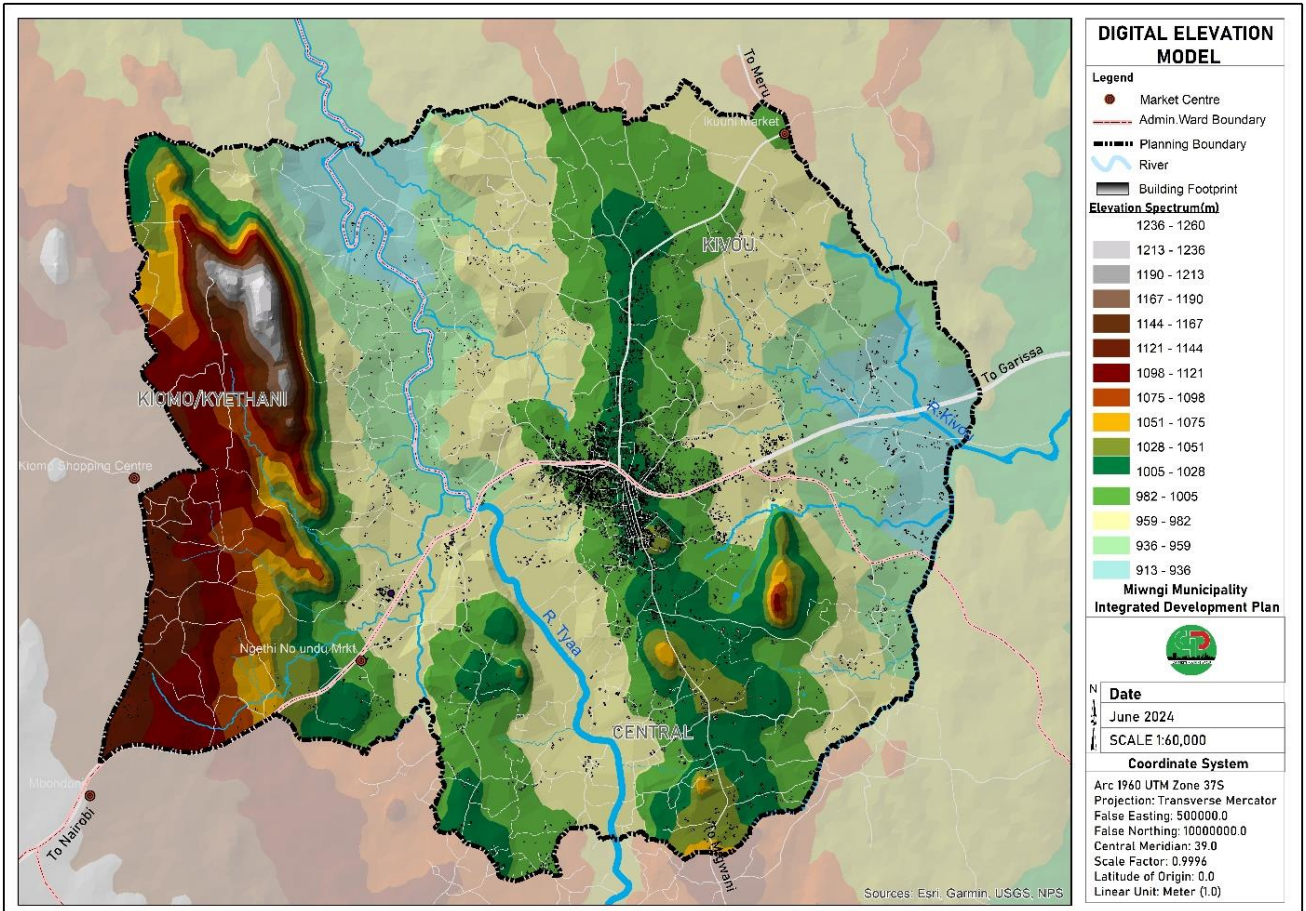
Appendix viii: Transport infrastructure



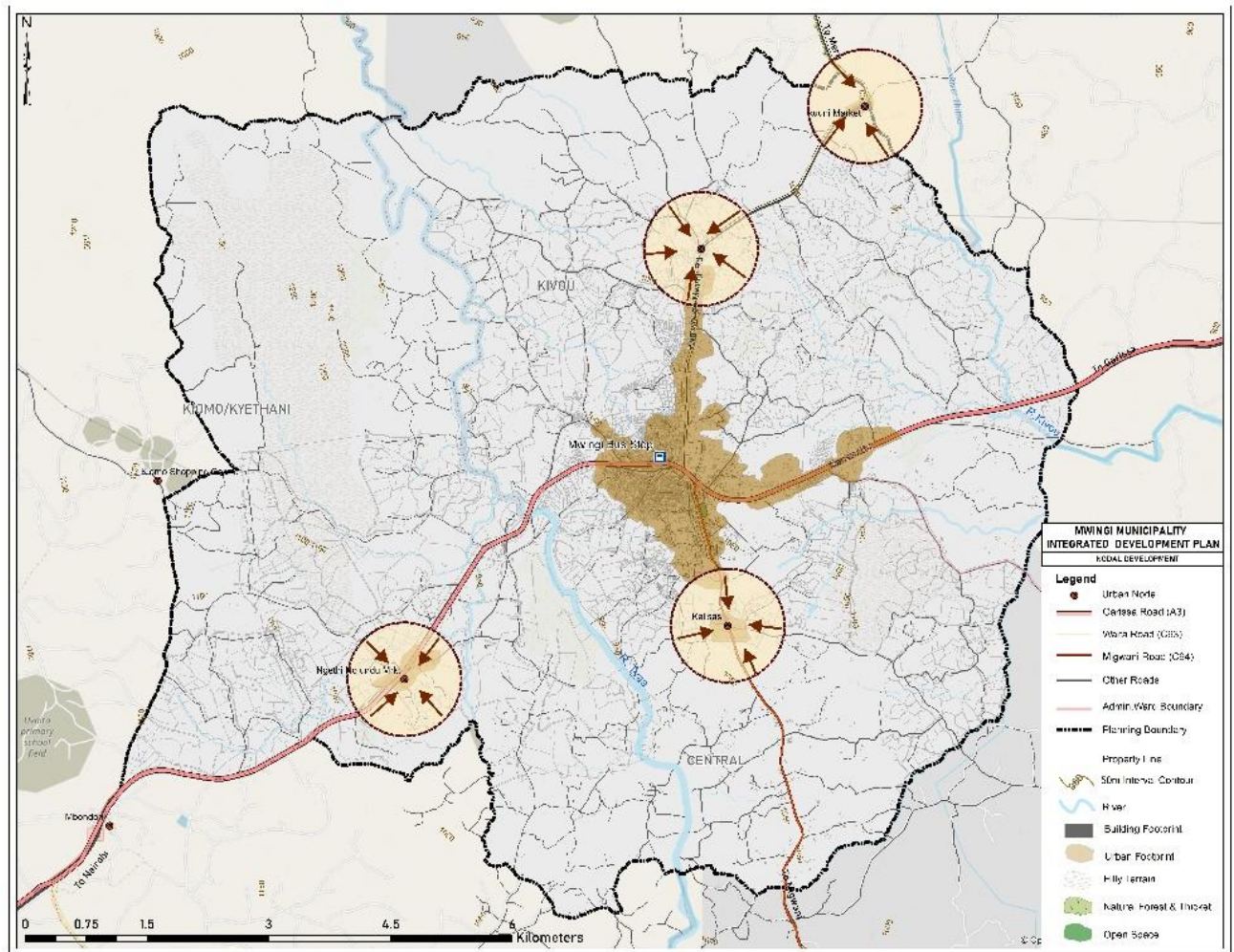
Appendix ix: Nodal development



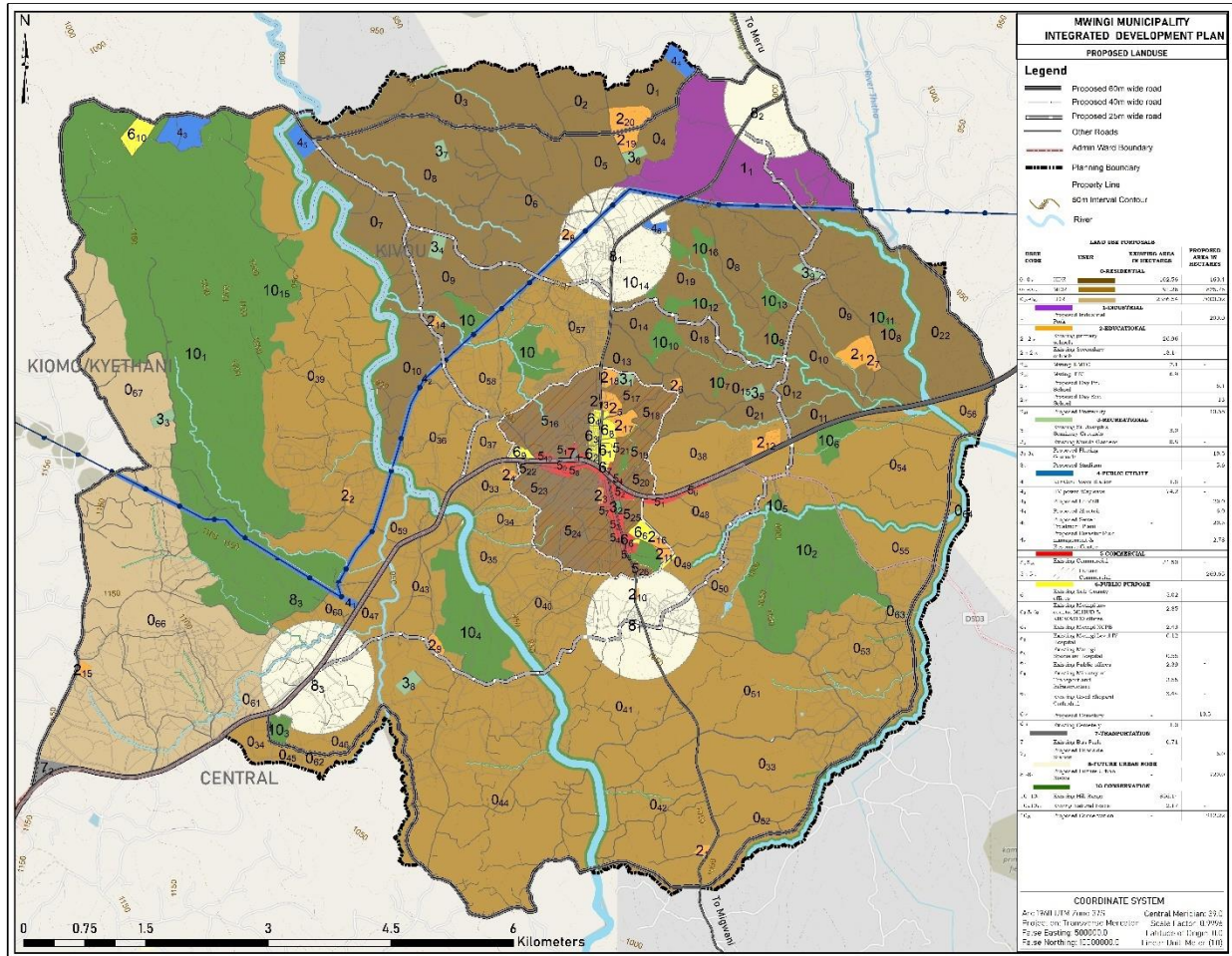
Appendix x: Digital elevation model



Appendix xi: Nodal development



Appendix xii: Proposed urban form of mwingi municipality





**Charrette Planning
Group Limited**
P. O. BOX 7444-40100
KISUMU



**County
Government of
Kitui**