



**LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLAN FOR  
OYUGIS MUNICIPALITY (2023 - 2033)**

BY

DEPARTMENT OF LANDS, PHYSICAL PLANNING, HOUSING & URBAN  
DEVELOPMENT.

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## **FOREWORD**

Oyugis Municipality is one of the fastest growing Municipalities in Homa Bay County and its sound planning is important, as it is going to be one of the urban areas which will be home to half of the world population by the year 2030. It is important to note that urban areas are engines of economic growth, centers of innovation and nucleus of melting pot of cultures; and these functions can only be achieved if municipalities are meticulously planned.

Planning of Oyugis Municipality has been done under the oversight of the Department of Lands, Physical Planning, Housing and Urban Development. Physical Planning of the municipality was done within the purview of global, regional and national policies, legislations and instruments including; Sustainable Development Goals (SDGs) Goal 11 on sustainable human settlements; New Urban Agenda involving 'leaving no one behind'; Vision 2030, a blue print for transforming Kenya to be a middle income Country by 2030; Constitution of Kenya 2010 especially Chapter Five on Land and Environment; articles 42,43 on the right to have a clean, healthy environment and provision of quality socio-economic services to all; Physical and Land Use Planning Act No 13 of 2019; and Urban Areas and Cities Act 2011, on the need to plan for sustainable settlements.

Oyugis Municipality is being planned with the Vision of '*A vibrant transit business hub, a just and inclusive municipality providing high quality services that satisfies the needs of residents and beyond, in a secure, serene, clean and healthy environment*'

Oyugis Municipality Local Physical and Land Use Development Plan is a 10-Year plan which will be implemented from 2023 to 2033. The plan effectuation process will be participatory and all stakeholders including the National Government, County Government and the Donor Community will be involved. It is envisioned that once the plan is effectively implemented, Oyugis Municipality will be a business and investment hub, akin to "Dubai" of Homa Bay County.

**H.E Hon. Governor**

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## **LIST OF ABBREVIATIONS**

CBD	Central Business District
CEC	County Executive Committee
DTM	Digital Terrain Model
EIA	Environmental Impact Assessment
EMCA	Environment Management Coordination Act
FGD	Focus Group Discussion
FR	Folio Registry
GIS	Geographical Information System
GoK	Government of Kenya
GPS	Global Positioning System
HFC	Housing Finance Corporation
HOMAWASCO	Homa Bay Water and Sewerage Company
MCA	Member of County Assembly
LPLUDPs	Local Physical and Land Use Development Plans
LVSWWDA	Lake Victoria South Water Works Development Authority
NGO	Non-Governmental Organization
NLC	National Land Commission
RIM	Registry Index Maps
SDGS	Sustainable Development Goals
ToR	Terms of Reference
UN-HABITAT	United Nations Human Settlement Program



## **EXECUTIVE SUMMARY**

The Oyugis Municipality Local Physical Land Use Development Plan (2023-2033) is an initiative by the Ministry of Lands, Housing, Physical Planning & Urban Development that is to be implemented by the County Government of Homa Bay. The planning process was executed in a participatory manner involving all the government agencies and stakeholders. The purpose of the Local Physical and Land Use Development Plan (LPLUDP) is to set up a framework that will lead to orderly and sustainable growth of Oyugis Municipality for the next 10 years. This plan endeavors to achieve the goals of Kenya Vision 2030 that seek to transform Kenya to a middle-income country by 2030 and provide a high-quality life to all citizens.

The plan area will cover approximately 105km<sup>2</sup> incorporating parts of the Kotieno Kokech, Kasimba, Kokal, Kanyango and Kamuma sub-locations. The Planning process started March 2023 in a participatory manner by engaging various stakeholders led by the ministry of Lands, Housing, Physical Planning & Urban Development through series of meetings and consultative workshops. The process also incorporates the strategic and integrated approaches in order to consider the physical, economic and social dimensions of development in Oyugis Municipality both horizontally and vertically among the various sectors. This has assisted in the assessment of development challenges and potentials of Oyugis Municipality. The planning process has undergone three major phases, that is, preparatory, Mobilization, stakeholder sensitization, Field Survey and investigative phase that have led to the production of the situational analysis report ready for validation. The remaining phases are the preparation of the draft and final plan that shall also be subjected to the stakeholder validation before approval.

The key findings from the planning processes so far undertaken shows that Oyugis Municipality is fast growing with the current population being 70,025 which is projected to be 96,322 by 2033. The CBD is growing as a commercial hub but with uncontrolled urban sprawl that is gradually extending into prime agricultural land in its peri-urban and environmentally fragile areas.

The municipality has adopted a linear type of growth that is structured along major roads such as the Oyugis-Kisii, Oyugis-Kisumu, Oyugis-Kendu and Oyugis-Gamba. Residential development has adopted mixed use pattern but with less development control estates such as A thousand Street and Kawaindi are showing signs of urban decay and slum development.

The infrastructural problems in Oyugis Municipality include poorly connected and narrow roads that are experiencing encroachment in some areas, inadequate piped water connections and lack of sewer networks. In addition, there are poor waste management practices, and as a result waste is dumped in farms and water bodies such as River Ayoro. The municipality currently generates approximately 22.80 tonnes per day and estimated to be 28.62 tonnes by 2033 yet there is no designated solid waste disposal site. It is also estimated that Oyugis Municipality currently generates approximately 2,426m<sup>3</sup>/day of raw sewer and projected to be 3,015m<sup>3</sup>/day by 2033 yet there is no sewerage treatment works. In terms of social infrastructure, the municipality still needs more educational facilities considering the rising population and the pandemics, inadequate supportive infrastructure for health facilities, no fire station and lack of public open spaces. Oyugis municipality is also facing a serious challenge of urban resiliency considering its fast growth without any tools prepared to manage the challenge.

Despite the municipality growing as a business hub, there lack of trade policy for the municipality, land for industrial use and poor support infrastructure. Urban governance is also deficient due to inadequate policy formulations and the limited capacity of the County Government to implement existing laws. The only official physical plan for Oyugis Municipality was prepared and approved in 1972 and mainly involved the determination of various land uses within public land covering not more than 4Ha. While a local development plan prepared in 2011, was never implemented. However, since most of the land in Oyugis Municipality is freehold, the ability of former local authorities and the young County Government to effect planning regulations has been seriously constrained.

On the other, hand the results also revealed several opportunities for Oyugis Municipality sustainable growth. The county government with strengthened institutions, partners and the community are ready to cooperate and support the process. The municipality has good connectivity to the surrounding towns, the growing population gives room for effective resource mobilization and development initiative planning; the rich agricultural land can make the municipality be food secure; ready market for housing stock due to high population can be exploited by real estate investors to achieve affordable housing; the rising population creates markets for goods and services; proposed construction of sewerage networks, extension of water reticulation system; room to develop and implement the urban resiliency management tools; untapped solar power and proposed expansion of electricity coverage and moderate land values suitable for land banking make Oyugis Municipality grow in a sustainable manner.

The completion of LPUDP will incorporate the implementation, monitoring, and evaluation strategies that will play a major role in ensuring that the plan achieves its desired goals and set objectives.

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# **CHAPTER ONE: INTRODUCTION**

## **1.1 Background**

Oyugis Local Physical and Land Use Development Plan is a medium ten-year development plan running from 2023-2033. The plan aspires to accelerate development and grasp the aspiration of transforming the municipality into an organized Municipality that factors in land use compatibility and environmental conservation. Thus, the plan is a crucial instrument for developing, operating and managing the municipality. It addresses the spatial, social, economic, environmental and infrastructural aspects of the municipality so as to achieve sustainable development.

The urbanization trend with its characteristics such as rapid demographic growth, spatial expansion, economic differentiation, social complexity, cultural diversity and institutional fragmentation call for an efficient and responsive mechanism to reduce the ancillary impacts of urbanization such as poverty, inequality, traffic congestion, growth of informal settlements and environmental degradation.

Major planning challenges facing Oyugis Municipality include: lack of a spatial framework to guide its growth since the existing plan has been overtaken by events, urban decay, urban sprawl, growing informal settlements, lack of adequate basic infrastructure developments like paved roads, storm water drainage, sewer system, proper water supply, solid waste disposal, environmental degradation including unsanitary disposal of waste and pollution of water bodies like Ayoro river. The plan has the following thematic areas; transportation; physical infrastructure and services, environment, social infrastructure, housing; local economic development and governance. This plan aims at addressing these myriads of challenges through provision of a clear land use and urban development framework for Oyugis Municipality which will not only provide practical solutions but also project a desired future state for the municipality.

## **1.2 Problem Statement**

Oyugis Municipality as a robust urban area with unlimited opportunities, facing a number of development challenges including: uncoordinated linear developments, road encroachments, inadequate energy and support infrastructure, inadequate health infrastructure, education and recreational spaces and other public utilities; lack of land information management system; undeveloped road network; low levels of access to portable water and other basic services.

Further, high population densities in the urban areas have strained facilities and opportunities leading to shortage of housing, unemployment, traffic nuisance, pollution, land over-subdivision, land dispute related conflicts, wading opportunities in tourism and manufacturing, and combating adverse effects of climate change.

## **1.3 Planning outline**

The preparation of the plan will entail the following

- To prepare a clear land use and urban development framework for Oyugis Municipality which will not only provide practical solutions but also project a desired future state for the municipality?
- The plan to be prepared in the context of the legislative framework of the Country's Constitution 2010; Kenya's Vision 2030, County Government Act, 2012; Urban Areas and Cities Act, 2011; the Physical Planning and Land Use planning Act, 2019 amongst other pieces of legislation.
- The assignment to cover the entire area defined in the boundaries attached and for a period of 2023-2033.
- The planning to consider the inter-relation with the neighboring areas whose activities directly influence the municipality and other cross-county resources like the full extent of major rivers, when dealing with water resource issues. Any matters touching on regional planning and existing ones will have to be considered and incorporated where appropriate.

- The planning process to apply inclusivity and participatory, multidisciplinary and multi-sectoral approaches. Consultative meetings with the County Executive and experts drawn from various professions and sectors within the County to be undertaken.
- GIS based Mapping to be undertaken to show the spatial representation of the natural and manmade features within the planning boundary. Features to be captured in the maps to include but not limited to contours, rivers, wetlands and man-made features (human settlements, physical and social infrastructure). Social economic surveys to be undertaken.

#### **1.4 Purpose of the Plan**

The purpose of this project was to prepare a local physical and land use development plan that will facilitate the achievement of orderly and sustainable growth of Oyugis Municipality. The achievement of the same is envisaged to address the existing and future development challenges of the municipality as stipulated in the Urban Areas and Cities Act, 2011, section 36(1) – (2) as to:

- Give effect to the development of Oyugis Municipality.
- Strive to achieve the objects of devolved government as set out in Article 174 of the Constitution.
- Contribute to the protection and promotion of the fundamental rights and freedoms contained in chapter four of the Constitution of Kenya and the progressive realization of the socio-economic rights
  - Be the basis for:
    - The preparation of environmental management plans;
    - The preparation of valuation rolls for property taxation;
    - Provision of physical/social infrastructure and transportation;
    - Preparation of annual strategic plans for Oyugis Municipality;
    - Disaster preparedness and response;
    - Overall delivery of service including provision of water, electricity, health, telecommunications and solid waste management; and

- The preparation of a geographic information system for the municipality;
- Nurture and promote development of informal commercial activities in an orderly and sustainable manner;
- Provide a framework for regulated urban agriculture; and
- Be the basis for development control.

The Local Physical and Land Use Development plan shall bind, guide, inform all planning development and decisions; and ensure comprehensive inclusion of all municipality functions.

### **1.5 Objectives of the Plan**

The objectives of Oyugis municipality local physical and land use development plan are:

- a) To prepare GIS based thematic maps for Oyugis Municipality.
- b) To collect, analyze and present physical, socio-economic and environmental data.
- c) To analyze, pictorialize and illustrate the spatial and non-spatial data collected.
- d) To give recommendations that will guide land use planning within the proposed planning boundary.
- e) To prepare land use zoning for Oyugis Municipality.
- f) To conduct and demonstrate public participation during the plan preparation.
- g) To prepare development control framework and guidelines within Oyugis Municipality and in accordance to the land use zones.

### **1.6 Scope of the Plan**

Oyugis local physical and land use development plan is a medium-term ten-year development plan running from 2023 to 2033 that will cover an area of approximately 105km<sup>2</sup>. The planning area will cover parts of the following sub-locations: Sino Kagola, Nyalenda, Kachieng, south Kachiena, Obisa, Kawion, Kamiyawa, Kotieno Kochich, kotieno konuonga, kadel kamidigo, oyugis town, Kotieno Kokech, Kasimba, Kokal, Kanyango and Kamuma.

## 1.7 Methodology

The process of preparing the Local Physical and Land Use Development Plan for Oyugis Municipality entailed the following:

- **Strategic** – development of a long-term perspective to urban development; addressing the critical aspects of development as opposed to the comprehensive approach to issues and development proposals.
- **Integrated** - take into consideration of the physical, economic and social dimensions of development; horizontal integration, among the various sectors of public action; policies, projects and proposals were considered in relation to one another; multi-sectoral and multi-disciplinary
- **Evidence-based** – systematic research and surveys, rigorous data analysis and interpretation were undertaken.
- **Result-oriented**-a systematic process was used in order to come up with the most effective and economical way of achieving the end product.
- **Participatory** - Targeted citizen and stakeholder engagement as per the constitutional provision.

### 1.7.1 Plan Preparation Process Phases

The preparatory phase involved:

- i. Preparation of a preliminary base map which entailed acquisition of satellite images, acquisition and digitization of PIDs and RIMs and the preparation of a map showing the existing situation.
- ii. Transect survey to appreciate the planning area, ground truth and prepare a final base map
- iii. Stakeholder identification and analysis to identify the right stakeholders that would be engaged and develop a strategy for communication during the planning process.
- iv. Data needs assessment to identify the correct information that would be required and develop a data acquisition, storage and analysis strategy.

## **Phase Two: Mobilization Phase**

During this phase, identified stakeholders were engaged to provide information about the plan preparation, and receive their feedback on the same. The stakeholders also provided additional information required for planning. Stakeholder engagement was undertaken through workshops, targeted consultative meetings, citizen fora and other public forum as was deemed appropriate. The stakeholder workshops were divided into three for; presentation of visioning and objective setting, validation of data collected about the area and validation of draft plan.

## **Phase Three: Field Survey**

The collection of data involved both secondary and primary data. The primary data was collected from the field while secondary data was gathered from existing documents (published and unpublished) related to the project area.

### **i. Secondary Data**

The study recognizes the published and unpublished documentation on the study area. The data sources were varied and included the county and sub-county documents, journals, internet documents, government departments, previous plans and previous related studies done elsewhere and/or in the study area. The purpose of this was to anchor the conceptual framework for the study. Data collected through this method was on the following;

- i. Physical characteristics and natural resource base of the study area.
- ii. Environmental issues on the study area.
- iii. Population dynamics of the study area.
- iv. Land ownership and housing characteristics.
- v. Economic base of the study area.
- vi. Infrastructure, utilities and services.
- vii. Institutional framework for the plan.

### **ii. Primary Data**

Primary data was collected through household surveys using structured household questionnaires, focus group discussions schedules for the targeted interest groups, key informant interviews, observation and photography. Since it was not possible to enumerate the whole population, a representation

of 362 households was sampled. To arrive at the best sample size, the below stated function was used:

$$nf = \frac{n}{1 + n/N}$$

Where nf=desired sample size when the population is less than 10,000

n=desired sample size when the population is above 10,000 (usually 384)

N=estimated population size

The sample calculation

$$nf = \frac{384}{1 + 384/6552}$$

=362 households

### ***Sampling techniques***

In order to have accurate representative sample, the planning area was divided into 4 zones based on the physical layout of the municipality. Stratified random sampling was then used to administer household questionnaires in various parts of Oyugis Municipality. This ensured that each household had equal chances of selection.

### ***Actual survey***

The survey was conducted on the basis of a structured questionnaires and check lists. The questionnaires were fed into Kobo collect application and then administered using mobile phones. The survey was conducted in May 2023. For local leaders and government representatives open ended schedules/ checklists were used to carry out interviews.

### ***Data entry and analysis***

Data entry and analysis was done using SPSS. Data output in the form of frequencies was presented using frequency tables and bar charts.

### ***c) Sensitization Phase***

During this phase, identified stakeholders were engaged to provide information about the preparation of the plan, and their feedback received



on the same. The stakeholders also provided additional information required for planning. Stakeholder engagement was undertaken through workshops, targeted consultative meetings and other public forum as was found appropriate. The stakeholder workshops were divided into three for; presentation of visioning and objective setting, validation of data collected about the area and validation of draft plan.

The objective of the visioning exercise was for stakeholders to come up with a clear, realistic and agreed upon vision of how things will have positively changed in a period of time (normally 5 to 10 years). They were to think in terms of how the municipality or affected people's lives was to improve within the time period. The Vision was the concept note explaining the desired future. It was based on the views of different stakeholders involved in the plan making process who stated their desired vision for the municipality which was to guide the municipality in achieving its set targets for the next ten years. Some of the visions suggested by the stakeholders were:

- Industrial and Transit municipality
- A self-sustaining municipality
- To be a world class well planned, secure and safe municipality that will be a home not only to the residents of Rachuonyo South Sub County but to also residents of Homa Bay county, Nyanza region and beyond (National government vision of Oyugis Municipality).

The above culminated into a negotiated and agreed vision for the municipality being: -

Oyugis Municipality was being planned with the Vision of '*A vibrant transit business hub, a just and inclusive municipality providing high quality services that satisfies the needs of residents and beyond, in a secure, serene, clean and healthy environment*'

#### **d) Investigative Phase**

In this phase investigation was undertaken to enhance understanding of the area's social, economic and environmental dynamics through desktop and field studies. The outcome of the investigation as well as the stakeholder

engagement formed a basis for the formulation of intervention measures of the plan.

Among the studies that were undertaken were;

- i. Land use and land suitability analysis
- ii. Infrastructure gap analysis,
- iii. Human settlement trends and patterns analysis,
- iv. Demographic analysis,
- v. Needs analysis,
- vi. Environmental profiling, etc.

#### **e) Plan Formulation Phase**

Based on stakeholder concerns, feedback on concept plan and findings from investigation, Oyugis Municipality local physical and land use development plan (comprehensive spatial development framework) was formulated.

#### **f) Plan Approval Phase**

After the stakeholder validation process that entailed presentation workshop for discussion of the draft plan, the draft plan was amended to reflect the stakeholder concerns raised during the workshops. Notice of completion of the plan was then published in newspapers and Kenya gazette. The amended draft was submitted to the Homa bay County Assembly for approval.

## **CHAPTER TWO: PLANNING CONTEXT**

### **2.1 Overview**

This plan has been prepared within the context of: Constitution of Kenya 2010, the Vision 2030, County Government Act of 2012, Urban Areas and Cities Act of 2011, Physical and Land Use Planning Act of 2019, various sectoral policy frameworks, relevant legislative provisions; the terms of reference and stakeholder concerns. It also presents the geographic context of the municipality at national, regional and local levels as discussed below.

### **2.2 Geographical Context**

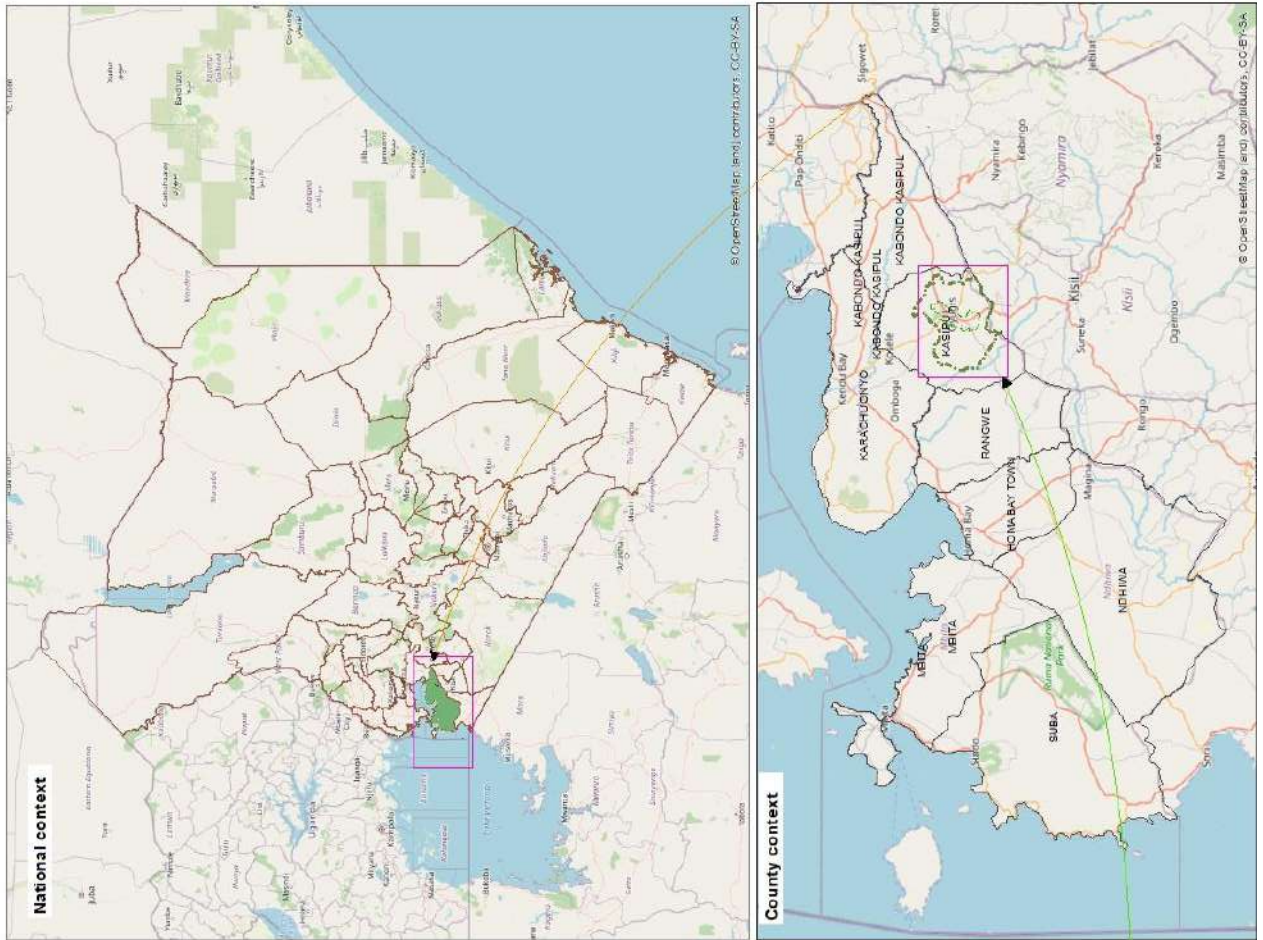
The planning area is located in western Kenya, at latitude 0° 27' 26.98" S and longitude 34° 39' 32.77" E and latitude 0° 34' 17.15" S and longitude 34° 47' 19.63" E and at approximately 1,420m above sea level. It serves as the Rachuonyo South Sub-County headquarters of Homa Bay County. The planning area lies between Kisii highlands and Lake Victoria basin. Oyugis Municipality's location has great strategic importance as it is located along Ahero —Isibania (A1) highway which is the gateway into Tanzania through Isibania. The road also links the municipality with Kisumu City and Kisii town hence providing opportunities for:

- Regional flow of goods, people, and capital
- Business growth and employment creation
- Inter-county and intra-county connectivity

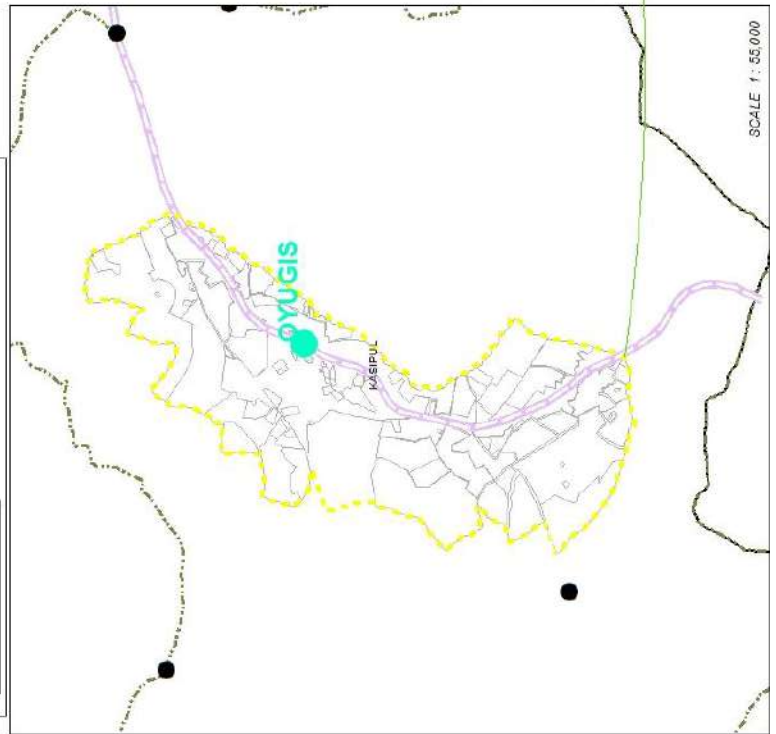
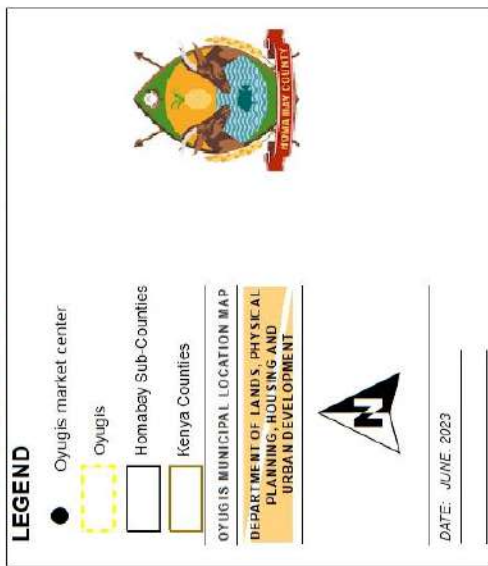
#### **2.2.1 Oyugis Municipality in the National Context**

The municipality is located in western part of Kenya along the A1 Ahero — Isibania road in Homa bay County. It is 249km North West of Nairobi city (Kenya's capital city), 25km North of Kisii town and 46km South of Kisumu city as shown in Map 2- 1. The municipality connects to Tanzania through Isibania border.

**Map 2- 1: Oyugis Municipality in the national context**



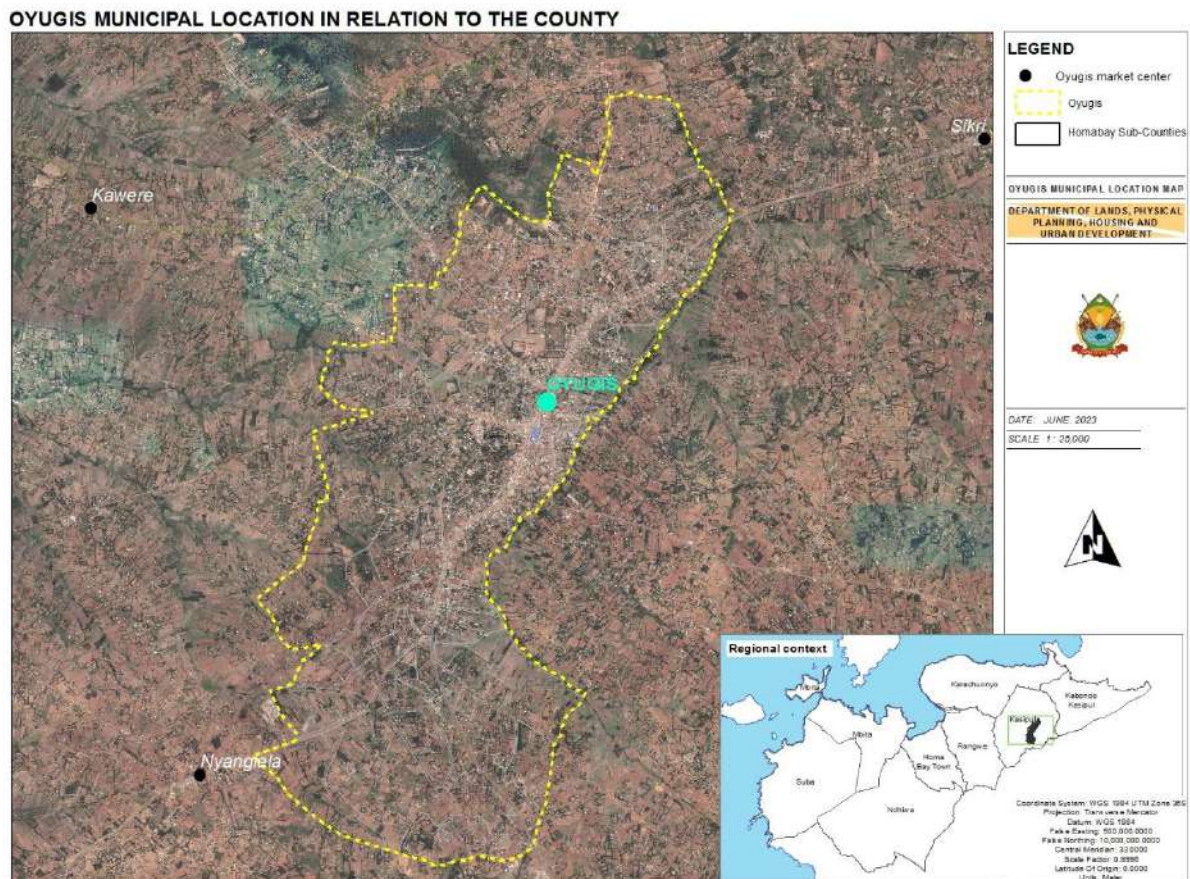
**OYUGIS MUNICIPAL LOCATION MAP**





residents living within and neighboring agricultural areas due to the available market infrastructure and huge customer base in the planning area. Map 2-3 shows Oyugis Municipality in the local context.

**Map 2- 3: Oyugis Municipality in Homa Bay County**



### 2.3 History of the Planning Area

Town council of Oyugis currently known as Oyugis Municipality started as an Asian trading Centre and has since grown into administrative and commercial hub of Rachuonyo sub-county. It is believed that Oyugis urban area had the largest fresh produce market in the 1960s and 1970s in East Africa and which was bigger than Kibuye Market in Kisumu city. Oyugis was then situated in Rachuonyo District, Nyanza province. It was established as an urban council in 1987. Among the officials who served diligently in the defunct Oyugis Municipal Council and the years in office were as shown in Table 2- 1;

**Table 2- 1: Oyugis council officials**

<b>S/No</b>	<b>Town Council Chairman</b>	<b>FROM</b>	<b>TO</b>
<b>1</b>	Peter Oranga	1989	1992
<b>2</b>	Joan Obare	1992	1997
<b>3</b>	Simon Okoko	1997	2002
<b>4</b>	Tobias O Misinjiro	2002	2007
<b>5</b>	Shem Nyatibo	2007	2008
<b>6</b>	Pamela A Otieno	2008	2009
<b>7</b>	Tom O Midiyo	2009	2013

*Source: Rachuonyo South Sub-county office*

The urban council saw a rapid development and was finally granted the municipality council status in 1992.

This rapid growth has been catalyzed by the municipality's strategic position on the internal truck Road, the national electricity grid and the STD telephone facilities besides close proximity to the districts headquarter in Kosele. The municipality has also registered tremendous population growth currently at 20,000 within the municipality Centre.

The formal sector and the barter market with most retails and wholesalers' outlets are confined within Oyugis Municipality Centre. The sub county has seven trading Centre within its jurisdiction namely; Ruga, Ohuru, Kasibuor, Mathenge, Kiwiro, Kawere and Kuoyo. These trading centers have been allocated different market days once every week with an average of 300 traders at peak hours being realized at Oyugis Market. Other markets experience at most 40 traders.

Industrial activities are derived from the informal sector comprising of, tailoring, shoes, radio and watch repair, Jua kali artisan and others. The industrial Centre is still weak as it is entirely on the informal (Jua kali) sub-sector. However there exists high potential particularly in food processing and animal feed industries that would utilize locally available Agricultural raw materials.

Because of its importance as a commercial and transit hub, the former Oyugis town has attained Municipality status.

## **2.4 Previous Planning Interventions**

Oyugis has had two plans before. In 1972 a Part Development Plan was prepared for Oyugis to guide its spatial development while in 2011 a Local Physical Development Plan was prepared when it had the status of a town so as to provide a framework for its spatial development for the planning period.

## **2.5 Policy, Legal and Institutional Framework**

### **2.5.1 Overview**

This section outlines the policy, legal and institutional frameworks that were considered in the preparation of Oyugis local physical and land use development plan. It gives an overview of the planning framework and reviews specific laws relevant to this plan. These Acts and Policies create linkages in the planning and development control in urban areas as applied by the Planning Departments within the county Governments.

### **2.5.2 Policy framework**

#### **Sustainable Development Goals**

The United Nations adopted sustainable Development Goals (SDGs) in 2015. There are 17 SDGs with 169 targets. They place the principles of 'leave no one behind', aiming to ensure the inclusion of marginalized, disempowered and excluded groups. SDG 11 focuses on making cities and human settlements inclusive, safe, resilient and sustainable. Oyugis Municipality is therefore being planned within the context SDGs.

#### **New Urban Agenda**

In the New Urban Agenda, promises to provide access to housing, safe drinking water and sanitation, nutritious food, healthcare and family planning, education, culture and access to communication technologies. It ensures that all citizens have access to equal opportunities and face no discrimination. The New Urban Agenda calls on city authorities to take into account the needs of women, youth and children, people with disabilities,



marginalized groups, older persons, indigenous people, among other groups. It promotes measures that support cleaner cities.

Tackling air pollution in cities is good both for people's health and for the planet. In the Agenda, there is commitment to increase their use of renewable energy, provide better and greener public transport, and sustainably manage their natural resources. The New Urban Agenda also focuses on;

- Strengthening resilience in cities to reduce the risk and the impact of disasters
- Take action to address climate change by reducing their greenhouse gas emissions
- Respects the rights of refugees, migrants and internally displaced persons regardless of their migration status
- Improve connectivity and support innovative and green initiatives
- Promote safe, accessible and green public spaces

Oyugis LPLUDP is aligned to this agenda in providing a roadmap for building cities that can serve as engines of prosperity, inclusion and centers of cultural and social well-being while protecting the environment

### **Kenya Vision 2030**

Kenya Vision 2030 is the current national development blueprint for period 2008 to 2030 and was developed following on the successful implementation of the Economic Recovery Strategy for Wealth and Employment Creation which saw the country's economy back on the path to rapid growth since 2002. The objective of the Kenya Vision 2030 is to transform Kenya into a middle-income country with a consistent annual growth of 10 % by the year 2030". The 2030 goal for urban areas is to achieve "a well-housed population living in an environmentally-secure urban environment." This will be achieved by bringing basic infrastructure and services namely roads, street lights, water and sanitation facilities, storm water drains, footpaths, and others.

One of the aims of the vision is to make Kenya be a nation that has a clean, secure and sustainable environment by 2030. This will be achieved through promoting environmental conservation to better support the economic pillar.

Improving pollution and waste management through the application of the right economic incentives in development initiatives is critical. The development of the municipality should therefore be viewed within this framework.

### **National Land Policy**

The policy addresses land management. Key issues include Section 3.4.3.2 – ecosystem protection (including wetlands). Measures for protection are required with sub-section 135 addressing fragile ecosystems to be managed and protected. Sub-section 137 focuses on Protection of watersheds, lakes, drainage basins & wetlands shall be guided by among other principles prohibition of settlement and agricultural activities in the water catchment areas, identification, delineation and gazettement of all water courses and wetlands as well as integrated resource management based on ecosystem structure. Section 3.4.3.3 addresses urban environment management on the face of the rapid urban development in the country. The section calls for control of waste dumping, regulation quarrying activities and rehabilitation of material dumping sites and land.

In summary, the policy enumerates issues that need to be addressed in land use planning namely:

1. Actualization of spatial frameworks for orderly management of human activities to ensure that such activities are carried out taking into account considerations such as economy safety, aesthetics, harmony in land use and environmental sustainability.
2. Establishment of an appropriate framework for public participation in the development of land use and spatial plans.
3. Establishment of an effective framework for coordination of land use plans to ensure implementation of planning proposals and regulations.

Specific aspects of planning have been highlighted such as urban and peri-urban land use planning, planning for urban agriculture and forestry, planning for informal sector activities and regulating use and development of land. Other aspects that have been given emphasis are urban environmental

management principles where specific measures to address environmental problems have been enumerated. Sectoral and cross cutting land use issues have also been tackled particularly the issue of corporation among different sectors. To ensure that these issues are dealt with effectively, the government has committed that it would facilitate an integrated multi-sectoral approach to land use and encourage integrated land use planning through the use of appropriate technology and participatory approaches. It has also committed to identifying areas of interest for sharing/ merging resources and expertise through public private partnership

### **The National Spatial Plan**

National Spatial Plan (2015-2045): The National Spatial Plan 2015-2045 provides a national spatial design framework for the integration of social, economic and political policies. The National Spatial Plan supports the implementation of strategic national projects specifically the flagship projects spelt out under Kenya Vision 2030 by indicating their spatial locations and providing a framework for absorbing the spatial impacts of these projects. It provides a coordinating framework for sectoral planning which has been lacking in the country and it aims to address the disconnect that has existed for a long time between physical and economic planning. This is expected to result in more prudent use of the country's scarce resources as the Plan provides a platform for prioritization of programmes and projects within the implementation mechanism.

The Plan is essential at this point when devolution is taking shape as it will provide a guide for development planning by the counties as they discharge their responsibility of preparing county and local plans. The National Spatial Plan provides physical planning policies which the plans at county level are expected to articulate and propagate. These policies include protection of rich agricultural land, conservation of identified environmentally sensitive areas, urban containment, and promotion of industrial development, among others.

### **Physical Planning Handbook**

This handbook provides clear and digestible user-friendly guidelines and minimum standards on the process and practice of physical planning. It has

been used as basis for assessment of projected demand for various facilities including land.

### **National Urban Development Policy (NUDP)**

This policy was developed in 2016 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.

### **National Environment Policy**

The policy's aim was to integrate 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.

### **National Housing Policy, 2016**

This policy is aimed at ensuring progressive realization of the right to accessible and adequate housing and reasonable standards of sanitation for every person as per Article 43 of the Constitution. It also intends to arrest the deteriorating housing conditions countrywide and bridge the shortfall in housing stock arising from demand that far surpasses supply particularly for low-income housing in urban areas.

### **National Water Policy**

The policy was mainly 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 within Oyugis Municipality.

### **2.5.3 Legal Framework**

#### **The Constitution of Kenya, 2010**

The Constitution of Kenya, 2010 is the supreme law of the Republic of Kenya. It 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 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.

#### **The Physical and Land Use Planning Act, 2019**

This act of parliament makes provision for the planning, use, regulation and development of land. This act provides 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 plans for urban areas, municipalities and cities providing a 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 maps.

### **Climate Change Act 2016**

This act gives the legal and institutional framework for the mitigation and adaptation to the effects of climate change; to facilitate and enhance response to climate change; to provide for the guidance and measures to achieve low carbon climate resilient development and for connected purposes. It shall be applied in all sectors of the economy by the national and county governments to – mainstream climate change responses into development planning, decision making and implementation; build resilience and enhance adaptive capacity to the impacts of climate change; formulate programmes and plans to enhance the resilience and adaptive capacity of human and ecological systems to the impacts of climate change; mainstream and reinforce climate change disaster risk reduction into strategies and actions of public and private entities; mainstream intergenerational and gender equity in all aspects of climate change responses; provide incentives and obligations for private sector contribution in achieving low carbon climate resilient development; promote low carbon technologies, improve efficiency and reduce emissions intensity by facilitating approaches and uptake of 184 No. 11 Climate Change 2016 technologies that support low carbon, and climate resilient development; facilitate capacity development for public participation in climate change responses through awareness creation, consultation, representation and access to information; mobilize and transparently manage public and other financial resources for climate change response; provide mechanisms for, and facilitate climate change research and development, training and capacity building; mainstream the principle of sustainable development into the planning for and decision making on climate change

response; and (1) integrate climate change into the exercise of power and functions of all levels of governance, and to enhance cooperative climate change governance between the national government and county governments.

### **The County Government Act, 2012**

The County Government Act, 2012 requires that all county governments prepare and implement integrated county development plans. The integrated county development plans are, according to the act, five year plans that are implemented through annual budgetary allocation by the county governments. In addition, all planning is expected to be inspired by the Kenya Vision 2030 and be aligned to the second Medium Term Plan of Kenya Vision 2030.

Under the County Government Act 2012, Cities and Urban Areas Act of 2011, the planning function has been devolved. Other opportunities include devolution of finance and budgeting and sharing of functions between the national and county governments; Provision of clear principles and values of governance, equity and sustainable development by the constitution and Provision of a direct linkage between planning and access to resources and clear indication of the type of plans to be prepared by the County Government Act 2012.

A paradigm shift in planning has been occasioned by the passing of the County Government Act 2012 part eleven (11). Section 102 of the County Governments Act provides the principles of planning and development facilitation in a county as follows:-

1. Integrate national values in all processes and concepts;
2. Protect the right to self-fulfillment within the county communities and with responsibility to future generations;
3. Protect and integrate rights and interest of minorities and marginalized groups and communities;
4. Protect and develop natural resources in a manner that aligns national and county government policies;

5. Align county financial and institutional resources to agreed policy objectives and programmes;
6. Engender effective resource mobilization for sustainable development;
7. Promote the pursuit of equity in resource allocation within the county;
8. Provide a platform for unifying planning, budgeting, financing, programme implementation and performance review; and
9. Serve as a basis for engagement between county government and the citizenry, other stakeholders and interest groups.

Section 103 of the County Governments Act, 2012 also gives the objectives of county planning as to:-

- a) Ensure harmony between national, county and sub-county spatial planning requirements;
- b) Facilitate the development of a well-balanced system of settlements and ensure productive use of scarce land, water and other resources for economic, social, ecological and other functions across a county;
- c) Maintain a viable system of green and open spaces for a functioning eco-system;
- d) Harmonize the development of county communication system, infrastructure and related services;
- e) Develop urban and rural areas as integrated areas of economic and sociality;
- f) Protect the historical and cultural heritage, artifacts and sites within the county; and
- g) Make reservations for public security and other critical national infrastructure and other utilities and services;

### **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 cities and municipalities management boards; and Municipal boards 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 provide the objectives and institutional framework for LPLUDP preparation and implementation as envisaged under this project.

### **Environmental Management and Coordination Act, EMCA (1999)**

This Act gives policy guidelines on holistic framework for the Management of the environment and natural resources in Kenya. It further ensures that the linkage between the environment and poverty reduction is integrated in all government processes and institutions in order to facilitate and realize sustainable development at all levels. This is done in the context of green economy enhancing social inclusion, improving human welfare and creating opportunities for employment and maintaining the healthy functioning of ecosystem. This policy gives the framework to guide the country's efforts to deal with the considerable and ever-growing environmental issues and challenges. The main goal of this Policy is "A better quality of life for present and future generations through sustainable management of the environment and natural resources"

The main **objectives** of the National Environmental Policy include among others:

- (i) Provide a framework for an integrated approach to planning and sustainable management of Kenya's environment and its natural resources;

- (ii) Strengthen the legal and institutional framework for effective coordination and management of the environment and natural resources;
- (iii) Ensure sustainable management of the environment and natural resources, such as unique terrestrial and aquatic ecosystems, for national economic growth and improved people's livelihood and well-being;
- (iv) Promote and support the use of innovative environmental management tools – such as incentives, disincentives, total economic valuation, indicators of sustainable development, SEA, EIA, Environmental Audit, and payment of environmental services – in environmental management;
- (v) Promote and enhance cooperation, collaboration, synergy, partnerships and participation in the protection, conservation, better management of the environment by all the stakeholders;

### **The Land Act No. 6 of 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.

### **The Land Registration Act No. 3 of 2012**

The Acts revises, consolidate and rationalize the registration of title to land. This grants the devolved Governments powers in land registration and compulsory land acquisition for development purposes.

## **Water Act, 2016**

The Act affirms the right to safe and clean water in adequate quantities and reasonable standards of sanitation as provided under the Constitution of Kenya, 2010. It commits the Cabinet Secretary responsible for water to formulate a water strategy, whose object is to provide the government's plans and programmes for the progressive realization of the right of every person in Kenya to water. The strategy shall outline, among others;

- Existing water services;
- The number and location of persons who are not provided with a basic water supply and basic sewerage services;
- Standards for the progressive realization of the right to water; and
- A resource mobilization strategy for the implementation of the plans.

In addition, the Act establishes the Water Services Regulatory Authority whose principal object is to protect the interests and rights of consumers in the provision of water services. The regulator shall among other functions:

- Determine and prescribe national standards for the provision of water services and asset development for water services providers;
- Evaluate and recommend water and sewerage tariffs to the county water services providers and approve the imposition of such tariffs in line with consumer protection standards;

## **Public Health Act (Cap 242)**

This Act empowers local authorities to establish office of the Medical Officer of Health or Health Inspector from whom they may make necessary inquiries and inspection regarding to any matter incidental to public health. The Act empowers county governments to provide health facilities hospitals and to make by-laws controlling developments and sanitation as well as to demolish, remove or alter buildings unfit for human habitation.

## **The Survey Act (Cap 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.

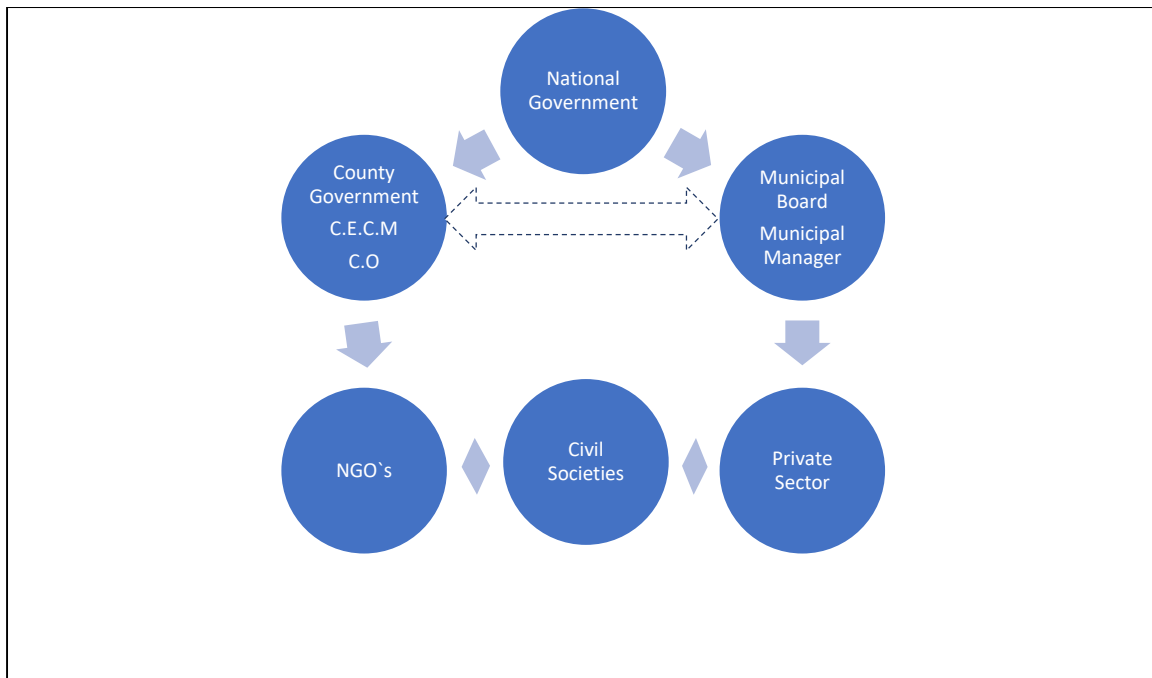
### **Public Finance Management Act (PFMA), 2012**

The Public Finance Management Act (PFMA), 2012 emphasizes what the County Government Act provides but puts a slightly different emphasis on planning. Whereas the County Government Act requires a –five-year county integrated development plan, in Section 125(1) (a) the PFMA requires both a long-term and medium-term plan.

#### **2.5.4 Institutional Framework**

Institutions are agencies to the implementations of the plan. Analysis of those who will implement the plan is very important during the plan making process. The plan will be implemented by: National government (source of fund and development of policies), County government (implement the projects and develop policies too), Private and public sector participate in project implementation. Municipal board oversees the affairs of the municipality while the municipality Manager is in charge of the day-to-day operations of the municipality. The private sector and the civic societies offer partnerships in terms of financial support, advocacy, and mobilization. The institutional framework of Oyugis Municipality is as depicted in Figure 2- 1.

#### **Figure 2- 1: Institutional framework**



## 2.6 Public Participation

The role of the public is enshrined in the Constitution and County Government Act. It is also captured in the Urban Areas and Cities Act. Participation is the hallmark of the devolved government and was used as a driver in the process of information generation and validation.

The public have been involved in the plan preparation through *barazas* and involving them in the process through organization of meetings, interviews and administration of questionnaires.

## 2.7 Stakeholder Concerns

The stakeholders involved in the preparation of Oyugis local physical and land use development plan are of different walks of life and that makes the plan inclusive. There have been focused groups discussions, interviews and administration of questionnaires which have all aimed at capturing the views and concerns of all the stakeholders. Below are some of their major concerns:

- Uncoordinated linear development
- Roads and public lands encroachment
- Poor management of solid wastes
- Lack of sewerage system and a cemetery
- Land dispute related conflicts

- Need for a bus park
- Insecurity. There is need for more street lights
- Upgrading of roads and clearance of road reserves
- Lack of green parks
- Revival of the tourism sector among others.

This plan strives to ensure that all the above concerns plus others are addressed in the best possible ways by providing solutions or advising best courses of actions.

## **2.8 Urban governance**

The governance and management of municipality is stipulated well in the Urban Areas and Cities Act, 2011. Section 31 of the act stipulates that governance of the municipality shall be vested in the county government and administered on its behalf by a municipal board. The municipality charter gives the board powers, general and special, governmental or proprietary, expressed or implied, which may be possessed or assumed by municipality under the Urban Areas and Cities Act, 2011, the County Government Act, 2012 and Oyugis Municipality By-laws.

### **2.8.1 Assessment of Governance Capacity**

Oyugis as a municipality has a Municipal board and a manager as required by the Urban Areas and Cities Act, 2011.

Development application is currently done by Oyugis town LPLUP that guides the development of the municipality. This has informed the preparation of Oyugis municipality LPLDP.

## **2.9 POC Analysis**

**Table 2 - 1: POC analysis for planning context**

<b>Opportunities</b>	<b>Constraints</b>
-Location along a A1 highway which connects to Tanzania -Good connectivity with other towns and centers within the region -Proximity to Lake Victoria	-Inadequate professionals of other cadre

## **CHAPTER THREE: PHYSIOGRAPHIC ANALYSIS**

### **3.1 Overview**

Understanding the physical environment of a municipality is the most critical part of any plan making process. This is because the physical environment sets the scene and forms the canvas on which the plan proposals can be overlaid. The physical environment encapsulates all aspects from topography, hydrology, geology, soils, vegetation and climate. Prior study of this various components of the physical environment shapes the proposals for the physical plan on top appreciating the inherent qualities in them as natural assets.

Oyugis Municipality has a beautiful environment with scenic Wire hills giving the back from the north-western side. With a hilly topography, Oyugis Municipality has its streams and rivers following in the pattern of these hilly areas and the resulting valleys. The predominant soil is black cotton soil that greatly supports the agro-based economy of the municipality. The A1 road that runs through the municipality gives it a transit characteristic hence the linear development. A proper analysis of the municipality's physiography will inform on land use proposals that ensure compatibility.

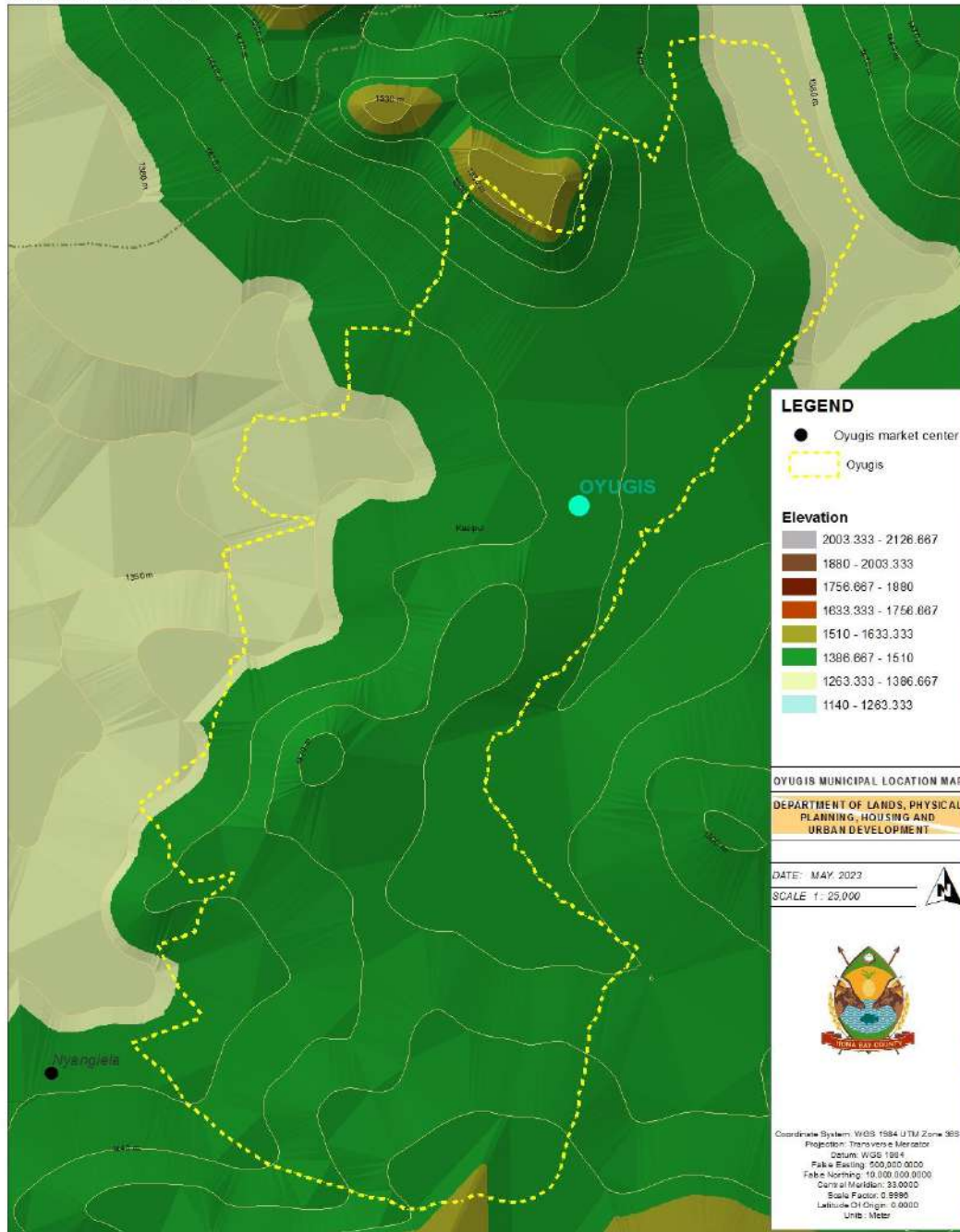
### **3.2 Natural Structure**

#### **3.2.1 Topography and Slope**

Oyugis Municipality has an undulating topography. Along the A1 road, the municipality is seen as rising from Owade Bridge to reach the peak at the junction headed to the sub-county offices. It then begins to slope gently as one moves towards Kotieno. The law courts and the police station occupy the highest parts of the municipality. The regions behind the law courts are generally steep slopping towards Masogo market. This region has the greatest slope and requires a lot of care while erecting structures. Regions east of the A1 road gently slope towards Ayoro River except for the region around Highland primary school that experiences a higher gradient. The areas around the Agoro schools, along the road to Kosele are relatively flat hence suitable for all kinds of development. (See Map 3 - 1)

### Map 3 - 1: Terrain of Oyugis

OYUGIS TERRAIN



### 3.2.2 Hydrology, Drainage and Water resources

The municipality’s water resources consist of Rivers (Ayoro, Nyaduma and Osare), Streams (Siany) and springs (Kawino). These together with ground water which is obtained from shallow well and boreholes supply the municipality’s water needs.



The municipality's wetlands are also found along the above rivers and streams. These include River Ayoro catchment, Siany swamp located in Aloo estate, and Nyaduma River and Osare River riparians located in Kotieno and Kasimba. These wetlands will act as biodiversity conservation areas as they offer habitats for indigenous plants, birds and insects. Since wetlands are often covered by dense vegetation, they are imperative in soil erosion, river regime control, filtration of pollutants as well as provision of fodder during dry spells. Over cultivation and over grazing along the rivers and in wetlands is threatening the wetlands existence and their vegetation which will in turn affect the wild life within the areas. Most people with cattle are grazing in the swamp that forms the catchment for Siany stream. There is need for control utilization of the wetlands so as to ensure their continuity.

### **3.2.3 Forest and Environment**

The municipality is surrounded by Wire hills. The closest forest to the municipality is Wire Forest which occupies an area of 399 hectares. Other forests within the region are Koderia Forest which covers an area of 686 hectares and Homa hills being the largest forest covering an area of 1,204 hectares though it is far away from the municipality. According to Map 3 - 2, the municipality is generally covered with trees and shrubs with the latter being the dominant. The trees are largely planted on individual plots and they include eucalyptus and cypress trees. These are greatly contributing to the municipality's forest cover with a target of attaining at least 10% tree cover.



### **3.2.4 Hills**

Oyugis Municipality is located close to Wire Hill which is also the home to Wire forest. This hill is located on the north-western end of the municipality and gives the municipality a very scenic look.

### **3.2.5 Geology and Soils**

This section looks at the rocks that form the foundation on which the municipality is built. It also looks at the nature of the soils that make up the surface where the municipality and the supporting human activities are situated. An analysis of this nature informs on the type of physical developments to carryout in what part of the municipality. It also informs on the various agricultural activities that can do well in what part of the municipality.

#### **Rock characteristics**

Oyugis Municipality sits on igneous rocks that are stable and can support heavy development. The rocks are of two broad categories, basic and acidic. The basic igneous rocks include serpentinites, basalts and nepheline phenolites that are found on the northern part of the municipality (Rawinji, Wire and parts of Agoro Sare). The acidic igneous rocks are the rhyolites which cover the remainder of the municipality.

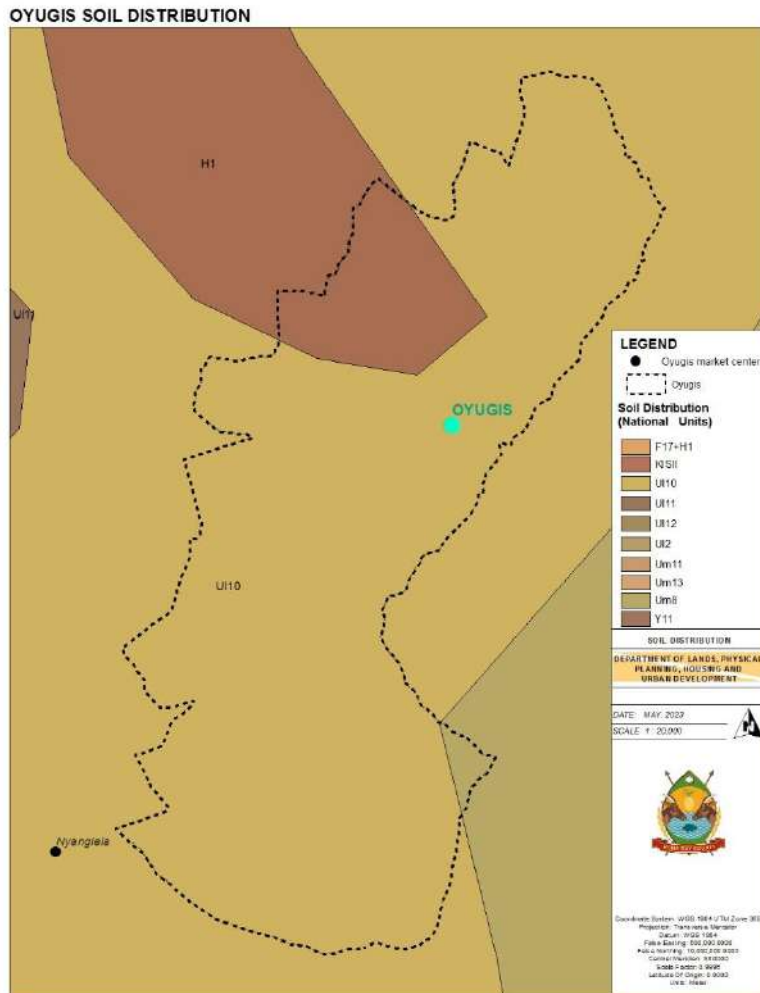
#### **Soil Characteristics**

Oyugis Municipality is characterized by two types of soil, the H1 and the UI10. The H1 soils are soils developed on basic igneous rocks (serpentinites, basalts, nepheline phenolites). They are somewhat excessively drained, shallow to moderately deep, reddish brown, friable, gravelly clay with acid humic top soils. They soils are found around Rawinji area and going up to and including Wire Hill.

The UI10 soils on the hand are soils developed on acid igneous rocks (rhyolites, etc.). They are a complex of predominantly well drained, moderately deep to deep, reddish brown to brown, friable, gravelly clay loam to clay soils. They cover the rest of the municipality (>90% of the municipality). These soils

support crop production. Map 3 - 3 shows the distribution of soils across the planning area and the adjacent lands.

**Map 3 - 3: Soil distribution map**

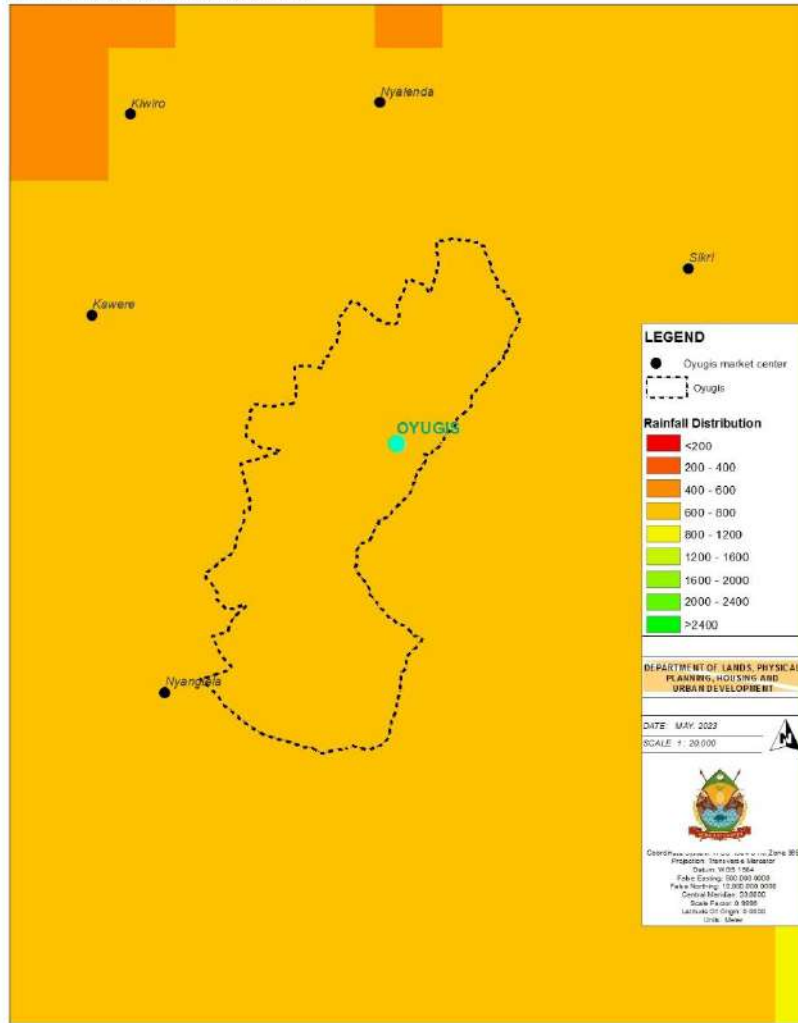


**3.2.6 Climate and Hazard Prone Zone**

Homa Bay County in which Oyugis Municipality falls has an inland equatorial type of climate. The climate is however modified by the effects of altitude and nearness to the lake which makes temperatures lower than in equatorial climate. There are two rainy seasons namely the long rainy season from March to June and the short rainy season from August to November. The annual rainfall for Oyugis Municipality ranges from 1200 to 1600 mm according to Map 3 - 4.

**Map 3 - 4: Rainfall distribution**

### OYUGIS RAINFALL DISTRIBUTION



Temperatures in Homa bay county ranges from 18.6°C to 17.1°C, with hot months being between December and March. February is usually the hottest month in the year. Oyugis Municipality experiences lower temperatures since it borders Kisii and Nyamira highlands.

Oyugis Municipality also has areas that are considered to be ecologically sensitive especially with respect to climate change. These include wetlands, riparian areas and hilly/steep slopping areas. These include the Ayoro water catchment, Siany water catchment and the Wire hills. These areas need to be protected from physical development since such will expose them high levels of erosion and environmental destruction that could turn hazardous to the residents.

### **3.2.7 Ecology**

Homa Bay County has a variety of agricultural activities being carried out in different parts of the county. The distribution of these agricultural activities is greatly affected by the various agro-ecological zones in the County. The County has seven Agro-ecological Zones namely: Upper Midland (UM1), Upper Midland (UM3), Upper Midland (UM4), Lower Midland (LM2), Lower midland (LM3), Lower Midland (LM4) and the Lower Midland (LM5). Oyugis Municipality falls within the Upper Midland (UM1). This agro-ecological zone occupies southern parts of Kasipul and Kabondo Kasipul sub-counties where tea and coffee are grown.

### **3.3 Urban Nature Interface**

This is the area where the urban area meets and interacts with rural lands. It includes areas where homes and other structures are intermixed with forests and land uses, and islands of undeveloped land. Before Oyugis became a town, the existing market centre covered a very small region. The region between the centre and the rural lands had very limited human activities. It comprised mainly of homes and farmlands for cereals and legumes. As the centre grew, the region between the municipality and the rural area began experiencing rapid land sub-division due to the rising demand for land for settlement.

The growing market centre also pushed the traditionally large homesteads into smaller homes with most having rental houses constructed within them. The large agricultural land got sub-divided further resulting into small plots that are very expensive. With the municipality now in place, the municipality's boundaries have been extended to include areas previously considered rural. As a result, the new interface is characterized by both traditional and modern homes that are surrounded by large tracks of farmland. The homes do not necessarily belong to the natives of the municipality, but to people who have bought land from the natives and want to live a little distance from the municipality. In this region, there exists heavy crop farming, forestry, bee keeping, and animal rearing among other economic activities common in rural areas.

### 3.4 POC Analysis for physiographic dynamics

Table 3 - 1 lays out the potentials, opportunities and constraints analysis for the physiography of Oyugis Municipality.

**Table 3 - 1: POC analysis for physiography**

Sector	Potential/Opportunities	Constraints
<b>Topography</b>	<p>The topography gives the municipality a beautiful view. In some places it also increases the value of land as a result of the associated view.</p> <p>Wire Hill also gives the town a beautiful look.</p> <p>The topography also limits chances of flooding</p>	<p>Some portions are very steep hence difficult to develop.</p> <p>Some areas, especially around wire could be prone to land slides</p>
<b>Geology and soils</b>	<p>The rocks forming the municipality's base are igneous rocks that are very stable and can support very heavy structures.</p> <p>The soils are majorly of volcanic origin hence are good for both physical development and farming of crops such as maize.</p> <p>This allows the municipality to grow and also makes it possible to produce the crops</p>	<p>In areas where the land is flat, water is retained causing waterlogging. This is seen around Siany in Aloo estate</p>

	required to feed the population.	
<b>Hydrology and drainage</b>	<p>The municipality is traversed with rivers and streams that drain surface water away reducing chances of flooding</p> <p>These water bodies also provide water for use by the urban population</p>	<p>Uncontrolled farming along the river banks have led to increased soil erosion when rivers burst their banks</p> <p>Pollution of these water bodies causes diseases among the populace</p>
<b>Climate</b>	<p>The inland equatorial climate experienced within and around the municipality supports a variety of crops due to high and reliable amounts of rainfall.</p>	<p>Occasional frost bites associated with such climate affects crops such as coffee and tea</p>
<b>Ecology</b>	<p>The municipality falls within the UM1 agro-ecological zone that supports the growth of a variety of crops (both cash and food).</p>	<p>Lack of agro-processing industries limits the growth of crop production</p>



## CHAPTER 4: POPULATION DYNAMICS

### 4.1 Overview of Population Dynamics

Population dynamics are very important aspects of the planning process that need to be wholesomely considered. This is because population and development are inter-related in such a way that population variables affect, and are affected by socio-economic development policies and interventions. This is due to the fact that planning revolves around improving the living conditions and livelihoods of the people within the jurisdiction of the planning area. The size and geographical distribution of the population, as well as the factors determining population change over time, are important aspects in organizing and managing the economy and society; and also in the planning of an urban area

### 4.2 Demographic Characteristics

#### 4.1.2 Population Size

According to the 2019 population census, the total population for the proposed Oyugis Municipality is 71,025. The population growth rate is similar to that of Homa Bay County and is estimated at 2.3%. Table 4 - 1 shows this population by sex.

**Table 4 - 1: 2019 population by age and sex**

Male	Female	Total
34,092	36,933	<b>71,025</b>

*Source: KNBS, 2019*

This population when projected to 2023, 2028 and 2033 using the growth rate of 2.3% gives the following population figures;

**Table 4 - 2: Projected population**

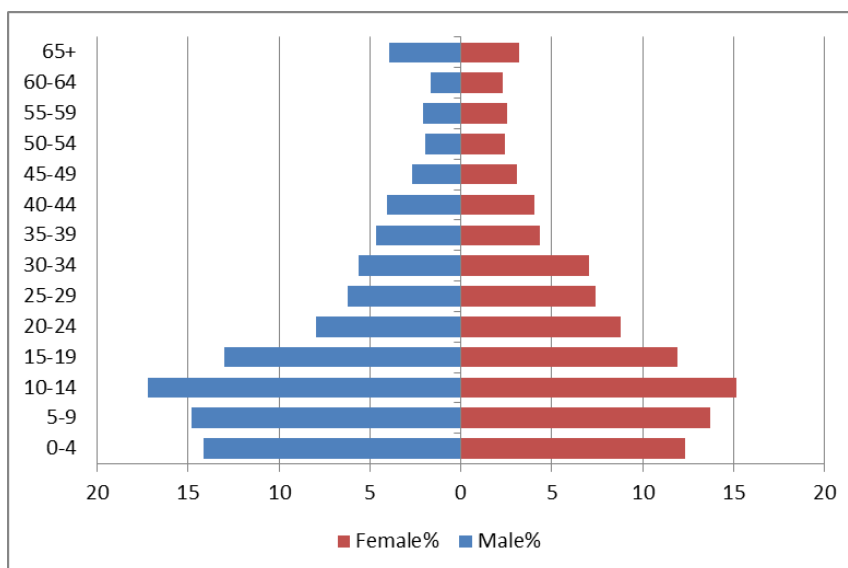
Year	2023	2028	2033
<b>Population</b>	77,484	86,391	96,322

### 4.1.3 Fertility Rate, Age-Sex Ratios and Household Size

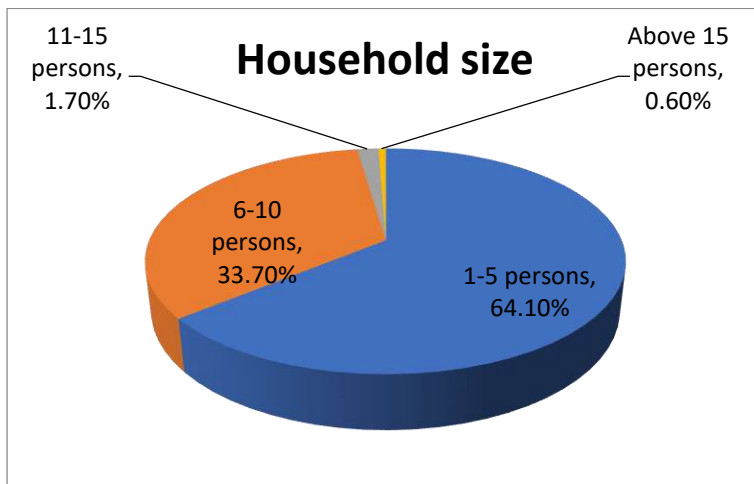
The female to male gender ratio in Oyugis Municipality is 52:47. Generally females outnumber males in all the wards that make up the municipality's boundary. The fertility rates are also high, and as a consequence the overall population is largely youthful. According to the projected population figures of 2023, the number of people aged between 0-14 years account for about 48% of the total population. (See

Figure 4 - 1) The socio-economic survey revealed that the average household size was between 1—5 people. This accounts for about 64.1%. This is followed by 6—10 people which accounts for 33.7%. There are few instances where the family size is larger than ten. These are however isolated and account for a paltry 2.3%. These figures on household size confirm the high fertility rate. Figure 4- 2 shows the general household size within Oyugis Municipality. Considering the projected growth of the population, there is an urgent need to provide employment opportunities to cater for the rising population.

**Figure 4 - 1: Oyugis population pyramid**



**Figure 4- 2: Household size**



#### **4.1.4 Population Growth Regarding Land Use**

As the population of Oyugis Municipality increases, certain challenges facing the environment and land uses within the municipality will be experienced since a growing population sharing a limited number of resources strains the environment. The following will be witnessed as a result of the population growth;

- Fertile agricultural land will be on the decline due to urban growth. This is because as the demand for land for settlement rises, subdivision will also be on the rise as smaller residential plots are generated. This will in turn promote intensive farming in place of extensive farming.
- The available physical and social infrastructure will strain as they seek to serve the whole population. Land use will therefore change for particular parcels as new facilities are constructed.
- Deforestation and environmental degradation will be experienced due to the increased demand for energy. According to the socio-economic survey conducted, 65.4% of the respondents use charcoal and firewood for cooking. A growth in population without change in the dependence on trees for fuel will increase deforestation.

### 4.1.5 Migration Patterns

**In-migration:** More than half of the residents of Oyugis Municipality say they are not natives of the municipality. Data from the field survey conducted in May 2023 indicates that 43.1% say they were the municipality while the remaining 56.9% were born elsewhere. [Table 4 - 3:](#) gives a summary of how the respondents answered the question “Were you born in this municipality?”

**Table 4 - 3: Place of birth of respondent**

		Valid Percent
	Born in Oyugis	43.1
	Born outside Oyugis	56.9
	Total	100.0

From Table 4 - 3 above, 56.9% of the respondents migrated into the municipality from their places of birth. *In-migration* in this context therefore refers to the movement of people from other regions into Oyugis Municipality. The survey went further to find out the reason behind the in-migration. It was established that this in-migration has been occasioned by a number of factors that include marriage, work/employment, trade, education and conflict. According to Table 4 - 4, 42.2% of the respondents moved into the municipality for marriage, 35% for employment reasons while those that came in for trade/business account for 18.4%. These three reasons account for up to 95.6% of those who moved into the municipality. Those who came into the municipality to get education and those that were fleeing from conflict account for only 4.4% of the in-migration cases.

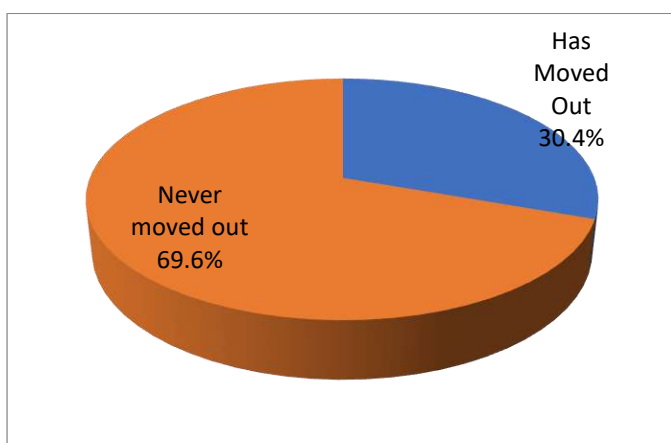
**Table 4 - 4: In-migration reasons**

		Frequency	Percent	Valid Percent
	Employment	72	19.9	35.0
	Business	38	10.5	18.4
	Marriage	87	24.0	42.2
	Conflict	4	1.1	1.9

Education	5	1.4	2.4
Total	206	56.9	100.0

**Out-migration:** The survey asked the respondents if they had moved out of the municipality so as to know the out-migration trends. 30.4% of the respondents said they had moved out while 69.6% said they had not moved out according. (See Figure 4 - 3) The rate of out-migration in Oyugis Municipality is therefore lower than the rate of in-migration signifying an attractive municipality with a growing population.

**Figure 4 - 3: Out-migration**



The survey also sought to find out the reasons for outmigration. According to Table 4 - 5, the main reasons for out-migration included employment (44.5%), education (25.5%), visitation (18.2%) and business/trade (10.9%).

**Table 4 - 5: Out-migration reasons**

		Frequency	Valid Percent	Cumulative Percent
<b>Valid</b>	Employment	49	44.5	44.5
	Business	12	10.9	55.5
	Conflict	1	0.9	56.4
	Education	28	25.5	81.8
	Visitation	20	18.2	100.0

	Total	110	100.0	
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**Seasonal Migration:** Seasonal migration is experienced when education institutions open or close. Students from tertiary institutions like Oyugis Medical Training Centre are part of the seasonal population in the municipality. During school semesters, these students live and operate around the school premises and thereby increase the population.

**Daily Migration:** The daytime population in the municipality consists of employees and business people who live in the municipality as well as those that come from outside the proposed urban boundary. This is clearly seen when people stream into the municipality aboard matatus and motorcycles along the major roads into the municipality. This takes place largely in the morning hours. They then leave later in the day. For this reason, the daytime population is higher than the nighttime population.

a) **Pull factors into Oyugis Municipality**

According to Table 4 - 4, the main reasons why people come to the municipality include trading/business opportunities, employment opportunities, marriage and education. Since the municipality is growing, the neighboring rural populations come to the municipality do business as well as seek employment opportunities. They in turn settle and become part of the urban population. Being a cosmopolitan municipality, intermarriages also take place hence making marriage another reason why people settle into the municipality.

b) **Push factors**

According to Table 4 - 5, those who leave the municipality mainly do so in search of more employment opportunities, more business opportunities and opportunities for further education. This implies that in as much as the municipality is growing, the business and employment opportunities are not adequate hence the need to move out. Since there are very few tertiary learning institutions, most residents opt to go for education outside the

municipality. Housing units within the municipality are also not enough to shelter all residents hence the need to try other towns.

#### **4.1.6 Morbidity, Mortality and Life Expectancy Rates**

Morbidity in Oyugis Municipality is high, 72% of the respondents reported to have had at least one member of the household falling ill over the six month preceding the survey. Only 28% had not reported a case of illness. The main causes of morbidity and mortality in Oyugis Municipality are malaria (62.9%), diarrheal diseases (12.8%), respiratory diseases (12.8%) and HIV/AIDs among others. (Refer to Table 4 - 6) Inadequate access to appropriate health care has contributed in the severity of these diseases. These diseases affect both adults and children within the municipality and the surrounding peri-urban areas.

**Table 4 - 6: Common diseases**

<b>Common diseases in household</b>	Malaria	62.9%
	Diarrheal diseases	12.8%
	Respiratory diseases	12.8%
	Nutrition related diseases	2.2%
	Tuberculosis	1.6%
	Other diseases	7.8%
<b>Total</b>		<b>100.0%</b>

The average life expectancy is 60 years (in general, women have a life expectancy of 61 years while men have a life expectancy of 59 years). With adequate provision of medical supplies and greater access to medical care and facilities, the life expectancy of the municipality can increase (County Profile, 2019)

## **4.2 Welfare Indicator**

### **4.2.1 Literacy Levels and Skills Development**

Education is an important tool of socio-economic development of any community. It empowers the community to perform various duties efficiently and effectively and therefore increases in labour returns. Education has the

ability to enhance human capacity and development of knowledge, which is necessary for production and therefore influences development process in of a municipality. Most of the residents of Oyugis have attained secondary education represented by 42.8%. This is followed by college at 32.6%, primary at 16.6% and then university comes last at 6.4%. There are cases of illiteracy especially among the elderly. This however accounts for a paltry 1.7%. **Error! Reference source not found.**

**Table 4 - 7: Level of education**

		<b>Frequency</b>	<b>Valid Percent</b>
	None	6	1.7
	Primary education	60	16.6
	Secondary	155	42.8
	College	118	32.6
	University	23	6.4
	Total	362	100.0

#### **4.2.2 Household Income and Expenditure**

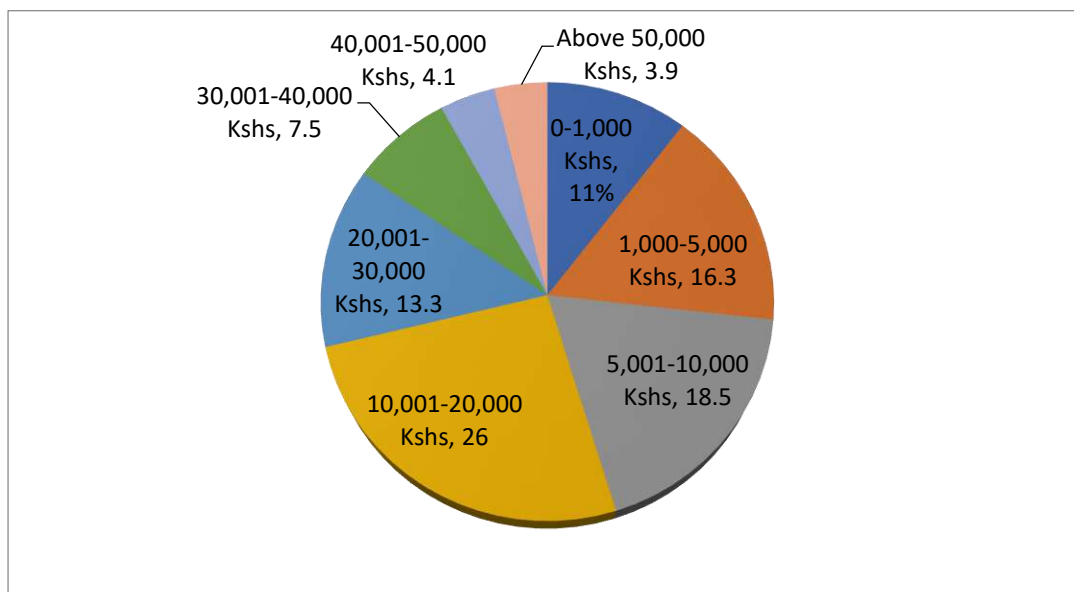
##### **i) Sources of income**

The main source of income in Oyugis Municipality is trading (34%) followed by agriculture (21%), then public services 11.3%, private services 9.7%, transport services (.7%), rental income 7.2%, craft 5.5% and remittances 0.3%. The fact that trade dominate Oyugis Municipality indicates that there is high income flows creating high demand for goods and services.

The household survey indicates that the average household income is 18,615 KShs. The majority earn an income level between 10000—20,000 (26%). The majority of households also spend between 10000—20,000 (26.2%). This could indicate the growth of small scale businesses to help provide goods and services to the growing population of Oyugis Municipality. Figure 4- 4 shows the levels of household income.



**Figure 4- 4: Household income**



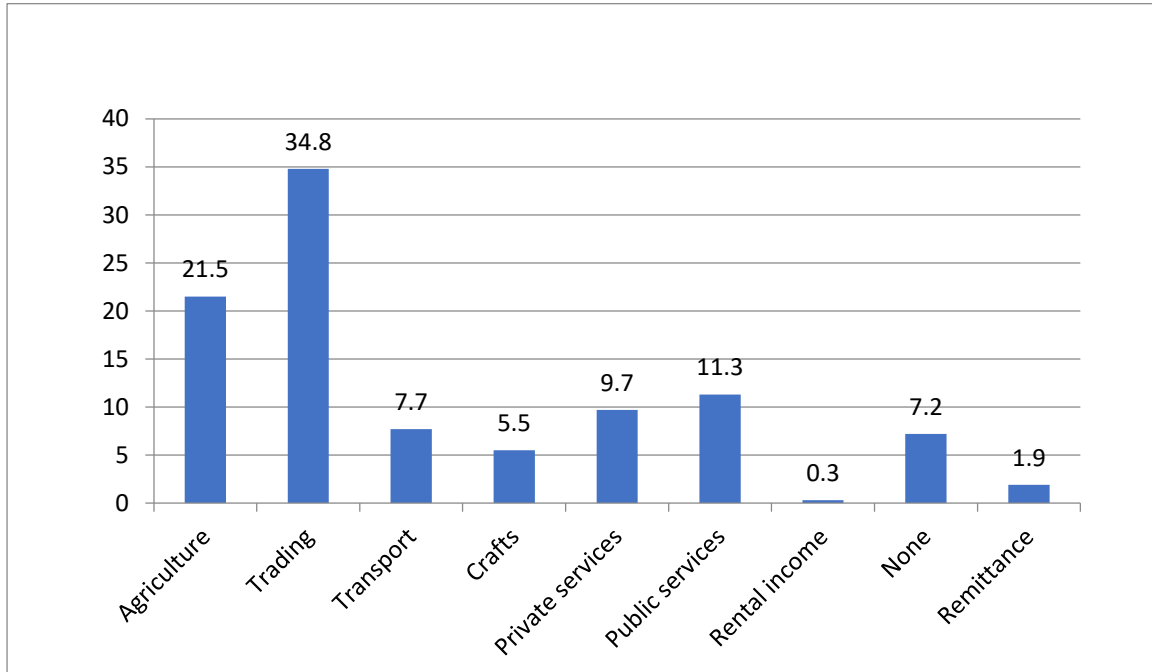
**ii) Sources of employment**

Informal and formal businesses e.g. retail shops and small scale farming which accounts for 60% of economic activities is the biggest employers in the municipality. Trade and Industry opportunities available include entrepreneurs (retail and wholesale businesses), agribusinesses, fashion design, food products, bakery and tourism sites (Kodera and Wire forests)

**4.2.3 Employment Level**

According to the socio-economic survey conducted in May 2023, 90.9% of the respondents were in way or another engaged in some form of gainful employment. These included agriculture, trading, crafts, transportation, private and public services among others. This population however includes people who are underemployed or are in disguised unemployment. Only 9.1% said they were not in gainful employment. These included those who depend on remittances as well as those that have no means of survival. (See Figure 4- 5)

**Figure 4- 5: Sources of income**



### **4.3 Community and Culture**

Oyugis Municipality has a cosmopolitan population with diverse cultural backgrounds. All Kenyan tribes with different cultures and customs live and work in Oyugis. The dominant communities include the Luo, the Luhya and Kisii's. As far as physical planning is concerned, these communities have their traditional systems of planning homesteads by allocating spaces for the main house, the sons' houses, the animals' sheds, crop farms and also space for future homes when the sons become of age. This therefore makes physical planning an idea that is easily welcome by most residents.

Residents of Oyugis are either Christians or Muslims. Christians are mainly of the Seventh Day Adventist church with a few belongings to other denominations. Since religion is a key variable in the development of citizens with good moral values, it is important to acknowledge that the influence of the SDA church is great in this municipality. Most businesses operate from Sunday to Friday with most remaining closed on Saturdays. A number of Faith-Based organizations within the municipality are known to be offering

moral and material support to projects beneficial to the people including Schools and Health facilities

#### 4.4 POC Analysis for the Population

Table 4 - 8 describes the potentials, opportunities and constraints analysis for the population in the planning area.

**Table 4 - 8: POC analysis for population**

<b>Sector</b>	<b>Opportunities</b>	<b>Constrains</b>
<b>Growing population</b>	Allows for effective resource mobilization and development initiative planning	High population increase may cause pressure on the available resources
<b>Migration</b>	Boosts the socioeconomic sector by increasing demand and supply for goods. New ideas come with new population hence better ways of doing business	Migration comes with diversity of culture. The bad culture corrupts the good one. Rapid rise in population causes congestion and strain on facilities and services
<b>Community and Culture</b>	Promotes and conserves heritage and identity. Traditional planning of homes makes modern planning acceptable As an Adventist municipality, business takes place across the weekend hence economic growth	Some retrogressive cultural practices compromise on progress as per the global trends
<b>Literacy and skills development</b>	The literacy levels are high which is good for producing skilled labour force	With rising unemployment, educated criminals are on the rise

		threatening the security of the municipality
<b>Employment</b>	A big portion of the municipality's residents are in gainful employment which is key in the growth of the municipality's economy	Rising unemployment especially among the youth threatens future of the municipality.
<b>High fertility rate</b>	A youthful population that provides the skill and energy required for economic growth	High population growth with limited employment opportunities leads to a rise in crime levels

## CHAPTER FIVE: LAND SECTOR

### 5. 1 Overview

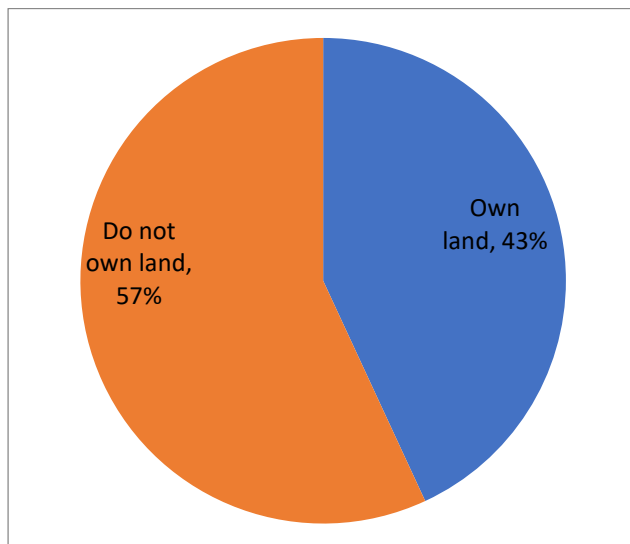
The chapter details out the land tenure, land classification, subdivision trends, availability and suitability of land within Oyugis Municipality to support development.

### 5.2 Land Tenure

Land tenure is defined as the system through which land rights are determined and documented. It also refers to the terms and conditions under which rights to land and land-based resources are acquired, held and/or transferred.

According to the field survey, 43% of the respondents are land owners while 57% are tenants. (See Figure 5 - 1) This is also exacerbated by limited public land in addition to grabbing of public land; it has resulted in increased land value especially within the congested urban core. The municipality has an outdated plan; hence the land owners seem to direct and decide on the development trends.

**Figure 5 - 1: Land ownership status**



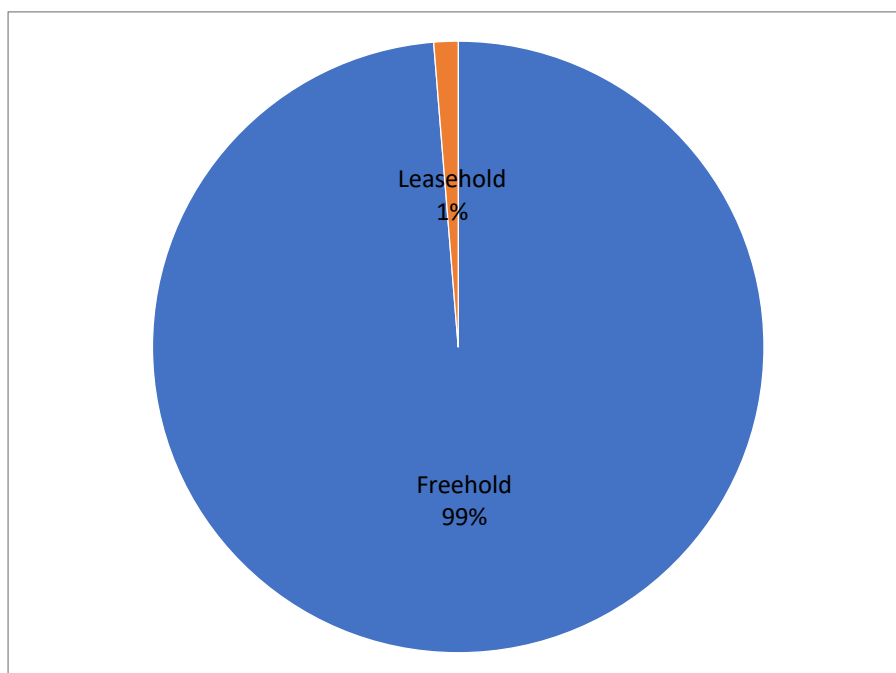
### 5.3 Land Classification

#### 5.3.1 Private Land

The Land ownership status in Kenya is classified as public, community or private. The private land ownership status in the municipality as depicted in the questionnaire analysis is 99% freeholds and 1% leaseholds. Since majority of the land is under freehold its extensively bureaucratic to set the lands apart for municipality expansion and public utilization.

Management and development of private land provide a major challenge to the county government since they are not mandated to select and adopt the best land-use options without consent of the land owners. Development on private land is on the basis of pure individual efforts, public private partnership or where the government requires land for development it will have to invoke compulsory acquisition clause which stipulates that the compensation should be based on the current market value of the land to be acquired for development.

**Figure 5 - 2: Nature of land ownership**



#### 5.3.2 Public Land

All government land in Oyugis Municipality is allocated to various government organizations and departments. In the CBD, these include Kenya Police Service, the Law Courts, and County Government Offices, Ministry of Roads

and Public Works and Oyugis Sub- County Hospital. Government land is also occupied by slaughter house and the two markets i.e., New Oyugis Market near completion at the Central Business District and Masogo Market at Kawahindi.

The public land in the planning area also includes all public schools, specifically Agoro Sare Schools and related institutions that take a huge portion of the prime land in the Central Business District and are dictating municipality's development trend. In addition, public land includes way-leaves, riverine sections, Owade wetland and Wire hills forest.

Public land provides an opportunity for county government to implement physical development plans since it's not cumbersome to acquire them development purpose.

The county and national government has power to reposes the encroached public land for conservation, protection and provision of infrastructure and services.

County government should negotiate with national government to relinquish or relocate some of its facilities that are occupying prime land within the Central Business District for development.

#### **5.4 Sub-Division Patterns**

The municipality's development trend has been greatly influenced by the transport network, the municipality's strategic location, since it nears major towns i.e., Rongo, Rodi Kopany, Kisii etc. It's strategic location along the Kisumu –Oyugis – Kisii highway has also facilitated commercial activities and also at the junctions of Kosele, Gamba, and Rodi Kopany joining the highway; these has resulted to linear development pattern hence most subdivision is mainly experienced along the highway and the feeder roads to cater for the emerging commercial opportunities.

This trend has enticed the landowners along the corridors to subdivide the land and sell to the emigrants and for their commercial activities.

Since most of the land in the municipality is privately owned it's difficult to properly control Land subdivision within area. The ongoing trend of uncontrolled land subdivision has made it difficult for the population to

undertake cost effective agricultural activities and also for the county government to develop basic facilities.

### **5.5 Land Banking**

Most of the land within the municipality is privately owned, with fewer public lands. Greater percentages of public lands are already occupied by relevant institutions and government agencies with limited land for expansion and future development.

In order for County Government to realize full to implementation the municipality's physical development plan; the county government will have to acquire land for any public facility.

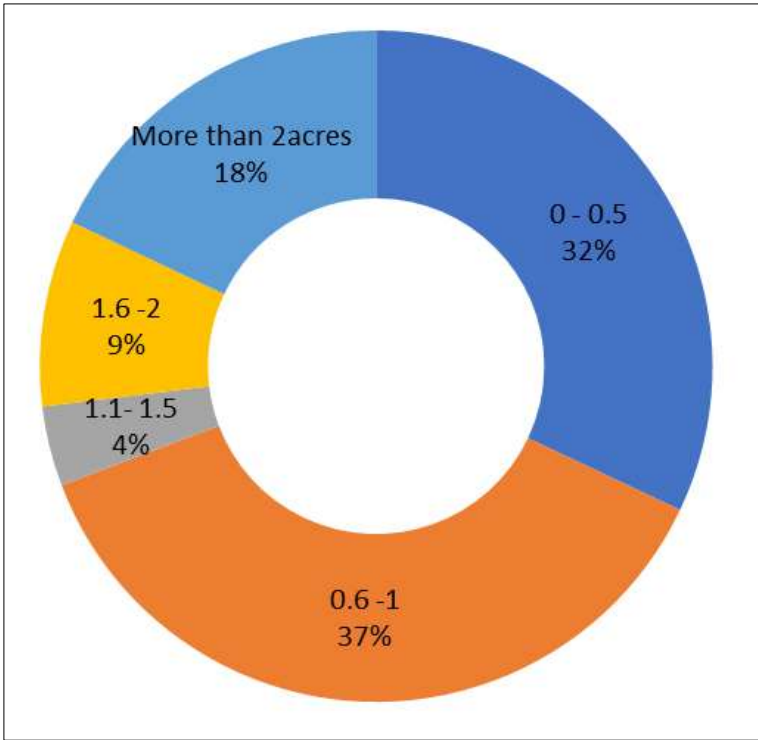
### **5.6 Land Sizes and Land Values**

#### **5.6.1 Land Sizes**

The according to the household survey, land sizes within the proposed planning boundary ranges from 0 – 0.5 acres at 32%, 0.6 – 1 acre at 37%, 1.1-1.5 acres at 4%, 1.6 – 2acre at 9%, More than 2 acres at 18%. Figure 5 - 3 presents the above data in chat. Due to increasing population and unregulated sub-division, land size continues to diminish in peri-urban and rural hinterland where average land sizes vary from 1 acre to 1.34 acres. Continued subdivision of land into small strips reduces land for sustainable and economic planning.

#### **Figure 5 - 3: Land sizes**





**5.6.2 Land Values**

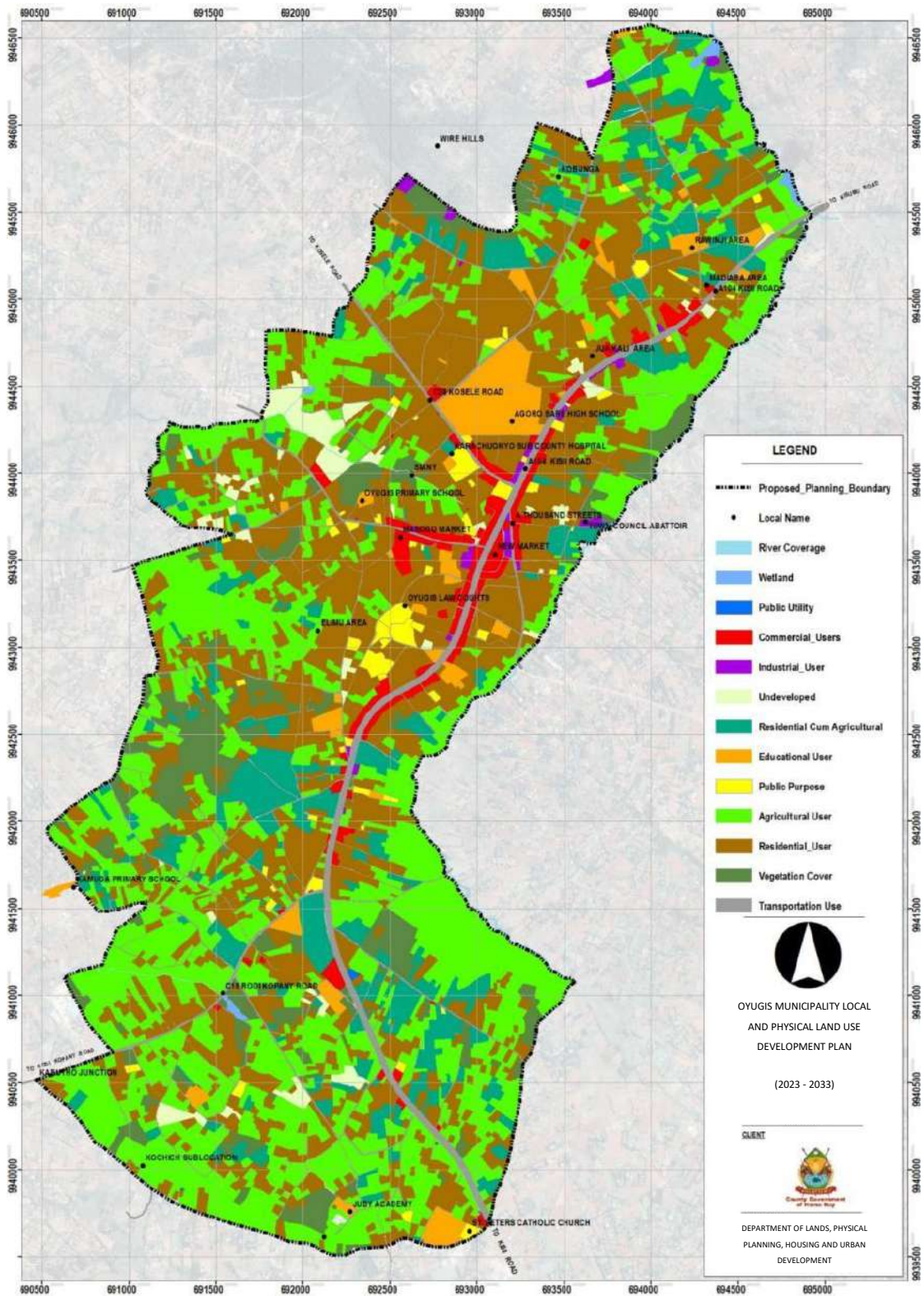
Land value is high in the core urban areas as these areas have attracted high population and are well serviced. Land in the CBD is valued at an average of Ksh. 1.5 million for a plot measuring 100ft by 50ft. A commercial plot located approximately 1Km from the Kisii-Oyugis-Kisumu Road measuring 100ft by 50ft has an average value of Kenya Shillings 700-900 thousand. Land values in the peri-urban rural areas of the planning area which are less serviced, have less developments and are mainly agricultural range from Kshs. 1 – 1.5 million per acre. The value and price of land in Oyugis Municipality is very low compared to most urban centers and towns in the region. With its strategic location, good climate, rich fertile soils and high investment opportunities, the low values of land especially in the CBD have triggered owners to congest development in single plots without observing plot setbacks and building lines.

**5.7 Land Use Status**

Availability of land in the planning boundary has largely continued to influence land use. Agricultural activities take the highest percentage

(approximately 33.8% and the percentage increases to 43.4% where there is mix use of agriculture and residential on the same land) of land use as most land is freehold with most of it practiced in the peri-urban and rural areas. Commercial, Public Purpose, Public Utilities and Industrial activities are largely manifested in the urban core. The analysis of the existing land use pattern will help inform the formulation of the proposed broad land use pattern. Map 5 - 1 shows the status of land use within the planning area.

**Map 5 - 1: Land use status**



### 5.7.1 Commercial

Commercial land uses are mostly concentrated in the CBD and spread along the major roads. Its compactness has influenced encroachment into road

reserves by commercial enterprises. Within neighborhoods and commercial areas mixed developments i.e., commercial-cum- residential exist. Commercial land use comprises of 2.1% of the planning area.

### **5.7.2 Residential**

Although there are no definite zoning patterns for residential land use, settlements for low- and high-income groups are distinct. Low and medium density residential areas occupy the hilly part of the municipality namely Magak-Odeka road, Ragama, Masogo line and Oyugis-Kosele-Kendu bay road. There is also a distinct class of low-income slum area comprising of the following areas namely, 1000 streets/Gamba areas, Kamuindi/old Indian areas/Market areas, Aloo Estate and majorly the northern part of the municipality as dissected by the Kisumu-Kisii Road. With the availability of affordable rent, Oyugis Municipality can be marketed as a dormitory urban area for Kisii town. Residential land use consists of 33.6% of land uses in the planning area.

### **5.7.3 Industrial Land Use**

There are several light and medium sized industries in Oyugis Municipality (0.05%). These industries include five bakery factory, coffee products, honey products, dairy cooling plant and a small saw mill. The municipality has potential for attracting agro-based industries for bananas, sweet potatoes, groundnuts, tea, sugarcane and dairy. With its location as a transit urban area connecting Central Nyanza to South Nyanza, Oyugis Municipality can attract excess entrepreneurs who find Kisii Town. There also exists informal sector commonly referred to as Jua Kali industries.

### **5.7.4 Educational Land Use**

There exist a number of educational facilities both public and private within the CBD. They include 46 pre-primary and primary schools, 19 secondary schools and tertiary educational facilities such as vocational training centre at Sikri and KMTC. Most of these schools are spread all over the proposed planning boundary. Of notice are Agoro Sare schools which are mainly located in the CBD. Educational land use covers approximately 3.2% of Oyugis Municipality.

### **5.7.5 Public Purpose Land Use**

Public purpose land uses are located equally between Oyugis and Kosele town. Kosele town is the sub-county headquarters where most of the national government offices are located while Oyugis has majority of the county government offices. Oyugis Municipality also have 16 health facilities including Oyugis level 4 and Matata hospitals. It houses government offices such as the sub-county government offices, Assistant County Commissioners Office, Agriculture and Livestock offices, sub-county hospital, law courts, police station, water and sanitation offices, Kenya Power offices and several religious organizations. Religious institutions are vast within the areas occupying better part of the municipality's landscape. The current Land utilization for public purpose is at approximately 0.2% of the proposed planning boundary.

### **5.7.6 Public Utilities Land Use**

Public utility land uses in Oyugis Municipality include water intake points, power plant and its way leave, telecommunication masts and dumpsite. This covers only 0.03% of land uses in the municipality.

### **5.7.7 Transportation Land Use**

Transportation land use includes all land under roads and footpath networks, parking spaces, bus terminals and bus stops. This covers only 6.7% of land uses in the municipality.

### **5.7.8 Recreational Land Use**

Due to scarcity of land in municipality, the municipality lacks green parks, stadium for public use. The distribution of the various land uses within the main urban core areas is as indicated in the table below.

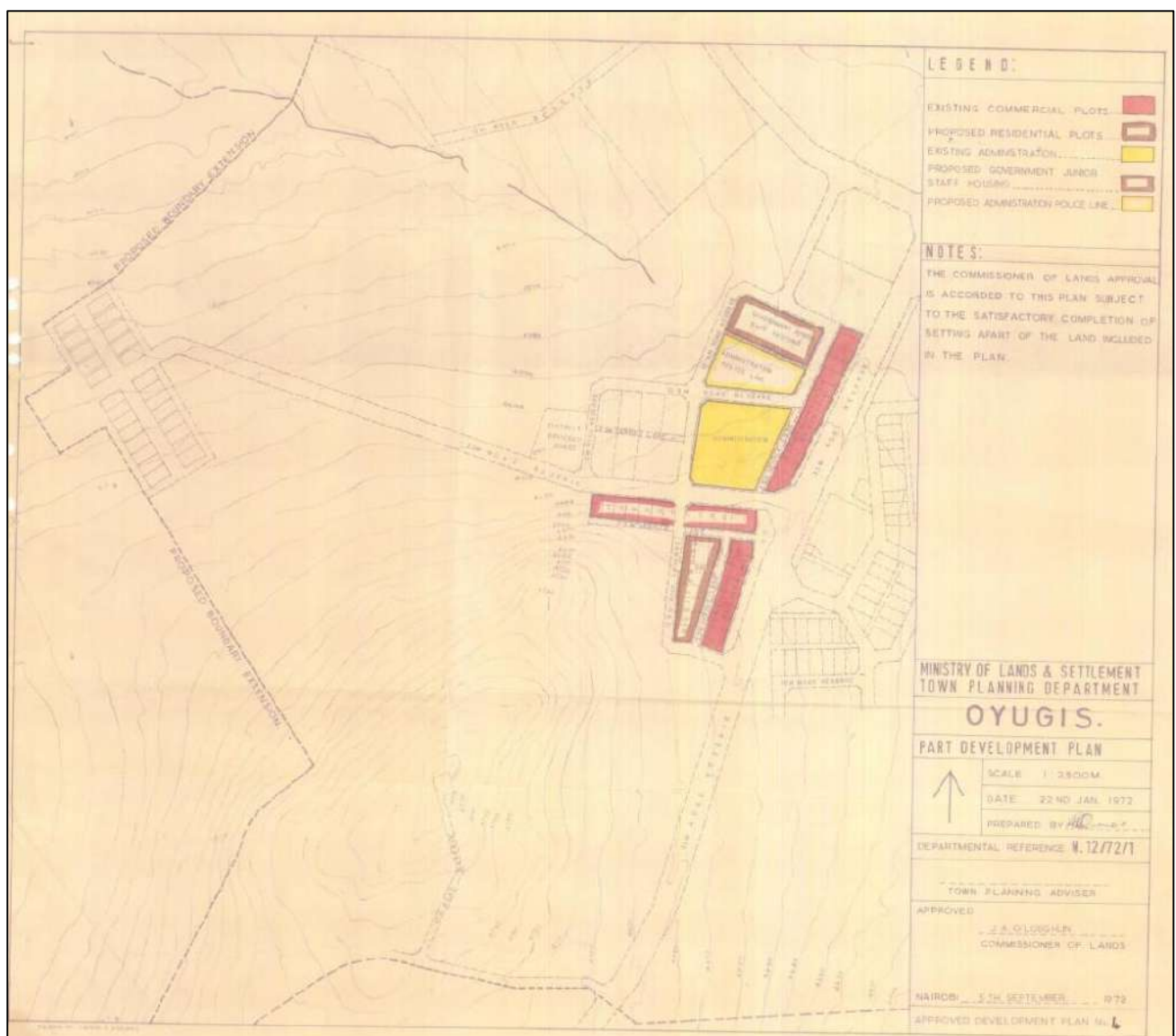
## **5.8 Spatial Temporal Trends**

The first developed scheme plan for the municipality was initiated and prepared by the Ministry of lands and Settlement, Town Planning Department on 22<sup>nd</sup> January, 1972 and approved by the commissioner of lands, on 5<sup>th</sup> September, 1972.

The plan proposal considered the existing commercial plots, existing administration land use and proposed for administration police line, government junior staff housing, the plan was accorded approval by the commissioner of lands but subjected to setting a part of the land included in the plan.

The plans boundary was estimated at 175.3 Ha; it extended from Agoro Sare High School, Ayoro and 1000 street area to Owade river it then stretched to Oyugis law court through Kisii – Kisumu Road then to Siany area joining Agoro sare through kosele road.

**Map 5 - 2: The 1972 Part Development Plan of the municipality**



Source: Homa Bay county government

The current land use patterns are mainly influenced by the municipality’s transport network i.e., Kisii - Oyugis – Kisumu Road, Oyugis – Kosele road, Oyugis- Gamba road; the municipality’s central business district accommodates Agoro sare schools, with pockets of government offices; oyugis law court.

The commercial developments constitute the main land use within the Central business District i.e New Oyugis Market, banks, shops and informal businesses; the municipalitys peri urban the dominate use agricultural and pockets of homesteads.

**Table 5 - 1: Existing land use in comparison with the National land use standards**

<b>CODE</b>	<b>LAND USE</b>		<b>AREA(Ha)</b>	<b>OYUGIS %</b>	<b>NATIONAL AVERAGE %</b>
<b>0</b>	Residential		502.4	33.6%	41.5%
<b>1</b>	Industrial		0.7	0.05%	7.8%
<b>2</b>	Educational		47.2	3.2%	15.6%
<b>3</b>	Recreational		0	0	13.2%
<b>4</b>	Public purpose		2.3	0.2%	15.0%
<b>5</b>	Commercial		31.9	2.1%	3.9%
<b>6</b>	Public utilities		0.5	0.03%	3.0%
<b>7</b>	Transportation		99.5	6.7%	-
<b>8</b>	Undeveloped land		27.2	1.8%	-
<b>9</b>	Agriculture	Pure Cultivation	504.9	33.8%	-
		Cultivation and Residence	143.3	9.6%	-
<b>10</b>	Conservation	Trees and Vegetation Cover	16.37	1.09%	-

		Riparian, Wetland	117.1	7.8%	-
<b>TOTAL</b>			1493.9	100%	100%

### **5.9 Spatial Temporal Trend on Environmentally Sensitive Areas.**

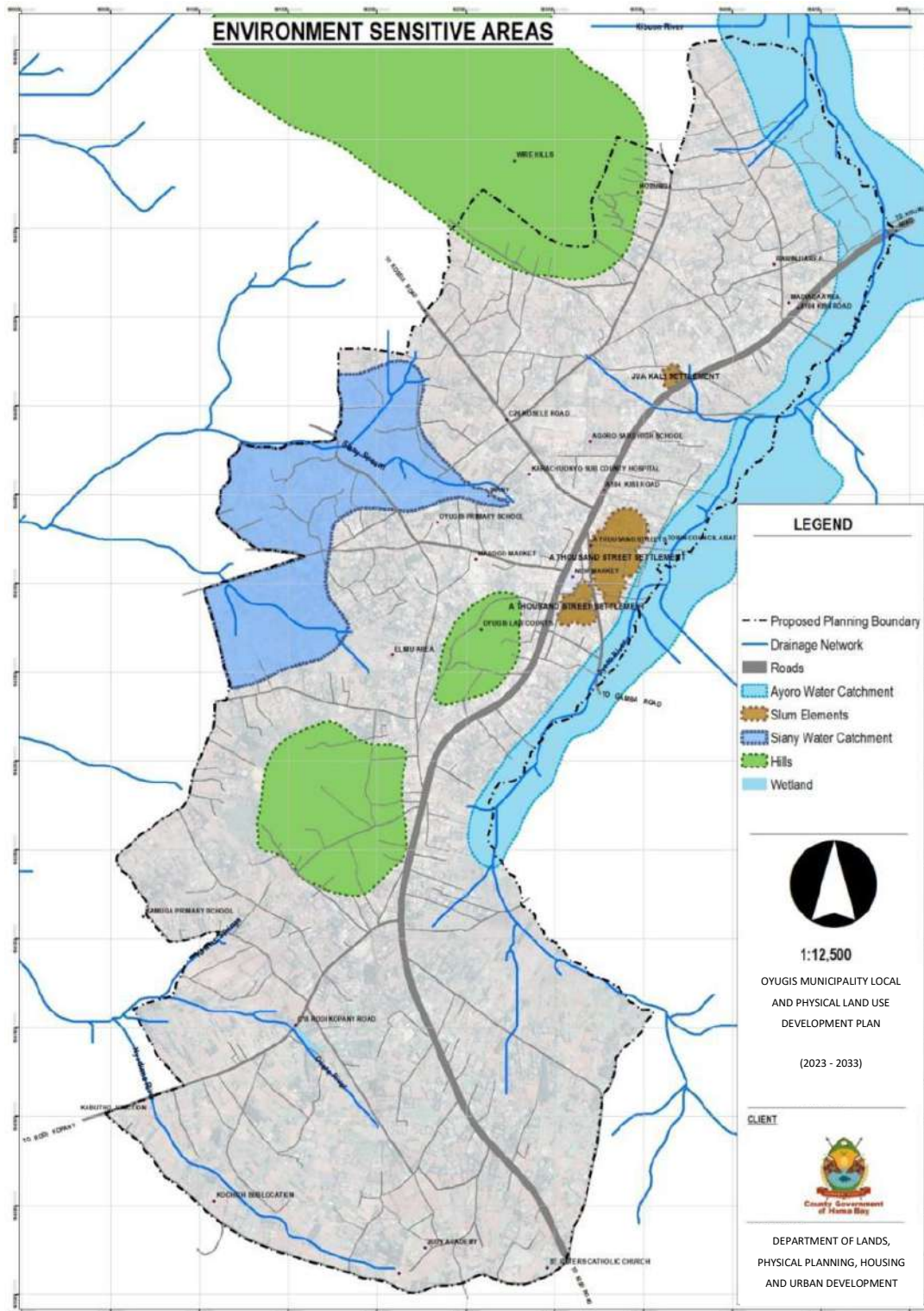
The land use patterns within the municipality are also influenced by the natural features such as Wire Hills and River Owade/Ayoro. Human settlement pattern of the municipality over the years has greatly been influenced by the Kisii - Oyugis – Kisumu Road which is an international trunk road and its rehabilitation has opened up the municipality to the outside investors.

The developments are clustered and congested along the international trunk due to the River Ayoro which is approximately 500metres from the Central Business District and stretches along the municipality as it slopes gently towards the north and also Wire hills which is at 2km away from Central Business District.

The natural elements have influenced and encouraged linear growth pattern of the municipality along the transport corridor away from the environmentally sensitive areas.



**Map 5 - 3: Environmentally sensitive areas**



### 5.10 Land Suitability and Capacity

Land in Oyugis Municipality constitutes a critical asset and a capital base that holds enormous potential for socio-economic development. This can be viewed from two broad perspectives: Land for agricultural production and related activities and land for physical development such as for settlements and other infrastructure. Both perspectives have immense influence on development of the municipality. Consequently, land availability and quality become two important issues that must be examined in the analysis of land as an environmental resource.

Land availability (supply) relates to the physical presence of land in a suitable form that can be used for various socio-economic development activities such as agriculture, settlements, urban development, physical infrastructural development, etc. Land quality (demand) relates to its ability to support sustainable production (Agriculture) and suitability (in regard to infrastructure development). It involves the analysis of the biophysical resource base to determine the long-term carrying capacity for different socio-economic and environmental functions. The understanding of land quality therefore varies according to the different uses' society demands of land.

### 5.11 Potential Opportunities Constraints Analysis

Table 5 - 2. shows the potentials, opportunities and constraints analysis for the land sector in Oyugis Municipality.

**Table 5 - 2: POC analysis for land**

<b>OPPORTUNITIES</b>	<b>CONSTRAINTS</b>
<ul style="list-style-type: none"><li>• The streams and wetlands joining River Ayoro may not be suitable for agricultural production, but it offers great opportunity for tourism development and biodiversity conservation in the municipality.</li></ul>	<ul style="list-style-type: none"><li>• High population density in the municipality, if not adequately managed can diminish availability of land for development (agricultural production and infrastructural development)</li></ul>

<ul style="list-style-type: none"> <li>• Oyugis Municipality being an agricultural urban area with conducive weather has an opportunity for agricultural intensification through practices such as horticultural production and zero-grazing especially in the peri-urban and rural areas of the planning area. This solves the problem created by high density in the municipality that has reduced land availability.</li> </ul>	<ul style="list-style-type: none"> <li>• Land grabbing and encroachment into road reserve and riparian lands has contributed to inadequacy of public and impossible for the municipality to allocate space for key public utilities such as cemeteries, open/recreational spaces, bus parks, open-air markets among others.</li> <li>• The topography of municipality slopes gently towards the north where it is marshy and not suitable for construction, however, informal settlements located there are reducing the wetland and affecting the flow of streams joining River Owade.</li> <li>• Due to high density especially in the CBD, land values are extremely high hence having an impact on development.</li> <li>• Lack of proper land use plan and zoning policies to guide municipality development</li> <li>• Unregulated subdivision of agricultural lands development</li> <li>• Unavailability of land for urban expansion</li> </ul>
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## **CHAPTER SIX: URBANIZATION AND HUMAN SETTLEMENT**

### **6.1. Overview**

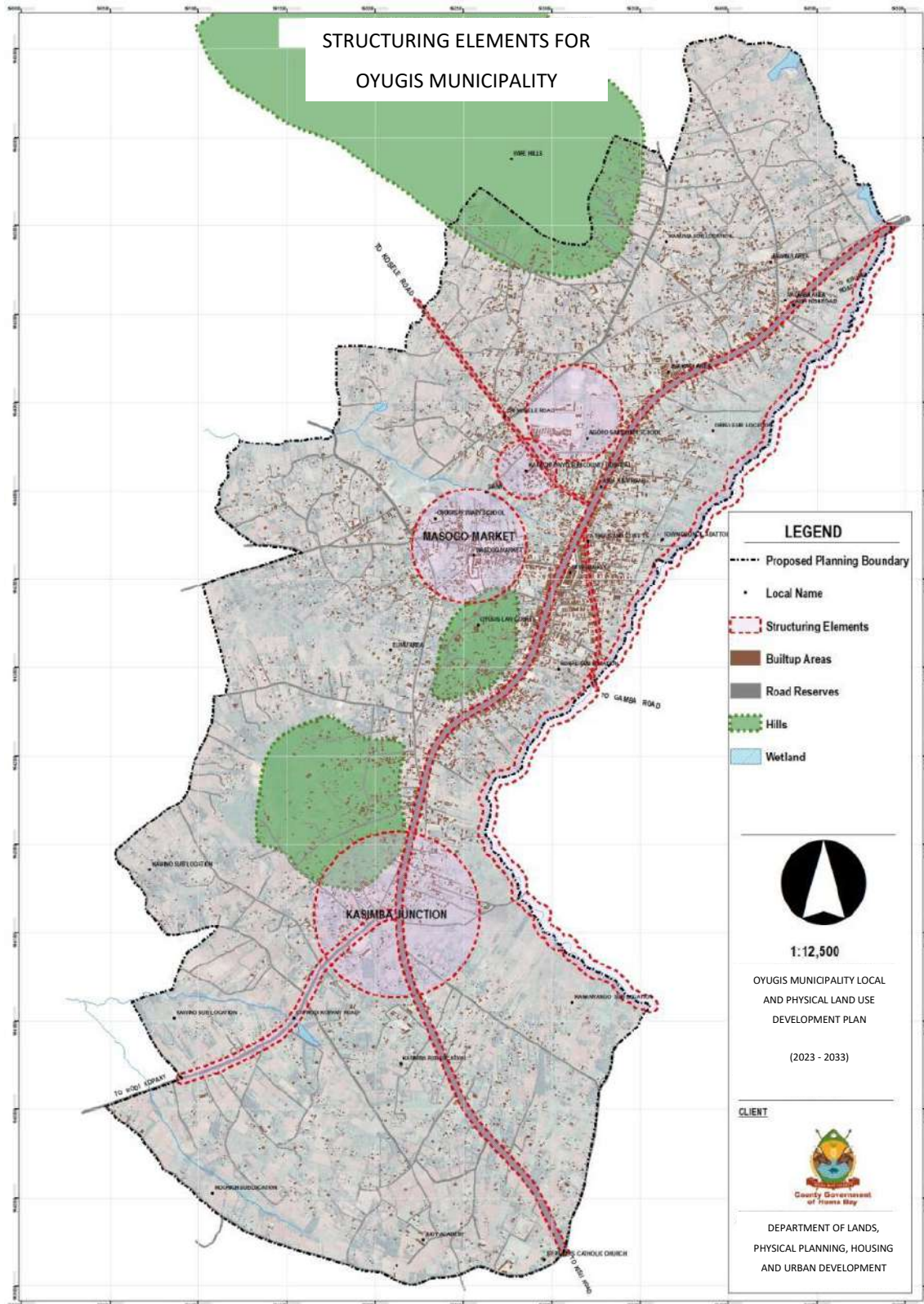
Globally, more people live in urban areas than in rural areas, with 54% of the world population residing in urban areas by the year 2014. Continuing population growth and urbanization are projected to add 2.5 billion people to the world's urban population by 2050, with nearly 90% of the increase concentrated in Asia and Africa (UNHABITAT, 2015).

Kenya is urbanizing rapidly but is under-urbanized, meaning that it still can leverage the benefits of urbanization and attain its goal of becoming an upper middle-income country by 2030. Based on a correlation of GDP per capita and urbanization for several countries, about 40% of Kenyans (given their current GDP of US\$1,200) should be living in urban areas, against the actual 27% (World Bank, 2016). On this measure, Kenya is an underperformer on urbanization. This finding applies to most urban areas in Kenya, where the core urban is densely populated with poor service provision while the rural area resources are underutilized thus increasing both urban and rural poverty.

### **6.2 Spatial Structure**

Transportation corridors dictate the spatial structure of Oyugis Municipality. Urban sprawl is in most cases as a result of residential land use. In Oyugis Municipality residential land use dictates the spatial structure of the municipality. Linear structure especially along the major roads is the preferred urban trend. This has made it impossible for developments that are not along these roads to be serviced. Wire Hills attracts developments (residential) towards the North of the planning area while River Owade limits development towards the South and West. Agoro Sare Schools occupy huge land parcels within the CBD thus dictating the expansion of the municipality. Map 6 - 1 illustrates the structuring elements in the planning area that dictate the spatial structure.

**Map 6 - 1: Structuring Elements for Oyugis Municipality**



### **6.3 Settlement Pattern**

Although there are no definite zoning patterns for residential land use, settlements for low- and high-income groups are distinct. Low and medium density residential areas occupy the hilly part of the municipality namely Magak-Odeka road, Ragama, Masogo line and Oyugis-Kosele-Kendubay road. There is also a distinct class of low-income slum area comprising of the following areas namely, 1000 streets/Gamba areas, Kawaindi/old Indian areas/Market areas, Aloo Estate and majorly the northern part of the municipality as distinctly dissected by the Kisumu-Kisii Road. As Kisii town expands and the cost of land and rests increases, Oyugis can be planned to become a dormitory municipality.

### **6.4 Urban Rural Interface**

Oyugis Municipality has an overpopulated core urban and a less dense rural area. This puts a lot of pressure on the peri-urban areas. This urban-rural interface is characterized by owner-occupied homes, bungalows or maisonettes with small gardens. The rate of land subdivisions is high as developments move away from the core urban. The average land size at the peri-urban is approximately a half an acre in the planning area.

### **6.5 Urban Housing**

Nabutola (2004) defines shelter as ‘a physiological human need’. He argues that shelter is like food so much so that even those who cannot afford it still need it. Therefore, by its nature housing represents a major investment requiring a substantial capital outlay. In the majority of housing projects, the developer whether as a corporate or individual has to recognize the time value concept of money. This raises the rate of interest to reflect the high risk of lending.

The Kenyan Constitution of 2010 guarantees the right to housing. Section 43(1) (b) of the Constitution provides that every person has the right to “accessible and adequate housing and a reasonable standard of sanitation” (Republic of Kenya, 2010). Sessional Paper No. 3 on National Housing Policy of 2004 aims to “facilitate the provision of adequate shelter and a healthy

living environment at an affordable cost to all socio-economic groups in Kenya.” The policy objectives have the potential of enhancing the realization of the right to adequate housing by enhancing ownership of housing through expanded access to housing finance, in addition to promoting security of tenure for land for all groups (Republic of Kenya, 2004). In 2017, the Government of Kenya developed the ‘Big Four Agenda’ blueprint where provision of affordable housing for all is one of the agenda. The main objective of this agenda is provision of quality and affordable 500,000 units by 2023 (Republic of Kenya, 2020).

Kenya has an annual housing demand of 250,000 units with an estimated supply of 50,000 units, culminating in a housing deficit of 2 million units, or 80% deficit. Housing affordability is a key challenge in Kenya with many people unable to afford to buy or build their own home. Only 2% of the formally constructed houses target lower-income families. About 6.4 million people of Kenya’s urban population live in informal settlements.

Housing delivery is the responsibility of county governments, which often lack adequate resources. Public sector involvement in housing development through Exchequer funding has been declining over the years while the private sector has mainly catered for upper middle and high-income groups, leaving the lower middle and low-income brackets unattended.

#### **6.5.1: Urban Housing Regulations**

Oyugis Municipality does not have an approved legal framework for residential development control. The existing zoning plan was approved in 1973 and expired. The municipality has since expanded beyond the planning boundary with the rural-urban interface experiencing high subdivision rate due to increased residential development in the peri-urban areas. This has encouraged haphazard development of residential houses in the municipality, proliferation of informal settlements and squatting in government land and riparian reserves. This has made it impossible for the county government to approve housing developments thus losing revenue as well.

### **6.5.2: Big Four Agenda: Provision of Affordable Housing**

The Big Four Agenda on provision of affordable housing was launched by the former president in 2017 was the first approach towards social housing in the 21<sup>st</sup> century. It is also the biggest attempt towards bridging the housing gap using public resources. However, the project stalled in the counties due to lack of funds.

Initially, county governments including the County Government of Homa Bay were requested by the national government to set aside land for this project. Residential designs suitable to each county government were developed and approved, land especially within Homa Bay County were set aside in Homa Bay and Kendu Bay towns but to date, only Homa Bay municipality affordable housing has commenced.

### **6.5.3 Housing Providers in Municipality**

According to the field survey, about 99.8% of the housing providers in the planning area are private while 0.2% of the housing stocks consists public/institution providers. Private housing is well spread across the whole planning area while public/institution housing is only found in neighbourhoods next to the CBD.

#### **Public Housing Initiatives**

Public housing initiatives in Oyugis Municipality include: twenty four (24) housing units for Kenya Police Service and four (4) housing units belonging to the Administration Police Line constructed the Ministry of Public Works; while the National Housing Corporation built eight (8) housing units at Jua kali estate and whose ownership is not clear. Plate 6 - 1 shows the Kenya Police Service Housing Units in Oyugis Municipality

#### **Plate 6 - 1: Kenya Police housing unit**





#### **6.5.4 Urban Housing Densities**

##### **a) Matata/Kanyango/Lower 1000 Streets**

This is considered as a high-density residential area. As indicated earlier, residential neighborhoods do not adhere to any zoning formation. However, majority of the people who reside in this neighbourhood are of low-income group. As shown in Plate 6 - 2, the house typologies for lower 1000 streets are row housing and flats. However, for Matata and Kanyango, housing typologies also include bungalows and apartments. Housing in 1000 streets is usually poorly serviced. Matata hosts Matata hospital while 1000 streets is behind the newly constructed market thus housing demand is very high for small-scale business people and labourers.

##### **Plate 6 - 2: Housing units in Matata/Kanyango/Lower 1000 Streets**



##### **b) Magak-Odeka Road/Masogo Line/Agoro Sare**

Magak-Odeka area is considered as 'Milimani' in Oyugis. These areas are mostly associated with middle to high income earners. It hosts both government and private residential housing. Housing typology is denoted by single detached or semi-detached two or three bed-roomed bungalows and a few maisonettes. Well-furnished apartments are also located in these areas.

Services in the area are adequately provided for. Other residential areas of the same housing classification include, Masogo, Agoro Sare, Ragama, Karogo, and Kasimba. Plate 6 - 3 shows housing units in Magak-Odeka road, Masogo line and Agoro Sare area.

**Plate 6 - 3: Housing units in Magak-Odeka road/Masogo line/Agoro Sare**



### **6.5.5 Housing Construction Materials**

Housing construction creates investment and employment that leads to business expansion which in turn drives the financial and other sectors. When housing industry grows, other sectors also grow. It is a powerful industry that stimulates and drives country's or municipalities' overall economic development and growth. New housing developments often drive infrastructure development that adds value to a municipality. Street networks, electricity and power are some of the required infrastructures for any successful development and need both private and public sector participation.

The availability of low-cost building materials and construction techniques in Oyugis Municipality was observed as fairly available. Building materials are generally fairly expensive since many of them have to be imported from external sources. Transport related overheads make the cost of materials exorbitantly high. Timber is a common construction material; it is easily sourced within (Wire Forest), but is relatively expensive.

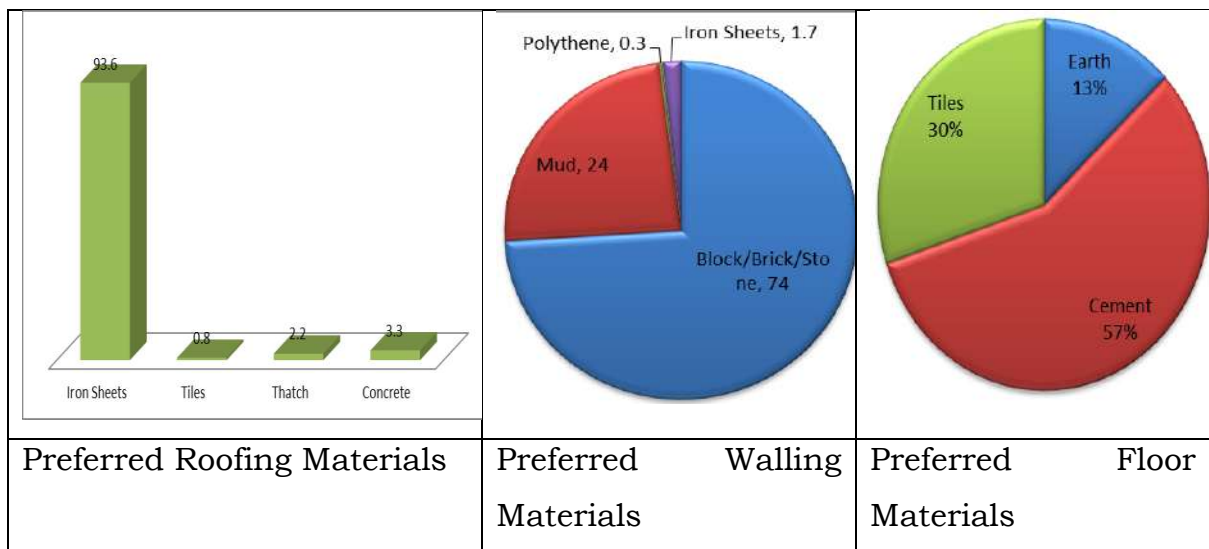
The quality of sand sourced around is good and is easily mined along River Owade, however, the best quality is mined along River Owade but behind Wire Forest. There is also need to introduce more sustainable quarrying techniques to ensure environmental safety and increased output of the product. Table 6 - 1 illustrates the sources of selected building materials in Oyugis Municipality.

**Table 6 - 1: Sources and Cost of Selected Building Materials**

<b>Material</b>	<b>Source</b>	<b>Remarks</b>
<b>Building Blocks</b>	Kendubay	30 Km from Oyugis Municipality
<b>Bricks</b>	Oyugis	Locally cured & used for 1-storey building construction
<b>Sand</b>	Behind Wire Forest (Mawego-Oyugis road)	5 Km from Oyugis CBD
	Within Oyugis Municipality (River Owade)	Locally available
<b>Timber</b>	Oyugis Municipality	Locally available
<b>Steel</b>	Nairobi	It cost 800 (D8) in the year 2023
<b>Galvanized iron sheet</b>	Local Hardware shops	Its costs approximately Ksh. 1,300 for a 30 gauge
<b>Cement</b>	Local Hardware shops	Average at Kshs. 750

According to the field survey, iron sheets is dominant and preferred building material for roofing as was confirmed by 93.6% of the responded while tiles, grass thatch and concrete share 6.4%. According to Figure 6 - 1, the preferred construction material for the wall is brick/block/stone (74%), mud (24%) and polythene and iron sheet at 2% of the respondents. Cement (56.9%), tiles (30.1%) and earth (13%) are the preferred construction material for the floor.

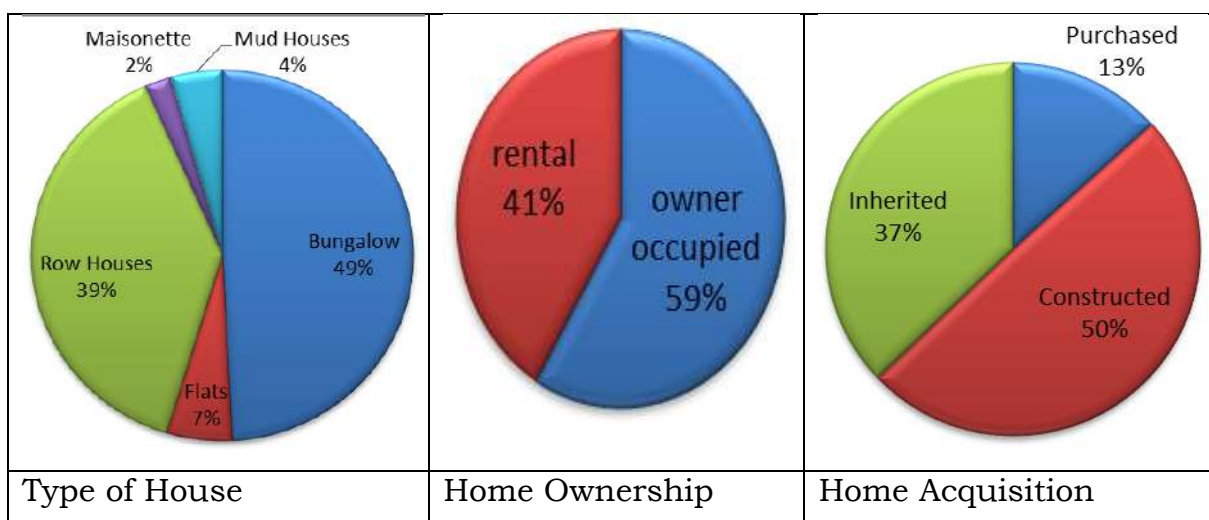
**Figure 6 - 1: Preferred Building Materials in Oyugis Municipality**



### 6.5.6 Existing Housing Typologies

The field survey revealed that 49.2% and 2.2% of the respondents occupy bungalows and maisonettes respectively; this finding is strengthened by 58.6% of the respondents who pointed out that they occupy their own homes. This is further reinforced by 49.1% and 13.3% of the respondents who constructed and purchased their houses respectively. These findings are shown in Figure 6 - 2. This finding confirms that half of the residents of Oyugis Municipality are either tenants or owner occupier. The study also confirms why 62.4% of the housing typology in the planning area is permanent while 22.4% and 15.2% are semi-permanent and temporary respectively.

**Figure 6 - 2: Housing Type, Ownership and Acquisition in Oyugis Municipality**



### **6.5.8 Informal Settlement**

1000 streets stretch from the CBD (at the junction of Kisii-Oyugis and Oyugis-Kosele road). The estates that are within the catchment of 1000 streets can be characterized as slums. Housing in 1000 streets is poorly serviced built on scrap corrugated iron sheets or mud and wattle. As Oyugis Municipality continues to grow without proper planning, informal settlements continue to mushroom. Other major informal settlements are found within the following areas, Jua Kali, Aloo estate and some parts of Kawaindi and Raila grounds.

#### **Characteristics of the Informal Settlements in Oyugis Municipality**

The study identified the following characteristics of informal settlements in the planning area:

- Often diverse building materials
- Unsecure land tenure
- Degradation of the local ecosystem
- Rapid, unstructured and unplanned developments
- Informal road network

Lack of basic services e.g. electricity, poor sanitation networks, lack of portable water and rampant illegal alcohol and drug abuse.

#### **Informal Settlement Upgrading**

The spread of informal settlement is not influenced by lack of suitable land for construction as has been confirmed by the survey that 97% of land within the planning area is suitable for residential land use. Its unsuitability is due to its terrain (25%), prone to floods (41.7%), prone to landslide/erosion (8.3%) and inadequate security (25%). However, 73.3% of the respondent's welcome settlement upgrading programmes with a focus on infrastructure development (55%) and titling at 10%. Construction of owner-occupied homes

(73.8%) and self-contained houses (75.9%) are the preferred settlement upgrading approaches.

### **6.5.9 Housing Finance**

As shown in Table 6 - 2, commercial loans are the preferred financial arrangement at 72.7% while 5% of the respondents do not prefer any financial arrangement. The Special Purpose Vehicle for housing development that desires owner occupation, self-contained units, basic infrastructure and the mode of payment preferred is commercial loans are unlimited even in Kenya. These include commercial banks, mortgage intuitions, National Housing Corporation, NACHU etc.

**Table 6 - 2: Preferred Financial Arrangement for Settlement Upgrading Programme in Oyugis Municipality**

<b>Financial Arrangement</b>	<b>Frequency</b>	<b>Percentage</b>
Commercial Loan	263	72.7
Mortgages	74	20.4
Grants	7	1.9
None	18	5.0
Total	362	100.0

### **6.5.10 Housing Infrastructure**

Infrastructure services are not evenly provided within the residential areas in the planning area. According to the socio-economic survey, 58% of the respondents are not connected to piped water and rely on other sources of water such as borehole, shallow wells, water vendors, river and roof catchment whose quality is not guaranteed. On the hand, roads in most neighbourhoods are narrow, lack drainage system and flood during rainy season as illustrated by Plate 6 - 4.

**Plate 6 - 4: Infrastructure Provision within Residential areas in Oyugis Municipality**

		
Borehole	Well drained road	Poorly drained road
		
Poor solid waste management	Pit latrine	Solid waste transportation

However, electricity is evenly distributed in the neighbourhoods with approximately 62% connected to the main grid. Wastes from residential areas are not regularly collected and are commonly dumped along the roads. In addition, the municipality does not have sewer system thus most residential houses use pit latrines and septic tanks as preferred sanitation facilities.

### 6.5.7 Housing Demand Analysis

According to the 2019 Housing and Population Census, Homa Bay County has an annual growth rate of 2.3% and an average household size of 4.3 (RoK, 2019). The housing need is therefore projected to grow from 7,620 in 2019 to 11,473 households in 2033 showing an increasing of 30% through the planning period.

**Table 6 - 3: Projected Household Growth for Oyugis Municipality**

Year	2023	2025	2027	2029	2033
Population	77,484	80,931	84,531	88,292	96,322

Household (HH)	15,497	16,186	16,906	17,658	19,264
Inter-censual increase in HH	537	689	720	752	1,606

From Table 6 - 3, it is estimated that the current total urban housing supply in the municipality is 8,157 (both permanent and temporary). Based on the current supply and the projected demand over the planning period, the municipality will need to develop or ensure supply of an additional 1,606 housing units by the end of the planning period, but the figures can be higher if permanent housing typologies are desired.

**Table 6 - 4: Analysis for Urban Residential Land Use Cover and Demand**

<b>Residential Zones</b>	<b>Average Residential Land use Cover (%)</b>	<b>Housing Demand 2023</b>	<b>Housing Demand 2027</b>	<b>Housing Demand 2033</b>
Low Density	28	150	484	734
Medium Density	30	161	519	786
High Density	42	226	727	1,100
<b>Total</b>	<b>100</b>	<b>537</b>	<b>1,730</b>	<b>2,620</b>

*Source: Adopted from Physical Planning Handbook, 2008*

Table 6 - 4 describes housing demand for each residential zone up to the end of the planning year. According to the Physical Planning Handbook, the average residential land use cover for low density residential zone is 28% of the land earmarked for residential land use, medium density takes 30% while high density holds 42%. By the year 2033, low density residential zones will require 734 housing units, medium density (786) and high density (1,100).

**Table 6 - 5: Analysis for Land Demand for each Residential Zone**



<b>Residential Zones</b>	<b>Minimum Plot Size (Ha)</b>	<b>Land Demand 2023 (Ha)</b>	<b>Land Demand 2027 (Ha)</b>	<b>Land Demand 2033 (Ha)</b>
Low Density (Bungalow, Maisonette)	0.2	30	96.8	146.8
Medium Density (Bungalow, Maisonette, Multi-family dwelling)	0.045	7.245	23.355	35.37
High Density (Row housing, detached, semi-detached)	0.03	6.78	21.81	33
<b>Total Land Demand</b>	-	<b>44.025</b>	<b>141.965</b>	<b>215.17</b>

Source: Adopted from Physical Planning Handbook, 2008

Basing on Table 6 - 5, the total land demand for residential land use by the year 2033 will be 215.17Ha (2.1517Km<sup>2</sup>) which is 80% increase of the current (2023) land demand of 44.025Ha (0.44Km<sup>2</sup>). According to Table 6.5, low density residential land use will require 146.8Ha by the year 2033, medium density (35.37Ha) while high density will require 33Ha.

### 6.5.8 POC Analysis for Urbanization and Human Settlement

Table 6 - 6 describes the potentials, opportunities and constraints analysis for urbanization and human settlement in the planning area.

**Table 6 - 6: POC Analysis for Urbanization and Human Settlement**

<b>Sector</b>	<b>Opportunities</b>	<b>Constraints</b>
<b>Housing</b>	<ul style="list-style-type: none"> <li>• Availability of housing finance</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-divisions are not properly guided and</li> </ul>

	<p>through the existence of numerous banks and Sacco's in the planning area.</p> <ul style="list-style-type: none"> <li>• A ready market for housing stock due to high population that can easily be exploited by real estate investors while the availability of cheap labor reduces the cost of housing construction</li> <li>• The existence of locally available building materials (bricks, sand and building stones) lessen the cost of housing construction</li> </ul>	<p>controlled as there are no residential zoning plans and hence no clearly designated zones.</p> <ul style="list-style-type: none"> <li>• Demand for descent housing that does not commensurate with housing supply.</li> <li>• Proliferation of slums and other informal settlements that threaten fragile ecosystems</li> <li>• Most residential areas/neighborhoods lack basic infrastructure and services</li> <li>• High cost of land especially in the core and peri-urban areas</li> <li>• Lack of serviced land in most parts of the planning area</li> </ul>
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## **CHAPTER SEVEN: ECONOMIC ANALYSIS**

### **Overview**

This section describes the distribution of economic activities in the planning area. Economic analysis is an important aspect in planning as it identifies important indicators of level of growth and development of a municipality. Economic performance influences the standards of living of a people and is an indication of how the people are able to best utilize (sustainably) their natural and human resources. For planning to be sustainable, it must respond to the existing economic activities and try to order economic activities in a sustainable manner.

The planning area comprises of both the urban, peri-urban and rural areas. In the urban areas such as Oyugis municipality, the local economy is largely driven by trade and commerce. However, in the rural areas, the agriculture sector is the main source of income for majority of the people.

Other drivers of the local economy in the planning area include:

- Industries – Light Industries largely create employment opportunities in the municipality and county as a whole.
- Tourism – There are potential tourism opportunities around the Koder forest and Wire forest Logistics and transport sector – The economy around Kisumu-Oyugis-Kisii – Isbanian and the centers along the road heavily depends on transport

The planning area has two distinct economic regions: the regional economy, the local economy

### **7.1: Regional Economy**

This focuses on the neighboring counties namely, Kericho, Kisii, Kisumu, Homaby and Migori. The economic performance of Oyugs is affected by these counties in terms of the flow of goods and services. Some goods such as sweet potatoes are exported to Tanzania through Oyugis –Kisii- Isbania road. Being a transit hub, the municipality receives wares from Uganda such as eggs

through Kisumu County and tomatoes and irish potatoes from Nakuru through Kericho County and also processed tea from Kericho and Kisii county. The municipality also receives fish from Kendu Bay and Homa Bay.

### **7.1.1 Financial Institutions**

Homa Bay County enjoys the presence of five major banks namely: Barclays Bank, Kenya Commercial Bank, Cooperative Bank, Post Bank and Equity Bank. All these banks are based in Homa Bay municipality save for Cooperative Bank which has additional presence in Mbita Point, Oyugis and Ndhiwa, Equity Bank which has additional presence in Mbita and Oyugis, Kenya Commercial Bank which has additional presence in Mbita Point and Oyugis. Post Bank has additional branches in Oyugis and Mbita Point.

The rest of trading centres are served largely by Microfinance Institutions, Community Financial Services Associations (CFSAs), 47 SACCOs, 25 village banks and presently about 40 banking agents. The emergence of banking agents has been fuelled largely by attempts by mainstream banks to shore up their presence in every trading centre or urban estate thereby deepening and widening access to their services. Like mobile money transfer services, agency banking is expected to grow very rapidly to expand access to banking in all sub-counties. Mobile banking services are also being provided by Equity Bank targeting market days in major trading centres. The need for industry-sensitive credit facilities especially for agriculture and tourism has been emphasized in many *Homaforums* in the county. Measures will therefore need to be taken to support strategic sub-sectors and make available affordable customer-focused credit to all potential entrepreneurs in the vision 2030 priority sectors.

### **7.1.2 Markets and Urban Centres**

According to the 2009 Kenya Population and Housing Census, Homa Bay County has four recognized urban centres namely: Homa Bay, Mbita Point, Kendu Bay and Oyugis. The county has several trading centres with the main ones being Sindo, Ndhiwa, Rodi Kopany, Kosele, Mirogi, Rangwe, Adiedo, Nyangweso, Aora Chuodho, Magunga, Ringa, Kadongo, Chabera, Misambi,

Ruga, Nyandiwa, Ogongo and Sena. Some of these market centres are growing fast and could soon graduate to townships going by the volume of development being witnessed. Today these centres are hosts to most microfinance institutions, wholesale and retail outlets, accommodation and entertainment facilities. Three of them: Ndhiwa, Kosele and Magunga host sub-county headquarters where closeness to government services continues to attract good investments. Others are strategically positioned to benefit from the local transport network as the key points of entry or connection between various busy roads. This category includes Nyandiwa, Rodi Kopany and Sena.

The county has 151 landing beaches managed under 118 Beach Management Units. These landing beaches have become influential trading centres in the county especially for fish and forestry products. Examples of landing beaches which have become thriving trading centres include Nyandiwa, Ringiti, Remba, Kwethumbe, Alum, Kaugege, Ndhuru and Sena.

All these regional markets affect the performance of Oyugis market as source of merchandise and market for products produced within and outside

## **7.2 Local Economy**

Oyugis Municipality has three main banks namely: Kenya Commercial Bank, Cooperative Bank, Post Bank and Equity Bank. It also has Microfinance Institutions such Kenya Women Finance Trust and SACCOs. The economy of Oyugis is dominated by small and medium enterprises in Jua kali, crop and livestock production, retail and wholesale businesses.

The service industry is also becoming vibrant in the areas of accountancy, banking, plumbing, elasticity installation, and building. Generally, the economy of Oyugis is vibrant and attracts a lot of private investors

## **7.3 Trade and Commerce**

Trade is an important economic activity within the planning area. Commerce is concentrated mainly in Oyugis Municipality and in market centers within the rural areas. Oyugis Municipality is the main commercial hub in the planning area as well as at the County level. The strategic position of the

municipality along Kisumu-Oyugis –Kisii- Isbania makes Oyugis a hub of economic activities. This provides opportunities for regional flow of goods, people, and capital and job creation. The Commercial activities have created employment opportunities and hence facilitating economic empowerment.

### **7.3.1 Formal Commercial Activities**

#### **Wholesale and Retail trade**

The municipality is dominated by large scale and small-scale retail activities. The municipality hosts Oyugs supermarket, Shivling and Tamu. The wholesale traders supply the retail shops that break the goods for sale as individual items. They are mainly located along the main road (Kisumu-Oyugis- Kisii ). Wholesale, retail, and general shops are a source of livelihood and employment in the municipality. Both agricultural and finished goods in the municipality are traded between buyers and sellers.

Most businesses in the planning area can be classified as micro and small enterprises (MSEs). An insufficient supply of business premises is one key challenge facing MSEs. Furthermore, a lack of contractual obligations between tenants and landlords frustrates entrepreneurial efforts, forcing traders to encroach on road reserves and other undesignated business areas.

### **7.3.2 Informal Commercial Activities**

The informal economy constitutes an important component in the economic activities and process of development in urban areas. Small-scale businesses and hawking activities are commonly practiced around major transport termini, on the reserves of busy internal roads and outside designated market structures. This has resulted to traffic congestion experienced along the main road. There is need for regularization of the sector by planning for the informal activities. These informal businesses within the planning area include: second hand clothes sellers, fruit and vegetable vendors, welding, shoe shining among others. The informal economy generates employment for an expanding urban workforce.

### **7.3.3 Service Industry**

The service industry or tertiary sector of industry provides services to businesses as well as final consumers. Businesses in this sector include accountancies, plumber services, computer services, restaurants, and tourist agents. If this plan (LPLDP) focuses on the provision of requisite resources (financial, physical, and human), the services industry can become a key driver of economic growth and job creation in Oyugis Municipality

### **Banking and financial services**

There are numerous banks and microfinance institutions in Oyugis Municipality and surrounding town centres in the planning area. Financial institutions play an important role in enabling capital mobilization hence, promoting economic growth and availing financial services to society. The commercial banks in the planning area include; Equity bank, Kenya Commercial bank, Cooperative Bank and Kenya Women Finance Trust among others.

### **7.3.4 Markets**

Markets play an important role in enhancing the local economy. In the planning area, most traders sell their produce as well as source raw materials from market centers. There are various types of markets within the planning area distinguished by the size, function and nature. Markets within the planning area serve a wider catchment of population outside the municipality and the county at large.

The municipality is served by several major markets namely; Masogo and Oyugis market is majorly an open-air market, but also has a permanent structure with stalls that specializes in selling vegetables, bananas, sweet potages groundnuts etc. It is also the main market for livestock trading and auction such as goats, sheep and cattle. There are other small markets in every trading centre. They become vibrant on Tuesdays and Fridays, the main market days.

## **7.4 Business Environment in the municipality**

In the planning area, laws and regulations to guide trade activity are in existence. The county government has policies to guide trade matters and is encouraging and supporting public-private partnerships.

### **(a) Infrastructure facilities**

Access to infrastructure facilities is crucial to the growth of businesses in an area. These facilities enable increase in factor productivity and reduce production costs, foster innovation and promote private capital formation. Oyugis Municipality has good road networks although not well developed

### **(b) Permits**

Majority of the businesses have only one permit. However, there are businesses that do not have business permits, and this is attributed to the high cost and the substitution of licenses with daily permits, and lack of information. According to the key informant interviews businesses cited that the high cost of permits/licenses was a major hindrance in operating business.

### **(c) Revenue streams**

The sources of revenue include business permits (which are paid annually and range from Ksh 2,450 to Ksh 120, 000), land and property rates, fines, quarrying permits (Ksh 200,000), and permits for events (e.g. outdoor announcements, crusades, etc.).

The main revenue base of Oyugis Municipality is agriculture, accounting for over 25millions Kenya shillings annually. The main sources of revenue are as follows (annually):



<b>OYUGIS MUNICIPALITY REVENUE COLLECTION</b>				
	<b>Revenue Stream/Income Source</b>	<b>FY 2019/2020</b>	<b>FY 2020/2021</b>	<b>FY 2021/2022</b>
1	Land Rates	-	-	-
2	Land transfers	42,052.00	245,052.00	342,052.00
3	Lease Charges (Consent/Transfers)	695,514.00	795,914.00	695,514.00
4	Land/Ground rents	959,987.00	989,387.00	999,387.00
5	Single Business Permits	1,291,327.00	2,691,327.00	1,291,327.00
6	Market Dues	974,340.00	1,974,340.00	2,974,340.00
7	Approval of plans /transfers/ certificates	895,919.00	895,419.00	895,419.00
8	Housing Fees (Rents)	-	-	-
9	Other Cess Income	607,336.00	677,336.00	407,336.00
10	Taxi/Motorbike Fees	1,301,599.00	891,599.00	1,501,599.00

**Table 7 - 1: Oyugis Municipality revenue sources**

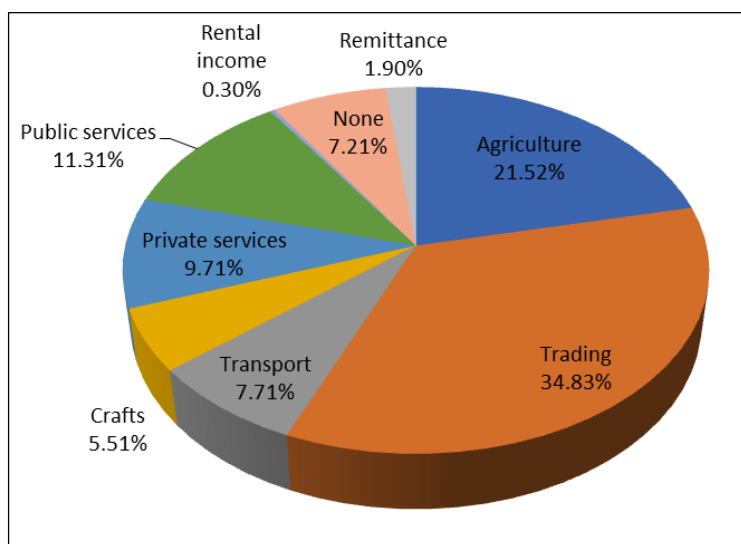
11	Site Value Rate	340,452.00	140,452.00	640,452.00
12	House/Kiosk Rents	985,718.00	995,718.00	955,718.00
13	Slaughter House Fees	457,972.00	457,972.00	457,972.00
14	Stock Auction Fees (Cattle/Goat/Sheep)	618,501.00	918,501.00	818,501.00
15	Stock Movement Fees	101,859.00	701,859.00	901,859.00
16	Veterinary Charges	394,110.00	494,110.00	994,110.00
17	Advertising/Bill boards	382,093.00	382,093.00	881,930.00
18	Bus Park Fees/Parking Fees	1,152,868.00	1,455,167.00	1,552,867.00
19	Liquor Licensing	-	-	-
20	Search and clearance certificates	178,526.00	186,226.00	280,226.00
21	Noise pollution permit fees	235,840.00	457,740.00	291,740.00
22	Fire Inspection Fees	92,889.00	227,850.00	199,149.00
23	Conservancy Fees/ Wildlife Grants	368,556.00	492,035.00	764,035.00

24	Water Charges	294,904.00	376,204.00	267,530.00
25	Fines and Penalties	619,292.00	229,172.00	289,172.00
26	Survey/Sub-Division Fees	194,269.00	284,269.00	186,269.00
27	Bricks/Sand/Murram/Stones	719,294.00	759,224.00	719,224.00
28	Miscellaneous Collections	47,220.00	47,220.00	97,220.00
29	Health Sector Charges (A-I-A)	-	-	-
	<b>Total Local Revenue</b>	<b>13,952,437.00</b>	<b>17,766,186.00</b>	<b>19,404,948.00</b>

Source: Oyugis Municipality revenue department

The main source of income in Oyugis Municipality is trading (34%) followed by agriculture (21%), then public services 11.3%, private services 9.7%, transport services (.7%), rental income 7.2%, craft 5.5% and remittances 0.3 %. The fact that trade dominate Oyugis Municipality indicate that there is high income flows creating high demand for goods and services. Figure 7 - 1, shows the main sources of income and hence revenue in Oyugis.

**Figure 7 - 1: Sources of income**



#### **(d) Strategic Location of the planning area**

The municipality is strategically located along Kisumu-Oyugis- Kisii- Isbania roads which connects the municipality to local and regional areas. This places the municipality in an opportune location for economic growth and dominance because the municipality acts as a transit urban area for goods on route to various urban areas within the region and also to neighboring countries.

### **7.5 Industry**

The industrial sector is not fully developed; nevertheless, there are formal and informal industries, with light industrial activities being the most common in the municipality.

The drivers of Industrialization in the planning area include;

- a. Strategic location- The municipality is the gateway to regional urban areas and cities such Kisumu, Kericho, Kisii and Homa Bay and entry to Tanzania through Isbania, strategically located along the Kisumu-Oyugis -Kisii-Isbania.
- b. Raw materials - Most industries benefit from the local presence of rich agricultural produce, sand harvesting wood etc.
- c. Existing infrastructure - The laid-down infrastructure (in terms of road networks, water systems, and housing and power lines) attracts industrial activities
- d. Local market
- e. Availability of labor

#### **7.5.1 Formal Industrial Sector**

The formal industrial in the municipality is made up of bakeries and dairy plants. These include the Jokamama Bakery at Madiaba, Baraka, Novel, Afia and Golden. The only dairy plant is the Kabondo Dairy plant.

#### **Petrol Stations**

In the planning area, there are around 6 petrol stations and petrol filling stations, with the major ones being National Oil. Most of the petrol stations and petrol filling stations are located along the A1 road.

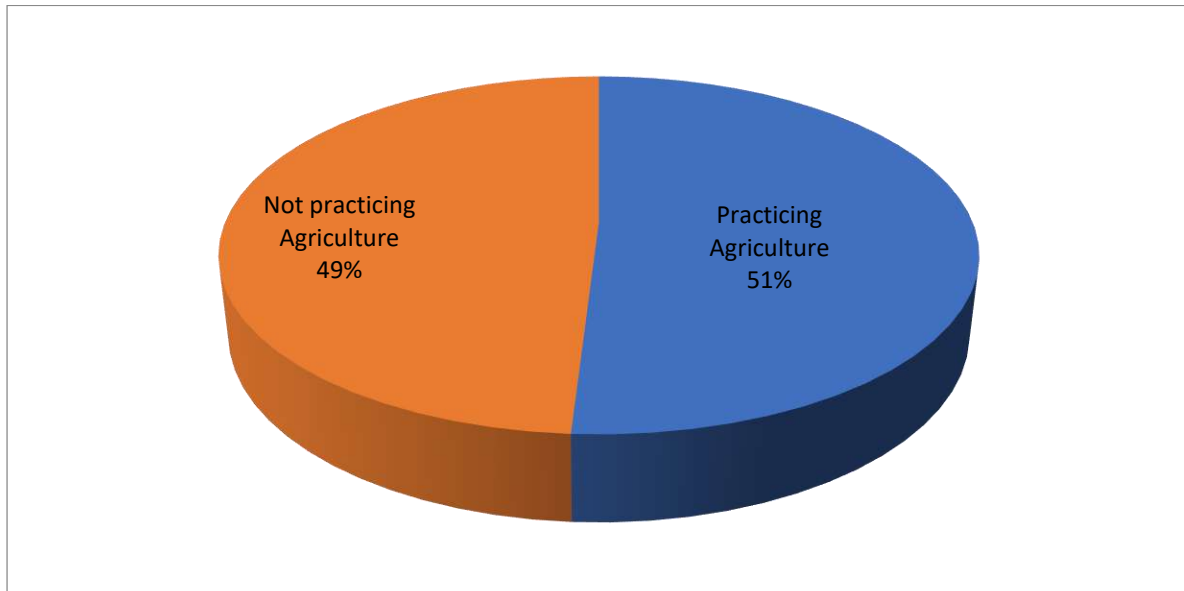
### 7.5.2 Informal Industrial Sector

There is a vibrant informal sector (jua kali sector) within the municipality and its environs which includes garages, carpentry, second hand cloth vending, tailoring, and workshops. Other informal industries in the municipality include the brick making, welding industry etc.

### 7.6. Agriculture and Livestock Production

Crop farming and livestock rearing accounts for 60% of the county's GDP. Agriculture is the major activity in the planning area, with about 70% of the population depending directly or indirectly on farming for their livelihoods. The rich hinterland surrounding the municipality also greatly contributes to the economy of the municipality. The use of appropriate agricultural practices can thus enhance the economy over the long term. From the survey, 51% of respondents confirmed that they are involved in agricultural activities and 49% were involved in other activities apart from agriculture (See Figure 7 - 2).

**Figure 7 - 2: Households practicing agriculture**



The main crops grown are maize, cassava, sweet potatoes and groundnuts. Other crops include beans, sorghum, bananas, several fruits and vegetables, and cash crops like coffee and tea in peri-urban areas. Majority of the farmers in the municipality engage in agriculture for both subsistence and commercial purposes.

Livestock rearing is a key economic activity in the municipality, and many farmers rear cattle for beef and milk production. Poultry farming and bee keeping are other sources of livelihood in the municipality.

Although the planning area is predominantly agricultural, there is little value addition taking place. Additionally, there are inadequate established markets to market agricultural produce, while the existing local market centers are not exploited to promote regional trade.

### **7.7 Tourism**

The planning area is located 20Km north of Kisii town along the major A1 highway. There is also another county road (C26) connecting Oyugis to Kendu Bay while C18 road links Oyugis with Homa Bay municipality via Rangwe. The area is of great geographic, cultural and natural diversity. Within the planning area, the tourist attractions sites identified are Kodera Forest, Wire Forest and a bird's sanctuary.

However, the potential of tourism in the municipality is yet to be fully exploited. From the survey, most of the respondents (96.8%) are not aware of the existence of tourism sites. From the survey report it seems only 3.2% of the sampled interviewees are aware of these sites while 96.8% are totally unaware of the existing tourism sites.

#### **a) Physical attractions**

The main tourism attractions in planning area include Kodera Forest, Wire Forest and bird's sanctuary

#### **b) Hospitality industry**

Oyugis has a few notable hotels that provide good rooms and facilities such as fitness halls, swimming pools, night clubs, bars, restaurants, and spacious gardens. Some of these hotels include the Le grand, Hotel, Winimum Hotel, Dudi View Hotel etc.

### **7.8 Potential/Opportunities and Constraints**

Table 7 - 2 outlines the potentials, opportunities and constraints analysis for economic analysis in the planning area.

**Table 7 - 2: POC analysis for economic analysis**

<b>SUB-SECTOR</b>	<b>POTENTIAL/ OPPORTUNITIES</b>	<b>CONSTRAINTS</b>
<b>Trade and Commerce</b>	<p>Improvement of access to infrastructure and services</p> <p>Skills development for better managed MSEs</p> <p>Development of new markets and upgrading of existing markets</p> <p>The high population in the municipality and the hinterland creates a market for the goods and services</p> <p>Investment in real estate commercial/ business premises</p>	<p>Poor infrastructure, high cost of licensing, and low turnover discourages the vibrant growth of SMEs.</p> <p>Lack of designated market places</p> <p>Lack of a trade policy</p> <p>Markets are small in size</p> <p>Inadequate micro finance institutions</p>
<b>Agriculture</b>	<p>Establishment of agro based value addition industries on horticulture, poultry, fish and livestock</p> <p>Investment in markets for agricultural produce</p> <p>Skills development on modern agricultural practices</p>	<p>Land fragmentation threatening agricultural unproductivity</p> <p>Lack of markets for agricultural produce</p> <p>Climate change threatens the sustainability of rain-fed agricultural productivity.</p> <p>Lack of modern agriculture technology skills</p>
<b>Industry</b>	<p>Potential to develop the industrial base of the municipality through:</p> <p>Agro-industrial processing</p>	<p>Lack of designated industrial zone</p> <p>Inadequate infrastructure like sewer, water networks</p>

	<p>(Value addition on fruits and vegetables, and cash crops like coffee and tea)</p> <p>Livestock processing (Value addition on dairy, meat and hides)</p> <p>Construction industry (Brick making. Sustainable sand harvesting)</p> <p>Establishment of Jua Kali industry/ Industrial park</p>	<p>and solid waste management facilities</p> <p>Frequent power blackouts which pose a major setback to existing industries</p> <p>High rate of land fragmentation which is limiting growth of industries</p>
<b>Tourism</b>	<p>Investment in:</p> <p>Tourism</p> <p>Conserve forests such as Wire and Koderia</p> <p><b>Eco tourism</b></p> <p><b>Hospitality industry</b></p> <p>Incorporate conference facilities, homestays, eco-lodges in tourist attraction sites</p> <p>Infrastructure investment and development e.g. roads and basic services</p>	<p>Limited funding provided for marketing and promotion.</p> <p>The hospitality industry is not fully developed</p> <p>Tourism has not been perceived as a high returns sector by private businesses in the County</p>

## **CHAPTER EIGHT: PHYSICAL INFRASTRUCTURE**

### **8.1 Overview**

Physical infrastructure is the basic physical structures required for an urban area to function and survive, such as Water Supply System, transportation networks, a power grid and sewerage and waste disposal systems. This chapter looks at the transportation, water demand and supply, solid waste management, sewerage disposal, storm water drainage and energy.

#### **8.1.1 Transportation Infrastructure**

Roads within the municipality are fairly good. Road transport is the most common mode of transportation in the municipality. Motorcycles and Matatus dominate the sector. There are poor drainage channels along most of the access roads and that the drainage channels along Ahero junction-Kisii highway done by KeNHA are not working properly. Storm water from the upper parts is not entering the channel as they are blocked by silt and solid wastes washed by storm water.

The municipality lacks rail and air transport infrastructure. Oyugis Municipality depends on Kabunde airstrip in Homa Bay municipality, Suneka airstrip in Kisii and Kisumu International Airport in Kisumu city. There is no railway line connecting to Oyugis. The rail transport ends in Kisumu city. The rail transport has been dormant but was revived in 2023 and is now operating. Water transport is supported in the region by Lake Victoria. Kendu bay town which is along the Lake is 20.6km from Oyugis Municipality but major water transport only takes place at Mbita which is 83.8km away.

#### **Transportation supply**

Road transport is the major mode of transport in Oyugis Municipality. The hierarchy of roads categorizes roads according to their functions and capacities. The basic hierarchy of roads in Oyugis Municipality comprises of National Trunk Road (Kisumu-Kisii Highway, Class A1) and Secondary highways (Oyugis-Kendu bay; Class C26 and Oyugis- Rangwe; Class C18) and



Minor local access roads within the municipality. Minor local access roads do not have classes or hierarchy and therefore there is need for naming through public participation and use of local knowledge

### 8.1.3 Road network

The delineated planning area for Oyugis Municipality cbd has a total road network of approximately 62.8 km as indicated in Table 8 - 1. These exclude tracks and roads less than 4 m wide.

**Table 8 - 1: Road Network by Type for Oyugis CBD**

<b>Road Surface Type</b>	<b>Road Length (km)</b>
<b>Paved</b>	18.9
<b>Gravel</b>	15.7
<b>Earth</b>	28.2
<b>Total</b>	<b>62.8</b>

### Classification of the roads

The categories of classified roads in the planning area as well as the corresponding lengths are shown in Table 8 - 2.

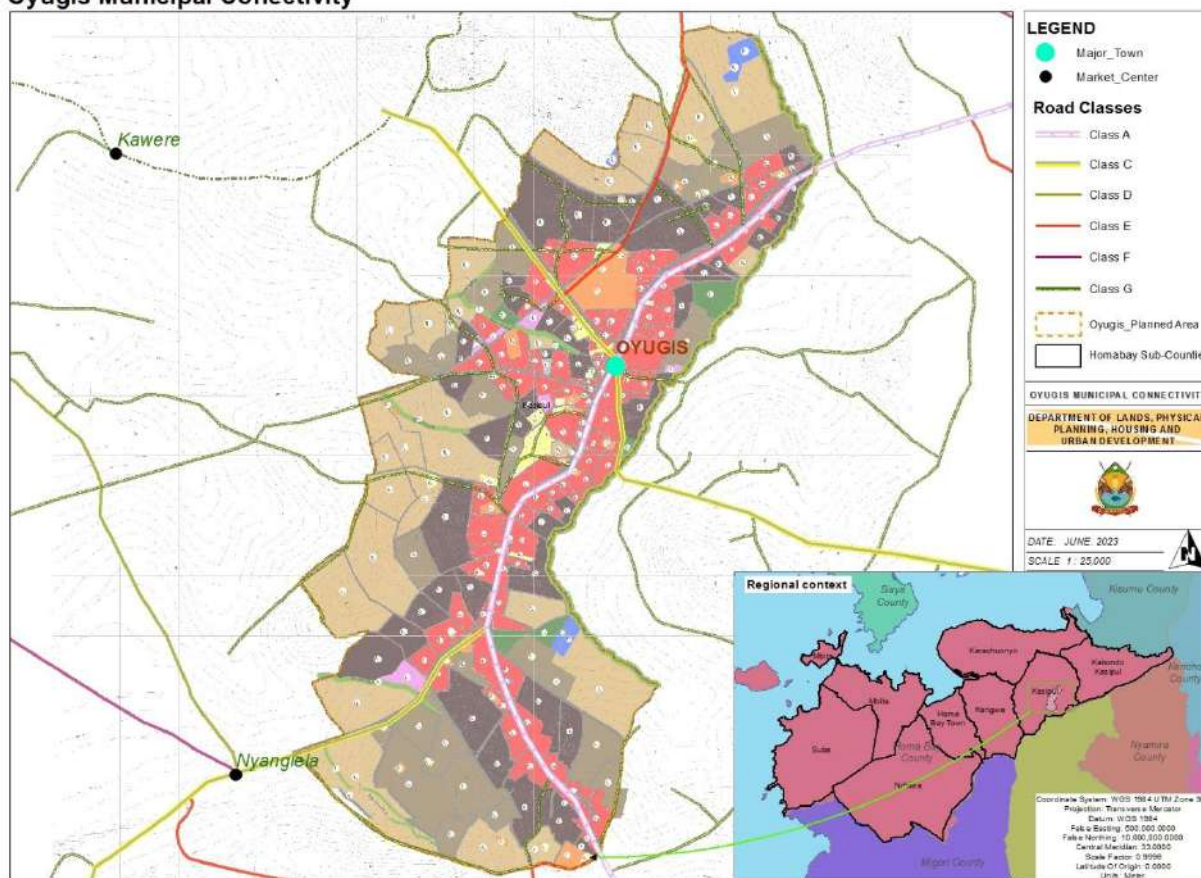
**Table 8 - 2: Road Network by class for Oyugis CBD**

<b>Road Class</b>	<b>Road Length (km)</b>
<b>Class A</b>	6.7
<b>Class C</b>	3.0
<b>Class E and below</b>	53.1
<b>Total</b>	<b>62.8</b>

The municipality is located along A104 Road Kisumu-Kisii Highway, C26 Oyugis – Kendu Bay Road and C18 Oyugis-Rangwe Road. The A104 Kisumu-Kisii Road is a 2-lane road while the latter two are single lane roads as portrayed by Map 8 - 1.

## Map 8 - 1: Oyugis Municipality Road network

Oyugis Municipal Conectivity



The Class C 26 and C 18 roads connecting Oyugis Municipality provides a shorter linkage between the municipality and the access to the agricultural settlements and the surrounding urban centres as Rodi Kopany, Rangwe and Kendu-Bay. The first section of the road, from Oyugis Municipality, is narrow and crossing between two vehicles is not easy.

Oyugis Municipality is connected to Kisii town by A104 road while to Kendu Bay Town and Rangwe Town by two main paved roads (C26 and C18) respectively. Oyugis Municipality market activities currently takes place along the major roads within the municipality such as the A104 highway and 1,000 street since the market construction is not yet complete as shown in Plate 8 - 1 in front of Shivling supermarket.

**Plate 8 - 1: Roadside traders in front of Shivling supermarket**



The main highways A1 (Kisumu-Kisii highway) was constructed with barriers without flyovers that makes accessibility between activity zones very challenging and exposes pedestrians and motorcyclists to danger always as shown in Plate 8 - 2.

**Plate 8 - 2: Cars/Motorbike parking along A1 road with guard rails**



The local access roads in the municipality are gravel or earth roads in a fair or poor condition.

### 8.1.4 Public transport system

The public transport service is very simple: there are some matatus stopping over on their route and boda boda to complete the trip to the final destination.

Transportation land use includes all land under roads and footpath networks, parking spaces, bus terminals and bus stops. This covers only 6.7% of land uses in the municipality as illustrated by Table 5 - 1.

### Mode of Transport Used to Work

45.3% of Oyugis residents are walking to work, 40.1% using boda-boda, 7.2% use private cars while 4.7% rely on personal motorcycles. Matatus are being used by 1.7% of the Oyugis residents as shown in **Error! Reference source not found..**

**Table 8 - 3: Mode of transport to work**

Mode of Transport	Frequency	Percent (%)
Walking	164	45.3
Boda boda	148	40.9
Private Motorcycle	17	4.7
Private car	26	7.2
Matatu	6	1.7
Bus	1	0.3
Total	362	100.0

Map 8 - 2 shows the transport facilities and infrastructures in Oyugis Municipality such as bridges, bus stops, boda-boda pick up points and roads. The municipality lacks a bus park but has bus stops along the major roads. Boda-boda is one of the major modes of transportation in the municipality

thus the presence of the numerous motorcycles pick up points throughout the municipality.

**Map 8 - 2: Oyugis Municipality transport facilities and infrastructure**



- Motorcyclists to be provided with decent parking areas away from the road reserves.
- A spacious and well-designed bus stage to be constructed.
- Poor communication and coordination among departments within the County.

### **Motorcycles (Boda Boda) Transport**

Boda boda is the major mode of transportation among the residents of Oyugis. This mode is preferred because it is readily available, can access narrow paths and its affordability. It is the best mode for accessing estates and villages. There are three associations dealing with it with a total membership of 10,100. Table 8 - 4 shows the associations by their names, their membership number, challenges and proposals.

**Table 8 - 4: Boda boda associations in Oyugis Municipality**

<b>S/No</b>	<b>Name of Boda Boda Association</b>	<b>Membership</b>	<b>Challenges</b>	<b>Proposals</b>
<b>1</b>	Oyugis Ngware Association	6,000	Insecurity Unemployment Poor roads	Public participation to be ensured in all developments taking place within the municipality. All access roads to be opened up and security lights be installed. Boda-boda riders to be vigilant.

				<p>In order to help the association, its members should be empowered through:</p> <p>Allocation of between 3-6 stalls in the new market, a water kiosk and toilets to manage.</p> <p>County government to employ around 10 members in the revenue collection sector.</p>
<b>2</b>	Oyugis Boda-Boda Association	2,500	<p>Lack of parking lots and shades for boda-boda riders.</p> <p>Poor access roads (Muddy roads).</p> <p>Power blackouts.</p> <p>Poor sanitation and unreliable water supply.</p> <p>Poor security.</p> <p>Hospitals not fully equipped.</p>	<p>Loans to be made available.</p> <p>Boda-boda shades to be constructed.</p> <p>Controlling constructions to open up access roads.</p> <p>Opening up of access roads.</p>



			Lack of footbridges and roundabouts along the highway	
<b>3</b>	Kasipul Boda-Boda Association	1,600	Poor road conditions within the municipality. Insecurity, theft of motorcycles. Unfair competition from students, teachers and doctors who have joined the sector.	Removal of school children, teachers and doctors from the business. Members to be empowered through provision of loans. The road to Kawahindi to be tarmacked.

There are several feeder roads within the municipality that are not regularly maintained while some have not been opened up. These roads are narrow with poor surface conditions and drainage. The following roads need improvements:

- Kasimba corridor
- Masogo-Oyugis secondary-Mawira-Nyangiela
- Kawango-Nyahera
- Kawahindi-National oil
- Oyugis-Kuoyo-Nyagor road
- Oyugis-Kawaindi-Nyandiwa-Kawere
- Owade-Rongo
- Oyugis-Slaughter-Obisa
- Aloo-Nyadendi
- Madiaba-Rawinji-Migwa-Nyadendi
- Madiaba-Obisa
- Kawahindi-Pasaka-Aloo

### **8.1.5 Street lighting and road signs**

Street lighting is evidenced along the tarmacked roads mostly. Kisumu-Kisii highway, Gamba road, Kosele road and Rodi Kopany roads have elements of street lights. Masogo market also has a few street lights. There are a few floodlights scattered in the municipality mostly in the market centres.

The tarmacked roads have road signs even though Gamba road and Kosele road were all marked as C 864 which is wrong. Other access roads lack road signage.

### **8.1.6 Ongoing County Road Projects**

The ongoing road projects being undertaken in the municipality include:

- Periodic maintenance of the county roads and KeNHA roads
- Installation of street lights along all major roads and flood lights in strategic locations.

### **8.1.7 Transportation Gaps**

- There is need to upgrade all roads to gravel and tarmac status and broaden them to the recommended width. Drainage systems also need to be installed along all roads.
- There is a need to create pedestrian sidewalks and designate bicycle/motorcycle tracks into the road networks.

### **8.1.8 Water Supply, Demand and Accessibility**

HOMAWASCO is in charge of water treatment and supply in the entire region. The municipality is well supplied by piped water. Approximately 27% of the municipality's population are connected to piped water. The water reticulation system for the municipality shows that water lines runs along all major roads within the municipality so it is upon the residents to get connected from their nearest pipe line as portrayed in Map 8 - 3.

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the pipes during low consumption hours and also for the pumping machine to rest and avoid breakdowns. Water supply is turned off whenever it is raining and at around 11:00 o'clock every night and turned back on between 4:00-5:00 o'clock in the morning every day.

There is an ongoing project whose capacity is 12,000m<sup>3</sup> and aims at supplying water up to Kosele by use of gravitational force from the intake point into the households. The project includes a construction of a storage tank of 500m<sup>3</sup> at the treatment area and a 4,500m<sup>3</sup> reservoir tank at Wire hills. The project is expected to begin operating by 2023. It is believed that the supply from the new project will adequately serve the municipality's' CBD current and future water demand.

According to world health organization (WHO) a person requires 50 liters of water per day. With the municipality's population of 75,817 persons the total water demand for the municipality is 3,790,850 litres/3,790.9m<sup>3</sup> per day. This demand exceeds the current supply capacity but with the completion of the ongoing water project, the capacity of the new project will be able to meet this demand and also supply Kosele. When the demand is projected to the year 2033 then a total of 2,201.7m<sup>3</sup> of water will be required which will still be within the supply capacity of the new project assuming the supply capacity to Kosele as portrayed in Table 8 - 5.

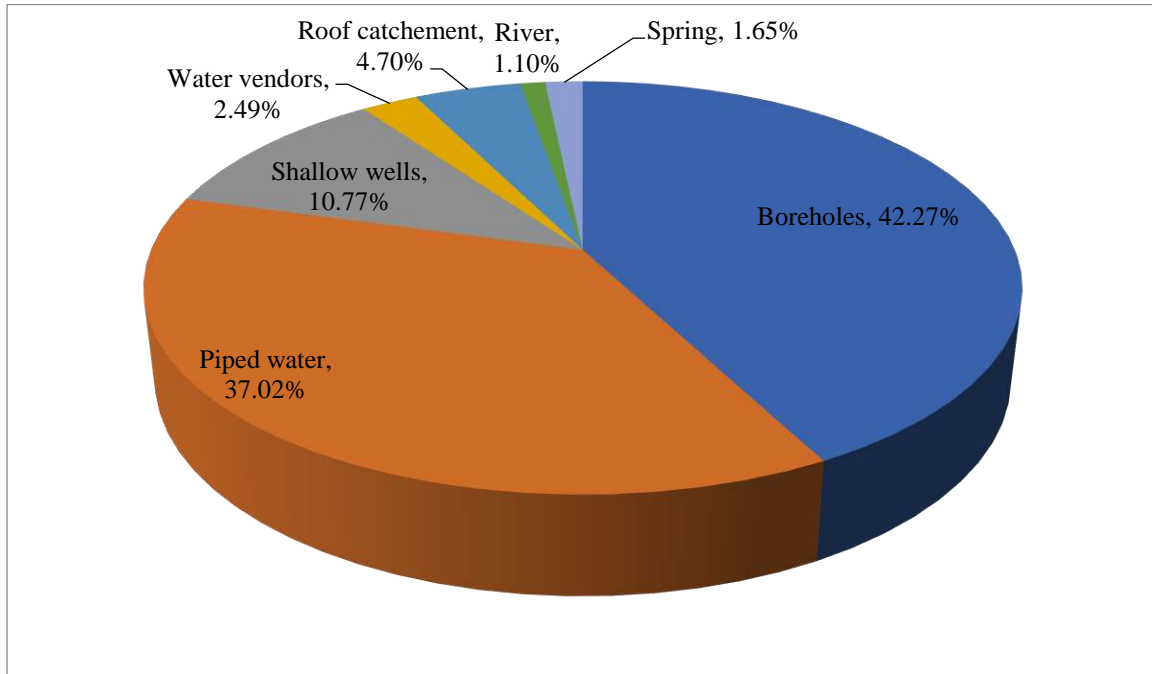
**Table 8 - 5: Water Demand Projection**

Year	Population	Expected Water Demand	
		Litres	m <sup>3</sup>
<b>2023</b>	75,817	3,790,850	3,790.9
<b>2027</b>	84,531	4,226,550	4,226.6
<b>2033</b>	96,322	4,712,400	4,712.4

Household survey result revealed that 42.27% of the residents are still relying on borehole water, 37.02% are using piped water, 10.77% depend on shallow wells, 2.49% rely on water vendors and 4.70% are using rain water while

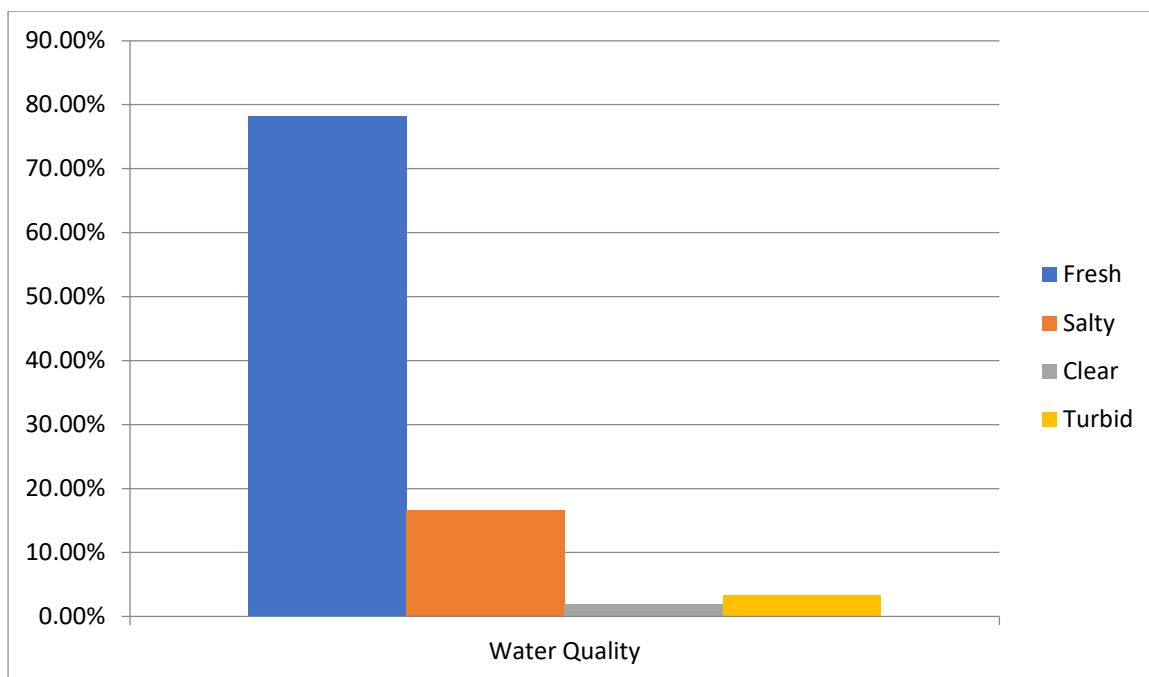
rivers and springs are being used by 1.10% and 1.65% respectively as shown in Figure 8 - 1

**Figure 8 - 1: Household Water Sources in Oyugis Municipality**



The results further confirm the deficit in water supply and connectivity of the municipality’s residents by HOMA WASCO supply source. This implies that majority of Oyugis residents rely on water sources that are not safe. However, in terms of water quality, the household survey showed that 78.18% believe that their water is fresh, while 16.57%, 3.31% and 1.94% consider the water to be salty, turbid and clear respectively as shown below

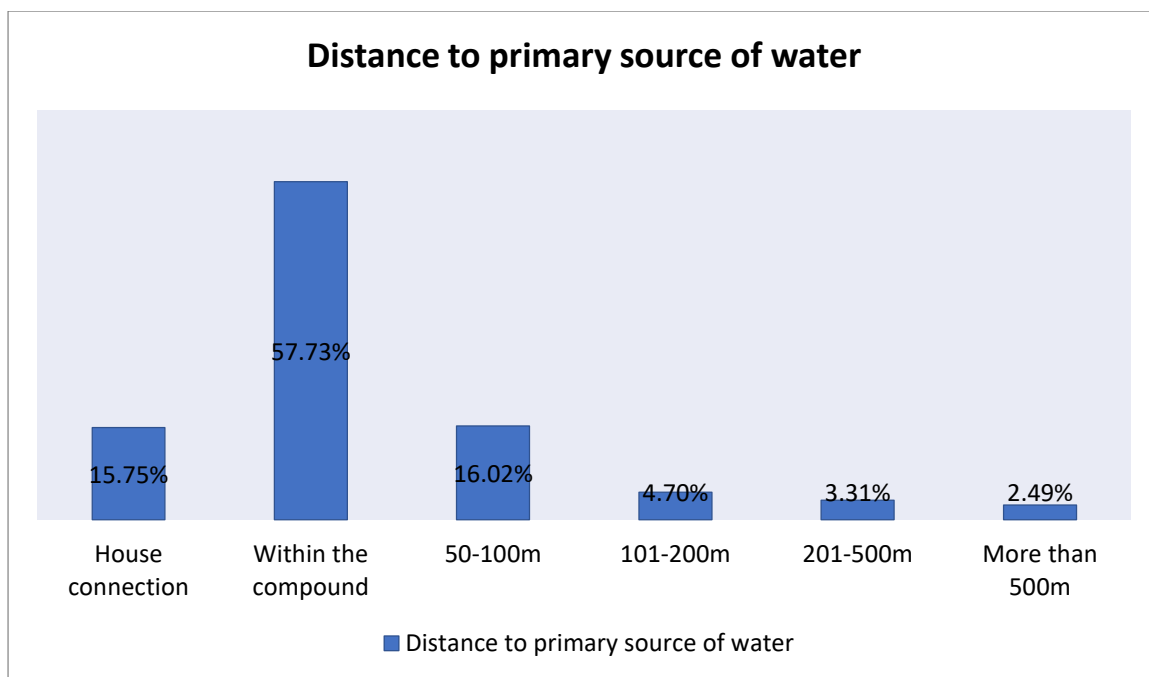
**Figure 8 - 2: Household Water Quality Assessment**



The information seems to be generally influenced by the general belief that water is clean as 'blessed by God'. The sub-county health officer revealed that the municipality currently suffers from several water borne related diseases like diarrheal, typhoid and dysentery. This is because quality of water affects human health directly. Therefore there is a need to improve piped water connectivity to other areas which are not yet connected by extending the reticulation line into the estates while at the same time hastening the completion of the new project. This will minimize the current health challenge caused by unclean water being used by the households.

Despite varying quality, water seems to be accessible from source to the majority of Oyugis residents. The household survey results revealed that, 57.73%, have water within their compounds, 16.02% get their water within 100m walking distance while 15.75% have their houses connected to piped water. This therefore means that a total of 89.5% of the residents have water within a distance of 100m while the remaining 10.5% fetch water from between 100m-500m as illustrated in Figure 8 - 3

**Figure 8 - 3: Distance to primary source of water**



## **Challenges in Water Sector within Oyugis Municipality**

These include:

1. Inadequate/old distribution pipeline hence;
  - a. New clients incurring higher costs of water installation.
  - b. Frequent damage of clients/service lines (increasing NRW)
2. Damage of main distribution and service lines during other infrastructural development (i.e., road/corridors construction and/or upgrading)
3. High electricity and energy cost.
4. Damaging and Vandalism of water infrastructures such as pipes, meters among others.

## **8.2. Sanitation**

### **8.2.1 Solid waste Management**

The urbanization process has led to increase in waste generation in Oyugis Municipality from various sources. The following are the solid waste generators in the municipality:

- a) **Household (Domestic) Waste:** Domestic waste is estimated to take up to two-thirds of solid wastes generated in the municipality. This includes kitchen wastes, food left overs, rags, metals, paper and cardboards, plastics, glasses, rubber, used face masks and leather among others. The paper wastes include paper bags and carrier bags used by the shopkeepers for the packaging of goods which are later disposed-off haphazardly by the clients. Plastic wastes consist of plastic soda and water bottles as well as broken household items such as plastic cups, plates and washing basins.
- b) **Commercial and Industrial Waste:** In this category, markets generate the highest volume of wastes (much of it being biodegradable) in this category. Carpentry industry along the highway is producing a lot of sawdust which is not being handled properly. Other sources of wastes in this category include shops, hotels, restaurants and warehouses among others.
- c) **Construction Debris:** Further to soils and rocks which are by products of excavation activities, demolition activities also generate a significant number of residual materials such as glasses, metals and timber residues.
- d) **Institutional Wastes:** This includes solid wastes predominantly papers from schools, governmental offices, hospitals and religious institutions among others.
- e) **Street Sweepings:** Street sweepings consist of sand, stones, spilled loads and debris from traffic accidents as well as paper and plastic litter dropped by pedestrians and passengers and those blown by wind.

The solid waste generation rate in the urban centres of the Sub-Saharan Africa is approximated at 0.65 kg/person/day (World Bank). With a population of 75,817 persons in Oyugis Municipality, the total waste generated is 49,281.05kg per day which is equivalent to 49.28 tonnes per day. When the population is projected using a growth rate of 2.3% for the next ten years, then the population size shall be 96,322 persons which in turn will



translate to a total wastes generation of 61,261.2kg per day as illustrated in Table 8 - 6.

**Table 8 - 6: Projected Solid Wastes Generation for Oyugis Municipality**

Year	Population	Expected Wastes Generated	
		Kgs	Tonnes
2023	75,817	49,281.05	49.28
2027	84,531	54,945.15	54.95
2033	96,322	61,261.20	61.26

### 8.2.3 Solid Wastes Handling and Disposal

The major challenge facing the municipality in handling wastes is lack of a designated dumpsite for disposal of collected wastes. The municipality also lacks strategically placed skips for temporary holding wastes before they are collected for disposal. The county government has around four skips at the sub-county headquarters which are not utilized. One of the skips lying at the sub-county headquarters is shown in Plate 8 - 3

**Plate 8 - 3: Wastes skip idling at the sub-county headquarters**



The non-utilization of the waste skips, lack of designated waste disposal sites and irregular collection of wastes has led to all forms of management including haphazard dumping, burning and burying Plate 8 - 4.

**Plate 8 - 4: Burning along the highway and dumping in farms near Masogo market**



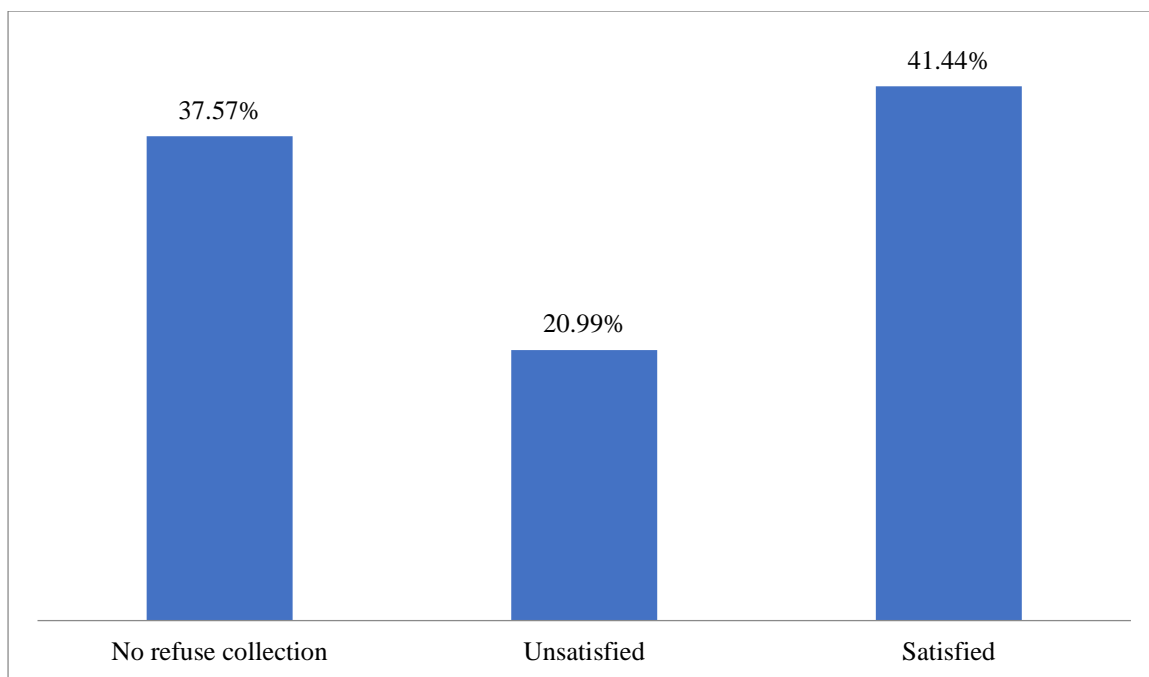
Currently, there is neither designated dumping site nor wastes receptacles in Oyugis Municipality. Wastes are temporarily dumped on and along the roads before they are collected by the tractor for disposal. Currently the municipality has an old tractor that is used for collecting wastes and then disposed of at individual farms for those who need the compost manure or indiscriminately disposed in open spaces. Wastes are also disposed next to River Ayoro past the slaughter slab where, when it rains storm water will end up dragging the wastes into the river thus causing pollution. The tractor is unable to adequately and timely collect the wastes from their temporary holding areas such as at the Highland school gate Plate 8 - 5.

**Plate 8 - 5: Tractor collecting wastes along Highland school road**



Interestingly, the survey results showed that 41.44% of the residents are satisfied with garbage collection in their neighbourhood, 37.57% stated that there is no solid waste collection in their neighbourhood while 20.99% are unsatisfied with garbage collection as illustrated by Figure 8 - 4 This therefore means that more than half of the population are not satisfied with the wastes collection in the municipality hence the need for the county government of Homa Bay to put more effort in solid waste management through adoption of the best practices.

**Figure 8 - 4: Level of satisfaction with garbage collection services**



The municipality needs a total of ten skips strategically placed in the following areas: Highland area, Juakali estate along the highway, Raila grounds, two skips to serve Masogo market-one at the Moonlight petrol station and another at the juakali artisans area, along the road heading to River Ayoro through the slaughter slab, Madiaba estate along the highway, along the highway opposite Co-operative bank, along Gamba road where there is a filling station and along Kendu bay road at the district hospital area. These will ensure every area within the municipality has a temporary waste holding area which will in turn lead to a clean municipality.

The County government is currently working on securing land for dumping site in Koderia forest area.

#### **8.2.4 Sewage Disposal**

The municipality currently lacks a sewer system that serves its residents despite the population growth. The municipality relies on septic tanks and pit latrines in disposing its refuse. Similarly, the municipality has inadequate public toilets at various residential areas. The municipality is served by a public toilet at the modern market. From the field survey, 8.1% of the respondents stated their biggest challenge with the county government of

Homa Bay is that of lack of or poor state of public toilets within the municipality while 4.6% requested improvement of the few available public toilets and construction of more.

The sewage flow/wastewater return has been assumed to be 80% of metered water entering the households (as per design standards, Ministry of Environment, Water and Natural Resources (MEWNR), Government of Kenya. The estimated sewage flows in Oyugis Municipality is summarized in Table 8 - 7

**Table 8 - 7: Sewer projection**

<b>Year</b>	<b>Population</b>	<b>Water Demanded (m<sup>3</sup>)</b>	<b>Water Demanded in m<sup>3</sup> (Exclusive of Unaccounted Water)</b>	<b>Estimated of sewage</b>
2023	75,817	3,790.85	3,032.68	2,426.14
2027	84,531	4,226.55	3,381.24	2,704.99
2033	96,322	4,712.40	3,769.92	3,015.94

The total waste water expected from the municipality is 2,426m<sup>3</sup> which when projected to 2033 shall be 3,015m<sup>3</sup>. This will assist in guiding the capacity of the proposed sewer system for the municipality.

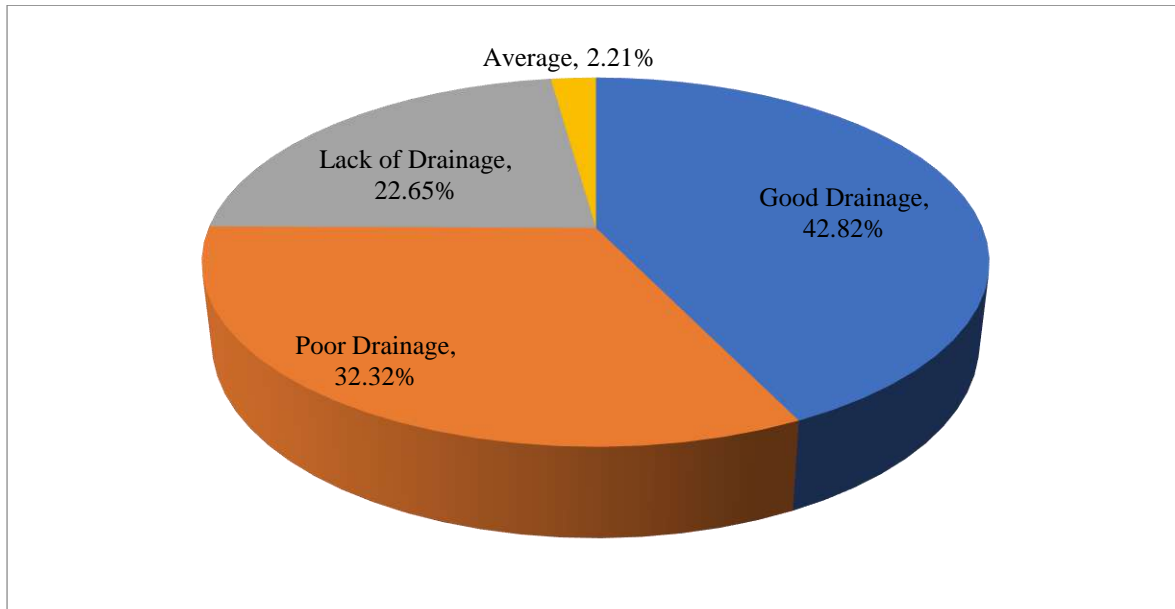
HOMAWASCO have done a proposal for the Oyugis Municipality Sewer plant reticulation following a survey conducted under Lake Victoria South Water Works Development Authority (LVSWWDA). The challenge still is the unavailability of adequate land for the plant.

### **8.2.5 Storm Water Management**

Field observation revealed that storm water drainage is not clearly done in the municipality except for the drainage channels along the tarmacked roads as Kisumu-Kisii highway, Kendu Bay, Rangwe and Gamba roads. Dumping of solid wastes into the drainage channels is resulting into their blockage hence the need for regular maintenance.

Household survey showed that majority supported the observation of poor drainage in the municipality where 32.32% said there is poor drainage, 22.65% said they lack drainage while 42.82% said that the municipality drainage is good as shown in Figure 8 - 5.

**Figure 8 - 5: Storm Water Drainage Status in Oyugis Municipality**



### 8.3 Energy Sources and Consumption

#### 8.3.1 Energy Sources

The dominant energy sources in the municipality are electricity, fossil and wood fuel. Oyugis is well connected by electricity through the national electric grid. The region receives more than eight hours of sunshine in a day which facilitates the usage of solar energy.

From the field survey, 7% of the residents are using electricity for cooking, 12.4% using kerosene, 42.5% depend on charcoal while those using wood and liquefied petroleum gas (LPG) constitute 22.9% and 15.2% respectively as summarized in Table 8 - 8. The figures show that more than three-quarters of the residents (77.8%) are using non-renewable energy sources which is posing great threat to biodiversity conservation. The use of charcoal and wood fuels is the dominant ones which ascertain the rural nature of the

municipality which makes them readily available and affordable to most people.

**Table 8 - 8: Composition of energy used for cooking**

<b>Energy for Cooking</b>	<b>Percentage Of Usage (%)</b>
Electricity	7.0
Kerosene	12.4
Charcoal	42.5
LPG	15.2
Wood	22.9
<b>TOTAL</b>	100

In terms of lighting, majority were using electricity 61.8%, kerosene 20.7% while others use charcoal, LPG and wood at 1.5%, 3.6% and 1.3% respectively. Solar energy consumption for lighting is at 11.2% in the municipality as shown in Table 8 - 9. The percentage usage of renewable energy is still low hence the need for sensitization on the benefits of adopting such usage.

**Table 8 - 9: Composition of energy used for lighting**

<b>Energy for Lighting</b>	<b>Percentage of Usage (%)</b>
Electricity	61.8
Kerosene	20.7
Charcoal	1.5
LPG	3.6
Wood Solar	1.3
Solar	11.2
<b>Total</b>	100

### **8.3.2 Electricity**

There is high demand of electricity in the municipality and peripheral centers. Nevertheless, the supply is deemed to be sufficient for the whole population.

Within Oyugis Municipality CBD, Kenya power currently serves 5,000 households and aims at serving another 100,000 more in the next 10 years. The planning area has only one sub-station which is located at Junction Mititi 3311 with 4 feeders.

### 8.3.4 Solar Energy

Oyugis Municipality has a high potential of supporting and sustaining solar energy. This is as a result of the long hours of sunshine which is approximated at over 8 hours per day. There are several providers of solar panels and systems in Oyugis Municipality. Some of the providers are: Solar panda, Sunking, M-Kopa solar, Mobisol among others. The solar systems are mostly used for lighting as described in Table 8 - 9.

### 8.3.5: POC Analysis for Physical Infrastructure

Table 8 - 10 describes the potentials, opportunities and constraints analysis for urbanization and human settlement in the planning area.

**Table 8 - 10: POC Analysis for Infrastructure**

SUBSECTOR	POTENTIAL/OPPORTUNITY	CONSTRAINT
<p><b>Transport</b></p>	<ul style="list-style-type: none"> <li>• Existence of A1 Road as a structuring element of the municipality</li> <li>• The municipality is linked with other towns by several roads emanating from it</li> <li>• The improvement and upgrading of the roads</li> <li>• Adequate road reserves for high accessibility</li> <li>• Moderate land values that have started rising</li> </ul>	<ul style="list-style-type: none"> <li>• Barrier on A104 Road within the CBD causing long detour and danger to pedestrians</li> <li>• There is poor road connectivity in the extended zones where most of the land parcels are not connected with secondary roads.</li> <li>• Poor road conditions leading</li> </ul>



	<ul style="list-style-type: none"> <li>• High-capacity transportation supply for passengers and goods</li> <li>• Potential to develop public transport system and creating logistic hub</li> </ul>	<p>to inaccessibility in some areas</p> <ul style="list-style-type: none"> <li>• Lack of designated bus stops and non-motorized transport spaces has led to frequent boda bodas/bicycles in the municipality.</li> <li>• The poor design of roads in Oyugis</li> <li>• Encroachment of the road reserves by human settlements</li> <li>• No transit stopping Area</li> </ul>
<p><b>Water</b></p>	<ul style="list-style-type: none"> <li>• On-going construction of reservoir at Wire hills and expansion of the reticulation system</li> <li>• Tapping water from the non-seasonal rivers</li> <li>• Untapped roof catchment</li> <li>• Availability of donor funding</li> <li>• Strong institutions as HOMAWASCO and RUWAS</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate/old distribution pipeline</li> <li>• frequent damage of clients/service lines</li> <li>• Damage of main distribution and service lines during other infrastructural development</li> <li>• High electricity and energy cost.</li> <li>• Damaging and Vandalism of water infrastructures</li> </ul>

		<p>such as pipes, meter among others.</p> <ul style="list-style-type: none"> <li>• Low coverage by the water reticulation system</li> <li>• Few meter connections</li> <li>• Pollution of water sources</li> <li>• Low supply against rising population</li> </ul>
<b>Sanitation</b>	<ul style="list-style-type: none"> <li>• Planned construction of sewerage network</li> <li>• Existence of solid waste skips</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of sewerage network</li> <li>• Lack of designated solid waste dumping sites</li> <li>• Inadequate public toilets and septic tanks</li> <li>• Poor drainage system</li> <li>• Rising quantity of solid and liquid wastes</li> <li>• Pollution of water sources</li> <li>• Haphazard disposal of solid wastes</li> </ul>
<b>Energy</b>	<ul style="list-style-type: none"> <li>• Extension of electricity network</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate electricity coverage</li> </ul>

	<ul style="list-style-type: none"><li>• Untapped solar</li><li>• Biomass</li></ul>	<ul style="list-style-type: none"><li>• Continued use of wood fuel</li></ul>
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## **CHAPTER NINE: SOCIAL INFRASTRUCTURE**

### **9.1 Overview of Social Infrastructure**

Physical infrastructure plays a vital role to municipality's development both economically and socially as it provides services and facilities that give room for social wellbeing and economic development. This chapter discusses the status of education facilities, health sector and community facilities in Oyugis Municipality as follows:

#### **9.2.1 Education Facilities Distribution**

Education facilities include 80 ECDE, 28 primary schools, 4 Secondary school and 1 tertiary institution. All public primary schools have ECDE Centre. The tertiary institution available is KMTC Rachuonyo Campus. Using the physical planning handbook, the following are the facilities requirements:

#### **Education Gap analysis**

##### **ECDE**

The recommended catchment population is 1 ECDE school for every 2500. If 18 ECDE schools will be required by 2033 then there is more than enough ECDE schools in the planning area. However, the distribution of the ECDE Schools using the recommended distance of 300-500metres not even.

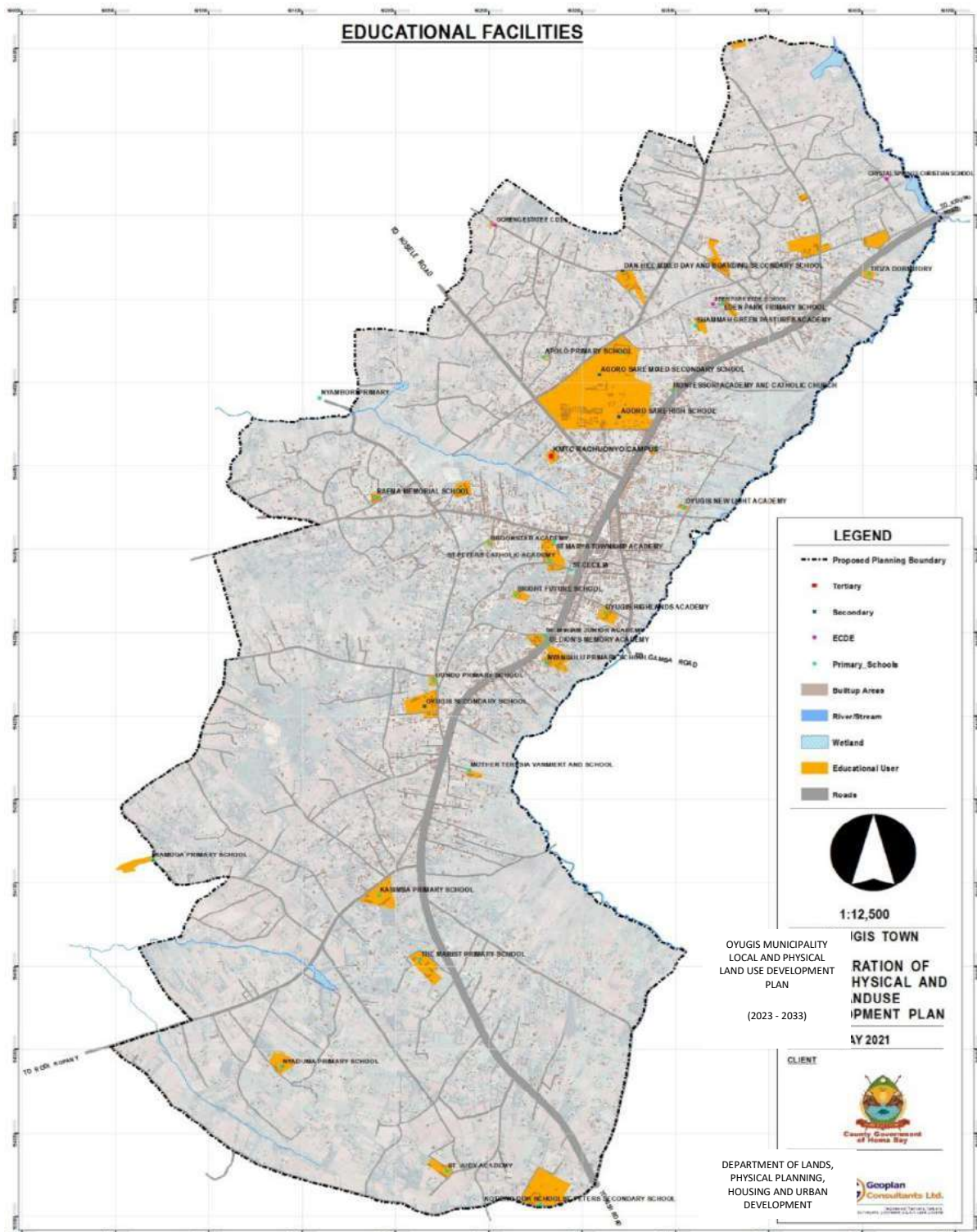
##### **Primary schools**

There are 28 primary schools within the planning area. The required ratio of schools to population catchment is 1:3500. If the 2033 population is projected, the required number of the primary schools will be 13 schools. There is the number is adequate.

##### **Secondary schools**

The existing secondary schools in Oyugis are 4. Using the planning handbook standards, 1 secondary school should serve a population of 8000. In 2033, the projected population will be 96,322 and number of secondary schools required will be 6. The school supply gap will therefore be 2.

**Map 9 - 1: Educational Facilities in Oyugis Municipality**



## **Challenges ECDE**

- Lack of Professional Supervisors for implementation of CBC Curriculum
- ECDE canters visited had limited child friendly furniture, infrastructure and sanitation facilities.
- Teachers were not prepared on psychosocial approaches to young children.
- Teachers in preprimary schools were psychologically prepared for re-opening of schools while ECDE teachers were left out.
- CBC implementation in the classroom is a challenge to the ECDE teachers.

## **9.3 Health Sector**

### **9.3.1 Health Facilities Distribution**

The health providers in Oyugis Municipality include public, private and faith-based institutions. Only two are public institutions and the remaining eight are either privately owned or faith based as shown in Table 9 - 1 . The major health facilities are Rachuonyo South Sub County hospital (public) and Matata nursing hospital (private). Rachuonyo South subcounty hospital and Matata Nursing Hospital are located along Oyugis -Kendu Bay Road and Kisumu – Kisii Highway within the planning area. The rest of the health facilities in Oyugis Municipality are either located near or along the major roads as shown in

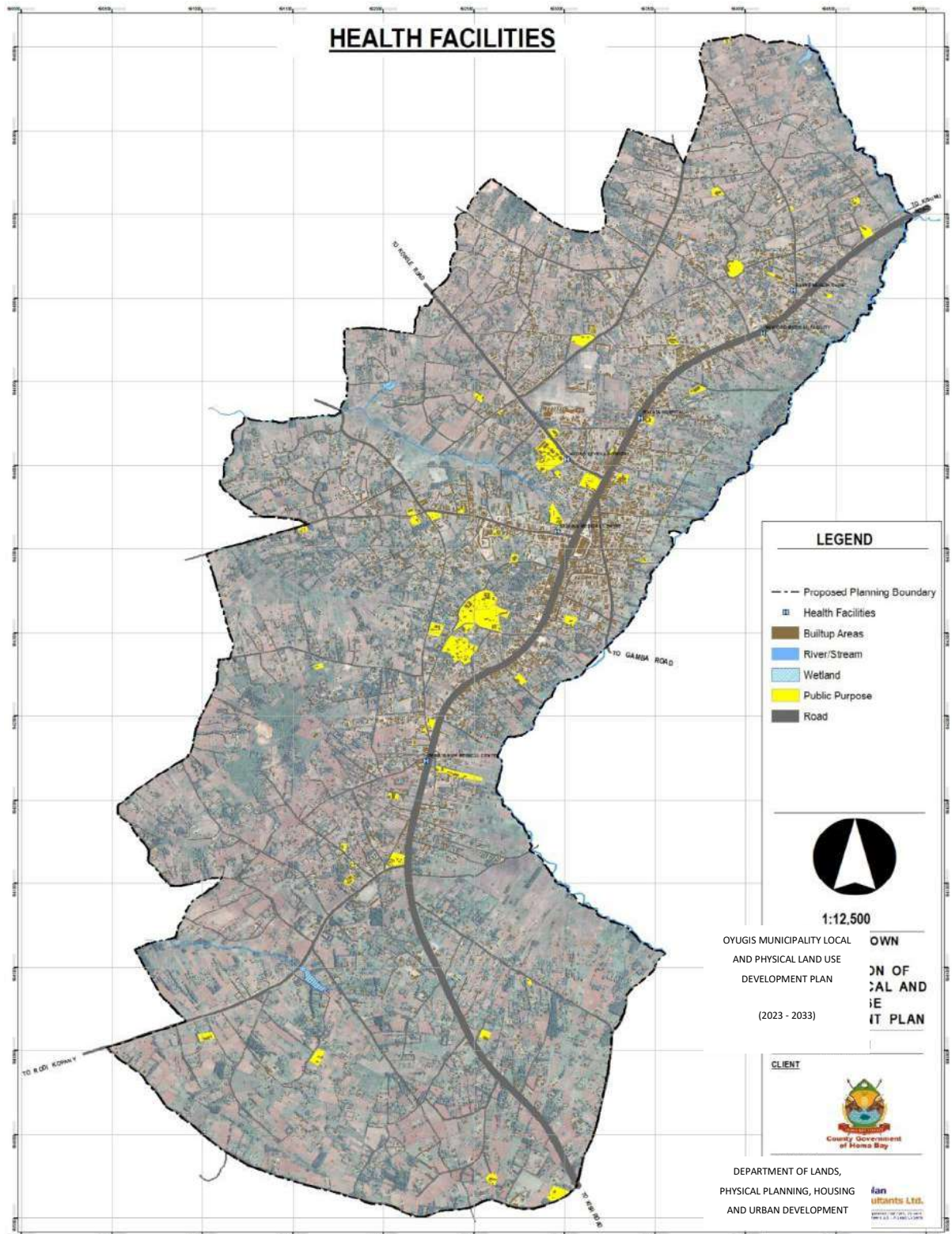
Map 9 - 2.

**Table 9 - 1: Health facilities in Oyugis Municipality**

<b>Category</b>	<b>Health facilities</b>	<b>Level of hospital</b>
<b>Public Hospitals</b>	Rachuonyo South subcounty hospital	Level 4
	Nguono medical centre	Level 3
<b>Private Hospitals</b>	Matata nursing hospital	Level 4
	Hawi family hospital	Level 3
<b>Faith based</b>	Wire dispensary	Level 2
	Shirikisho health centre	Level 3
<b>Clinics</b>	Sunrise clinic	Level 1
	Evans healthcare clinic ltd	Level 2
	Downtown medical clinic	Level 3
	Toric`s nursing home	Level 2

Doctor to patient ratio in Oyugis is one doctor to ten thousand patients (1:10,000) which is ten times the world health organization recommended doctor: patient ratio of 1:1,000. Nationally the doctor: patient ratio is approximately one doctor to seven thousand patients (1:7,000). The doctor patient ratio scenario in Oyugis is as a result of the inability of the public and private health sectors to hire adequate doctors retain them and increase their numbers with the expansion in regional population size.

**Map 9 - 2: Health facility within the planning area**

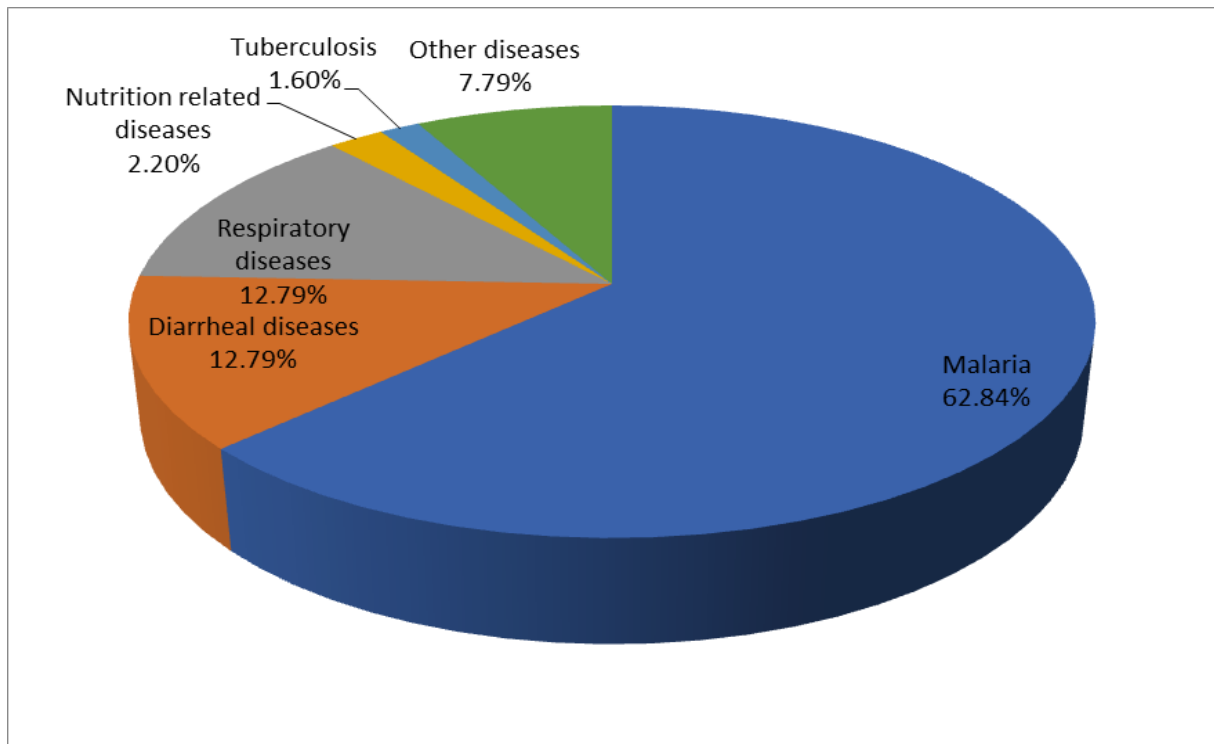




### 9.3.2 Disease prevalence

The major diseases in Oyugis are malaria and diarrheal diseases. Malaria constitutes 62.9%, followed by diarrheal and respiratory diseases at 12.8% each. Nutritional related diseases, tuberculosis and other diseases constitute 2.2%, 1.6% and 7.8% respectively as shown Figure 9 - 1

**Figure 9 - 1: Common diseases in households**



Rachuonyo South Sub county hospital entrance is very steep and walk-way is muddy as shown in. Hence need for

- pavements with shades to ease movement of patients and doctors all the times whether it is raining or shining,
- ramps in all buildings for easy access by persons with disability (PWD) or people on wheelchair and the access from the tarmacked Kendu bay road for both motorists and pedestrians should be leveled a bit.

Nyangiela sub-county hospital was upgraded to a level 4 hospital while its facilities were not improved to meet the demands of a level 4 hospital.

The municipality has adequate health facilities which only need adequate staffing and provision of required facilities and equipment for them to function as demanded.

**Plate 9 - 1: Steep access to the road and walkway within the hospital**



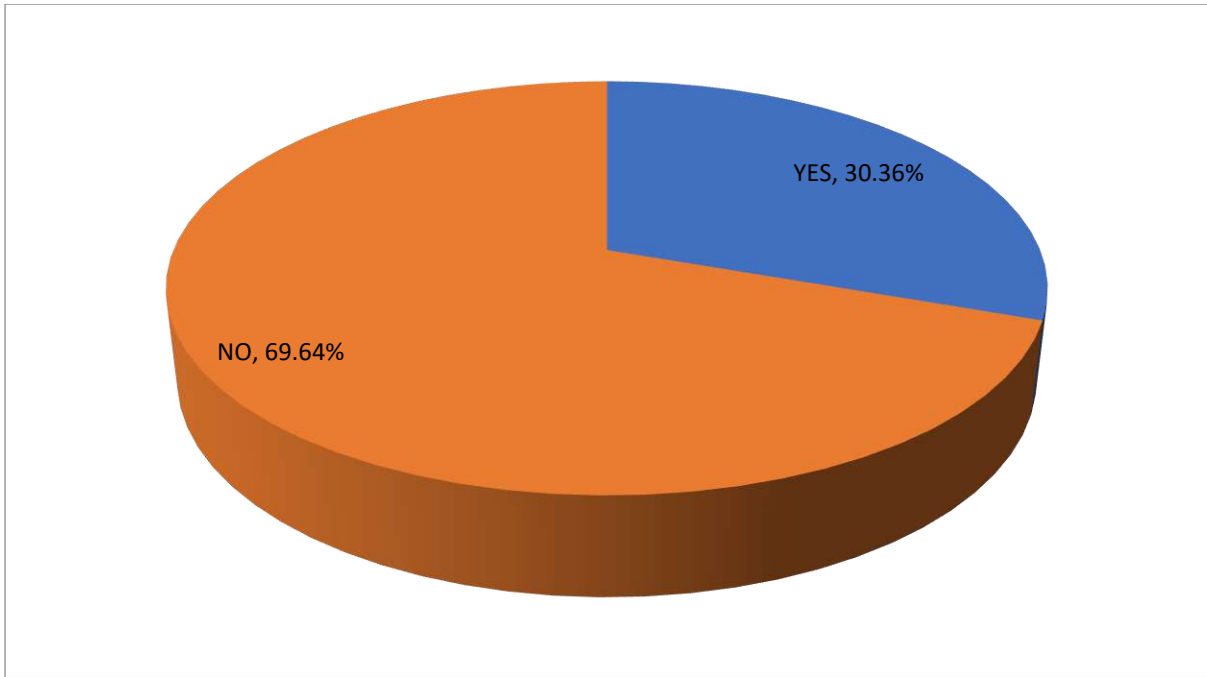
**9.4 Recreational facilities**

**9.4.1 Public recreational facilities**

Currently the planning area lack designated public recreational facilities such stadium arboretum, parks, open spaces trail among others. The population structure of the municipality is made up greatly of youths who need open spaces for their physical and psychological development.

There are no designated open spaces. Most residence (73.26%) used undeveloped lands such as Raila Grounds and road reserves as recreational sites. However, a few residences (30.36%) use public schools for sports since the school is equipped with sport facilities as shown in the Figure 9 - 2.

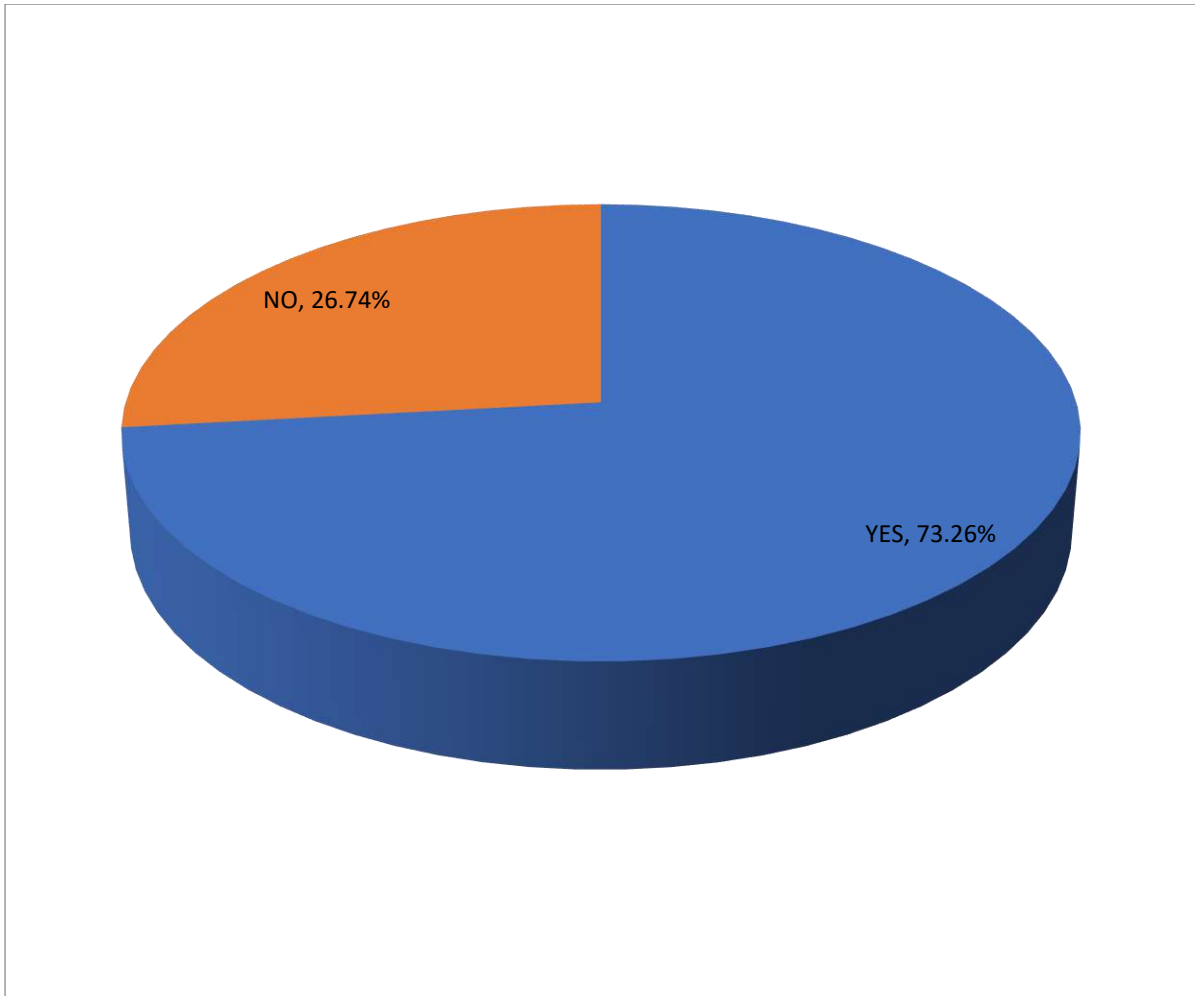
**Figure 9 - 2: Availability of playgrounds**



#### **9.4.2 Private Recreational Facilities**

There are few private recreational facilities within the planning area. These are mainly found in resorts, hotels, club houses and private schools. Most of these facilities are open to the public but not affordable to the low-income individuals. This recreational include swimming pools, open spaces and playgrounds in schools. Most of these recreational facilities have supporting infrastructure such as sitting areas, recreational gadgets and equipment such as darts, polls etc. 73.26% are aware of the existence open spaces for creational purposes as shown in Figure 9 - 3.

**Figure 9 - 3: Availability of open spaces**



## **9.5 Community facilities**

### **9.5.1 Library**

Oyugis Municipality has no established libraries. This hinders education and research progress which is crucial for human development and improving literacy.

### **9.5.2 Fire station**

The planning area has no fire station. Currently, the municipality rely on the Kisii and Homa Bay fire stations which are approximately 23km and 46.1km away respectively. A well-equipped fire station is needed in order to prevent loss of property and life in case of fire emergencies especially in the dense neighborhoods.

### **9.5. 3 Postal services**

The planning area has a post office. The post office offers crucial services to the community such as delivering and sending of parcels, mails, access to bills and payment, selling postage stamp, provision of post office boxes etc. The post office is located along Kisumu – Kisii Highway.

**Plate 9 - 2: Post Office in Oyugis Municipality**



### **9.5.4 Community centres**

There are two resource centres in Oyugis. One is located opposite Catholic Church and the other near Rawinji primary school called Rawinji Resource centre. The Rawinji resource centre has land for expansion and house the office of the assistant chief.

### **9.5.5 Cemeteries**

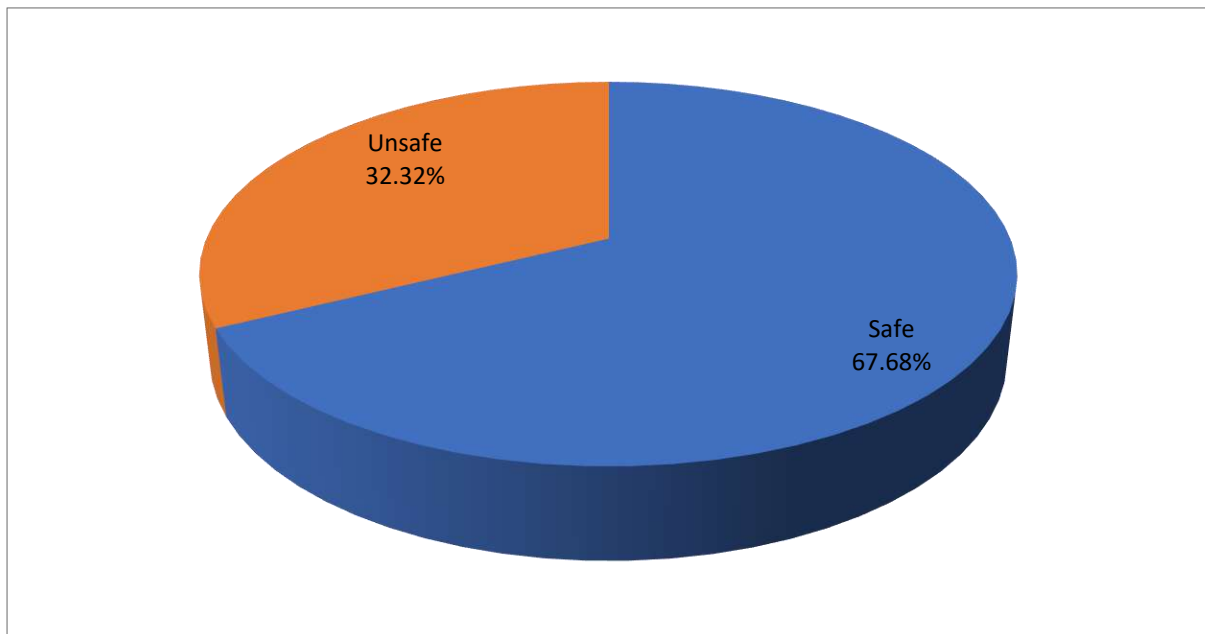
There are no cemeteries within the planning area. Most people still bury their dead within their premises. Others dispose their bodies in Kisii or homa bay towns. There is need cemeteries and crematorium for ease of body disposal.

## **9.6 Law and order**

Oyugis Municipality has well established law and order institutions which include Oyugis Law Courts, Oyugis Police Station and two Police Posts located

in Nyangiela and Kosele. Although situated outside the municipality they provide the much-needed security services. The Oyugis Police Station is the main police station in the greater Rachuonyo District. Presence of security apparatus within the municipality has improve the security of the municipality as most residence (67.68%) felt safe while 32.32% of the state that municipality is unsafe as in Figure 9 - 4.

**Figure 9 - 4: State of security**



Estates which are more secure include: Rawinji, Aloo, Kanyango, Kotieno, Masogo, matata, Kasimba, Ragama, St. Joseph while unsafe estates include Madiaba, Juakali, 1000 street at 50%, 57.1%, 62.5% and 67.7% respectively. This can be attributed by inadequate street lines, abandoned buildings, narrow and dark alleys.

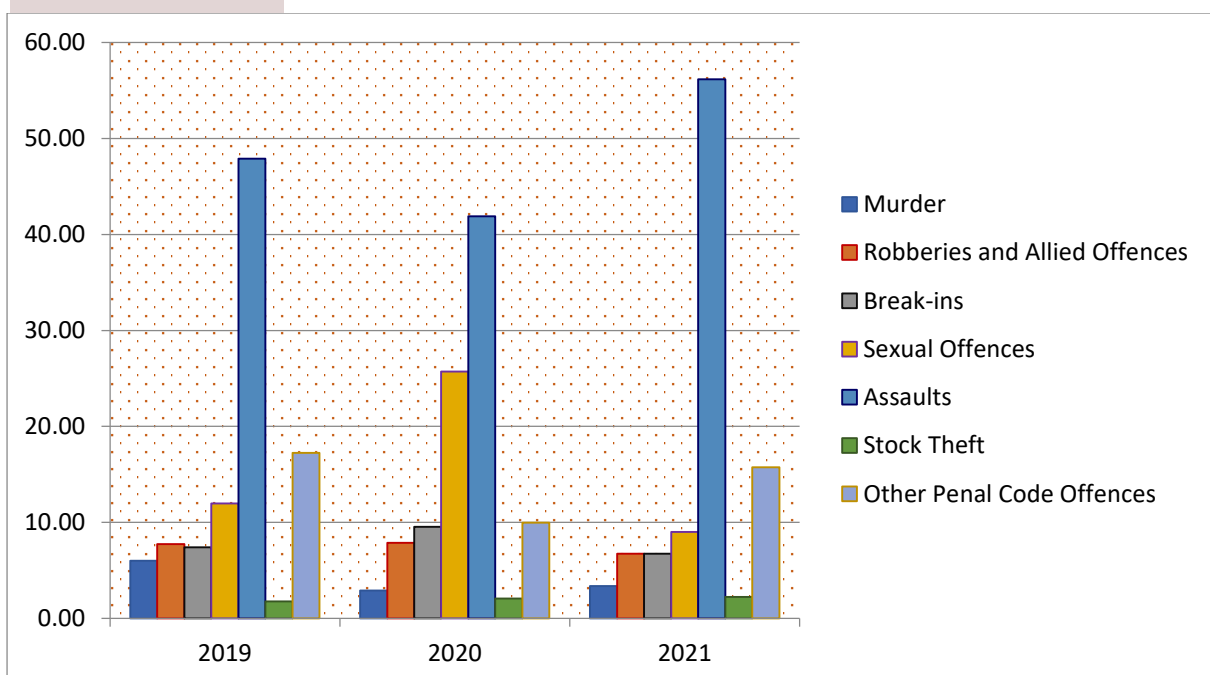
**Table 9 - 2: Estate security**

		General state of security			Total
		Safe	Unsafe	Unsafe (%ages)	
CLUSTER/ZONE/ESTATE	Rawinji	49	21	30	70
	Aloo	53	16	23.2	69
	Kanyango	17	6	26.1	23

Kotieno	19	6	24	25
Karogo	2	2	50	4
St.Joseph	8	4	33.3	12
Kawaindi	5	4	44.4	9
Madiaba	6	8	57.1	14
Ragama	18	5	21.7	23
Kasimba	20	5	20	25
Matata	18	4	18.2	22
1000 street	10	21	67.7	31
Masogo	14	5	26.3	19
Juakali	6	10	62.5	16
<b>Total</b>	<b>245</b>	<b>117</b>		<b>362</b>

The municipality is beset by a number of crimes which include; murder, robberies and allied offences, breakings, sexual offences, assault, stock theft and other penal code offences. For the last 2 years, cases of Murder and sexual offences has been on the rise as depicted by Figure 9 - 5

**Figure 9 - 5: Crime rates**



Source: Oyugis Police Station

It is notable that there is a direct relationship between the frequency of crimes in various hotspots and absence of key infrastructural facilities such as street lights and good road network. Dark streets and neighborhoods offer fertile grounds for occurrence of crimes, while roads which have no through ways present difficulties during patrols. The crime rate in Oyugis Municipality is associated with land disputes relating to boundaries and land ownership and as such there is need to implement land laws and related instruments in order to eradicate land related conflicts.

In terms of planning standards in the security sector, a ratio of one Police Officer to 400 peoples (1.400 rations) should be maintained. With a population of over 75,817 people, Oyugis Municipality should by now be having over 190 Police Officers. Oyugis CBD has a Police station and Law Courts, with modern infrastructure facilities. However, there will be need to build more houses to accommodate more security officers and also to be connected with adequate water supply for office and domestic uses.

### 9.6 POC Analysis for Social Infrastructure

Table 9 - 3 describes the potentials, opportunities and constraints analysis for urbanization and human settlement in the planning area.

**Table 9 - 3: POC analysis for social infrastructure**

<b>Physical infrastructure</b>	<b>Opportunities</b>	<b>Constraints</b>
<b>Education</b>	<ul style="list-style-type: none"> <li>• Adequate ECDE and Primary Schools</li> <li>• Availability of national secondary school – Agoro Sare secondary</li> <li>• Increased business opportunities around the KMTC</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate training on new CDC curriculum</li> <li>• Understaffing especially in the ECDE;</li> <li>• lack of a vocational training institution/ polytechnic</li> <li>• inadequate funds for running education facilities</li> </ul>



<p><b>Health</b></p>	<ul style="list-style-type: none"> <li>• Presence of health facilities</li> <li>• Availability of land for expansion</li> <li>• Presence of level 4 hospitals</li> <li>• Presence of KMT</li> <li>• strategic location of hospitals near the highway</li> </ul>	<ul style="list-style-type: none"> <li>• Understaffing of both the skilled unskilled persons</li> <li>• Inadequate drugs and equipment</li> <li>• Lack of shades and pavements</li> <li>• Inadequate bed capacities</li> <li>• Poor supportive infrastructure</li> <li>• Lack of standardized ambulance <ul style="list-style-type: none"> <li>• Stalled projects such as outpatient department, laundry house</li> <li>• inaccessible pedestrian gate at the Rachuonyo South sub county hospital</li> </ul> </li> </ul>
<p><b>Community facilities</b></p>	<ul style="list-style-type: none"> <li>• Availability of variety of currier services</li> <li>• Lack of designated open spaces and parks</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of services such, libraries, cemeteries, fire station,</li> <li>• Lack of designated open spaces</li> </ul>
<p><b>Law and order</b></p>	<ul style="list-style-type: none"> <li>• Presence of police station and courts within the CBD</li> </ul>	<ul style="list-style-type: none"> <li>• Increase crime rates especially assault and sexual offences</li> <li>• Lack off street lighting</li> <li>• Dead ends and narrow roads</li> </ul>

		<ul style="list-style-type: none"><li>• Inadequate police housing</li><li>• Presence of Oyugis police station</li><li>• Inadequate patrol vehicle</li><li>• Understaffing of the skilled and unskilled staffs</li></ul>
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## CHAPTER TEN: SYNTHESIS OF EMERGING ISSUES

### 10.1 Overview

This chapter contains opportunities and challenges that are as a result of synthesis of emerging issues. Potentials are considered the possibilities of harnessing resources within the municipality if the factors are favorable while the constraints are the impediments that need to be mitigated to achieve the planned goals. The opportunities and constraints are as discussed in Table 10- 1.

**Table 10- 1: Emerging issues**

<b>LOCATION CONTEXT</b>	
<b>Opportunities/Potentials</b>	<b>Challenges/Constraints</b>
<ul style="list-style-type: none"> <li>• Location along a A1 highway which connects to Tanzania.</li> <li>• Good connectivity with other towns and centers within the region</li> <li>• Proximity to Lake Victoria</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate professionals of other cadre.</li> </ul>
<b>PHYSIOGRAPHY</b>	
<b>Opportunities/Potentials</b>	<b>Challenges/Constraints</b>
<ul style="list-style-type: none"> <li>• The topography gives the municipality a beautiful view. In some places it also increases the value of land as a result of the associated view.</li> <li>• Wire Hill also gives the tow a beautiful look.</li> <li>• The topography also limits chances of flooding</li> <li>• The rocks forming the municipality's base are igneous rocks that are very stable and</li> </ul>	<ul style="list-style-type: none"> <li>• Some portions are very steep hence difficult to develop.</li> <li>• Some areas, especially around wire could be prone to land slides</li> <li>• In areas where the land is flat, water is retained causing waterlogging. This is seen around Siany in Aloo estate</li> <li>• Uncontrolled farming along the river banks have led to</li> </ul>

<p>can support very heavy structures.</p> <ul style="list-style-type: none"> <li>• The soils are majorly of volcanic origin hence are good for both physical development and farming of crops such as maize. This allows the municipality to grow and also makes it possible to produce the crops required to feed the population.</li> <li>• The municipality is traversed with rivers and streams that drain surface water away reducing chances of flooding</li> <li>• These water bodies also provide water for use by the urban population</li> <li>• The inland equatorial climate experienced within and around the municipality supports a variety of crops due to high and reliable amounts of rainfall.</li> <li>• The municipality falls within the UM1 agro-ecological zone that supports the growth of a variety of crops (both cash and food).</li> </ul>	<p>increased soil erosion when rivers burst their banks</p> <ul style="list-style-type: none"> <li>• Pollution of these water bodies causes diseases among the populace</li> <li>• Occasional frost bites associated with such climate affects crops such as coffee and tea</li> <li>• Lack of agro-processing industries limits the growth of crop production</li> </ul>
<b>POPULATION</b>	
<b>Opportunities/Potentials</b>	<b>Challenges/Constraints</b>
<ul style="list-style-type: none"> <li>• Allows for effective resource mobilization and development initiative planning</li> </ul>	<ul style="list-style-type: none"> <li>• High population increase may cause pressure on the available resources</li> </ul>

<ul style="list-style-type: none"> <li>• Boosts the socioeconomic sector by increasing demand and supply for goods.</li> <li>• New ideas come with new population hence better ways of doing business</li> <li>• Promotes and conserves heritage and identity.</li> <li>• Traditional planning of homes makes modern planning acceptable</li> <li>• As an Adventist municipality, business takes place across the weekend hence economic growth</li> <li>• The literacy levels are high which is good for producing skilled labour force</li> <li>• A big portion of the municipality's residents are in gainful employment which is key in the growth of the municipality's economy</li> <li>• A youthful population that provides the skill and energy required for economic growth</li> </ul>	<ul style="list-style-type: none"> <li>• Migration comes with diversity of culture. The bad culture corrupts the good one.</li> <li>• Rapid rise in population causes congestion and strain on facilities and services</li> <li>• Some retrogressive cultural practices compromise on progress as per the global trends</li> <li>• With rising unemployment, educated criminals are on the rise threatening the security of the municipality</li> <li>• Rising unemployment especially among the youth threatens future of the municipality.</li> <li>• High population growth with limited employment opportunities leads to a rise in crime levels</li> </ul>
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**LAND**

<b>Opportunities/Potentials</b>	<b>Challenges/Constraints</b>
<ul style="list-style-type: none"> <li>• The streams and wetlands joining River Ayoro may not be suitable for agricultural production, but it offers great</li> </ul>	<ul style="list-style-type: none"> <li>• High population density in the municipality, if not adequately managed can diminish availability of land for development</li> </ul>

<p>opportunity for tourism development and biodiversity conservation in the municipality.</p> <ul style="list-style-type: none"> <li>• Oyugis Municipality being an agricultural urban area with conducive weather has an opportunity for agricultural intensification through practices such as horticultural production and zero-grazing especially in the peri-urban and rural areas of the planning area. This solves the problem created by high density in the municipality that has reduced land availability.</li> </ul>	<p>(agricultural production and infrastructural development)</p> <ul style="list-style-type: none"> <li>• Land grabbing and encroachment into road reserve and riparian lands has contributed to inadequacy of public and impossible for the municipality to allocate space for key public utilities such as cemeteries, open/recreational spaces, bus parks, open-air markets among others.</li> <li>• The topography of municipality slopes gently towards the north where it is marshy and not suitable for construction, however, informal settlements located there are reducing the wetland and affecting the flow of streams joining River Ayoro.</li> <li>• Due to high density especially in the CBD, land values are extremely high hence having an impact on development. <ul style="list-style-type: none"> <li>• Lack of proper land use plan and zoning policies to guide municipality development</li> <li>• Unregulated subdivision of agricultural lands development</li> <li>• Unavailability of land for urban expansion</li> </ul> </li> </ul>
<p><b>URBANIZATION AND HUMAN SETTLEMENTS</b></p>	

<b>Opportunities/Potentials</b>	<b>Challenges/Constraints</b>
<ul style="list-style-type: none"> <li>• Availability of housing finance through the existence of numerous banks and Sacco's in the planning area.</li> <li>• A ready market for housing stock due to high population that can easily be exploited by real estate investors while the availability of cheap labor reduces the cost of housing construction</li> <li>• The existence of locally available building materials (bricks, sand and building stones) lessen the cost of housing construction</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-divisions are not properly guided and controlled as there are no residential zoning plans and hence no clearly designated zones.</li> <li>• Demand for descent housing that does not commensurate with housing supply.</li> <li>• Proliferation of slums and other informal settlements that threaten fragile ecosystems</li> <li>• Most residential areas/neighborhoods lack basic infrastructure and services</li> <li>• High cost of land especially in the core and peri-urban areas</li> </ul> <p>Lack of serviced land in most parts of the planning area</p>

**ECONOMY**

<b>Opportunities/Potentials</b>	<b>Challenges/Constraints</b>
<ul style="list-style-type: none"> <li>• Improvement of access to infrastructure and services</li> <li>• Skills development for better managed MSEs</li> <li>• Development of new markets and upgrading of existing markets</li> <li>• The high population in the municipality and the hinterland creates a market for the goods and services</li> </ul>	<ul style="list-style-type: none"> <li>• Poor infrastructure, high cost of licensing, and low turnover discourages the vibrant growth of SMEs.</li> <li>• Lack of designated market places</li> <li>• Lack of a trade policy</li> <li>• Markets are small in size</li> <li>• Inadequate micro finance institutions</li> <li>• Land fragmentation threatening agricultural unproductivity</li> </ul>

<ul style="list-style-type: none"> <li>• Investment in real estate commercial/business premises</li> <li>• Establishment of agro based value addition industries on horticulture, poultry, fish and livestock</li> <li>• Investment in markets for agricultural produce</li> <li>• Skills development on modern agricultural practices</li> <li>• Potential to develop the industrial base of the municipality through: <ul style="list-style-type: none"> <li>• Agro-industrial processing (Value addition on fruits and vegetables, and cash crops like coffee and tea)</li> <li>• Livestock processing (Value addition on dairy, meat and hides)</li> <li>• Construction industry (Brick making. Sustainable sand harvesting)</li> <li>• Establishment of Jua Kali industry/ Industrial park</li> <li>• Investment in: Tourism Conserve forests such as Wire and Koderia</li> <li>• Incorporate conference facilities, homestays, eco-</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lack of markets for agricultural produce</li> <li>• Climate change threatens the sustainability of rain-fed agricultural productivity.</li> <li>• Lack of modern agriculture technology skills</li> <li>• Lack of designated industrial zone</li> <li>• Inadequate infrastructure like sewer, water networks and solid waste management facilities</li> <li>• Frequent power blackouts which pose a major setback to existing industries</li> <li>• High rate of land fragmentation which is limiting growth of industries</li> <li>• Limited funding provided for marketing and promotion.</li> <li>• The hospitality industry is not fully developed</li> <li>• Tourism has not been perceived as a high returns sector by private businesses in the County</li> </ul>
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<p>lodges in tourist attraction sites</p> <ul style="list-style-type: none"> <li>• Infrastructure investment and development e.g. roads and basic services</li> </ul>	
<b>PHYSICAL INFRASTRUCTURE</b>	
<b>Opportunities/Potentials</b>	<b>Challenges/Constraints</b>
<ul style="list-style-type: none"> <li>• Existence of A1 Road as a structuring element of the municipality</li> <li>• The municipality is linked with other towns by several roads emanating from it</li> <li>• The improvement and upgrading of the roads</li> <li>• Adequate road reserves for high accessibility</li> <li>• Moderate land values that have started rising</li> <li>• High-capacity transportation supply for passengers and goods</li> <li>• Potential to develop public transport system and creating logistic hub</li> <li>• On-going construction of reservoir at Wire hills and expansion of the reticulation system</li> <li>• Tapping water from the non-seasonal rivers</li> <li>• Untapped roof catchment</li> </ul>	<ul style="list-style-type: none"> <li>• Barrier on A104 Road within the CBD causing long detour and danger to pedestrians.</li> <li>• There is poor road connectivity in the extended zones where most of the land parcels are not connected with secondary roads.</li> <li>• Poor road conditions leading to inaccessibility in some areas.</li> <li>• Lack of designated bus stops and non-motorized transport spaces has led to frequent boda bodas/bicycles in the municipality.</li> <li>• The poor design of roads in Oyugis.</li> <li>• Encroachment of the road reserves by human settlements.</li> <li>• No transit stopping Area.</li> <li>• Inadequate/old distribution pipeline.</li> <li>• Frequent damage of clients/service lines.</li> </ul>

<ul style="list-style-type: none"> <li>• Availability of donor funding</li> <li>• Strong institutions as HOMAWASCO and RUWAS</li> <li>• Planned construction of sewerage network</li> <li>• Existence of solid waste skips</li> <li>• Extension of electricity network</li> <li>• Untapped solar</li> <li>• Biomass</li> </ul>	<ul style="list-style-type: none"> <li>• Damage of main distribution and service lines during other infrastructural development.</li> <li>• High electricity and energy cost.</li> <li>• Damaging and Vandalism of water infrastructures such as pipes, meter among others.</li> <li>• Low coverage by the water reticulation system.</li> <li>• Few meter connections.</li> <li>• Pollution of water sources.</li> <li>• Low supply against rising population.</li> <li>• Lack of sewerage network.</li> <li>• Lack of designated solid waste dumping sites.</li> <li>• Inadequate public toilets and septic tanks.</li> <li>• Poor drainage system.</li> <li>• Rising quantity of solid and liquid wastes.</li> <li>• Pollution of water sources.</li> <li>• Haphazard disposal of solid wastes.</li> <li>• Inadequate electricity coverage.</li> <li>• Continued use of wood fuel</li> </ul>
<b>SOCIAL INFRASTRUCTURE</b>	
<b>Opportunities/Potentials</b>	<b>Challenges/Constraints</b>
<ul style="list-style-type: none"> <li>• Adequate ECDE and Primary Schools</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate training on new CDC curriculum</li> <li>• Understaffing especially in the ECDE;</li> </ul>

<ul style="list-style-type: none"> <li>• Availability of national secondary school – Agoro Sare secondary</li> <li>• Increased business opportunities around the KMTC</li> <li>• Presence of health facilities.</li> <li>• Availability of land for expansion</li> <li>• Presence of level 4 hospitals.</li> <li>• Presence of KMTC</li> <li>• Strategic location of hospitals near the highway</li> <li>• Availability of variety of currier services</li> <li>• Lack of designated open spaces and parks</li> <li>• Presence of police station and courts within the CBD</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of a vocational training institution/ polytechnic</li> <li>• Inadequate funds for running education facilities</li> <li>• Understaffing of both the skilled unskilled persons</li> <li>• Inadequate drugs and equipment</li> <li>• Lack of shades and pavements</li> <li>• Inadequate bed capacities</li> <li>• Poor supportive infrastructure</li> <li>• Lack of standardized ambulance</li> <li>• Stalled projects such as outpatient department, laundry house</li> <li>• Inaccessible pedestrian gate at the Rachuonyo South sub county hospital</li> <li>• Lack of services such, libraries, cemeteries, fire station,</li> <li>• Lack of designated open spaces</li> <li>• Increase crime rates especially assault and sexual offences</li> <li>• Lack off street lighting</li> <li>• Dead ends and narrow roads</li> <li>• Inadequate police housing</li> <li>• Presence of Oyugis police station</li> <li>• Inadequate patrol vehicle</li> <li>• Understaffing of the skilled and unskilled staffs</li> </ul>
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## **CHAPTER ELEVEN: DEVELOPMENT CONCEPT AND SCENARIOS**

### **11.1 Overview**

This chapter looks at the possible trends of Oyugis Municipality in terms of the nature of urban form and possible factors that will steer its growth. The purpose of scenario building is to project the future trends of the municipality and propose the best alternative that will assist in realizing the municipality's vision and in managing its spatial expansion.

### **11.2 Development Trends**

The municipality's settlement and development are concentrated along the A1 Ahero-Kisii highway. This road acts as the major structuring element of the municipality and it divides the municipality into two parts. The municipality is expanding towards Kisumu and Kisii along the highway and also towards Kosele along the Kosele tarmac road. To the south the municipality's development is restricted by River Ayoro while to the north Wire hills acts as barrier. Agoro Sare schools have occupied a major chunk of land within the CBD thus reducing the available land for development in the area. Map 6-1: in chapter six, Urbanization and Human Settlement under the sub-topic Spatial structure Illustrates the structuring elements of Oyugis Municipality.

### **11.3 Factors Determining Growth of Oyugis Municipality**

#### **a. Current roles:**

- Administrative and civic headquarter of Rachuonyo south sub-county.
- Commercial hub for the region with financial function.
- Transportation center linking by road to Kisii, Kisumu, Nairobi, Isibania and to Tanzania.
- Security center with a police station and a police division.
- Training and research center for health education/ Knowledge center with public and private educational institutions.
- Health service center with a level 5 health facility.
- A viable climate and good soil that supports agricultural production for various crops

#### **b. Likely future roles of the municipality**

- The commercial role of the municipality shall expand in tandem with increased population and its hinterland, improved infrastructural development linking Oyugis to its hinterland including an improvement of the roads.
- The transportation function of the municipality shall advance as a result of the upgrading of the A1 highway to Isibania, Gamba road and Kendu-bay road.
- The security role shall be sustained.
- Training, research and educational functions may advance with the implementation of the proposed vocational training institute.

**c. Additional roles for the future**

Oyugis may acquire the following roles:

- Industrial role- if industries for value addition for agricultural produce and livestock products are put up in Oyugis to process sweet potatoes, coffee, meat, milk, animal feeds, bones, hides and skins.
- Tourism function-by improving and promoting the bird sanctuary, establishing a museum and sports like hiking at Wire hills among others.

**d. Spatial development**

Given the physical character and the structuring elements influencing the municipality development, the following urban development patterns may emerge:

- Compact Development- driven by settlement according to clans, encouraged by the topographic characteristics, fueled by communal land rights which allow unhindered settlement.
- Linear development where population is concentrated along the major transportation corridor.
- Polycentric pattern of development with concentrated developments at the core and dispersed developments towards the periphery and concentrated at specific nodes. More developments have occurred on the southern quadrant of the municipality.

## **11.4 The Development Options**

### **11.4.1 Linear Development/Status Quo**

It is evidenced by the lineal structures that are located along the A1 Kisumu-Isibania highway. Lineal developments can also be evidenced along Gamba and Kendu-bay tarmac roads. The developments within the entire municipality have been following the roads.

#### **Opportunities**

- High demand for development due to existence of market and services along the road.
- Easy to provide infrastructure and services as it is located along transportation corridor.

#### **Challenges**

- It's difficult to allocate land uses and their compatibility.
- Road reserves are vulnerable to encroachment threatening road safety as a result of reduced visual amenities.
- It causes traffic congestion and frequent accidents.
- It sterilizes back land, often hampering the planned expansion of settlements; and makes access to farmland difficult.
- Gives undesirable visual breaks in the developed appearance of the locality as most frontages are at times not intensively built up and have substantial gaps between buildings.
- There is a possibility of transferring population pressure and other challenges to other areas hence increasing pressure on the available resources.
- Difficult to have a CBD because developments are spread out.

### **11.4.2 Compact Development**

It only has one CBD with settlements and roads radiating from the central business district and is cut through by a series of circular roads which form rings around the central business district. The CBD is the center of commercial activities. The housing development clings to these roads and radiate from the CBD.

This form of development results in more efficient use of land through high density planning.

#### **Opportunities**

- It will optimize on use of existing infrastructure facilities and services such as Roads (A1 Ahero-Isibania, Gamba and Kendu-bay), Civic and administrative centre (Police Station, Government Offices), Financial Institutions (Co-operative, Family, Equity) and Commercial Activities within the CBD.
- Integrates settlement and employment opportunities where people can live, work and play due to close proximity to the CBD without making long trips/journeys.
- It's easier to define growth limits using the existing radial rings.
- It is easier to locate land uses within the radial ring's quadrants defined by roads.
- Provides an opportunity of land banking at the outer core/ring there is less development and population evidenced by scattered houses.
- Promotes social cohesion among the clans as it provides an opportunity for provision of common facilities/services between the existing quadrants.
- Easier to provide infrastructure and services guided by rings/quadrants in phasing projects.



- It promotes compact development within the rings starting from the.
- Central Business District.
- Mitigating Urban sprawl by defining the growth limits using the rings into the hinterland.
- There is equal access to the CBD as it is a radius with quadrants equally developed.
- Provides an efficient public transport system and has an urban layout.
- Encourages walking and cycling.
- Sustainable: it requires less finance in infrastructure provision.
- Encourages the infilling of undeveloped spaces.

### **Challenges**

- It does not disperse developments to other areas in short term.
- Wastes space due to irregular shapes of plots.
- Contribute to congestion of the CBD if not well managed.

### **11.4.3 Polycentric Development**

This approach proposes the spread of urban developments by establishment of more than one CBD. Apart from the main Central Business District other upcoming centers surrounding the CBD will also develop and merge with the main CBD thus resulting in several nodes of development which support each other. This scenario is encouraged as it spreads development although it doesn't support sustainability in the use of land for future development/land banking. It is also uneconomical as it will be expensive to install infrastructure and services. In the long run the core area will be left isolated with no development leading to urban decay as the population and development continue to be dispersed. It can best be achieved through radial transportation network. The key nodes in Oyugis are the CBD, Madiaba, St. Joseph area and Kasimba junction.

#### **Opportunities**

- Diversity in terms of traditional architecture.
- Promotes identity of people by clans.
- Easy flow of traffic.
- Marginal land values differentials.
- Specialization of each of these development nodes is promoted.
- These nodes are essential in promoting sustainable neighborhoods.

#### **Challenges**

- Expensive in terms of providing infrastructure and services.
- Results in unnecessarily long journeys.
- Uneconomic use of land resource.
- Dispersed development encourages environmental degradation such as loss of open spaces.
- Minimizes on land banking for future development.
- In the long run, it doesn't decongest the core urban area as dispersed urban settlements will eventually attract infill development.
- It's not easy to persuade developers/investors to follow a certain route which has no potential of growth
- Difficult to get direction as developments are irregular and don't follow any pattern.

#### **11.4.4 Proposed Model**

Of the three approaches discussed, the preferred approach is the Hybrid Development model of Compact development and Polycentric Development Model. This model proposes compacting of developments around the proposed commercial nodes. The following advantages are presented with regards to the planning area:

- It is going to build on existing trends of rings and quadrant patterns developing a more compact municipality (core area), and the surrounding areas such as Madiaba, St. Joseph area and Kasimba junction.
- Mitigating Urban sprawl by defining the growth limits using the rings.
- Discouraging linear development along the major transportation corridor using the quadrants and rings as the growth limits to guide development.
- Mitigate cost of infrastructure and service provision by phasing development of infrastructure guided by the existing rings/quadrants.
- Land banking the outer ring for future development and expansion of the municipality.
- Densification of the inner ring where the Central Business District is located.
- Regulate subdivision of land using the ring pattern and quadrants to limit subdivisions on the outer ring of land.
- Reduces congestion in the Main CBD by creating sub-CBDs
- It's cost effective in infrastructural provision as it is done in phases.
- Promotes aesthetics & reduces urban sprawl if well managed.
- Enhances security.
- Convenience in accessing facilities.
- Reduces transportation cost & enhancing pedestrianized development.

## **CHAPTER TWELVE: STRUCTURE PLAN**

### **12.1 Overview**

This chapter outlines Oyugis Municipality structure plan highlighting the broad land uses categories. The chapter also highlighted the proposed allocation of different land uses, their sizes in relation to the size of the entire municipality, standards guiding the land use allocations; land uses distribution and the proposed development densities.

#### **a. Residential land use**

The proposed residential land use covers approximately 40.1 square kilometers representing approximately 43 % of the entire planning area. This takes into consideration the current residential land uses, compatibility with neighboring land uses as well as to cater for the future housing demands.

There are a total of 94 zones that have been proposed. These includes high density residential (HDR), medium density residential area (MDR) and low-density residential area (LDR). Residential land use takes the highest percentage because Oyugis Municipality is a dormitory urban area for the neighboring towns and centre such as Kosele, Kisii, Kendu Bay and Rangwe. The three categories of residential areas have separate standards and strategies as given below.

#### **Residential Land Use Planning Standards for Oyugis Municipality**

Planning for residential settlements involves designation of housing zones. The population of the zones should be able to support the services within the physical entity. It is recommended that an estate shall have 100 households on the average. The principles in estate planning include the land use distribution, density of development and site planning.

#### ***Land Use Distribution***

Residential areas are integral parts of the overall built-up area (dwelling plots) together with day-to-day services, recreation and communication network. They give the percentage allocation of land in various residential densities.

may be used as a guide in planning for residential zones and reasonable variations may be permitted depending on local conditions.

**Table 12 - 1: Average Observed Land Use Allocations in Residential Neighborhood Development**

Number	Land use	Percentage of Developed Area		
		High Density	Medium Density	Low Density
1	Dwelling plots	40-60	64-74	80-90
2	Recreation	21-29	7-16	-
3	Community Facilities	5-20	9-20	0.1-1
4	Roads and streets	4-15 1-7	6-7 3-4	8-8.8 0-2.2

Source: *Physical Planning Handbook, 2008*

### Density of Development

In recommending gross residential densities care should be taken that they create in spatial and functional meaning an independent system of the built-up services, recreation and communication network. For controlling the intensity of development, Table 12 - 2 gives a range of densities that can be adopted. These may be varied depending on the type of waste disposal, availability of piped water, and the level of building technology to be applied.

**Table 12 - 2: Recommended Densities for Residential Development**

Type of Dwelling	No. of dwelling per Hectare	Allocation per dwelling (M <sup>2</sup> )
Detached Bungalows		
(i) Low density	10	1000
(ii) Medium density	16	500
(iii) High density	35	285
Semi-detached and Row Housing		
(i) Low density	20	417
(ii) Medium density	32	333
(iii) High density	70	250
Multi-family Dwellings		
(i) Low density	50	200
(ii) Medium density	60	168
(iii) High density	70	143

(iv) Special density	133	75
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Source: *Physical Planning Handbook, 2008*

### Site Planning

Table 12 - 3 to Table 12 - 7 describes the recommended minimum plot frontage by type of housing, minimum plot size for different housing schemes, minimum plot coverage, minimum set back of dwelling from plot lines and minimum street width per given number of plots.

**Table 12 - 3: Recommended minimum plot frontage by type of housing**

Type of Residential Frontage	Minimum Frontage in Meters		
	Detached	Semi-detached	Row housing
Slum upgrading schemes	70	75	75
High density housing	70	75	75
Medium/low density housing	60	60	70

Source: *Physical Planning Handbook, 2008*

**Table 12 - 4: Recommended minimum plot sizes for different housing schemes**

Type of housing	Minimum plot size in square metres		
	Detached	Semi-detached	Row Housing
Slum upgrading schemes	223.2	148.8	111.6
High density housing	334.8	223.2	167.4
Medium/low density housing	465	309.7	232.5

Source: *Physical Planning Handbook, 2008*

**Table 12 - 5: Recommended Minimum plot coverage**

Type of residential development	Maximum plot coverage		
	Detached housing	Semi-detached housing	Row housing
Slum upgrading schemes	50	65	65
High density housing	50	60	65
Medium/low density housing	40	50	60

Source: *Physical Planning Handbook, 2008*

**Table 12 - 6: Recommended Minimum setback of dwelling from plot lines**

Type of residential development	Minimum set-back in metres		
	Front	Side	Rear
Slum upgrading schemes	2.5	1.5	3
High density housing	3	1.5	4.5
Medium/low density housing	4.5	3	6

Source: *Physical Planning Handbook, 2008*

**Table 12 - 7: Recommended Minimum Street width per given number of plots**

Number of plots	Street width
1 – 20	9m
21 – 50	12m

Source: *Physical Planning Handbook, 2008*

### High Density Residential Areas (HDR)

In total the area under HDR measures approximately 294.2 Hectares with a total of 45 zones namely 1-45 (as shown on Map 12 - 1) and when fully developed, it can provide space for construction of 7500 housing units. But using population projection the housing demand for this zone is 1,100 housing units by the year 2033.

Among the strategies to be adapted, include-

- Zoning of areas for different specific housing typologies
- Preparation of building plans by registered and qualified designers.
- There should be routine maintenance of buildings
- Incorporate smart growth, new urbanism neighborhood concepts in all residential areas

### Permitted Uses

Multi-dwelling residential units, Retail shops, cybercafé, neighborhood parks/recreational facilities, dispensaries, clinics, nursing homes, religious centres/institutions, guesthouse without bar section, supermarkets, schools i.e. nursery, primary and secondary schools, playground, daycare, vocational training college, light industries (food processing plans i.e. bakery, milk

processing plant, water, bottling plant etc.), carpentry, timber yard, building materials storage yard, cloth making, library, bus stops, bodaboda sheds/parking.

### **Medium Density Residential Areas (MDR)**

The MDR covers zones **O46-68** on Map 12 - 1 measuring about 216.4 hectares is expected to provide spaces for building approximately 3000 housing units. The demand for housing by the year 2033 is 783 housing units; hence there are more housing spaces in case of population influx. Medium Density Residential areas are expected to accommodate less population than high Density residential areas.

#### **Permitted uses**

Bungalow, maisonette, multi-dwelling units, corner shops, cybercafé, neighborhood parks/recreational facilities, dispensaries, clinics, nursing homes, religious centres/institutions, guesthouse without bar section, supermarkets, schools i.e. nursery, primary and secondary schools, playground, daycare, vocational training college, light industries (food processing plants i.e. bakery, milk processing plant, water, bottling plant etc.), carpentry, timber yard, building materials storage yard, cloth making, library, bus stops, bodaboda sheds/parking.

### **Low Density Residential Areas (LDR)**

The well to do category of the population will be residing in zones **O69-94** measuring 431.1 Hectares. The housing demand by the year 2033 is 734 housing units. The size of LDR is enough to create room for 10,000 housing units. The principles of smart growth and new urbanism also apply to LDR zones.

#### **b. Industrial Land Use**

##### **Light Industrial Zone**

There are a total of 7 industrial zones. Zone no. **11 - 16** are light industrial zones while Zone **17** is heavy industrial zone. Zone **11** is an existing abattoir



located on the lower side of a thousand street near R. Ayoro. It occupies land size measuring 0.8 hectares and is adequate for construction of a modern facility that can supply meat to the whole county and even supplement neighbouring counties. Zone 13-5 are proposed light (Jua kali) industrial sites measuring 4.4Ha to be located at Siany and next to Oyugis Primary School. This will help relocate carpenters, garage, metal fabricators spread along the major roads causing land use conflict with road users. Other light industries in the municipality are fuel stations and posho mills that dot the municipality.

### **Heavy Industrial Zone**

A heavy industrial zone (an agro processing zone) is proposed to be located at Osare area along the Oyugis-Rangwe road. The area where heavy industrial zone is located has minimal development as compared to other areas, hence fit for heavy industrial activities. A green buffer zone will be created around the heavy industrial zone separating the neighboring residential zone. Industrialists will be required to treat their wastes before discharge into the environment.

### **c. Educational Land use**

Oyugis Municipality has a number of schools some of which are centres of excellence. It is recommended that each public primary school should have an ECD (Early Childhood Development) centre to boost compulsory free primary and secondary school education programme offered by the government. One secondary school has been proposed at Mawira to cater for the deficit of two secondary schools required by the year 2033.

The other strategies to be adapted include; equipping and modernizing of schools, turning some primary into double streams. This plan also proposes every primary and secondary school should prepare a site layout plan for future expansion of the school. This will assist in locating facilities in their proper location for convenience and economical utilization of land.

### **d. Recreation Land Use**

There are no adequate provision of recreational facilities and green spaces in Oyugis Municipality. In the proposed structure plan, provision is made for a sports ground **(31)** measuring 8.4 Hectares located behind Nyadendi hotel area. Five (5) Public Parks are proposed to be located within the municipality at Nyahera area, behind Oyugis Supermarket, Siany area, Raila grounds and an arboretum at the junction of 1000 streets and R. Ayoro measuring 11.7 hectares.

In order to make Oyugis Municipality to be a resilient and environmentally sustainable area, it is proposed that all streets should be planted with ornamental trees and flowers. All plot owners and land owners including all public and private institutions in Oyugis Municipality should set aside 10% of their total land area for greenery as stipulated by the Presidential Executive Order on improving forest cover.

#### **e. Public Purpose Land Use**

The development of land for public purposes is generally expected to be intertwined within the residential and commercial developments. As result no broad zones for public purposes are expected. Existing administrative centers at Milimani are to be maintained. However, it is proposed that the public purpose at the sub-county office area is to be densified to accommodate the fire station measuring 0.5Ha. a library and a community centre have been proposed next to Gundo Primary School measuring 0.9Ha. it is proposed that Rawinji Resource centre should be densified to accommodate another (small) library to accommodate the residents of western side of the municipality.

#### **f. Commercial Land Use**

##### **Central Business District (CBD)**

The existing and proposed CBD expansion area is designated by zone classification numbers 5 and coloured red in Map 12 - 1. Zone **51-15**, **517-59** and **561-90** designates areas occupied by supermarkets, shops and hotels. Zone **516** shows the new Oyugis Open-Air Market while the famous Masogo market has been proposed as a wholesale market modelled to be designed like

Muthurwa market. Livestock Auction Sale yard is proposed to be located next to Siany past Kawaindi.

This plan also proposes beautification programmes for CBD. These include; tree planting, landscaping, paving of walkways and fencing of gardens within the CBD. The beautification programme should be implemented immediately or within the first year of approval of this plan.

#### **g. Public utilities land use**

##### ***Sewer Treatment Plant***

Oyugis Municipality has no integrated conventional sewerage reticulation system, and as such, proposal is made for sewerage works at zone **6<sub>1</sub>** measuring 3.1Ha. this facility will be located at Migwa area next to River Owade.

##### ***Water Reservoir***

A site for a water Reservoir is proposed to be sited at Wire forest denoted as zone **6<sub>3</sub>** measuring 1.3 Ha.

##### ***Power Sub-station***

An existing Power Sub- Station is located along the Oyugis-Kisii road past Kasimba junction opposite Marxist school. The land measures 1.5Ha and is adequate for expansion to accommodate the expanded municipality.

##### ***Cemetery***

It is proposed that a cemetery be located at Nyahera area. The cemetery should be demarcated and fenced to accommodate Christians and Muslims. It Measure approximately 3.9Ha.

##### ***Solid Wastes Treatment Site***

A landfill is proposed for Oyugis Municipality measuring 2.9Ha to be developed at Migwa area bordering the proposed sewer treatment plant. A buffer zone should be established between the two utilities.

#### **h. Transportation**

The plan proposes retaining the existing transport facilities. In order to decongest Oyugis Municipality new Bus Park and to ensure coordination of road network, another bus park is proposed at the junction of Oyugi/Kosele and Agoro Sare/Masogo roads to serve the proposed Masogo market and the proposed bypass. This bus park has a land size of 1.0Ha. A southern bypass has been proposed as: River Owade-St. Joseph-Agoro Sare-Masogo-the lower part of the police station then linking the Kisumu road towards Kisii. An interchange will be place at River Owade to ensure ease of movement at the beginning of the bypass. Another round about has been proposed at Agoro Sare/Kosele junction to avoid accidents. To improve on road coordination, a roundabout has been proposed at the Kosele Junction while an island curb has been proposed at the 1000 streets junction. A lorry park has been proposed opposite Masogo market measuring 0.7Ha.

A foot bridge is proposed at the new Oyugis market linking the market with Masogo road. Service lanes will be opened up at the back of all the buildings with street frontage to cater for loading and offloading of goods so as to decongest major roads.

#### **i. Agriculture**

Urban agriculture is categorized as one of the land uses within an urban set up. It is a supplementary source of livelihood of food and fuel for many households. Agriculture practices in urban areas can convert biodegradable waste into compost manure. Practice of agriculture should be in harmony with aesthetics of the municipality and should not be allowed to be a nuisance. In order to promote urban agriculture in the area, there should be adequate provision of infrastructural services to enhance easy access to the markets among other related factors. The agricultural potential that exists within the peri-urban and rural areas of the municipality must be exploited to the benefit of the residents.

In this plan it is proposed that only growing of short crops in residential areas can be practiced. Within the agricultural zones, the minimum plot size

recommended is one hectare (2.471 Acres). The recommended road size in agricultural area is 9m.

**j. Conservation Area**

In order to make Oyugis as a resilient and environmentally sustainable municipality, provision is made for 30m riparian reserve along River Owade as depicted in zone 8<sub>1</sub>. Other riparian reserves in Oyugis Municipality are zoned as 8<sub>2-5</sub>. The total area proposed under conservation land use is 62.0Ha.

Zone Code	Area Covered	Ground Coverage (%)	Plot Ratio	Type of Development	Remark
<b>RESIDENTIAL</b>					
<b>LOW DENSITY RESIDENTIAL</b>					
<b>O<sub>93-126</sub></b>	Nyalenda, Kapolice, Owade, Wire, Migwa, Kawino spring, Osare, Kasimba, Nyaduma, Kotieno School area, Nyahera, Magak Road, Gundo Primary School	50	-	Bungalows Masionette Minimum Plot size – 0.2 Ha unsewered to 0.1 Ha sewered	<ul style="list-style-type: none"> <li>• Maximum Level – 2</li> <li>• Minimum Road size 9m</li> <li>• Parking – 2 per dwelling</li> <li>• Allow for Densification</li> <li>• Allow for 10% surrender for Public Purpose on Sub-division</li> <li>• Building materials <ul style="list-style-type: none"> <li>✓ Floor- Cement screed</li> <li>✓ Walls – Cut stones and bricks</li> <li>✓ Roofs – tiles and Roofs – tiles and Galvanized Iron sheets</li> </ul> </li> </ul>
<b>MEDIUM DENSITY RESIDENTIAL</b>					
<b>O<sub>60-89</sub></b>	Behind Matata Hospital, next to the proposed stadium, Nyahera, Kotieno school, Kasimba, Osare, Milimani, Rawinji, St. Joseph,	50	1:3 1:4	Mansionette, bungalows, semi-detached Minimum Plot size – 0.05 Ha unsewered to 0.1 Ha sewerred	<ul style="list-style-type: none"> <li>• Maximum level-</li> <li>• levels unsewered</li> <li>• levels on sewerred</li> <li>• Minimum Road width- 9m apartments allowed on different zones.</li> <li>• Allow for 10% surrender for Public Purpose on Sub-division</li> <li>• Parking – 1 per dwelling</li> <li>• Building materials <ul style="list-style-type: none"> <li>✓ Floor- Cement screed</li> </ul> </li> </ul>

					<ul style="list-style-type: none"> <li>✓ Walls – Cut stones and bricks</li> <li>✓ Roofs – tiles and Roofs – tiles and Galvanized Iron sheets</li> </ul>
<b>HIGH DENSITY RESIDENTIAL</b>					
<b>0<sub>1-59</sub></b>	1000 streets, Kawaindi, Aloo, behind Rachuonyo Sub-county hospital	75	100	Row housing Mansionets Semi-detached Flats developments Minimum Plot size – 0.05 Ha unsewered to 0.03 Ha sewerred	<ul style="list-style-type: none"> <li>• Maximum level –</li> <li>• levels unsewered</li> <li>• levels on sewerred</li> <li>• Minimum Road width – 9m apartments allowed on different zones.</li> <li>• Setbacks – 3m from the boundary</li> <li>• Parking – 1 per dwelling</li> <li>• Allow for densification</li> <li>• Allow for 10% surrender for Public Purpose on Sub-division</li> <li>• Building materials <ul style="list-style-type: none"> <li>✓ Floor- Cement screed</li> <li>✓ Walls – Cut stones and bricks</li> <li>✓ Roofs – tiles and Galvanized Iron sheets</li> </ul> </li> </ul>
<b>INDUSTRIAL</b>					
<b>1<sub>1</sub></b>	1000 streets (next to Ayoro bridge)	75%	100%	Light Industry Existing Abattoir Cold Rooms Minimum Plot size – 0.1 Ha	<ul style="list-style-type: none"> <li>• Parking – 1 for every 10 workers</li> <li>• Additional Parking for Cyclists</li> <li>• Provide pedestrian Walkways</li> <li>• Allow for Redevelopment</li> </ul>
<b>1<sub>2-4</sub></b>	Siany area (next to cattle auction ring), upper part	75%	100%	Light Industry (Jua Kali) Godowns	<ul style="list-style-type: none"> <li>• Maximum level –</li> <li>• levels</li> <li>• Parking – 1 for every 10 workers</li> </ul>

	of Masogo market towards the court			<p>Cold Rooms Warehouses Minimum Plot size – 0.1 Ha</p> <p>Carpentry Metalwork Fabricating Garage Minimum Stall size – 10×20m</p>	<ul style="list-style-type: none"> <li>• Additional Parking for Cyclists</li> <li>• Setbacks – 6m Front 3m Back</li> <li>• Provide pedestrian Walkways</li> <li>• Allow for Redevelopment</li> <li>• Establish a buffer zone away from the school</li> </ul>
<b>1<sub>8</sub></b>	Osare area (Along Oyugis-Rodi road, next to R. Osare)	75%	100%	<p>Heavy Industry Godowns Cold Rooms Minimum Plot size – 0.1 Ha</p> <p>Agro-based value addition Timber treatment Manufacturing etc.</p>	<ul style="list-style-type: none"> <li>• Maximum level – levels</li> <li>• Parking – 1 for every 10 workers</li> <li>• Additional Parking for Cyclists</li> <li>• Setbacks – 6m Front 3m Back</li> <li>• Provide pedestrian Walkways</li> <li>• Allow for Redevelopment</li> </ul>
<b>EDUCATIONAL</b>					
<b>2<sub>14</sub></b>	Mawira	-	-	Secondary school	<ul style="list-style-type: none"> <li>• Minimum land size of 3.4Ha</li> <li>• Provide space for classrooms, laboratory, office, playground, sanitation facilities, kitchen</li> <li>• Circulation space per pupil should be 6m<sup>2</sup></li> </ul>
<b>RECREATIONAL</b>					



<b>33-6</b>	Raila grounds, behind oyugis supermarket, Siany area, Nyahera	-	-	Green parks	<ul style="list-style-type: none"> <li>• 1 to 2 Ha per 10,000 people</li> <li>• Undertake ornamental landscaping</li> </ul>
<b>32</b>	Junction of 1000 streets and River Ayoro	-	-	Arboretum	<ul style="list-style-type: none"> <li>• 1 to 2Ha per 10,000 people</li> <li>• Undertake ornamental landscaping</li> <li>• A footpath with a 7m width</li> <li>• Establishment of a nature trail</li> </ul>
<b>31</b>	Behind Nyadendi hotel	-	-	Stadium	<ul style="list-style-type: none"> <li>• Flat terrain</li> <li>• Length (maximum of 120m and minimum of 90m)</li> <li>• Width (maximum of 90m and minimum of 45m)</li> <li>• The track must have 6 to 8 lanes of a standard width of 1.22m</li> <li>• Field track measuring 400m on the outer sides of football pitch</li> <li>• Access road of 12m</li> <li>• Parking space – 1 car space for 10 or 20 seats/spectators</li> <li>• Fenced</li> <li>• It must have changing rooms</li> </ul>
<b>PUBLIC PURPOSE</b>					
<b>49</b>	Rawinji, Next to Gundo primary	-	-	Public library	<ul style="list-style-type: none"> <li>• Land size – 0.4 Ha</li> <li>• Quite environment</li> <li>• Good light and ample surrounding</li> </ul>
<b>49</b>	Next to Gundo primary	-	-	Community centre	<ul style="list-style-type: none"> <li>• Land size – minimum of 1Ha</li> </ul>

					<ul style="list-style-type: none"> <li>• Good light and ample surrounding</li> </ul>
<b>4<sub>8</sub></b>	Sub-county offices			Fire Station	<ul style="list-style-type: none"> <li>• Land size – minimum of 0.4Ha</li> <li>• Staff house and office</li> <li>• Parking space for fire extinguisher vehicles and ambulance</li> <li>• Drilling area</li> </ul>
<b>COMMERCIAL</b>					
<b>5<sub>1-22, 24-75, 77-79, 81-107</sub></b>	CBD, along Oyugis Kosele road, along Kisumu-Kisii road, Kasimba Junction, madiaba	75	150	Commercial offices Flats-If Sewered Minimum Plot size – 0.045 Ha Materials- blocks, building stones, bricks, tiles, G.C.I (galvanized corrugated iron)	<ul style="list-style-type: none"> <li>• Minimum level –</li> <li>• levels</li> <li>• Additional levels (From 4) with provision of a Lift</li> <li>• Parking – 1.5 for every Office space</li> <li>• Additional Parking for Cyclists</li> <li>• Setbacks – 3m Front <ul style="list-style-type: none"> <li>▪ 1.5m Back</li> </ul> </li> <li>• There should be break of 3m after every 6 commercial plots</li> <li>• Provide pedestrian Walkways</li> <li>• Minimum road size of 15m within CBD</li> <li>• Lay by stops at interval of 600m within CBD</li> <li>• Allow for Redevelopment</li> <li>• Provision of street lights</li> <li>• Provision of security lights on commercial premises as a condition for issuance of single business permit</li> </ul>

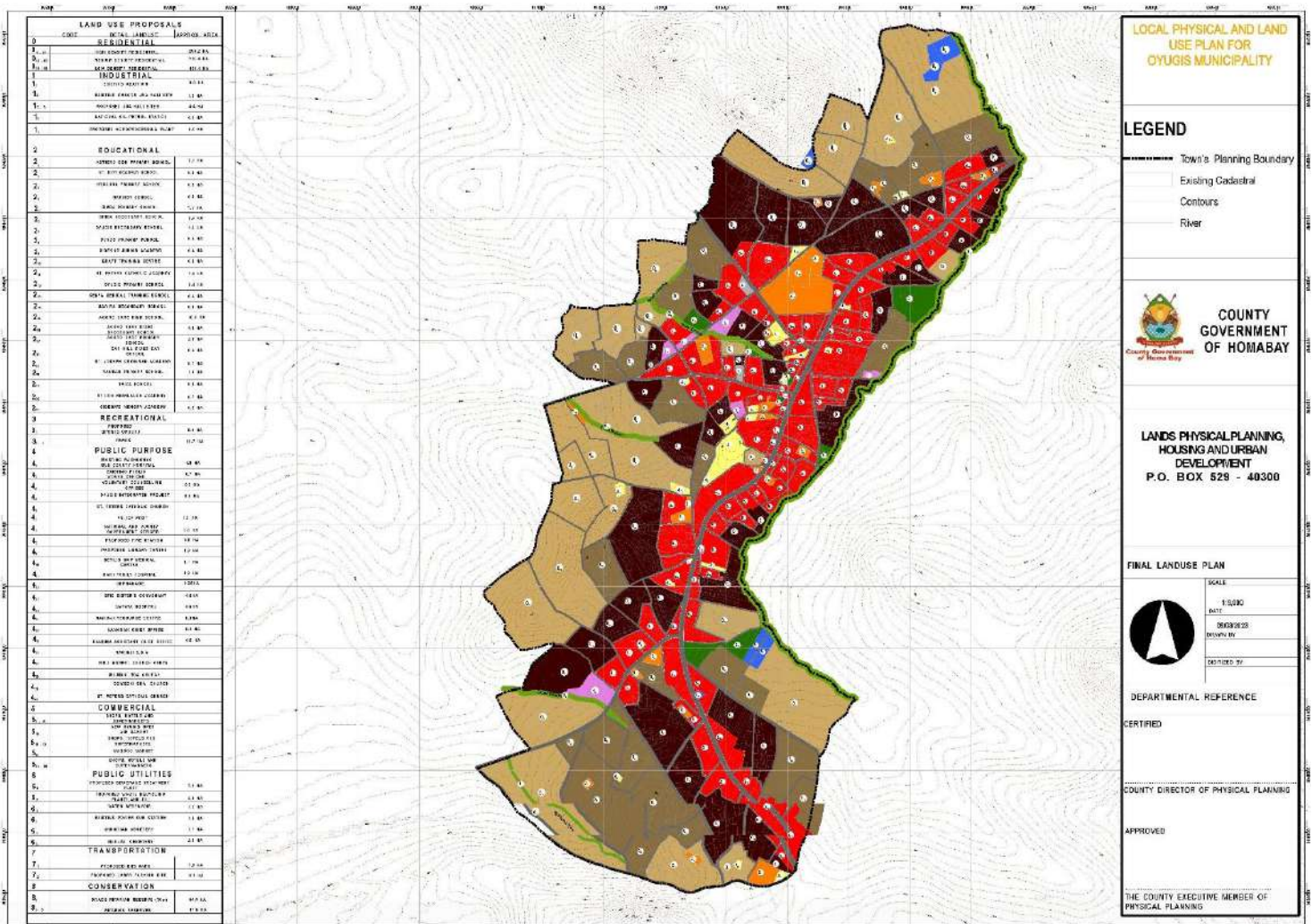
					<ul style="list-style-type: none"> <li>• Ensure plan approval before commencement of building</li> <li>• Issuance of compliance and occupation certificates before occupation of buildings</li> <li>• Old building to be given facelift by painting.</li> </ul>
5 <sub>23,76</sub>	New Oyugis Open Air Market, Masogo Market	75	100	Commercial offices Flats-If Sewered Minimum Plot size – 0.05 Ha	<ul style="list-style-type: none"> <li>• Maximum level –</li> <li>• levels</li> <li>• Additional levels (From 4) with provision of a Lift</li> <li>• Parking – 1.5 for every Office space</li> <li>• Additional Parking for Cyclists</li> <li>• Setbacks – 2m Front 1.5m Back</li> <li>• Provide pedestrian Walkways</li> <li>• Allow for Redevelopment</li> </ul>
		75	100	Commercial offices Flats-If Sewered Minimum Plot size – 0.05 Ha	<ul style="list-style-type: none"> <li>• Maximum level –</li> <li>• levels</li> <li>• Additional levels (From 4) with provision of a Lift</li> <li>• Parking – 1.5 for every Office space</li> <li>• Additional Parking for Cyclists</li> <li>• Setbacks – 2m Front 1.5m Back</li> <li>• Provide pedestrian Walkways</li> <li>• Allow for Redevelopment</li> </ul>
<b>UTILITIES</b>					

<b>6<sub>5-6</sub></b>	Nyahera			Cemetery	<ul style="list-style-type: none"> <li>• Fenced</li> <li>• Demarcated and separated to cater for Christians and Muslims</li> <li>• Plant trees around the site</li> </ul>
<b>6<sub>1</sub></b>	River Owade (Migwa Area)			Sewerage plant	<ul style="list-style-type: none"> <li>• Fenced</li> <li>• Create a buffer zone to separate it from residential areas</li> <li>• Plant trees along the buffer zone</li> </ul>
<b>6<sub>2</sub></b>	Migwa area			Recycling plant, landfill	<ul style="list-style-type: none"> <li>• Minimum land size of 2Ha</li> <li>• Located on the leeward side</li> <li>• A 100m protection belt</li> <li>• More than 1Km away from urban areas</li> </ul>
					•
<b>TRANSPORTATION</b>					
<b>7<sub>1</sub></b>	Along Oyugis-Kosele road next to Agoro Sare High School	-	-	Bus park	•
<b>7<sub>2</sub></b>	Opposite Masogo market	-	-	Lorry park	•
<b>By-Pass</b>	Between River Owade to behind Agoro sare school to Masogo market, lower part of the police and ending at the last petrol	-	-	Road By-pass	<ul style="list-style-type: none"> <li>• Minimum road size of 15m within CBD</li> <li>• Minimum road size of 9m in agricultural zones</li> <li>• Minimum of 6m for service lanes for commercial plots</li> <li>• Lay by stops at intervals of 600m within CBD</li> <li>• Minimum of 15m<sup>2</sup> per car in parking bays.</li> </ul>

	station towards Kasimba junction				<ul style="list-style-type: none"> <li>• Minimum of 35m<sup>2</sup> per bus in parking bays</li> <li>• Unblocking of all blocked roads</li> <li>• Road widening as proposed in the plan</li> <li>• Provision of street and security lights in both CBD and residential areas.</li> <li>• Preparation of road improvement plan</li> <li>• Segregation of land uses</li> <li>• Development of bus/ matatus park</li> <li>• Parking lots of 15 m breaks and above</li> <li>• Murraming of all roads</li> <li>• All junctions to be improved in design at least T-junctions only</li> </ul>
<b>Round-about, curbed Islands</b>	Round-about at Oyugis-Kosele junction and curbed island at 1000 street junction	-	-	Tarmacking and/or murraming of the road	<ul style="list-style-type: none"> <li>• Prohibit advertisements with 30m to the round-about</li> <li>• Provide traffic signs</li> </ul>
<b>Service lanes</b>	CBD	-	-	Service lanes	<ul style="list-style-type: none"> <li>• Set back of building whose frontage is facing major highways</li> <li>• Width of 12m</li> <li>• Allow for loading and offloading of goods</li> <li>• Parking of large trucks</li> <li>• Provide street lighting</li> </ul>

<b>Footbridge</b>	Along the Kisumu-Kisii road (linking the new Oyugis market to Masogo line)	-	-	Foot bridge	<ul style="list-style-type: none"> <li>• Prohibit street vending</li> <li>• Constructed using stones and/or metals</li> <li>• Minimum width of 3m</li> <li>• Height of 5.7m</li> <li>• Include ramps to support people who are abled differently</li> <li>• Provide electricity</li> <li>• Prohibit motorcycle from using the footbridge</li> </ul>
<b>Inter-change</b>	At River Ayoro	-	-	Inter-change	<ul style="list-style-type: none"> <li>• Height of 5.0 m minimum</li> <li>• Minimum width of 12m</li> </ul>
<b>AGRICULTURE</b>					
<b>All</b>	Only in areas zoned as Low and Medium Residential Densities	-	-	Peri-urban and rural urban agricul	<ul style="list-style-type: none"> <li>• Kitchen gardens</li> <li>• Controlled livestock husbandry (dairy, pig)</li> <li>• Controlled poultry</li> <li>• Permit only short crops (less than 1m in size)</li> </ul>
<b>CONSERVATION AREAS</b>					
<b>81-5</b>	Buffering of rivers and streams	-	-	Conservation areas	<ul style="list-style-type: none"> <li>• A footpath with a 7m width</li> <li>• Establishment of a nature trail</li> <li>• Planting of indigenous and ornamental trees</li> </ul>

## Map 12 - 1: Proposed structure plan



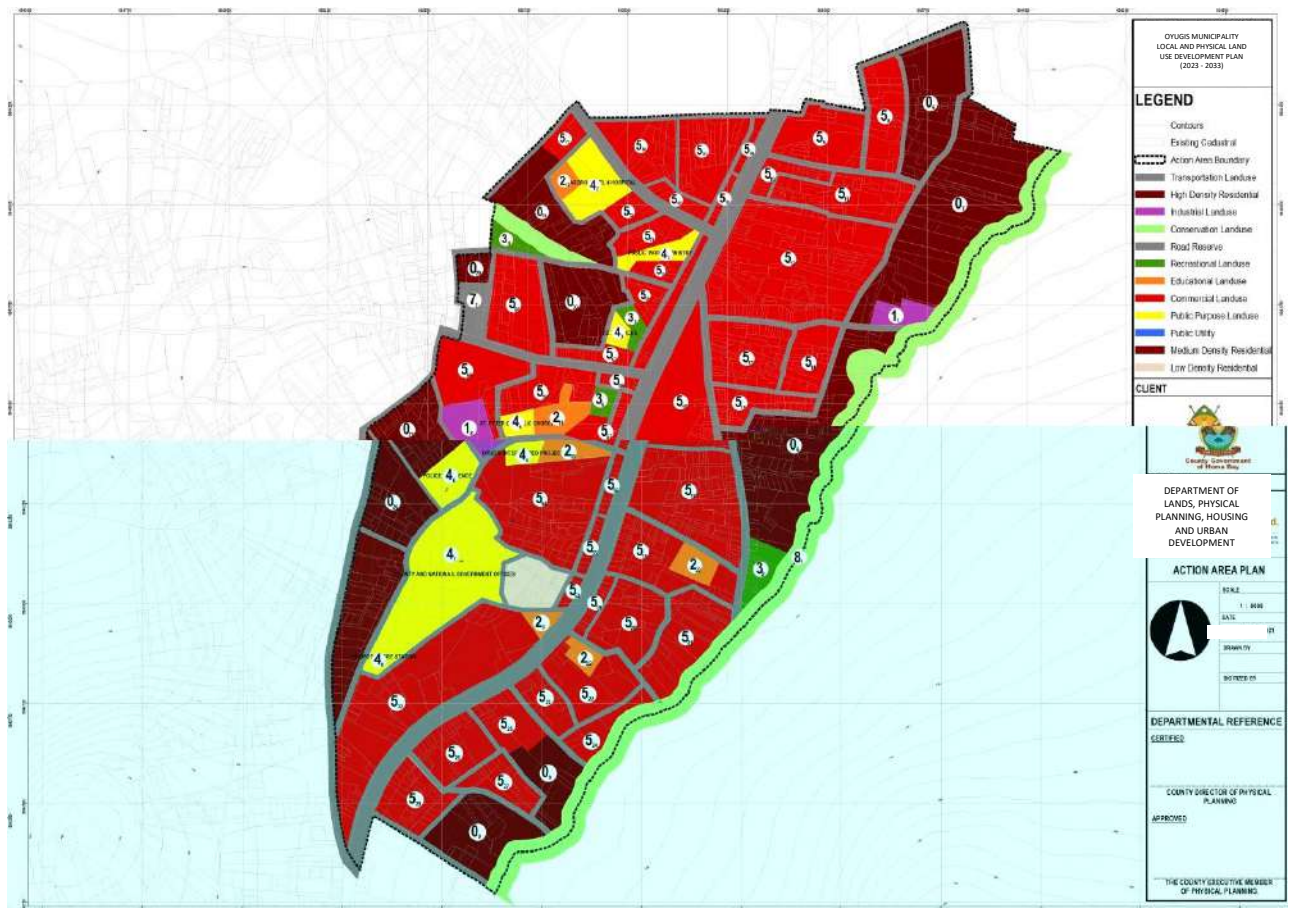
## 12.2 Action Area Plan

An area action plan for the central business district was prepared in order to give a detailed plan of the CBD. Development priorities, stakeholder’s concerns, development policies and planning standards were considered in coming up with the area action plan.

### CBD Action area plan

It forms the core of Oyugis Municipality with rampant businesses, financial institutions, human and traffic congestion, road encroachment and uncoordinated parking. The action area plan aims at bringing order to the CBD as illustrated in Map 12 - 2.

## Map 12 - 2: CBD Action Area Plan



## Objectives

1. To enhance mobility within the CBD
2. To improve on urban aesthetic and functionality the urban core
3. To enhance efficiency and integration of land users
4. To create urban order and harmony

## Challenges

The following are the main challenges within the CBD

- Lack of designated NMT lanes & footbridges
- Road user conflicts
- Lack of public open spaces and parks
- Lack of parking spaces for boda-boda, cars, lorries and public service vehicle
- Congestion caused by street vendors along Kisumu-Kisii Road



- Barrier on A1 Road within the CBD causing long detour and danger to pedestrians
- Damaging and vandalism of water infrastructures such as pipes, meter among others.
- Low coverage by the water reticulation system.
- Few meter connections.
- Pollution of water sources.
- Lack of sewerage network.
- Poor solid waste management system.
- Inadequate public toilets and septic tanks.
- Poor drainage system.

#### Road user conflict, Traffic segregation and congestion

- Transfer street vendors along the major roads to create room for non-motorized transport and other amenities
- Provide proper road signage and pedestrian crossing facilities such as foot bridges
- Expand narrow roads at least 9metres through acquisition of road reserve
- Construct the proposed by-pass and direct non local traffic away from the CBD
- Provide pedestrian footpaths to minimize accidents. The sidewalks should have a minimum width of 1.5 meters wide for low traffic areas and minimum of 2metres in high pedestrian traffic areas and a vertical clearance of 2.1metres
- Provide a minimum of 1.5 meters of bike lane against a curb or adjacent to a parking lane on major roads. One way bike lane is preferred to discourage illegal riding against traffic and improve safety
- Increase installation of street lighting system, drainage system and street furniture along the major roads
- Construct bus park as proposed and prohibit road side parking for public transport vehicles
- Encourage investment in private parking business within the CBD

- Tarmac all roads within the CBD

#### Provision of parking bays

- Reposes road reserve and design parking for private vehicles along the major roads
- All new commercial buildings to provide parking spaces as per the standard of one and half parking spaces for every 100 square meters
- Provide for lorry parking as proposed
- Discourage loading and offloading of trucks and heavy commercial vehicle within the CBD during the day (between 7am and 7pm)
- Provide for bicycle parking bays in all public facilities

#### Solid and liquid waste management system

##### Liquid waste management system

- Improve and maintain drainage system in the CBD to minimize pollution and flood during rainy seasons
- Provide for sewer reticulation system as proposed

- Prohibit pit latrines within the CBD and encourage use of standard bio digesters and septic tanks for disposal of liquid wastes
- Construction of modern public toilets with wash areas in markets and other public places

#### Solid waste management system

- Provide skips and modern garbage collection vehicle within the CBD
- Increase the frequency of garbage collection at least 3 days per week
- Designate areas for solid waste collection points to minimize pollution of water and land.
- Discourage disposal of wastes into drainage channels and river by imposing fines and charges to the offenders or cleaning of the CBD by offenders
- Each hospital major hospital in the CBD to have incinerators for the disposal of solid waste

#### Improve water infrastructure

- Increase coverage of water reticulation system
- HOMA WASSCO to collaborate and work with residents of Oyugis closely to minimize unmetered connections and vandalism of water infrastructure

#### Improve efficiency of development control system and municipality management

- Employ professionals of different cadre such as physical planners, engineers, building inspectors enforcement officers etc.
- Provide support facilities such as vehicles to aid the work of development control officers
- Increase efficiency use land

#### Establishment of recreational facilities

- Provide open spaces at Elimu area, R. Ayoro as proposed in the plan
- Provide arboretum at Ayoro bridge.

- Demarcate riparian reserve (30m) along R. Anyoro and provide for proper landscaping creating green corridors for cycling, jogging, walking and suitable furniture

#### Optimal utilization of land

- Encourage High rise building within the commercial zone up to 20 floors
- Construct 5 storey markets at the proposed site caters for demands for stalls and eliminate street vendors on road reserves. This will also enhance revenue generation.
- Approve building within the CBD with lifts and enough parking as per the planning standards

A closer look at the CBD revealed that there are four zones that would require specific intervention to help in eradicating the challenges being faced. These four zones include;

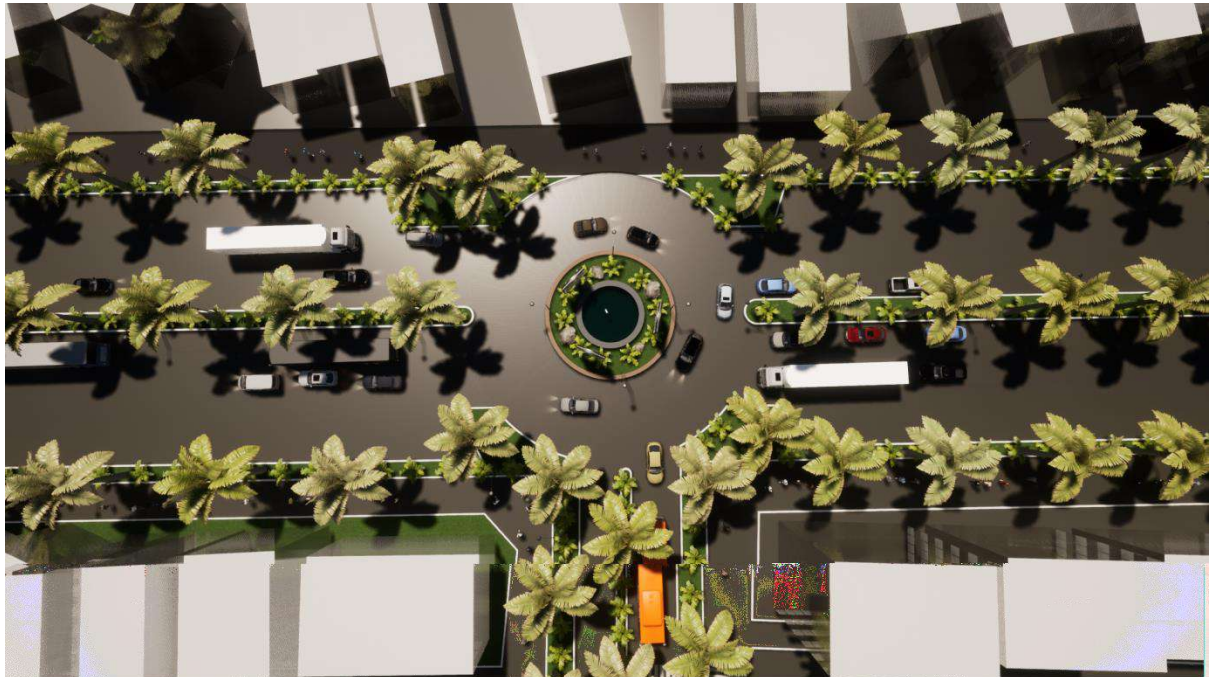
1. Kosele road junction and Gamba road junction
2. Masogo lane
3. Ayoro river riparian
4. The new bus park

The proposed interventions for the above mentioned zones are discussed here below.

### **Zone 1: Kosele junction and Gamba Junction**

- Introduce a roundabout at the Kosele junction to ensure easy movement of vehicles around the junction

#### **Plate 12 - 1: Proposed roundabout at Kosele junction**



- Relocate all carpenters from their current roadside stations to the new light industrial park
- Prohibit laying of timber along the road, across pedestrian walkways and over the drainage channels.
- Restrict loading and off-loading of supplies to the service lane and not the road reserves
- Remove all the stalls at Kosele and Gamba junction to improve visibility and limit encroachment into the road reserves
- Prohibit the location of carwashes within the road reserves

- Establish a green park next to Raila grounds. The park must have paths, furniture, fountains, monuments, lawns, rest rooms, a children section and library
- Install street lights and flood lights to ensure security of the bus park users
- Provide for water hydrants at designated places for ease of handling fire of fire incidences
- Prohibit hawking and vending along the streets to minimize conflicts. Also to be affected are the temporary stalls that are illegally installed
- Provide proper road signage and proper road marking for ease of traffic control
- Put in place motorcycle shades at designated points
- Provide pedestrian footpaths to minimize accidents. The sidewalks should have a minimum width of 1.5 meters wide for low traffic areas and minimum of 2metres in high pedestrian traffic areas and a vertical clearance of 2.1metres.
- Introduce a kerbed island at the Gamba road junction to clearly separate vehicles into 1000 street from those leaving 1000 street

**Plate 12 - 2: Proposed kerbed island at Gamba road junction**



- Provide a minimum of 1.5 meters of bike lane against a curb or adjacent to a parking lane on major roads. One way bike lane is preferred to discourage illegal ridding against traffic and improve safety
- All buildings within the zone to provide for their own parking
- Provide for parking spaces for small vehicles. These should be done along the major roads within the zone
- Provide for street furniture along the streets

### **Zone 2: Masogo Lane**

- Relocate the garages to the light industrial park which is to be situated next to the cattle sale yard
- Relocate the pick-ups and lorries from Masogo junction to the new lorry park located opposite Masogo market
- Make Masogo market a whole sale market where bulk sale of commodities especially agricultural produce takes place. Masogo market to also handle textile as well as leather and plastic products. The modern market to become a retail market where small quantities can be sold.
- Place two skips (one next to moonlight filling station and the other next to the juakali section) to serve Masogo market.
- Provide for a foot bridge to link the modern market and the road that leads to Masogo market
- Relocate all welders in this zone to the jua kali section of Masogo market
- Establish a green park behind Oyugis supermarket. Ornamental landscaping to be done on the park to make it appealing and user friendly

### **Plate 12 - 3: Proposed green-park behind Oyugis supermarket**



- Open up service lanes to help with loading and off-loading of goods into and out of shops in this zone.
- Prohibit hawking and vending along the streets to minimize conflicts. Also to be affected are the temporary stalls that are illegally installed
- Provide for parking spaces for small vehicles. These should be done along the major roads within the zone
- Install drainage channels along the roads for effective handling of storm water. The drainage channels should be covered and laid in a manner that does not affect the pedestrian walkways
- Provide pedestrian footpaths to minimize accidents. The sidewalks should have a minimum width of 1.5 meters wide for low traffic areas and minimum of 2 metres in high pedestrian traffic areas and a vertical clearance of 2.1 metres
- Provide a minimum of 1.5 meters of bike lane against a curb or adjacent to a parking lane on major roads. One way bike lane is preferred to discourage illegal riding against traffic and improve safety
- Provide proper road signage and proper road marking for ease of traffic control



- All buildings within the zone to provide for their own parking
- Put in place motorcycle shades at designated points
- Provide for proper public toilets within the bus park. The design of the toilets should cater for persons with disability
- Provide for street furniture along the streets

### **Zone 3: Ayoro River Riparian**

- Create a 30m riparian to protect the river from pollution
- Plant indigenous trees within the buffer zone to promote the conservation of indigenous species
- Create nature trails within the riparian zone to make the buffer zone accessible to the public
- Introduce a 7m foot path along the Ayoro River Riparian. The path should run from the proposed arboretum to the proposed stadium. It will also have bollards at intervals to prohibit motorized transport.
- Install street lights along the proposed 7m foot path for aesthetics as well as for security
- All buildings along the riparian Must face the river to minimize pollution
- Have in place an arboretum at the intersection of Gamba Road and Ayoro River.
- Do ornamental landscaping at the proposed arboretum to increase its functionality

### **Zone 4: The proposed bus park**

- Establishment of modern bus park
- Put in place motorcycle shades at designated points
- Provide pedestrian footpaths to minimize accidents. The sidewalks should have a minimum width of 1.5 meters wide for low traffic areas and minimum of 2metres in high pedestrian traffic areas and a vertical clearance of 2.1metres
- Provide a minimum of 1.5 meters of bike lane against a curb or adjacent to a parking lane on major roads. One way bike lane is preferred to discourage illegal ridding against traffic and improve safety

- Construct a round-about at the intersection of the by-pass and the road to Kosele
- Provide proper road signage and proper road marking for ease of traffic control
- Install street lights and flood lights to ensure security of the bus park users
- Install drainage channels along the roads for effective handling of storm water. The drainage channels should be covered and laid in a manner that does not affect the pedestrian walkways
- Provide for proper solid waste management systems within this zone. These will include dust bins and skips, and a system for collecting the waste to the designated waste disposal site
- Prohibit hawking and vending along the streets to minimize conflicts. Also to be affected are the temporary stalls that are illegally installed
- Provide for proper public toilets within the bus park. The design of the toilets should cater for persons with disability
- Discourage the dropping and picking up of passengers along the roads
- Ensure steady supply of clean water within the zone
- Build a perimeter wall around Agoro Sare Secondary school to minimize interference with learning process. This is because the proposed bus park will be a source of noise
- All buildings within the zone to go up to four floors (G+3)
- All buildings within the zone to provide for their own parking
- Prohibit loading and off-loading of goods at undesignated places
- Provide for parking spaces for small vehicles. These should be done along the major roads within the zone
- Designate an entry and an exit for the proposed bus park to limit unnecessary congestion at the main access.
- Provide for street furniture along the streets
- Provide for water hydrants at designated places for ease of handling fire of fire incidences



## **CHAPTER THIRTEEN: DEVELOPMENT STRATEGIES**

### **13.1 Overview**

This chapter has sector specific strategies and their plans of actions aimed at achieving the overall objective of Oyugis Local Physical and Land use Development Plan.

### **13.2 Transportation Strategy**

The issues complicating transportation in Oyugis Municipality are many including; traffic congestion occasioned by usage of part of A1 road reserve by hawkers and informal sector businesses; usage of carriage way by all modes of transport such as NMT, motorized transport, and through traffic from Kisumu -Kisii-Migori Isibania road. In this regard the design of transportation strategy for Oyugis Municipality should involve development of smart transportation system that takes into account, safety, comfort, convenience, environment friendly component, and cost effectiveness. The following strategies are made;

#### **Strategy 1: Address the problem of traffic congestion along Kisumu-Oyugis-Kisii-Migori Isibania road**

Measures to Support the Strategy:

- Acquire land for and construct a new bus park
- Provide for Traffic Separation involving Modal split traffic coming and out of CBD. NMT and pedestrian lanes should be designed
- Provision of parking spaces to alleviate traffic congestion along the main highway
- Relocation of Hawkers along A1 road who contribute in making A1 road congested
- Provision of street furniture involving signage, traffic signals and street furniture to quicken traffic flow
- Opening of by-pass roads to filter through traffic and to decongest A 104 highway,

- Erection of bumps to control traffic flow along the highway and to ensure road safety
- Commercial developers in the CBD should provide enough parking spaces for shoppers
- KURA to redesign cut rail to provide for convenient traffic circulation
- Enact and enforce traffic management by-laws to ensure smooth mobility of motorized and NMTs

### **Strategy 2: Planning for Non- Motorized/Motorized-Boda Boda**

Measures to Support the Strategy:

- Design NMT lanes and cyclist paths along all roads in Oyugis Municipality
- Provide common boda boda parking spaces with shades
- Designate dropping and picking points of passengers by NMT/motorized Boda bodas
- Ensure good discipline and character of NMT/Motorized Boda Bodas
- Formulate and enforce by-laws to regulate NMT/Motorized Boda Boda transport

### **Strategy 3: Increase parking infrastructure capacities in Oyugis Municipality**

Measures to Support the Strategy:

- Acquire land for parking spaces including matatu and Lorry parking.
- Formulate and enforce parking regulations
- Loading and offloading of luggage for supermarkets in the CBD and Industrial areas to be done at convenient times especially during the night hours

### **Strategy 4: Ensure good road connectivity to all areas within Oyugis Municipality**

Measures to Support the Strategy:

- Acquire land for connecting missing links for roads in the municipality

- Open up all roads to enhance connectivity and to create arterial /bus routes to all areas
- Expand on narrow road reserves to allow for two-way

### **Strategy 5: Improvement of poor State of roads within Oyugis Municipality**

Measures to Support the Strategy:

- Institute municipality-wide road murraming projects
- Tarmacking of all arterial road hierarchy
- Construct of road bridges, culverts to enhance connectivity and drainage of roads

## **13.3 Law and Order**

Security and safety of urban dwellers in a municipality is of paramount importance, as it provides an enabling environment for investors to go on with their daily businesses without interruptions. The vision of law and order in Oyugis Municipality is to have a secure, safe and just municipality of which the following strategies are proposed;

### **Strategy 1: Ensure security and safety of residents in Oyugis Municipality**

Measures to Support the Strategy:

- Increase the number of police officers to the ration of 1 police officer to 400 people
- Provide street lighting in crime hotspots
- Opening up of roads to facilitate street patrols
- Address the root cause of crimes to prevent crimes, such as land ownership and family cases

### **Strategy 2: Improve Housing conditions of security officers**

Measures to Support the Strategy:

- Build more decent housing to accommodate all security officers
- Provide water and associated amenities to Law Courts and police stations

### **13.3 Housing Strategies**

The following strategies supported by the above-mentioned standards are geared towards supporting and achieving the overall objective of the housing strategy.

#### **Strategy 1: Promoting land use planning to support quality and affordable housing**

Measures to Support the Strategy:

- The County Government of Homa Bay shall initiate surveying and titling of plots particularly in freehold areas to ensure that they are adequate and approved for residential use.
- The County Government of Homa Bay shall enhance easy access to land for residential use and especially to low-income groups through communal amalgamation. This will be achieved through community sensitization.
- Undertake and implement zoning of areas into specific residential densities.
- Prepare detailed action physical development plans for areas identified for housing development.
- The County Government of Homa Bay shall provide basic plot layout and minimal infrastructure such connections to sewer, electricity, water and roads in advance of spontaneous development.
- The county government will initiate and undertake dialogue and participatory planning activities among all the stakeholders in the housing sector to sensitize them various challenges and opportunities.

#### **Strategy 2: Supporting slum upgrading programmes**

Measures to Support the Strategy:

- Re-zoning of areas around the CBD into high density residential areas. Areas such as 1000 streets, behind Matata Hospital, Jua Kali area, Aloo Estate and Masogo line shall be zoned as high density residential zones.

- Initiating informal settlement improvement programmes. The County Government of Homa Bay in collaboration with the national government agencies such as KENSUP, KISIP and the UNHABITAT shall initiate informal settlement improvement programmes in 1000 streets, Jua Kali and Masogo line.
- The county Government of Homa Bay shall undertake initiatives that encourage private sector financial institutions to provide housing finance for low cost housing improvement.
- The County Government of Homa Bay shall design a standard low-cost house for sensitization and implementation in areas zoned for residential purposes.

### **Strategy 3: Enhancing use of quality, local and affordable building techniques and materials**

Measures to Support the Strategy:

- The county government in collaboration with other government agencies such as NLC will undertake a yearly capacity building initiative for building contractors and masons to sensitize them and improve their skills on modern building technologies and building materials. These include ABMT centres that supports use of locally available resources.
- The county government in consultation with NEMA will initiate a yearly seminar to encourage sand harvesters to use sustainable mining techniques.
- County government should introduce subsidies that support and attract investment in hardware premises within the municipality hence reducing the cost of construction materials.
- The county government shall develop and enact county by-laws on mining that will regulate the mining, transportation and use of construction materials.

### **Strategy 4: Formulating user-friendly housing regulations**



#### Measures to Support the Strategy:

- Six (6) building inspectors shall be employed and posted to enforce development control regulations in the municipality. Each inspector will oversee two (2) zones as proposed in structure plan.
- The county government shall establish county law courts to strengthen the enforcement of existing housing standards in the municipality.
- The plan proposes the developing residential zoning standards which will give parameters for approval in each of the residential densities, infrastructure requirement and mandatory connection to all utilities.
- Cascade the building codes (regulations) into county by-laws to make them easy to understand.
- The county government shall develop brochures and fliers that simplify the housing regulations and procedural frameworks to sensitize stakeholders in the housing sector and make development approval procedures easy to understand.
- The municipality executive should establish development control committee that will comprise of both the county government departments and national government agencies such as NEMA, NCA, among others.

#### **Strategy 5: Support establishment of housing finance mechanisms**

##### Measures to Support the Strategy:

- Enter into consultation with large commercial banks, real estate investments agencies, NACHU and other housing finance institutions to establish and strengthen their housing finance departments in Oyugis Municipality so as to ensure that housing finance credit is accessible.
- Coordinate yearly and regular training/workshops on various housing finance models to sensitize the community on available financial models.

- The county government should encourage its residents to establish and register housing Sacco's especially those that will venture into low-cost housing.
- Initiate discussion with existing self-help groups and support them into venturing into housing financing.

### **Strategy 6: Improving housing infrastructure services**

Measures to Support the Strategy:

- Acquire land for affordable housing
- Enforce mandatory connection to national grid, sewer system and water reticulation for housing development approval.
- Expand and connecting electricity, sewer system, water supply and telecommunication network in all residential areas
- Provide garbage skip for all residential zones in central location
- Provide children playgrounds, open parks and recreational facilities in all residential zone
- Provide public toilets in designated urban areas

### **13.4 Environmental Management strategies**

Oyugis is a developing municipality with the capacity to adequately handle its environmental issues such as solid and liquid wastes. The municipality lacks a sewer system and solid wastes management site. In order to curb its environmental concerns, the municipality aims at providing quality life to its citizens through sustainable management of the environment and natural resources. This can be achieved through:

#### **1. Solid Wastes**

#### **Strategy 1: Providing a comprehensive solid waste management**

Measures to Support the Strategy:

- Acquire land at Wire hills and establish a solid wastes recycling/management site.
- Purchase corded litter bins

- Strategically locate skips and skip loaders in strategic areas within the municipality.
- Ensuring that all health facilities and clinics within the municipality install incinerators for the management of the hospital wastes.
- Planting of trees and scented flowers in the recycling plant to obviate smell from the facility.
- Passing the necessary by-laws prohibiting indiscriminate dumping of wastes in the municipality.
- Creation of an autonomous waste management unit in the municipality. The unit should be adequately staffed with appropriate personnel and supplied with appropriate easy to service equipment such as skip loaders.
- Regulate and license all private solid waste collectors

## **2. Storm Water Drainage**

### **Strategy 1: Developing proper drainage system for the municipality**

Measures to Support the Strategy:

- Extending the storm water drainage network beyond the A1 road and integrating the same with road networks.
- Demolition of structures on the drainage way leaves and flood prone areas.
- Regular cleaning and maintenance of the drainages.
- Closing up all the open drains with grated slabs to prevent dumping of wastes into system.

## **3. Sewer**

### **Strategy 1: Providing a comprehensive sewerage system for the municipality**

Measures to Support the Strategy

- Acquire land and develop liquid wastes treatment plant at the upper part of Owade Bridge.
- Developing a sewer network within the municipality.

- Construct modern public conveniences/sanitary facilities in the CBD and in public places through public-private partnerships

#### **4. Environmental Hazards and Disaster Management**

##### **Strategy 1: Developing environmental hazards and disaster management system**

Measures to Support the Strategy:

- Formulate a Disaster Preparedness and Management section within the municipality administration.
- Formulate Disaster Preparedness and Management by laws.
- Establishment of 3 fire stations with at least a fire engine with members staff.
- Make and enforce laws that all buildings must have complete fire fighting equipment to include the fire fighting horse reel, fire extinguishers and fire hydrants.
- Enforcement of biodiversity conservation and protection regulations.
- Develop and implement effective disasters early warning systems.

#### **5. Controlling of roaming animals within the municipality**

- Animal holding sites establishment
- Enforce laws on animal movements

#### **6. Preservation of ecologically sensitive areas**

- Rehabilitation of pelican Birds sanctuary along Oyugis – Gamba road
- Protection of Wire hills, Koderia Forest and other water catchment areas

### **13.5 Recreational Facilities**

#### **Strategy 1: Providing recreational facilities**

Measures to Support the Strategy:

- Reposes encroached open spaces e.g. stadium and riparian reserves.

- Acquire land and provide 3 open spaces in identified areas i.e Elimu area, Along River Ayoro (lower part of 1000 street) and Siany.
- Encourage Public Private Partnership in provision of playgrounds.
- Ensuring that educational institutions set aside land for recreational facilities.
- Development of a regional museum and other tourist attraction sites within the municipality and its environs to preserve the traditional artefacts and to attract tourists.

### **Strategy 2: Improving aesthetics of the municipality**

Measures to Support the Strategy:

- Protect, maintain, and enhance the natural and organic character of the watercourses by planting a tree buffer e.g. River Ayoro riparian.
- Encourage and promote tree planting in the planning and development of urban spaces, streets, roads and infrastructure projects; as well as woodlots in peri-urban areas;

### **13.6 Social Infrastructure strategy**

Development of social infrastructure translates to vibrant economy and enhances the growth of a municipality. The purpose of this strategy is to enhance access to social facilities and to ensure that the same are adequately provided within the planning area. The following strategies will help in achieving this:

#### **1. Energy**

#### **Strategy 1: Ensuring accessible and reliable electricity supply**

Measures to Support the Strategy:

- i. Expand the supply of power by encouraging private sector participation in the exploration of possibilities for developing alternative cheap and environmentally sound energy sources.
- ii. Enforce regulations relating to the preservation of power way-leaves.

- iii. Increase the electricity network within the municipality.

## **Strategy 2: Promote the adoption of clean energy**

Measures to Support the Strategy:

- i. Expand the supply of power by encouraging private sector participation in the exploration of possibilities for developing alternative cheap and environmentally sound energy sources.
- ii. Install and maintain solar powered street lights throughout the municipality.
- iii. Encourage and promote the use of renewable energy.
- iv. Popularisation of alternative energy sources such as solar energy

## **2. Cemetery**

### **Strategy 1: Provide a cemetery**

Measures to Support the Strategy:

- i. Acquire land for proposed cemeteries at Wire hills and another towards Muga primary school area and demarcate between Christian, Muslim's and other religions.
- ii. Enactment and enforcement of by-laws prohibiting burials within the municipality boundaries and sensitisation of the residents to undertake burials in the designated cemeteries.

## **3. Water**

### **Strategy 1: Expand water coverage within the municipality**

Measures to Support the Strategy:

- i. Expand the water reticulation system to supply water to the entire Planning area.
- ii. Completion of the ongoing water treatment and supply project so as to ensure supply of adequate water.

- iii. Establishing water kiosks within a radius of 50 meters in informal settlement.
- iv. Prosecutions of offenders who are vandalizing water facilities.

### **Strategy 2: Protect and preserve natural water resources**

Measures to Support the Strategy:

- i. Determine the riparian reserve for River Ayoro and plant it with trees.
- ii. Restricting developments on the riparian reserves.
- iii. Controlling activities within the wetlands, only allowing environmentally friendly activities.
- iv. Adherence to public health standards for safeguarding underground water resources
- v. Enforcement of approvals for sinking wells and boreholes to enhance safety standards.

## **4. Health**

### **Strategy 1: Improving access to effective and efficient health services**

Measures to Support the Strategy:

- i. Provide adequate medical staff in every hospital to a recommended WHO doctor patient ratio of 1:1000.
- ii. Increase bed capacity that provides bed occupancy of not more than 100%.
- iii. Encourage Public Private Partnerships in development of health facilities.
- iv. Equip all health facilities with modern medical equipment.
- v. Attach mortuaries to the health facilities and encourage establishment of private funeral parlours.
- vi. Provision of support infrastructure such as access roads, pavements, shades etc.
- vii. Regularize supply of drugs to all health facilities.

## **5. Security**

### **Strategy 1: Improving security within the municipality**

Measures to Support the Strategy:

- i. Provide adequate flood and street lights within the municipality.
- ii. Provision of support infrastructure such as adequate housing, water, sewer and electricity among others to all the police facilities.
- iii. Enforce community policing initiatives (Nyumba Kumi initiative).

## **6. Education**

### **Strategy 1: Provision of quality and affordable education**

Measures to Support the Strategy:

- i. Construct more classrooms in schools within the CBD.
- ii. Provide supporting infrastructure like water, desks and toilets among others in all schools.
- iii. Establish modern community libraries/Digital hubs at Rawinji resource center.
- iv. Deployment of adequate staff in the schools to a recommended teacher-pupil ratio of 1:40.
- v. Implement the proposed construction of Mawira secondary school on the identified site.
- vi. Construct a secondary school next to Kasimba primary school.
- vii. Creation of incentives to the private sector, religious organisations and other stakeholders to continue investing in the provision of educational facilities and services.
- viii. Enforcement of quality assurance and regulatory policies governing the education sector.
- ix. Increment of development densities for the educational institutions to enable them accommodate increased student population and to avail land for recreational, boarding and staff housing.

### **Strategy 2: Developing skilled and job-oriented human resource**



Measures to Support the Strategy:

- i. Acquire land and construct a vocational training institute next to the KMTC.

### **13.7 Economic Development Strategies**

Strategies are courses of activities geared towards the achievement of given objectives. The strategy formulation process for Oyugis Municipality was supported by the existing background documents, a synthesis of the potentials, opportunities and constraints of data collected, and stakeholder inputs from the various forums held in the municipality. It provides a summary of the direction of development and the desired end that the municipality intends to achieve.

#### **1) Industry and Trade Development Strategies**

##### **Strategy 1: Promotion of agro-industrial growth**

Measures to Support the Strategy:

- Creation of Industrial Zones:
- Zoning and planning of industrial parks.
- Promotion of innovative agriculture for industrial development
- Sourcing of industrial markets both locally and regionally.
- Development of urban and rural infrastructure (roads, water, electricity networks) to promote industrial production.
- Preparation and Implementation of Local Physical Development plans to control urban growth in the event of Industrial growth.
- Tailor and develop education institutions and programs that supplement the requirements of industries.
- Create and promote an appropriate and enabling business environment for investors in the business park and industrial zones
- Formation and investment in regional markets:
- Integration agreements for market creation
- Establishment of a Jua kali zone within the major urban nodes and CBD

- Creation of several multipurpose dams for fish farming long major rivers

### **Strategy 2: Preparation and implementation of a Pro MSE and industry policy**

Measures to Support the Strategy:

- Preparation of a trade policy.
- Improvement of trade licensing and revenue collection streams

### **Strategy 3: Harmonization of single business license fees**

Measures to Support the Strategy:

- Establishing a one-stop licensing shop.
- Involving traders in decision making.
- Improving issuance of licenses to avoid unscrupulous traders
- Regulate fees to make them business friendly.
- County government intervention to tame rogue revenue collectors

### **Strategy 4: Construction of Masogo Municipal market and revival of market stalls at the CBD**

Measures to Support the Strategy:

- Completion of stalled market stalls
- Introduction of new market stalls where none exist.
- Designate waste disposal space in all markets.
- Redesign the drainage system in major markets.
- Construct public toilets in all markets
- Construct storage facilities for farmers produce.

### **Strategy 5: Improved access to infrastructure for businesses in all trading centers**

Measures to Support the Strategy:

- Connection of trading centers to water and electricity.

- Regulation of frequent electric blackouts
- Improvement of roads

### **Strategy 6: Skills improvement for better managed MSEs**

Measures to Support the Strategy:

- Skills needs assessment
- Skills improvement plans and policy
- Training program
- Equip vocational training centers with business training facilities

### **2) Tourism development strategies**

#### **Strategy 1: Promote private sector involvement and investment in tourism**

Measures to Support the Strategy:

- Address the perception challenge through promotion and sensitization.
- Provide innovative incentives to the private sector to encourage investment.

#### **Strategy 2: Investment in tourist attractions**

Measures to Support the Strategy:

- Subsidies for resorts and activities around Koderu and Wire forests

#### **Strategy 3: Infrastructure investment and improvement**

Measures to Support the Strategy:

- Construction of tourism missing links within the county.

#### **Strategy 4: Environmental and cultural conservation**

Measures to Support the Strategy:

- Conservation of water towers.

- Preservation and promotion of culture
- Investment in cultural villages

### **Strategy 5: Tourism niche development**

Measures to Support the Strategy:

- Brand Oyugis Municipality as a cultural and tourist destination. This would require well developed tourism sites and standard hotels

## **13.8 Urban Governance Strategies**

The implementation of this plan and smooth running of the municipality depends on the good urban governance. The values of good governance include accountability, transparency, responsiveness, equity, inclusivity, effectiveness and efficiency and public participation. These values increase public confidence and create a sense of ownership in the planning and management of urban affairs.

The following are strategies to enhance good urban governance:

### **Strategy 1: Enhance institutional capacity building for the municipality and plan implementation**

Measures to Support the Strategy:

- Training of staff to help in decision making in matters relating to urban design, development control, land use planning and urban management issues.

### **Strategy 2: Promote public participation in planning related matters**

Measures to Support the Strategy:

- Provide mechanism to build public private partnership in the implementation of the plan.
- Encourage community inclusivity for all genders, disabled and marginalized through participation in project identification and implementation.

- Create incentives for organizations and individuals to participate in the activities that lead to the achievement of the objectives and vision of the plan
- Enhance public participation through community forums such as public barazas, citizen fora and social media to increase community participation in programs and projects within the municipality.

## CHAPTER FOURTEEN: PLAN IMPLEMENTATION MATRIX

### 14.1 Overview

This chapter outlines sectoral strategies, actions to be taken to achieve them, the locations of each action, the actors who will be responsible for their implementation and the time-frame within which each action should be achieved. The time-frames are marked as short term, medium term and long term. Short term projects are quick win projects which will be achieved between 1-3 years, medium term projects achievement ranges between 4-7 years while long term projects are to be achieved between 8-10 years as illustrated in the tables below.

### 14.2 Transportation

The strategies and actions under this sector are meant to re-organize the municipality's traffic flow, decongesting the highway and ensuring better access, mobility, comfort, reduced travel time, convenience, efficiency and low transportation costs as highlighted by Table 14 - 1.

**Table 14 - 1: Transportation matrix**

<b>Sector</b>	<b>Programmes Strategies</b>	<b>Actions Activities</b>	<b>Location</b>	<b>Actors</b>	<b>Duration</b>
Transport	Decongest traffic in A1 Highway	<ul style="list-style-type: none"> <li>• Traffic Separation-Modal split</li> <li>• Provision of parking spaces</li> </ul>	<ul style="list-style-type: none"> <li>• A1 road</li> <li>• Entire CBD</li> </ul>	<ul style="list-style-type: none"> <li>• KenHA</li> <li>• County Government of Homa Bay</li> </ul>	Short term

		<ul style="list-style-type: none"> <li>• Relocation of Hawkers along A1 road</li> <li>• Opening of by-pass road</li> <li>• Erection of pumps to control traffic flow</li> <li>• Construction of footbridge to link Masogo market and the new market</li> <li>• Introduce a round-about at the Kosele junction</li> <li>• Introduce a curbed island at the Gamba road junction to streamline traffic flow</li> <li>• Introduce a round-about at the Kosele road—by-pass intersection</li> <li>• Proper road marking and road signage</li> </ul>	<ul style="list-style-type: none"> <li>• From Owade Bridge and passing behind Agoro Sare, through Kawaindi, to Gundo Primary School and back to A1 road</li> <li>• Alroad</li> <li>• A1 road</li> <li>• Kosele Road</li> <li>• All roads</li> </ul>	<ul style="list-style-type: none"> <li>• NTSA</li> <li>• KURA</li> </ul>	
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		<ul style="list-style-type: none"> <li>Relocate the lorries and trucks to the new parking</li> </ul>	<ul style="list-style-type: none"> <li>Opposite Masogo market</li> </ul>		
	Regulation of NMT/Motorized-Boda Boda Transport	<ul style="list-style-type: none"> <li>Provide designated boda boda parking spaces</li> <li>Provision of Cycling paths</li> <li>Provision of Parking spaces</li> <li>Provision of cycle lanes</li> <li>Marking of dropping and picking places</li> <li>Ensure good discipline and character of Boda Bodas</li> </ul>	<ul style="list-style-type: none"> <li>All other roads</li> </ul>	<ul style="list-style-type: none"> <li>County Government of Homa Bay</li> <li>Boda Boda Associatios</li> </ul>	Short Term
	Ensure efficient traffic flow within the planning area	<ul style="list-style-type: none"> <li>Widen existing roads</li> <li>Acquire land for road expansion and for opening of missing links</li> </ul>	<ul style="list-style-type: none"> <li>Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>County Government of Homa Bay</li> <li>NLC</li> <li>GOK</li> </ul>	Short term



		<ul style="list-style-type: none"> <li>• Provide for service lanes for loading and off-loading</li> <li>• Construct a new bus park</li> </ul>	<ul style="list-style-type: none"> <li>• At the proposed Kosele road—by-pass intersection</li> </ul>		
	Ensure that all roads are motorable	<ul style="list-style-type: none"> <li>• Tarmacking of roads within the CBD</li> <li>• murraming of roads</li> </ul>	<ul style="list-style-type: none"> <li>• All earth roads within the planning area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government of Homa Bay</li> <li>• KURA</li> </ul>	long term
	Provide for adequate parking spaces	<ul style="list-style-type: none"> <li>• Acquisition of land for parking spaces</li> <li>• Construction of parking spaces</li> <li>• All buildings to provide for parking spaces</li> </ul>	<ul style="list-style-type: none"> <li>• CBD Area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government of Homa Bay</li> <li>• KURA</li> </ul>	long term

### 14.3 Land and Housing

This matrix intends to solve the land tenure issues experienced in Oyugis Municipality, curbing the upcoming slums, promoting quality and affordable housing through adoption of modern building techniques and materials as shown in Table 14 - 2.

**Table 14 - 2: Land and Housing Implementation Matrix**

<b>Sector</b>	<b>Strategy</b>	<b>Activities</b>	<b>Location</b>	<b>Actors</b>	<b>Duration</b>
Land	<ul style="list-style-type: none"> <li>Improving land tenure and land accessibility</li> </ul>	<ul style="list-style-type: none"> <li>Restriction of land sub-division</li> <li>Improvement of land by-laws</li> <li>Enforcement of the land by-laws and planning regulations</li> <li>Acquisition of land for service provision</li> </ul>	<ul style="list-style-type: none"> <li>Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>County government</li> <li>NLC</li> <li>Ministry of lands</li> </ul>	Long term
Housing	<ul style="list-style-type: none"> <li>Promoting Land use Planning to support quality and</li> </ul>	<ul style="list-style-type: none"> <li>Initiate surveying and titling of plots particularly in freehold</li> <li>Enhance easy access to land for residential especially to low</li> </ul>	<ul style="list-style-type: none"> <li>Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>County Government</li> <li>NLC</li> <li>NCA</li> </ul>	Short term

	affordable housing	<p>income groups through communal amalgamation</p> <ul style="list-style-type: none"> <li>• Zone areas for specific residential densities</li> <li>• Prepare detailed action physical development plans for areas identified for housing development</li> <li>• Provide basic plot layout and minimal infrastructure such connections to sewer, electricity, water and roads in advance of spontaneous development</li> <li>• Initiate dialogue and participatory planning activities among all the stakeholders in the housing sector</li> </ul>		<ul style="list-style-type: none"> <li>• Ministry of Infrastructure, Public Works, Housing and Urban Development</li> <li>• Private sector</li> </ul>	
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	Undertaking slum upgrading programmes	<ul style="list-style-type: none"> <li>• Re-zoning of areas around the CBD into high density residential areas</li> <li>• Initiating informal settlement improvement programmes</li> <li>• Encourage private sector financial institutions to provide housing finance for housing improvement and infrastructure upgrade</li> <li>• Designing a standard low-cost house</li> </ul>	<ul style="list-style-type: none"> <li>• 1000 streets, Masogo, madiaba, Aloo Estates</li> </ul>	<ul style="list-style-type: none"> <li>• County government</li> <li>• KENSUP</li> <li>• KISIP</li> <li>• Private sector</li> <li>• NHC</li> <li>• Presidential Delivery Unit</li> </ul>	Short term
	Enhance use of quality, local and affordable building techniques and materials	<ul style="list-style-type: none"> <li>• Undertake capacity building for building contractors and masons</li> <li>• Encourage use of sustainable mining techniques</li> <li>• Support investment of hardware premises to reduce cost of construction materials</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• NCA</li> <li>• Ministry of Infrastructure, Public Works, Housing and</li> </ul>	Short term

		<ul style="list-style-type: none"> <li>• Develop county by laws on mining of construction materials</li> </ul>		Urban Development	
	Formulating user-friendly housing regulations	<ul style="list-style-type: none"> <li>• Establish County Law Courts to strengthen enforcement of existing housing standards</li> <li>• Developing residential zoning standards</li> <li>• Cascade the building codes (regulations) in to county by-laws</li> <li>• Simplify the housing regulations and procedural frameworks</li> <li>• Employ building inspectors</li> <li>• Establish a development control committee</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• NCA</li> <li>• Judicial Service Commission</li> <li>• Ministry of Infrastructure, Public Works, Housing and Urban Development</li> </ul>	Short term
	Support establishment of	<ul style="list-style-type: none"> <li>• Encourage establishment of housing finance institutions</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> </ul>	Short term

	housing finance mechanisms	<ul style="list-style-type: none"> <li>• Undertake regular training/workshops on various housing finance models</li> <li>• Encourage registration of housing SACCOs</li> <li>• Support self-help groups to venture into housing financing</li> </ul>		<ul style="list-style-type: none"> <li>• Ministry of Infrastructure, Public Works, Housing and Urban Development</li> </ul>	
	Improving housing infrastructure services	<ul style="list-style-type: none"> <li>• Enforce mandatory connection to public infrastructure and utilities before development approval</li> <li>• Improve infrastructure services in the residential areas</li> <li>• Provide garbage skip in all residential zones</li> <li>• Provide playgrounds in all residential zone</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• Ministry of Infrastructure, Public Works, Housing and Urban Development</li> <li>• HOMAWASCO</li> <li>• Kenya Power</li> <li>• Communication Authority &amp;</li> </ul>	Long term

				Mobile Service Providers	
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#### 14.4 Environment and Social Infrastructure

Environmental quality in Oyugis Municipality is fair. There are no major industries in the municipality while the tree cover is recommendable. Lack of a liquid and solid wastes management site hinders the maintenance of hygiene and sanitation in the municipality. The municipality has already established social infrastructures which only needs improvement while the missing ones should be established as shown in Table 14 - 3.

**Table 14 - 3: Environment and Social Infrastructure Implementation Matrix**

Sector	Strategies	Activities	Location	Actors	Time-frame
<b>Environment</b> <i>Solid waste management</i>	Provide comprehensive solid waste management	<ul style="list-style-type: none"> <li>Public sensitization</li> <li>Organize for clean ups</li> <li>Acquire land for wastes recycling</li> <li>Regular solid wastes collection</li> </ul>	<ul style="list-style-type: none"> <li>Entire planning area</li> <li>Near Owade, next to proposed sewer treatment</li> </ul>	<ul style="list-style-type: none"> <li>County government</li> <li>Municipal Board</li> <li>Market management committee</li> <li>CBOs, NGOs</li> </ul>	Short-term Medium-term Short-term

		<ul style="list-style-type: none"> <li>• Strategic location of skips</li> </ul>	<ul style="list-style-type: none"> <li>• At the selected sites within the municipality</li> </ul>	<ul style="list-style-type: none"> <li>• Residents</li> <li>• NG-CDF</li> </ul>	
<i>Drainage system</i>	Develop proper drainage system for the municipality	<ul style="list-style-type: none"> <li>• Opening up the blocked drainage channels</li> <li>• Constructing drainage channels along all roads</li> </ul>	<ul style="list-style-type: none"> <li>• Within the municipality</li> </ul>	<ul style="list-style-type: none"> <li>• KURA</li> <li>• County Government</li> <li>• Public works</li> <li>• NGOs</li> <li>• NG-CDF</li> </ul>	<p>Short term</p> <p>Medium-term</p>
<i>Sewer management</i>	Provide a comprehensive sewerage system for the municipality	<ul style="list-style-type: none"> <li>• Acquire land for sewer treatment plant</li> <li>• Construct a sewer treatment plant</li> <li>• Develop a sewer network</li> <li>• Construct adequate public toilets</li> </ul>	<ul style="list-style-type: none"> <li>• Upper part of Owade bridge(Northern end)</li> <li>• Entire planning area</li> <li>• Markets, Bus parks, Public parks, Community facilities</li> </ul>	<ul style="list-style-type: none"> <li>• HOMAWASCO</li> <li>• County government</li> <li>• NGOs, CBOs</li> <li>• NG-CDF</li> <li>• KISIP</li> <li>• World Bank</li> </ul>	<p>Medium term</p> <p>Long-term</p> <p>Short term</p>



<i>Environmental hazards and disasters</i>	Develop environmental hazards and disasters management system	<ul style="list-style-type: none"> <li>• Enforcement of biodiversity regulations</li> <li>• Develop and implement effective early warning systems</li> <li>• Create awareness and educate the community</li> <li>• Encourage community participation in disaster management</li> <li>• Establishment of a fire station with at least a fire engine with 5 members staff</li> <li>• Establishing Disaster Preparedness and Management section</li> </ul>	<ul style="list-style-type: none"> <li>• Wire hills</li> <li>• River Ayoro riparian reserve</li> </ul>	<ul style="list-style-type: none"> <li>• County government</li> <li>• NGOs, CBOs</li> <li>• NG-CDF</li> <li>• NEMA</li> <li>• WARMA</li> </ul>	<p>Medium term</p> <p>Short-term</p> <p>Long-term</p> <p>Medium-term</p>
<b>Utilities</b> <i>Energy</i>	Ensure accessible and reliable electricity supply	<ul style="list-style-type: none"> <li>• Encourage the use of renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>• Kenya Power REA</li> <li>• NGOs</li> </ul>	<p>Short-term</p> <p>Medium-term</p>

	Promote the adoption of clean energy	<ul style="list-style-type: none"> <li>• Public, private, partnership with manufacturers to lower cost of installation</li> <li>• Increase electricity coverage to 100%</li> <li>• Enforcement of the by-laws relating to the preservation of power way-leaves</li> <li>• Popularization of alternative energy sources such as solar energy</li> </ul>			<p>Long-term</p> <p>Medium-term</p> <p>Short-term</p>
<i>Cemetery</i>	Provide for cemeteries	<ul style="list-style-type: none"> <li>• Acquire land for establishment of cemetery</li> <li>• Establish a cemetery for all religions (one for Christians and the other for Muslims)</li> <li>• Enforcement of by-laws prohibiting burials within the municipality boundaries and</li> </ul>	<ul style="list-style-type: none"> <li>• Near Nyahera</li> </ul>	<ul style="list-style-type: none"> <li>• County government</li> <li>• NGOs, CBOs, FBOs</li> <li>• NG-CDF</li> </ul>	Long-term

		sensitization of the residents to undertake burials in the designated cemeteries			
<i>Water</i>	Expand water coverage within the municipality  Protect and preserve natural water resources	<ul style="list-style-type: none"> <li>• Connect more households to the water lines</li> <li>• Establishing water kiosks within a radius of 50 meters in informal settlement</li> <li>• Awareness campaigns and community sensitization</li> <li>• Tree planting along the water courses</li> <li>• Prepare a land use plan</li> <li>• Prosecutions of offenders</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> <li>• Jua kali estate</li> <li>• 1000 streets</li> <li>• Aloo estate (Masogo line)</li> <li>• River Ayoro riparian reserve</li> <li>• Siany</li> </ul>	<ul style="list-style-type: none"> <li>• County government</li> <li>• NEMA</li> <li>• WARMA</li> <li>• KFS</li> <li>• NGOs, CBOs</li> <li>• NG-CDF</li> </ul>	<p>Medium term</p> <p>Short-term</p> <p>Short-term</p> <p>Long-term</p> <p>Short-term</p>
<b>Health</b>	Improve access to effective and efficient health services	<ul style="list-style-type: none"> <li>• Acquire modern medical equipment</li> <li>• Regularize supply of drugs</li> <li>• Attach mortuaries to the health facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Rachuonyo south Sub-county hospital</li> </ul>	<ul style="list-style-type: none"> <li>• County government</li> <li>• National government</li> </ul>	<p>Medium term</p>

		<ul style="list-style-type: none"> <li>• Hire two more medical doctors</li> <li>• Encourage establishment of private funeral parlours</li> <li>• Provision of support infrastructure such as access roads, pavements, shades etc.</li> </ul>		<ul style="list-style-type: none"> <li>• NGOs, CBOs, FBOs</li> </ul>	
<b>Security</b>	Improve security within the municipality	<ul style="list-style-type: none"> <li>• Provide adequate flood/street lights within the municipality</li> <li>• Enforce community policing initiatives (Nyumba Kumi initiative)</li> <li>• Provide street lighting</li> <li>• Opening of roads for ease of patrols</li> <li>• Increase number of security officers</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>• National police service</li> <li>• County government</li> <li>• NGOs, CBOs, FBOs</li> </ul>	Short term

<b>Education</b>	Provide quality and affordable education  Develop skilled and job-oriented human resource	<ul style="list-style-type: none"> <li>• Construct a vocational training institute</li> <li>• Construct the proposed Mawira secondary school</li> <li>• Construct a new secondary school</li> <li>• Public private partnership in improving educational facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Next to KMTC</li> <li>• Proposed Mawira secondary site</li> <li>• Next to Kasimba primary school</li> <li>• Gundo primary school</li> </ul>	<ul style="list-style-type: none"> <li>• County government</li> <li>• PAs</li> <li>• CBOs, NGOs, FBOs</li> <li>• National government</li> </ul>	Medium term
<b>Recreation</b> <i>Stadia</i>	Provide recreational facilities	<ul style="list-style-type: none"> <li>• Construct a stadium</li> </ul>	<ul style="list-style-type: none"> <li>• Ragama area</li> </ul>		Long term
<i>Open spaces/ Public parks</i>	Improve the aesthetics of the municipality	<ul style="list-style-type: none"> <li>• Acquisition of land for open spaces</li> <li>• Establishment of 5 open spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Nyahera, Behind Oyugis supermarket, Next to Raila ground, Siany</li> </ul>		Long term

		<ul style="list-style-type: none"> <li>• Establish an arboretum along wetlands and river riparian reserves</li> <li>• Establish a 30m riparian reserve for recreation and conservation</li> <li>• Set aside 10% of the municipality for green spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Along Ayoro River (starting from where Gamba road meets Ayoro River)</li> <li>• Ayoro River</li> <li>• Elimu area</li> </ul>		
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## 14.5 Economic

The municipality is rampant and has both agricultural and commercial potentials which if well tapped into and managed will lead to the municipality's sustainability. Improved agricultural production, value addition and improved revenue collection are some of the economic benefits that can be achieved through outlines of Table 14 - 4.

**Table 14 - 4: Economic Implementation Matrix**

Sector	Strategies	Activities	Location	Actors	Duration
<b>Economic Agriculture</b>	Promotion of agro-industrial growth	<ul style="list-style-type: none"> <li>Establishing industrial zones.</li> <li>Promotion of innovative agriculture for industrial development</li> <li>Sourcing of industrial markets both locally and regionally.</li> <li>Development of urban and rural infrastructure (roads, water, electricity)</li> </ul>	Proposed industrial zones; at Osare	<ul style="list-style-type: none"> <li>County government</li> <li>Private sector</li> <li>National Government</li> </ul>	<p>Long-term</p> <p>Continuous</p>

		<p>networks) to promote industrial production.</p> <ul style="list-style-type: none"> <li>• Preparation and Implementation of Local Physical and land use Development plan to control urban growth in the event of industrial growth.</li> <li>• Tailor and develop education institutions and programs that supplement the requirements of industries.</li> <li>• Create and promote an appropriate and enabling business environment for investors in the municipality</li> </ul>	<ul style="list-style-type: none"> <li>• Light industrial park next to the cattle sale yard</li> </ul>		<p>Short term</p> <p>Long term</p> <p>Medium term</p>
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		<ul style="list-style-type: none"> <li>• Formation and investment in regional markets</li> <li>• Promotion and development of cottage industry</li> <li>• Establishment of a jua kali zone within the municipality</li> </ul>			
<i>Trade</i>	Improvement of business environment to encourage the growth of MSMEs	<ul style="list-style-type: none"> <li>• Preparation and implementation of a Pro MSME`s and industry policy</li> <li>• Preparation of a trade policy.</li> <li>• Improvement of trade licensing and revenue collection streams</li> <li>• Harmonization of single business license fees</li> </ul>	<ul style="list-style-type: none"> <li>• Planning area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government of Homa Bay</li> <li>• NGOs, CBOs, FBOs</li> <li>• Market management committee</li> <li>•</li> </ul>	<p>Short-term</p> <p>Short-term</p>

		<p>by: Establishing a one-stop licensing shop.</p> <ul style="list-style-type: none"> <li>• Involving traders in decision making.</li> <li>• Improving issuance of licenses to avoid unscrupulous traders</li> <li>• Regulate fees to make them business friendly.</li> <li>• County government intervention to tame rogue revenue collectors</li> <li>• Construction and revival of market stalls:</li> <li>• Completion of stalled market stalls</li> <li>• Introduction of new market stalls where none exist.</li> </ul>	<ul style="list-style-type: none"> <li>• Masogo market</li> <li>• New market</li> <li>• Next to the proposed bus park</li> <li>• Masogo market, new market, proposed bus park</li> </ul>		Short-term
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		<ul style="list-style-type: none"> <li>• Designate waste disposal space in all markets.</li> <li>• Redesign the drainage system in major markets.</li> <li>• Construct public toilets in all markets</li> <li>• Construct storage facilities for farmers produce</li> </ul>			
	Improve access to business financing	<ul style="list-style-type: none"> <li>• Sensitization to counter fear of borrowing.</li> <li>• Tailoring lending to small businesses best captured by MFI`s</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• MFIs</li> <li>• NGOs</li> <li>• Commercial banks</li> </ul>	<p>Short-term</p> <p>Short-term</p>
	Improved access to infrastructure for businesses	<ul style="list-style-type: none"> <li>• Connection of markets to water and electricity.</li> </ul>	<ul style="list-style-type: none"> <li>• All markets</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• KPLC</li> </ul>	<p>Short-term</p>

		<ul style="list-style-type: none"> <li>• Regulation of frequent electric blackouts</li> <li>• Improvement of roads</li> </ul>		<ul style="list-style-type: none"> <li>• HOMAWASCO</li> <li>• World bank</li> </ul>	
	Skills improvement for better managed MSME`s	<ul style="list-style-type: none"> <li>• Skills needs assessment</li> <li>• Skills improvement plans and policy</li> <li>• Training program</li> <li>• Equip vocational training centers with business training facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area</li> <li>• TVETs within and around the planning area</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• GOK</li> <li>• TVETs</li> <li>• NGOs</li> <li>• SACCOs</li> </ul>	Medium term
<i>Tourism</i>	Promote private sector involvement and investment in tourism	<ul style="list-style-type: none"> <li>• Address the perception challenge through promotion and sensitization.</li> <li>• Provide innovative incentives to the private sector to encourage investment</li> </ul>	<ul style="list-style-type: none"> <li>• Entire planning area and beyond</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• Tourist Stakeholders</li> </ul>	Short-term

	Investment in tourist attractions	<ul style="list-style-type: none"> <li>• Subsidies for resorts and activities around Koderia and Wire forests</li> <li>• Revive tourist sites that have gone dormant</li> </ul>	<ul style="list-style-type: none"> <li>• Koderia and Wire</li> <li>• The bird watching site</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• GOK</li> <li>• Private investors</li> </ul>	Medium term
	Infrastructure investment and improvement	<ul style="list-style-type: none"> <li>• Construction of link roads</li> <li>• Providing additional support infrastructure to support the establishment of amenities</li> </ul>	<ul style="list-style-type: none"> <li>• Planning area and beyond</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• Development Partners</li> </ul>	Short-term
	Environmental and conservation	<ul style="list-style-type: none"> <li>• Conservation of Forest water towers.</li> </ul>	<ul style="list-style-type: none"> <li>• Wire forest</li> <li>• Koderia forest</li> <li>• Ayoro River</li> </ul>	<ul style="list-style-type: none"> <li>• Government of Kenya</li> <li>• Kenya Forest service</li> <li>• WRA</li> <li>• NEMA</li> </ul>	Long term

	Tourism niche development	<ul style="list-style-type: none"> <li>• Brand Oyugis as a cultural and tourist destination</li> </ul>	<ul style="list-style-type: none"> <li>• Koderia forest</li> <li>• Wire forest</li> <li>• Birds sanctuary</li> </ul>	<ul style="list-style-type: none"> <li>• County Government</li> <li>• Stakeholders</li> </ul>	Short-term
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## 14.6 Urban Governance

Oyugis Municipality currently is set up with the board, manager and relevant officers to run the municipality. Table 14 - 5 illustrates the strategies and actions of improving the municipality governance capacity.

**Table 14 - 5: Urban Governance Implementation Matrix**

Sector	Emerging issues	Strategies	Activities	Actors	Time frame
	Inadequate public involvement in planning and urban affairs	Promote public participation in planning related matters	<p>Civil education, sensitizing and awareness creation on development control and regulation</p> <p>Formation of estate association/management committee</p>	County government	Immediately and continuously

## **CHAPER FIFTEEN: CAPITAL INVESTMENT PLAN FOR OYUGIS MUNICIPALITY**

### **15.1 Revenue Position of Oyugis Municipality**

#### **15.1.1 Introduction**

Oyugis Municipality has a potential of generating higher local revenues from property rates tax, entertainment tax, and any other tax authorized to be impose by an Act of Parliament as assigned under Article 209 (2) of the constitution. In addition, Article 209 (2) also enables counties to collect fees and user charges for services provided under county legislation.

The Finance Act 2023 also gives Counties legal mandate to collect taxes from additional revenue streams within its jurisdiction.

#### **15.1.2 Sources of Revenue in Oyugis Municipality**

##### **1. Single Business Permits (SBP)**

The SBP is one of the main sources of Oyugis Municipality revenues that should be integrated into other revenue database. There should be update of inventory of all business premises within Oyugis Municipality and Homa Bay County at large.

This CIP proposes decentralization of revenue collection to Oyugis Municipality in order to ease monitoring and management. The county should further consider enhancing the capacity of all staff especially those responsible for the administration of SBP and other revenue sources at all levels.

##### **2. Devolved units**

The government is developing a national legislation to guide counties on revenue collection. This was due to complaints that some devolved units had come up with prohibitive taxes that have scared away investors. The guide is meant to check on the unnecessary levies that are way above what the business community can afford and remain in business. The National

Treasury proposed a review of the fees charged by counties that include reviewing property rates that currently doesn't match the current market rates and thus more revenues for the county.

### **3. Motor Vehicle Park Fees**

The County/Municipality should consider public private partnership (PPP) arrangements for provision and management of motor vehicle parking facilities. Consideration should be given to expanding parking facilities across the municipality based on parking demand.

The County/municipality should further develop monitoring and enforcement to ensure that all the existing parking spaces are utilized effectively. This should include development of simple but robust method for determining parking charges and levy charges

### **4. Land Based Revenue**

The County/municipality should consider integrating property rating into the municipality Geographical Information Systems. This will ease monitoring of property rate collection. This will aid in enhancing existing land value capture instruments while exploring other instruments by developing by laws to support the same

The county/municipality should further fast track development of the County Valuation roll while ensuring continuous updating of the database to capture changing property values. This should include networking the revenue section and relevant departments like the Department of Land to ensure all chargeable properties are captured by revenue section. Legislation is needed to enhance revenue collection at county, with additional resources needed to develop databases on taxpayers through the automation of fees and levies. Consideration should further be given to adequate vigilance and revenue systems to be able to gather information on property tax evasion.

### **5. 5. Housing /Market stalls/Kiosk rent**



Development of facilities like markets and kiosks should be demand driven through engagement of users in development of facilities to guarantee uptake and proper use. The county/municipality should consider integrating of Kiosks into existing or proposed facilities to control encroachment on road reserves and proliferation of illegal kiosks.

Further to this, adequate budgets should be provided for annual maintenance of existing facilities like Markets and Bus parks. Consideration should be given to reinvesting a percentage of revenue generated from these facilities into maintenance to encourage users to comply in terms of payments and reduce complaints.

### **5.6 Public Private Partnership (PPPs)**

Where the county government is not in a position to provide a service, it may contract it to private sector operators to provide the service with such conditions as will ensure sustained availability of the service at an affordable cost to all who need it. Services that can be privatized include water supply, solid waste management, slaughter houses, rental housing, nursery schools, markets, hotels, lodges and restaurants.

Public Private Partnership in municipality service provision and in problem solving is still a subject for further consideration by the county government and interested private sector parties especially in connection with the provision of user charge services such as conservancy, markets, bus-park and slaughter house which can also be run effectively for the benefit of the general public by the county government in partnership with the private sector.

Provision of public health and pre-primary school education mainly by religious organizations, NGOs and parents-teachers associations are good examples of private sector participation in the provision of public services in the municipality. The county government should adopt policies and strategies that further promote private sector participation in provision of services needed by residents at the local level.

## **15.2 Revenue Enhancing Strategy for Oyugis Municipality**

The following cross-cutting institutional changes may be considered to enhance the revenue across all revenue streams:

1. Strengthen the financial policy to broaden revenue base especially on land. The county government should also ensure fully computerized revenue collection as well as strengthening enforcement to bolster revenue collection. Automation will eliminate leakages and contribute towards achievement of the set revenue targets
2. Improve coordination in terms of assessment, collection, administration and data sharing-the integration of various revenue functions is critical to ensuring that all revenue sources are easily mapped and reliable predictions about potential revenue potential can be made for all the revenue sources.
3. Introduce a comprehensive monitoring and evaluation systems for each revenue source.
4. Institute adequate revenue intelligence and vigilance system and have proactive efforts to gather information about tax evasion.
5. There must be a consistent effort to ensure proper and integrated revenue management that guarantees the collection of all potential revenue in a manner that is efficient, effective and accountable. The county government should adequately invest and employ technology through automation of the revenue collection and administration process.
6. Maximize on business licenses and in so doing, develop the most economic approach to collecting revenue. This may involve partnering with the Kenya Revenue Authority
7. Leverage on domestic tourism as a source of revenue; like the conservation of Koderia and Wire Forest and development of good tourist hotel in Oyugis Municipality.

8. Create a favorable environment that supports entrepreneurship and attract investments through reform of the business regulatory frameworks. This will enhance volumes of trade and consequently create taxation opportunities;

9. Develop a transparent and accountable system of incentives (reward) for early payments and penalties for those in tax arrears to promote compliance. The County Government could partner with the private sector through Public Private Partnerships, to devise innovative mechanisms of increasing their revenue collection and services delivery. Some of the avenues they may explore include Tapping into private capital to fund development initiatives and outsourcing services from the private sector to enhance efficient and effective service delivery

10. Carry out valuation roll to determine rates and plot rents payable to the county Government An up to date Valuation roll with all property information and all ratable properties within the county's boundaries should be instituted and regularly updated. It is worth noting that the process of getting an up-to-date valuation roll in in progress

11. Licensing of rental houses and real estate developments

12. Embrace the concept of value involving taxation of properties in areas where the county has provided infrastructure with the view to harnessing unearned increments

13. Capacity Building & Enhanced Revenue Administration. Due to the prevailing capacity gaps especially on the ICT skills, revenue administrators and collectors need to be supported through regular capacity building on new and emerging trends in order to keep abreast with the new ways and systems as well as international standards.

14. Inventory for the County Assets. Lack to identify, validate and record on both assets and liabilities of the defunct local authorities may occasion

revenue losses for the county. The county has since began the process of having an inventory for the county assets

15 Enforcement of the By-Laws and Regulations. It is proposed that County government ensures that the gazette fees and charges are collected according to the proposed By-Laws and Regulations.

16. Strengthening Institutional Framework. The institutions in the county mandated to collect revenue should have legal backing to strengthen coordination, and avoid duplication of efforts.

17.The County should consider integrating an e-governance platform which will allow full integration of the consolidated revenue data base and consequently linked with the Integrated Finance Management Information System (IFMIS) to enhance better revenue collection and financial management:

18. Establish partnerships and networking with the donor community for funding

### **15.3 Oyugis Capital Investment Plan (2023 -2033)**

#### **15.3.1: Approach for Developing the Capital Investment Plan**

The CIP is based upon strategic priorities that enhance conservation and improvement of the bio-diversity and heritage in the municipality as well as boost economic development in Oyugis Municipality, with emphasis on sustainability. The set priorities shall guide investments on maintenance and modernization of existing infrastructure I assets that may have deteriorated or setting up new infrastructure to meet current stakeholder needs and requirements.

Oyugis Urban Development Plan Implementation Matrix was generated after comparison of impacts of different development scenarios of investments across various sectors. Projects were selected from the Plan Implementation Matrix which, incorporated public input and detailed all known project ideas including strategy, relevant actors and expected outcome of implementing a project.

The plan has established approximately 80 different funding programs which incorporate the capital responsibilities of the County Government of Oyugis and the National Government. The programs are sector based highlighting funding allocations for each program based on stake-holder input, and technical staff recommendations. Program sizes were initially established to ensure that they were sufficient to cover projects already underway. A two-phase process was then used in allocation of the remaining funds. The first phase allocates restricted-use funds to projects within the first five years (2023-2027) and those that are legally or in some way mandated. Allocations to be continued in the following 5 years (2027-2033) based on the strategic priorities.

Finally, there will be a public review process of the Oyugis Municipality Local Urban Development Plan after one year, during which this CIP will incorporate input from elected leaders, county technical officials, business groups and other key stakeholders about other priority projects that best facilitate the sustainable development of Oyugis Municipality and require funding for planning, construction or both. The CIP becomes a rolling plan, linked to the annual budgetary process.

### **15.3.2 Challenges of the CIP.**

There are at least three substantial challenges in dealing with CIP in, Oyugis, Homa Bay County.

1. Demands and desires for capital investments are always higher than available funding hence the leaders will prioritize their projects that best facilitate the sustainable development of Oyugs Municipality.
2. Timing Challenge- There is an intrinsic timing challenge. On one hand, allocating funding for capital projects should be done annually within the Country's budgeting cycle. On the other hand, complex infrastructure projects may require several years of preparation and 'packaging' before external financing (grants or loans) can be sought.
3. Contemporary approaches to evaluate options for complex infrastructure usually exceed the Government's technical capabilities.

4. Capital Investment Planning is an evolving area of public management thus all County governments across the world are continuously trying new approaches,

### **15.3.3 Principles in Preparation the CIP**

In preparation of the Oyugis Municipality Capital Investment Plan the following assumptions were put into consideration;

1. County government will take care of assets if they are only provided to County government services to constituents or perform mandatory obligations of the County government.
2. Since financial resources available to the County Government for capital projects are limited, a process will be established to evaluate the competing needs of various Government services to maximize the use of the financial resources in the areas of high priority.
3. Local financial policy will be formulated and enacted to define in which assets to invest, capital investment priorities and financial sources,
4. The approach will be multiyear
5. Capital Investments will be considered within the frameworks of life cycle costing and assessment of alternatives
6. The process and results should be inclusive and transparent involving all departments, senior and junior staff, Local community and the public.

These principles will ensure that the following activities take place;

1. County government does not spend its limited resources on 'frivolous' investment in projects that are not Government business (For example, Investing speculative commercial real estate)
2. All needs are compared objectively
3. Prudent long-term fiscal policy is exercised
4. Innovative solutions at the project level are considered
5. Individuals have effective channels through which to express their preferences.

This framework balances the conflicting interests and preferences of different stakeholders (Residents, Businesses, Utility companies etc.) are perhaps its

strongest feature. In particular, such balancing makes this CIP itself reasonably resilient after changes of ruling party or ideology. Nevertheless, the above principles need to be made compatible and with the complicated realities in which the County government operates.

#### **15.3.4 Impacts of the CIP**

The Capital Investment Plan has direct and multifaceted impact on local life;

1. **Quality of life** - the quality of life in Oyugis Municipality and its attractiveness to people and business depend on the quality of public infrastructure and related services. This infra-structure is an outcome of local Capital Investment Planning. Given that public funding for capital projects usually is limited, hence making the right choices among competing investments becomes an important factor in the municipality's long-term vitality and competitiveness.
2. **Long-lasting spatial effects** -capital investments projects impact local life after the projects have been implemented. Locating public capital investment wisely and according to sectorial demand can serve as a catalyst to attract private sector capital investment -on top of public investment- in particular location and thus create a node of urban renewal or growth. Errors in allocating public projects can dramatically reduce the municipality's utility and waste the limited public resources. Erroneous choices also have negative socioeconomic implications.
3. **Fiscal legacy** - Capital investment by the County Government often requires some form of long-term borrowing. Moreover, even if new properties and infrastructure are acquired or built without borrowing, making wise choices is important because funding spent unwisely could be used better elsewhere. In addition, capital investment usually leads to ongoing annual operation and maintenance expenses.

#### **15.4 Sectoral Development Strategies**

Strategies are courses of action geared towards the achievement of given objectives. The strategy formulation process for Oyugis Municipality was

supported by the existing background documents, a synthesis of the potentials, opportunities, and constraints of data collected, and stakeholder inputs from the various forums held in the municipality. The estimated costing the various components within this CIP have been summarized in table below sector wise.



The Capital Investment Plan (CIP) is the multi-year capital investment estimates of proposed capital projects for implementing the local physical and land use development plan for Oyugis urban area. It presents an investment road map for the horizon year 2033 based on evaluation of projects to determine their return on investment in the long run.

The capital projects are deemed viable for the plan period having economic, social and environmental impacts as projected through a cost-benefit analysis in project identification and costing phases. (See Table 15 - 1)

**Table 15 - 1: Capital Investment Plan**

No	Sector	Total Cost	% of Total
1	Local Economy	438,400,000	4.2%
2	Transport	3,115,400,000	30.0%
3	Physical Infrastructure	749,800,000	7.2%
4	Social Infrastructure and Services	3,681,700,000	35.5%
5	Environment and Natural Resources	2,393,000,000	23.1%
	Total	10,378,300,000	100.0

### **15.4.1 Transportation**

#### **Table 15 - 2: Transportation strategies**

No.	Strategy	Project	Location	Quantity	Unit Cost in KES	Total Cost Estimate (in KES)	2020/202	2023/202	2023/202	2023/202	2024/202	2025/202	2026/202	2027/202	2028/202	2029/203	
1.	Decongest traffic in A1 Highway	Opening of by-pass road	From Owade Bridge and passing behind Agoro Sare, through Kawaindi, to Gundo Primary School and back to A1 road (ring road)	4.9km	3.3 Million per Kilometre	1.6B		0.8B	0.8B								
2.		Erection of pumps to control traffic flow	A1 Road	4	300,000	1.2M	1.2M										
3.		Construction of footbridge to link Masogo market and the new market	A1 Road	1	10.7M	10.7M	3.6M	3.6M	3.6M								
4.		Introduce a round-about at the Kosele junction	Kosele Road	1	2M	2M		1M	1M								
5.		Introduce a curbed island at the Gamba road junction to streamline traffic flow	Opposite Masogo market	1	1.5M	1.5M		0.75M	0.75M								
6.		Introduce a round-about at the Kosele road—by-pass intersection	Kosele and A1 road	1	3M	3M		1.5M	1.5M								
7.		Proper road marking and road signage	A1 road	1	5M	5M	5M										

8.	Regulation of NMT/Motorized-Boda Boda Transport	Provide designated boda boda parking spaces	All Roads	15	90,000	1.4M	1.4M											
9.		Provision of Cycling paths	All Roads	93.628 km	1.8M	168.5M	168.5M											
10		Provision of designated dropping and picking areas	All Roads	5	2M	10M	10M											
	<b>Ensure efficient traffic flow within the planning area</b>	Construct a new bus park	Along Kosele/Kendu Road	1	335.7 M	335.7 M		167.85M	167.85M									
		construct a new lorry park	Near Masongo Market	1	60m	60m		30M	30M									
		Acquire land for road expansion and for opening of missing links	within the municipality	10KM	3.8M	38M	12.7M	12.7M	12.7M									
11	Ensure that all roads are motorable	Tarmacking of roads within the CBD	All Roads within CBD	21.8km	40M	872M									218M	218M	218M	218M
12	Provide for adequate parking spaces	Acquisition of land for Lorry Park and new bus park	Near masongo market & Along Kosele/Kendu Road	1..7ha	1.5M	6.4M									3.2M	3.2M		
<b>TOTAL</b>						3,115,400,000												

Notes:\*Policy driven, included in other programs or requires feasibility study.

## **15.4.2 Local Economy**

### **Table 15 - 3: Local economy strategies**

No.	Strategy	Project	Location	Quantity	Unit Cost in KES	Total Cost Estimate (in KES Millions)	2020/2023	2023/2023	2023/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030
<b>Agriculture</b>																
1.	Promotion of agro-industrial growth	Establishing industrial zones.	Proposed agr0-based processing plant	4.8ha	300m	300m										
2.		Establishment of a jua kali zone within the municipality	along the Proposed Ring Road opposite Oyugis Primary School	1.8ha	136.4 M	136.4 M			34.1M	34.1M	34.1M	34.1M				
<b>Trade</b>																
3.		Expansion and Rehabilitation of Masongo market	Masogo market	1	10 M	10 M	3.3M	3.3M	3.3M							
4.		Designate and provide waste disposal space in all markets (Transfer sites)	All markets	4	2 M	8 M	2.7M	2.7M	2.7M							
5.		Redesign the drainage system in major markets.	All markets	4	200 M	200 M	66.7M	66.7M	66.7M							

6.		Construct public toilets in all markets	All markets	4	6m	24m	8M	8M	8M							
7.		Construct storage facilities for farmers produce	Masogo market, new market, proposed bus park	3	20m	60m	15M	15M	15M	15M						
<b>Total</b>						438,400,000										

**Notes:**

\*Policy driven, included in other programs or requires feasibility study.

### **15.4.3 Social Infrastructure**

**Table 15 - 4: Social infrastructure strategies**



No.	Strategy	Project	Location	Quantity	Unit Cost in KES	Total Cost Estimate (in KES Millions)	2020/2023	2023/2023	2023/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030
<b>Health</b>																
1.	Improve access to effective and efficient health services	Acquire modern medical equipment	Rachuonyo south Sub-county hospital	1	329.7M	329.7M	109.9M	109.9M	109.9M							
2.		Hire two more medical doctors	Rachuonyo south Sub-county hospital	2	6m	12m	12M									
3.		Construct a mortuary	Rachuonyo south Sub-county hospital	1	30m	30m				10M	10M	10M				
<b>Education</b>																
4.	Provide quality and affordable education	Construct a vocational training institute	Next to KMTC	1	60 M	60 M				20M	20M	20M				
5.		Construct the proposed Mawira secondary school	Proposed Mawira secondary site	1	25 M	25 M				8.3M	8.3M	8.3M				
6.		Land purchase and construct a new secondary school	Next to Kasimba primary school	0.5ha	27 M	27 M				9M	9M	9M				

Recreational																
7.	Provide recreational facilities	Construct a stadium	Ragama area	1	2.5b	2.5b							0.625M	0.625M	0.625M	0.625M
8.		Acquisition of land for open spaces	at Raila Ground	0.4ha	1acre-4m	4m			2M	2M						
9.			Behind Oyugis Supermarket	0.4ha	1acre-4m	4m			2M	2M						
10.			Along Siany Stream next to Onyango Tree Nursery	0.5ha	1acre-4m	6m			3M	3M						
11.		Establish 5 open spaces	Land Abutting Oyugis - Kisii Highway near Kasimba Junction, Raila grounds, Along Siany Stream next to Onyango Tree Nursery, Along Ayoro/Owade River abutting 1000 Streets and behind Oyugis supermarket	5	90m	450m				150M	150M	150M				

Security														
12.	Improve security within the municipality	Provide adequate flood/street lights within the municipality	Planning Area	3901	60,000	234M	78M	78M	78M					
<b>TOTAL</b>						3,681,700,000								

**Notes:**

\*Policy driven, included in other programs or requires feasibility study.

### 15.4.4 Environment and Natural Resources

**Table 15 - 5: Environmental strategies**

No.	Strategy	Project	Location	Quantity	Unit Cost in KES	Total Cost Estimate (in KES Millions)	2020/2023	2023/2023	2023/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030
<b>SOLID WASTE MANAGEMENT</b>																
1.	Provide comprehensive solid waste management	Acquire land and establish wastes recycling plant	At Migwena area Near Owade, next to proposed sewer treatment (100,000 target population)	2.8ha	15m lad acquisition	1.2 B	0.6B	0.6B								
2.		Provide garbage skips at designated locations	Planning area	10	200,000	2,m	1M	1M								
3.	Develop proper drainage system for the municipality	Opening up the blocked drainage channels	Within the CBD	10km	200,000	2m	2M									
4.		Constructing drainage channels along all roads	PLANNING AREA	93.6km	1.5m	140m		35M	35M	35M	35M					

Sewer Management													
5.	Provide a comprehensive sewerage system for the municipality	Acquisition of land for construction of sewer treatment plant	Migwa area, Upper part of Owade bridge (Northern end)	3.5ha	4.3m	15m	7.5M	7.5M					
6.		Construct a sewer treatment plant	Migwa area, Upper part of Owade bridge (Northern end)	1		1.1B			0.275B	0.275B	0.275M	0.275M	
7.		Construct adequate public toilets at designated locations	Planning area	10	6m	60m	20M	20M	20M				
<b>TOTAL</b>						2,393,000,000							

**Notes:**

\*Policy driven, included in other programs or requires feasibility study.

**15.4.5 Physical Infrastructure**

**Table 15 - 6: Physical infrastructure strategies**

No.	Strategy	Project	Location	Quantity	Unit Cost in KES	Total Cost Estimate (in KES Millions)	2020/2023	2023/2023	2023/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030
<b>Water services.</b>																
1.	Expand water coverage within the municipality	Connect more households to the water lines and sewerage network	Planning area		716.8 M	716.8 M				102.4M	102.4M	102.4M	102.4M	102.4M	102.4M	102.4M
2.		Establishing water kiosks within a radius of 50 meters in informal settlement	Jua kali estate, 1000 streets, & Aloo estate (Masogo line)	10	0.8M	8M	2.6M	2.6M	2.6M							
3.		Tree planting along the water courses	River Ayoro riparian reserve	1	10M	10M	4M	3M	3M							
<b>Cemetery</b>																
4.	Provide for cemeteries	Acquire land and establishment of cemetery for both muslims and cristions	0.5km from the Simba roundabout abutting Owade river at Konyango	3.5ha	3M	15M	5M	5M	5M							
<b>TOTAL</b>						749,800,000										



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