

BONDO MUNICIPALITY INTEGRATED DEVELOPMENT PLAN 2023-2027



EXECUTIVE SUMMARY

The Plan is a strategic vision that defines the spatial development for the municipality. It is a medium-term Plan spanning a period of five (5) years with 3-year periodical reviews. The preparation of Bondo Municipality Integrated Development Plan is recommended under the Urban Areas and Cities Act, 2011. The purpose of this plan is to provide a municipal spatial structure that defines how its space is utilized to ensure optimal and sustainable use of land. This is imperative as it will facilitate the achievement of the land policy principles of efficiency, equity, sustainability and productivity. Further, the Plan provides strategies and policies to deal with municipal challenges including urbanization and spatial imbalances/inequalities. This municipal plan delimits the growth and development of Bondo Municipality to provide a more detailed spatial structure. Overtime, lack or poor planning has led to uncoordinated and unguided development resulting not only in duplication of efforts but also in resource wastage and unbalanced development. The Plan will thus provide a spatial framework upon which the various sectoral plans and policies will be anchored. The Plan shall provide physical planning policies to support economic and sectoral planning and also guide the preparation of sectoral development plans. The specific objectives of the Plan are: To Integrate land use and infrastructure planning to improve the built, economic and social environments of the municipality; To reduce land use conflict and enhance urban safety; To promote economic development and efficient use of land and protection of significant natural and heritage features; To provide strategies for adaptation to climate change, including reduced vulnerability to natural disasters; To create the municipality's character and ensure compactness of its spatial form and design; and to provide a framework of plan implementation, organization and administration requirement and resources for implementing the plan. The plan is divided into six chapters as outlined below. Chapter one gives the introduction and background of Bondo Municipality highlighting its location, vision, mission, objectives, scope of the plan and organization of the plan among others. Chapter two provides the policy, legislative and institutional framework. Chapter three delves into the situational analysis of the Municipality, providing a physical, social and environmental scan of the Municipality. Chapter four the Municipal planning and design concepts. Chapter five outlines the plan proposals highlighting the strategies that will be in place and the projects and programs to be implemented. Finally, chapter six presents the implementation framework, monitoring and evaluation framework.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Bondo Municipality continues to witness rapid urbanization characterized by inadequate infrastructure such as transport, water, sewerage, drainage and solid waste management. Pressure and demand for land is attributed to increasing population, infrastructural and economic development among other competing uses. Other notable challenges include urban informality, haphazard developments, over-subdivision of land, urban sprawl, and encroachment of agricultural land. In view of the above, the Bondo Municipality resolved to prepare the Integrated Urban Development Plan (IDep) (2022-2027) to guide spatial development framework for the urban area.

The IDeP was prepared in accordance with the requirements of the Physical and Land Use Planning Act (PLUPA) of 2019, County Governments Act, 2012 (amended 2020) and Urban Areas and Cities Act (UACA), 2011 (amended 2019). It seeks to increase urban prosperity and improve the quality of life by spurring economic, infrastructural, environmental and social development.

1.2 Location of the Municipality

1.2.1 Regional Context

Bondo municipality is located in Siaya county one of the counties in Nyanza region. Siaya County borders Busia County to the North, Kakamega and Vihiga County to the northeast, Kisumu County to the southeast and shares a Lake Victoria Border with Kisumu County to the south. The municipality is approximately 22km from Siaya Municipality and approximately 61km from Kisumu City; Nyanza region headquarters.

1.2.2 Local Context

Bondo Municipality lies at the intersection of Kisian - Bondo - Usenge (B10) and Luanda Kotieno- Bondo - Siaya (B9) Roads in Bondo Sub-County, Siaya County. The municipality covers the Bondo Township and its immediate environs including Jaramogi Oginga Odinga

University of Science and Technology, Awelo, Bar Opuk, Dunya, Yieke, Ochot, Bar Kowino and Ratiya. It occupies approximately 83.83 km². Administratively, it covers parts of North, South and West Sakwa Wards. North Sakwa ward contributes the largest area at 43.87 km² while South Sakwa ward contributes the least area at 5.93 km². The following maps show the extent of the area under planning and the national, sub-county and ward location context;

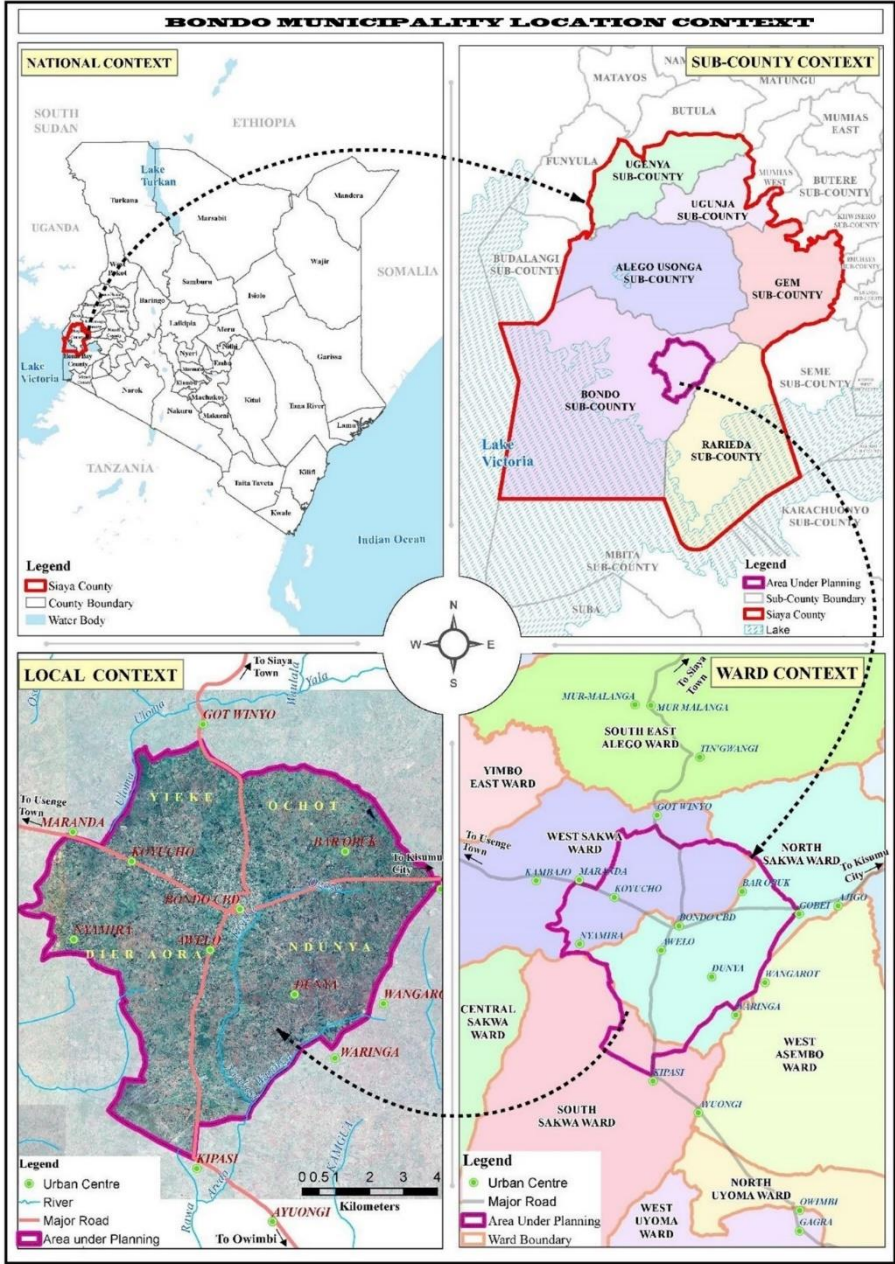


Figure 1. 1: Location context

1.3

Vision

To be a leading Municipality in the region through provision of quality, timely, sufficient and appropriate services to the residents of Bondo Municipality

1.4 Mission

To provide quality service that is affordable, accessible, acceptable, sustainable, resilient and effective to all without any discrimination.

1.5 Objectives

1.5.1 Specific objectives

- To Integrate land use and infrastructure planning to improve the built, economic and social environments of the municipality.
- To reduce land use conflict and enhance urban safety
- To promote economic development and efficient use of land and protection of significant natural and heritage features.
- To provide strategies for adaptation to climate change, including reduced vulnerability to natural disasters
- To create the municipality's character and ensure compactness of its spatial form and design
- To provide a framework of plan implementation, organization and administration requirement and resources for implementing the plan

1.6 Scope of the Plan

The IDeP covers a detailed analysis of the sectoral and spatial structure of Bondo Municipality. It covers a land surface area of 83km². The Plan is a medium-term spatial planning framework and development strategy with a planning horizon of five (5) years from 2023-2029 and shall be subject to five (5) year reviews. It discusses the current situation in Bondo municipality highlighting the sectoral and thematic constraints that inhibit the economic vibrancy, environmental sustainability and community development. The Plan

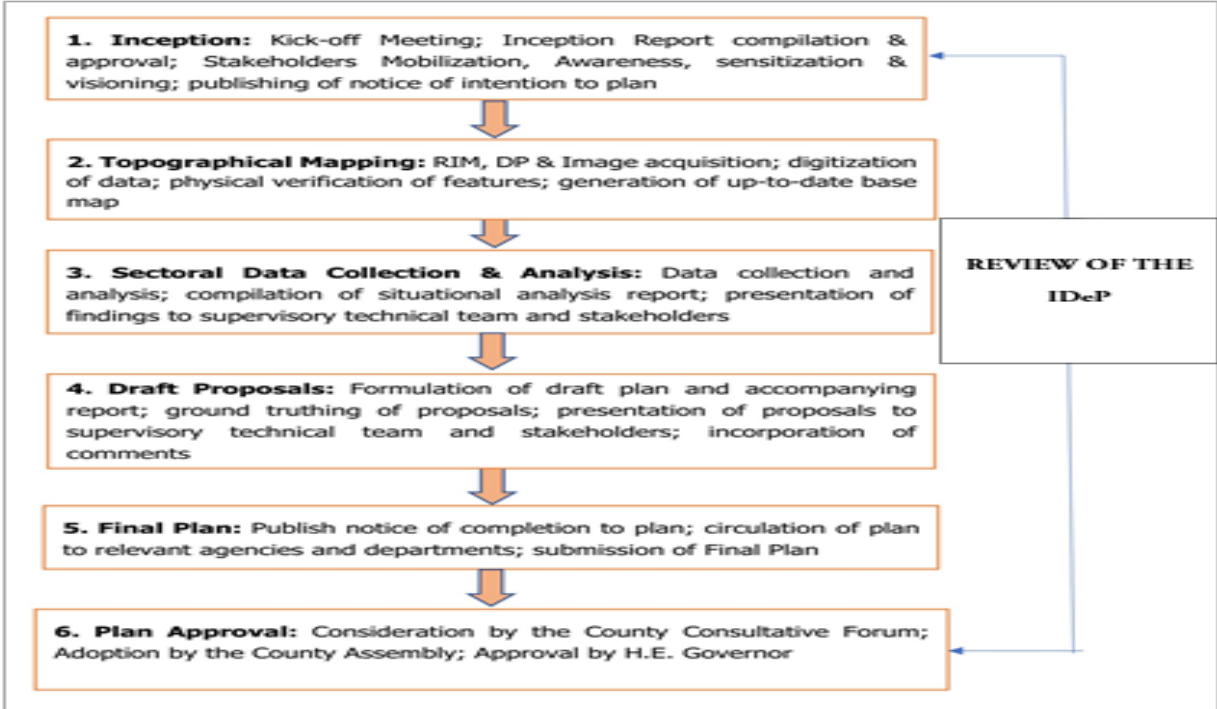
offers the Spatial Development Strategy for the municipality that depicts all existing physical features, spatially illustrates development projects. It aims to address pertinent issues such as human settlement patterns, urban and rural development, utilization of natural resources, transport and infrastructural development and attracting suitable investment in the municipality.

1.7 Organization of the Plan

This plan is organized into ten (10) chapters, namely: Introduction –provides the background to the plan including the vision, objectives, scope and methodology. Legislative, policy and institutional framework; planning area; economy, urban infrastructure; Housing and social infrastructure; Emerging planning issues; plan proposals; and Implementation framework.

1.8 Methodology

The process, rationale and framework for spatial planning is provided for by the Constitution of Kenya 2012, County Government Act 2012, Physical Planning Act cap 286 and other legislations. The process was thus participatory and involved open forums which brought on board key stakeholders and professional experts. Synthesis and evaluation of the plan was carried out through a participatory process. In conclusion, the process was holistic to accord an inclusive and integrated strategic development plan that articulates the Bondo Municipality;s vision and development agenda. The planning process is summarized in the diagram below: -



CHAPTER TWO

2.0 POLICY, LEGISLATIVE AND INSTITUTIONAL FRAMEWORK

2.1 Overview

Urbanization has become one of the world's problems that must be addressed properly. Problems that arise due to urbanization are poor social amenities, overstretched physical infrastructure, poor housing and imbalanced financial flow. The government of Kenya has put in place a number of policies to address these problems. The instruments addressing these problems include:

2.2 Policy Framework

2.1.1 The Kenya Vision 2030

This is a Kenya development blueprint document developed in 2008 to provide the guideline for the improvement of the country into a newly industrialized, middle-income country by 2030. The document envisions that the developments will provide a high quality of life to all its all Kenyan citizens in a clean and secure environment. The Kenya Vision 2030 recognizes the need for 'an adequately and decently housed nation in a sustainable environment' as an integral part of transforming the country into a newly industrializing middle-income country by 2030. The document outlines three initiatives aimed at enhancing equity in accessing adequate housing. These include housing development initiative for the production of 200,000 units annually by the year 2012 up from 35,000 units in 2008 and mortgage financing mechanisms to create a variety of housing investment facilities to provide affordable financing Kenyans. The other initiative related to the enactment of housing legislation to consolidate all housing related legislations into one law.

2.1.2 National Housing Policy

The policy was developed in 2004 and reviewed in 2010 for the purpose of alignment with The Constitution of Kenya 2010. The policy was developed with a broad objective of providing adequate shelter and a healthy living environment at an affordable cost to all socio-economic groups in Kenya in order to foster sustainable human settlements. The policy identifies widespread poverty, rapid urbanization, inadequate supply of urban land suitable for housing development, limited access to housing finance, lack of proper management and maintenance of existing stock, lack of infrastructure and social facilities,

inappropriate legislative and institutional framework as the main causes of poor housing conditions.

2.1.3 National Land Policy (Sessional paper No. 1 of 2017)

This policy was developed to guide the country towards efficient, sustainable and equitable use of land for prosperity and posterity'. It provides the overall framework and defines the key measures required to address the critical issues of land administration, land use planning, restitution of historical injustices, environmental degradation, conflict resolution, proliferation of informal settlements, outdated legal and institutional frameworks, and land information management. The key principle in the policy is land use planning which is recognized as essential for the efficient and sustainable utilization and management of land and land-based resources throughout the country.

2.1.4 National Urban Development Policy (NUDP)

This policy was developed in 2012 with the aims to strengthen development planning, urban governance and management, as well as to promote urban investment and delivery of social and physical infrastructure in all urban areas under a devolved system of governance. The policy seeks to promote the global competitiveness of Kenyan urban areas through the promotion of Local Economic Development (LED). This is envisaged to achieve through the promotion of local physical and economic planning as well as the creation of a framework for the promotion of LED and public private partnerships in urban development. The policy also seeks to promote agglomeration economies through the development of new specialized urban core areas and metropolitan regions to spearhead growth and investment in thematic areas and sectors of the national economy.

2.1.5 National Environment Policy

The policy was developed in 2013 with an aim at integrating environmental aspects to the national development planning process. It gives comprehensive guidelines for achieving sustainable development with regard to the effects of development on the environment. The provisions are crucial in ensuring the development of environmentally sustainable human settlements.

2.1.6 National Water Policy

The was developed in 2007 to guide the provision of safe water for household consumption and sets out the framework for the water sector reforms to overcome the institutional and operational weaknesses in the sector. The provisions in this policy are useful in planning for water and sanitation services within the affected informal settlements.

2.1.8 The National Spatial Plan (2015-2045)

This is a long-term development plan prepared in 2015 for the whole country. It gives the direction and the trend of spatial development for the whole territorial boundary up to 2045. The Plan provides national physical planning policies aimed at guiding micro-level physical development plans. The plans envisaged under this project would be prepared in furtherance of the broad provisions of the national spatial plan.

2.1.9 The Sustainable Development Goals (SDGs) of 2015

These are 2030 Agenda for Sustainable Development, which was ratified by all UN member states at the 2015 United Nations General Assembly. They are 17 in number with 169 targets which are critical to the world's pandemics. The plan prepared should therefore should therefore address issues like; eradication of extreme poverty, tackling global inequality and climate change, promoting sustainable urbanization and industrial development, protecting natural ecosystems, and fostering the growth of a peaceful and inclusive communities and governing institutions.

2.1.6 Siaya County Integrated Development Plan 2018-2022

Siaya County Integrated Development Plan 2022-2027 is a policy blueprint that will guide development in the county between 2022 and 2027. The document debates county's spatial development framework, natural resource assessment, key county development priorities, strategies and programmes to be implemented in the next five years. This plan is therefore prepared in line with the CIDP in term of development strategies and strategies.

2.2 The Legal Framework

2.2.1 Constitution of Kenya, 2010

This is the supreme law of the Republic of Kenya. The constitution provides the basis and the principles for planning. In the Fourth Schedule, Part 1 (21) it decrees to the National Government to set the general principles of land planning and the coordination of planning

by the counties and in Fourth Schedule, Part 2 (8) its tasks County Governments to undertake County planning and development. It further gives the National Land Commission the function to monitor and have oversight responsibilities over land use planning throughout Kenya under Article 67 (2)(h).

Article 43(1)(b). Besides, the bill of rights under the constitution states that every person has the right to a clean and healthy environment (42); the highest attainable standard of health; clean and safe water in adequate quantities; and that every child has the right to shelter and health care (53). This affirms that housing is recognized as a basic human right in Kenya and therefore concerted efforts must be made towards the realization of this right. In fact, the constitution bestows on the state and all its organs a fundamental duty to observe, respect, protect, promote and fulfill the rights and fundamental freedoms, and hence calls upon the state to take legislative, policy and other measures, including the setting of standards, to achieve the progressive realization of these rights.

2.2.2 The Physical and Land Use Planning Act, 2019

This an act of parliament to make provision for the planning, use, regulation and development of land. This act provided for preparation of various land development plans, inter-county physical and land use development plans, integrated county physical and land use development plans, city physical and land use development plans, urban area physical and land use development plans and sectoral plans on the National Physical and Land Use Development Plan.

Section 46 (e) mandates the county government to prepare local physical and land use development plan for urban areas, municipalities and cities providing guideline framework for building and work development. Section 48 of the same act provides that all the maps prepared in the above plans should be Geographical Information System based map.

2.2.3 Urban Areas and Cities Act, 2011

The Act establishes a legislative framework for the classification of human settlements as urban areas or cities, besides laying out a framework for governance and management of urban areas and cities and participation by the residents in the same. The statute establishes city, municipalities and town management committees to oversee the affairs of each respective urban area, especially with respect to:

- Developing and adopting policies, plans, strategies and programs;
- Formulating and implementing integrated development plans;
- Controlling land use, land subdivision, land development and zoning by public and private sectors for any purpose within urban areas and cities;
- Developing a framework for the spatial and master plans for each respective city or municipality;
- Promoting and undertaking infrastructural development and services within the city, municipalities or towns; and
- Administering and regulating the internal affairs of each respective urban area, municipality or city.

In this respect, the Urban Areas and Cities Act provides the objectives and institutional framework for implementation of the plans envisaged under this project.

2.2.4 County Government Act, 2012

This Act bestows County Assemblies with the mandate to approve county development plans. The statute further establishes County Executive Committees to monitor the process of planning, formulation and adoption of the integrated development plan by a city or municipality through provisions like county integrated development plans, county sectoral plans, county spatial plans and cities and urban areas plans. The Act further stipulates that each city or municipality shall have land use plans, building and zoning plans and development control plans. In addition, the Act provides that city or municipal plans shall be the instrument for development facilitation and control within respective cities or municipalities.

2.2.5 Land Act, 2012

The Land Act, 2012 was meant to revise, consolidate and rationalize the hitherto existing land laws; to provide for the sustainable administration and management of land and land-based resources; and for connected purposes. According to the Act, there shall be equal recognition and enforcement of land rights arising under all tenure systems and non-discrimination in ownership of, and access to land under all tenure systems as expressly identified under the Constitution. This Act provides for the conversion of land from one

category to another for the various listed purposes which include land use planning. It also prohibits the allocation of public land that has not been planned and that does not have development guidelines.

2.2.6 Environmental Management Coordination (Amended) Act, 2015

This Act provides for the establishment of an appropriate legal institutional framework and procedures for the management of the environment. It recognizes that every person in Kenya is entitled to a clean and healthy environment and has the duty to safeguard and enhance that same environment. It is therefore necessary to have provisions in the spatial development framework on land to ensure the protection and conservation of the environment. The regulations for environmental control and management that the Act provides will be useful in the preparation of the integrated development plan for Bondo Municipality.

2.2.8 National Land Commission Act, 2012

The Act provides for the establishment of the National Land Commission. It states the functions, powers, composition and administrative duties of the members of the commission. The general function of the commission is the management and administration of public, private and community land.

2.2.8 Public Health Act No. 21 of 2017

This Act of Parliament makes provisions for securing and maintaining the health of the public. . The Act can be used by local authorities to prohibit informal traders from transacting business in unsanitary conditions. It sets standards to be observed by people who wish to carry out trade in foodstuffs and the conditions under which such trading should be done.

2.2.9 The Survey Act, 299

This Act makes provisions in relation to the conduct of land surveys in Kenya. The Act offers guidelines for aerial surveys for mapping purposes or other similar purposes, including procedures in carrying out such surveys. The survey work to be carried out as part of this project will proceed in accordance with the provisions of this Act.

CHAPTER THREE

3.0 SITUATIONAL ANALYSIS

3.1 PHYSIOGRAPHIC PROFILE

3.1.1 Relief and topography

Bondo Municipality is characterized by an undulating topography with a large channel of the natural system. The area under planning drains to the South towards Migwena area and also to North towards River Yala as shown in the Contours Map below. Gobei area is the highest point at 1330m above sea level. The lowest point lies at 1190m above sea level near Migwena area.

The municipality is characterized by low-lying valleys and hills and is suitable for agriculture and urban development as shown in the Contours and Slope Analysis Maps overleaf. This analysis is helpful in the planning for the establishment of infrastructure such as water and sewer as well as for the location of facilities such as airstrips that require a relatively flat area such as in Migwena.

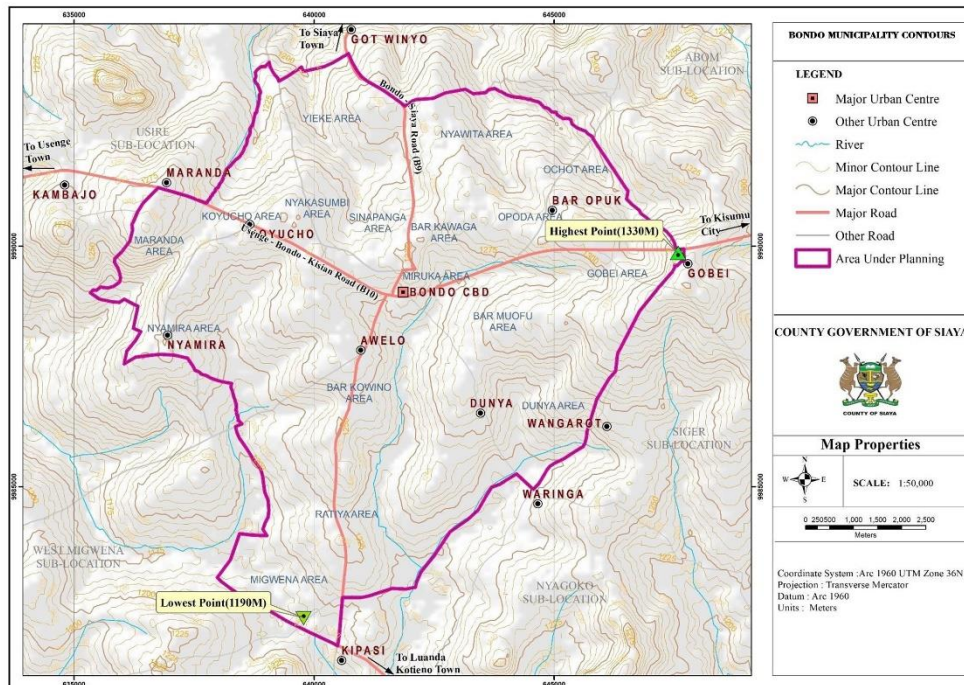


Figure 3. 1: Bondo municipality topography

3.1.2 Hydrology and drainage

Bondo municipality falls between two drainage regions that is river Yala and river Ndati which drain to Lake Victiria basin. River Yala dominates the drainage of the municipality being the major source of water infrastructure for the town.

3.1.3 Geology and soils

The Municipality is composed of Nyanzian and Kavirondian rocks, known as the Nyanza Craton, considered as oldest rocks in the country. The Nyanzian system is mainly composed of lavas and pyroclastic with minor sediments and banded ironstones. These rocks include basalts, desites and rylites, that consist of rough and fine aggregates used in the construction industry. The main soil type is ferrasols and its fertility ranges from moderate to low with most soils being unable to produce without the use of either organic, inorganic or in most cases both types of fertilizers. Most of the areas have underlying murram with poor moisture retention.

3.1.4 Climate Condition

The Municipality experiences a bi-modal rainfall, with long rains falling between March and June and short rains between September and December. The rainfall amount in the municipality ranges between 800mm –2,000mm per annum. Temperatures vary with altitude rising from 21°C to 22.50° C. Humidity is relatively high with mean evaporation being between 1,800mm to 2,200mm per annum in the municipality. The relative humidity ranges between 73 per cent in the morning and 52 per cent in the afternoon.

3.2 BIOLOGICAL ENVIRONMENT

3.2.1 Flora

Bondo municipality area mainly has grass, some shrubs and minimal number of trees similar to many areas within the County. Grass and trees grow on the seasonal floodplain and stands of acacia occur throughout the landscape of the municipality.

3.2.2 Fauna

The variety of wildlife found in the adjacent regions around the municipality which include hippopotamus (Lake Victoria, River Yala), crocodiles (Yala Swamp, parts of the Lake Victoria), and monkeys, leopards and hyenas (Got Abiero Hills).

3.3 STRUCTURING ELEMENTS

There are a number of structures that defines the developments in the municipality. The topography of the municipality is a major structuring element that define in the development. Key structuring Elements in the municipality include;

- ❖ Major Roads; Usenge-Bondo-Kisian Road (B10) tarmacked), Bondo-Siaya Road (tarmacked), Luanda Kotieno-Bondo Road (tarmacked) and Ukwala-Bondo Road (Partly tarmacked and murrum condition).
- ❖ Jooust Main Campus
- ❖ Bondo KMTC
- ❖ Bondo Sub-County Hospital
- ❖ Oginga Odinga Recreational Park among other key features

3.4 POPULATION AND DEMOGRAPHICS

3.4.1 Population size and composition.

The municipality had a population size of about 42,187 in the year 2019, according to the 2019 Kenya National Census Report. The population is projected to be at 44,971 in the year 2022 with a growth rate of 2.2%. This has been derived as shown below;

$P = P_0 \times (1 + (r \times t))$ Where;

P= Total Population after time 't'

P₀= Starting Population

T= Time in years

R= % rate of growth. The national growth rate is 2.2%.

The national average of 2.2% growth rate is used instead of the average for Bondo (1.7%) because the area under planning is urbanizing faster than the rest of the county which is largely rural. Using the County average would result to projections that are much lower and not reflect the actual scenario in Bondo.

JOOUST Student Population: It is approximated that JOOUST hosts about 8,000 to 10,000 students who are residents within the area under planning. While as this population has been considered in some projections such as calculation of water demand, it has been excluded in others that as it does not contribute to projections such as the primary and secondary school needs.

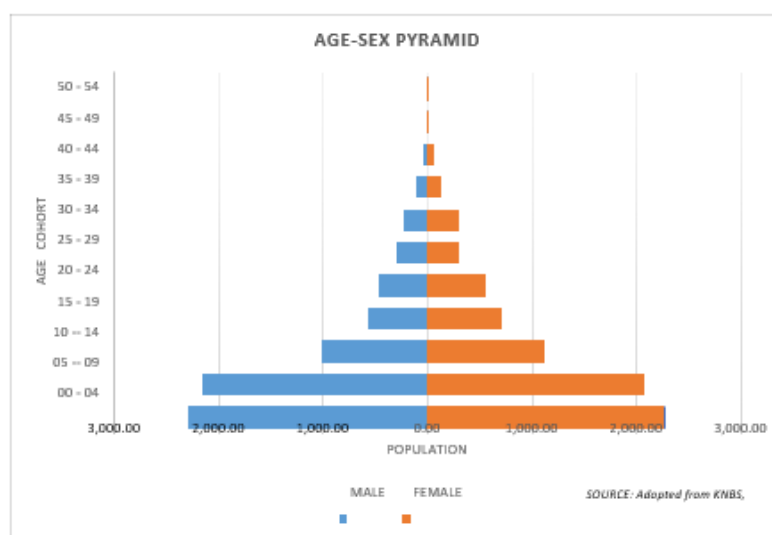
Table 3. 1: Bondo municipality population projection

Total	2019	2022	2025	2028	2032
	42,187	44,971	47,939	51,103	55,600
JOOUST Student	10,000				

Source: KNBS 2019

3.4.2 Population structure Bondo Municipality

The population structure reveals a population of a higher percentage of young generation. The figure3-1 show the pyramid of Bondo municipality population structure.



3.4.2 Demographic Characteristics

Indicators of Well-being: From the 2019 survey it reveals that the Bondo Municipality has poverty level of below 50%. The notable poverty decline could be attributed to the fact that more resources have been devolved, the presence of educational institutions, and vibrant hospitality industries. There have also been many pro-poor programmes such as; social protection programmes for the poor and vulnerable groups, initiatives for the less privileged where both the incidence and depth of poverty are high, and affirmative action in public procurement and access to credit in favor of the youth and women.

Literacy: The survey from Kenya National Bureau of Statistics (2019), 79.75% of 15years aged population have a basic education.

Life Expectancy: The average lifespan in municipality is estimated to be 40 years under today's social, economic and health conditions, a staggering 16 years shorter than Kenya average of 56.6 years, and more than a quarter century shorter (Kenya Institute for Public Policy and Research, 2014). It is reasonable to believe that the unfavorable conditions that prevailed during the period of economic sabotage resulting in collapse of local industries had a negative impact.

Morbidity and Mortality: From the survey done by KNBS (2019), most deaths at infant stage is caused by malaria taking 54%. Other causes of death are respiratory diseases, and diarrhea. It is important to note that the burden of non-communicable conditions in the county such as cardiovascular diseases, diabetes, cancers, mental health, has not been quantified but also causes a number of deaths. The current child mortality rates for the county (NNMR 39/1000 live births, IMR 111/1000 live births, U5MR 159/1000 live births) are among the highest in the municipality. Majority of these deaths are due to preventable and treatable illnesses. Of importance also is the fact that the majority of childhood deaths are due to an underlying factor of HIV/AIDS and malnutrition.

Fertility: The fertility rate of the municipality has been reported to declining in the region with households recording average of 3 persons per household, mostly because of the increasing demand for smaller families and use of modern contraception. Addressing barriers to access and use of family planning would further reduce fertility.

3.5 LAND

3.5.1 Land Tenure

Land ownership in Bondo Municipality is categorized as either private land, public land and community land as per land registration act 2012. Private land forms most of the land in the Municipality which is owned by private individuals. The total area coverage of the municipality is 83.21km² with 33% being urban land and the 67% being peri-urban land, 90% of which is freehold.

Figure 3. 2: Surface areas by Category

Category	Area (Km²)
Total Area	83.21
Urban land	27.5
Peri-urban land	55.21

Source: Department of Lands, County Government of Siaya

3.5.2 Mean Holding Size, Land Suitability, Use and Availability

The average smallest land size in Bondo Municipality is approximately 0.5ha. Due to the higher percentage of the land in Bondo Municipality being on a freehold tenure system, it is difficult to come up with developments unless county government buys the land from the individual land owners.

3.5.3 Percentage of Land with Title Deed

As at 2022, about 99% of land was already adjudicated. About 40,000 title deeds have not yet been collected from the land registry. During the plan period, efforts are expected to be made to encourage land owners to collect their title deeds.

3.5.4 Incidence of Landlessness

Bondo Municipality, majorly inhabited by families trace their land ownership mostly based on their ancestral lineage. The culture of land ownership is under threat following the emerging trend of leasing or selling land for commercial endeavors coupled by expected growth and demands of the municipality. This trend is likely to lead to cases of landlessness in the near future.

3.5.5 Land Conversion/Change of Use

The municipality has an increasingly rapid urbanization, reporting high rates of population increase. The demand for housing in municipality has put pressure on the available land for settlement. Agricultural land in the peri-urban areas is gradually getting fragmented as people construct new homes. Although the majority of the peri-urban land is predominantly used for crop farming, with deforestation as a common practice to give way for physical development and other investments .

3.5.6 Land Use

There are major categories defining land use in Bondo Municipality. They are; Residential, Commercial, Industrial, Recreational, Educational, Agricultural, Wetlands, and water bodies. Analysis of land use in the municipality currently reveals a decline in land cover, especially on the fragile ecosystems.

- Bondo Municipality land has been classified into the following uses;

- Settlement- these entails the built environments for both residential and commercial purposes.
- Transportation- these covers lands under roads and airstrip in the municipality.
- Vegetation cover-these includes the forested areas especially along hilly grounds like in Got Abiero Hills.
- Water bodies -includes land occupied by rivers, streams, ponds, shallow wells and wetlands.
- Agricultural lands- This category entails cultivated land, fallow land, farm houses, horticultural, range land as well as crop fields. The main food crops include; maize, sorghum, millet, beans, cowpeas, cassava, sweet potatoes, groundnuts and finger millet while the main cash crops include groundnuts.

3.6 ECONOMY

3.6.1 Overview

Bondo municipality suffers lack of industries. Although there exists minimal juakali industrial outfits, there is a need to rethink on the strategies of uplifting cottage industries /indigenous industries in the town by the local community. It is the biggest and rapidly growing town that links Kisumu City and Usenge, Siaya and Luanda Kotieno. This being the case many economic activities in the municipality revolves around basic farming and trade. Transportation activities such as bodaboda, small scale business in households and fishing related activities, dominate the economic sector. Tourism sites include Jaramogi Oginga Odinga mausoleum and Migwena cultural centre. Hospitality industry by means of building hotel, bars and lodging activities is on the upward trend. Hotels like Bondo Pride Hotel, the Don Hotel, Loch Hotel, May Hotel, the Loch Hotel have set the pace in bar & lodging business in addition to conferencing facilities. There are also small scale food kiosks that needs nurturing that keeps many households in terms of employment creation the residents of Bondo.

3.6.2 Farming as an Economic Activity

The main food crops in Bondo municipality include; maize, sorghum, millet, beans, cow peas, cassava, sweet potatoes, groundnuts and finger millet. Vegetables produced in the municipality are: tomatoes, onions and kales while fruits grown in the region are; mangoes, pawpaw, bananas, oranges and watermelon.

3.6.3 Fisheries

Kenya's fisheries resources are an important source of food, employment and foreign exchange earning in Kenya. It is estimated that the fishing industry employs over 48,400 artisan fishermen and that 5,000,000 persons are engaged directly or indirectly in fish processing and trade. Rivers Yala and other surface water bodies in the municipality provide necessary grounds for fishing activity and fish production in the municipality.

3.6.4 Tourism Sector as an Economic Activity

The municipality has only one gazetted historical site; Jaramogo Oginga Odinga Museum. The settlement patterns within the municipality coupled with the high population density possess as a major constraint to large scale wildlife conservation. There have been several investments in cultural heritage sites, hotel development, and attempts to link the municipality with the Western Kenya Circuit tours and travel investments. Siaya County Tourist Guide (2016) enumerates some of the destination sites with potential for tourist attractions (sightseeing, Bird watching, picnics, camping, educational facilities, Nature Photography, Fishing, Boat rides, Water sports, Canoeing, Nature walk, Nature drive, Biking, Wildlife safaris, Recreational sailing, cruise tourism, sport fishing, film tourism, hill hiking, cave camping. Kayaking, Beach Volleyball) and cultural activities (traditional dances, Nyatiti players, Orutu players, Dodo dancers, Dirges, Tero buru.

3.6.5 Traditional Music/Instruments:

Nyatiti, Orutu, Ohangla, Peke, Tung, Bul 2. Traditional Weapons: Orujie, Mbidho, Kuot, Luth, Okumba, Ligangla, Tong, Atheno, Okot, Okol 3. Traditional Attire/Regalia: Pien gugru, Pien Nya diel, Akala, Kond Tigo, Chieno, Olemo 4. Traditional Dishes: Aliya, Atururu, Atuago, Hariadho, Ogira, Atipa, Riga, Rabuon. 5. Traditional Artifacts: Da pii, Pand Nyaluo, Mbir, Osero, Koo, Owes, Kom Nyaluo, Oliho, Aguata, Haiga, Tao, Agul, Odheru, Nyiedh, Hamiero,

Osieke, Ralung, Pong Nyatieng. 6. Cultural festivals: Got Ramogi Festivals, Siaya County

3.6.6 Hotels and Hospitality

There are 90 unclassified hotels with a gross bed capacity of 1,500. In addition, there are 98 bars and restaurants. Where international visitors can find accommodation include: Bondo Pride Hotel, the Don Hotel, Loch Hotel, May Hotel .

3.6.7 Industrial Production

Industrial production in the municipality is still low compared to other established towns with raw materials, hence no major processing and/or manufacturing industries. There are a few firms that use local raw material for industrial processing such as bakeries and Jua kali industries. In terms of industrial potential, the municipality have available raw materials that include fish, mangoes, hides and skins, cotton, sand and underlying rocks. These industrial potentials infrastructural development, credit finance, and political goodwill. Jua Kali Industry can be credited to be the main driver of industrial development in the municipality as it provides as an avenue for industrial incubation and employment, especially in Jua Kali garages (mechanics), metal fabrication, and carpentry (wood joinery).

3.6.8 Trade and Commerce

The following factors influence trade patterns in Bondo Municipality: Presence of educational institutions, proximity to Kisumu and several beaches along Lake Victoria, quality of service roads serving the market centres (accessibility), security, economic viability, availability of auxiliary services such as banking, credit facilities, general infrastructure in the trading centres.

3.6.9 Small and Medium Enterprise (SME) and Medium Sector Enterprises (MSE)

On average 9 out of 10 new jobs are created in the informal sector. Majority MSEs are in the agriculture at 46 % followed by Trade at 41% and Small Manufacturing 9%. Services and Transport form the 4%.Half of the MSEs collapse within the first three years of their establishment; 65% their businesses are not registered and majority operate on temporary structures/market stalls. There are 17 registered MSE associations in the Municipality each with an average of 300 members and 6 MSE SACCOs. Most of the products are made for local markets since most operator's lack creativity and innovation; they copy and replicate similar products from their business colleagues with the resultant effect of market saturation. The MSE Sector plays an important role towards the County's economic growth, employment creation, poverty reduction and development of an industrial base and therefore must be prioritized. To effectively address these challenges, there is a need to come up with a disaggregated MSME's Data Profile, Construct and Equip industrial development Centers, promote creativity and innovation, Development of Business Information Center and creation of a Municipality Revolving Fund of which all these do not exist in the Municipality. There is also need to develop Municipality Industrial

Development Policy to facilitate investment of industries with much focus on provision of incentives

3.6.10 Employment

The informal sector is one of the biggest employers of the majority of the municipal population. Welding, furniture wares, vehicle mechanics, boda boda transport, footwear are common undertakings in the market centres. The location of the activities within the trading centres is an area of conflict that require planning intervention. Majority of the informal economic activities are domiciled in key trading centres. In Bondo municipality 11% of the residents with no formal education are working for pay, 13% of those with a primary education and 22% of those with a secondary or above level of education. Work for pay for those with secondary or above level of education is highest in Nairobi at 49% and this is twice the level in Bondo (Table 3.2).The Municipality has both formal and informal employment scenario.

Majority of the employees are from the formal employment from the government offices.

Table 3. 2: Overall Employment by Education and levels in Bondo Municipality

Education Level	Work for pay	Family Business	Family Agricultural Holding	Intern s Volunteer	Retired Homemakers	Fulltime student	Incapacitated	No work	Number of Individuals
Total	15.4	13.5	44.1	1.2	0.7	13.1	0.9	5.2	413,673
None	10.5	10.1	62.5	2.0	0.4	0.5	3.3	4.7	38,443
Primary	13.2	14.4	47.1	1.0	7.0	11.6	0.7	5.0	263,720
Secondary	22.4	12.8	30.5	1.3	5.9	20.7	0.5	0.5	111,510

Source: International Development (2013)

3.6.11 Financial Institutions

The municipality has a few banks. Most of the banking services are located in Bondo town. Examples include Kenya Commercial Bank, Equity Bank, Co-operative Bank, Post Bank,



Figure 3. 3: Cooperative bank Bondo Branch

and Kenya Women Finance Trust. . All trading centres within the municipality host Bank Agents, M-pesa and M-shwari as important financial services that has supported small-scale traders in financing their businesses. Financial services from the main stream banks are limited and restricted to bias lending terms. However, the prevalence of informal banking merry-go-rounds, Kenya Women Finance Trust, Mshwari services is helping alleviate this problem.

3.6.12 Trade and Commerce Emerging Planning Issues

Poor Roads in most parts of the municipality

Limited access to credit facilities and if they exist access is difficult

Unplanned locations for informal economic activities

Limited capacity to diversify and keep trends with change of times and opportunities

Inadequate creativity and innovation in business enterprises

Most employment is in the informal sector (lack of formal employment)

Low agricultural and industrial productivity results in low traded goods and services

3.6.13 Economic Sector Challenges

Some of the common economic base sector challenges that require interventions include (Lake Basin Economic Blueprint, 2019). Challenges include:- Low domestic savings and investments, Low per capita income growth, High Levels of unemployment and poverty, High energy cost, Poor business environment: inadequate entrepreneurial skills, Major economic and social disparities, Rapid population growth (rural -urban migration and urbanization), High dependence on rain-fed agriculture (in arable land), Declining fish

resources (Lake), Untapped tourism (ecotourism) potential, Slow structural transformation (agriculture to industry), Narrow range of export products, Health services affect the population well-being perform productive services, Governance in the economic sector.

3.7 Settlement Patterns and Infrastructure

Human activities revolve around areas where people live, work and socialise. This, over a period, leads to growth of settlements of different size, form and structure. The configuration of different uses within a settlement and the resulting flows among them may be described as the structure of the settlement. The distribution of people and activities over a spatial frame, the connectivity among them and the inter-flows, may be described as the settlement pattern. At any period of time frame there will be established an equilibrium amongst the different factors affecting them. Any change in any of these factors will result in disturbance and re-organization of either the structure of the settlement or the pattern of distribution of the settlement. Their spatial pattern is influenced by factors such as land, climate, water, transport, infrastructure, politics, security among others.

3.7.1 Rural settlements

Rural settlements in the municipality are generally homogeneous, sparsely populated and engaged primarily in agriculture and allied activities as the predominant economic activity.

3.7.2 Urban Settlements:

Urban settlements in the municipality are heterogeneous and densely populated. Primarily, urban centers contain non-agricultural components of economic activities such as commerce, industry and services. Bondo town is the highest rank of urban centre within the municipality. It has an estimated urban population of 62,225 (2019 census). Other urban centres within the municipality includes Ndira, Nyawita, Koyucho, Maranda and part of Kambajo market.

3.7.3 Urban Infrastructure

Urban infrastructure includes basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools and post offices This section profiles the municipality's infrastructure and gaps.

3.7.3.1 Transport

Bondo Municipality is a high movement area. With 24.9% of the county's urban population, intense movement takes place within, from, into and through the town. Although the town is fair in terms of traffic, it is likely to experience negative impacts of high-

volume traffic in the future. With devolution, the intensity of movements is bound to accelerate and increase in a short period of decades. Concerted and effective planning, development, operation and management of the transport system of the region are critical for the sustainable development.

1. Existing Transport System

Transport network in the municipality is predominantly characterized by regional and local roads as in the map.

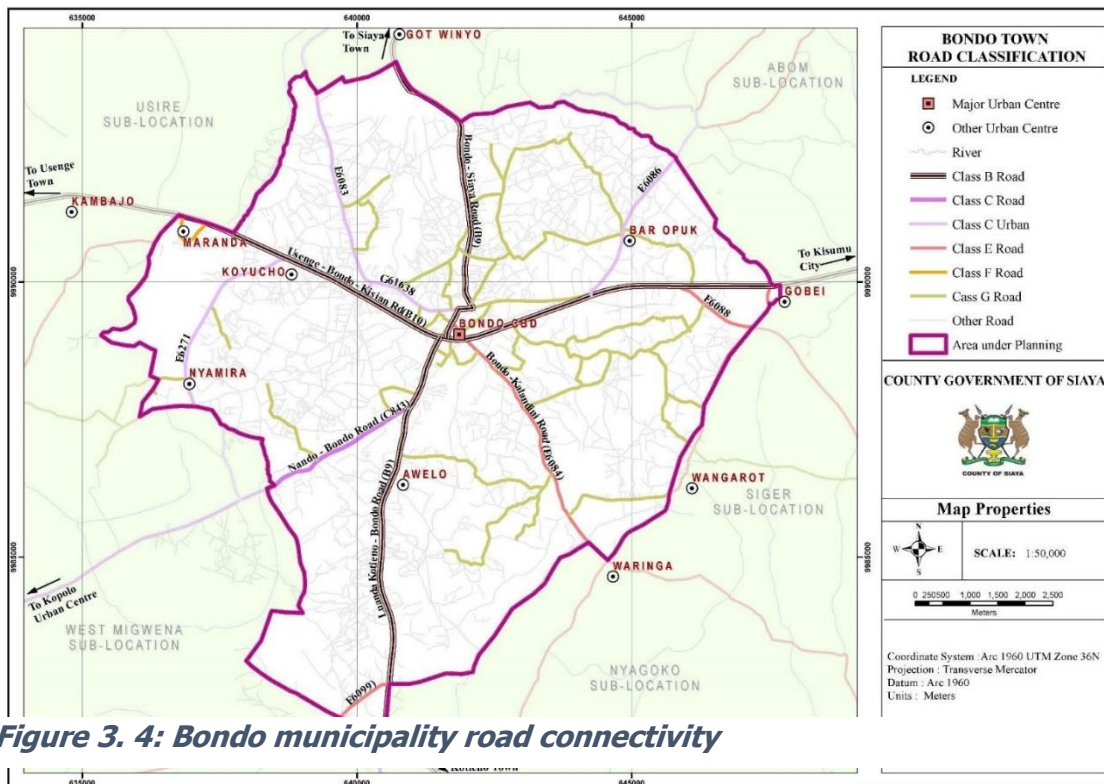


Figure 3. 4: Bondo municipality road connectivity

2. Public and inter mediate transport

The major public carriers in the municipality are buses and matatus with motorcycles being used for short distances. Buses are majorly used for distant regional movements as well as inter county travels. There exists organized bus companies and saccos that manage operations for efficient movement. However, there exists major shortcomings in the public transport system such as: thin profitability margins, inadequate designated parking, poor fleet maintenance and low productivity. Comparatively, motorcycles have higher frequency and quick response to passenger demands than Matatu and bus service. The worst criticisms about motorcycles are: High accidents, low carrying capacity, over speeding and unlicensed drivers.

3. Air transport

The municipality has a proposed airstrip at Migwena. Location of Airstrips in the municipality is however located 70km from Kisumu International Airport.

4. Non-motorized transport

Walking is a key element of a balanced transportation system. It is an integral element in the majority of trips made by other modes. In Bondo, it is the most predominant mode of travel. With the affordability levels still very low, walking has become the means of mobility for a large number of people. While with increasing income levels, the share of walking trips would come down, walking as a mode would still be the choice for a large number of people. There is a need for promoting walking, both as a primary mode as well as an access mode to transit system, through appropriate development strategies. Owing to the fact that the majority of people walk, the municipality lacks proper pedestrian facilities to facilitate walking. Thus, there is a need to designated walkways and install critical infrastructure that guarantees safety.

3.7.3.2 Energy

The municipality has immense opportunity for development of power sector to meet the future power demand. The efficient, reliable and sustainable energy services will provide the impulse for the development of various sectors of the economy including agriculture, tourism, communication, industries, trade and commerce among the others. An integrated approach is thus suggested for power generation and planning in the region. A rapid population growth and expected higher per capita income will lead to increase in demand of power. The level of energy consumption of the region directly depends on the economic growth. To bridge the demand gap, there is a need to explore the development of alternative energy potential, such as wind power, solar energy, biogas among others.

3.7.3.3 Sewerage and Sanitation

Organized sewerage and sanitation facilities are available in municipality although a very small percentage is connected to it. There exists predominant dependence on pit latrines followed by septic tank. Open defecation is also in practice. There is a serious deficiency in system provision with very low coverage.

3.7.3.4 Drainage

The municipality has a naturally undulating terrain with a large network of natural streams. This, combined with rainwater harvesting, provides an excellent drainage system. However, in Bondo town, there is a serious drainage problem due to an insufficient and blocked drainage system. Large-scale development activities, likely to be undertaken in the future, may exacerbate water logging, especially in low-lying areas. A planned approach is required in this sector. Currently, there is no structured policy or strategy for urban and rural storm water management. Stagnated storm water drainage in any locality has negative environmental and health impacts and causes inconvenience to the community.



Figure 3. 5: Storm water management infrastructure

3.8 Housing and Social Infrastructure

3.8.1 Housing in Bondo Municipality

According to the 2019 population and Housing Census (GOK, 2010), Bondo municipality has a population of 62,225 with a growth rate of about 2.5%. Thus, the projected population will be 80,000 in the year 2030. This high population growth will require adequate housing and reasonable standards of sanitation as provided for under economic and social rights in the Kenya Constitution 2010. The 2019 census showed that housing conditions in Bondo Municipality are unsatisfactory. Bondo municipality has a serious demand for housing. This is due to the increasing urban population of the municipality, which is expected to double within a very short time due to a huge influx of students. The emergence of a university campus of Jaramogi Oginga Odinga University and other tertiary colleges has created demand for housing for lecturers and students.

In Bondo Municipality housing remains a challenge that requires an attention both from the private and the public stakeholders. Some parts of the Urban and peri urban comprise pockets of single-story buildings to small household mixture of permanent and semi-permanent dwellings. Mainly the houses are made of bricks and corrugated mabati roofs. Although grass thatched houses still exist the numbers are gradually declining. Land ownership in Bondo municipality is controlled by the private landlords who in most cases do not have income to put up modern and decent housing. The Municipality has to work on ways of activating affordable housing programmes that would enable the residents of the municipality to access decent living conditions. Clean and safe, affordable & decent housing is a basic right to all the estates in Bondo Municipality.

3.8.2 Municipal Social Infrastructure

3.8.2.1 Education

Education is an important inducer of economic growth and development of any society. The most important element for future economic and social success is development of inclusive and quality education. This would have to be understood as an important part of the spatial development strategy, aiming support in enhancing qualities of education for the whole county, and for all. Findings indicated a strong link between poverty with reduced achievement in education. Bondo municipality has a number of education institutions ranging from pre-primary centers, primary schools like Bondo Township, Atilili Primary, Wango Academy, New Dawn Academy; Some of the secondary schools include Nyamira Girls' Secondary, Bondo Township Sec and Bar-Kowino Sec School; Middle level colleges are also coming up like Kenya Medical Training College (Bondo branch) and university education in Jaramogi Oginga Odinga University of Science and Technology (JOUST) . Many secondary schools within and outside the municipality are producing a good number of students that are ready to join Tvet Training Centres.

To achieve access to quality education for all, the Municipality ought to focus on the distribution of schools, their accessibility and quality of infrastructure. Therefore, Location and access of education facilities are important principles in planning. The goal is to ensure access to services in areas undeserving (administrative principle) through a hexagonal lattice analysis. On the other hand, location serves as an important factor leading to the

success of any educational facility (Location-allocation principle). A strategic location provides high-quality service to the community at a low cost.

3.8.2.2 Health Facilities

An efficient and effective healthcare is a right to all people staying in a municipality. It is one of the social pillars of vision 2030 as well as the agenda on sustainable development. As a municipality, the Bondo municipality residents are highly concerned about improved healthcare in terms of the provision of basic health infrastructure and access. There is a lot of attention being focused on community and public health as well. The Kenya Constitution 2010 Article 43 (1a) provides for the right to the highest attainable standard of health, which includes the right to health care services, including reproductive health care. Additionally, Article 56 (1e) states that the government shall put in place affirmative action programmes designed to ensure that minorities and marginalized groups have reasonable access to water, health services and infrastructure. In its Fourth Schedule, the Constitution highlights the devolved health functions which include county health facilities and pharmacies; ambulance services; promotion of primary health care; licensing and control of undertakings that sell food to the public; veterinary services (excluding regulation of the profession); cemeteries, funeral parlour and crematoria; and refuse removal, refuse dumps and solid waste disposal. Bondo Municipality is the home to level three facility located at Bondo Sub county Hospital right at the headquarters of the municipality. This facility attends to the needs of all the six wards of Bondo Sub-county and hence it needs the maximum attention to continue offering services to the residents. Other medical facilities in the municipality includes health centers like Gobei health centre & dispensaries. Health facilities require sufficient land sizes for expansion. They also require ease of access by residents of the municipality. The level of medical supplies and staff should match the needs of the health facilities as well. Other private initiatives in terms of health improvement in the municipality comes from the private sector contribution of Harvens Hospital, Bondo Medical facility and Quenteric Hospital.

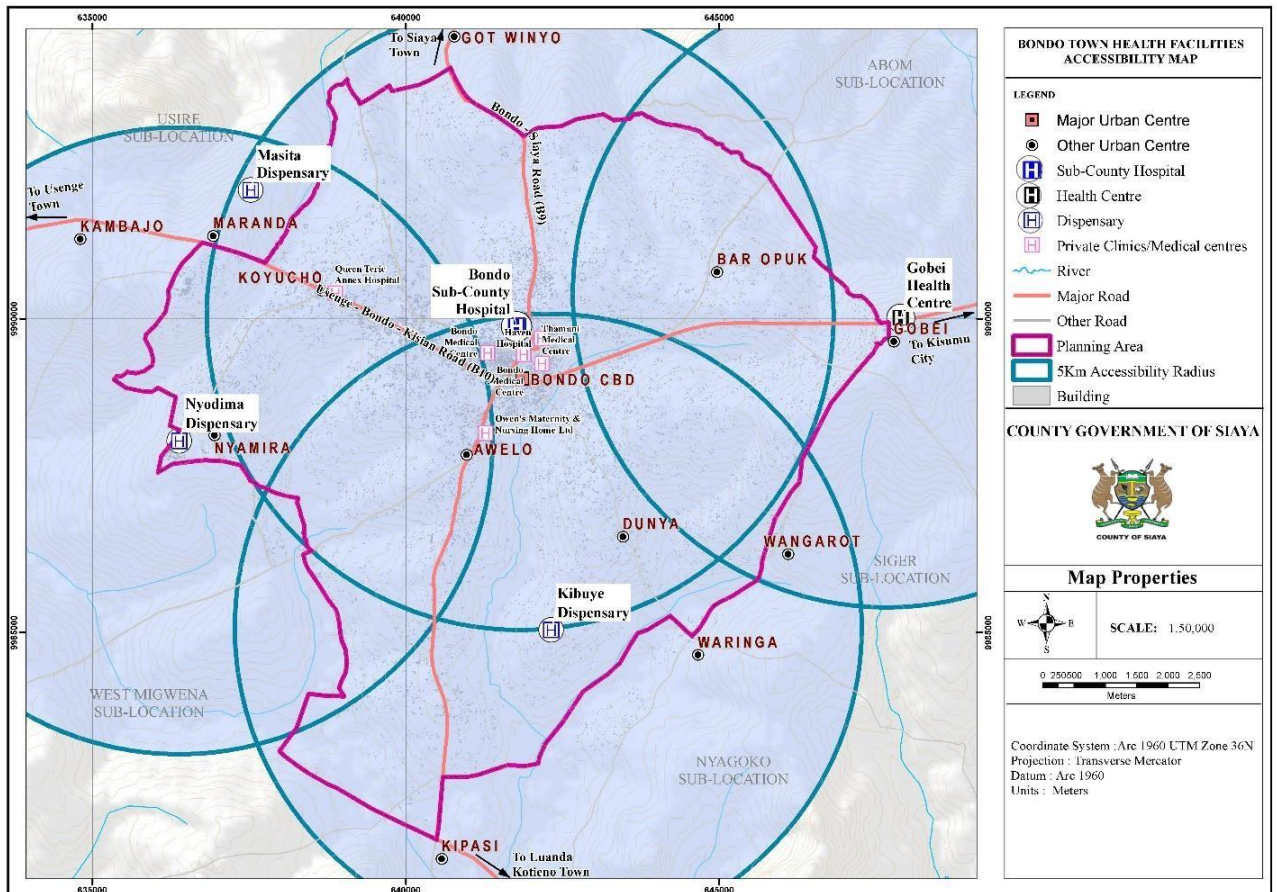


Figure 3. 6: Bondo municipality health facility distribution

3.8.2.3 Recreational Facilities

Bondo municipality is endowed with the potential create amenities for social inclusion, interaction and recreation. Public spaces in the municipality that exists needs activation with possible design to invite participants and residents to use. The municipality at the moment doesn't have a modern social hall or Amphitheatre where people can meet and hold events. Apart from small halls that can accommodate very few people at Sub County headquarters and CDF hall, the municipality requires a hall that can be used for events. Public parks exist but have not been developed either for public utility in the best way possible. The municipality has Oginga Odinga park and Bondo stadium which can form good sites for public meetings and community recreation.

3.8.2.4 Information and Communication Technology (ICT) Hubs

ICT is central in providing linkages between all levels of government, the private sector and urban communities towards achieving sustainable development. The Government of Kenya realized the role ICT plays in the socio- economic development of the nation. This is evidenced by the National ICT Policy based on the Economic Recovery Strategy for Wealth and Employment Creation 2003-2007. The National ICT Sector Master Plan (2008 – 2012) outlines the road map and implementation strategy for making ICTs more accessible and affordable to the entire population. This is to enable the Republic of Kenya to be a fully-fledged knowledge and information society by 2030 (GoK, 2007).

Bondo Municipality still remains challenged in terms of access to public internet access either through cable or wireless means. Members of the municipality require first class service timeliness by way of internet. Currently, the internet is restricted to offices and cybercafes run by private practitioners in Bondo town. It would be proper that planning of ICT infrastructure of the municipality goes beyond the public office spaces to even private spaces within the outdoor environment especially on locations of parks that are strategic and central to the life of the residents. This can be in the form of Wi-Fi-connections that allow small scale traders and businesses to thrive. Online business opportunities cannot be harnessed without the use of technology-oriented processes that relies on the internet.

3.8.2.5 Sports Facilities and Stadium

Siaya County is in the process of renovating Migwena recreational center. This would go alongside the improvement of various sporting facilities and training materials. Issues to do with improvement of physical infrastructure are good but should be seen to go alongside the quality human resource meant to offer services and train the residents of the municipality.



Figure 3. 7: Jaramogi Oginga Odinga Park

3.8.2.6 Cemeteries and Crematorium

Bondo Municipality has a mortuary at Bondo Sub County hospital. Other races are gradually coming to the municipality to do business and therefore the presence of such services core to the community of urban residence would be important.

3.9 Water, Environment and Natural Resources

3.9.1 Water Resources in Bondo Municipality

Water resources in Kenya are increasingly being polluted by organic, inorganic and microbial matter. The impact of pollution on water resources is manifested by water of poor quality which gives rise to water toxicity to mammals and aquatic life loss of aesthetic value by becoming unsuitable for recreational activities, high cost of water supply as polluted water is expensive to treat, eutrophication, de-oxygenation, acid rain and habitat modification. The report by NEMA (2004) indicates that per capita waste generation ranges between 0.29 and 0.66 kg day-1 within the urban areas of the country. The municipal waste generated in the urban centres, 21% emanates from industrial areas and 61% from residential areas, an indication that residential areas in the urban centres are the major sources of wastes generated.

Types of Water Sources: The main water sources in Bondo Municipality are from the surface water, groundwater and run-off water. Other sources include protected springs, dug wells and water pans. Miruka water pan was recently rehabilitated by support from the county government in collaboration with the World Bank.

Access to Water: Water in Bondo Municipality is supplied by Siaya & Bondo Water Company Limited. Piped water in the town is provided by The Lake Victoria South Water Service Board (LVSWSB) through SIBO. There are also individual initiatives to provide water for domestic purpose through shallow wells and roof catchments. Water kiosks and shallow wells are the dominant sources of water in the town.

Environment refers to the sum total of the surrounding livelihoods of most county residents depend on natural resources that are highly vulnerable to environmental degradation and the effects of climate change. Rapid population growth places enormous pressure on natural and environmental resources such as fisheries, forests, water, and land. The municipal management is keen in identifying and marking the environmentally fragile and sensitive areas that are thus suitable for conservation. Everybody in the municipality has a right to a safe and clean environment.

3.9.2 Wetlands

Bondo Municipality lies in a lowland around Ratiya wetlands that extends to many parts of Bondo towns and into the estates. The municipality is often prone to serious flooding when it rains. . Bondo Town has a serious drainage problem when it rains. Navigation from one place to another is often a serious problem occasioned by pools of water everywhere. Poor drainage affects the transport infrastructure road maintenance in the town due to surface runoff. Ratiya wetland is permanent, a number of policies guides investment and practice on environmental management;

1. Wetlands Management and Coordination Policy, 2013

The goal of this policy is to ensure wise use and sustainable management of wetlands in order to enhance sustenance of the ecological and socio-economic functions of Kenya's wetlands for the benefit of present and future generations. This is based on the principles and values of, among others, wise use, precautionary principle, public participation, devolution and ecosystem-based management, taking cognizance of the national and international cooperation.

2. Forest Policy, 2014

This Policy proposes a broad range of measures and actions responding to the challenges faced by the forest sector. It is based upon the views and expert opinions of those participants

drawn from the public and private sector, and civil society organizations. A number of strategic initiatives have been introduced to improve and develop the forest resource base; integrate good governance, transparency, and accountability, equity and poverty reduction into the forest.

3. Sessional Paper No. 3 of 2016 on National Climate Change Framework Policy This Policy's focus is on the inter linkages between sustainable national development and climate change. Climate change adversely impacts key sectors that are important to the economy and society: Environment, Water and Forestry; Agriculture, Livestock and Fisheries; Trade; Extractive industries; Energy; Physical Infrastructure; Tourism; and Health. This Policy therefore elaborates intervention measures that can help to achieve the goal of low carbon climate resilient development

*Figure 3. 8: Waste
Bondo municipality*



management site in

3.9.3 Waste

Bondo

doesn't have a functional landfill. Solid waste management collection of wastes in the municipal occurs through a manual system where the casuals are employed on a contractual basis to collect wastes and deposit at designated bins. The wastes are then transferred by means tractors to a temporary dumpsite located in town. The municipality is planning to invest in a more efficient system of waste collection, disposal system that meets the demand of the municipal residents. Another issue which needs to be attended to is waste management (solid and liquid) in the county. The protection of biological diversity, natural resources, and remedying contaminated land are also issues addressed by the municipal plan.

Management

Municipality

3.9.4 Green Open spaces

Quality open space provision plays an important role in improving the quality of life of residents. It provides a quiet, breathing space and acts as a clearing house allowing for a range of open-air activities. It further contributes to health conditions, air quality as well as pleasantness of residents. All areas should be supplied with open space based on population density at an average ratio of around 11 square meters per resident (international standard), or around 0.4 ha for 1,000 for residential neighborhoods (ISUD, 2013). Green and open spaces include forests, hills and protected green areas. Bondo Municipality has a number of green spaces available in town and within the peri urban areas. Some of the open spaces are potential and forms suitable growth centers for recreational facilities. Examples includes Oginga Odinga Park and Migwena recreational centre.

3.9.5 Environmental Hazards and Disasters/Flooding

Environmental degradation in Kenya contributes to climatic change which leads to high costs of living in urban utilities like water, electricity bills, health bills etc. Natural and human induced hazards pose a threat to human life, property and environment. Natural hazards include dry spells, soil erosion, drying-up of water sources, lightning and hailstorms, among others. Disasters occur when natural hazards interact with vulnerable people, property, and livelihoods causing varying damage depending on the level of vulnerability of the individual, group, property or livelihoods. Bondo Municipality and its immediate environs is always prone to some level of flooding that poses a threat to transportation and sanitation to the residents. Large pools of waste pose as a health hazard in terms of offering breeding conditions for insects and mosquitoes which are vector agents for various diseases in the municipality. A healthy urban populace is a necessary asset for urban development.

Floods are mostly experienced during the high rainfall season. The main causes of floods are deforestation, land degradation, poor environmental planning, inappropriate soil and water conservation measures, poor agricultural practices and climate change related issues. Impacts of floods in the town are loss of lives and property, an outbreak of waterborne diseases infrastructure destruction, displacement of people, soil erosion that will result in silting of rivers and blockage of drainage systems. The flooding creates the stagnant water which in turn provides a breeding site for mosquitoes that cause malaria.

3.9.6 Forests and Hills

Destruction of forests and hills in the county, and the resultant biodiversity loss is a key environmental challenge. The environmental challenges are aggravated with increased

population growth, agricultural expansion, over-dependence on wood fuels, and low levels of afforestation and accelerated deforestation in the county. The loss of forests and wetlands are envisaged to increased loss of habitat, change micro-climate, loss integrity of ecosystem, crop yields as well as a decrease in food security. Wood fuel harvesting has been recognized as a major reduction of forest cover. The following data provide information on the number and size of gazetted forests and forest production. The rest are manmade forests arising out of exotic tree plantations or agroforestry.

3.9.7 Natural and Human Disaster and Municipal preparedness to handle Disasters

Both human and natural risks must be considered when urban planning is concerned, as they both can endanger the sustainability of the physical and social environment. Disaster preparedness in the town is low, despite regular floods and heavy rains. Slum areas are often inaccessible due to either blocked or narrow roads or impassable muddy roads when it rains. An assessment of people living at risk of fire, natural disasters indicates that a number of people that can potentially be affected in case of fire outbreak. The Municipality has neither a functional fire engine nor a fire station.

3.9.8 Pollution

Water pollution arising of soil erosion along the steep hills is rampant in some areas of the municipality. A number of primary schools with very many students have contributed to massive erosion in town. Bondo Township Primary school is an example where the greater part of the school has been left bare for years. Contamination of underground water resources is a common thing in the municipality. When it comes to Pit latrines; an increase in population has generally contributed immensely to pollution of urban environments due to increase in the level of human wastes.

3.9.9 Biodiversity

Biodiversity is the representation of the millions of different species on the earth and the genetic diversity within these species. Humans depend on Biodiversity to survive on planet Earth. Plants give oxygen and carbon-dioxide to make food. The animals take food that has been made by plants and therefore survival exist between different living organisms. Certain organisms have economic value such as plants being made into medicine such as Aloe Vera which is found in other parts of the Municipality. These plants have value to the ecosystem and are a source of natural beauty and recreation. Diseases or insects such as army worms,

crickets and grasshoppers which are part of the ecosystem have at times wiped out a food crop in the municipality.

3.9.10 Emerging Development Issues

- Sporadic flooding causing threat to coverage of the life and property.
- Inadequate sewerage system within the municipality.
- Insufficient preservation, protection discharged into the aquatic and rational exploitation of natural environment resources
- Encroachment of wetlands
- Poor environmental sanitation
- Waste water from municipal sewage
- Low public awareness on sanitation treatment system and hygiene
- Soil erosion due to poor land use
- Poor waste management practices
- No waste recycling
- Contamination of water sources
- No separation of wastes at source
- Poor waste disposal
- Loss of Biodiversity
- Littering of polythene wastes

3.10 Municipal Governance

Capacity to enforce municipal planning regulations, is inefficient and should be given special attention. The regulation of land and property development, through statutory plans and development permits, is a vitally important role of the urban planning system. Thus, the municipality requires capacity to oversee planning, implementation of plans, development control and enforcement.

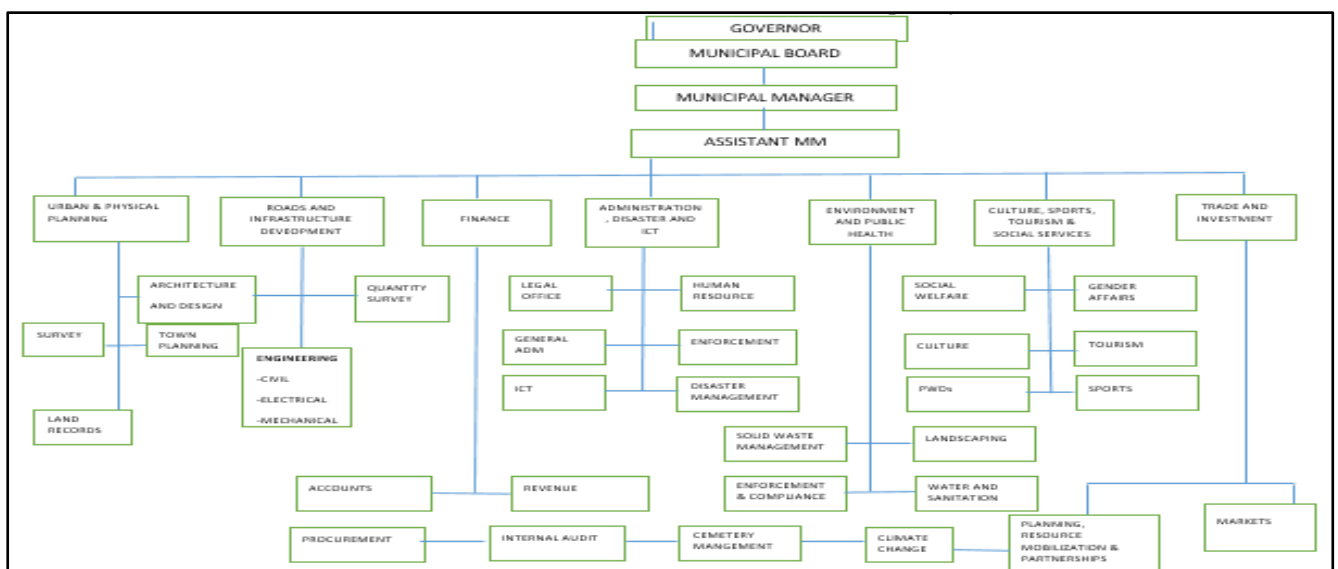


Figure 3. 9: Bondo municipality organogram

3.11 Emerging Planning Issues

3.11.1 Strategic Opportunities

The municipality is strategically positioned in Siaya county with vast opportunities that give it a competitive advantage for growth and development. These include: -

- Strategic location of the municipality in Siaya County with regional connection to Kisumu, Homabay, Migori and Busia Counties.
- The topography of the planning area undulates gently and the soils present no major challenge for urban development. Equally there is ample land for future urban expansion;
- The presence of institutions of higher learning such as Jaramogi Oginga Odinga University of Science and Technology, Kenya Medical Training Centre and Bondo Technical Training Institute affords an opportunity for forward and backward industrial development;

3.11.2 Urban Growth Dynamics

Urbanization in the planning area is characterized by:

- Uncontrolled urban expansion and sprawl characterized by low-density development and vacant or derelict land imposing several disadvantages, such as higher infrastructure costs, poorly-planned land use and increasing energy consumption and air pollution due to the greater impact of motorized transport. The result is a 'patchwork' of different developments, including residential settlements interspersed with vacant land;
- Low densities which has translated into greater demand for land and corresponding infrastructure;
- The urban form in the commercial nodes is largely linear following the main transport network. This has implications of making service and infrastructure provision costly;
- There is also urban sprawl where growth of the urban area is occurring through the process of scattered development of miscellaneous types of land use in isolated locations on the fringe, followed by the gradual filling-in of the intervening spaces with similar uses. This is not only producing an inefficient and unpleasant environment on the urban fringe, but adversely affecting the inner urban area and the rural areas as well;

- The various commercial nodes have no identifiable urban form or structure, and no clear neighborhoods to form activity organizing elements. As well these nodes have no evident functional specialization.

3.11.3 Economy

The economy of the commercial nodes within the municipality does not seem to relate to the expected forward and backward linkages of industrial development

- There is very little subsidiary industrial development in the commercial nodes and most of the economic activities are commercial concerns with little industrial or manufacture component.
- The few light industrial activities are often unplanned and crop up along road reserves and open spaces;
- The economic activity in the commercial nodes is by and large service oriented (business outlets) with considerable informal proportions.

3.11.4 Settlement patterns and Infrastructure

The municipality is characterized by low levels of services and infrastructure provision with dense and scattered human developments:

- Unplanned rural developments and market centres
- Low investment in urban and rural drainage facilities and inadequate drainage management and design;
- The lack of pollution-abating infrastructure, involving sewer systems and control over industrial discharges inflicting adverse impacts on watercourses. Byproducts of human settlements, such as solid wastes, are not properly managed thus the likelihood of affecting groundwater quality through the percolation of residual liquids
- Absence of a reliable garbage collection and disposal. Part of the population in poor neighborhoods dumps the trash on the streets and in the drainage system;
- Limited road paving and ancillary services and facilities;
- Poor connectivity among activity areas and between the commercial nodes;
- Lack of road safety mechanism and high accident risk from trail traffic;
- Non-provision for pedestrian movement along the major roads;
- Poor road conditions;
- Inadequate water and energy reticulation;

- Inadequate provision and maintenance of public recreational facilities;

3.11.5 Housing and Social Infrastructure

The apparent challenges in housing and social infrastructure provision include:

- Lack of zoning and provision of quality residential neighborhoods;
- Individual housing initiatives are not supported by the requisite infrastructure and Services;
- Absence of social housing programmes to target the poor;
- Development control mechanisms to regulate housing development are ineffective;
- Informal residential settlements are characterized by: Lack of basic services—water, sanitation, waste collection, storm drainage, poor access, street lighting, paved footpaths;
- Inadequate schools and health care facilities within easy reach;
- Inadequate safe-public children play areas; ● Inadequate meeting areas.
- Lack of designated cemeteries
- Poorly maintained recreational spaces e.g. green spaces

3.11.6 Environment and Natural Resources

- Bondo municipality faces a number of environmental issues such as: Solid waste, collection and its management: This is a major challenge because a large amount of solid waste is left by the side of streets, to decay, which is a major source of health concerns. Further, there are no appropriate mechanisms to collect and dispose waste generated;
- Liquid wastes discharged into terrestrial and freshwater environments leading to contamination of drinking water sources from untreated domestic and industrial wastewater and from agricultural runoff;
- Un-serviced settlements or settlements provided only with rudimentary infrastructure;
- In the low-income neighborhoods air and water pollution cause chronic and infectious respiratory disease, water-borne diseases such as diarrhea and intestinal worm infections, increased mortality rates particularly among children;
- Loss of green space, destruction of special local ecosystems, noise pollution, and aesthetically unpleasant sights and smells;
- Lack of waste treatment;
- Degradation of water caused by waste disposals;

- Lack of drainage and other facilities for poor neighborhoods.

CHAPTER FOUR

4.0 PLANNING AND DESIGN CONCEPTS

4.1 Spatial Design

The Plan asserts that the municipality's intensification and expansion must include good design. To achieve this, any public or private development proposals are expected to incorporate the following principles:

Identity: recognize and respond to landscape, ecology, heritage, built form, peoples and communities which establish the context for municipality's unique sense of place;

Adaptability: allow the municipality to accommodate a rich mix of uses, activities, urban form and architecture;

Integration: support uses, activity centres, energy systems and movement networks that are well connected; and

Efficiency: optimize the full potential of a site's intrinsic qualities.

The existing urban development pattern and trends suggest opportunity for integration of Transit corridor cum ring development, Nodal-Oriented Development and Balanced Regional Development Strategy as models for planning and development of Bondo municipality. This is with Bondo municipality constituting a higher urban place providing higher value goods and services; followed by Ndira,, Gobei, part of Kmbajo mkt, Got Winyo mkt and Ratiya centre. .

4.2 Intensification

Over time, the plan provides for the emphasis to shift away from outward growth of the municipality in favour of both high rise and high-quality infill development. This intensification is not targeted toward a uniform level of density but spans a spectrum. The highest level of intensification is targeted at two types of areas: along transit corridors and within urban centres. A centre is defined by the Plan as: a concentrated mix of public and private activities in a defined area, including shopping, offices, public transport nodes and community facilities. The greatest growth is meant to occur within a center's walkable catchment, i.e., the area in which people can be expected to easily walk to access a Centre's focal point. 11 urban centres are identified throughout

Each urban center is placed in a hierarchy that reflects its development potential and role within the municipality. For example, Bondo Municipality is at the top of the hierarchy and aims for high rise development, 24-hour economic activity and quality housing. This is followed in ranking by other centres depending on their level of infrastructure and population

catchment. Each urban centre will receive a specific planning framework through the Strategic Development Plan. Some centres are described as regeneration centres, requiring mixed public sector actions to address economic, social or physical inequalities. Others are market attractive centres in which there is strong market growth potential requiring limited public sector support. Where an area's character, environment or heritage is risked, growth is deprioritized.

4.3 Expansion within a Rural Urban Boundary (RUB)

Bondo Municipality is growing. The question is: where? Measures to address this question should focus on curbing expansion through the use of urban limits. The Plan aims to build upon the urban limits concept with the imposition of a Rural Urban Boundary. The objective is to ensure that growth over the Plan's 10-year life occurs predominantly within the boundaries of the RUB. The RUB will give effect to the model of a "quality, compact municipality" which foresees a mixture of growing Bondo both upward and outward.

4.4 Edges

Streams traversing the municipality are the vital lateral reference for the residents. The streams and wetlands offer unique opportunity to attain a balanced urban environment design which can be reached by the following means of landscape transformation:

- Development of "green belt" along the streams and wetlands
- Development of spatial planning framework of social oriented landscaped public recreational spaces;
- Establish buffer zones to regulate encroachment of agricultural and urban activities.

4.5 Connectivity

The main roads that traverse and provide accessibility to the municipality (Kisumu-Bondo-Usenge and Siaya), are the primary transportation corridors that structure the municipality. They act in cahoots with the edges to define the possible activity and governance sub-areas. These are essential design elements upon which the transport system of the town will be hinged. Further, rural roads act as structuring elements for rural development. The municipality has a fair coverage of roads but requires rehabilitation and expansion. Pedestrian development facilities are poorly developed.

CHAPTER FIVE

5.0 PLAN PROPOSALS

5.1 SETTLEMENT PATTERNS AND INFRASTRUCTURE

This section discusses planning proposals as strategies for developing human settlements and infrastructure. It presents urban growth dynamics, transportation, housing, Energy, sewerage and sanitation

5.1.1 Strategy 1: Urban growth dynamics

The Bondo Municipality Integrated Development plan (IDep)2023-2027 aims to promote a compact urban form with a hierarchy of commercial and mixed-use nodes of varying scale and function offering a range of easily accessed quality services and complement the municipality's identity. The IDep limits the development of human settlements and shall regulate the spatial form and use of space in the municipality.

5.1.2 Strategy 2: Enhancing inter-urban connectivity to facilitate spatial and social interactions:

With the targeted strong growth in the economy and population of Bondo municipality, rapid growth in intra- and inter-regional freight and passenger transportation demand is inevitable. If left unchecked, growth in the transportation sector is expected to add pressure in terms of traffic and safety concerns. There is a need to develop Public transport parking as destinations and urban activity nodes: this will provide a place of transfers between motorised and nonmotorised transport modes such as cycling and walking. They should preferably be located near major activities, employment nodes and higher residential areas and integrate into one another in order to increase public transport use and enable easy movements. To actualize this, there is a need to: provide additional services in the bus parks (e.g. shopping facilities). This might even create opportunities for side businesses and generate extra revenues for public transport operators (e.g. renting the premises to shopkeepers); Integrate transit stops and bus parks into design and layout of the activity centre; providing passage and operator facilities and security and safety installation such as queue railing, toilets, seating facilities etc. ; redesign and improve the condition of existing bus park in Bondo municipality. Stringent measures should be adopted to regulate on street parking on motorised modes.



Figure 5.1: Illustrative Design of Streetscapes

5.1.3 Strategy 3: Integrate pedestrian friendly facilities to facilitate non-motorized transport.

Non-motorized transport (NMT) has a benign environmental impact. It is the main mode of transport for the residents, and in some a significant source of income for them. As the main transport mode for the work journeys of the residents, it is also critical for the economic functioning of the municipality. This shall be achieved through the following actions: -

- the provision of safe, adequately segregated infrastructure;
- direct routings without major intersection conflicts with motorized traffic;
- secure bicycle parking to preclude theft;
- Local cycling master plan that should be the basis both for planning infrastructure specifically for bicycles and for incorporating cycling into general traffic infrastructure and management planning;
- Monitoring, enforcement, and legal penalties, particularly on vehicle infringements to run or park in NMT space;
- Establishment of strong enforcement traffic policies on NMTs.

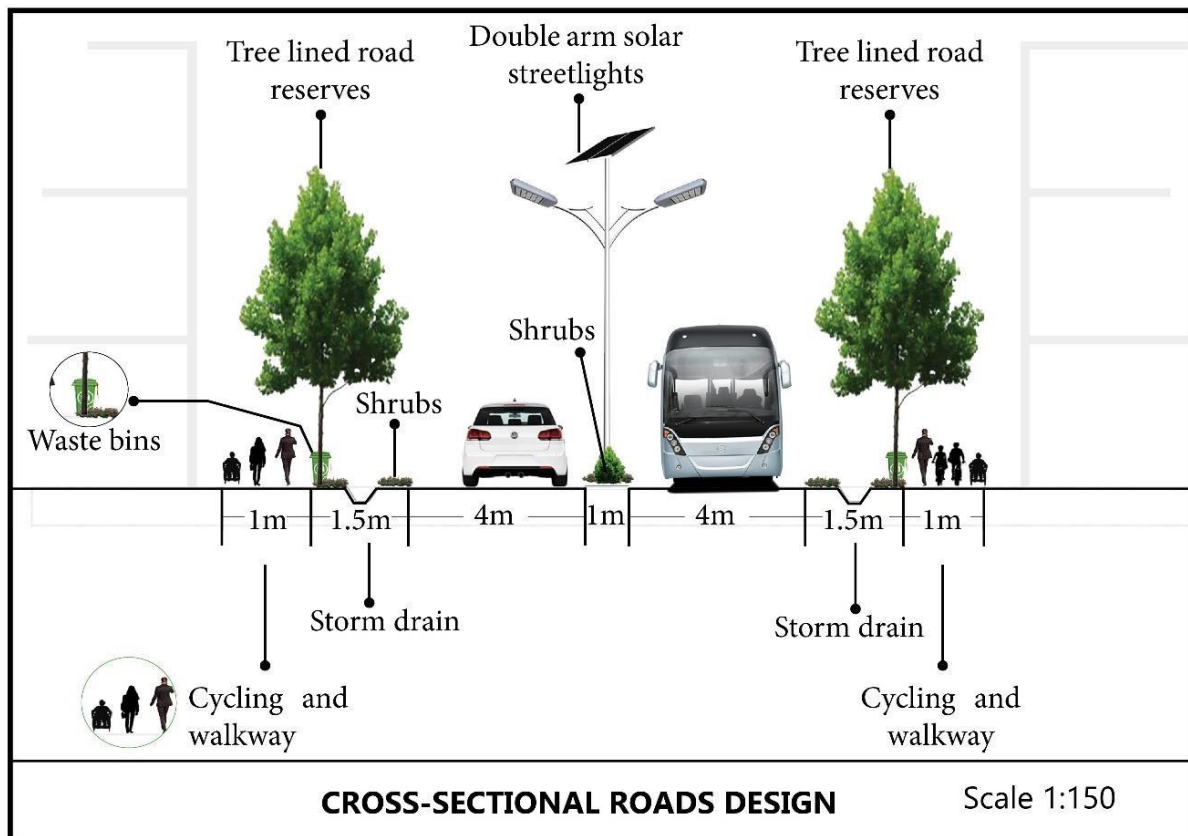


Figure 5.2: Cross-sectional Design of an Integrated Transport System

5.1.4 Strategy 4: Rural area transportation

The most desired future for the municipality is a sustainable and accessible rural area. Thus, there is a need to improve public transport service in the rural areas. Most rural areas have access to roads (either tarmac or murrum). Mostly, motorcycles facilitate movements in the rural areas with little access to various public transportation modes. Looking into the future, public transport needs to be opened up for the rural areas to facilitate daily ridership and reduction of carbon footprints of the municipality. Therefore, there shall be need to provide large capacity vehicles (buses) from rural areas to urban areas. Progressively, the municipality should shift modes from use of motorcycles to public transportation.

5.1.5 Strategy 5: Provision of affordable quality housing in urban and rural areas of the municipality

For the municipality to materialize its goal of ensuring access to decent housing for all, stakeholders in the building industry should work together. Communication amongst the stakeholders, planners, architects, engineers, contractors, developers, manufactures and the county government is vital to create common goals. The Municipality shall: -

- **Expedite building approval process:** integrate development control standards with regular development, approval and inspection process; ensure compliance to building

codes and standards as verified on plans, drawings and reports and part of regular planning application submissions.

- **Develop prototypes of affordable-decent housing in the Municipality:** The municipality should take a leading role in developing building prototypes which includes residential housing, schools, and other public institutions. This can further be actualized through pilot demonstration and joint venture project for constructing affordable-decent housing for offices, commercial and residential buildings.
- **Ensure access to energy for new buildings and energy efficiency improvement for existing buildings (Retrofitting):** The municipality should identify candidate buildings (commercial and offices) for retrofitting demonstration projects; and provide subsidies and tax incentives for building owners.
- **Institutional:** The municipality to conduct a needs assessment and urban capacity for housing; Identification of areas and locations to put new houses (Affordable housing locations); Allocation and clearance on land for housing development; and negotiated purchase approach of land for consolidation.
- **Social:** Creation of mixed communities – impact on type and size of housing; provision of affordable housing; and monitoring of affordable housing
- **Financial:** Establishment of a constructive partnership between public and private sectors; establishment of housing development funds; implementation of a housing fund at the Government level; and promotion and provision of housing on subsidized and nonprofit rents.
- **Spatial:** Creation of sustainable housing environments; Sustainable land use; linking development with public transport; Re-designation of business and other functions into housing; Promotion of mixed-use development; and greenery in housing areas & quality design that meets urban standards.
- **Rural Buildings:** Vernacular architecture is a common practice in most of rural housing as they are constructed by empirical builders without the intervention of professional architects. Therefore, the municipal board shall develop a strategy to ensure conservation and promotion of a mixture of both modern and vernacular housing in the rural areas. This is important in ensuring heritage and identity preservation.

5.1.6 Strategy 6: Promote access to clean energy to supplement other energy sources in the municipality:

Green energy has been designated as a primary option to overcome dependence on fossil fuels and also as a solution towards energy crisis and global warming. In order to promote the use of clean energy in the municipality, a shift towards renewable as an alternative energy is necessary. To achieve this, there is a need to establish advances in the energy system i.e. smart grid, decentralized electricity generation; and provision of incentives, subsidies and derivation of tariff rate for the municipality; Harness solar energy by encouraging solar PV as PV roofing, PV farm and PV on public infrastructure; and develop infrastructure for wind energy by identifying strategic potential locations.

5.1.7 Strategy 7: Sewerage and Sanitation

The coverage of sewerage infrastructure is skewed to the CBD (Bondo town) while the rest of the municipality. The under-served areas of clustered human activity require installation of this crucial infrastructure. A detailed master plan of the sewerage system as well as reservation for land is necessary. In the rural areas, quality sanitation facilities are required. The municipality in its initial stages needs to develop prototypes for eco-toilets in collaboration with non-governmental and partner organizations.

5.1.8 Strategy 8: Drainage

As such, there is a risk for stagnation of water causing environmental and health risks. The municipality should therefore establish a drainage plan that details slope and discharge of stormwater. Drainage channels should further be integrated along road reserves. Improving vegetation cover will also help in controlling floods.

5.1.9 Strategy 9: Sustainable solid and liquid waste disposal mechanism

Sewerage and sanitation facilities are important to any urban facility. Bondo Municipality has a fully functional sewerage system. Predominant dependence is on pit latrine followed by septic tank. Open defecation is also in practice. Therefore, there is a serious deficiency in sewerage system connection in the municipality. Solid waste management is also a big problem with the municipality. The municipality doesn't have a designated landfill and therefore it is difficult to control solid waste disposal in the municipality. The plan therefore proposes the following strategies:

- **Operationalization of the sewage treatment plant:** This will involve connecting the sewerage to be accessible to every individual household and business entities in the municipality.

- **Decentralization of the current sewerage system for each town:** The current sewerage system is for both Bondo town and Siaya Municipality. In the current status the sewerage system will be overstretched in operation. Decentralization of the sewerage system will involve Bondo municipality installing their pumping station and a treatment plant.
- **Establishment of designated landfills:** The dumping sites and disposal sites establishment should be done in a location where ground water will not be polluted. Trees should be planted on those locations to help in purifying the environment. The municipality should have an operational mechanism of collecting solid waste in the municipality i.e installing skips at every residential and market center.
- **Reuse of the sewer:** This will be possible for a fully operational sewerage system. The system will produce a large quantity of sewage which can be recycled for use in other activities like irrigation of crops or forest, ground water recharge and reuse in the industries.

5.1.10 Strategy 10: Social Development:

Some of the strategic proposal in addressing social problems are as follows: -

- Lack of employment opportunities - Training, facilitate further employment, utilize county administrators' and focus on jobs for residents putting in consideration gender and disability factors.
- Support less privileged people who lack skills to be able to access income generating activities- Meet community and private sector demands, focus on youth, combine hard & soft skills, followup support, standardize and accredit courses, workshops provided as part of a set.
- Disadvantaged areas especially in urban centres are more affected by gang activity, crime and substance abuse - To develop holistic strategies to address gangs, substance abuse & youth development.
- Municipality should facilitate access to housing opportunities - Focus on urbanization, continue to recognize & upgrade informal settlements, sensitization of new homeowners.

5.1.11 Strategy11: Industrial Development:

- Bondo Municipality needs to reserves sites for industrial parks. Additional capital should be budgeted to start industrial and incubation parks.
- Diversification and upgrading based on both agriculture modernization and higher value-addition and introduction of new technology in industries

- Crude and outdated methods of mining i.e. for bricks and sand harvesting. Proper training in geology to the affected areas.
- Demarcate more land for industrial use in the municipality i.e. Juakali sheds/stalls

5.1.12 Strategy 12: Water supply and Resources Development

Water resources being limited, management of available resources against various heads of consumption must be worked out to take care of the current and the future generation. In the Municipality, both surface water and ground water resources are currently exploited to meet the high demand for water. Water resources that can be used within the Municipality include: River Yala and waterpans. These resources should however be planned and protected for current and future generations. The following strategies have been developed to ensure that a sustainable water consumption is attained in the Municipality, which include:

- **Protection of water intake points:** Bondo municipality has a water supply system managed by Siaya Bondo Water and Sewerage Company (SIBOWASCO). The company has its inlet at the southern part of Yala River and supplies both Siaya Municipality and Bondo Municipality. A protection buffer of 50m radius of trees should be provided to prevent pollution of water and conservation as well. Other water intake points like springs, waterpans and boreholes should be protected as well. The planning standards recommends the following protection radius.

Table 5.1: Recommended Protection Belts for water sources

Protection belt	Direct protection	(Radius)	Indirect protection	(Radius)
Borehole	10m		50m	
Well	10m		50m	
River	10-50m		50m	
Waterpans	10m		30m	

- **Centralization of the water supply system:** Currently the water supply system in the municipality is not efficient. SIBOWASCO is overstretched with the large area of coverage. The plan proposes installation of water reservoirs for every town to improve the water supply within the municipality. More water supply connection should also be done in the municipality to every household and business entities.

5.1.13 Strategy 13: Environment and natural resource management

The plan proposes a sustainable municipality with proper resource management. The strategy covers for: planting of trees along the roads and proper landscaping of the municipality and

the open spaces. The plan proposes partnerships and engagement with local communities in the ownership and management of environmentally sensitive areas. Additionally, an environmental management plan and policy guidelines mandating 10% increment of tree cover should be enforced on individual and public land holdings in urban and rural areas.

5.1.14 Strategy 14: Economic development strategy.

The plan should propose activities that will increase the revenue generation for both the municipality and the county. The plan proposes the expansion of SMEs and by infrastructure development in trading centres (markets): electricity (street lighting, solar powered), water and sanitation, establishment of stall markets which will expand the local economy. The plan also proposes financial enhancement to local traders: credit facilities, revolving funds, banking facilities. The plan also proposes hospitality and tourism sector to be expanded so as to promote tourism which will improve the cash flow in the municipality.

5.1.15 Strategy 15: Urban resilience strategy.

Urban resilience strategies are actions that the municipalities can take to become more resilient to shocks and stresses, such as natural disasters, climate change, and economic crises. These strategies can help will help Bondo municipality to recover more quickly from shocks and stresses, and to adapt to long-term changes. The strategies include

- Invest in green infrastructure: green infrastructure, such as green roofs and rain gardens
- Improve disaster preparedness and response: Bondo municipality will develop and implement disaster preparedness and response plans to ensure that they are ready to respond to shocks and stresses. This includes developing early warning systems, identifying evacuation routes, and stockpiling essential supplies.
- Promote social cohesion: develop strong social ties can help communities to recover more quickly from shocks and stresses.
- Strengthen economic resilience: Bondo municipality will support economic resilience by investing in education and training, promoting small businesses, and attracting new industries.

5.1.15 Strategy 16: Urban resilience strategy.

Gender mainstreaming strategies are approaches to integrating a gender perspective into the design, implementation, monitoring, and evaluation of policies, programs, and projects in all political, economic, and social spheres. The goal of gender mainstreaming is to promote

gender equality and eliminate gender discrimination in the municipality. Here are some key genders mainstreaming strategic activities for Bondo Municipality.

- Gender analysis: Identify and developing gender dimensions of policies, programs, and projects.
- Developing gender-responsive budgeting: Gender-responsive budgeting is the process of ensuring that public budgets are allocated and spent in a way that promotes gender equality. It involves identifying the gender implications of budget proposals and ensuring that budgets are sufficient to meet the needs of both women and men.
- Capacity building: Developing the skills and knowledge of individuals and organizations to implement gender mainstreaming. This can involve training, workshops, and mentoring.
- Monitoring and evaluation: Monitoring and evaluation is essential for tracking the progress of gender mainstreaming efforts and identifying areas where improvement is needed.

CHAPTER SIX

6.0. PLAN IMPLEMENTATION FRAMEWORK

6.0 Introduction

Having considered the growth scenarios and the development strategies to be adopted for the realization of sustainable growth of Bondo Municipality, it is recommended that the County Government of Siaya should adopt robust development paradigms known to promote sustainable urban growth and which can be summarised as follows: -

- i. Adoption of new legal and institutional framework for plan implementation by passing bylaws for the development control and decentralization of planning to sub-county levels. The County Government of Siaya should establish well-staffed and equipped planning units in all the sub-counties to ensure that there is a well-coordinated plan implementation and development control.
- ii. Undertaking comprehensive capacity building in all the departments of the county government so as to empower various plan implementing departments in fulfilling their mandates.
- iii. Mobilization of adequate resources for the implementation of the plan. This should draw on a range of sources including annual budgets, donor funding and public-private partnerships.
- iv. Adoption of a result-based management approach to the implementation, monitoring and plan review.

This chapter therefore provides the implementation schedule for the proposed projects, the stakeholders involved in the implementation of the plan as well as ways and means for easing of funds. While the overall implementation of the plan is the responsibility of broad-based stakeholders, provision of leadership and coordination in the implementation of the same is the responsibility of the County Government of Siaya.

6.1 Project and Programs

It is envisaged that the proposed facilitative, productive and perceptive projects will be implemented for the sustainable development of Bondo Municipality. While facilitative projects or programmes enables the production sector to effectively and efficiently operate, productive projects or programmes directly produces goods and services thus creating employment opportunities and income enhancement. On the other hand, perceptive projects are those projects or programmes that improve the image (aesthetics) of the town thus giving

the town a unique identity which attracts potential investors. The facilitate projects to include but not limited to the proposed: -

- i. Expansion of water supply and development of sewer reticulation
- ii. Transportation projects which include development and rehabilitation of roads, bus park and other parking areas for different modes of transportation.
- iii. Expansion of power supply in the town and its environs and augmenting the same with alternative sources of energy such as solar.

The productive projects include the establishment of the proposed and expansion of the existing industrial establishments such as the small-scale (Jua-kali) industrial developments, the furniture workshops, bread bakery and fruit juice industries, flour milling, timber yards, animal feeds and plastic recycling industries, milk processing and cooling plant, steel rolling and EPZ among others.

The perceptive projects include: -

- i. Expansion of the green spaces and implementation of landscaping schemes as earlier discussed.
- ii. Greening of the properties and rehabilitation of degraded sites within the municipality and its environs.
- iii. Expansion of the existing stadium in Municipality town into a modern stadium.

6.1.1 Quick Win Projects

Quick win projects are those projects which are proposed to be implemented within a period of 100 days upon the approval of this plan. These projects which require low funding have high visibility and are effective in rallying support for the planning activities. The proposed quick win projects thus include: -

- i. Establishment of an adequately staffed and equipped physical planning unit for Bondo Sub-County to implement, monitor and enforce the plan.
- ii. Formation of Community forum for the implementation and monitoring of the plan.
- iii. Implementation in a phased-out manner the transportation proposals which include among others development, upgrading and rehabilitation of roads, bus park and other parking areas for different modes of transportation.
- iv. Establishment, upgrading and/or rehabilitation of storm water drainage system in the town

- v. Implementation of beatification projects in the C.B.D and residential neighborhoods
- vi. Rehabilitation of degraded sites within the town and its environs.
- vii. Provision of waste management facilities.
- viii. Establishment of a system of scrutinizing development applications, approvals and supervision.
- ix. Extension of power supply and popularization of the use of alternative sources of energy e.g solar.
- x. Development of Adult Skills Acquisition Centre with modern teaching and learning equipment's
- xi. Rehabilitation and expansion of educational facilities to accommodate rising student population.
- xii. Demarcation of buffer zones for the fragile ecosystems.

6.1.2 Short Term Projects

Short term projects are those proposed projects and/or programmes envisaged to be implemented within a period of 1 to 2 years upon the approval of the plan. These projects which are low in cost fulfil the immediate needs of the community. Equally, the implementation of the projects does not involve many Actors. The above being the case, the below stated projects among others are recommended as short-term projects: -

a. Public Utility

- ✓ Development and/or rehabilitation of public toilets within the C.B.D and other proposed commercial nodes.
- ✓ Enhancement of waste management in the town through the installation of waste receptacles as well as acquisition of land for solid waste landfill.
- ✓ Sinking of boreholes and safeguarding strategic springs for community water uptake
- ✓ Phased out implementation of water supply and sewer reticulation
- ✓ Improvement on the reliability of power supply by the KPLC as well as popularization of the use of alternative sources of energy.

b. Safety and Security

- Installation of street lights.

c. Transportation

- ✓ The provision of safe, adequately segregated infrastructure;
- ✓ Direct routings without major intersection conflicts with motorized traffic;

- ✓ Secure bicycle parking to preclude theft;
 - ✓ Local cycling master plan that should be the basis both for planning infrastructure specifically for bicycles and for incorporating cycling into general traffic infrastructure and management planning;
- d. **Social Infrastructure**
- ✓ Upgrading of the facilities in the health centre to include maternity ward, disaster rescue centre and an incinerator.
 - ✓ Establishment of a National Polytechnic
 - ✓ Establishment of vocational training facilities within the town
- e. **Recreation**
- ✓ Upgrading of the current stadium to international standards.
 - ✓ Provision of community halls at the neighborhood levels
 - ✓ Development of parks, playgrounds and squares in all the residential neighborhoods.
 - ✓ Incorporation of library in all the community halls within the town.
- f. **Local Economic Development**
- ✓ Development of the proposed markets in the designated areas as per the plan
 - ✓ Provision of infrastructure and services such as water, sewer, paved roads, solid waste collection points and electricity to the proposed and existing development nodes.
 - ✓ Development of ICT park and Data Processing Zone
 - ✓ Construction of livestock market and a modern slaughter house
 - ✓ Development of industrial sites for woodwork and metalwork as per the plan
- g. **Governance**
- ✓ Equipping and adequately staffing the service providing departments.

6.1.3 Medium Term Projects

Medium term projects are those proposed projects and/or programmes envisaged to be implemented within a period of 2 to 3 years upon the approval of the plan for they require collaboration of more stakeholders. These projects include: -

a. **Utilities**

- Implementation into phases water supply and sewer reticulation proposals

b. **Economy**

- Development of residential hotels, conference facilities, shopping malls and a cultural center
 - Development of medium industrial and business parks as designated in the plan.
- c. **Housing**
- Upgrading and granting security of tenure to all the informal settlements.
 - Upgrading of all public housing in the town.
- d. **Recreation**
- Expansion of the existing stadium municipality into a modern stadium.
 - Development of a regional museum to preserve the traditional artefacts.

6.1.4 Long Term Projects

Projects enumerated herein are proposed to be implemented within a period spanning to 5 years and are therefore expected to be achieved by the end of the planning period. These projects require to be implemented in phases for they need large outlay of capital investments and feasibility studies. They are exemplified by: -

a. Transportation

- Paving all the internal roads with bitumen material.
- Acquisition of land and development of pedestrian streets within the town.
- Acquisition of land and expansion of Migwena Airstrip as per the plan.
- Construction of underground parking facilities in all the modern commercial buildings.
- Construction to bitumen surfaces all roads leading to major market centers in the municipality.

b) Economy

- Establishment of light industries as earlier discussed in the designated areas.

c) Utilities

- Completion of the last phase of water supply and sewer reticulation project.

6.2 Coordination Framework for the Plan Implementation

At policy level, coordination focuses on facilitating: -

- i. The implementation of strategies and measures by the stakeholders

- ii. Dialogue between all the stakeholders and the county government to create conditions that favors the adoption and implementation of the plan.

At operational level coordination is mainly concerned with improving efficiency of actions through: -

- i. Information exchange
- ii. Facilitation of administrative procedures
- iii. Availing financial flow for the implementation of critical activities, directing resources to priority areas and avoiding overlap of activities.

To enhance good coordination, it is recommended that: -

- i. Immediate enforcement of the plan be undertaken
- ii. The quick wins projects should be undertaken to pave way for the implementation of short term, medium term and long-term projects and/or programmes.

6.3 Financing Framework

The implementation of Bondo Municipality Integrated Development Plan (2023-2027) by the County Government of Siaya requires the best elements of organization and financial stability. Therefore, the below stated measures should be undertaken for the county government to have a well-organized and coordinated departmental structures and organizations capable of implementing the plan: -

i) Public Finance

Central Government Funds

- Funding from KeNHA and KURA
- Funding from the Kenya Airport Authority (KAA)
- National Government Constituency Development Fund (NGCDF)
- Remittances to the County Government by the National Treasury
- The Women Enterprise Development Fund (WEDF)
- The Youth Enterprise Development Fund (YEDF).
- The Constituency Bursary Fund.

Projects

The above stated funds should be able to fund the following proposed projects: -

- i. Development of fully equipped and staffed Bondo sub county Hospital and the proposed health center complete with incinerators and disaster rescue center

- ii. Upgrading of the Migwena Airstrip for commercial purposes.
- iii. Establishment of other tertiary and vocational training institutions.
- v. Landscaping of the municipality CBD
- vi. Acquiring land for solid waste disposal.

ii) **The County Government's Finances**

Sources of finance for the county government includes but not limited to remittances by the national government treasury, parking fees, property taxes (land rates and contributions in lieu of rates), market fees and slaughterhouse fees, single business permits, stall charges as well as public private sector partnerships. These funds are viable in financing the following projects: -

- i. Redevelopment of the sub-county government offices to accommodate the expanded functions.
- ii. Settlement of the recurrent expenditures.
- iii. Upgrading the health facilities.
- iv. Rehabilitation and construction of new schools, vocational centers and polytechnics.
- v. Relocation and redevelopment of modern multi-storey and open-air market stalls
- vi. Development of modern public housing and upgrading of slums
- vii. Acquisition of land and construction of the proposed bus-park
- viii. Upgrading of public parks in the municipality

iii) **Loans, Grants and Donor Funds**

Local and international funding mechanisms provide the best options for funding the following projects: -

- i. Upgrading the health facilities.
- ii. Rehabilitation and construction roads within the municipality.
- iii. Relocation and redevelopment of modern multi-storey and open-air market stalls.
- iv. Development of modern public housing and upgrading of slums.
- v. Upgrading of public parks in the municipality
- vi. Construction of the ICT park
- vii. Construction/upgrading of schools
- viii. Expansion and construction of the water supply a sewer reticulation within the municipality.

- ix. Provision of trainings and awareness creation on environmental governance.

iv) Public - Private Sector Partnership Funding

Projects include: -

- i. Funding of SMEs by the micro finance institutions
- ii. Provision of street lights, water supply, solid and liquid waste management.
- iii. Housing provision
- iv. Development of residential hotels and restaurants complete with conference facilities.
- v. Conservation of parks and playgrounds among others.

v) Community Participation Framework

Continued involvement of the community in this process is aimed at achieving acceptability of the plan.

Towards this end, the following undertakings will be done with full community participation:

- i. Formation of community based environmental management committees.
- ii. Spearheading establishment of neighborhood policing units.
- iii. Continuous monitoring of the plan implementation by the community.

6.4 Monitoring and Evaluation of the Plan

For the assessment of the impact, effectiveness and efficiency of the plan, it is imperative that monitoring and evaluation processes shall be strengthened. In this regard, more attention shall be granted to the critical programs and projects that form the vital path to the achievement of the municipality's vision. Whereas monitoring of the identified projects enables keeping track of the progress, evaluation enables the proponent of a project to estimate the impact of the project and/or programme and to decide whether adjustments need to be made. Collectively, this helps in the assessment of progress, identify difficulties, ascertain problem areas, promote credibility and build public confidence by reporting on the results, helps formulate and justify budget requests, identify promising practices as well as enable the implementation of immediate remedial actions to put the project and/or programme on course.

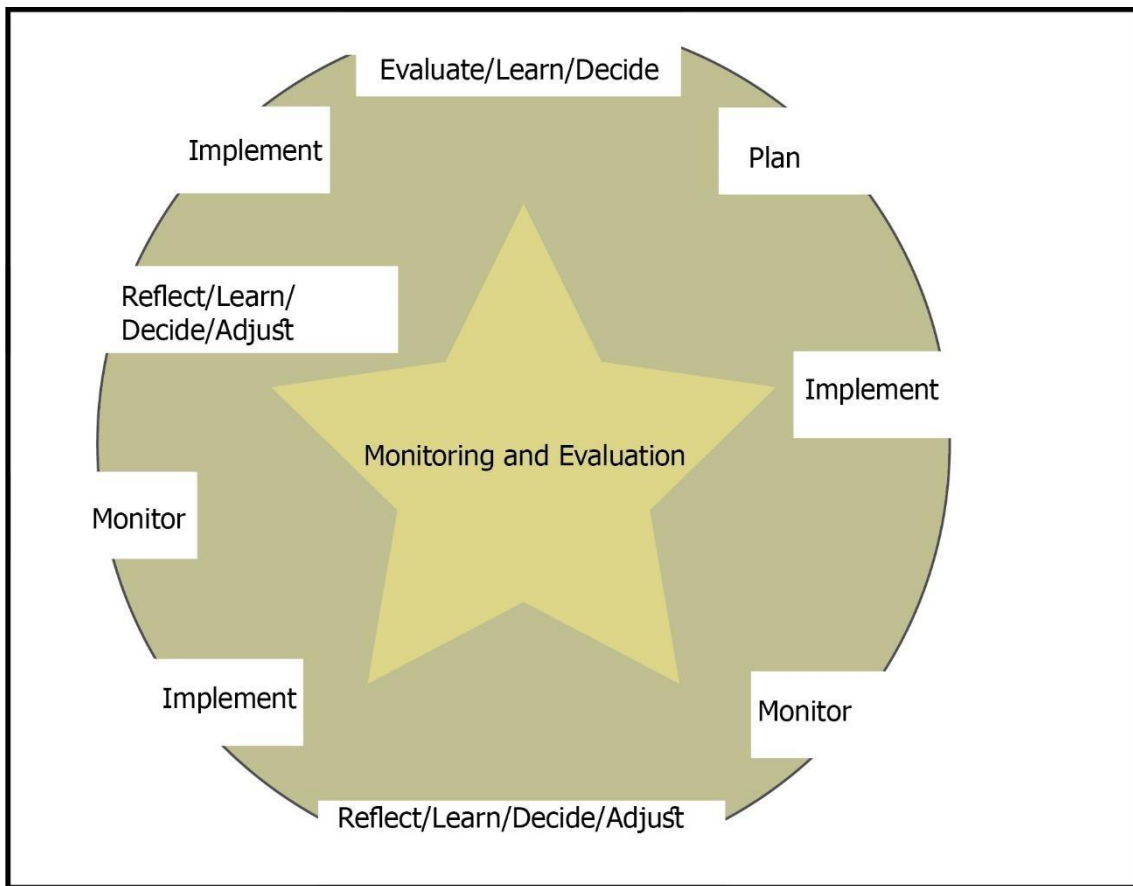


Figure 6. 1: Monitoring and evaluation framework

Source: (Researchers, 2019)

Proper implementation of an effective monitoring and evaluation system shall entail an effective institutional setup for coordination and implementation, adequate involvement of the various stakeholders with adequate resources allocated for monitoring and evaluation activities. To effectively monitor implementation of programmes, projects and activities within the plan period, participatory monitoring and evaluation approaches shall be adopted at all levels of planning including the community level as a means of promoting teamwork and stakeholders' involvement in the plan implementation. This plan proposes that this shall be continuously used complete with provision of feedback mechanisms on progress and impacts. Some of the questions that the evaluation of the Bondo Municipality Integrated Urban Development Plan (2023-2027) shall rationalize include: -

- i. Does the plan continue to relate to the policy framework?
- ii. Does it continue to reflect the municipality's development priorities?
- iii. Are the objectives still relevant?
- iv. Will achievement of the plan's outputs ensure attainment of its purpose and/or goal?
- v. Are there any unstated assumptions which are, or could become problematic?

6.5 The Plan Implementation Matrix

Sector	Projects and Programmes	Actors	Time Frame	Cost
Housing and Human Settlements Development	<ul style="list-style-type: none"> ✓ Technical assessment of land suitability and infrastructure requirements for residential developments ✓ Development of focused public investment plan to outline the location and timing of planned public infrastructure. ✓ Audit of the existing housing stock and project the future housing requirements ✓ Allocation of land for new housing and allied infrastructure to cater for the needs of the projected population growth. ✓ Public housing development and restricting subdivision of land within the town ✓ Slum upgrading as well as prohibiting illegal conversion of residential buildings and set-backs into other users ✓ Promotion of public-private sector partnerships in housing provision ✓ Promotion of the use of locally available building materials. ✓ Instituting development approval reforms to improve efficiency. ✓ Facilitating property mapping, planning, surveying and titling processes for acquisition of land (property) ownership documents. ✓ Implementing the comprehensive public transport strategy as contained in the plan to support the activity corridors and other growth areas. 	<ul style="list-style-type: none"> ✓ Local community ✓ National Government ✓ National Land Commission ✓ County Government of Siaya ✓ NGCDF Committee ✓ CBOs ✓ NGOs 	Short term before 2027	Approximately Ksh 900 million per year per

	<ul style="list-style-type: none"> ✓ Enforcement of the development control standards recommended in the plan as well as encouraging mixed developments especially where the nodes are well served by public transport ✓ Implementation of best practice urban design principles in the growth nodes to establish and maintain higher levels of amenity and functionality Development of commercial and industrial centres at strategic points of the town and its hinterland to act as activity corridors supporting the development of the public transportation network ✓ Extension and/or development of roads, water, sewer, electricity and adequate storm water network in the existing and proposed residential areas ✓ Establishing an efficient solid waste collection point in the residential neighborhoods. 	<ul style="list-style-type: none"> ✓ Local community ✓ National Government ✓ National Land Commission ✓ County Government of Siaya ✓ NGCDF Committee ✓ CBOs ✓ NGOs 	Long Term	
Industrial Development	<ul style="list-style-type: none"> ✓ Development of the existing industrial developments as well as developing the proposed industrial and business parks in different parts of the town as designated by the plan. ✓ Encouraging mixed (light, medium and heavy) industrial investments in the town 	<ul style="list-style-type: none"> ✓ Ministry of Trade and Industrialization 	<ul style="list-style-type: none"> ✓ Immediately (Within the first 100 days after the approval of this plan) and continuously 	
	Development and reserving sites for small-scale woodwork and metalwork industries in a number of neighborhoods within the town	<ul style="list-style-type: none"> ✓ County Government of Siaya 		Approximately Ksh. 467 million per

	Allocation of land for varied industrial developments within the municipality		Short Term	year.
	Improvement of road linkages to the urban hinterlands for efficient collection of the raw materials and for the marketing of the finished products.	Local community	Medium Term	Approximately Ksh. 467 million per year.
	Provision of support infrastructure such as sewer, water, energy among others on the designated industrial sites	Private developers	Medium Term	
	Establishment of Public-Private Partnership for the provision of financial support and land incentives to industrial start-ups	Ministry of Lands	Long Term	
	Improvement of livestock and crop husbandry to achieve diversified agricultural production.	Kenya Industrial Estate (KIE)	Long Term	
Commercial Developments	Land allocation for the formal and informal commercial activities within the CBD and within the residential neighborhoods	Ministry of Tourism	Short term	Ksh. 1.5 billion
	Creation of conducive working environment for the formal and informal commercial sector activities e.g., reducing time for registering business to at least two weeks.	County Government of Siaya		

	Establishment of business parks to act as commercial activity incubators	County Government of Siaya		
	Establishment of semi-open markets and shops in the residential neighborhoods as well as development of allied infrastructure that sustains such activities	County Government of Siaya	Short term	
	Extension of financial and technical services and assistance to informal sector and small-scale traders	County Government of Siaya		

	Review of rates, stall charges and business permits in order to provide conducive environment upon which such commercial ventures can thrive			
	Development of empowerment/skill acquisition center			
	Development of shopping malls, residential hotel and conference facilities as designated in the plan to spur tourism			
	Provision and improvement of infrastructure and services such as sewer, water, paved roads, public conveniences and solid waste management as well as electricity to the proposed and existing commercial nodes to act as an incentive to investors.	<ul style="list-style-type: none"> ✓ Local community ✓ National Government ✓ National Land Commission ✓ County Government of Siaya 	Short Term	

	Provision of I.C.T park and Data Processing Zone	<ul style="list-style-type: none"> ✓ Siaya ✓ NGCDF Committee ✓ CBOs 		
	Establishment and/or strengthening tertiary institutions to provide entrepreneurial training	<ul style="list-style-type: none"> ✓ Local community ✓ National Government ✓ National Land Commission ✓ County Government of Siaya 	Medium Term Before By 2027	
	Enhancing security within the town through regular police patrol and installation of CCTV cameras among others			
	Building capacity of the Private Sector through targeted training, information sharing, dialogues and promotion of joint ventures between the county government and the sector	<ul style="list-style-type: none"> ✓ National Land Commission ✓ County Government of Siaya 	Long Term	
	Undertaking periodic compliance monitoring audit on registered SMEs, to ensure that statutory obligations are fulfilled.		Before 2032	
	Conservation of habitats for animal species such as baboons, monkeys, birds, butterflies and snakes that can to use as tourism base.			
	Development of a modern stadium at Migwena sports ground.			

Educational Facilities	Development of schools as designated by the plan	✓ The National Government	Short Term	Approximately Ksh 30 million per year
	Development of a new National Polytechnic and vocational training facilities as designated by the plan	✓ Ministry of Education		
	Addressing the general imbalances in the distribution and accessibility to all primary and secondary schools.	✓ PTAs		
		✓ CBOs		
	Rehabilitate and expansion of facilities in all existing schools to accommodate rising student population.	✓ NGOs ✓ Ministry of Education-Inspectorate		
Equipping and maintaining appropriate landscaping in the schools to create environment conducive to teaching and learning.				

	<p>Allocation of land and development of Adult Skills Acquisition Centre</p> <p>Quality assurance and adherence to regulatory policies governing the educational institutions</p>			
	<p>Deployment of staff in the urban and peri-urban schools to a recommended teacher pupil ratio of 1:40.</p>			
	<p>Provision of support infrastructure such as water, energy, roads among others to education facilities</p>	<p>✓ Parents</p>	<p>Medium Term</p>	
	<p>Encouragement and facilitation of the participation of the private sector, religious institutions and other stakeholders in the provision of education facilities and services.</p>	<p>✓ Private Developers</p> <p>✓ Sponsors</p> <p>✓ County Government of Siaya</p> <p>✓ Local radio stations</p> <p>✓ Chiefs barazas and Schools</p>	<p>Long Term</p>	<p>-</p>

Recreational Spaces and Biodiversity Conservation	<ul style="list-style-type: none"> ✓ Establishment of urban park and picnic site, walkways, arboretum, fountains, monuments and museum ✓ Implementation of landscaping and beautification schemes as well as greening (tree planting) within the C.B.D, along the major roads, within institutions such as schools and in open spaces within the neighborhoods as means of conserving the environment and to mitigate the ravages of the climate change to adopt the human settlement to the prevailing environmental circumstances ✓ Development of a regional museum to preserve the traditional artefacts. ✓ Provision of community halls I the residential neighborhoods ✓ Development of parks, playgrounds and/or village squares in each residential neighborhood and communities. 	<ul style="list-style-type: none"> ✓ County government of Siaya ✓ NEMA ✓ Local Community ✓ Private Investors Donor ✓ Agencies ✓ National Government 	<p>Immediately</p>	<p>Varies from Ksh 1.5</p>
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Environmental Conservation	<ul style="list-style-type: none"> ✓ Implementation of landscaping and beautification schemes as well as greening (tree planting) within the C.B.D, along the major roads, within institutions such as schools and in open spaces within the neighborhoods as means of conserving the environment and to mitigate the ravages of the climate change to adopt the human settlement to the prevailing environmental circumstances Development of a regional museum to preserve the traditional artefacts. ✓ Provision of community halls I the residential neighborhoods ✓ Development of parks, playgrounds and/or village squares in each residential neighborhood and communities. ✓ Incorporation of library in each community hall, public grounds/village squares in the surrounding communities. ✓ Encouraging the private sector to develop clubs, restaurants, eateries and residential hotels complete with conference facilities ✓ Enactment of by-laws requiring that permission must be obtained from the county government before a tree is cut ✓ Enactment of by-laws committing developers to implement a landscape scheme 	<ul style="list-style-type: none"> ✓ County government of Siaya ✓ NEMA ✓ Local ✓ Community ✓ Private ✓ Investors ✓ Donor ✓ Agencies ✓ National Government 	Short Term	Varies from Ksh 1.5 million to Ksh 250 million
	<p>Enacting by-laws controlling approvals of outdoor advertisement (billboards), signs boards and other structures</p> <hr/> <p>Rehabilitation of the degraded sites within the C.B. and the other neighborhoods within the town and i hinterland.</p>	National Government -	Short Term	

	<p>Reclamation of the swamps and flood prone areas</p> <p>Strict observance of the riparian reserve to buffer the water body from adverse anthropogenic activities.</p> <p>Enacting of by-laws ensuring that excavation and demolition materials are appropriately dumped as well as backfilling of open holes and abandoned construction sites and/or quarries</p> <p>Discouragement of human settlements on flood prone and hill-slopes</p> <p>Management of alien plant species invasion into the town</p> <p>Popularization of the use of non-motorized mode of transportation</p> <p>Provision of the necessary infrastructure which supports public transportation and non-motorised modes of transportation</p> <p>Enactment and enforcing by-laws controlling openburning of wastes in the town and ensuring that all the health facilities have incinerators</p> <p>Enforcement of NEMA standards and statutory regulations on industrial emissions and noise levels</p> <p>Popularization of the use of cleaner domestic energies such as electricity, liquefied petroleum gas and alternative (green) energy such as solar energy to control indoor air pollution</p>	<ul style="list-style-type: none"> ✓ Public Works National ✓ National Government ✓ Water Resources Management Authority (WRMA) ✓ County Government 	<p>Medium Term</p>	
<p>Public Purposes</p>				

Health Facility and Services	Expansion of Siaya County Referral hospital and Health Centre complete with rescue centers and incinerators	County Government of	Short Term	An average of 7.5 million per
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	Improvement and maintenance of the landscape and buildings of all health facilities.	Bondo Private Developers		project per year
	Equipping and staffing the facilities			
	Establishing Public-Private Sector Partnerships for the provision of health services	Ministry of Health	Medium Term	
	Provision of support infrastructure such as water, sewer, and electricity among others to all health facilities.			
Security Facilities and Services	Development of modern Administration police line with residential facilities.	National Government – Ministry of Internal Security National Police Service County Government of Siaya	Short Term	Approximately Ksh 29 million
	Adequately staffing and equipping the facilities with disaster management installations.			
	Provision of support infrastructure such as adequate housing, water, sewer, and electricity among others to all the facilities.			
	Improvement and maintenance of the landscape and buildings of all the security stations.			

Public Utilities				
Water Supply	Incorporating a local water company to harness the local water resources and to expand the existing reticulation.	National Government	Short Term	
	Development of water treatment plant, reservoir and pumping stations			

	Establishment of sustainable water distribution supply system for cost recovery with consumers properly fitted with water meters for an efficient, transparent and accountable system of revenue collection.			Approximately Ksh 29 million
	Installation of water storage tanks at strategic positions within the settlement and expanding the services to new development areas.			
	<ul style="list-style-type: none"> ✓ Drilling of boreholes, shallow wells and development of other safe sources of water for the supply to the town after treatment. ✓ Partnership building for the operation of water sources and reticulation systems. ✓ Fencing around all the shallow wells to protect them from pollution ✓ Safeguarding underground water quality through adherence to public health stipulations and standards ✓ Enforcement of approvals for sinking wells to enhance the achievement of safety standards. 	<ul style="list-style-type: none"> ✓ Management Authority (WRMA) ✓ NGOs ✓ Private developers ✓ County Government of Siaya ✓ NEMA 	Medium Term	A total of Ksh 2.5 billion

<p>Sewer Reticulation</p>	<p>Instituting an immediate phased out construction of a sewerage system within the town to cover all neighborhoods and commercial nodes – starting with the C.B.D of the town</p> <p>Development of sanitary solid waste management site cum sewer treatment site.</p> <p>Regular Maintenance of the sewerage line and treatment plant.</p> <p>Instituting an effective monitoring and control measures to regulate the discharge of toxic waste into the sewer.</p> <p>Increasing the number of public conveniences/sanitary facilities in the town</p> <p>Instituting effective waste monitoring and control measures to regulate the discharge of untreated toxic wastes into open dumps.</p>	<ul style="list-style-type: none"> ✓ National Government ✓ Water Resource Management Authority (WRMA) ✓ NGOs ✓ Private developers ✓ County government of Siaya 	<p>Immediately</p> <p>Short Term</p>	<p>A total of Ksh 200 Millions</p>
<p>Transportation and Traffic Management</p>	<p>Provision of system of roads that can take the traffic generated within the town out of the town</p> <p>Upgrading (widening) the narrow roads and rehabilitating the roads by making them all weather.</p>	<ul style="list-style-type: none"> ✓ The Kenya Roads board KeNHA 	<p>Short Term Before 2027</p>	<p>90 Million Per Km</p>
	<p>Installation of street furniture such as streets lights, planting trees along it, providing pedestrian and cycling paths, providing lane markings and road</p>	<ul style="list-style-type: none"> ✓ KURA ✓ KeRRA ✓ Private Developers 	<p>Medium Term</p>	

	signage and traffic lights.	<ul style="list-style-type: none"> ✓ County Government of Siaya ✓ Land owners ✓ Traffic police ✓ Motorcycle operators ✓ The Public 			
	Expanding the Bondo-Kisumu Road into a 60m dual carriage way with designs taking into consideration motorized and non- motorized modes of transportation.				
	Development of bus and lorry parks and other parking spaces within the town and its environs.				
	Creation of pedestrian streets or walkways and integrating the drainage systems with road networks.				
	Provision of routes and parking for the None – Motorized Modes of transportation				
	Development of bus stops, interchanges at major crossings within the proposed express way				
	Initiating private sector-led development of decent taxi service system for the town.				
	Provision of on-street and off-street parking facilities at appropriate locations				
	Enacting by-laws enforcing strict parking standards for offices, shopping plazas, churches, hotels, restaurants, bars and eateries.				
	Acquisition of adequate way leaves for road widening by engaging the affected plot owners along each road				
	Maintenance of roads linking the town to other urban centres in the region				

	Construction of motorcycle parks in the town with adequate public conveniences such as passenger waiting sheds, storage facilities, fastfood kiosks and toilets among others			
	Construction of motorbikes and bicycles tracks and footpaths, footbridges and tunnels along busy motorize routes.			
	Strict observance of development control measures such as the setbacks and			
Storm Water Drainage Network	Extension of storm water drainage to other parts of the town	KeNHA	Immediately	Approximate Ksh 150 million
	Construction of the drainage network intertwined with the road network			

Storm Water Drainage Network	Demolition of structures on the drainage way leaves and flood prone areas.	<ul style="list-style-type: none"> ✓ KURA ✓ KERRA ✓ Private Developers ✓ County Government ✓ Siaya Land owners ✓ The Public Business Community 	Immediately	Approximate Ksh 150 million
	Unblocking the drainages channel along the roads			
	Conducting regular routine maintenance and cleaning of the storm water drains			
	Provision of the slab covers for all open concrete roadside drains to prevent direct dumping of solid waste into them.			

Electricity and Alternative Energy Sources	<ul style="list-style-type: none"> ✓ Extension of the electricity supply and transformer installations to the developed areas and proposed new development sites. ✓ Development of power sub-station as designated by the plan ✓ Popularization of alternative sources of energy such as solar energy within the town to complement the current electricity supply. ✓ Installation of solar powered street lights throughout the town. ✓ Enforcement of the by-laws relating to the preservation of power way-leaves. 	<ul style="list-style-type: none"> ✓ County Government of Siaya ✓ Kenya power Western region 	<p>Immediately</p>	<p>Approximately Ksh 800million</p>
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Fire Station, Disaster Preparedness and Management	<ul style="list-style-type: none"> ✓ Establishment of a fire station within the municipality with at least a fire engine with adequate members of staff to serve the municipality and its environs ✓ Undertaking the development of the proposed ✓ water reticulation with fire hydrants ✓ Establishing Disaster Preparedness and ✓ Management section within the county government ✓ Enactment of Disaster Preparedness and ✓ Management by by-laws ✓ Enforcement of zoning regulations to ensure separation of conflicting land uses so as to reduce chances of fire disasters ✓ Establishment of disaster rescue centres within the ✓ health facilities as earlier discussed ✓ Initiating public-private sector partnerships to encourage private hospitals, NGOs and other stakeholders to operate ambulance services and ✓ establish the centre for disaster preparedness and management ✓ Enacting building by-laws for all the public buildings to be equipped with firefighting equipments such as horse reel, fire extinguishers and fire hydrants 	<ul style="list-style-type: none"> ✓ County ✓ Government of ✓ Siaya ✓ National ✓ Government ✓ Private ✓ Developers ✓ NGOs 	<p>Immediately (within the first 100 days after the approval of this plan) and continuously</p> <p>▪</p> <p>Short Term Before 2027</p> <p>▪</p>	<p>Approximately Ksh 125 million</p>
Public Cemetery	<p>Acquire land for establishment of a public cemetery and crematorium.</p>	<p>County Government of Siaya</p>	<p>▪ Short Term Before 2027</p>	<p>Approximately Ksh 150 million</p>

	Enforcement of by-laws prohibiting burials within the town boundaries and sensitization of the residents to undertake burials in the designated cemeteries.	Development Partners		
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Solid Management and Sanitation Enhancement	Acquiring land for solid waste landfill for the Municipality	<ul style="list-style-type: none"> ✓ County ✓ Government of Siaya ✓ National Government - ✓ Private Developers ✓ NGOs 	Immediately	Approximately Ksh 500 million
	Enforcing by-laws compelling all the health institutions and clinics to install incinerators for the management of the hospital wastes			
	Allocating spaces for primary waste collection areas (receptacles) before being transferred to the dumpsite			
	Establishing measures for cost recovery and income generation by the county government – levying charges on dumping in the site and for providing refuse collection service to general public.			
	Fencing of the dumpsite to keep away stray animals and children from accessing the site			
	Landscaping the dumpsite and planting it with trees and scented flowers to screen off the nuisance and to obviate smell.			
Repairing and/or constructing the road leading to the dumpsite to all weather standards to enhance accessibility.				

	<p>Encouraging safe scavenging in waste collection - plastics and metals from the dumpsite for sale to reduce the amount of waste on the dumpsite.</p> <p>Enforcing by-laws prohibiting indiscriminate dumping of wastes</p> <p>Enforcement of by-laws relating to proper disposal of industrial/workshop refuse/effluents as well as provision of disposal sites/facilities for small-scale industries and roadside workshops that cannot afford private treatment plants.</p>			
	<p>Provision of adequate refuse dumping facilities within the urban area for prompt evacuation of waste to dumping sites.</p>	<p>National Government</p>	<p>Immediately</p>	<p>Approximately Ksh</p>

	<p>Implementation of street cleaning through monthly public environmental clean ups</p> <p>Enforcement of by-laws requiring every development to provide adequate sanitary facilities to the residents and/or clients of the establishment.</p> <p>Instituting public-private sector partnerships in the provision of public toilets in all existing and proposed public places and in major activity areas</p> <hr/> <p>Public awareness creation through campaigns on benefits of hygiene and clean environment</p> <hr/> <p>Capacity building in solid waste management by either increasing the solid waste management equipment and staff or building public – private sector partnership by out sourcing environmental management services.</p>			500 million
	<p>Popularization of the adoption of appropriate methods of waste disposal and treatment at the household level such as such as composting, waste separation and recycling</p> <p>Enactment and enforcement of by-laws that focus on health, hygiene and general sanitation (strict enforcement of Public Health Act – Cap 242).</p>	<ul style="list-style-type: none"> ✓ County ✓ Government of Siaya ✓ National Government - ✓ Private Developers NGOs 	Long Term	
Land Management	<p>Incremental implementation of the zoning regulations such as minimum plot sizes, coverages, ratios and users as proposed in this plan</p> <p>Instituting appropriate fiscal incentives to development and disincentives for idle holding of land for speculations</p>		Immediately and Continuously	Approximately Ksh 160million

	Establishment of public land reserves (land banks) to prevent urban sprawl			
	Establishing Private-public-partnership in land management through the incorporation of the private sector, the Civil Society organizations (CSO), Community Based organizations (CBOs) and Non-Governmental organizations (NGOs)			
	Popularization of informal dispute resolution methods in matters concerning land			
	Establishment of cadastral and land registration systems for the town			
	Establishment simplified user-friendly Land Information System and Geographical Information System (G.I.S) for the town accessible to the citizens – to be manned by qualified and competent ICT and GIS Experts			