

**PEOPLE'S ADAPTATION
LOCAL PHYSICAL AND LAND USE
DEVELOPMENT PLAN
2025-2035
HOMA BAY MUNICIPALITY**



GLOBAL
CENTER ON
ADAPTATION



PLAN APPROVAL

CERTIFIED BY:

I certify that the Plan has been prepared, publicized and circulated pursuant to the provisions the Physical and Land Use Planning Act of 2019, Urban Areas and Cities (Amendment) Act of 2019, the County Governments Act of 2012 and in observance of all requisite procedures and standards.

Name of the Registered Physical Planner _____

Signature: _____ Date: _____

Signature: _____ Date: _____

Director of Physical and Land Use Planning, Homa Bay County.

RECOMMENDED BY:

Pursuant to Section 49 (3) of the Physical and Land Use Planning Act of 2019, this Plan is hereby adopted and recommended for approval by the County Assembly of Homa Bay

Signature: _____ Date: _____

County Executive Committee Member in Charge of Lands, Physical Planning, Housing and Urban Development.

APPROVED BY:

Pursuant to the legislative authority granted in Article 185 (4) of the Constitution and functions designated in Section 8 (1) (e) of the County Governments Act of 2012 and Section 49 of the Physical and Land Use Planning Act of 2019, Homa Bay County Assembly hereby approves this Plan.

Signature: _____

Clerk to the County Assembly of Homa Bay Hansard No: _____ Date: _____

ENDORSED BY:

The County endorses this Plan, as approved and commits its resources towards the realization of its envisaged proposals and for the benefit of the Homa Bay Municipality residents.

Signature: _____ Date: _____

H.E Governor, County Government of Homa Bay





FOREWORD



Message from the Governor, Homa Bay County

The People's Adaptation – Local Physical and Land Use Development Plan marks a transformative shift in the way land use and urban planning are approached in Kenya. Developed in response to the complex challenges facing Homa Bay Municipality—including climate change impacts such as flooding, drought, and rising urban heat, as well as longstanding issues like inadequate housing, informal settlements, and overstretched infrastructure—this Plan signals a bold, people-centered direction.

What sets this Plan apart is its locally led, community-driven process. It reflects a deep, inclusive engagement with the people of Homa Bay, grounded in their knowledge, priorities, and lived experiences. As Governor, I am proud to present this pioneering framework—one that places residents at the core of both spatial planning and climate adaptation.

The Plan offers practical, inclusive strategies to guide sustainable land use, infrastructure investment, and resilience-building across the Municipality. It places particular emphasis on the informal settlements of Sofia, Shauri Yako, and Makongeni, where the need for targeted intervention is most urgent.

Developed through extensive consultation—particularly with women, youth, and marginalized groups across all sub-locations—this Plan aligns local action with global climate goals. I deeply thank the residents who contributed their voices to this process. Their insights and aspirations have shaped this vision, and I reaffirm my commitment that these voices will continue to guide the County's development priorities.

My administration is dedicated to sustained collaboration with all stakeholders to ensure the full realization of this Plan's objectives.



I firmly believe that its implementation will deliver tangible, positive changes—both individually and collectively. It is my vision that Homa Bay Municipality will grow into a vibrant lakeside city, where resilience and sustainability are not just ambitions, but the core principles that shape our future.

In closing, I extend my sincere appreciation to the Global Center on Adaptation (GCA), Akiba Mashinani Trust (AMT), and the Department of Lands, Physical Planning, Housing and Urban Development for their unwavering support in the development of this landmark Plan.

H.E. Gladys Wanga EGH, CBS

Governor

Homa Bay County



Message from the President and CEO, Global Center on Adaptation

At the Global Center on Adaptation (GCA), we believe that the most effective and lasting responses to climate change are those led by the people who experience its impacts most acutely. That is why we are proud to support the *People’s Adaptation – Local Physical and Land Use Development Plan* for Homa Bay Municipality—a pioneering initiative that redefines how local governments can plan for a climate-resilient future by placing the voices of the most vulnerable at its core.

This Plan is historic. It is the first land use plan in Kenya—and arguably the first globally—to fully integrate climate adaptation from the very beginning. Unlike conventional planning approaches that treat climate concerns as secondary, this process acknowledged from the outset that rising temperatures, flooding, drought, and urban vulnerability are already shaping the daily lives of citizens, particularly those in informal settlements.

Across Africa and around the world, rapid urbanization is colliding with the escalating threat of climate change. Towns like Homa Bay are at a crossroads—grappling with intensifying climate risks, inadequate infrastructure, and deep social inequities. Yet, within these challenges lies a powerful opportunity: to reimagine urban planning as a vehicle for resilience, inclusion, and empowerment.

This Plan exemplifies that opportunity realized. What makes it truly groundbreaking is where it began: with community consultations in the informal settlements of Sofia, Shauri Yako, and Makongeni. Residents—many of whom live with the harshest consequences of environmental and systemic neglect—shared their experiences, hopes, and priorities. These lived realities formed the foundation of the Plan.

By centering the voices of the people—especially women, youth, and marginalized groups—



Homa Bay has forged a new path for inclusive, climate-smart urban development. The priorities articulated in this Plan are not theoretical; they are rooted in the aspirations of residents and translated into actionable strategies for sustainable land use, infrastructure investment, and environmental protection.

Through this deeply participatory and locally driven process, Homa Bay has produced more than a technical document. It has crafted a people-centered blueprint for urban resilience—one that fuses spatial planning with climate justice, and long-term development with urgent, community-identified needs.

GCA is honored to have supported this transformative effort, in partnership with Governor Gladys Wanga, the County Government of Homa Bay, and Akiba Mashinani Trust. We commend the County’s visionary leadership for embracing a new paradigm of planning—one that prioritizes equity, participation, and long-term climate resilience.

As we work to scale locally led adaptation across Africa and beyond, Homa Bay stands as a powerful model. This Plan proves what is possible when those on the frontlines of climate change are not just consulted—but empowered to shape the future of their cities.

Prof. Patrick V. Verkooijen

President and CEO

Global Center on Adaptation



Message from the Executive Director, Akiba Mashinani Trust

The *Homa Bay People's Adaptation – Local Physical and Land Use Development Plan* is more than a planning instrument, it is a bold statement of intent, vision and partnership. It reflects a shared commitment to inclusive development, climate resilience and community-driven change.

At Akiba Mashinani Trust (AMT), we have long championed the power of organized communities to drive inclusive urban development. This Plan embodies that belief. It was developed through processes of grassroots engagement, settlement profiling, and participatory mapping—anchored in the lived experiences of residents in informal settlements like Makongeni, Sofia, and Shauri Yako, as well as in growing urban centers such as the CBD and Kabunde.

AMT is proud to have been a core partner in the co-production of this Plan and contributed to ensuring that planning reflects the voices of those often left out of formal systems. The result is a plan that centers equity, secure tenure, access to services, and the right to the city. We believe this model can inspire similar initiatives across the country and continent.

Together, we offer this plan as a collective achievement and a catalyst for sustained action. It is a model of how climate-smart development can be built from the ground up where government, communities, and partners co-create a resilient, just, and inclusive future to have been a core partner in the co-production of this plan.

Jane Weru

Executive Director

Akiba Mashinani Trust



Message from the County Executive Committee Member, Lands, Physical Planning, Housing & Urban Development, Homa Bay County

The Constitution of Kenya in its Fourth Schedule assigns the function of county planning and development to the County Governments. Specifically, Section 47 the Physical and Land Use Planning Act, 2019 gives the County Executive Committee Member in charge of physical and land use planning powers to initiate and prepare local physical and land use development plans. Further, responsibility to undertake planning function is anchored in the County Governments Act, 2012 and the Urban Areas and Cities Act, 2011 (amended 2019).

People's Adaptation – Local Physical and Land Use Development Plan for Homa Bay Municipality is unique given the focus it has placed on climate adaptation and local knowledge. It reflects the desired spatial form and land use zoning for Homa Bay Municipality in the next ten years.

Notably, the proposals made in the Plan are premised on the views freely shared by the people themselves. These proposals are catalytic and transformative in nature leveraging partnerships and collaboration from development partners, interest holders and stakeholders. Due to changing circumstances, this Plan will evolve and we are committed to regularly updating it to ensure that it remains aligned with the national and international policy and regulatory regimes.

In conclusion, this Plan is a critical investment guide for Homa Bay Municipality as it gears for city status in the near future. I therefore take this earliest opportunity to rally the great people of Homa Bay in particular and Kenyans in general to support its successful implementation as part of county spatial planning efforts.

Hon. Dr. Peter Ogola
CECM
Lands, Physical Planning,
Housing and Urban
Development



Message from the Board Chair and Municipal Manager

The *People’s Adaptation – Local Physical and Land Use Development Plan* for Homa Bay Municipality marks a significant milestone in our collective journey toward inclusive, sustainable, and climate-resilient urban development. As the Municipality Board, we are proud to be part of a process that not only addresses the technical dimensions of urban planning but also centers the voices and priorities of our communities.

This Plan is the product of a truly participatory process—one that involved residents from informal settlements, market centers, lakefront communities, and rural neighborhoods. Their insights, drawn from lived experiences, have been instrumental in shaping land use strategies that are both responsive and forward-looking.

The Plan provides a clear roadmap for the transformation of Homa Bay Municipality: unlocking the potential of our central business district, improving infrastructure and service delivery in informal settlements, guiding the

sustainable development of key action areas such as Kabunde Airstrip Buffer Zone and the lakefront, and ensuring that our land use planning aligns with climate adaptation priorities.

As a Board, we are committed to supporting the implementation of this plan through effective governance, stakeholder coordination, and resource mobilization. We also recognize the vital role of youth, women, and marginalized groups in driving the change envisioned in this document.

We extend our sincere appreciation to the Homa Bay County Government for its leadership, to the Global Center on Adaptation for its support, and to Akiba Mashinani Trust and the organized communities for ensuring that planning begins and ends with the people.

Let this Plan serve not only as a guide, but as a promise—to build a Municipality where equity, resilience, and opportunity define the spaces we inhabit and the future we create together.

Sigar Agumba
Homa Bay Municipality
Manager

ACKNOWLEDGMENTS



Message from the Chief Officer Housing and Urban Development

The development of the *People’s Adaptation – Local Physical and Land Use Development Plan* for Homa Bay Municipality is the result of a collective effort grounded in partnership, technical rigor, and deep community engagement. I extend my appreciation to the County Government of Homa Bay under the able leadership of HE Gladys Wanga, EGH and its Departments, Akiba Mashinani Trust, the Global Center on Adaptation, and Suez Consulting for their invaluable contributions to

this groundbreaking process. This Plan would not have been possible without the dedication of professionals and community leaders who guided the consultations, spatial analyses, and integration of climate adaptation into the planning framework.

Thanks is also due to the following key individuals, who played instrumental roles in the planning process:

Institution	Name	Role/Title
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	Teddy Oginga	Director, Housing
	Zilper Opapo	Director, Public Participation & Stakeholder Management
	Fredrick Onyango Warega	Deputy Director, Physical Planning (Team Leader)
	Joseph Omiti	Deputy Director, GIS
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Suez Consulting	Estelle Rouhaud, Amélie Agnel, Georgina Andre, Winnie Atieno, David Billaud, Anthony Floro, Diana Wachira	Technical Support – Informal Settlements Rapid Climate Risk Assessment

Plan. Charles Obondo, RPP, MKIP
Chief Officer
Housing and Urban
Development
County Government of Homa
Bay

EXECUTIVE SUMMARY

The *People's Adaptation - Local Physical and Land Use Plan 2025 - 2035* for Homa Bay Municipality is a ten-year spatial and development planning framework aimed at guiding sustainable urban growth, infrastructure development, and climate adaptation within the Municipality. It responds to pressing challenges including rapid urbanization, expansion of informal settlements, inadequate infrastructure, environmental degradation, and increasing exposure to climate risks such as flooding, drought, and urban heat.

The Plan was developed through a locally led and participatory process that integrated community knowledge with statutory planning requirements. A dual-methodology was adopted, combining Kenya's conventional land use planning framework with the Mukuru Special Planning Area approach an inclusive, community-driven model focused on locally led adaptation. This ensured the process was both legally compliant and rooted in the lived experiences of residents.

Extensive data collection was carried out through participatory mapping, household enumeration, infrastructure surveys, climate risk assessments, and community consultations. Over 21,000 households were engaged across all 13 sublocations within the Municipality, with a focus on capturing detailed information on land use, population dynamics, service access, economic activity, and climate vulnerability. A Rapid Climate Risk Assessment was also conducted to identify

priority hazards and inform the integration of adaptation measures into the Plan.

The Plan begins with a situational analysis that assesses the physical environment, topography, hydrology, climate, geology, land use, and demographic characteristics of the Municipality. It identifies major issues such as unregulated development, tenure insecurity, service deficits in informal settlements, and the high vulnerability of low-lying areas to flooding and other climate impacts.

Based on the analysis, the Plan evaluates several growth scenarios and proposes a hybrid, integrated urban development model as the preferred planning approach. This model combines the densification of the urban core with the development of new polycentric growth nodes to relieve pressure from the Central Business District and enable balanced, inclusive expansion. Informal settlements are prioritized for upgrading, including in-situ infrastructure improvements and regularization of land tenure.

The Plan outlines a detailed land use framework, specifying allocations for residential, commercial, industrial, agricultural, recreational, and conservation areas. Sectoral proposals are included to guide interventions in housing, transport, water and sanitation, solid waste management, energy, ICT, environment, and social amenities. These are supported by zoning





regulations and design guidelines to promote orderly and climate-resilient development.

In addition, the Plan includes action area proposals for priority locations such as the CBD, Lakefront, Kabunde buffer zone, and informal settlements in Makongeni, Sofia, and Shauri Yako. It concludes with an implementation framework that identifies institutional responsibilities, outlines a capital investment plan, proposes

financing mechanisms, and sets up monitoring and evaluation tools to track progress and ensure accountability.

The Plan provides a comprehensive, data-driven, and community-validated roadmap to transform Homa Bay Municipality into a more inclusive, organized, and climate-resilient urban area over the next decade.

PLAN OUTLINE



This Plan is organized into five sections and nine chapters, supported by annexes, references, and lists. It systematically presents the context, analysis, proposals, and implementation strategies necessary to guide climate resilient and sustainable development in Homa Bay Municipality.

I. Introductory Sections

- 1. Introduction:** This chapter sets the foundation by presenting the historical background, problem statement, vision, objectives, and guiding principles of the Plan. It also outlines the methodology.
- 2. Planning Context:** This chapter situates Homa Bay Municipality within national, regional, and local frameworks. It details the constitutional, legal, and policy environments governing planning processes and reviews relevant international best practices and development linkages.
- 3. Situational Analysis:** A core component of the Plan, this chapter provides a detailed analysis of the physical, environmental, demographic, and socio-economic context of the Municipality. It examines infrastructure, land use, housing, public services, disaster risks, climate adaptation, and key development challenges and opportunities.

- 4. Synthesis:** This chapter integrates findings from the situational analysis into a land suitability assessment, a SWOT analysis, and identifies crosscutting issues. It provides the basis for the planning alternatives and proposals that follow.

II. Plan Formulation

- 5. Alternative Planning Models:** This chapter explores multiple development models—Nil Intervention, Monocentric, Polycentric, and Integrated—before presenting the preferred planning strategy. It also reflects the outcomes of community consultations and participatory planning inputs.
- 6. Plan Proposals:** Presents the proposed spatial and thematic structure plan for Homa Bay Municipality, outlining the key components of land use, infrastructure, services, and green networks that will shape the town's future growth.
- 7. Action Area Plans:** Provides detailed proposals for key priority areas within the Municipality, including informal settlements (Makongeni, Sofia, Shauri Yako), the lakefront, Kabunde buffer zone, and the Central Business District (CBD).



III. Implementation and Conclusions

8. Implementation Framework: Outlines the institutional and financial framework required to operationalize the Plan. It includes a Capital Investment Plan, a Community Engagement Framework, and Monitoring and Evaluation indicators to track progress and accountability.

9. Conclusion: Summarizes the strategic direction of the Plan and affirms the commitment to transforming Homa Bay Municipality into a climate resilient, inclusive, and sustainable urban center.

References and Annexures

The final section contains all references, technical data, and supplementary materials used in the preparation of the Plan, ensuring transparency and traceability of all information and processes.

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LIST OF ACRONYMS AND ABBREVIATIONS

AfDB	Africa Development Bank
AMT	Akiba Mashinani Trust
BMUs	Beach Management Units
CBC	Competency Based Curriculum
CBD	Central Business District
CBOs	Community Based Organizations
CIDP	County Integrated Development Plan
CSOs	Civil Society Organizations
DEM	Digital Elevation Model
DRM	Disaster Risk Management
DTF	Decentralized Treatment Facility
ENSO	Niño Southern Oscillation
EPRA	Energy and Petroleum Regulatory Authority
FAO	Food and Agriculture Authority
FAR	Floor Area Ratio
FGDs	Focused Group Discussions
FLoCCA	Financing Locally-Led Climate Action
GBV	Global Based Violence
GCA	Global Center on Adaptation
GIS	Geographic Information System
HIV	Human Immunodeficiency Virus
HOMAWASCO	Homa Bay County Water and Sanitation Company Limited
ICT	Information Communication Technology

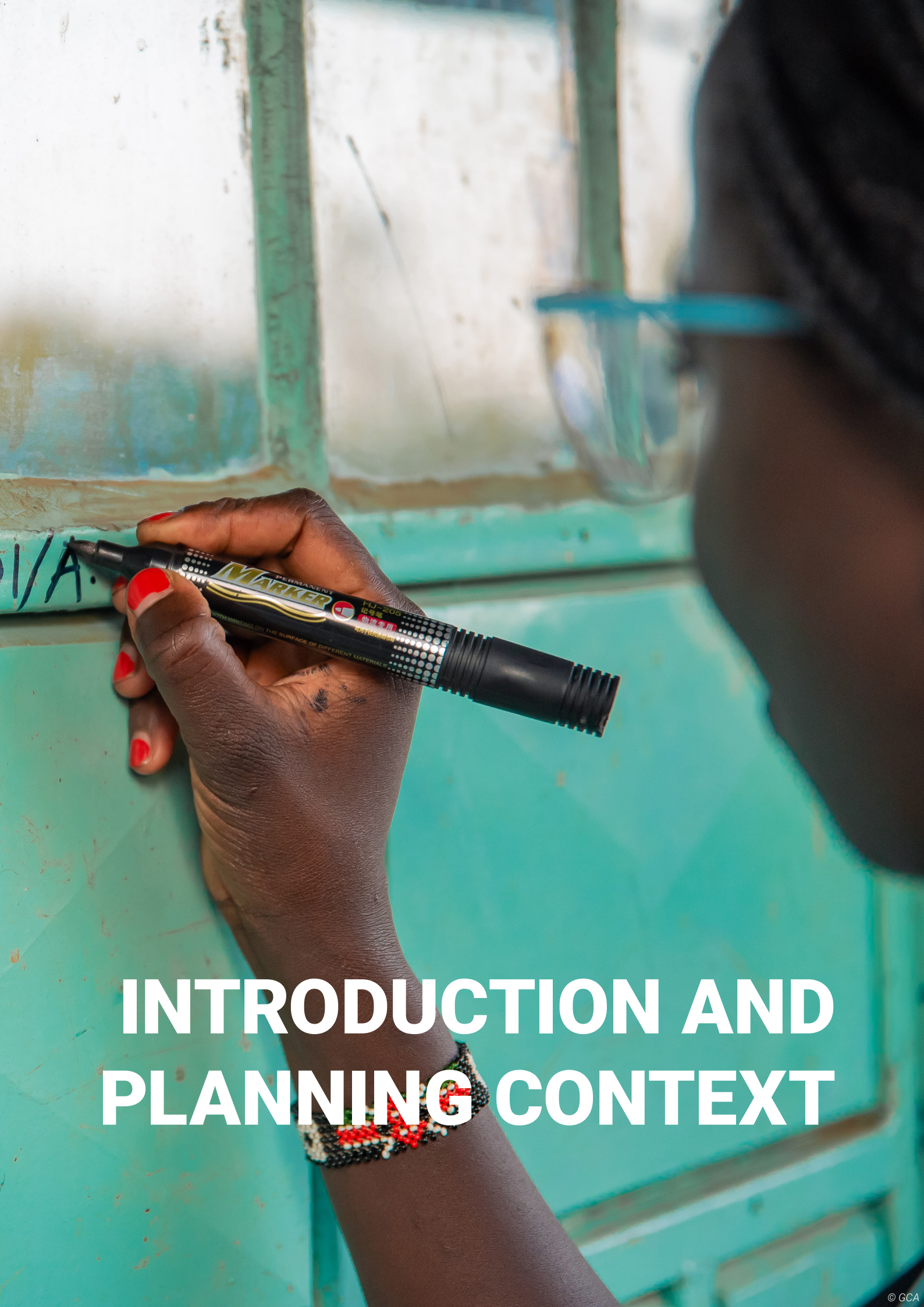


IOD	Indian Ocean Dipole
KBC	Kenya Broadcasting Corporation
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KFS	Kenya Forest Service
KISIP	Kenya Informal Settlement Improvement Project
KMD	Kenya Meteorological Department
KMTC	Kenya Medical Training College
KNBS	Kenya National Bureau of Statistics
KNCCI	Kenya National Chamber of Commerce and Industry
KPLC	Kenya Power and Lighting Company
KRCS	Kenya Red Cross Society
KTN	Kenya Television Network
KURA	Kenya Urban Road Authority
KUSP	Kenya Urban Support Programme
LIMS	Land Information Management System
LLA	Locally Led Adaptation
LPLUDP	Local Physical and Land Use Development Plan
LPPHUD	Lands, Physical Planning, Housing and Urban Development
LREB	Lake Region Economic Bloc
MCA	Member of Climate Assembly
MRC	Material Recovery Center
NCPWD	National Council for Persons with Disabilities
NDMA	National Drought Management Authority
NEMA	National Environment Management Authority
NG-CDF	National Government Constituency Development Fund
NGOs	Non-Governmental Organizations
NLC	National Land Commission
NMT	Non-Motorized Transport
NTV	Nation Television
PCRA	Participatory Climate Risk Assessment

PLUPA	Physical and Land Use Planning Act
PWDs	People With Disabilities
RCRA	Rapid Climate Risk Assessment
RIMs	Registry Index Maps
SEA	Strategic Environmental Assessment
SHIF	Social Health Insurance Fund
SPA	Special Planning Area
SWOT	Strengths, Weaknesses, Opportunities and Threats
TVET	Technical and Vocational Education and Training
UACA	Urban Areas and Cities Act
UHC	Universal Health Care
UNFCCC	Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
VTC	Vocational Training Centre
WRA	Water Resources Authority



HMAR/ARJ/00



INTRODUCTION AND PLANNING CONTEXT



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INTRODUCTION

Kenya, one of East Africa’s most rapidly urbanizing nations, is home to over 70 municipalities—each playing a vital role in regional administration, economic activity, and delivery of essential social services. Among them, Homa Bay Municipality stands out as a key administrative and economic hub in Homa Bay County, situated in the southwestern corner of the country along the shores of Lake Victoria. Spanning roughly 90.2 km² and home to around 30,000 households, the Municipality is a growing urban center that anchors the socio-economic life of the region.

However, like many urban areas across Kenya, Homa Bay Municipality faces mounting challenges from unplanned and poorly coordinated urban expansion. Rapid population growth, coupled with weak planning frameworks, has fuelled the rise of three informal settlement, Sophia, Shauri Yako, and Makongeni. These densely populated areas suffer from inadequate infrastructure and basic services—including poorly maintained road networks, erratic access to clean water, non-existent or limited sewage systems, inefficient waste disposal, and a shortage of schools, health centers, and recreational spaces.

These urban strains are further compounded by the intensifying impacts of climate change. Homa Bay Municipality is increasingly vulnerable to climate shocks: frequent flooding threatens low-lying informal settlements, erratic rainfall and temperature shifts affect water availability and agricultural productivity, and rising temperatures, combined with poor sanitation, exacerbate the spread of vector-borne diseases like malaria.

Despite these challenges, the Municipality holds significant promise. Its strategic position along Lake Victoria offers immense potential for trade and tourism. It's youthful population presents a demographic dividend—poised to drive innovation and productivity if properly empowered. Moreover, the region's freshwater resources and fertile land provide a strong foundation for sustainable agriculture and fisheries.

Realizing this potential requires a shift toward integrated, climate-sensitive urban planning—planning that recognizes the interconnectedness of social, economic, and environmental systems. This is the driving vision behind the *People's Adaptation – Local Physical and Land Use Development Plan* (LPLUDP). The plan prioritizes building resilient infrastructure to withstand climate stress, establishing robust waste management systems, expanding access to clean water, sanitation, and education, and formalizing informal settlements to promote inclusive growth.

With a clear, community-driven roadmap and a commitment to sustainable development, Homa Bay Municipality is well-positioned to transform its vulnerabilities into strengths—becoming a model for urban resilience and inclusive progress in Kenya and beyond.

Historical Background

Homa Bay Municipality traces its roots to the early 20th century, when it emerged as a humble beachside market known as *Chich Onuno*—later called Onuno Market. In 1925, the British colonial administration renamed the town Homa Bay, inspired by its scenic vantage point overlooking the iconic Homa Hills in what was then Karachuonyo District. Over the decades, the town steadily transformed—gaining Urban Council status in 1974, becoming a Town Council in 1987, advancing to a Municipal Council in 1991, and finally achieving full Municipality status in 2019 under Kenya's 2010 Constitution. Today, Homa Bay spans roughly 90.2 square kilometers, with a population of about 82,414 residents. Governance is entrusted to the County Government, with the day-to-day administration handled by a nine-member Municipal Board and a Municipal Manager serving as Chief Executive Officer.

Homa Bay occupies a unique and notable place in Kenya's urban development story. Once envisioned as a blueprint for the country's future cities, the town was planned with remarkable foresight—its water and sewerage systems were laid out *before* the first buildings rose.¹ This deliberate approach aimed to craft a model lakeside town that would serve as the administrative hub of the newly established South Nyanza District.

Yet, despite its ambitious beginnings, Homa Bay's growth faltered. A web of political, administrative, and socio-ethnic challenges stalled its trajectory. One of the most significant blows came in the mid-1960s, when plans for a Soviet-funded cotton textile factory were abruptly shelved—casualties of Cold War tensions and simmering political

¹ Kamau, J. (2025). Revisiting Homa Bay @62: The model town that never was. *Daily Nation*. 20 July.

rivalries within the new nation. Simultaneously, the town found itself at the center of regional discontent. The Kuria community, feeling sidelined in the new district setup, called for their own local governance structure in Ikerege—a move that underscored deeper concerns about representation, inclusion, and equity in the post-independence era.

Over the years, repeated efforts to secure township and later municipal status for Homa Bay faced bureaucratic delays. Officials frequently cited the town's low revenue yield and insufficient population as reasons for denying formal urban status. By the time Homa Bay was declared an urban centre in 1974 and later upgraded to township status in 1984, the town had already lost key development opportunities. These delays left the Municipality with limited land for expansion and without the institutional infrastructure needed to guide its growth. Even today, the town controls only a portion of its intended planning jurisdiction, which continues to hamper large-scale development initiatives.

Homa Bay has gradually emerged as a regional hub due to its strategic location along Lake Victoria and the gradual decentralization of

public services. Rural-to-urban migration, natural population growth, and regional economic activities have driven the town's expansion. The Municipality now hosts several critical institutions, including Tom Mboya University, Kenya Medical Training College (KMTTC), and the Homa Bay County Referral Hospital. These facilities have played a significant role in attracting investment, spurring residential and commercial growth, and expanding the town's socio-economic base.

In recent years, Homa Bay has also gained attention for its natural beauty and tourism potential, particularly due to its scenic lakefront and surrounding hills. The Municipality's historical trajectory from a meticulously planned model town to one that struggled with delayed recognition offers key lessons for spatial and development planning today. It reflects the importance of political goodwill, institutional capacity, and inclusive governance in translating urban visions into tangible outcomes. This historical background informs the current planning process and provides a foundation for addressing legacy challenges while building a resilient, inclusive, and well-planned urban future for Homa Bay.



Problem Statement

Like many fast-growing urban centers across Kenya, Homa Bay Municipality is navigating a complex web of urban planning challenges that increasingly threaten its path toward sustainable development. Fuelled by a rising population, rural-to-urban migration, and a vibrant local economy built on fishing, small-scale trade, and informal enterprise, the town is undergoing rapid urbanization. However, this growth is largely uncoordinated, outpacing the capacity of existing infrastructure, public services, and governance systems to respond effectively. Climate change further compounds these challenges, intensifying flooding, shoreline erosion, and water scarcity, which strain already inadequate drainage and sanitation systems. Rising temperatures and unpredictable rainfall patterns also disrupt livelihoods dependent on fishing and agriculture, heightening urban vulnerability and deepening socio-economic inequalities.

One of the most pressing issues is the deterioration and inadequacy of urban infrastructure, particularly the road network. Most roads in the Municipality remain *murrum* or earth-surfaced, with only a small fraction having been tarmacked. This not only hampers mobility and economic activity but also severely disrupts access to essential services—especially during the rainy season, when many routes become impassable.

Much of Homa Bay Municipality continues to struggle with underdeveloped—or entirely absent—urban infrastructure. Water supply systems are unreliable, sewerage networks are limited, solid waste management remains ineffective, and drainage infrastructure is poorly developed. These deficiencies have led to widespread sanitation issues and growing environmental degradation.

The rapid expansion of informal settlements—often emerging on unplanned and environmentally sensitive land—has only compounded these problems. Shauri Yako, Sofia, and Makongeni have become the largest informal settlements in the Municipality, marked by limited access to essential services, weak enforcement of building standards, and insecure land tenure. Residents in these areas face daily challenges related to health, safety, and dignity.

Land use in the Municipality remains largely unregulated. Conflicting, overlapping, and often informal land claims are common, while weak development control and limited adherence to zoning regulations further fuel disorganized urban growth. Institutional and governance weaknesses exacerbate these issues—coordination among County departments is frequently fragmented, and meaningful community participation in planning processes is minimal. As a result, development plans often fail to reflect the realities or priorities of local residents.

Compounding the situation are resource constraints, low technical capacity among urban planners, and fragmented data systems that hinder evidence-based policymaking. Without accurate, up-to-date information, it becomes nearly impossible to formulate responsive and sustainable urban strategies.

These multifaceted challenges highlight the urgent need for a structured, inclusive, and data-driven planning framework—one that aligns with Kenya's Physical and Land Use Planning Act of 2019 and supports the national development goals outlined in Vision 2030. Such a framework would lay the groundwork for orderly urban development, equitable service delivery, environmental stewardship, and strategic investments in infrastructure and housing.

Without timely and targeted interventions, Homa Bay Municipality risks falling deeper into spatial disarray, exacerbating social inequalities and increasing its exposure to climate-related and socio-economic shocks.

Vision Statement

A resilient and inclusive Lake Side City Powered By local Innovation by 2035.

Objectives

This *People's Adaptation – Local Physical and Land Use Development Plan* for the Municipality aims to guide planned, systematic, strategic, inclusive and climate-resilient development in Homa Bay Municipality, to promote sustainable growth, improve infrastructure, and enhance the quality of life for residents. By integrating climate change considerations into the planning processes, the Municipality will ensure that investments in people and infrastructure are resilient and protected. The Plan's specific objectives are to:

- Provide an overall spatial framework to guide climate-resilient development.
- Designate and regulate land use zones with specific land use guidelines.
- Guide and coordinate the development of infrastructure provision, including public facilities.
- Provide a basis for inclusive, efficient and effective delivery of services.
- Guide the use and management of natural resources.
- Provide an integrated and actionable strategy to address climate change and environmental protection.
- Integrate sectoral policies into the physical and land use plan.

Scope of the Plan

This Plan covers both geographical and socio-economic aspects of Homabay Municipality. The Plan includes key features such as:

- Land use patterns and housing structures.
- Infrastructure, including roads, drainage, and water supply.
- Socio-economic activities and population demographics.
- Mapping and numbering to accurately identify buildings and households.
- Household enumeration to assess access to basic services, economic activities, and climate-related challenges.
- Analysis of environmental and social factors affecting the settlement.
- Plan proposals and development scenarios.

The baseline data and information for this Plan was collected by, for and with the communities, to ensure that development strategies for Homabay Municipality are informed by real community needs and challenges.

Principles of Planning

This Plan is grounded in a set of core planning principles designed to guide Homa Bay Municipality toward a more sustainable, inclusive, and resilient future:

- **Evidence-Based Decision-Making:** Leveraging reliable, data-driven insights to inform policies and prioritize investments.
- **Sustainability:** Promoting environmentally sound, socially responsible, and economically viable urban development practices.
- **Inclusivity:** Ensuring active community participation through locally led data

collection, consultation, and co-creation of solutions.

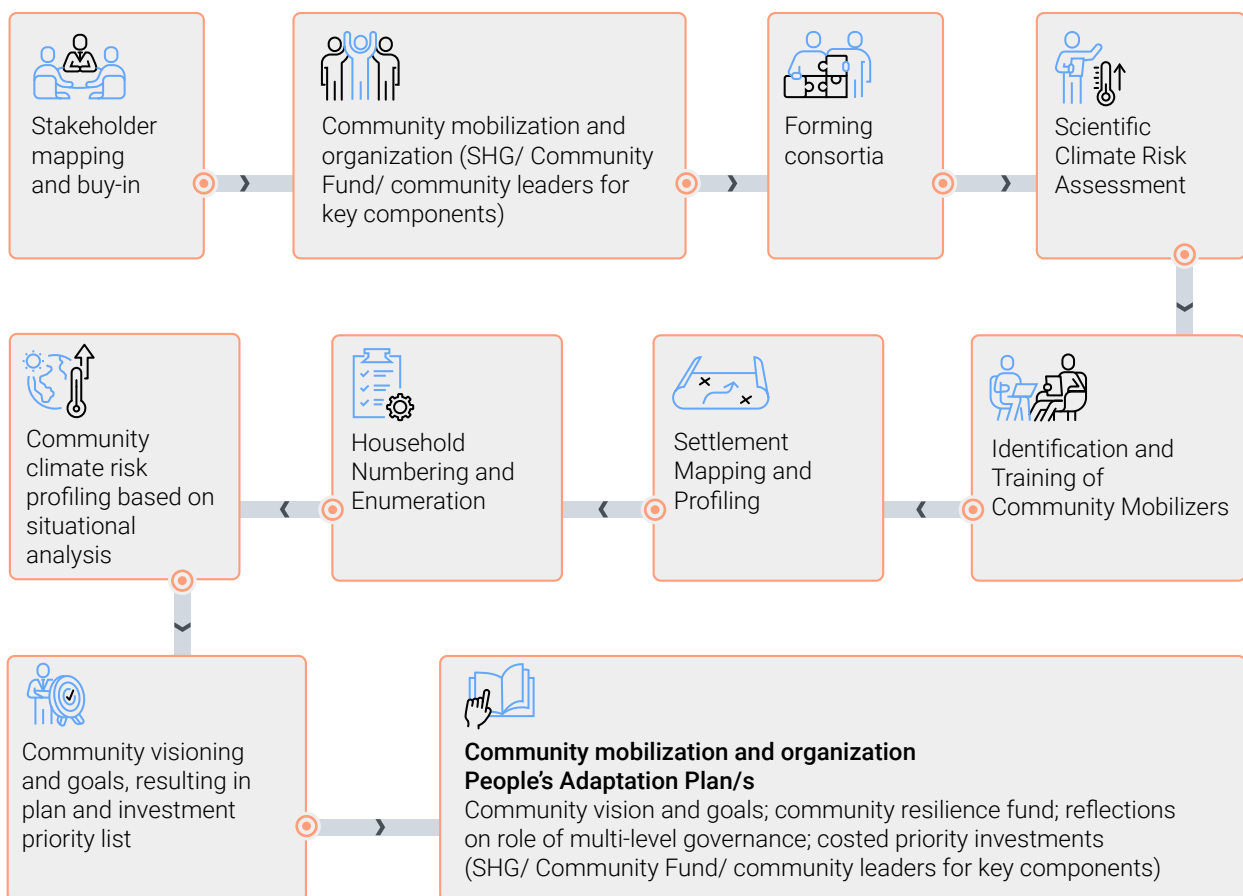
- **Resilience:** Strengthening the Municipality’s capacity—and that of its residents—to adapt to climate change and other environmental or socio-economic shocks.
- **Efficiency:** Optimizing land use and resource allocation to support smart, coordinated growth.
- **Equity:** Redressing historical disparities in infrastructure, services, and development outcomes to ensure all residents benefit from urban progress.

Methodology

The methodology for this Plan integrates two key approaches to ensure that the Plan is both community-led and policy-compliant, while addressing climate adaptation needs.

1. The Mukuru Special Planning Area (SPA) approach, a locally led climate adaptation framework emphasizing community participation and resilience-building.
2. The conventional planning process in Kenya, a structured, policy-driven approach aligned with national and County planning regulations.

Figure 1. An overview of the Mukuru SPA Approach



The Mukuru SPA approach ensures that the methodology adheres to the Principles of Locally Led Adaptation (LLA), by putting communities in the driving seat of the planning process. Adherence to Kenya’s statutory Local Physical and Land Use Development Planning (LPLUDP) framework ensures regulatory compliance. A combination of the two methodologies ensures that this Plan is:

- **Community-led**, actively involving residents and stakeholders.
- **Climate-responsive**, addressing vulnerabilities and enhancing resilience.
- **Data-driven**, using primary and secondary data to inform decision-making.
- **Policy-compliant**, aligning with legal and institutional planning frameworks.

Primary Data Collection

Primary data sources used for this Plan reflect a contemporary, community-led and comprehensive understanding of the status quo. Primary data was collected by the community, and through field assessments and technical surveys.

Community-led Data Collection

The community-led data collection process for the Homa Bay Municipality was designed to integrate participatory mapping, household numbering, and enumeration. This approach ensured that data collection was both community-driven and methodologically rigorous. By involving residents as enumerators and community researchers, the planning process generated accurate and localized data, while at the same time building capacity and ownership among community members.

The involvement of community members in this exercise was crucial, as research has shown that local mobilizers and co-researchers significantly enhance the reliability and credibility of data collection efforts. This inclusion of local residents in research processes fosters higher community trust, increases response rates, and enhances contextual accuracy (GCA, 2023). A total of 298 enumerators from the local community were engaged in the data collection process. They underwent comprehensive training to equip them with the skills necessary for mapping, household numbering, and conducting surveys.

Urban planners from Homa Bay County Government and community representatives agreed on a **standardized numbering system** to ensure that each household received a unique identifier—a fundamental step in establishing a structured and verifiable database of residential, commercial, and mixed-use structures within the Municipality. By assigning unique household identifiers, the process also ensured traceability and consistency in future surveys, facilitating effective urban planning, infrastructure development, and resource allocation.

After training, the enumerators conducted **systematic household mapping on paper and numbering**, ensuring that each structure within the Municipality was accurately documented and numbered. This mapping process provided critical data on the type of structure, its land use (residential, commercial, mixed-use), and its occupancy status (owner-occupied, rented, vacant). The exercise also played an essential role in identifying informal housing units and service gaps, which are often overlooked in conventional urban planning processes. The importance of settlement mapping in informal areas has been widely documented, with studies emphasizing

its role in improving service delivery, disaster preparedness, and land tenure security (GCA, 2022).

Following the household numbering and mapping, **enumeration** was carried out in collaboration with community research assistants. This involved administering structured questionnaires to every household in collecting data on socio-economic conditions, household demographics, employment patterns, and access to basic services. This step was crucial to capture both qualitative and quantitative data, and provide a comprehensive understanding of the community's needs and vulnerabilities.

The importance of household enumeration in urban planning cannot be overstated, as it serves as the foundation for evidence-based decision-making and targeted policy interventions. Systematic enumeration ensures the inclusion of vulnerable populations, enhances the accuracy of service delivery planning, and supports tenure security (GCA, 2023). The data collected through enumeration can be used to identify informal workers, women-headed households, and at-risk populations, enabling responsive urban interventions that prioritize the most vulnerable groups.

By empowering community members as co-researchers, mappers, and enumerators, the process not only strengthened local capacity in data collection and urban planning but also fostered a sense of ownership and accountability over the planning outcomes. The participatory approach ensured that the collected data was contextually accurate, community-validated, and reflective of local realities, making it a powerful tool for inclusive urban development.

The community-led mapping, household numbering, and structured enumeration provided a solid evidence base for decision-

making, ensuring that future planning efforts are responsive to community needs and aligned with both local and national urban development policies. This approach underscores the engagement of local communities in research and planning processes, reinforcing the principle that sustainable urban development must be driven by the people who live in, and best understand, their settlements.

Rapid Climate Risk Assessment

The Rapid Climate Risk Assessment (RCRA) for Homa Bay employed an interdisciplinary and participatory methodology combining spatial analysis, climate modeling, and community engagement.

The process began with a literature review and climate data analysis to identify key threats such as flooding, heat stress, and water scarcity. This was followed by stakeholder interviews with county officials, non-governmental organizations (NGOs), and service providers to understand institutional gaps and local vulnerabilities. Field visits and participatory workshops were then held in the three informal settlements within the Municipality (Shauri Yako, Makongeni, and Sofia) where community members mapped hazard-prone areas, highlighted priority issues, and shared their lived experiences of climate impacts. Focus groups—disaggregated by gender, youth, elderly, and persons with disabilities—ensured inclusive participation and helped capture differentiated vulnerabilities.

The technical component of the RCRA involved hydrological and hydraulic modeling to estimate flood depths and velocities under current and future climate conditions. These simulations were supported by GIS and remote sensing to spatially map hazard exposure, overlaid with infrastructure, population density, and land use data.

Exposure, sensitivity, and adaptive capacity indicators were used to score vulnerability across the three settlements. This approach revealed that while all settlements face climate risks, their vulnerabilities differ based on topography, infrastructure quality, and social dynamics. By integrating scientific modeling with community input, the assessment produced localized risk profiles that inform tailored adaptation strategies for each settlement.

Infrastructure and Service Mapping

The infrastructure and service mapping process in Homa Bay Municipality, was conducted using geospatial tools, field surveys, and participatory data collection methods to assess the availability, accessibility, and condition of essential services. The mapping covered roads, drainage, water supply, sanitation, and energy access, providing valuable insights into existing infrastructure gaps. Roads were classified based on their type, condition, and connectivity, with an emphasis on identifying unmapped informal access routes that play a crucial role in mobility within the settlement. Drainage mapping focused on stormwater management systems, documenting blocked or poorly maintained channels that contribute to flooding and waterlogging during heavy rains. Additionally, water supply networks were mapped to distinguish between piped connections, boreholes, and community water kiosks, while sanitation assessments detailed the distribution of latrines, shared toilet facilities, and solid waste management practices. Energy access mapping identified grid-connected areas, informal power supply points, and alternative energy sources such as solar, helping to highlight disparities in service provision.

While mapping physical infrastructure, formal and informal service delivery mechanisms that

sustain the settlement were also documented. Formal service providers include County government agencies responsible for road maintenance, public water utilities, and national electricity suppliers, which offer regulated services but often fail to meet the full demand in low-income areas. Informal service providers play a crucial role in filling these gaps, with small-scale water vendors, informal waste collectors, and community-led sanitation initiatives emerging as vital alternatives where formal systems are lacking.

For example, in many urban settings, privately managed public toilets and waste collection services operate on a pay-per-use basis. These arrangements help bridge gaps in sanitation where publicly provided services are limited or unreliable. Mapping such services highlights the coexistence of formal and informal networks, reinforcing the importance of urban planning approaches that acknowledge and integrate community-led initiatives into broader infrastructure strategies.

The infrastructure and service mapping exercise is a critical step in identifying spatial patterns of service provision, infrastructure gaps, and vulnerabilities in underserved areas. It supports evidence-based planning by pinpointing where targeted investments and policy responses are most needed. By capturing disparities in access to key services such as roads, drainage, and utilities, the mapping provides a foundation for inclusive and equitable urban development.

The mapping process also revealed opportunities for strengthening public-private partnerships, upgrading informal service systems, and improving coordination between government authorities and local communities.

Socio-economic Profiling

The socio-economic profiling of Homa Bay Municipality was conducted through an in-depth analysis of household questionnaires administered to residents. This data collection provides valuable insights into income levels, employment trends, informal economic activities, and access to essential social services. By analyzing this information, planners can assess economic disparities, identify livelihood challenges, and develop strategies to enhance local economic resilience and social well-being.

Household income and employment patterns are assessed by examining sources of income, employment status, and household expenditure trends. The questionnaires distinguish between formal employment, casual labor, self-employment, and subsistence activities, identifying income variations across different socio-economic groups. This information is crucial to understand economic vulnerabilities, particularly among low-income households and informal workers, and to support the formulation of policies aimed at job creation, skills development, and financial inclusion.

The socio-economic profiling evaluates informal economy and market dynamics, which play a vital role in sustaining livelihoods. The data captures types of informal businesses, their economic contributions, operational challenges, and regulatory constraints. Understanding these dynamics is essential to strengthen local markets, improve access to financial services, and create a more inclusive economic environment.

The availability and accessibility of social services—including education, healthcare, and security—is analyzed to determine service gaps, infrastructure needs, and priority intervention areas. By integrating these findings into urban planning and policy recommendations, the socio-economic profiling ensures that development initiatives are responsive to the needs and realities of the community.

Environmental and Land Use Surveys

The collection of primary data on land tenure, land use classification, and environmental degradation in Homa Bay Municipality, involved a combination of household surveys, spatial analysis using ArcGIS, and participatory methods such as focus group discussions (FGDs) and field observations.

Household surveys were conducted to gather information on land ownership, tenure security, and land utilization, while Registry Index Maps (RIMs) were digitized to provide a clear spatial representation of public and private land parcels. The digitized maps were integrated with data from the mapping and numbering process, ensuring that land use types—residential, commercial, institutional, public spaces, and mixed-use—were accurately represented in Geographic Information Systems (GIS). The classification of land uses using ArcGIS enables planners to analyze land suitability, identify underutilized spaces, and assess the compatibility of existing land uses with urban development goals.

To assess environmental degradation, primary data was collected through FGDs with community members and through direct field observations. The FGDs engaged residents, local leaders, and environmental stakeholders, allowing them to highlight key environmental challenges such as soil erosion, deforestation, poor drainage, and pollution from unregulated waste disposal. Participants also provided historical perspectives on changing land use patterns and their impact on environmental quality. In addition to discussions, field observations were conducted to document visible signs of environmental degradation, including eroded landscapes, areas with frequent flooding, solid waste accumulation points, and encroachments into riparian zones. This qualitative approach ensured that data collection was grounded in lived community experiences, complementing spatial analysis by providing real-time evidence of environmental vulnerabilities. By integrating FGD insights with GIS-based mapping, the planning process ensured that land use planning and environmental interventions were responsive to community-identified concerns and spatially verifiable data.

Community Consultation meetings

The community consultation meetings in Homa Bay Municipality were guided by a structured, participatory methodology aimed at integrating grassroots perspectives into the People's Adaptation LPLUDP. This methodology ensured that planning was evidence-based, inclusive, and reflective of local knowledge, while generating concrete, actionable proposals.

The consultation process was grounded in participatory planning principles that emphasized inclusivity, local ownership, and co-creation of solutions. The process was designed to bridge community experiences with technical planning, leveraging the insights gathered from the Situational Analysis Report and GIS mapping. Discussions were guided to ensure equitable

input from women, youth, persons with disabilities (PWDs), elders, and other key community stakeholders. Community members were empowered to express both their challenges and aspirations through structured group sessions, visual tools, and interactive exercises.

Each consultation session was held at the sublocation level, targeting approximately 70 participants, segmented into three focus groups: women-only, youth and PWDs, and a mixed group inclusive of all community members. The meetings followed a standard agenda that began with an opening and context-setting session, followed by a situational presentation; a visioning exercise; two thematic breakout sessions; a mapping activity; a plenary feedback session; and a closing segment. Facilitators used local languages and culturally sensitive formats to foster a safe and open dialogue environment.

A range of tools were used to support facilitation, encourage participation, and capture data, including:

- **Printed maps** for community mapping of key physical features, risks, and opportunities.
- **Manilla papers and vision boards** to capture group ideas during discussions.
- **Discussion and project templates** to document challenges, solutions, and proposed interventions.
- **Sticky notes and markers** for prioritization and visual organization.
- **Project categorization sheets** to group proposals into Quick Wins (0–1 year), Short-term (1–5 years), and Long-term (5–10 years).

Each proposal generated by the community was recorded, photographed, and digitized for consideration and integration into the spatial plan and adaptation strategy.

Thematic discussions were organized into four key areas:

1. Infrastructure
2. Social services
3. Environment, agriculture, climate change, blue economy, and mining
4. Spatial and economic potential

Facilitators helped participants identify current challenges, existing assets, and viable solutions in each sector. Simultaneously, a participatory mapping exercise allowed community members to mark strategic development areas, vulnerable zones, and potential polycentric centers directly onto printed maps. This spatial data will inform future zoning, service distribution, and investment prioritization.

The outcomes of the consultations, ranging from shared visions and thematic proposals to mapped development priorities, were synthesized into the final People's Adaptation-LPLUDP. The proposals will also form the basis for phased project implementation, with the planning team and County departments assessing feasibility, budget alignment, and integration into ongoing County and national development initiatives. The methodology ensures not just data collection, but meaningful co-production of Homa Bay's urban and climate resilient future.

Secondary Data Collection

Existing data from government agencies, academic institutions, and development partners supplemented primary findings. Some of the data sources used are listed below.



County Government Records

A key source of secondary data was county government records, including the Homa Bay County Integrated Development Plan (CIDP), which outlines development priorities, socio-economic indicators, and strategic interventions across various sectors. Additionally, sectoral reports from different County departments provided technical assessments on land use, infrastructure, environment, and socio-economic conditions. Previous urban plans and spatial frameworks were also reviewed to understand past planning efforts, their implementation challenges, and areas requiring revision. A Participatory Climate Risk Assessment (PCRA) completed in 2023 and the County Climate Change Action Plan were also used to examine climate vulnerability trends, adaptive capacity, and resilience strategies at the County level this supplemented by a Rapid Climate risk assessment carried out on Behalf of the GCA by SUEZ consulting to further beef up understanding of the local context in the informal settlements. These sources collectively ensured that the study was informed by policy-backed data, technical analyses, and climate adaptation strategies, strengthening its relevance for evidence-based urban planning and decision-making.

National Government Data

National government data was sourced from various agencies, research institutions, and policy frameworks to provide demographic, socio-economic, environmental, infrastructure, and governance insights. This secondary data was essential to align the urban planning and climate adaptation planning process in Homa Bay Municipality with national policies, statistical benchmarks, and development frameworks.

Demographic and Socio-economic Data

Data on population distribution, household structures, income levels, and employment trends was obtained from Kenya National Bureau of Statistics, specifically through the 2019 Kenya Population and Housing Census, the 2015/16 Kenya Integrated Household Budget Survey, and annual Economic Survey Reports. These datasets provided a statistical basis for analyzing socio-economic inequalities, housing demand, and poverty levels in Homa Bay Municipality. Additionally, reports from Kenya Institute for Public Policy Research and Analysis and the Kenya Vision 2030 framework offered insights into long-term economic projections, governance impacts, and policy-driven urban growth priorities.

Environmental, Climate, and Disaster Risk Data

Environmental and climate data was sourced from the National Environment Management Authority (NEMA), Kenya Meteorological Department (KMD), and National Drought Management Authority (NDMA). NEMA's State of Environment Reports and Strategic Environmental Assessments were used to assess environmental sustainability, pollution trends, and ecosystem conservation in the Municipality. KMD provided climate datasets, including rainfall patterns, temperature variations, and climate risk profiles, which were critical for climate adaptation planning. NDMA's Drought Early Warning Bulletins and Disaster Preparedness Reports provided insights into historical disaster impacts, water scarcity trends, and emergency response mechanisms. The Principles of Locally Led adaptation were also referenced to integrate community-driven adaptation measures into urban resilience strategies.

Infrastructure, Transport, and Public Works Data

The Kenya Urban Roads Authority and Kenya Rural Roads Authority provided data on road networks, traffic congestion levels, and transport expansion projects. These datasets helped in identifying service gaps and planning for infrastructure improvements.

Agriculture, Fisheries, and Blue Economy Data

Data from the Ministry of Agriculture, Livestock, Fisheries & Cooperatives' National Agriculture Sector Growth Strategy (2020-2030), fisheries production reports, and National Irrigation Board assessments were particularly relevant for understanding food security, economic activities in the blue economy, and the role of agriculture in local livelihoods.

Public Health, Education, and Social Services Data

The Ministry of Health and Ministry of Education provided critical sectoral data. The Kenya Health Information System and Universal Health Coverage Reports were used to map health facility distribution, disease burdens, and healthcare access levels. The National Education Sector Strategic Plan (2018-2022) provided insights into educational facility distribution, enrollment rates, and literacy levels in the Municipality.

Trade, Industry, and Tourism Data

Trade and industry data was obtained from the Kenya National Chamber of Commerce and Industry and Kenya Investment Authority, which provided insights into county-level business climates, industrialization potential, and economic zones development. The Kenya Tourism Board reports offered additional data on visitor statistics and ecotourism opportunities, relevant for the development of sustainable tourism in Homa Bay Municipality.

Governance and Urban Development Data

Urban governance and policy frameworks were reviewed through the State Department for Devolution, the County Governments Act (2012) and the Urban Areas and Cities Act (2011, revised 2019), which provided legal guidelines for urban governance, city classification, and devolution frameworks. The Council of Governors reports further enriched the study with county-level development strategies, intergovernmental coordination mechanisms, and devolved governance performance assessments.

Research and Technical Studies

To obtain data on climate risks, adaptation strategies, and resilience planning, reports from global and national organizations were reviewed. Key sources included the GCA, UN-Habitat, and the World Bank, which provided insights into climate vulnerability, urban resilience frameworks, and locally led adaptation strategies. The GCA's *2023 Guide for Building Climate Resilience in Urban Informal Settlements* and *State and Trends in Climate Adaptation* reports were analyzed for best practices in community-driven climate adaptation. Similarly, UN-Habitat's Cities and Climate Change Initiative and Kenya's Climate Resilient Urban Development Framework offered policy guidelines and case studies on sustainable urban planning. Additionally, the World Bank's *Kenya Climate Risk Profile* and *Kenya Urbanization Review* (2016) provided county-level climate risk assessments, urban growth trends, and their implications for infrastructure resilience. These reports were selected based on their relevance to climate adaptation, data reliability, and applicability to Homa Bay's urban planning context.

Academic research from Kenyan universities and international think tanks was also systematically reviewed to provide peer-reviewed studies, technical analyses, and policy recommendations.

Institutions such as the University of Nairobi, Jomo Kenyatta University of Agriculture and Technology, Technical University of Kenya, Maseno University, and Tom Mboya University were selected for their research on climate-smart urban planning, informal settlements, and land use planning. Think tanks such as the Kenya Institute for Public Policy Research and Analysis, African Centre for Technology Studies, and International Institute for Environment and Development contributed studies on urban governance, climate resilience, and sustainable development policies. Additionally, the Stockholm Environment Institute's Africa Centre provided data on climate risk analysis and adaptation planning in East Africa. The review process involved searching institutional repositories, analyzing thematic reports, and selecting studies based on their scientific rigor and relevance to Homa Bay's urban development challenges.

By systematically collecting and synthesizing climate risk reports, policy frameworks, and academic research, this methodology ensured that urban planning and climate adaptation strategies in Homa Bay Municipality were grounded in reliable secondary data sources. The integration of national and international reports with locally relevant academic studies allowed for the identification of urban vulnerabilities, environmental risks, and adaptation opportunities. Furthermore, the use of government reports, statistical publications, and climate datasets provided a quantifiable basis for analyzing climate risks and informing evidence-based decision-making. This approach strengthened the study's ability to propose actionable interventions that are both scientifically validated and aligned with Kenya's national climate resilience and urban development policies.

Data Analysis and Synthesis

The data collected in Homa Bay Municipality, was analyzed using a combination of quantitative and qualitative techniques to ensure a comprehensive and evidence-based understanding of urban planning challenges, climate risks, and socio-economic conditions. This mixed-methods approach integrates spatial analysis, statistical modeling, climate resilience assessments, and sectoral strengths, weaknesses, opportunities, and threats (SWOT) analysis, allowing for informed decision-making and targeted policy interventions. Each analytical method provides unique insights into settlement patterns, infrastructure needs, environmental vulnerabilities, and community resilience, forming the foundation for sustainable urban development and adaptation planning.

The spatial analysis was conducted using GIS and remote sensing techniques to map land use patterns, climate vulnerability hotspots, and service accessibility gaps. Through this process, planners were able to identify informal settlements, evaluate infrastructure distribution, and pinpoint environmental risks such as flood-prone areas and land degradation. The use of GIS-based land suitability assessments ensured that the classification of land use—residential, commercial, institutional, and mixed-use—reflects actual settlement trends and policy guidelines. Additionally, remote sensing data was employed to detect environmental changes over time, allowing for proactive measures to mitigate deforestation, soil erosion, and encroachment into protected zones. This spatially driven analysis provides a visual representation of urban vulnerabilities, making it easier to formulate geographically targeted interventions in infrastructure development and climate adaptation planning.

To complement spatial mapping, statistical analysis was employed to process quantitative socio-economic data, using software such as Excel and Statistical Packages for Social Scientists. This analysis focuses on income distribution, employment patterns, access to essential services, and demographic trends, providing a numerical basis for understanding economic inequalities and service provision disparities. By applying descriptive and inferential statistical techniques, the planning process uncovers correlations between socio-economic factors and climate risks, enabling planners to develop targeted programs that address vulnerabilities among low-income households, informal workers, and marginalized groups. Additionally, trend forecasting was conducted to assess urbanization pressures and future infrastructure needs, ensuring that the Municipality is prepared for demographic shifts and resource demands in the coming years.

A scientific climate risk assessment was integrated with community-led climate risk and vulnerability profiling, to ensure that community experience and priorities inform climate resilience planning. This analysis evaluates how climate-related hazards—such as flooding, drought, and extreme temperatures—affect different sectors such as housing, agriculture, and public health.

By identifying high-risk areas and assessing the community's adaptive capacity, the plan proposes interventions such as flood control infrastructure, improved drainage systems, and nature-based solutions to enhance urban resilience. The findings align with Kenya's Climate Resilient Urban Development Framework, ensuring that proposed adaptation measures are policy-compliant and scalable for broader implementation.

A sectoral SWOT analysis was conducted across multiple planning sectors to identify

key policy gaps, investment opportunities, and structural challenges. The analysis covers water, irrigation, sanitation, energy, environment, forestry, and climate change, focusing on access to clean water, sustainable energy solutions, and environmental conservation strategies. It also assesses agriculture, livestock, fisheries, the blue economy, mining, digital infrastructure, and cooperatives, examining food security, rural livelihoods, and technological advancements in economic development. The trade, industry, tourism, and marketing sectors were analyzed to determine market access challenges, industrial growth prospects, and opportunities for tourism-driven economic expansion.

The plan examines land use planning, housing, and urban development, highlighting issues such as informal settlements, land tenure security, and housing affordability. Public service sectors, including public health and medical services, are reviewed to assess healthcare accessibility and disease burden trends. Education, human capital development, and vocational training was analyzed to identify skills gaps and workforce preparedness levels.

By employing spatial analysis, statistical modeling, climate resilience assessments, and a sectoral SWOT analysis, this methodology ensures that urban planning and adaptation strategies in Homa Bay Municipality are data-driven, inclusive, and sustainable. The integration of GIS mapping, demographic trends, and sectoral performance assessments provides a solid foundation for evidence-based policy formulation, ensuring that urban development efforts align with national planning frameworks while addressing the unique needs of local communities. The Plan will enable decision-makers to develop strategic, well-informed interventions that promote equitable urban growth, climate resilience, and long-term socio-economic sustainability.

Data Validation and Stakeholder Engagement

To ensure the credibility, accuracy, and applicability of the collected data, a comprehensive validation process was undertaken. This process is designed to align findings with community priorities, technical expertise, and national and county-level policy frameworks. By engaging county departments, local residents, technical experts, and policymakers, the validation process refines the situational analysis, address gaps and inconsistencies, and enhances evidence-based decision-making for urban development and climate adaptation strategies in the Municipality.

The first stage of validation involved departmental reviews and feedback, where relevant County departments assessed the data within their respective sectors. Experts in land use planning, infrastructure, water and sanitation, public health, climate resilience, and governance examined the findings to identify potential gaps, inaccuracies, or missing components. This review was conducted in a collaborative setting, allowing for interdepartmental discussions to resolve data inconsistencies and integrate sectoral insights into the final analysis.

Following the departmental review, community validation workshops were held to engage residents, community leaders, and local stakeholders in reviewing the findings. These public meetings provided an opportunity for community members to confirm the accuracy of the data, highlight any overlooked issues, and offer insights from lived experiences. Feedback

from these workshops was incorporated into the final situational analysis, ensuring that community voices and concerns are reflected in the Plan.

A technical committee review was also conducted, bringing together experts from urban planning, environmental management, infrastructure development, and governance. This committee provided a final layer of professional scrutiny, refining key recommendations and ensuring that proposed interventions are technically sound, feasible, and aligned with best practices in urban development.

The final step of the validation process was the integration of findings into national and county planning frameworks, ensuring compliance with Kenya's National Urban Development Policy, County spatial planning guidelines, and climate adaptation strategies. This process guarantees that the validated data not only reflects community needs but also aligns with regulatory and policy requirements, making it a strong foundation for sustainable urban development.

Limitations and Mitigation Strategies

The process of data collection, validation, and analysis in Homa Bay Municipality presented several challenges that could affect the accuracy, comprehensiveness, and efficiency of the study. To address these obstacles, targeted mitigation strategies were implemented to ensure that the process remains robust, inclusive, and policy aligned.

Table 1. Limitations and mitigation strategies

Challenge	Mitigation Strategy
Data gaps in County records and data to assess climate risks	Community-sourced data and remote sensing was used to fill gaps
Stakeholder coordination	Communication with stakeholders was strengthened through county focal points
Resource constraints for field surveys	Leverage partnerships with universities and NGOs
Limited GIS skills among community mappers	Provide training and mentorship

Data gaps in County records and climate risk assessments was a key challenge, limiting the availability of historical and spatial data for planning. To bridge this gap, community-sourced data collection methods, such as participatory mapping, household surveys, and focus group discussions, were utilized. Remote sensing and GIS technology was employed to analyze land use changes, flood-prone areas, and infrastructure deficiencies, ensuring that climate risks are accurately assessed even in the absence of comprehensive government records. Stakeholder coordination was another challenge, particularly in ensuring effective communication and collaboration among various County departments, community representatives, and technical experts. To mitigate this, designated focal points within County departments and community leadership structures were identified to facilitate information flow, streamline decision-making, and enhance multi-stakeholder engagement.

Similarly, resource constraints for field surveys

could limit the scope and depth of data collection activities, particularly in under-resourced areas. To overcome this, strategic partnerships with universities, research institutions, and NGOs were established to mobilize financial, technical, and human resources to support data collection and analysis.

Limited GIS skills among community mappers posed a challenge to the accuracy and effectiveness of spatial data collection and analysis. To address this, capacity building initiatives were introduced, including training workshops, mentorship programs, and hands-on GIS mapping exercises to equip community mappers with technical skills in spatial analysis and digital mapping tools.

These mitigation strategies ensured that challenges encountered during the research process were effectively managed, allowing for a data-driven, community-centered, and policy-compliant approach to urban planning and climate adaptation in Homabay Municipality.



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THE PLANNING CONTEXT

This chapter provides a comprehensive overview of the location context of Homa Bay Municipality, and examines the legal, policy, and institutional framework within which the Plan is anchored.

Location

Homa Bay County is located in western Kenya, along the southern shores of Lake Victoria, in what was formerly Nyanza Province. Established under the devolved governance framework of Kenya's

2010 Constitution, the County plays a vital role in the socio-economic and ecological dynamics of the Lake Region Economic Bloc (LREB). It shares borders with Migori, Kisii, Nyamira, Kericho, and Kisumu counties, positioning it strategically as a link between Kenya's agricultural highlands and the lake-based economy.

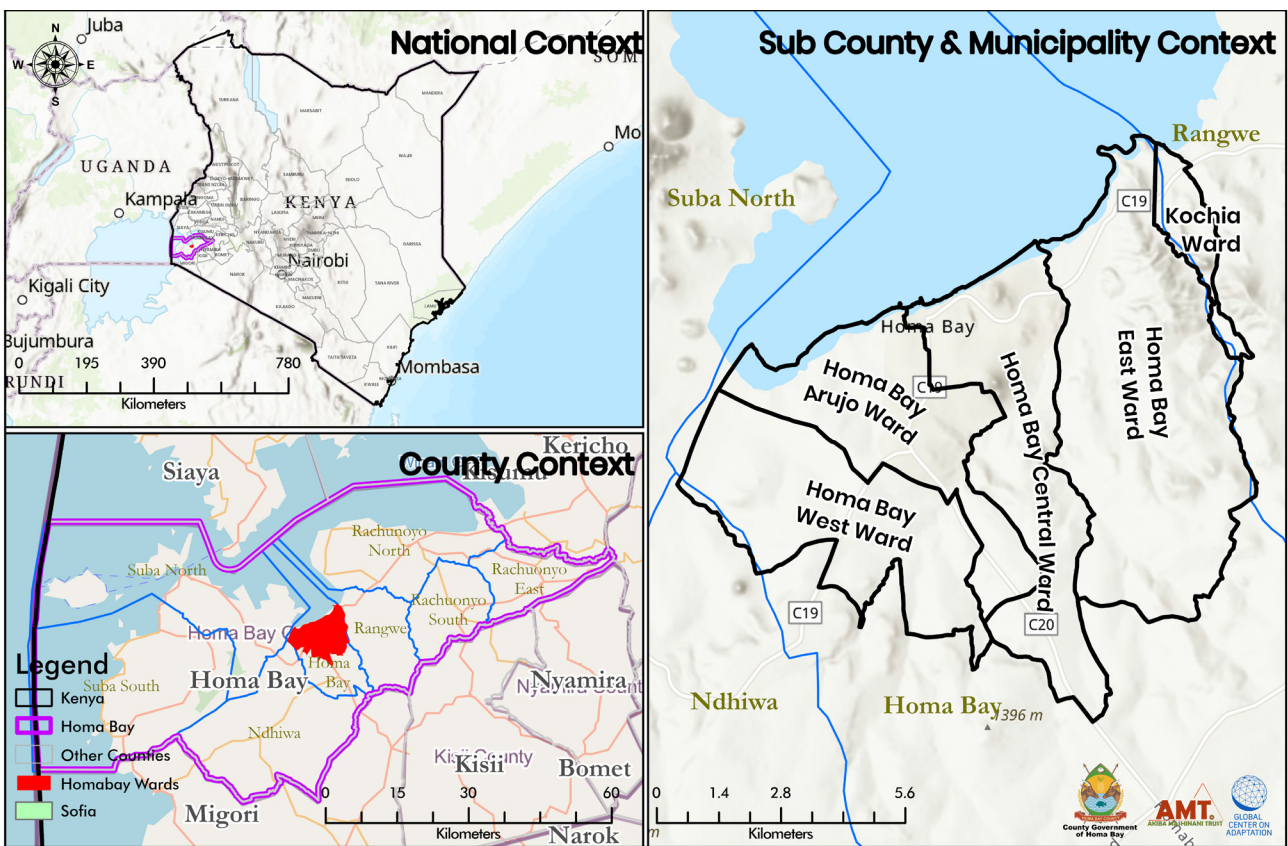
At the heart of the County lies Homa Bay Municipality—the administrative and political headquarters. The Municipality features a diverse

spatial layout, combining residential, commercial, industrial, agricultural, and institutional land uses, reflecting its growing role as a regional urban center.

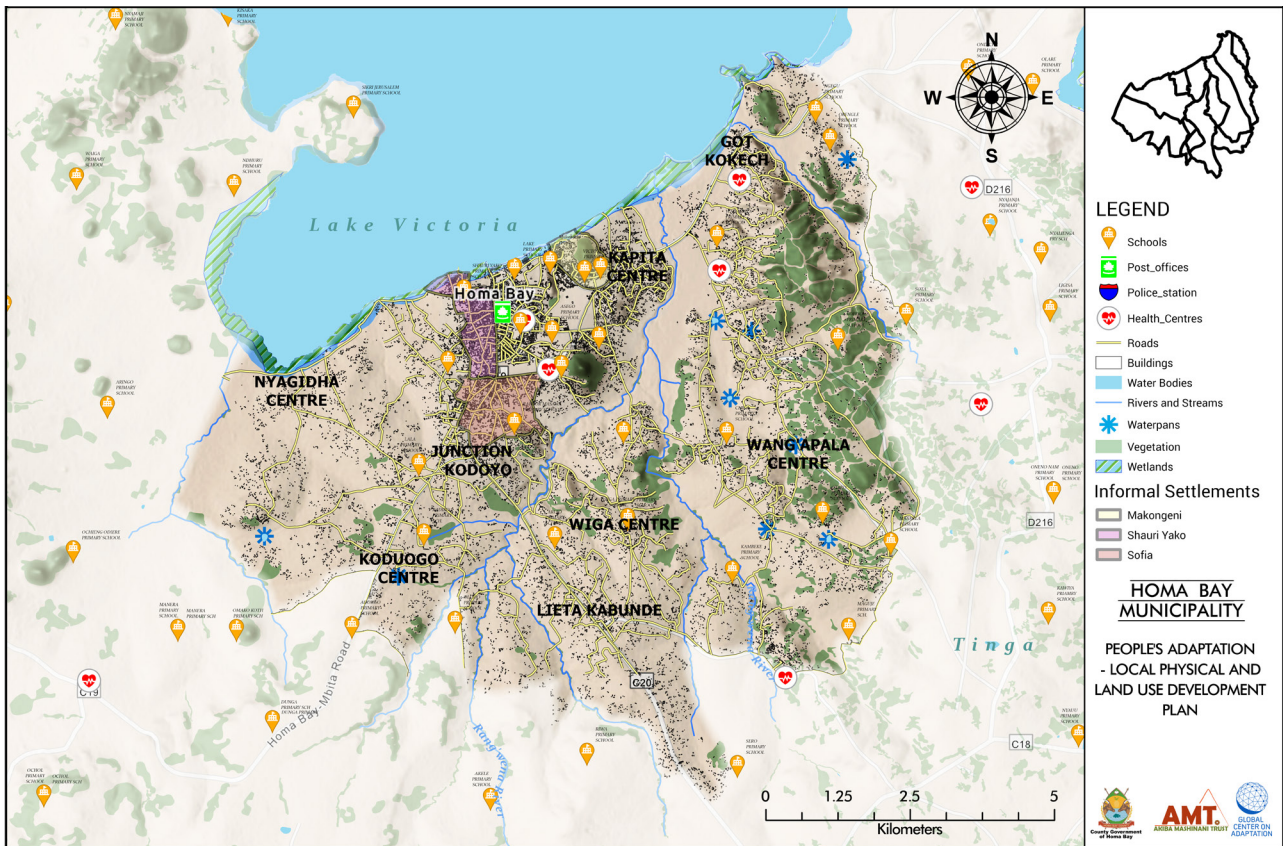
Homa Bay Municipality's central business district (CBD) serves as the hub for both commercial activity and administrative functions. Surrounding the CBD are residential areas that range from formally planned neighborhoods

to informal settlements such as Shauri Yako, Makongeni, and Sofia. The Municipality also supports a variety of small-scale industries and agro-processing enterprises, particularly those linked to fish processing and agribusiness. Institutional land use is evident in the presence of schools, healthcare facilities, and government offices, while agricultural activities dominate the outskirts, reflecting the town's blend of urban and peri-urban dynamics.

Map 1. Geographic and Spatial Context



Map 2. Base Map



Constitutional, Legal, Policy, and Institutional Framework

This People’s Adaptation – Local Physical and Land Use Development Plan for Homa Bay Municipality is firmly grounded in a multi-tiered legal, policy, and institutional framework that aligns with international commitments, national legislation, policy priorities, and County-level development strategies. The alignment ensures the Plan is both contextually relevant and legally enforceable, while also integrating global best practices in climate adaptation and sustainable urban development.

At the global level, the Plan is informed by key international frameworks including the Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction, and the New Urban Agenda, all of which promote resilient, inclusive, and sustainable urban environments. Additionally, the United Nations Framework Convention on Climate Change (UNFCCC) provides the guiding principles for climate action, under which the Plan contributes to locally driven mitigation and adaptation efforts.



Within the national legal framework, the Plan draws its mandate from the Constitution of Kenya, 2010, particularly Article 42 and Article 69, which affirm the right to a clean and healthy environment and establish obligations for sustainable land use and natural resource management. It is further supported by laws such as the Physical and Land Use Planning Act (2019), which governs the preparation and implementation of spatial plans; the Climate Change Act, 2016 (amended 2023), which institutionalizes climate change governance; the Urban Areas and Cities Act (2011, amended 2019), which outlines the planning and governance of urban areas; and the Environmental Management and Coordination Act, 1999 (amended 2015), which regulates environmental protection.

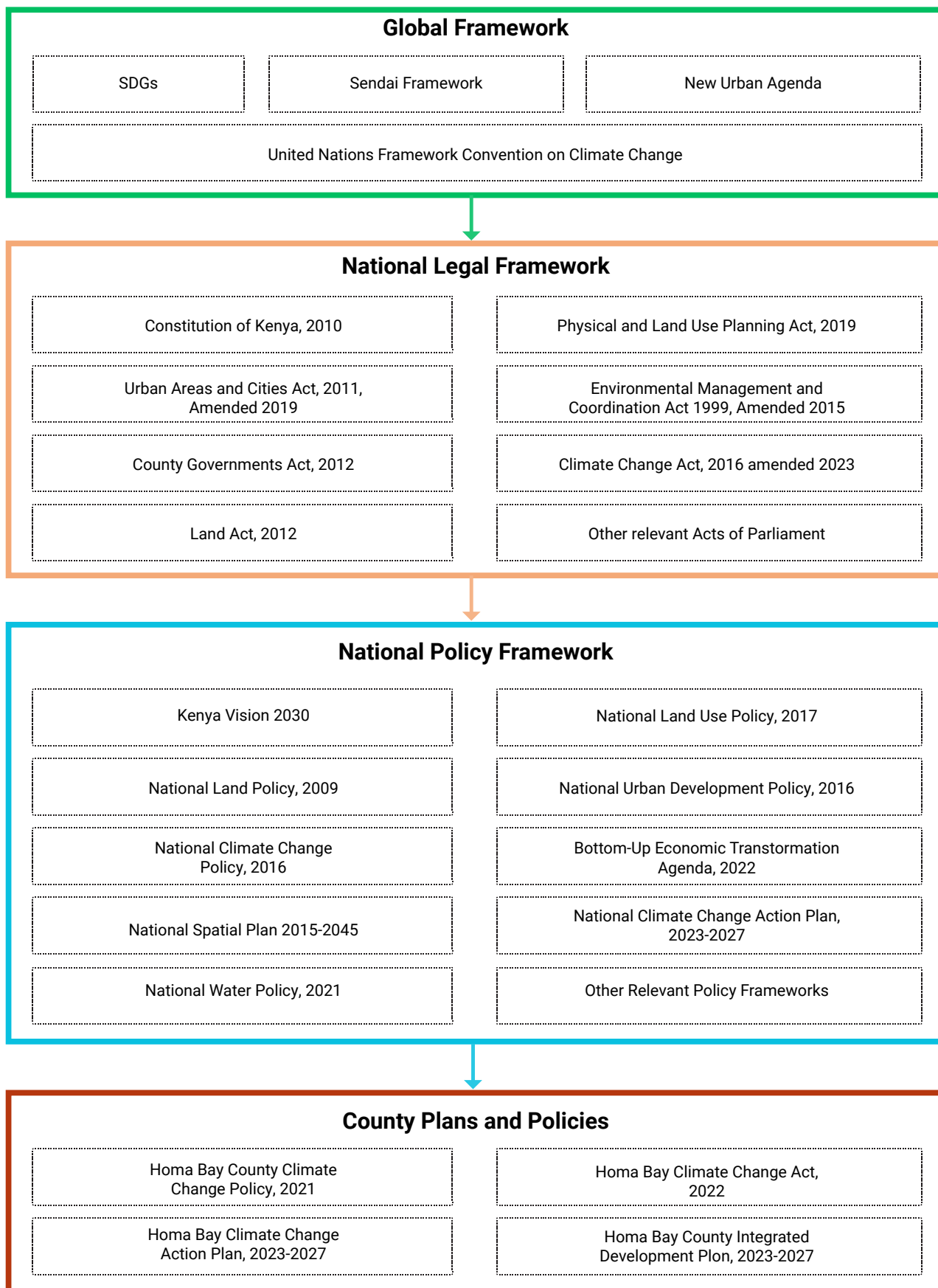
From a national policy perspective, the Plan aligns with Kenya's long-term development blueprint, *Kenya Vision 2030*, and is guided by sectoral policies such as the National Land Policy (2009), National Climate Change Policy (2016), and the National Water Policy (2021). The National Urban Development Policy (2016) and National Land Use Policy (2017) also shape the Plan's spatial and land use strategies, while the National Spatial Plan (2015–2045) provides a spatial vision to which the local Plan contributes. Importantly,

the Plan is part of Kenya's commitment to implement the National Climate Change Action Plan (2023–2027) and the Bottom-Up Economic Transformation Agenda (2022) by enhancing local resilience and inclusive development.

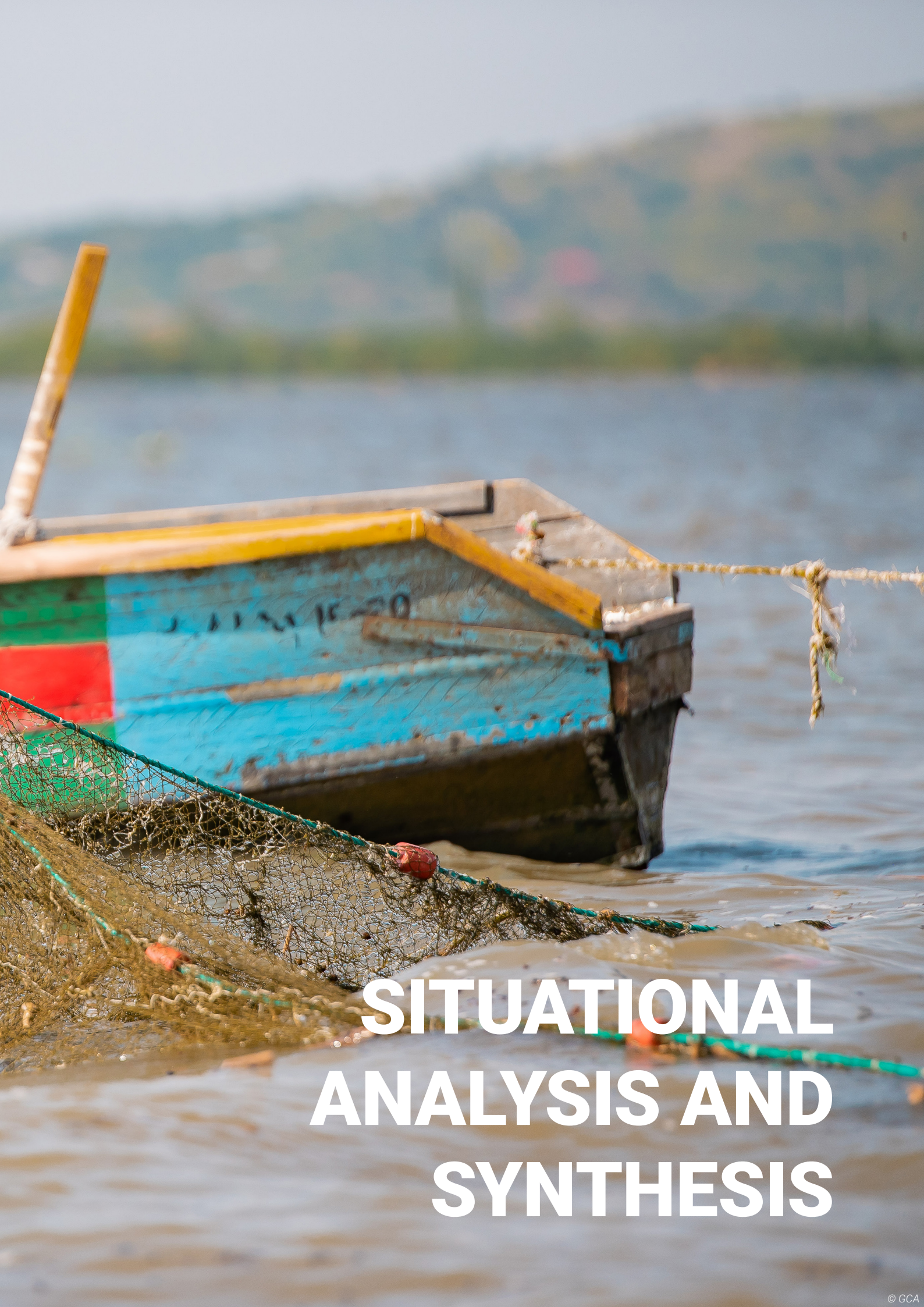
At the County level, the Plan is nested within Homa Bay's legislative and policy instruments including the Homa Bay County Climate Change Act, 2022, and Homa Bay Climate Change Policy, 2021, which establish the legal basis for local climate governance. It is also informed by the Homa Bay Climate Change Action Plan (2023–2027), which provides actionable priorities for local adaptation and mitigation, and the Homa Bay County Integrated Development Plan (2023–2027), which outlines the county's development trajectory and strategic priorities.

Through this multi-level integration, the Homa Bay Municipality People's Adaptation – Local Physical and Land Use Development Plan not only fulfills the constitutional and legislative obligations of sustainable urban planning but also reflects Kenya's international commitments and county aspirations. It serves as a model for locally driven, climate-responsive urban development anchored in law, guided by policy, and responsive to the needs of the people.

Figure 2. Policy and Legal Frameworks







SITUATIONAL ANALYSIS AND SYNTHESIS



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SITUATIONAL ANALYSIS

This chapter presents a comprehensive situational analysis that establishes the foundation for planning and decision-making by offering a detailed understanding of the current conditions within the planning area. It examines the key physical, demographic, and socio-economic characteristics that shape development opportunities and constraints in Homa Bay Municipality.

Physical Environment

Topography

Elevation and Terrain Features: The Digital Elevation Model (DEM) for Homa Bay Municipality reveals significant topographical variation, with elevations ranging from approximately 1,133 meters to 1,372 meters above sea level.

This variation creates distinct lowland, midland, and highland zones, each with specific implications for land use, infrastructure development, environmental management, and disaster risk.

Map 3. Topography



The lowland zones are primarily located along the lakefront and include sublocations such as Homa Bay Town, Asego, Arujo, and parts of Kobwola Kogwang. The low elevation and proximity to Lake Victoria make them highly susceptible to flooding and waterlogging, especially during the long rainy season. Both the RCRA and community observations highlighted increased frequency of flooding in these lowland zones, often impacting informal settlements like Shauri Yako and Makongeni.

The mid-elevation range covers large portions of central Homa Bay Municipality, including parts of Kalanya Kanyago, North Kanyabala, Kothidha, and southern Arujo. Validation meetings noted that midland areas experience fewer flood events but face occasional challenges related to soil erosion on moderate slopes. The RCRA flagged these zones as suitable for structured urban

expansion, given their favorable terrain and lower disaster risk profile.

The eastern and southern sections of the Municipality—particularly Katuma, Kanam, Kanyach Kachar, and parts of Kalanya Kanyago—fall within the highland zone. The RCRA identified these highland zones as susceptible to landslides and soil degradation, especially where vegetation cover has been disturbed. Feedback from communities living in these upland areas confirms concerns about road accessibility and land degradation linked to steep terrain.

Slope Analysis: The slope analysis of Homa Bay Municipality reveals a predominantly gentle to moderate terrain across most of the municipal area, with localized pockets of steep slopes concentrated mainly in the eastern and southeastern sublocations. Slope gradients

have been classified into six categories based on percentage rise: 0-2%, 2.1-5%, 5.1-8%, 8.1-15%, 15.1-25%, and 25.1-42%. This classification

provides insight into land suitability for various uses, risk assessment, and infrastructural planning.

Map 4. Slope Analysis

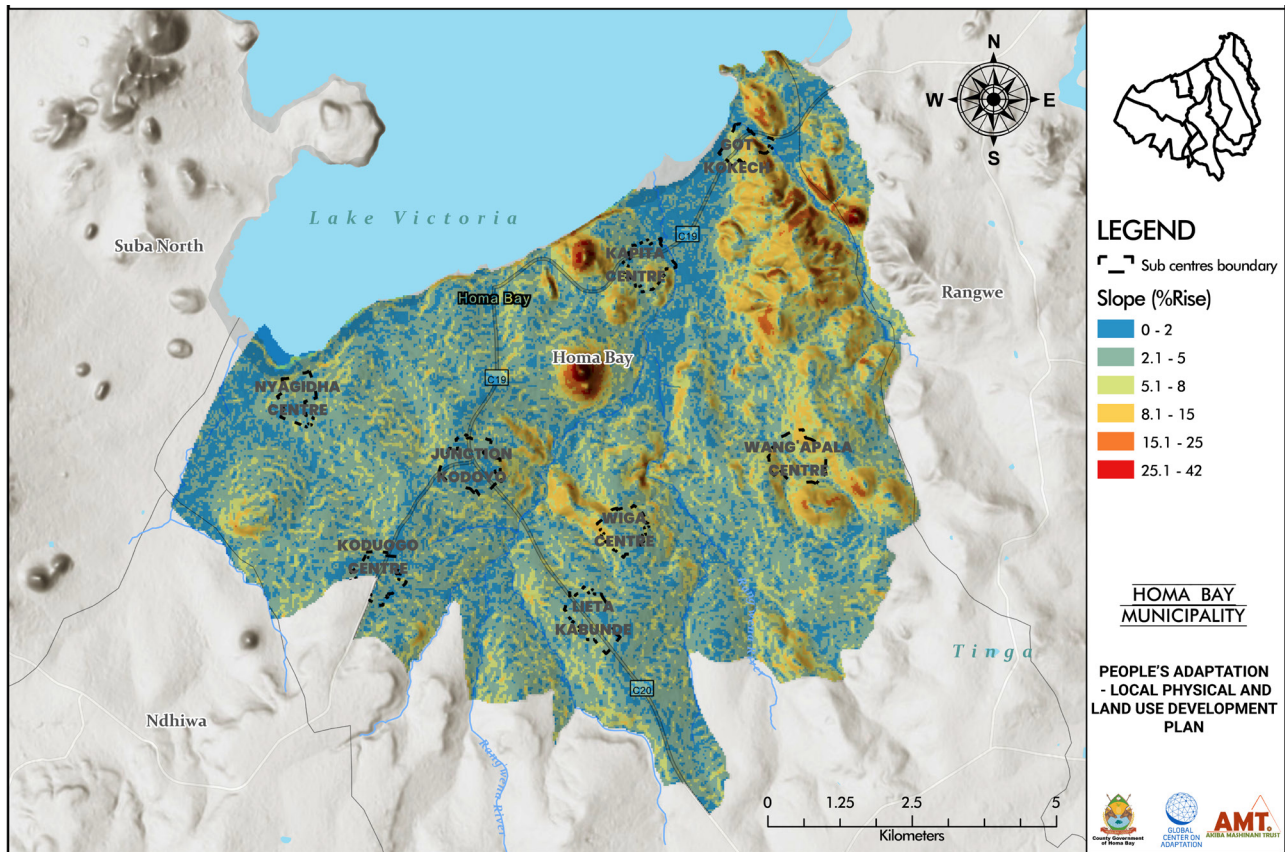


Table 2. Slope Gradient Categories

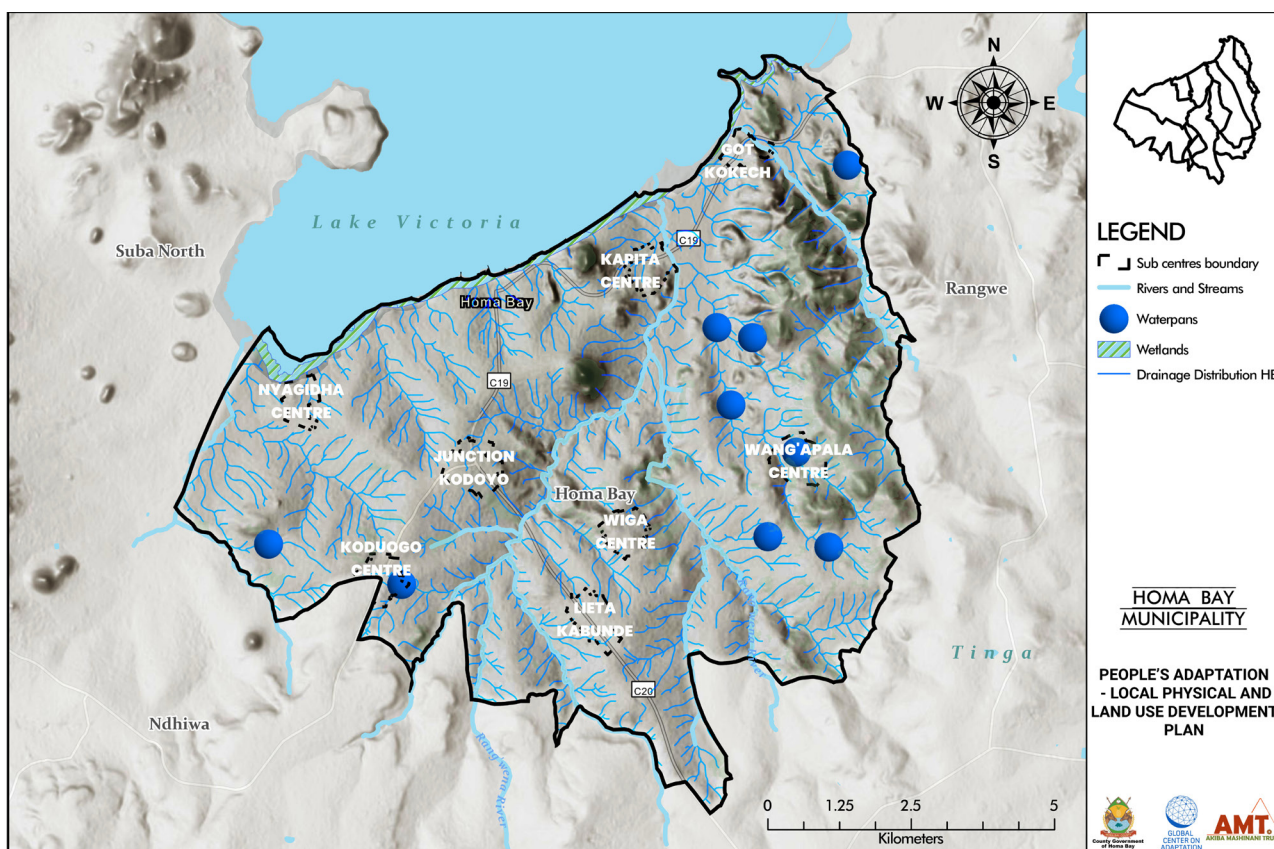
Slope Category (% Rise)	Approximate Area Coverage	Land Use Suitability	Planning Recommendations
0- 2%	Majority of urban cores	Ideal for all development types	Prioritize urban expansion and infrastructure
2.1 - 5%	Extensive in suburban areas	Suitable for most development	Moderate earthworks; manage stormwater
5.1 - 8%	Moderate zones	Suitable with engineering controls	Employ erosion control and retaining walls
8.1 - 15%	Limited patches	Marginal for dense development	Restrict heavy construction; conservation focus
15.1 - 25%	Scattered locations	Unsuitable for most development	Protect for conservation and low-impact use
> 25%	Very limited areas	Prohibit development	Strict protection; soil stabilization

Hydrology and Drainage

Surface Water Resources: Homa Bay Municipality is endowed with a diverse and vital network of surface water resources that underpin the livelihoods, agriculture, and economic activities of its residents. Situated along the shores of Lake Victoria, one of Africa’s

largest freshwater lakes, the Municipality’s hydrology is strongly influenced by this major water body, which serves as a critical source for domestic water, fishing, and transportation. The Municipality’s surface water system comprises numerous rivers, streams, and seasonal water pans, as illustrated in the hydrology map below.

Map 5. Hydrology and Drainage



Lake Victoria serves as the mainstay for a significant portion of the Municipality’s population who rely on its waters for daily domestic use, including drinking, cooking, and sanitation. Fishing on the lake and surrounding wetlands constitutes a major economic activity, providing employment and contributing to food security for many households. The RCRA report highlights the lake’s importance but also underscores the growing pressure on its water quality due to pollution and increased demand.

Rivers, streams, and water pans provide supplementary water sources vital for small-

scale irrigation, livestock watering, and domestic consumption, especially for communities located farther from the lakeshore. Validation meetings noted that the reliability of these surface water sources varies seasonally and spatially, influencing the types and intensity of agricultural production possible across sublocations.

Groundwater Resources: Groundwater constitutes a vital component of the water supply system within Homa Bay Municipality, particularly in sublocations where surface water resources are limited or seasonally unreliable. Existing groundwater infrastructure includes a mix of

shallow hand-dug wells and deeper boreholes equipped with mechanized pumps, widely distributed across the Municipality. Community validation data indicates that a significant portion of households, especially those in informal settlements and remote villages, rely heavily on groundwater sources for daily water needs due to the absence of piped water systems. This reliance heightens the importance of sustainable groundwater management practices to prevent depletion and contamination.

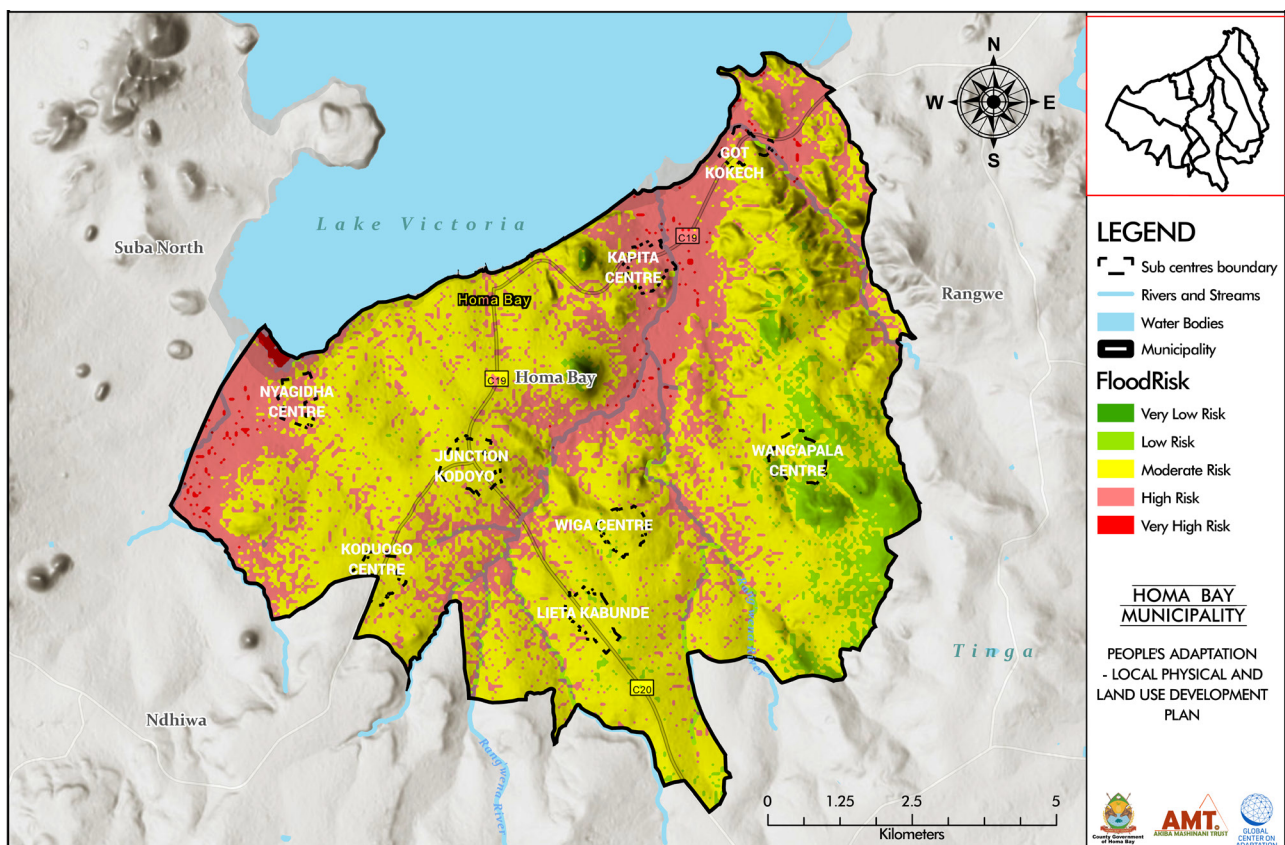
Groundwater quality faces notable risks, particularly from contamination linked to sanitation practices. The widespread use of pit latrines across the Municipality presents a significant threat to groundwater integrity. Poorly constructed or improperly sited latrines near wells and boreholes facilitate the infiltration of pathogens and nitrates into groundwater, posing serious public health hazards. Outbreaks of waterborne diseases such as cholera and

typhoid have been documented in communities relying on untreated groundwater, underscoring the gravity of this issue.

The RCRA further emphasizes groundwater contamination as a critical risk factor exacerbated by increasing population density and inadequate sanitation infrastructure. It highlights the need for spatial planning that ensures appropriate distances between water points and sanitation facilities.

Drainage Systems and Flood Risk Areas: Homa Bay Municipality relies on a mix of natural and engineered drainage systems to manage surface runoff and reduce flood risks. Rivers, wetlands, and topographic depressions channel water toward Lake Victoria, while urban areas such as Homa Bay Town, Arujo, and Asego are served by canals, culverts, storm drains, and retention basins. Despite this, frequent flooding persists, particularly in low-lying informal settlements with poor drainage.

Map 6. Flood Risk



Flood-prone areas—including Homa Bay Town, Arujo, and parts of Asego—experience recurrent inundation during the long (March–May) and short (October–December) rains. Contributing factors include poor soil permeability, blocked drainage channels, encroachment into riparian areas, and unplanned development. Climate change has intensified these risks, with heavier rainfall, shrinking permeable surfaces, and expanding informal settlements disrupting natural drainage.

Floods damage infrastructure, displace residents, destroy crops, and increase the spread of waterborne diseases, especially in areas with inadequate sanitation. The Rapid Climate Risk Assessment recommends integrated flood management through improved maintenance of

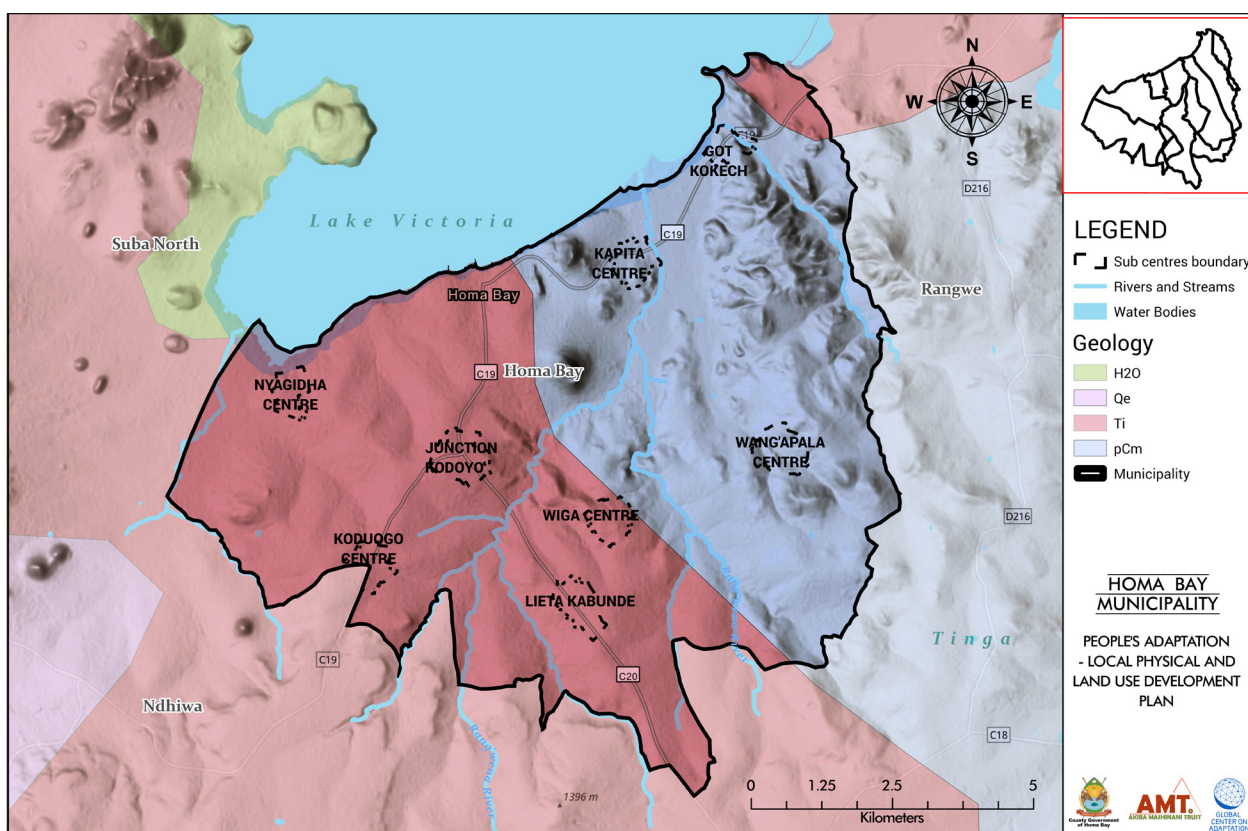
drainage systems, construction of stormwater infrastructure, and adoption of nature-based solutions like wetland restoration. Incorporating flood risk mapping, early warning systems, and community awareness into municipal planning is essential to reduce vulnerability and build local resilience.

Geology and Soil Characteristics

Geology

The geology of Homa Bay Municipality is characterized by four main formations, each with distinct properties that influence land use, construction, water availability, and natural hazards within the Municipality as indicated in the map below.

Map 7. Geological Formations



Alluvial deposits: These formations primarily comprise recent alluvial sediments such as sand, silt, and clay associated with river valleys, low-lying floodplain areas, and notably the shores of Lake Victoria. These deposits are less stable for heavy infrastructure but highly suitable for agriculture due to fertile soils and easy water access. Drainage conditions can be challenging here, requiring careful management to avoid flooding and soil erosion.

Quaternary deposits: These deposits consist of loose, unconsolidated materials such as gravel, sand, and clay typically found in valley floors and flatter terrains.

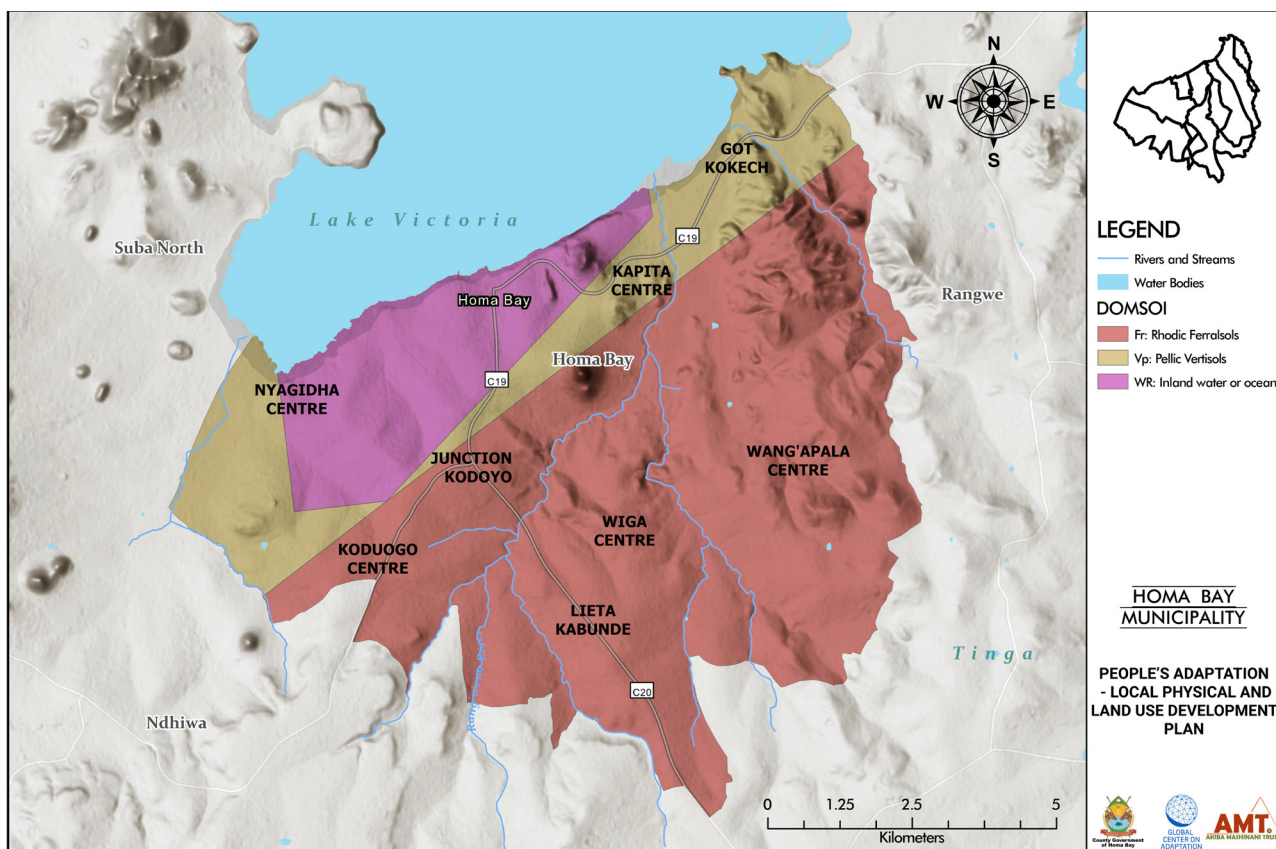
Tertiary Igneous and Metamorphic Rocks: This extensive formation dominates the western and central parts of the Municipality. These rocks provide a solid and stable foundation for buildings and infrastructure, making them highly suitable for urban development.

Paleozoic and Mesozoic Sedimentary Rocks: The eastern and southeastern parts of Homa Bay Municipality are predominantly underlain by this formation, comprising sedimentary rocks such as shale, sandstone, and limestone. Some areas may be susceptible to erosion or rock fracturing, requiring detailed geological and geotechnical assessments before construction.

Soil Types and Land Suitability

The soil composition across Homa Bay Municipality varies significantly, influencing agricultural productivity, construction suitability, and environmental management practices. According to the soil classification map and accompanying data, three primary soil types dominate the Municipality as indicated in the map below: Rhodic Ferralsols (Fr - Red Areas), Pellic Vertisols (Vp - Yellow Areas) and Inland Water or Ocean (WR - Purple Areas).

Map 8. Soil Types



The distribution of soil types across the Municipality informs both agricultural potential and urban planning decisions. Rhodic Ferralsols, despite lower natural fertility, represent the bulk of arable land and must be managed sustainably to prevent degradation. Pellic Vertisols require special consideration in infrastructure design and agricultural scheduling due to their physical behavior.

Sublocations with significant areas of fertile soils, such as parts of Arojo and Homabay Town, offer opportunities for agricultural diversification and urban expansion if properly managed. Conversely, areas with challenging soils, especially Vertisols, call for adapted construction technologies and soil conservation measures.

Climate

Temperature Trends and Seasonal Variations

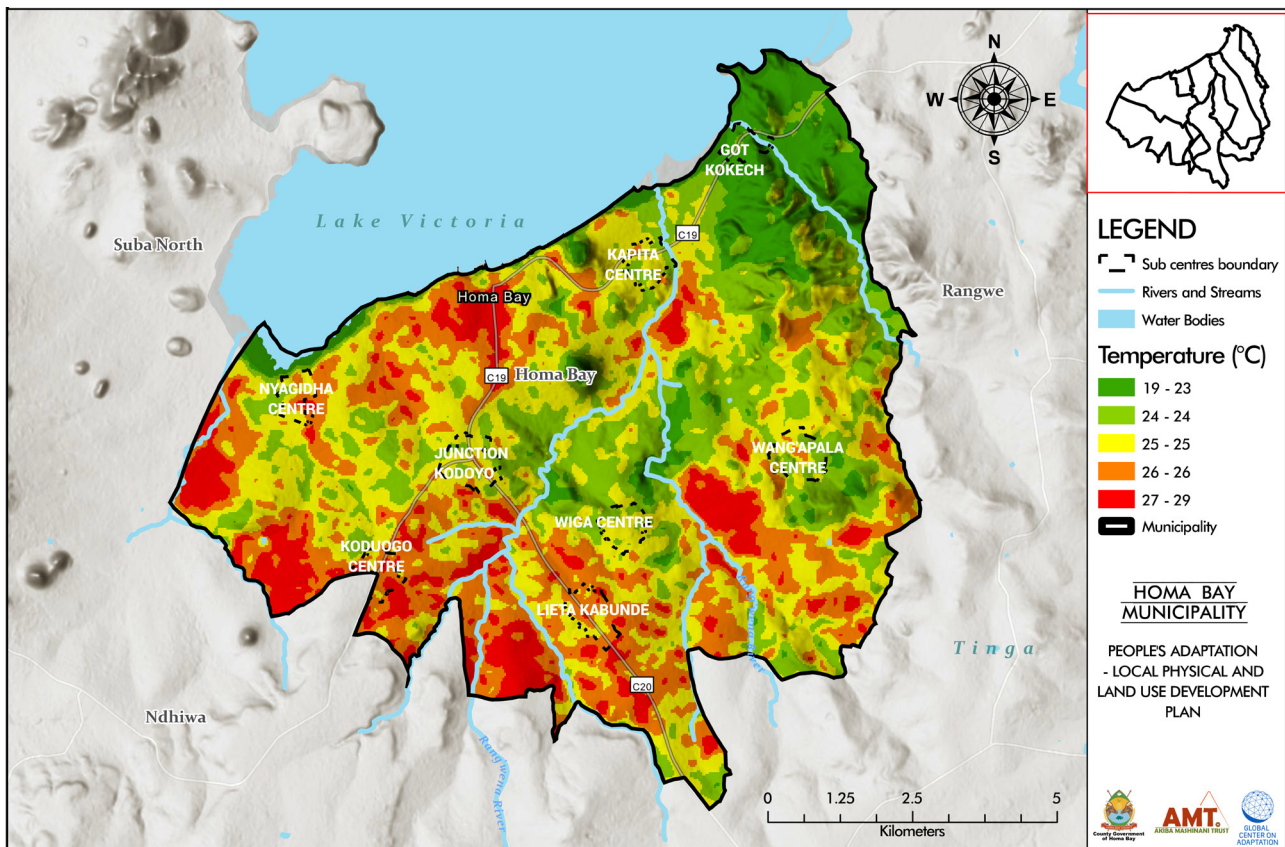
Homa Bay Municipality experiences a tropical inland equatorial climate, moderated by elevation and proximity to Lake Victoria. Average temperatures range from approximately 18°C in upland areas like Katuma and Kanam, to 29°C in low-lying zones such as Homa Bay Town and Arojo. The hottest period occurs between December and March, particularly February, coinciding with the dry season and increasing the

risk of heat stress for people, crops, and livestock. April, following the onset of the long rains, tends to be the coolest month.

According to the RCRA, long-term climate records from the Kenya Meteorological Department indicate a national temperature increase of approximately 2.2°C since the mid-20th century, with similar trends observed in Homa Bay. Under high-emission scenarios (RCP8.5), average temperatures in the Municipality are projected to rise by 1.0°C to 2.0°C by 2050, with up to 98 additional heatwave days annually. These rising temperatures are linked to higher incidences of heat-related illnesses, soil moisture deficits, and changes in pest and disease patterns affecting agriculture—trends confirmed through community consultations.

A 2025 Land Surface Temperature map highlights spatial temperature differences across the Municipality. Cooler zones, such as Kanam and Kothidha, benefit from higher elevations and vegetation cover, while warmer areas like Katuma, Kotieno, and Kalanya Kanyango experience more heat due to lower elevation, urbanization, and reduced vegetation. Urban centers like Homa Bay Town and Arojo exhibit pronounced urban heat island effects, where impervious surfaces amplify heat stress, particularly impacting vulnerable populations.

Map 9. Land Surface Temperature



These findings underscore the urgent need for climate-sensitive urban planning strategies, including expanding green infrastructure, promoting urban forestry, and using heat-reflective materials. Understanding local temperature dynamics is essential for building community resilience, protecting public health, and guiding sustainable land use within Homa Bay Municipality.

Rainfall Patterns and Distribution

Homa Bay Municipality experiences a bimodal rainfall pattern, with long rains from March to May and short rains from October to December, averaging between 1100 mm and 1300 mm annually. Rainfall is highly variable across time and space, influenced by terrain, proximity to Lake Victoria, and regional atmospheric systems. While historical data shows no clear long-term trend in total rainfall, the RCRA notes a rise in extreme rainfall events, particularly short, high-

intensity storms during the long rains, which often cause flash floods. Community members in low-lying areas such as Shauri Yako and Makongeni report increasing flood incidents affecting homes, sanitation, and livelihoods.

Climate drivers like the El Niño Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) significantly influence rainfall variability—El Niño years bring excess rainfall and flooding, while La Niña is associated with drought. Community feedback confirmed awareness of these cycles and their impact on farming and disaster planning.

Future projections suggest a modest increase in mean rainfall by mid-century, but with greater variability and unpredictability. This includes more intense storms and longer dry spells, creating dual risks of flooding and drought, which challenge water management, agriculture, and food security.

Addressing this volatility requires adaptive strategies such as improved flood control, water storage, and climate-resilient farming. Community consultations emphasized the growing need for flexible planting schedules and reliance on irrigation to cope with erratic rainfall.

Wind and Air Quality

The Municipality's prevailing wind direction is generally from the southwest to the northeast, influenced by regional wind systems and local lake breeze circulations generated by Lake Victoria. These winds play a vital role in atmospheric mixing and pollutant dispersion, which affects urban air quality dynamics.

Climate Change Indicators

The RCRA identifies several key climate change indicators affecting Homa Bay Municipality, supported by community feedback from across sublocations.

Rising temperatures are a major concern, with projections indicating a 1.0-2.0°C increase by 2050 under high-emission scenarios. Residents reported hotter dry seasons, increased heat-related illnesses, and reduced crop yields. Farmers observed shifting growing seasons and greater irrigation needs, while health workers noted a rise in vector-borne diseases like malaria—trends aligned with RCRA findings on rising evapotranspiration and expanding vector habitats.

Rainfall variability is intensifying, with more frequent and extreme storms leading to flooding, especially in vulnerable areas like Shauri Yako and Makongeni. Community members cited damage to homes, sanitation, and livelihoods, reinforcing concerns about infrastructure weaknesses in informal settlements.

Drought risk, while less frequent than flooding, is worsening due to erratic rainfall and dry spells.

Farmers and pastoralists reported reduced water availability, crop failures, and pasture loss, leading to food insecurity and highlighting the need for drought-resilient crops and diversified water sources.

Soil erosion and landslides are increasing, driven by intense rainfall and unsustainable land use on steep slopes. Communities in Kanam and Katuma reported visible gullies and slope failures affecting farms, roads, and homes, consistent with RCRA erosion risk maps.

Storm and strong winds are becoming more frequent in the region, often damaging roofs, electricity poles, and unreinforced structures. Informal settlements with substandard housing materials are particularly susceptible.

Vulnerable groups—including women, youth, persons with disabilities, and female-headed households—face disproportionate climate risks in Homa Bay Municipality due to deeply entrenched structural inequalities and limited access to resources, information, and adaptation mechanisms. Women, in particular, are disproportionately impacted by climate change owing to traditional gender roles that place them at the frontline of caregiving, water collection, and food provision—roles that are increasingly strained by climate-induced droughts and floods (Suez Consulting, 2025). Female-headed households often struggle with insecure land tenure, lower income levels, and reduced access to financial services, which restrict their ability to invest in adaptive infrastructure or recover from climate shocks. For example, in Sofia, 89.9% of women work in the informal sector, where job insecurity and exposure to climate-sensitive sectors like fish selling and urban farming are rampant. Youth are similarly vulnerable, especially in informal settlements like Sofia and Makongeni, where unemployment among the 15–24 age group is as high as 59.6% and 25%,

respectively. These compounding vulnerabilities mean that young people often lack the financial stability, skills, and institutional support needed to anticipate and respond to climate hazards. The cumulative impact of these intersecting forms of marginalization means that climate change not only threatens livelihoods and health but also exacerbates pre-existing social and economic inequalities.

Community consultations stressed the need for inclusive, targeted adaptation strategies. The combined scientific and community evidence underscores the urgent need for integrated, equity-driven climate responses to build resilience and protect livelihoods in Homa Bay Municipality.

Mining

Homa Bay Municipality, though not traditionally known for large-scale mining, hosts several small-to medium-scale extractive activities that support its growing construction industry. These include sand harvesting, building stone quarrying, and especially ballast production, which is the most prominent. Ballast mining involves extracting and crushing hard rocks into coarse aggregates for use in construction. The hard rocks are primarily sourced from local hills and rocky areas using basic tools. This activity plays a vital economic role by meeting the Municipality's increasing demand for housing and infrastructure, supporting youth employment, promoting micro-enterprises, and reducing construction costs by providing locally sourced materials.

Environmental Conservation and Sustainability Measures

Protected Areas and Biodiversity

Homa Bay Municipality hosts a range of ecological assets including Lake Victoria, Wetlands, steep slopes of Kodhidha and hills like Got Asego and Got Simenya. These areas are crucial for biodiversity conservation, offering habitats for numerous plant and animal species. However, pressures from human activities threaten their sustainability. Encroachment, pollution, and illegal logging are key threats to biodiversity.

Deforestation and Land Use Change

Deforestation rates in Homa Bay have risen due to agricultural expansion, fuelwood collection, and urban development. The conversion of forested areas into farms or settlements not only reduces tree cover but also weakens soil structure and increases vulnerability to climate-related risks.

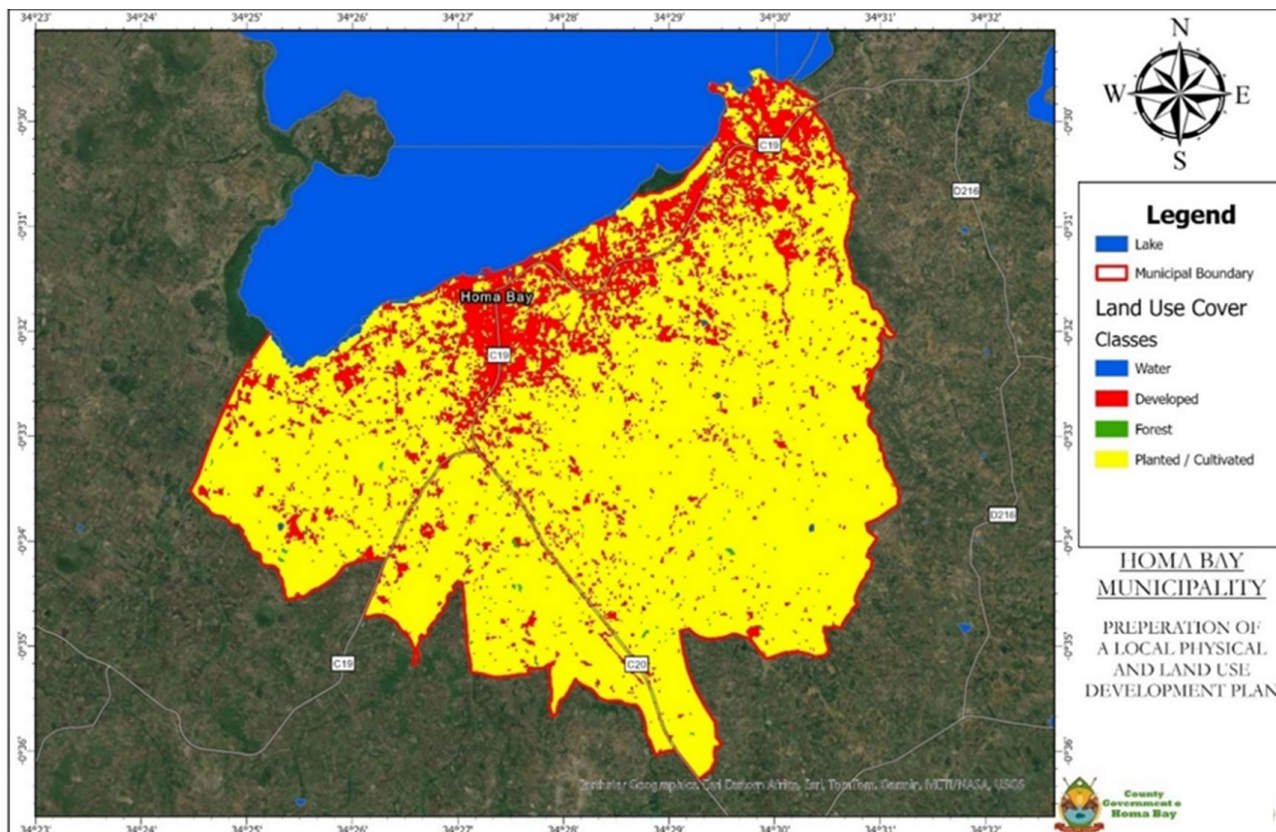
Unchecked land use changes undermine climate resilience and contribute to environmental instability. Integrating sustainable land management practices into planning processes and enforcing land use regulations can help reverse these trends.

The Land Use and Land Cover map of Homa Bay Municipality provides an overview of how land within the municipal boundary is currently utilized. The map reveals that the Municipality is predominantly characterized by cultivated or

planted land, shown in yellow, which occupies the largest portion of the area. This indicates a largely agrarian land use pattern, reflective of a rural-urban fringe setting where agriculture remains

a central economic activity. The municipal boundary is clearly delineated in red, enclosing a diverse mix of land uses within its jurisdiction.

Map 10. 2024 Land Use and Land Cover



Climate Adaptation and Resilience Initiatives

The Homa Bay County Government established and commissioned the County Climate Information Center as a central hub for climate-related data, supporting sectors such as agriculture, maritime transport, and disaster risk management. Using ward-level satellite weather data, the center has significantly improved the quality and accessibility of localized climate information.

To enhance public awareness and promote behavioural change, the County sensitized 106 community organizations on climate change impacts, mitigation, and adaptation through workshops and trainings, with targeted engagement of women and youth groups.

As part of its adaptation measures, the County has drilled and equipped 37 solarized boreholes across the 37 wards to facilitate reliable community water provision. In addition, 84 community-based and youth groups were engaged to establish tree nurseries aimed at increasing vegetation cover and rehabilitating degraded lands.

Building on these initiatives, the FLOCCA (Financing Locally-Led Climate Change Actions) programme has deepened youth involvement in ecosystem restoration. Through this initiative, two youth groups per ward have been trained in nursery establishment and management, each equipped with seeds and basic tools. Each group targets the production of approximately 100,000 seedlings, contributing to reforestation, livelihood

improvement, and sustained community ownership of environmental restoration activities. Stakeholder Consultations, FLOCCA Programme (2025).

Furthermore, the County distributed climate-resilient certified seeds to vulnerable communities identified through the Participatory Climate Risk Assessment (PCRA) and FLOCCA processes, coupled with training on planting, crop management, and post-harvest handling to enhance food security and reduce climate-related crop losses.

Population and Demographic Characteristics

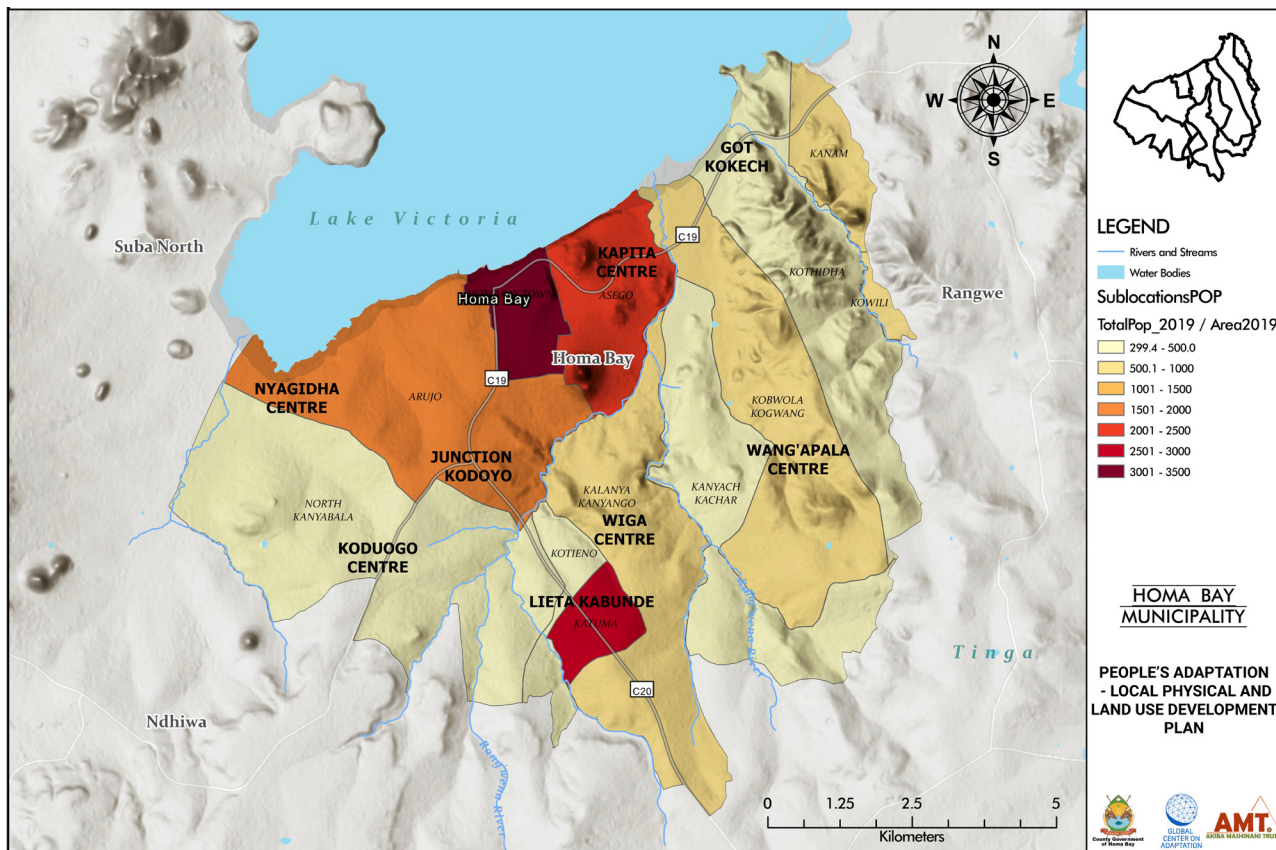
Population Size, Distribution & Density

Homa Bay Municipality's population is reflected through two key data sources: the Kenya National Bureau of Statistics (KNBS) 2019 census, which estimates a population of 82,414 within the municipal boundary, and the enumeration carried out as part of this planning process, by the County Government of Homa Bay and AMT, in 2025. The latter provides a more granular and community-level population estimate of 56,505 residents (adjusted from a 50,297 baseline with 89% household coverage). While the KNBS data offers official national comparability, the enumeration is more locally specific. The divergence in figures stems from methodological differences—KNBS applied broad census sampling, while the enumeration data was gathered via direct household-level mapping and interviews across all sublocations.

Population distribution is uneven across the Municipality, reflecting the mixed urban, peri-urban settlement structure. Based on the study, Arujo emerges as the most populous sublocation with 13,708 residents, accounting for over 31% of the total surveyed population. Asego (6,738 residents) and Homa Bay Town (5,886 residents) follow as key urban centers. These areas, characterized by dense residential developments and active commercial zones, are also home to the largest informal settlements, such as Shauri Yako and Sofia. On the other hand, sublocations like Kalanya Kanyango, Kotieno, and Kothidha have significantly lower populations, ranging between 3,000–4,000 residents each, indicating more peri-urban or low-intensity land use patterns.

The 2019 KNBS census data aligns with this pattern of spatial variation. It shows that sublocations such as Asego, Kobwola-Kogwang, Arujo, and Township-Homa Bay each cover more than 98% of their areas within the municipal boundary and collectively accommodate a significant share of the Municipality's 82,414 population. Homa Bay Town stands out with the highest population density at 2,263 persons/km²—a clear indicator of its central role as the Municipality's administrative and economic hub. In contrast, low-density sublocations like Kanam, Kotieno, and Kowili (each with fewer than 2,000 people) highlight the rural–urban transition zones, which offer future opportunities for planned growth and urban expansion. Together, the data supports a nuanced understanding of population concentration and provides a strong basis for service delivery, infrastructure planning, and land-use prioritization.

Map 11. Population Density



Household Characteristics

Household dynamics in Homa Bay Municipality reflect a complex and evolving urban structure. As part of the enumeration conducted for this Plan, a total of 21,317 households were visited, of which 18,894 participated in full interviews, translating into 89% coverage. The most prevalent household type falls under the “other” category, accounting for 54% of all households. These include shared rentals, cohabiting individuals, single-person units, and informal living setups. This highlights a shift from traditional family structures toward more diverse and often economically driven arrangements. Nuclear households make up 27%, while single parent and extended households account for 10.3% and 8.7%, respectively. This trend, especially dominant in dense sublocations such as Arujo, Township-Homa Bay, and Kalanya

Kanyango, reflects both urban migration patterns and socio-economic pressures such as housing affordability.

The enumeration data further reveals sublocation-specific insights. Arujo, with a mapped area of 13.2 km², leads with 6,415 households visited and a population of 13,779, supported by the presence of the largest informal settlements in the Municipality—Shauri Yako and Sofia. In Township-Homa Bay, 2,899 households were interviewed, capturing a population of 5,916. Other sublocations like Kalanya Kanyango and Kanyach Kachar follow with 2,178 and 1,396 interviewed households, respectively. Notably, Kowili, though only 0.5 km² in size, recorded 76 participating households with the highest average household size of five persons per household. In contrast, Arujo and Township-Homa Bay report lower

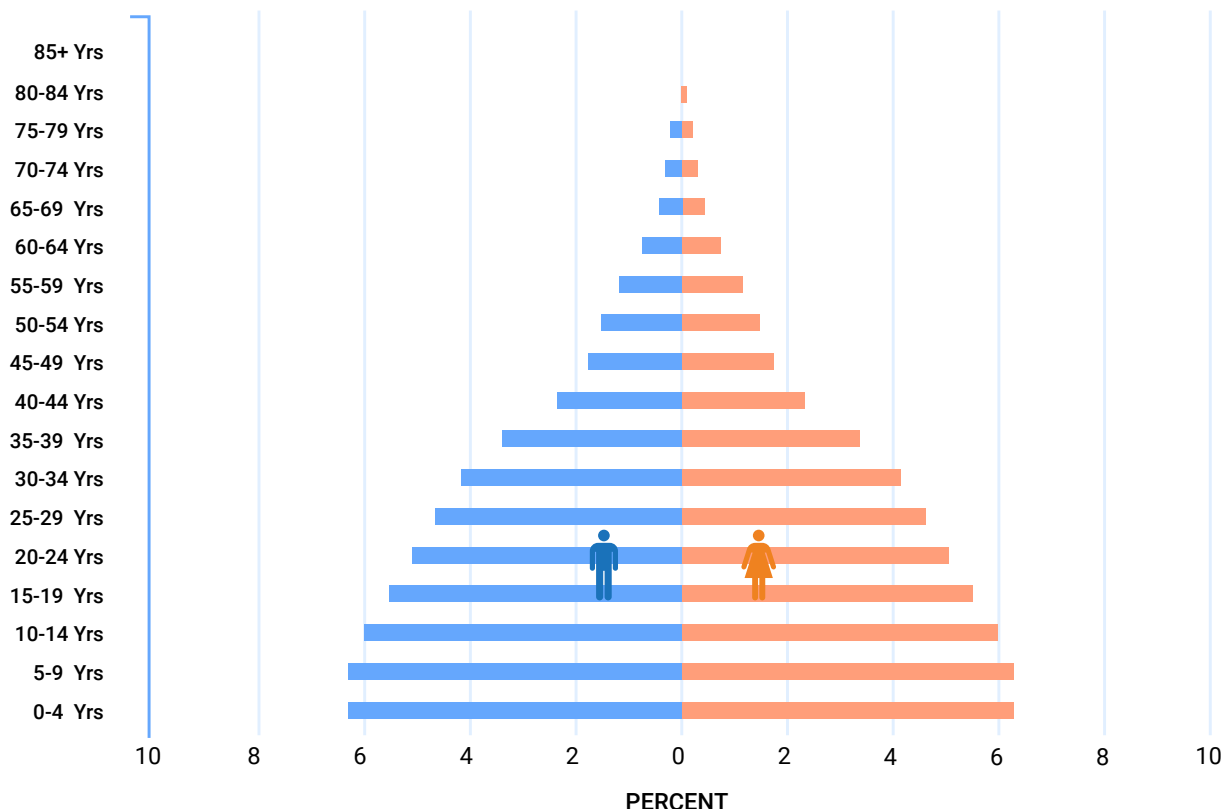
average household sizes of two persons per household, underscoring a dense, fragmented urban environment dominated by small units or individuals sharing dwellings.

These findings emphasize the importance of adapting service delivery and housing strategies to fit this shifting demographic reality. The enumeration’s household-level data offers the practical granularity needed for targeted interventions. High-density areas with dominant “other” household types face greater pressure on water, sanitation, and waste systems, while peri-urban areas like Kotieno, Kothidha, and North Kanyabala—though less dense—require inclusive infrastructure planning to address dispersed settlements. The data calls for a shift in urban planning approaches to recognize non-traditional households and support their inclusion in housing policies, service distribution models, and land-use frameworks.

Gender and Age Composition

Homa Bay Municipality exhibits a balanced gender structure with slight male predominance, based on the AMT 2025 household enumeration data. Of the 50,665 residents captured through interviews, 49% were female (22,459), 50% male (23,570), and 1% (317 individuals) identified as intersex. This inclusive data collection approach—where gender-diverse responses were explicitly captured—demonstrates increasing awareness and openness in gender identity reporting. The observed 1% intersex representation is significantly higher than typical national averages (which usually fall below 0.1%), suggesting either improved enumeration methods or a more supportive local context for disclosure. Compared to national figures from the 2019 KNBS census, which recorded 49.5% female and 50.5% male, the Municipality’s gender proportions are fairly consistent, though they reflect a higher level of inclusivity.

Chart 1. Population Pyramid



At the sublocation level, Arujo recorded the highest number of female residents (6,907), followed by Asego (3,347) and Homa Bay Township (2,936). Interestingly, Kobwola Kogwang reported the highest number of individuals identifying as intersex (14 individuals), even though it is a relatively less urbanized area. Other sublocations reporting intersex individuals include North Kanyabala (3), Kalanya Kanyango (1), and Kanyach Kachar (1), while Kothidha, Kotieno, Kanam, Kowili, and Katuma reported none—though this may be attributed to lower population sizes or underreporting due to cultural sensitivities. These variations emphasize the need for inclusive health, education, and civic services that consider all gender identities in their design and delivery.

In terms of age distribution, the Municipality has a distinctly youthful population. The dominant age cohort is 20-24 years, with 7,194 individuals, followed by those aged 15-19 (5,661) and 10-14 (4,570). Children under 10 years make up over 6,500 residents, indicating high birth rates and a strong future demand for early childhood services and schools. The proportion of residents below 35 years surpasses 50% of the total population, positioning youth as the Municipality's demographic engine. This demographic profile presents both an opportunity and a challenge: while it offers the potential for innovation, entrepreneurship, and labor force growth, it also demands significant investment in education, healthcare, housing, and employment systems to avoid youth unemployment, poverty, or exclusion.

Migration and Vulnerability

Migration plays a significant role in shaping the demographic and social landscape of Homa Bay Municipality. According to the AMT 2015

household enumeration conducted for this study, 36.9% of the Municipality's residents are migrants, having moved into the area from other parts of the County, neighboring counties, or beyond. Among these, the majority (64.1%) are intra-county migrants, indicating strong internal mobility within Homa Bay driven by proximity to services, access to employment, and the pull of urban centers like Arujo, Homa Bay Town, and Asego. Another 34.7% are inter-county migrants, reflecting the town's regional draw, particularly for students, traders, and professionals. A smaller share (1.6%) are international migrants, likely including returnees, refugees, or diaspora settlers. These figures emphasize Homa Bay's growing role as a regional and economic node in the Lake Region.

The drivers of migration are mostly economic. Among the migrant population, 28.9% reported moving to Homa Bay Municipality in search of employment, while 13.4% cited education as their primary reason. Others moved due to proximity to family (17.5%), availability of affordable housing (5.1%), or to pursue business opportunities (4.1%). This migration is most pronounced in rapidly growing sublocations like Arujo, North Kanyabala, and Kobwola Kogwang, all of which have high household and building densities according to the mapping data. These areas not only absorb a large share of the new population but also face increased pressure on essential services such as water supply, solid waste management, health, and education facilities.

Migration also amplifies the visibility of vulnerable groups within the Municipality. The study data indicates that 30% of all households are female-headed, a demographic often associated with increased economic strain, especially in informal settlements.

Elderly-headed households and households with large dependency ratios (children under 14 or adults over 60) also face higher vulnerability. In Arujo, for instance, 88.2% of small households reported financial difficulties, while in Homa Bay Town, the figure stood at 81.8%.

Furthermore, settlements with high levels of in-migration—such as Shauri Yako and Sofia—are characterized by poor housing quality, overcrowding, and limited access to infrastructure. These dynamics underscore the need for targeted support to migrant households and inclusive planning frameworks that protect at-risk populations while fostering economic integration and social cohesion.

Growth Trends

Homa Bay Municipality continues to experience steady population growth, consistent with national and county-level demographic trends. As noted earlier, the 2019 KNBS census recorded a total of 82,414 residents within the current municipal boundary, while the current enumeration provides a population estimate of 56,505 residents. These two population baselines—though different in scope and methodology—offer a realistic range for understanding the Municipality’s demographic trajectory.

Using the estimate of 56,505 as a 2025 baseline, and applying an average annual growth rate of 2.2%, Homa Bay Municipality is projected to grow by approximately 24% over the next ten years, reaching around 70,032 residents by 2035. This projection reflects the steady momentum driven by urban migration, early-age fertility, and internal mobility within Homa Bay County. The same

growth rate applied to the 2019 KNBS figure of 82,414 yields a projection of approximately 102,008 residents by 2035. This represents a potential increase of nearly 20,000 people over the coming decade, reinforcing Homa Bay’s position as one of the fastest-growing secondary towns in the region.

These population dynamics are further influenced by the Municipality’s youthful age structure and its role as a migration destination. The inflow of youth and working-age individuals from rural parts of the county and neighboring counties contributes to increased settlement density, particularly in sublocations like Arujo, Asego, and Homa Bay Town. These areas already report high concentrations of households and buildings, according to the AMT survey, and are likely to absorb the largest share of future growth. As such, population expansion will not only be numerical but spatial—manifesting in the densification of existing settlements and outward expansion into peri-urban zones.

Despite having a fixed land area of 90.2 km², the Municipality’s population-to-land ratio is set to increase significantly. High-density areas such as Homa Bay Town already exceed 2,200 persons/km², while several others are approaching or surpassing the 1,000 persons/km² mark. These trends point to increasing demographic pressure on housing, land, and social infrastructure. If current growth rates continue, the projections based on both the current enumeration and by KNBS confirm that Homa Bay Municipality is on a clear upward population trajectory, with the total number of residents likely to fall between 70,000 and 102,000 by 2035.

Table 3. Population Projections for Homa Bay Municipality*Using 3.4% annual growth rate, compounded*

Year	2025 Enumeration (56,505)	KNBS 2019 Baseline (82,414)
2025	56,505	82,414
2027	58,995	85,991
2029	61,586	89,732
2031	64,284	93,643
2033	67,097	97,732
2035	70,032	102,008

Table 4. Populations Projections for Homa Bay Municipality Segregated by Age Groups

Age Group	Male (2025)	Female (2025)	Male (2027)	Female (2027)	Male (2029)	Female (2029)	Male (2031)	Female (2031)	Male (2033)	Female (2033)	Male (2035)	Female (2035)
0-4	4,944	4,862	5,164	5,078	5,394	5,304	5,634	5,540	5,885	5,787	6,146	6,044
5-9	4,944	4,862	5,164	5,078	5,394	5,304	5,634	5,540	5,885	5,787	6,146	6,044
10-14	4,697	4,615	4,906	4,820	5,124	5,034	5,352	5,258	5,590	5,492	5,839	5,737
15-19	4,450	4,367	4,648	4,562	4,855	4,765	5,071	4,977	5,296	5,198	5,532	5,429
20-24	4,120	4,038	4,304	4,217	4,495	4,405	4,695	4,601	4,904	4,806	5,122	5,020
25-29	3,708	3,626	3,873	3,787	4,045	3,955	4,225	4,131	4,413	4,315	4,610	4,507
30-34	3,296	3,214	3,443	3,357	3,596	3,506	3,756	3,662	3,923	3,825	4,097	3,995
35-39	2,637	2,554	2,754	2,668	2,877	2,787	3,005	2,911	3,138	3,040	3,278	3,175
40-44	1,977	1,895	2,065	1,979	2,157	2,067	2,253	2,159	2,354	2,255	2,458	2,356
45-49	1,483	1,401	1,549	1,463	1,618	1,528	1,690	1,596	1,765	1,667	1,844	1,741
50-54	988	906	1,032	946	1,078	988	1,126	1,032	1,177	1,078	1,229	1,126
55-59	659	576	688	602	719	629	751	657	784	686	819	717
60-64	412	412	430	430	449	449	469	469	490	490	512	512
65-69	247	247	258	258	269	269	281	281	294	294	307	307
70-74	164	164	172	172	179	179	187	187	196	196	204	204
75-79	82	82	86	86	89	89	93	93	98	98	102	102
80+	41	41	43	43	44	44	46	46	49	49	51	51

Land Tenure and Land Use Analysis

Land Use Analysis

Land Use Patterns in Homa Bay Municipality:

The developed areas of Homa Bay Municipality are predominantly residential. Of all the developed plots recorded, 82.6% are used for housing. This shows that most of the land is taken up by homes, especially low-density units like bungalows and cottages. While this meets shelter needs, it also limits space for other important public and economic uses.

Commercial land, including shops, kiosks, and hospitality businesses, accounts for just 5.3%. These businesses are mostly informal kiosks and roadside vendors, with very few planned commercial centers or office buildings. Public buildings such as churches, health facilities, and

government offices cover 3.4% of the land, with churches alone making up nearly two-thirds of this category. Educational facilities occupy 1.4% of developed land, mostly early childhood and primary schools, with limited provision for secondary or tertiary institutions.

Recreational areas, at only 0.3%, are scarce and industrial zones are even lower at 0.8%. This indicates limited space for youth activities, sports, green spaces, and job-creating industries. Public utilities like water, power, and waste facilities occupy just 0.3%, which is inadequate for a growing urban population.

These gaps in non-residential land use suggest that, while housing demand is being met, the town's land allocation is unbalanced. Essential infrastructure and services are squeezed into limited space, which may lead to overcrowding, traffic congestion, poor service delivery, and increased land use conflict.

Table 5. Summary of Land Use Categories

Land Use Category	Share of Developed Parcels (%)	Key Issues Observed
Residential	82.6	Dominant; mostly low-density; inefficient land use
Commercial	5.3	Mostly informal kiosks; few planned zones
Public Purpose	3.4	Over 60% are churches; limited health and administration space
Mixed Use	4.7	Growing trend; often unregulated
Educational	1.4	Mostly for primary education, with very few Technical and Vocational Education and Training (TVET) institutions or colleges
Industrial	0.8	Scattered, informal; limited job creation
Agricultural	0.7	Declining; pressure from urban growth
Recreational	0.3	Almost absent; little space for play or leisure
Public Utility	0.3	Too low for expanding infrastructure needs
Vacant	0.3	Mostly speculative or pending development

Land Tenure System

Land Tenure Categories and Tenure Awareness:

According to the 2025 enumeration, land tenure in Homa Bay Municipality is largely private, with 75.6% of households residing on land classified as private, either through formal title deeds or inherited claims. Public land, including government reserves, planned settlements, and institutional holdings, accounts for 9.3%, while

community land represents 6.0%. Alarming, 6.9% of households did not know the legal status of the land they occupy, which raises concern about tenure literacy and documentation gaps. These figures show that while formal private land dominates, a sizable portion of the population still lives with unclear or insecure tenure arrangements.

Table 6. Land Tenure Categories

Tenure Category	Share of Households (%)	Notes
Private Land	75.6	Includes formally titled or informally inherited
Public Land	9.3	State, institutional, or unallocated land
Community Land	6.0	Held under clan or customary tenure
Unknown Tenure	6.9	Residents unaware of legal status or documentation

Housing Tenure and Security of Occupation:

The enumeration revealed a diverse mix of tenure types. 45.9% of residents own the homes they live in, suggesting relatively high homeownership, especially in peri-urban and ancestral areas. Meanwhile, 36.3% of households are tenants—mostly concentrated in urban zones like Homa Bay Town and Arujo. Another 11.6%

of respondents reported living in family-owned homes, often shared by extended family, but not necessarily formally subdivided. The remaining 6% comprise squatters (1.4%), caretakers (2.0%), and others in vulnerable arrangements, with limited legal protection and no access to formal services or building permits.

Table 7. Housing Occupancy Status

Occupancy Status	Share of Households (%)	Description
Owner-Occupied	45.9	Primary residence is legally or customarily owned
Tenant	36.3	Renting, formally or informally
Family House	11.6	Shared/inherited property, often undocumented
Caretaker/Squatter	3.4	Temporary, informal, or insecure arrangements

Land Ownership Documentation and Risks:

The 2025 enumeration highlights that 92.3% of landowners in Homa Bay Municipality have some form of legal documentation, such as title deeds or letters of allotment. This high documentation rate suggests a relatively mature land administration system. However, 7.7% of landowners lack formal documents, which puts them at greater risk of eviction, conflict, or exclusion from

financial and planning systems. Most eviction threats reported (3.14%) came from residents on public or contested private land, and were often longstanding disputes between occupants and legal owners. Households without documentation are also unable to use land as collateral or legally defend their claims, reinforcing cycles of poverty and underdevelopment.

Table 8. Land Documentation and Eviction Risks

Indicator	Value (%)	Notes
Households with ownership documents	92.3	Titled or formally recognized
Without ownership documents	7.7	Includes oral claims, inherited but untitled land
Households reporting eviction threats	3.1	Mostly from private landowners, ongoing for years

Land Ownership and Tenure Categories

Gender and Land Access Disparities:

The 2025 enumeration uncovered significant gender inequality in housing and land ownership across Homa Bay Municipality. Only 12.0% of female respondents reported owning the homes they live in, compared to 34.2% of men. While tenancy is more evenly distributed, men (23.3%) still outnumber women (13.1%) as tenants. Women

are more likely to live in family-owned homes or as dependents, and less likely to hold independent tenancy or ownership rights. This gap reflects long-standing structural barriers—including customary inheritance practices, limited financial access, and lower land rights awareness among women. Without direct control over property, many women remain more vulnerable to eviction, poverty, and displacement.

Table 9. Gender vs Housing Occupancy

Gender	Owner (%)	Tenant (%)	Family House (%)	Squatter/Caretaker (%)
Male	34.2	23.3	8.5	4.6
Female	12.0	13.1	3.1	1.7

Land Cadaster and Documentation Coverage

Homa Bay’s land cadaster shows strong coverage of formal land documentation, with 92.3% of landowners reporting possession of legal documents such as titles, allotment letters, or leases. This is a promising sign of institutional functionality and tenure security. However, the remaining 7.7% without documentation are often

located in informal or inherited settlements, and face barriers to accessing services, engaging in land transactions, or defending their rights legally. Community and ancestral lands, which represent around 25.7% of occupied parcels, are the most under-documented, particularly in areas without structured governance or registration systems. These gaps expose such land to disputes, unauthorized sales, and speculative claims.

Table 10. Land Documentation Status

Ownership Status	Share of Households (%)	Notes
With legal documentation	92.3	Titles, leases, or official allotment letters
Without documentation	7.7	Includes informal inheritance or oral claims

Constraints and Opportunities in Land Use

Management: The current land allocation reveals structural imbalances that limit economic growth and service delivery. Only 0.8% of developed land is set aside for industrial use, limiting opportunities for job creation and value addition. Public utility land—needed for water, energy, and waste infrastructure—is just 0.3%, far below what’s needed for a growing town. Recreational spaces, which are important for youth, social life,

and community health, occupy only 0.26% of land. These constraints are compounded by informal encroachments on wetlands and public land, especially in high-density areas like Makongeni, Shauri Yako, and Sofia. However, opportunities exist: the strong rate of documentation, a dominant private land base (75.6%), and strong cultural ties to land create a strong foundation for structured, inclusive growth if better planning tools are applied.

Table 11. Summary of Land Use Constraints and Opportunities

Opportunities	Constraints
High documentation rate (92.3%)	Gender disparity in land ownership (M:F = 3:1)
Strong private land base (75.6%)	Low industrial (0.8%) and utility (0.3%) land
Cultural and ancestral land ties	Encroachment on wetlands and public land
Community-led potential for tenure upgrades	Informal settlements with insecure tenure

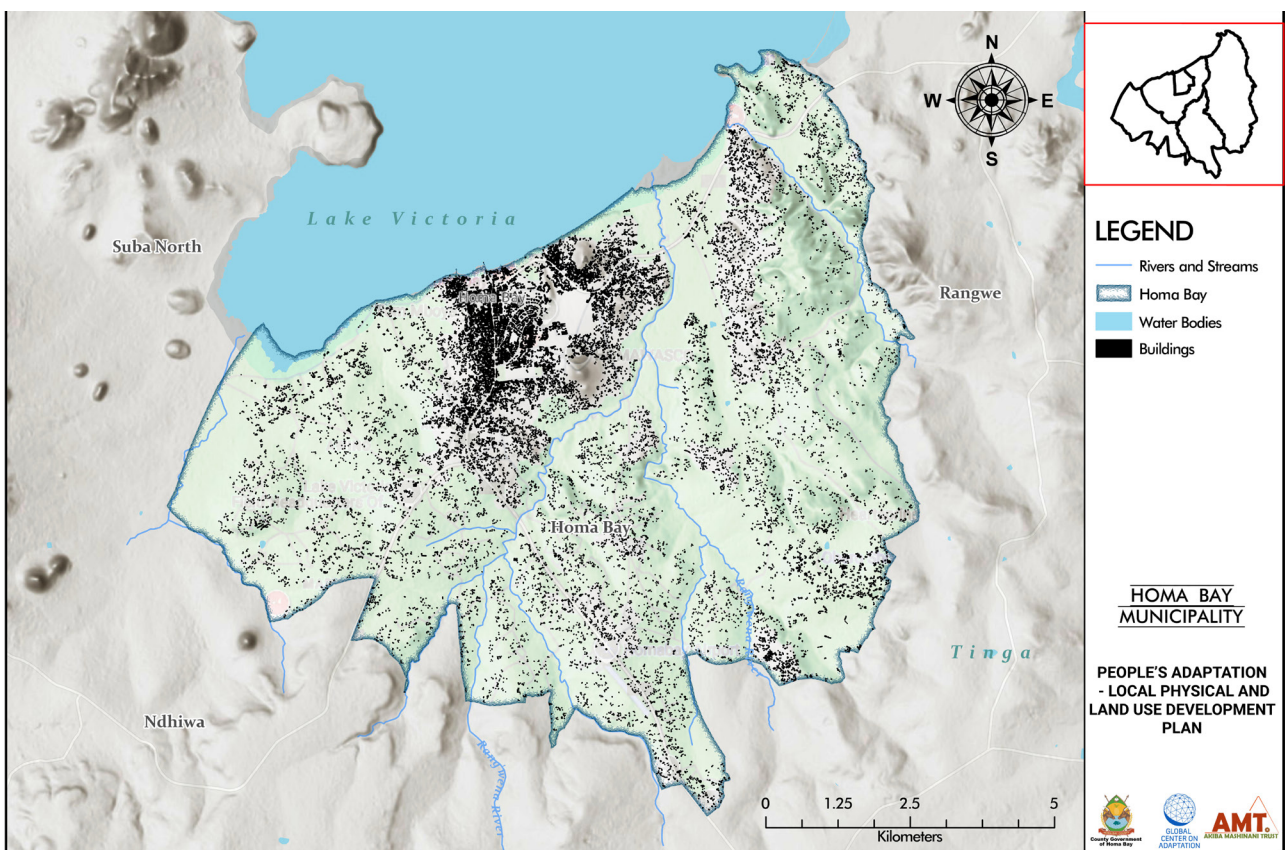
Human Settlements and Housing

Human Settlement Patterns

Urban and Rural Settlement Distribution: The settlement landscape of Homa Bay Municipality reveals a spatial divide between compact urban zones and widely dispersed rural communities. According to the 2025 enumeration, the most urbanized areas—Homa Bay Town, Arujo, and Asego—are characterized by dense, contiguous buildings, indicative of structured urban growth

and access to basic services. These areas exhibit features of planned residential development, but also accommodate several informal settlements with irregular street networks, high population densities, and limited infrastructure. Notably, areas like Shauri Yako, Sofia, and Makongeni form the Municipality’s core informal clusters, interwoven within formal zones.

Map 12. Buildings



On the other hand, rural and peri-urban sublocations such as Kalanya Kanyago, Kanam, North Kanyabala, and Kotieno maintain traditional settlement patterns defined by scattered homesteads surrounded by farmland and open

landscapes. These zones feature low residential densities and rely heavily on agriculture-based livelihoods. Settlement growth in these areas is slower but increasingly threatened by urban encroachment. Their infrastructure is limited, and

access to water, roads, and sanitation remains inconsistent. As Homa Bay's urban population expands, these rural fringes are becoming transition zones, underscoring the need for integrated planning across the urban-rural continuum.

Distribution of Informal Settlements

The 2025 enumeration shows that informal settlements represent a significant portion of the Municipality's housing ecosystem, accounting for

over 27% of all households. These settlements—most prominently Sofia (10.7%), Shauri Yako (10.4%), and Makongeni (6.2%)—are defined by unplanned layouts, temporary or semi-permanent structures, and limited access to sanitation, water, and road networks. The residents are often recent migrants or lower-income households who cannot afford formal housing. Despite their challenges, these areas are vibrant social and economic nodes and serve as entry points for rural migrants seeking livelihood opportunities in urban Homa Bay.

Map 13. Sofia Expansion 2005 - 2025



Map 14. Shauri Yako Expansion 2005 - 2025



The spatial growth of these settlements is most visible in lakeside and hillside locations, where regulatory oversight is weakest and environmental risks are highest. Informal expansion has encroached on public lands, riparian zones, and even steep slopes, increasing vulnerability to flooding, pollution, and landslides. A comparison of satellite imagery from 2005

and 2025 shows how Makongeni, nestled at the base of Got Rabuor Hill, has grown laterally due to topographical constraints, while Sofia and Shauri Yako have expanded inland, replacing green spaces and former agricultural land. These trends call for upgrading programs, service provision, and tenure regularization to prevent further degradation and social vulnerability.

Map 15. Makongeni Expansion 2005 - 2025



Settlement expansion and densification

Areas experiencing rapid growth and housing pressure: Settlement expansion in Homa Bay Municipality is being driven by both natural population growth and internal migration, with pronounced impacts in urban and peri-urban sublocations. The 2025 enumeration identifies Homa Bay Town, Asego and Arujo as areas with the highest residential densities and housing stress. Homa Bay Town leads with a population density of 2,263.85 persons/km², followed by Asego (1,247.78) and Arujo (1,038.48). These

figures far exceed rural density levels, reflecting the Municipality’s rapid shift toward urban living and growing demand for shelter, services, and infrastructure.

Encroachment on Wetlands, Riparian Zones, and Public Spaces: Environmental degradation is a growing concern in Homa Bay Municipality due to unregulated settlement expansion into ecologically sensitive areas. The 2025 enumeration shows severe encroachment on wetlands, riparian buffers along streams, and the Lake Victoria shoreline—areas crucial for biodiversity, flood regulation, and water quality.

Informal settlements in Asego, Shauri Yako, and Homa Bay Town are the primary culprits, expanding into these zones due to affordability constraints and weak enforcement. Land reclamation for housing has compromised natural floodplains and disrupted drainage systems, heightening the Municipality's vulnerability to seasonal flooding and erosion.

Construction is creeping onto steep slopes and hillsides, which are not suitable for permanent settlements. These high-gradient areas suffer from increased erosion and landslide risk when vegetation is cleared for informal housing or subsistence farming. Public green spaces are also being lost to informal development, undermining urban liveability, public health, and climate resilience. Immediate actions are needed to strengthen land-use zoning, enforce environmental regulations, and integrate nature-based planning strategies to restore degraded areas and prevent further encroachment.

Development Trend Analysis

Growth of Settlements Over Time: Settlement expansion in Homa Bay Municipality has accelerated over the past two decades due to rising migration from rural areas and neighboring counties. According to the 2025 enumeration, over 65% of household migration occurred after the year 2000, marking a period of rapid urbanization. Arujo, Asego, and Homa Bay Town have absorbed 71.3% of all new migrant households, making them the fastest growing sublocations. Arujo alone accounts for 38.4% of in-migrants, emphasizing its role as the Municipality's key urban frontier. Additionally, inflows from Kisumu (10.5%), Migori (7.2%), and Kisii (5.3%) have contributed to urban population pressure and demand for housing.

As population influx continues, so does the demand for land, resulting in a notable transformation

of land use. Large areas previously under agriculture or open space have been converted into residential and commercial developments, especially in Arujo and Asego. This has pushed food production zones further outward, increased dependency on external supply chains, and contributed to the spatial fragmentation of peri-urban areas. The Municipality is now witnessing horizontal sprawl, where unplanned developments expand beyond planned urban footprints. These developments often lack basic services and are built in ecologically vulnerable areas. This shift calls for better land-use control mechanisms, upgrading of informal areas, and forward-looking planning to balance population growth with sustainability.

Urban Centers within the Municipality

Homa Bay Municipality's urban system is anchored by a mix of residential, commercial, administrative, and institutional zones, forming a network of interconnected centers that shape local livelihoods and development. The 2025 enumeration shows that residential land dominates, taking up 82.7% of all developed land, with the largest shares located in Arujo (21.9%), Asego (14.4%), and Kobwola Kogwang (12.2%). Homa Bay Town remains the primary economic node, accommodating 44.6% of all commercial land use, including retail, banking, hospitality, and formal markets. Supporting this are growing commercial zones in Asego (18.5%) and Arujo (14.3%), which offer informal trade spaces, service hubs, and local economic opportunities.

In addition to these formal centers, residents of the Municipality are primarily served by a diverse network of smaller market centers and local trading hubs. These include Junction Kodoyo, Koduogo, Nyagitha, Olodo, Rangwena, Lieta, Kabunde, Wiga, Chiga, Ogande, Nyalkinyi, Got Koketch, Kapita, Corner Kogot, Makongeni, Masita, and Ngegu. These areas act as daily

access points for food, transport, social interaction, and small-scale commerce, and are often located along major transit routes or settlement clusters. Though typically informal and lacking permanent infrastructure, they are vital to household economies and urban-rural connectivity. Planning efforts should therefore recognize these community nodes and prioritize their infrastructure upgrading, sanitation, market sheltering, and land-use protection to ensure they remain accessible and sustainable amid increasing urbanization.

Informal Settlements and Challenges

Spatial Growth of Informal Settlements (2005–2025)

Over the last two decades, informal settlements in Homa Bay Municipality have grown significantly in both size and density, as visualized through aerial imagery comparisons between 2005 and 2025 - Map 13 - Map 15. The 2025 enumeration shows that Shauri Yako, Sofia, and Makongeni have expanded into surrounding green or agricultural land to meet increasing demand for affordable housing. Shauri Yako has stretched inland from its original lakeshore boundary, while Sofia has densified and spilled outward into peri-urban spaces. Makongeni, constrained by Got Rabuor Hill, has grown laterally along the hillside, intensifying pressure on limited flat land and compounding risks of erosion and landslides.

This expansion reflects both demographic pressure and systemic housing gaps. The irregular layout and lack of coordinated infrastructure planning make these settlements vulnerable to poor drainage, sanitation failures, and fire hazards. Plot sizes have shrunk due to land

scarcity, and infill construction has reduced open spaces needed for community functions. These trends underscore the urgency of integrating informal settlements into the municipal planning framework. Upgrading initiatives including infrastructure extension, slope stabilization, and environmental restoration are necessary to manage further growth and improve living conditions for residents.

Prevalence of Informal Settlements

Informal settlements now represent approximately 27.9% of all households in Homa Bay Municipality. According to the 2025 enumeration, over 10,000 residents live in unplanned, high-density areas. The majority are concentrated in Shauri Yako, Makongeni, and Sofia. These neighborhoods exhibit weak tenure systems, limited infrastructure, and poor housing quality. Despite rapid population growth, these areas have received minimal public investment in services such as water, sanitation, and drainage. This has resulted in health risks, exposure to environmental hazards, and structural safety concerns.

These three settlements continue to grow faster than formally planned neighborhoods, with an annual expansion rate of 4.5%, largely fueled by rural-urban migration and rising rental demand. Encroachments into riparian zones, public reserves, and wetlands are particularly alarming. If left unchecked, this trend will undermine urban resilience and reduce the Municipality's capacity to manage climate risks and maintain environmental integrity. A coordinated approach involving tenure regularization, infrastructure investment, and participatory planning is essential to upgrade informal settlements while preserving surrounding ecological systems.

Housing and Infrastructure Gaps

Housing in the three informal settlements is marked by semi-permanent or temporary structures, typically built from iron sheets, mud walls, earth floors, and unregulated materials. Only 38% of structures across the Municipality qualify as permanent, while over 22% are temporary and are concentrated in Katuma, Kotieno, Kanyach Kachar, and Kowili. These structures lack resilience to weather extremes and are prone to collapse, flooding, and fire. Poor roofing and walling materials contribute to overheating, noise discomfort, and pest infestation, negatively impacting the health and dignity of occupants.

Infrastructure provision is severely lacking in informal and rapidly growing areas. Many households rely on seasonal boreholes or water vendors, shared pit latrines, and informal dumping sites for solid waste. Drainage systems are absent or blocked, leading to recurrent flooding in low-lying settlements like Shauri Yako and Asego. Access roads are often unpaved and impassable during rains, limiting mobility and emergency access. These infrastructure deficits compound social vulnerability, making it difficult for residents to access work, education, or health services.

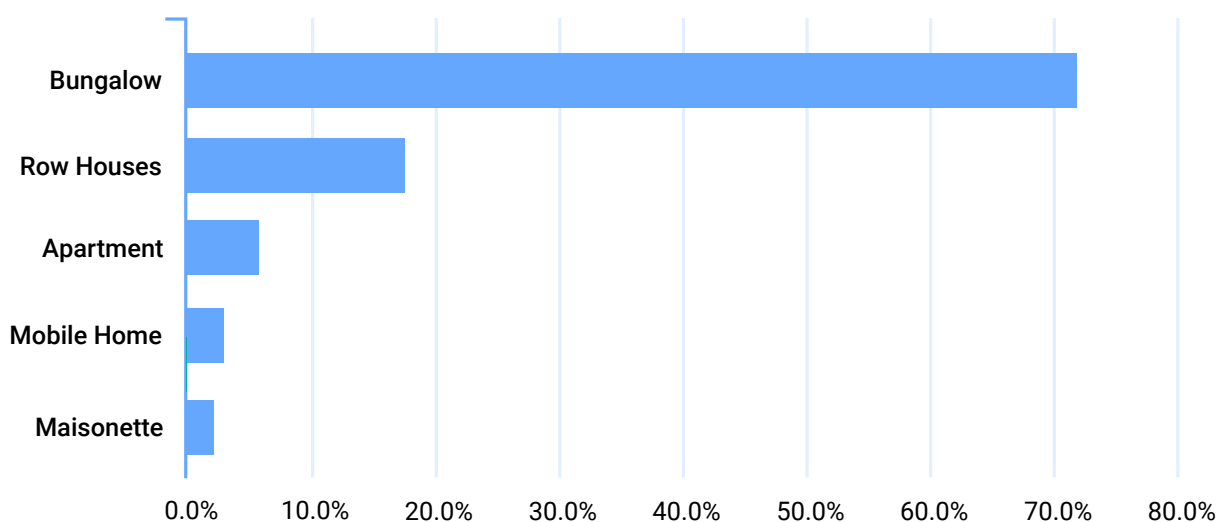
Urban upgrading efforts must prioritize basic services particularly water, sanitation, drainage, and solid waste management while leveraging community participation for maintenance and sustainability.

Housing Typologies

The 2025 enumeration revealed that housing structures in Homa Bay Municipality are diverse, reflecting wide disparities in income levels, land access, and planning enforcement. The dominant typology is bungalows and cottages, accounting for 71% of all housing units. These are typically stand-alone houses on individually owned plots, common in peri-urban and rural zones. Row houses (17.6%) are found mainly in compact informal settlements and offer modest density for lower- and middle-income households.

Apartments, though limited to 5.5%, are emerging in more formal urban zones like Homa Bay Town and serve multi-family or rental needs. The remaining stock includes mobile homes/trailers (3.2%) and maisonettes/villas (2.6%), indicating both vulnerability and affluence at opposite ends of the spectrum.

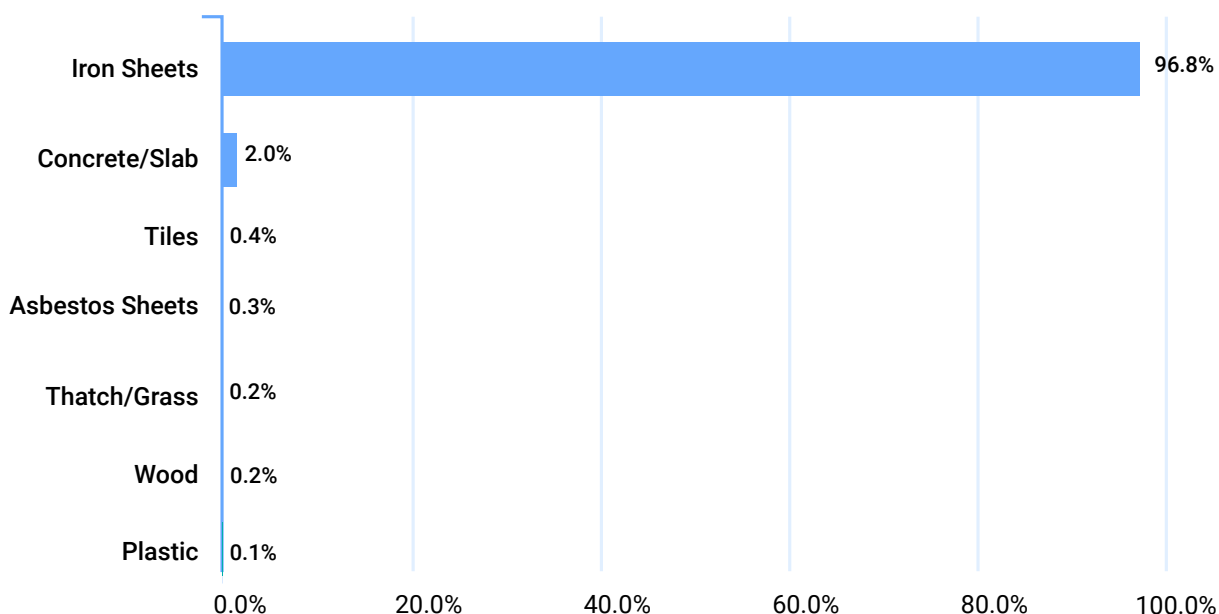
Chart 2. Housing Typologies Across Homa Bay



Building materials reveal much about housing durability and household vulnerability. Across the Municipality, iron sheet roofing dominates (97%), valued for affordability and ease of installation.

However, it poses challenges such as excessive heat absorption and noise. Walls show a more varied pattern: cemented/plastered walls (38.3%), iron sheets (34.3%), and mud (26.4%).

Chart 3. Roofing Material



Floor materials are similarly split—concrete/cement floors make up the majority, but earth floors are still prevalent in low-income and rural areas, comprising 29% of all homes. The reliance on mud, earth, and iron sheeting is particularly high in sublocations such as Kanyach Kachar, Katuma, and North Kanyabala, underscoring the need for incremental housing improvements and access to affordable building materials.

The combination of materials determines housing durability. Only 38% of buildings are classified as permanent structures, constructed using durable

walls, floors, and roofs. The majority—about 51%—are semi-permanent, typically combining mud or iron sheet walls with concrete or earth floors. Temporary structures, accounting for 11%, are often concentrated in informal or unplanned settlements. These structures are susceptible to flooding, fire, and collapse. Informal areas like Makongeni, Kowili, and Kotieno show the highest share of temporary dwellings, raising urgent safety and public health concerns. Urban upgrading efforts should prioritize these zones for slum improvement, supported by building code enforcement and material subsidies.

Table 12. Construction materials

Sublocation	Dominant Roofing Material	Observations & Implications
Arujo (6,326)	Iron Sheets (6,166)	Also has 117 concrete slabs and 17 tile roofs, suggesting higher construction standards in some parts.
Asego (3,929)	Iron Sheets (3,775)	Contains 23 tile roofs and 5 wooden roofs; low-cost roofing dominates.
Homa Bay Town (1,619)	Iron Sheets (1,519)	Has highest use of asbestos (28), presence of slab and tile roofing implies mix of formal and informal housing.
Kalanya Kanyago (2,276)	Iron Sheets (2,207)	Almost entirely iron-sheet roofed; limited material diversity.
Kanam (694)	Iron Sheets (646)	Mostly iron sheets; low slab/tile count suggests economic constraints.
Kanyach Kachar (1,920)	Iron Sheets (1,866)	Moderate material variety; 21 tile roofs may reflect upgrading trends.
Katuma (469)	Iron Sheets (412)	Unusual concentration of wooden roofs (42), indicating traditional or semi-permanent housing.
Kobwola Kogwang (2,963)	Iron Sheets (2,899)	Also has 10 polycarbonate roofs, which is the highest in any sublocation.
Kothidha (2,307)	Iron Sheets (2,263)	4 plastic roofs; limited diversity in materials.
Kotieno (484)	Iron Sheets (472)	Some use of polycarbonate and thatch. Very low use of permanent roofing.
Kowili (144)	Iron Sheets (139)	Smallest sample; 1 wood and 1 tile roof recorded.
North Kanyabala (3,385)	Iron Sheets (3,301)	Significant tile usage (21), concrete slabs (50), and mix of other materials suggest varied housing types.

Chart 4. Flooring Material of Buildings

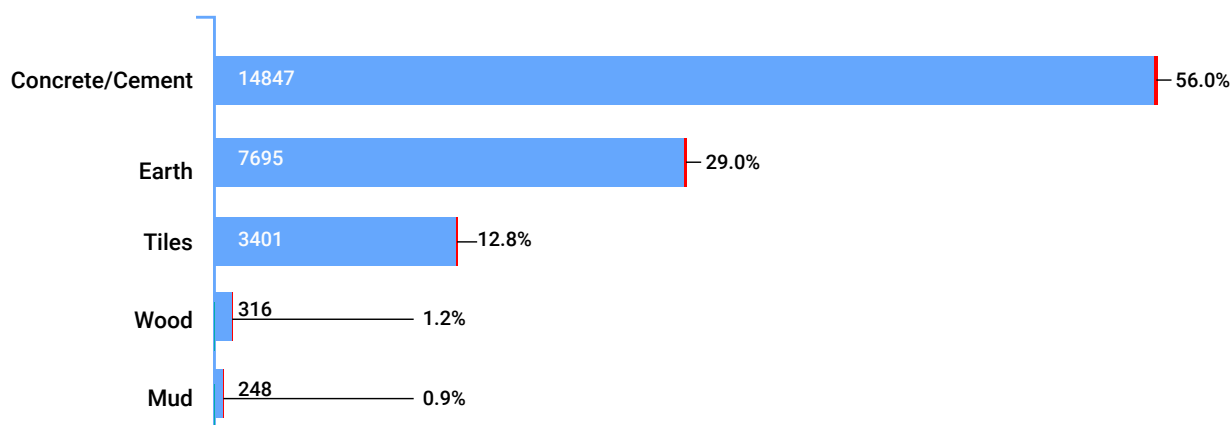
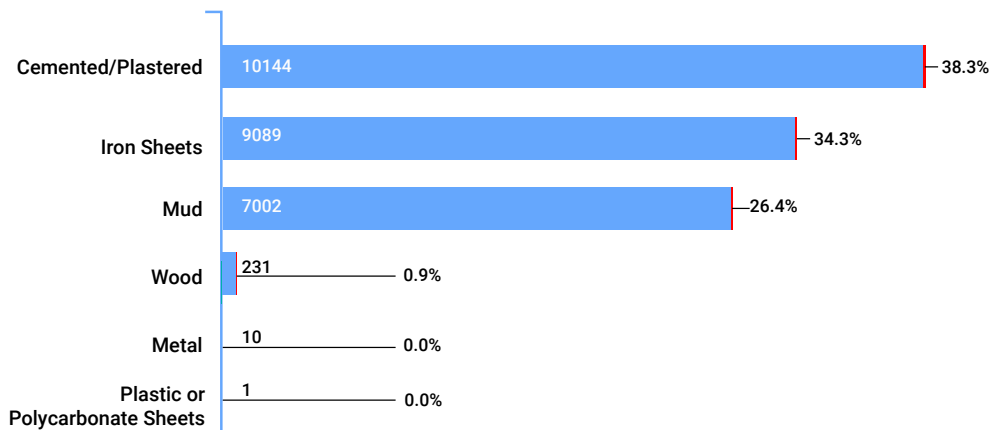


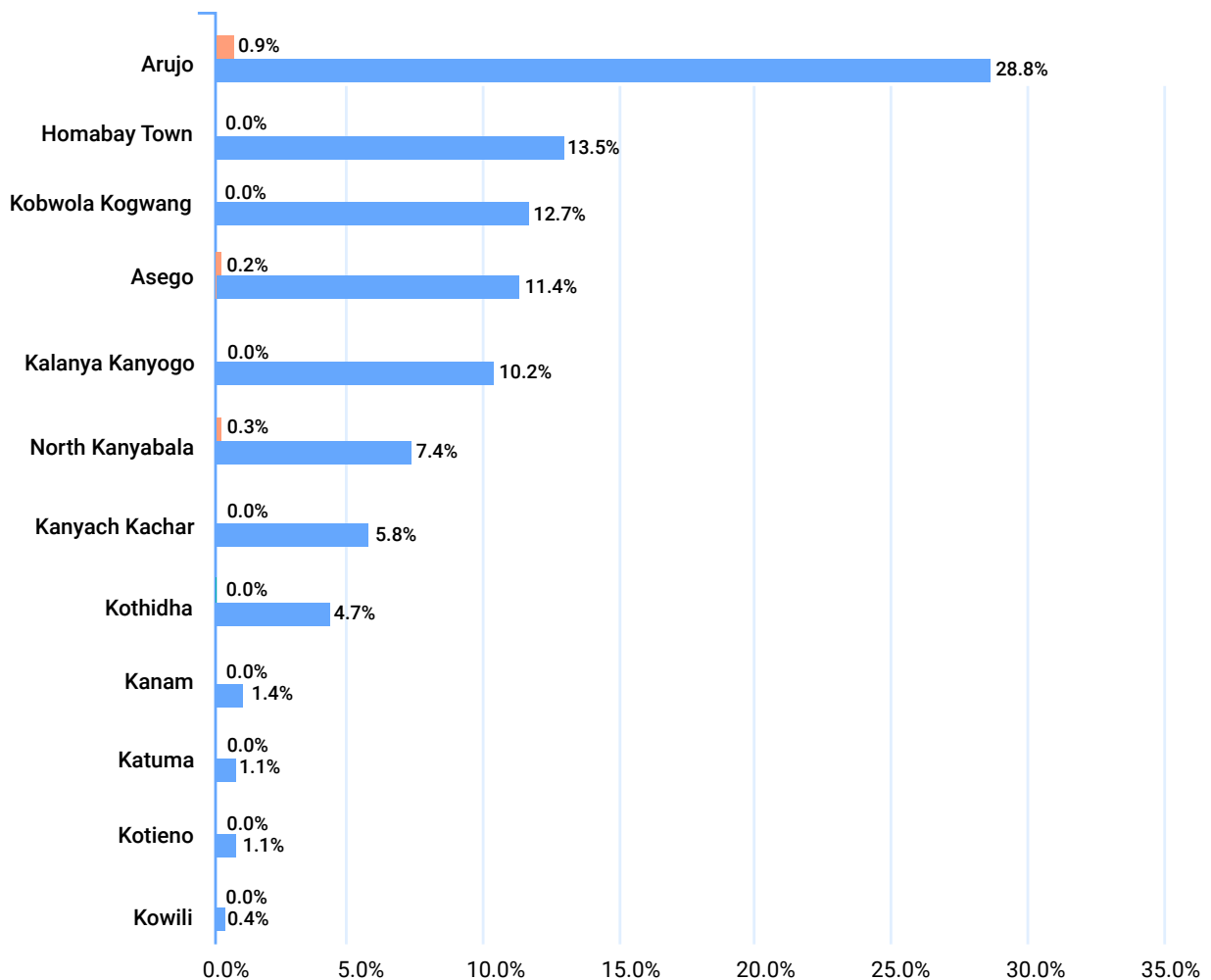
Chart 5. Wall Material of Buildings



Density and occupancy trends provide insight into living conditions. While 64.4% of households have one person per room, 22.5% have two persons, and 8.2% have three. Alarming, 6.4% of households host four or more people per room, especially in Arujo, North Kanyabala, and Kanyach Kachar. These overcrowded

environments pose serious health risks, increase disease transmission, and reduce quality of life. Overcrowding is particularly prevalent in informal rental housing, where 14.2% of tenants share a single room with three or more individuals. Such conditions point to a growing affordability gap and limited supply of livable housing options.

Chart 6. Households Sharing Living Quarters across the Municipality



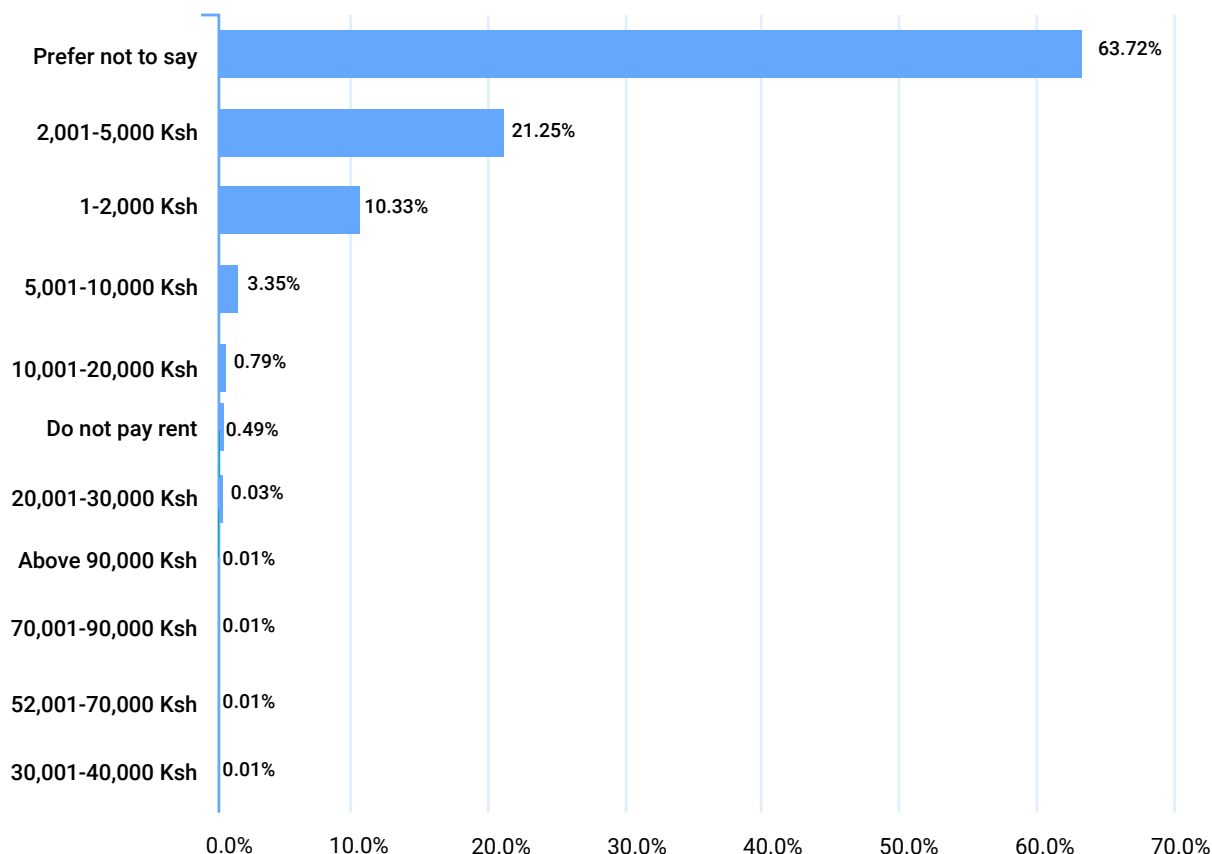
The 2025 enumeration indicates that shared living arrangements are minimal across the Municipality, with most wards reporting less than 1% of households sharing living quarters. The highest proportions of shared occupancy are observed in Arujo (0.9%), followed by North Kanyabala (0.3%) and Asego (0.2%). In all other wards, shared housing is either absent or negligible.

In contrast, there are noticeable variations in home ownership rates, with Arujo (28.8%), Homabay Town (13.5%), and Kobwola Kogwang (12.7%) registering the highest proportions of households residing in owned homes. These patterns point to distinct spatial differences in housing conditions across the municipality, with some areas demonstrating relatively higher consolidation of property ownership, while others exhibit very limited housing diversification or sharing.

Cost of Housing

Rental costs vary significantly by location and dwelling type. The majority (63.7%) of tenants pay below Ksh 5,000 per month, especially in Arujo and Kobwola Kogwang, which offer relatively affordable housing. Mid-range rentals (Ksh 5,000–20,000) are more common in Asego and Homa Bay Town, where infrastructure is stronger and demand higher. High-end rentals above Ksh 30,000 are rare, accounting for just 0.3% of the market, typically in high-income zones with better services. This cost stratification reveals that housing remains accessible only to those with stable incomes, while a large proportion of households are priced out of formal rental or ownership markets.

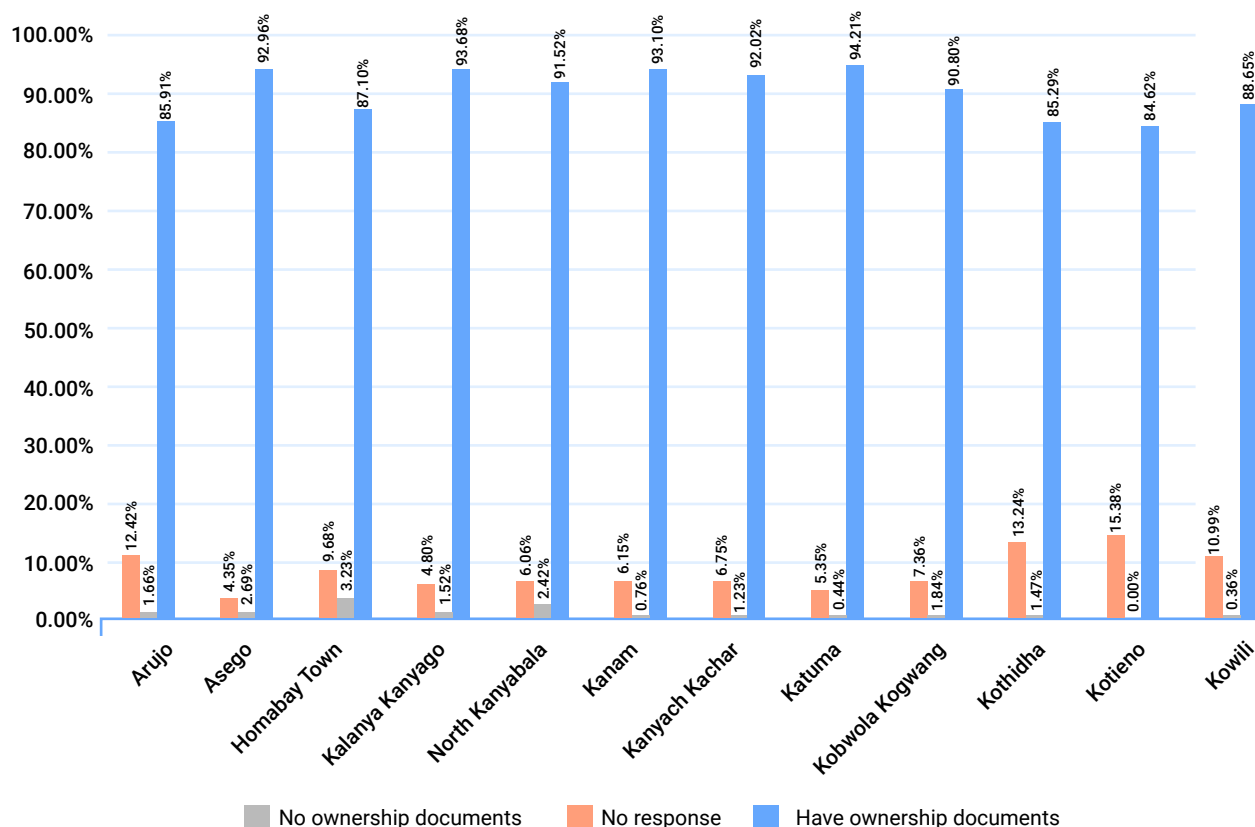
Chart 7. Rent Categories Across Homa Bay Municipality



Affordability is a critical challenge across the Municipality. An alarming 37.4% of tenants spend over 30% of their income on rent, the global affordability benchmark. This burden is especially acute in urbanized sublocations like Homa Bay Town and Asego, where over 42.8% of tenants fall into this high-rent bracket. The situation is dire for households earning under Ksh 4,000 per

month, who make up 29.8% of the population. These households face a double bind: they cannot afford formal housing yet are excluded from financing mechanisms for homeownership or improvement due to the cost of the units as social housing is not provided, forcing many into overcrowded, unsafe, and poorly serviced dwellings.

Chart 8. Households with Ownership Documents Among Land Owners



The financial barriers to homeownership and housing upgrades are compounded by irregular incomes and lack of access to credit. As of 2025, 22.6% of households earn less than Ksh 2,000 per month, while 34.6% report irregular or no income. This severely limits their ability to save, qualify for loans, or invest in incremental housing improvements. For tenants, the instability of rent

prices and tenure insecurity further discourage investment in long-term housing quality. Addressing this challenge will require a multi-pronged approach that includes the expansion of affordable housing finance, introduction of micro-loan programs, and public-private partnership rental housing initiatives targeted at low-income populations.

Housing Conditions

Structural Integrity and Safety

A substantial share of Homa Bay's housing stock lacks structural resilience, particularly within informal settlements. As of 2025, approximately 22.2% of all structures are classified as temporary or semi-permanent, composed of mud walls, earth floors, and makeshift roofing—especially in sublocations like Katuma, Kanyach Kachar, Kotieno, and Kowili. These structures are highly susceptible to fire, collapse, and water damage during heavy rains. Climate change further heightens these risks, as more frequent and intense rainfall events trigger flooding, soil erosion, and slope instability, weakening foundations and accelerating structural decay.

Prolonged dry spells also lead to ground cracking and shrinking of earthen materials, undermining wall integrity, while strong winds and heatwaves increase the likelihood of roof damage and fires. The risk is amplified in settlements located near flood-prone or geologically unstable areas such as Shauri Yako and Makongeni, where poor construction practices and terrain challenges converge. These climate-induced stresses not only compromise housing safety but also disrupt access to essential services such as water, sanitation, and electricity, further exposing residents to health hazards and economic insecurity. Without targeted upgrading and compliance enforcement, these structural vulnerabilities will continue to place residents at high physical and health risk.

Access to Basic Services

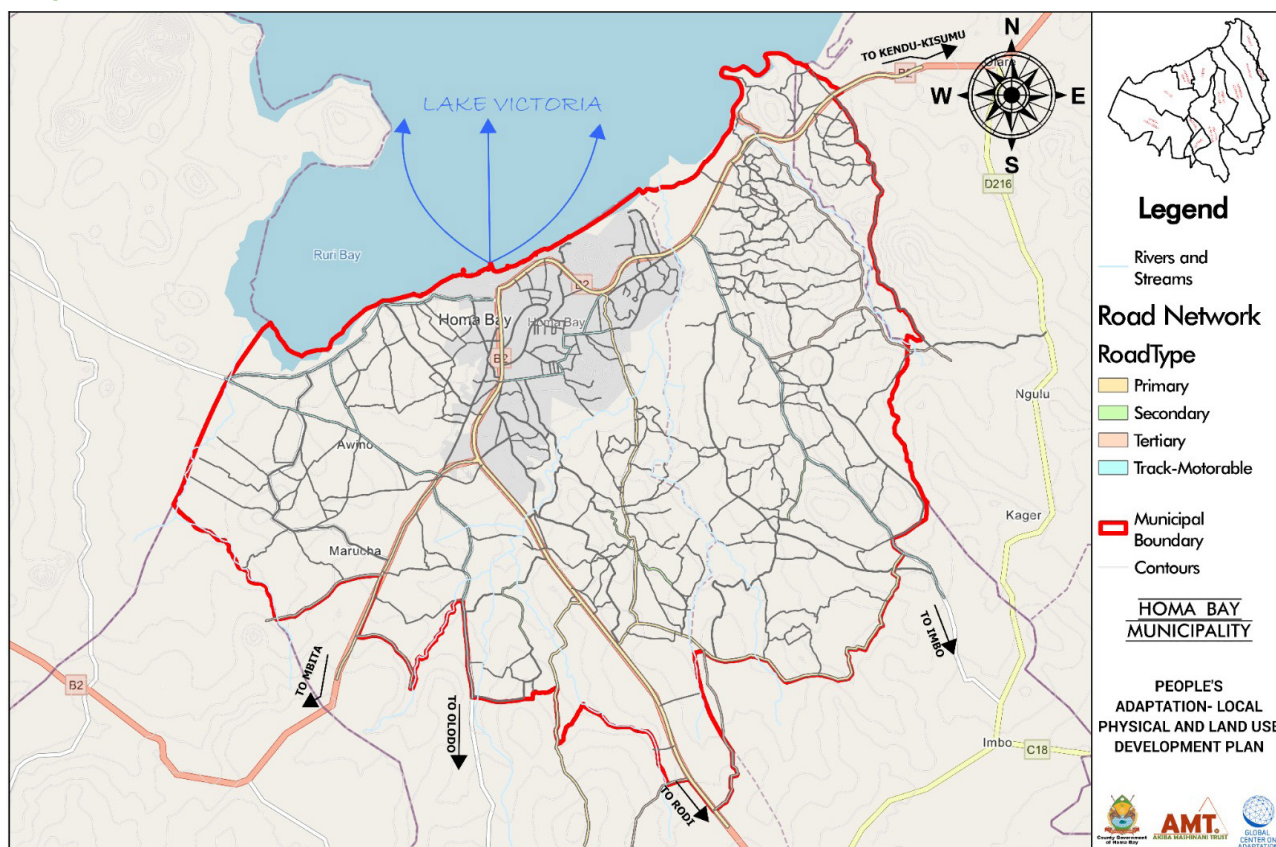
Access to essential services—water, sanitation, drainage, and solid waste management—remains uneven across the Municipality, with the greatest gaps in informal and peri-urban zones. Many households in these areas rely on unregulated water vendors, boreholes, and shared pit latrines, exposing them to hygiene-related diseases. Drainage is underdeveloped in densely populated areas like Asego, Arujo, and Homa Bay Town, where inadequate stormwater infrastructure leads to frequent flooding, stagnant water, and mosquito-borne illnesses. Solid waste collection services are limited, and illegal dumping is common in unplanned neighborhoods. The consequences include not only environmental degradation but also heightened public health risks, especially among children and elderly residents.

Physical Infrastructure

Transportation Networks

Road Transport: Road transport remains the predominant mode of transportation within Homabay Municipality, playing a critical role in supporting the residents' daily economic, social, and livelihood activities. Commonly utilized modes include motorcycles (*boda bodas*), public minibuses (*matatus*), and private vehicles. Motorcycles and *matatus* provide faster and more flexible alternatives for medium-to-long-distance travel, significantly influencing residents' mobility.

Map 16. Transportation



The Municipality's road network is characterized by varying conditions that reflect different levels of development, accessibility, and durability. Of the mapped roads within the Municipality:

- **27.63 km² are tarmacked roads.** These roads are surfaced with bitumen and are typically found in urban centers, major thoroughfares, and key economic zones.
- **92.47 km² are murram roads.** These are made from compacted gravel and natural materials, and are more common in peri-urban and rural parts of the Municipality.
- **182 km² are earth roads.** These make up the majority of the road surface in the Municipality. Earth roads are prone to erosion and are usually impassable during the wet season, severely limiting accessibility and economic activities in the affected areas.

Homa Bay's road network, much of which is unpaved or poorly maintained, is highly vulnerable to climate-related hazards. Intense and erratic

rainfall events cause flooding and surface runoff that wash away road surfaces, create deep gullies, and damage drainage systems. In low-lying and poorly drained areas such as Shauri Yako and Makongeni, roads frequently become impassable during heavy rains, disrupting mobility, trade, and access to essential services. Prolonged dry spells also contribute to dust pollution and surface cracking, accelerating road deterioration. These conditions increase maintenance costs and reduce connectivity between key economic and social zones within the municipality.

Additionally, inadequate drainage worsens road conditions, with frequent flooding and waterlogging during rains making roads impassable, disrupting mobility, damaging infrastructure, and affecting livelihoods.

Non-Motorized Transportation: Residents of Homa Bay Municipality largely depend on walking and cycling, but the infrastructure to support non-motorized transport is severely lacking. Existing pedestrian walkways are often narrow, poorly

maintained, and obstructed by open drains or manholes. The absence of dedicated cycling lanes forces cyclists to share roads with vehicles, increasing the risk of accidents.

Key challenges for non-motorized transport include: safety risks from sharing roads with motor vehicles and reckless driving; encroachment onto roads by informal businesses and parked vehicles, pushing pedestrians into traffic; lack of designated paths for non-motorized transport, discouraging safe, sustainable mobility and poor street lighting, heightening insecurity and limiting safe movement at night.

Air Transport: Homabay Municipality has an the Kabunde Airstrip in Kalanya Kanyango sublocation, which offers a critical access point for domestic air travel. The Airstrip is located six kilometers from Homa Bay CBD. It was modernized in 2015, and commercial flights started in 2016. Despite its potential, the airstrip remains underutilized, with only a few scheduled flights to and from Wilson Airport in Nairobi. This limits its potential to contribute to economic growth and connectivity.

The airstrip could boost logistics, trade, and tourism if supported by infrastructure investment and policy reform. Enhancing its capacity would reduce dependence on Kisumu International Airport, 120 km away, and attract investors to the Municipality.

Surface Water Transport: Surface water transportation in Homa Bay Municipality is primarily facilitated by Waterbus, which provides regular and reliable ferry services across Lake Victoria. Waterbus connects various parts of Homa Bay County and extends its reach into Siaya County, enhancing regional mobility and trade. Notable routes include the Homa Bay Northwest line, which serves destinations such as Sukru, Sota, Odango, Kisaka, Sikri, and Uwii; and the Homa Bay–Asembo Bay route, which links the town to Siaya County with stops at Kamito,

Kunya, Doho, Mainuga, Banana, and Kajimo.

Other forms of water transport, such as canoes and private boats, are also widely used for daily livelihood activities, especially by fishing communities. These modes contribute to the local economy by enabling the transport of goods and people, improving access to markets, and supporting fishing and trade.

Surface water transport is a reliable and cost-effective alternative in the region. It also contributes to tourism development, offering a unique means to explore the Lake's beauty and surrounding attractions. The Homa Bay pier, which is currently under rehabilitation will be 153 meters long when it is completed, designed to accommodate vessels up to 4000 tons. However, climate variability and extreme weather events are disrupting lake conditions. Increased storm frequency, fluctuating water levels, and stronger winds lead to rough waters, shoreline erosion, and damage to docks and landing sites. These hazards threaten the safety of small-scale fishers and transport operators while reducing the reliability of water transport as a livelihood and trade route. Shoreline flooding and sedimentation further complicate navigation and limit safe harboring during storm surges. With improved infrastructure and support, the surface water transport sector holds significant potential to enhance economic growth, regional integration, and sustainable tourism within Homa Bay Municipality.

Public Transport Accessibility: Public transport in Homa Bay Municipality is dominated by *matatus* and *boda bodas*, with taxis serving a smaller but important role in emergencies and special cases. *Matatus* offer affordable transport along major routes but face issues like overcrowding, irregular schedules, and unpredictable fares, affecting reliability.

Boda bodas are preferred for short-distance and door-to-door services, especially in areas

inaccessible to *matatus*. However, safety concerns, lack of rider training, and weak regulation remain challenges. Taxis, including emerging digital services, are less used due to higher costs, but are valued for their privacy and reliability, particularly in urgent situations.

Improving transport requires better road networks, regulated fares, safe *boda boda* operations, and well-marked transport stops. Collaboration between service providers, local authorities, and residents is key to developing an inclusive and sustainable transport system.

Energy

Electricity Supply and Access: About 54% of households (9,917) in Homa Bay Municipality rely on the national grid for lighting, while 46% (8,556) depend on off-grid alternatives like kerosene, solar, or batteries. This reflects progress in electrification but also underscores the need for further investment in grid expansion, off-grid solutions, and supportive energy access policies.

Grid electricity and informal connections are increasingly strained by climate stressors. Heavy rains and flooding damage power poles, transformers, and underground cables, leading to frequent outages. In peri-urban and informal settlements, windstorms and lightning strikes pose risks to both formal and informal energy systems, including solar installations. Conversely, prolonged dry and hot periods heighten energy demand for cooling while reducing hydropower generation efficiency from Lake Victoria's basin systems. These impacts threaten energy reliability, safety, and affordability for residents and businesses.

Although many households are connected to the national grid, frequent blackouts have driven the demand for alternatives. Among the 46%

of households not on the grid, 88% (7,264) use solar energy for lighting, while 12% (1,032) rely on biogas.

Solar's dominance is due to its affordability and accessibility, but adoption is still limited by cost barriers, lack of technical support, and unreliable vendors. Biogas uptake remains low, constrained by high setup costs and the need for consistent quality organic waste, making it viable mainly for farming households.

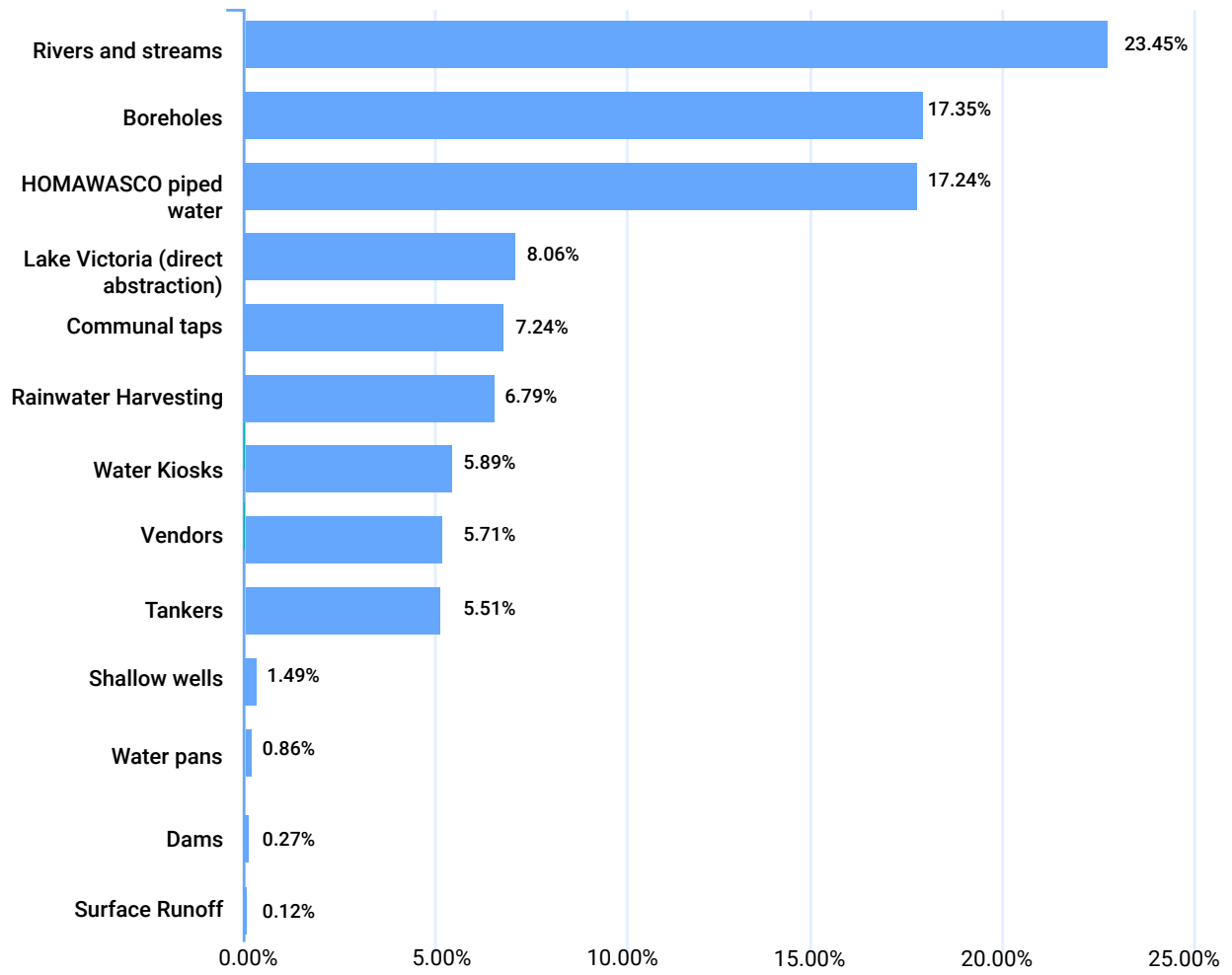
Cooking Energy and Indoor Air Pollution: Solid fuels dominate household energy use, with firewood (42%) and charcoal (32%) as the main sources. Though cheap and accessible, these fuels pose serious indoor air pollution risks, leading to respiratory illnesses and other health issues. Improved charcoal stoves (4.3%) offer some improvement by burning more efficiently, but their effectiveness depends on ventilation and user behavior. Cleaner alternatives like LPG (13%) and biogas (6%) are used by fewer households but offer significant health and efficiency benefits.

Use of electricity (1%), solar (0.1%), ethanol (1.4%), and briquettes (0.1%) remains limited, likely due to costs and availability. Expanding access to clean fuels, improving stove technology, and promoting better ventilation are key to reducing the health burden of solid fuel use.

Water

Water Sources: Households in Homa Bay Municipality rely on a mix of formal and informal sources for water for domestic use, reflecting both infrastructural gaps and local adaptations to water availability. Rivers and streams are the most common source, used by 23.45% of households. Boreholes supply 17.35% of households, while the public utility HOMAWASCO serves 17.24% of the households.

Chart 9. Domestic Water Sources



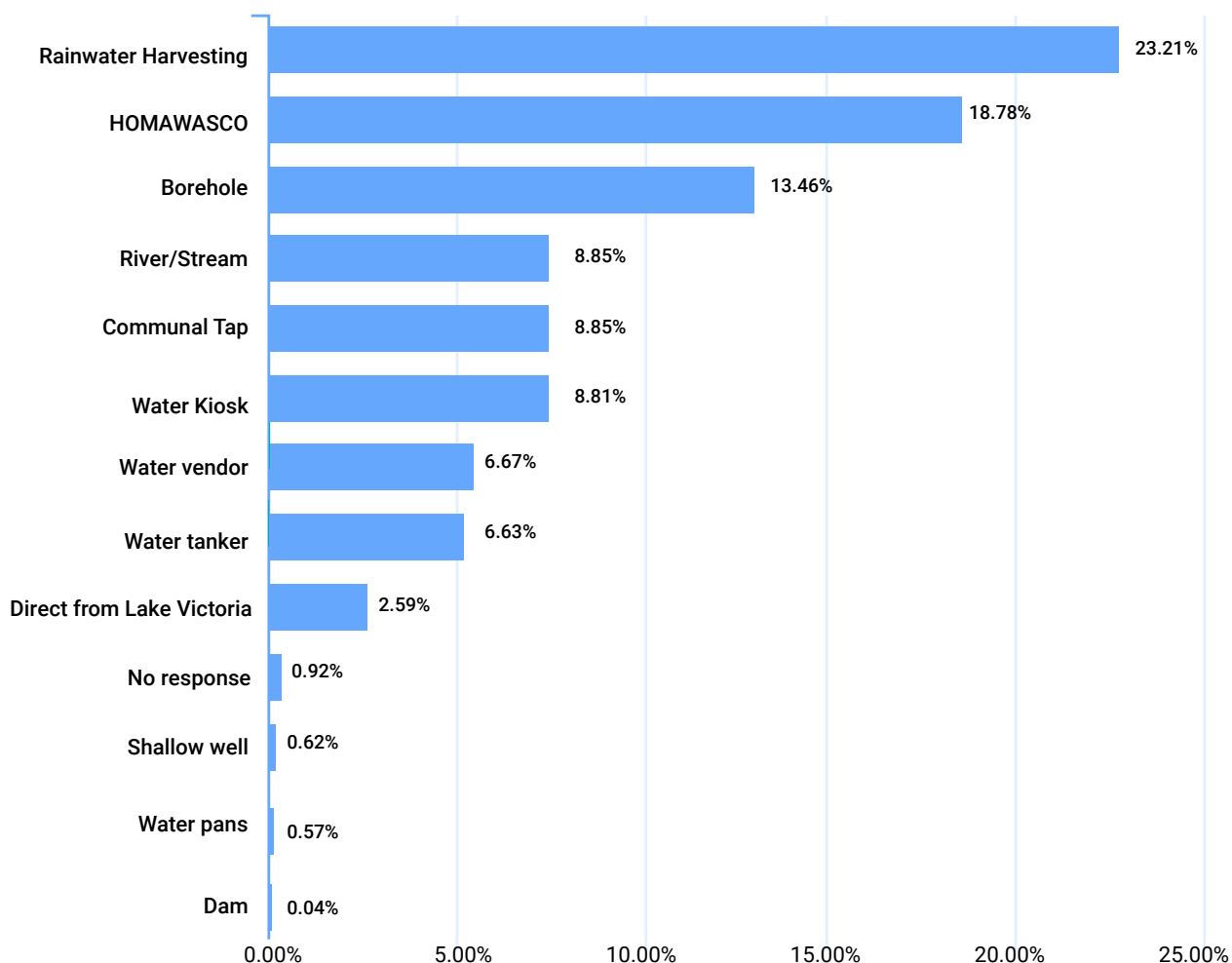
Other water sources include Lake Victoria (8.06%), communal taps (7.24%), rainwater harvesting (6.79%), water kiosks (5.89%), vendors (5.71%), and tankers (5.71%). While these sources fill service gaps, they vary in cost, reliability, and safety.

A small percentage of households still depend on shallow wells (1.49%), water pans, and even broken pipes—highlighting serious access and quality concerns. The data underscores the need to expand safe, reliable water infrastructure and

improve regulation of alternative sources.

Rainwater harvesting is the most common source of drinking water in Homa Bay Municipality (23.21%), followed by HOMAWASCO piped supply (18.78%) and boreholes (13.46%). Other notable sources include communal taps, water kiosks, and rivers/streams—each used by about 8–9% of households. Less commonly, residents rely on water vendors, tankers, or Lake Victoria for their drinking water supply.

Chart 10. Main Source of Drinking Water



These water sources are directly influenced by changing rainfall patterns and rising temperatures. Extended dry spells reduce surface water availability and lower groundwater tables, leading to intermittent supply from boreholes

and community taps. During heavy rainfall, flooding and surface runoff contaminate open wells and shallow sources, increasing the spread of waterborne diseases. Informal settlements located in flood-prone zones experience

frequent damage to storage and distribution infrastructure. As climate change continues to affect water quantity and quality, households—especially women and children—face longer collection times and higher costs for clean water.

Households clearly show a preference for cleaner or safer sources when it comes to drinking, highlighting a gap in access to reliable drinking water and pointing to the need for expanded infrastructure and safe water supply systems.

Ongoing and Planned Community Water Projects:

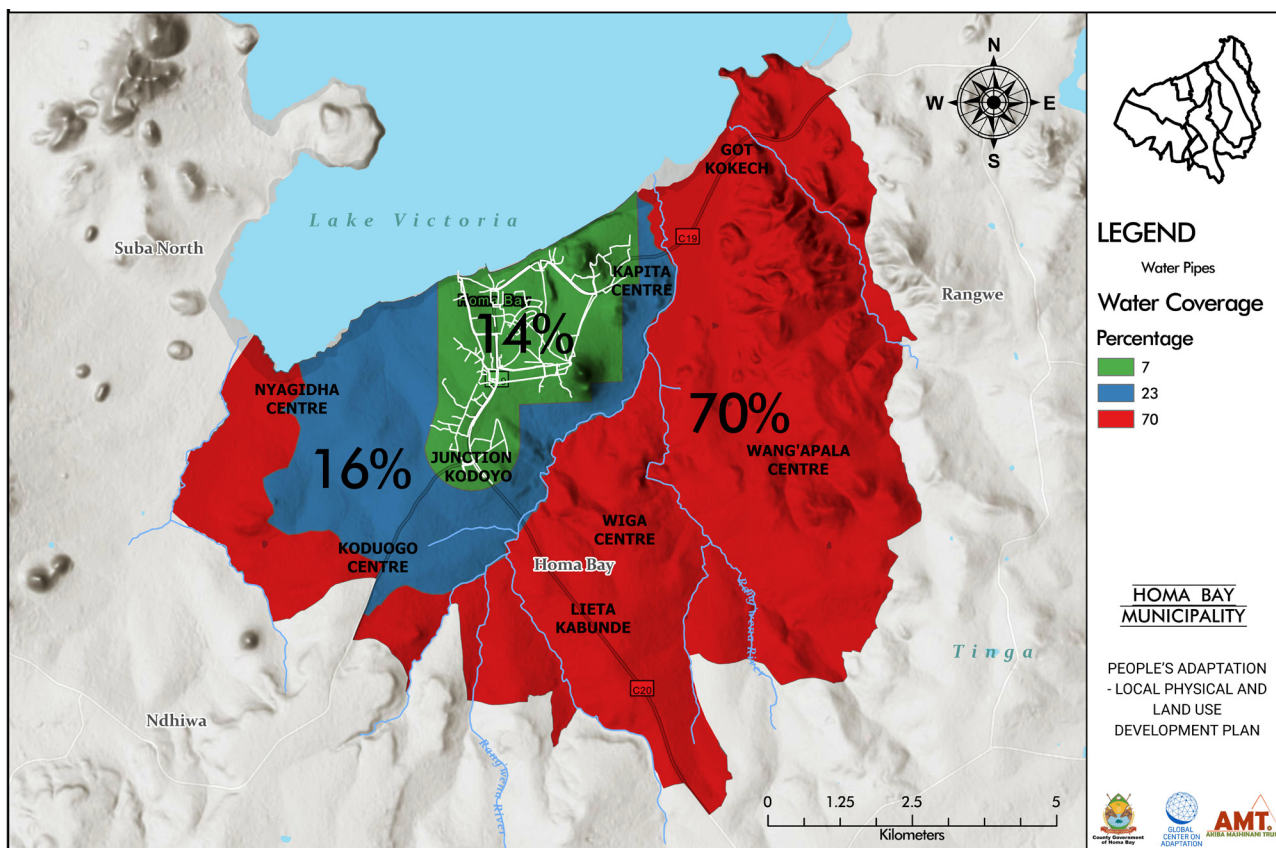
In addition to the existing formal and informal sources, several community-driven and partner-supported initiatives are under implementation through the FLOCCA (Financing Locally-Led Climate Change Actions) programme. These projects aim to enhance access to reliable water supply and strengthen local resilience to climate

variability. Current works include drilling and equipping boreholes in Lieta (5,000-litre capacity), Kabuyo Siro, Wiga, Ushuru Centre within Homa Bay Town, and the Nyagidha Community Water Project. Solarisation of the Lieta borehole—linked to the local primary school in Kabunde—has already been completed. These interventions are expected to improve local water security and reduce dependence on unregulated water vendors. Stakeholder Consultations, FLOCCA Programme (2025).

HOMAWASCO Water Service Coverage:

HOMAWASCO, the utility company, supplies piped water to only 14% of the Municipality, leaving 86% of residents without direct access to piped water. The 2025 enumeration indicates that 1,903 individuals in formal settlements and 1,275 individuals in informal settlements are connected to the piped water network.

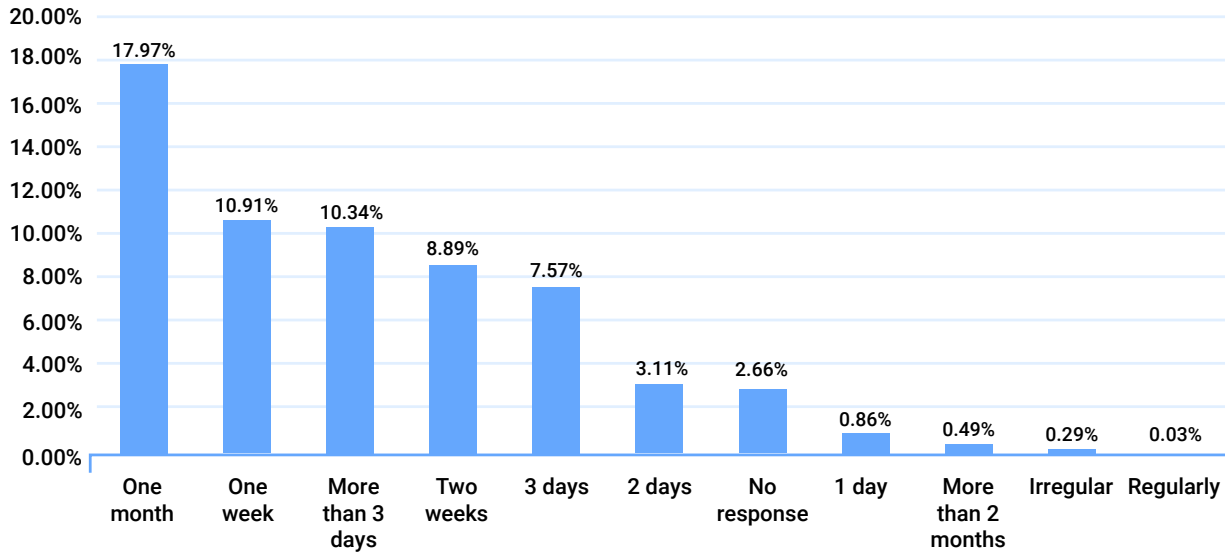
Map 17. Water Reticulation



Despite these connections, 12.21% of respondents to the 2025 enumeration reported experiencing interruptions in piped water supply, with disruptions ranging from irregular outages

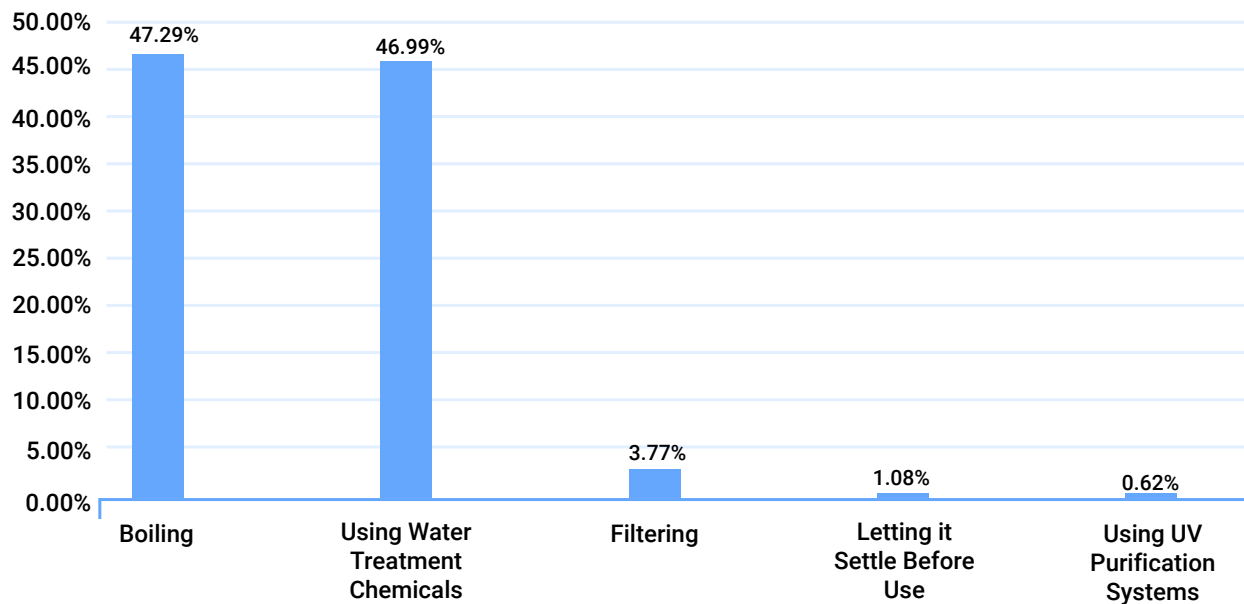
to prolonged periods of up to one month. This points to significant challenges with the reliability of the piped water supply system.

Chart 11. HOMA WASCO Water Supply Interruption Periods



Water Quality and Safety: A majority of households (66.2%) treat their drinking water, primarily through boiling, chemical disinfection, filtration, settling, and UV purification.

Chart 12. Water Treatment Methods



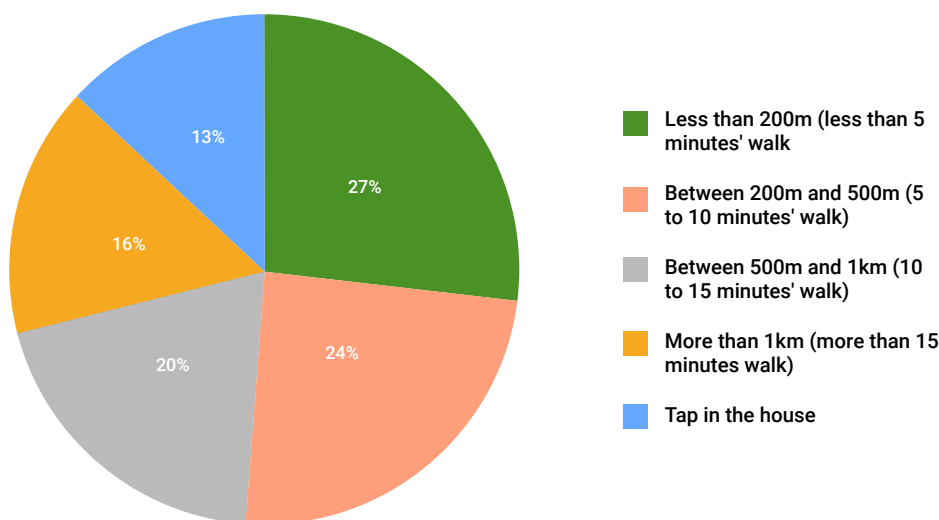
The remaining 33.1% of households do not treat their water, potentially due to perceived safety of the source (e.g., HOMA WASCO or boreholes), lack of awareness, or limited access to treatment resources and 0.7% did not respond. Despite high

treatment rates, waterborne diseases persist likely due to poor storage, inconsistent treatment, high levels of water contamination, unregulated water vendors and multiple water sources.

Water Accessibility and Distance: The travel time to access water varies from household to household, depending on the source of water. While only 13% of households have water supply at their houses, 24% walk 5-10 minutes to access

water; 20% walk for 10-15 minutes; and 16% have to walk for longer than 15 minutes. Longer distances increase time burdens, reduce time for work or school, and pose health risks.

Chart 13. Distance and Time Taken to Fetch Water



Cost of Water: Water costs vary significantly, depending on the source. HOMAWASCO, the official utility provider, offers the most affordable option at approximately Ksh 2 per 20-liter container, about 1% to 2% of a low earner’s income water. Water from regulated public kiosks costs between Ksh 2 and 5 per container, 1% to 3% of the daily income of a low earner.

per month. However, households in informal settlements typically pay between Ksh 600 and Ksh 1,200 per month for the same amount of water—representing a cost that is 200% to 500% higher than the official utility rate.

However, the majority of the population in the Municipality relies on more expensive, but poorer quality suppliers. Water sold by motorcycle vendors is the most expensive, costing approximately Ksh 20 per 20 liter container—equivalent to 7% to 20% of a low earner’s daily income. Bicycle vendors charge about Ksh 15 per container, representing 5% to 15% of daily income.

This stark disparity illustrates a “poverty penalty,” where low-income households—often reliant on informal vendors—pay significantly more for water that is frequently of lower quality and delivered through unreliable means. The situation presents a clear equity challenge, highlighting the urgent need for policy and infrastructure interventions to ensure fair and affordable access to safe water for all residents. Additionally, climate change exacerbates both scarcity and contamination of drinking water sources in Homa Bay. Erratic rainfall patterns and prolonged droughts reduce the reliability of piped and natural sources, while intense storms cause sedimentation, sewage overflow, and pollution of Lake Victoria. These fluctuations compromise water quality and

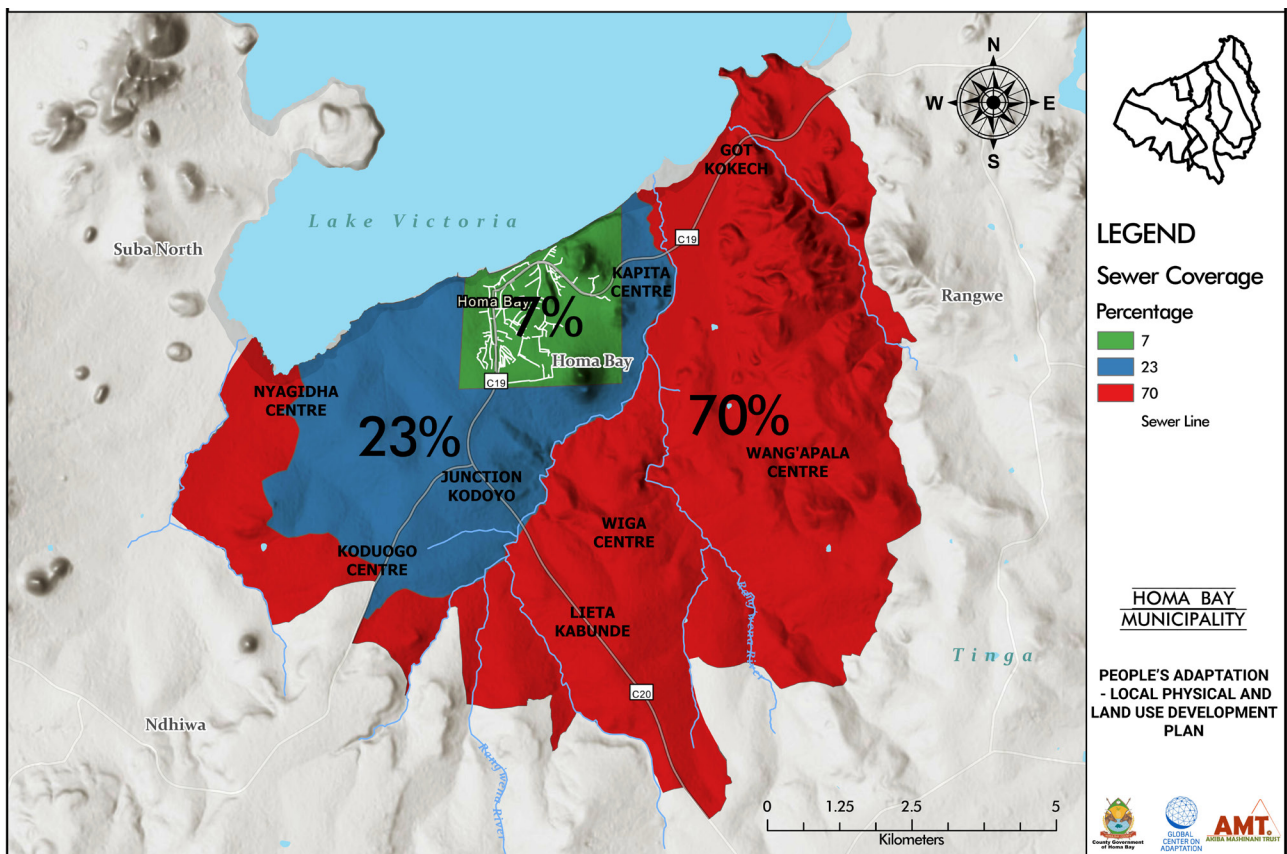
Households in the Municipality consume an average of 66.69 liters of water per day, which translates to approximately 2 cubic meters (or units) per month. Under HOMAWASCO’s official tariff, this volume would cost around Ksh 200

increase treatment costs for both households and the municipal water provider. Communities in low-lying and unserved areas are particularly vulnerable, relying on untreated or unsafe sources during shortages, thereby elevating health risks and vulnerability to waterborne illnesses.

Sanitation

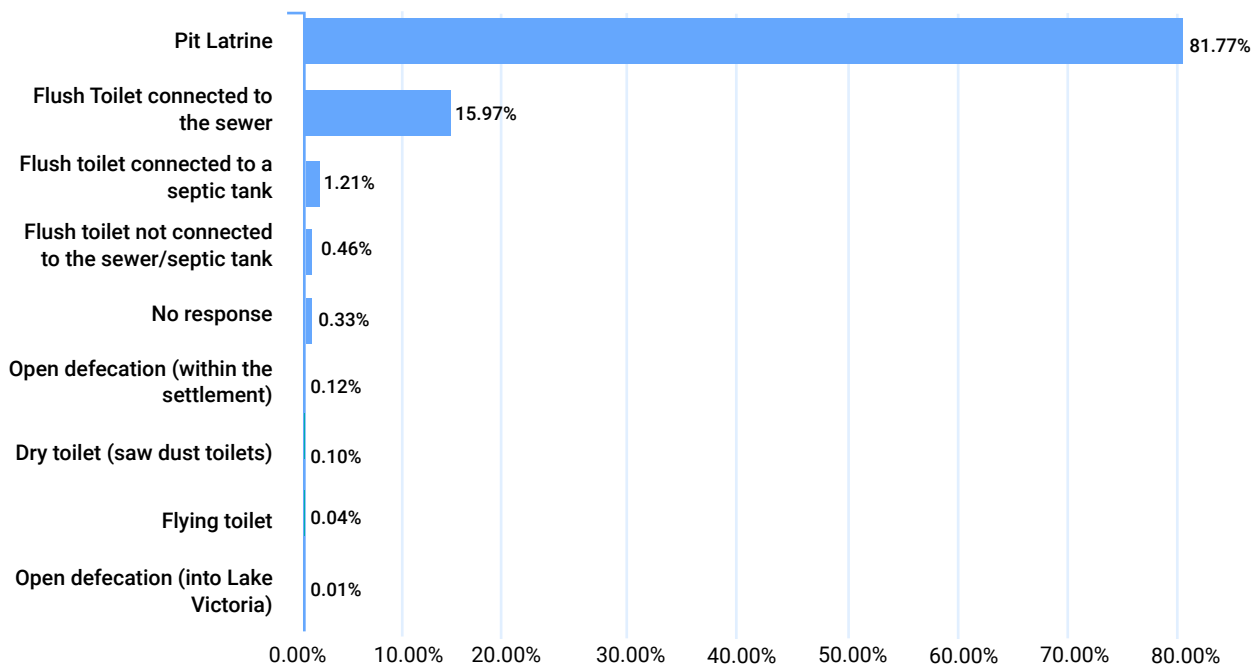
According to HOMA WASCO, the current sewer system covers 6.4% of the Municipality's area leaving 93.6% to use other sanitation options like pit latrines and septic tanks.

Map 18. Sewer Reticulation



The 2025 enumeration indicates that 81.7% of the households within the Municipality use pit latrines.

Chart 14. Human Waste Disposal Methods



46% of the households in formal settlements and 75% in informal settlements use shared sanitation facilities. Once pit latrines and soak/septic tanks are full, households respond in various ways: some rely on local authorities or private services to empty them. Others use chemical additives to reduce waste volume, resort to digging new pits, or, in a few cases, dispose the untreated waste into the Lake.

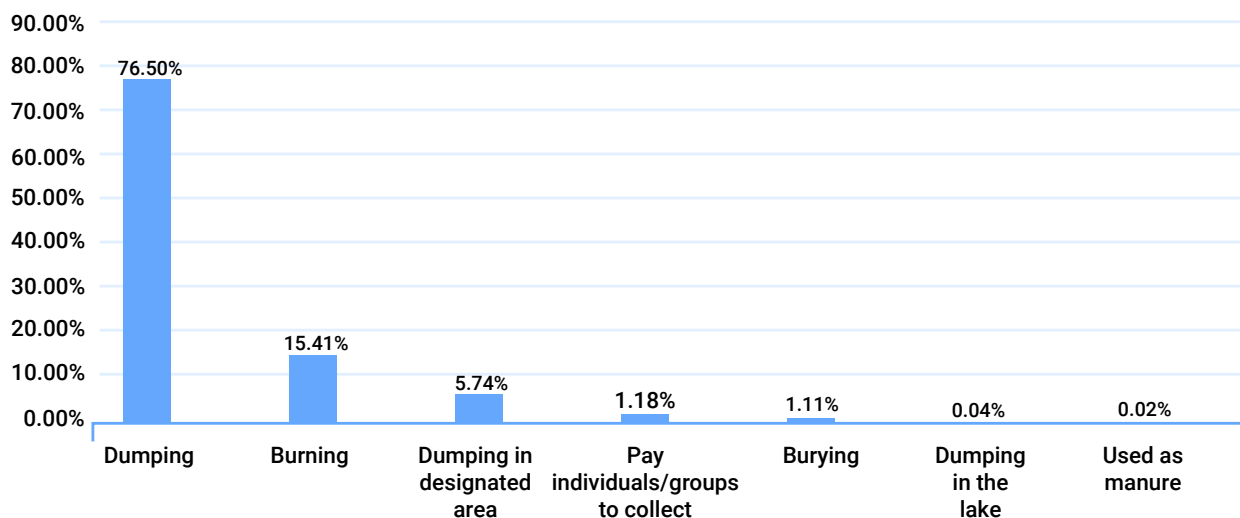
Solid Waste Management

According to NEMA, the average Kenyan generates approximately 0.5 kilograms of waste daily. Based on the current population of 56,505, Homa Bay Municipality produces an estimated

28252.5 kgs (28.2 tons) of waste per day. Based on projected population growth to 70,032 over the next ten years, daily waste generation is expected to rise to 35,016 kilograms (35 tons).

Provisions for solid waste management are severely limited in Homa Bay Municipality, with only 3.7% of the households relying on public waste collection. The 2025 enumeration shows that the majority, 73.7%, dispose of waste through dumping, often in undesignated areas, while 14.8% resort to burning. Only 1.1% use private or group collection services, and a few households even dump directly into Lake Victoria, posing serious environmental risks.

Chart 15. Solid Waste Disposal Methods



This heavy reliance on informal methods highlights inadequate coverage of structured waste services, especially in informal settlements. Widespread dumping and burning contribute to pollution, blocked drainage, and increased exposure to disease. Expanding public collection, enforcing disposal regulations, and promoting safer waste practices are critical to improving sanitation and environmental health. Additionally, Solid waste management growing pressure from rapid urbanization and inadequate infrastructure, challenges that are further intensified by climate change. Heavy rainfall and flooding wash uncollected waste into drainage systems, roads, and Lake Victoria, causing blockages, contamination, and increased vector-borne diseases. Flooded dumpsites and open waste pits release leachate, polluting groundwater and nearshore waters. Extended dry periods exacerbate odor, spontaneous waste combustion, and air pollution, especially in open dumping areas. These climate impacts increase environmental degradation, threaten public health, and raise the cost of waste collection and disposal services.

Information, Communication, and Telecommunications

Mobile Network and Internet Coverage: There is widespread availability of mobile phones across the Municipality, reflecting national trends toward high mobile penetration rates, even within informal settlements. Mobile phones are predominantly used for communication, mobile money transactions, accessing news, and conducting informal business activities. However, variations exist in the type and quality of mobile phone access, with some households using basic mobile phones while others have smartphones that enable more diverse functions, including internet access.

Facebook remains widely used, especially among the older generation, for sharing community updates and engaging in local discussions. Meanwhile, younger audiences are increasingly turning to platforms like TikTok, Instagram, and X (formerly Twitter) to consume and share news, entertainment, and opinions in real-time. This evolving media ecosystem ensures that residents across age groups remain informed,

engaged, and connected to both local and national developments.

Internet accessibility, however, has significantly lower penetration levels compared to mobile phone usage. Internet access is primarily through mobile data subscriptions, with limited availability of broadband or fixed internet connections. Households with internet access generally use it for social media, communication, accessing educational content, and informal business or trade. However, cost barriers, lack of awareness, limited digital literacy, and inconsistent network connectivity constrain broader adoption and usage among residents.

The ICT which is vital for economic activity, education, and service delivery, is increasingly exposed to climate-induced disruptions. Extreme weather events such as floods, lightning, and strong winds damage telecommunication masts, fiber-optic cables, and power supply infrastructure, leading to network outages and data transmission failures. In flood-prone areas, equipment corrosion and reduced accessibility delay maintenance and repair works. Rising temperatures can also reduce the lifespan and efficiency of electronic systems. These impacts limit connectivity, hinder emergency communication during disasters, and slow down service delivery across key sectors such as education, health, and commerce.

Mass Media Communication: Homa Bay Municipality is served by a rich and diverse mass media environment that plays a key role

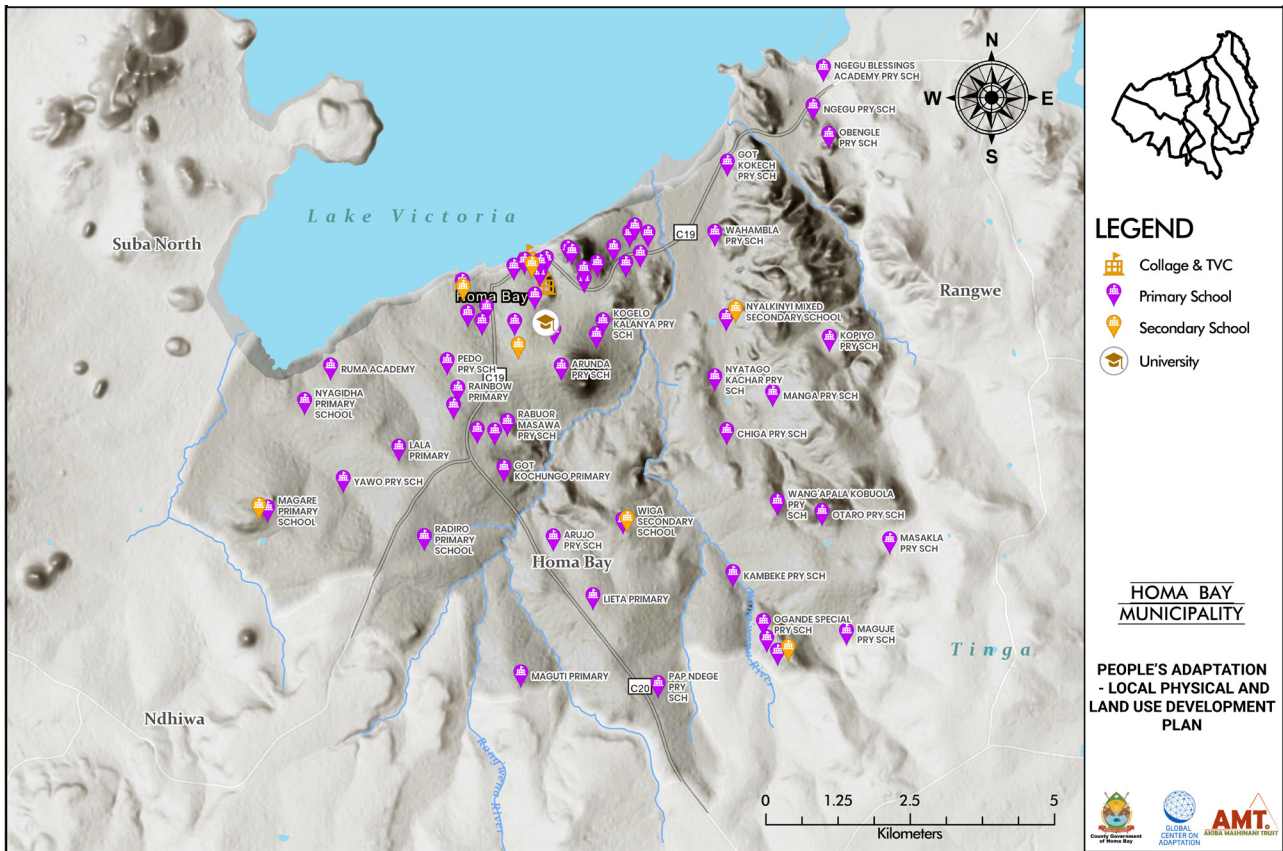
in public awareness, civic engagement, and cultural expression. Several local and regional radio stations broadcast within the Municipality, including Ramogi FM (97.0 FM), Girwa FM (105.0 FM), Lolwe FM, Mayienga FM, and Victoria Radio. These are complemented by popular national radio stations such as Radio Citizen, Radio Maisha, and Radio Jambo, which have strong followings in the area and provide news, entertainment, and national dialogue in English, Kiswahili, and local languages. Television access is dominated by national broadcasters such as Ramogi TV, Citizen TV, KTN, NTV, and KBC, which regularly feature content relevant to Homa Bay residents, including coverage of County affairs and national programs. The print media space is served by widely circulated newspapers like *The Standard* and *Daily Nation*, which offer both national and localized reporting.

Social Infrastructure

Education

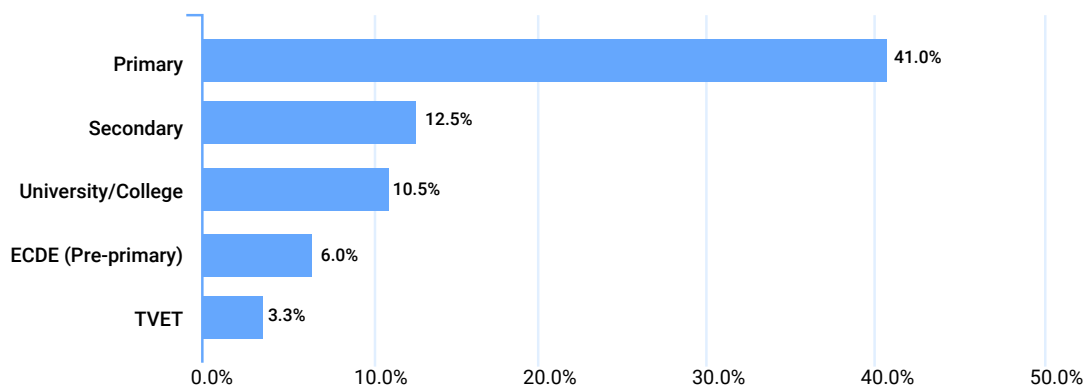
Educational Institutions: The spatial distribution of educational institutions in Homa Bay Municipality reveals a concentration of primary schools around the urban core, with fewer secondary schools and only one University located near the central area. The 2025 enumeration found 36 primary schools, 12 secondary schools, two Technical and Vocational Education and Training (TVET) training institutions, three colleges and one University.

Map 19. Schools



From the study, 17.4% of the population is students. Out of this population 6% attend Early Childhood Development and Education centers, 41% attend primary schools, 12.5% attend secondary schools, 3.3% TVET institution and 10.5% attend colleges/University.

Chart 16. School going population distribution



While this reflects relatively good access to basic education, populations living on the periphery of the Municipality often rely on dry weather roads to access educational institutes, making them less accessible during adverse weather. This limits equitable access, particularly for students

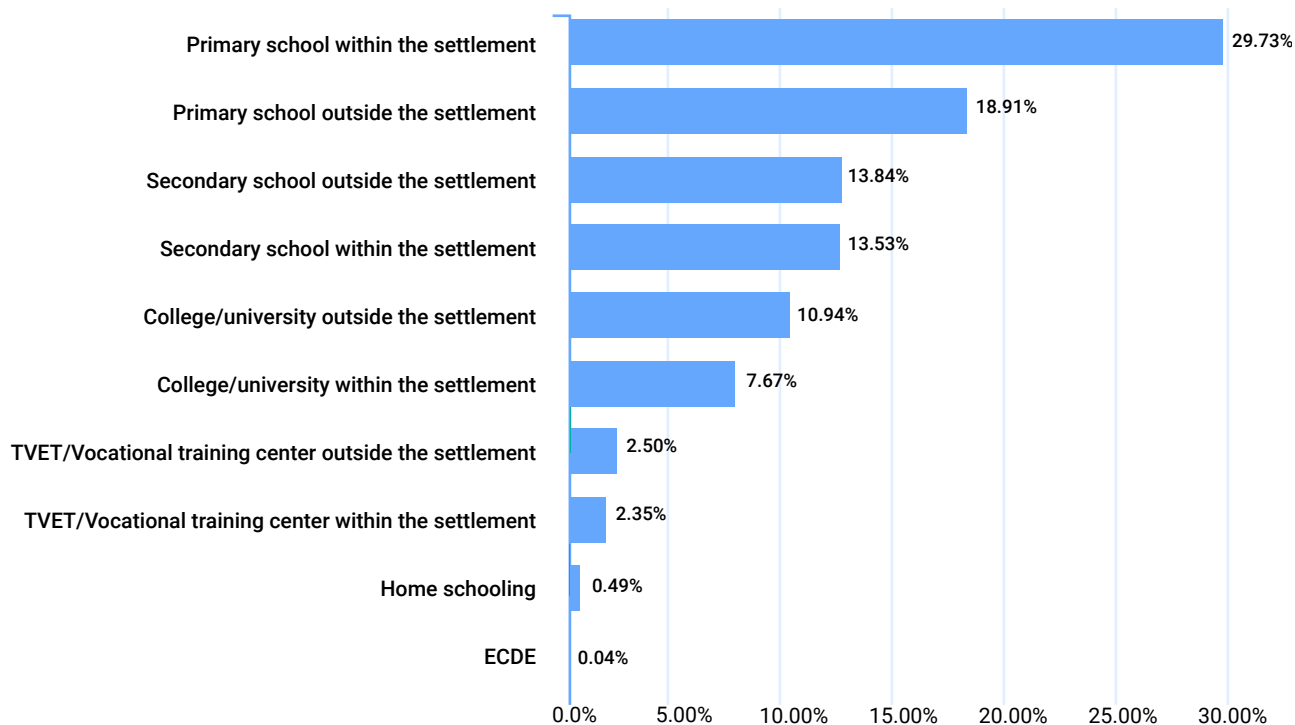
attending secondary and tertiary institutions.

Access to Educational Institutions: Primary schools remain the most widely attended, serving 29.73% of the school-going population within settlements, and an additional 18.91% outside, underscoring a reliance on local basic

education. Access to secondary education is more balanced, with 13.53% attending within settlements and 13.84% outside. However, the

need to travel for secondary schooling still poses challenges, particularly in underserved areas.

Chart 17. Distribution of School-Going Population by Facility



Tertiary education, including universities and colleges, is primarily accessed outside the settlement (10.94%) compared to only 7.67% locally, indicating limited local availability. Similarly, TVET and vocational training remain underutilized, accounting for just under 5% of enrollment overall, highlighting a gap in practical and technical skill training.

Barriers to Education: Financial constraints are a major obstacle to continued education, with 22.6% of households lacking income. Costs associated with school fees, transport, and learning materials frequently prevent school attendance. Long distances to schools further deter enrollment, with nearly half of secondary school students (49.7%) attending institutions outside their settlements. Additionally, household responsibilities often divert children, particularly girls, from schooling, while a small fraction of students are either homeschooled (0.49%) or not enrolled at all (0.2%).

Climate change also undermines education service delivery and infrastructure in Homa Bay. Flooding, high winds, and heat stress frequently damage school buildings, roofs, and access roads, disrupting learning continuity. Schools located in low-lying and informal areas face frequent closures during heavy rains, and classrooms constructed with temporary materials become unsafe and uninhabitable. Prolonged droughts increase water scarcity, affecting hygiene, and sanitation, particularly in early childhood institutions. These disruptions contribute to lower attendance, increased dropout rates, and greater vulnerability among children, especially in informal settlements and rural-urban transition zones.

Quality of Education and Infrastructure: The quality of education varies significantly across the Municipality, shaped by uneven access to learning materials, classrooms, and qualified teachers. With 41% of students enrolled in primary

schools, these institutions are under pressure and often face resource shortages especially with the new Competency-Based Curriculum. The limited presence of TVET institutions and universities restricts access to higher learning, especially for students unable to relocate.

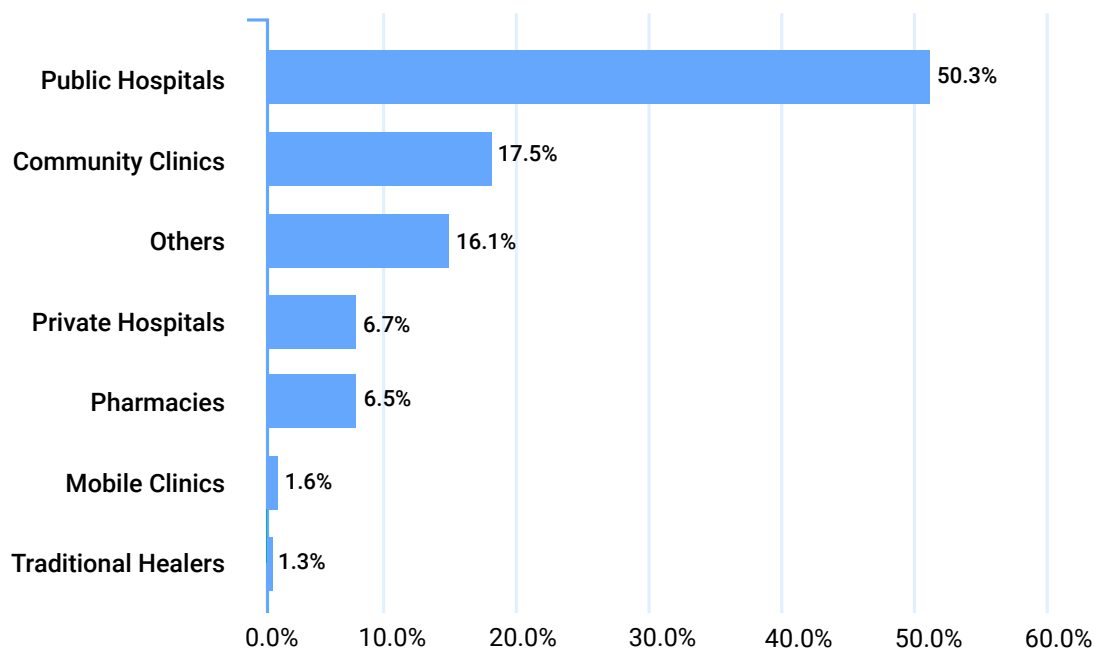
Infrastructure remains inadequate in many schools, particularly in relation to water, sanitation, electricity, and ICT. These gaps are especially pronounced in secondary schools, many of which are located outside the students' residential areas. Poor infrastructure contributes to low retention rates and limits the effectiveness of teaching, particularly with regard to digital

literacy and modern learning methods.

Health

Access to Healthcare Facilities: The distribution of health facilities varies from one sub-location to another. During the enumeration and mapping exercise, five public health institutions were identified within the Municipality: Homa Bay Teaching and Referral Hospital; Makongeni level 4 Hospital; Nyalkinyi level 3 Hospital; Pedo level 3 Hospital; and Wiga Level 2 hospital. 50.3% of the population seek medical attention from public health facilities.

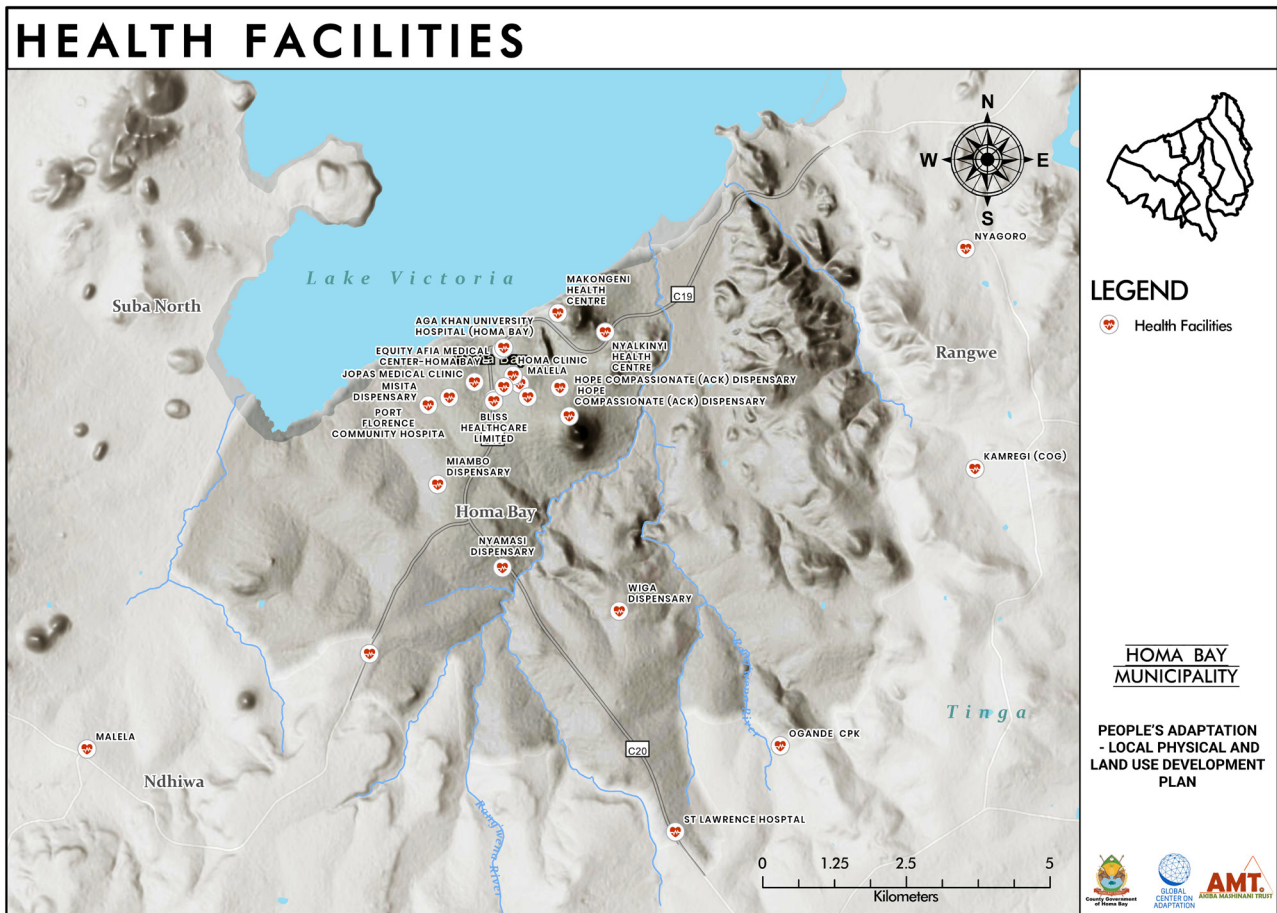
Chart 18. Health Service Provider



In addition to public facilities, the health-facilities map shows the presence of several private and faith-based health centres and dispensaries, particularly concentrated along the main urban corridor and within densely populated neighbourhoods. These complement the public sector by providing outpatient, maternal, and emergency care services, thereby improving overall service coverage within the municipality.

The spatial distribution of health services closely aligns with the major road corridors which connect the central urban area to peripheral health centres such as Wiga and Ogande. Despite this relatively high concentration of health institutions near the urban core, access disparities persist in upland and eastern parts of the municipality, where longer travel distances and terrain challenges reduce service accessibility.

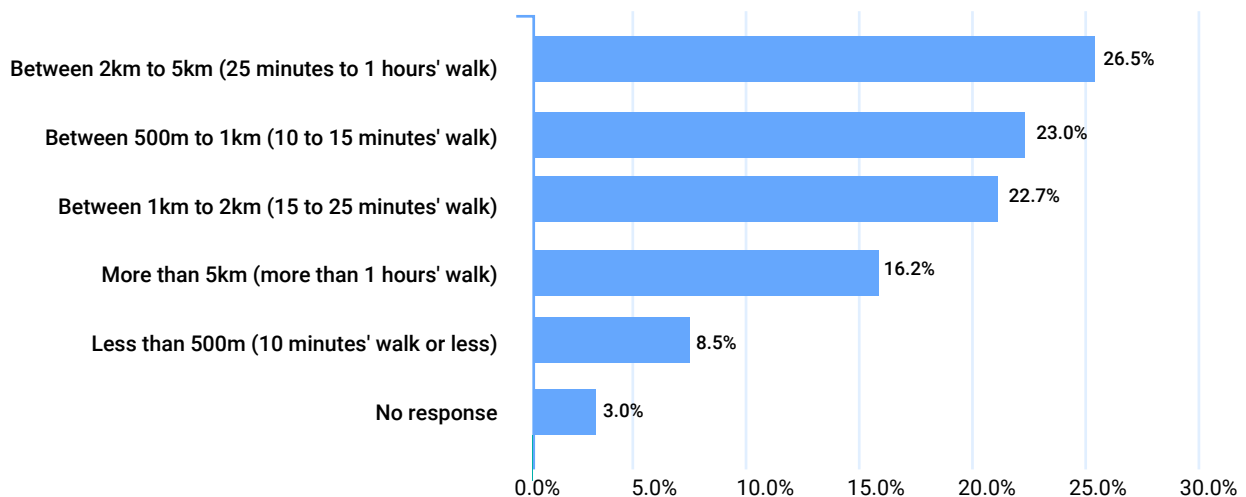
Map 20. Health Facilities



Distance to Nearest Health Facility: Approximately, 54.2% of households are within two kilometers of a health facility—a 15–25-minute walk. However, 16.2% must travel over five kilometers, posing significant access

challenges. Only 8.5% live within 500 meters of a facility. Greater distances correlate with delays in seeking care and increased reliance on self-treatment or traditional medicine.

Chart 19. Distance to Medical Facility by Household



Common Health Issues and Disease Burden:

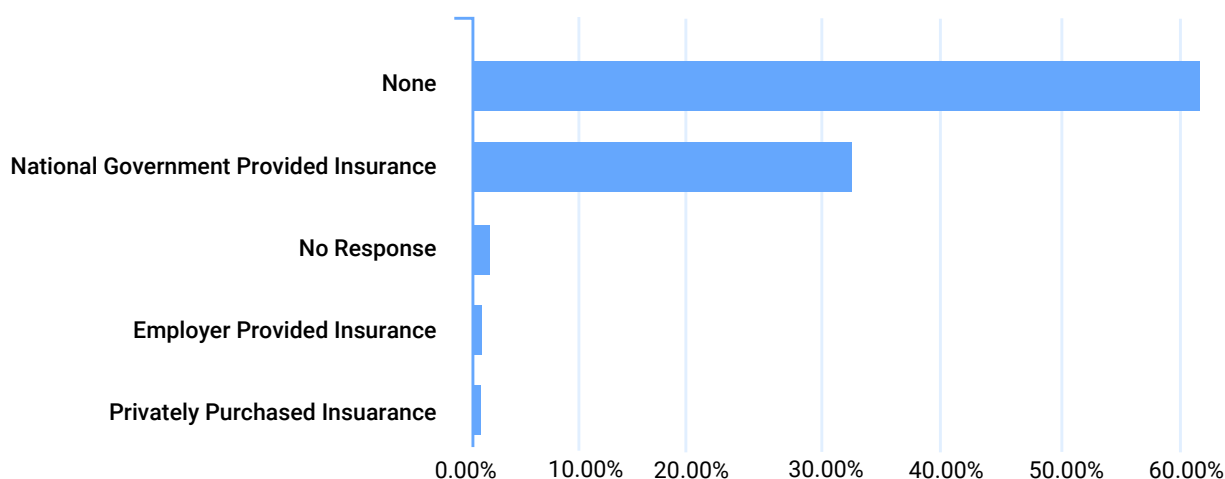
The enumeration found that respiratory illnesses are the most prevalent health condition in Homa Bay Municipality, affecting 83.5% of households—largely due to asthma. This is linked to poor air quality, indoor smoke, and overcrowding. Other common diseases include gastrointestinal diseases, diarrhea, typhoid and ulcers.

Chronic and other notable conditions include diabetes, skin diseases, pneumonia, hypertension, tuberculosis, and HIV/AIDS. Less common ailments, cancer, sickle cell disease, and epilepsy, affect a combined 0.8% of households.

These figures indicate a dual burden of communicable and non-communicable diseases, highlighting the urgent need for comprehensive healthcare interventions, improved environmental health, and access to clean water and public health services.

Health Insurance and Affordability of Healthcare: From the study, 36.3% of households have health insurance, primarily through the Social Health Insurance Fund, with minor contributions from employers and private plans as indicated in the graph below. A significant majority remain uninsured, exposing them to high out-of-pocket medical costs.

Chart 20. Distribution of Households by Access to Medical Insurance



Personal savings are the main source of healthcare funding for 67.2% of households. Additional coping mechanisms include *chamas*, *harambees*, and loans. This financial pressure places many households at risk of instability due to unexpected medical expenses

The main challenges raised by the community with regard to health facilities in Homa Bay Municipality include: high treatment costs; poor service delivery; staff shortages; and a lack of essential drugs and equipment. Additionally, Homa Bay's health infrastructure and population health outcomes are closely tied to climate variability. Increased temperatures and changing rainfall patterns have heightened the prevalence

of climate-sensitive diseases such as malaria, cholera, and respiratory infections. Flooding damages health facilities, limits access to care, and contaminates water sources, leading to disease outbreaks. Heatwaves and poor air quality exacerbate respiratory conditions and strain under-equipped health centers. Power outages during storms disrupt cold chain systems and emergency services, while prolonged droughts reduce water availability in hospitals and clinics. These combined stresses weaken health service delivery, increase healthcare costs, and disproportionately affect vulnerable populations such as children, the elderly, and people with chronic illnesses.

Markets and Economic Hubs

Markets in Homa Bay Municipality are a mix of formal and informal setups, with commercial land use at 5.3% and mixed-use areas at 4.7%. Informal markets—including street vending and market stalls—are a key livelihood source, supporting 36.4% of the workforce, while casual labor accounts for 21.7%.

Most businesses are located close to residential zones, easing access but straining public utilities. Storage and sanitation facilities are scarce, heightening health risks. Congestion, lack of space, insecurity, poor hygiene, and eviction threats due to informal operations are also major challenges facing the markets.

Security

Crime hotspots were identified in Asego, Arujo, and Kobwola Kogwang with community members reporting theft, land disputes, and assault. Limited street lighting contributes to insecurity in these areas.

Land occupied by law enforcement facilities such as police stations, administration offices, and other government security facilities constitutes 3.4% of total land use. However, accessibility to law enforcement services remains inconsistent across sub-locations. While law enforcement infrastructure exists, challenges in resource allocation and operational capacity may affect response times to incidents in some areas. Community policing supplements formal efforts.

Recreational Areas

Recreational spaces are severely limited, with only 0.3% of land allocated for parks, Raila Odinga Stadium and gyms. Other recreational

facilities are located in education facilities most of which are open to the public. Residents of the Municipality also utilize the surrounding hills for recreational activities, particularly hiking and nature walks.

Other Social Facilities

Religious institutions play a significant role in the community. The enumeration revealed that 97.2% of the residents are Christian, 1.1% are Muslim, and 0.1% are Hindu. Religious and cultural institutions cover up to 3.4% of the existing land use. However, these facilities are unevenly distributed; sometimes built with temporary building material; built in residential areas; or learning institutions are used for religious activities.

The Municipality is served by a cemetery located near Arunda Estate, which occupies approximately 2.7 acres of prime land within the town. Other social facilities include dilapidated women's center in Makongeni, the Kabunde CIH Community Centre, the Homa Bay Post Office, and the Homa GK Bay Prison.

Socio-Economic Characteristics

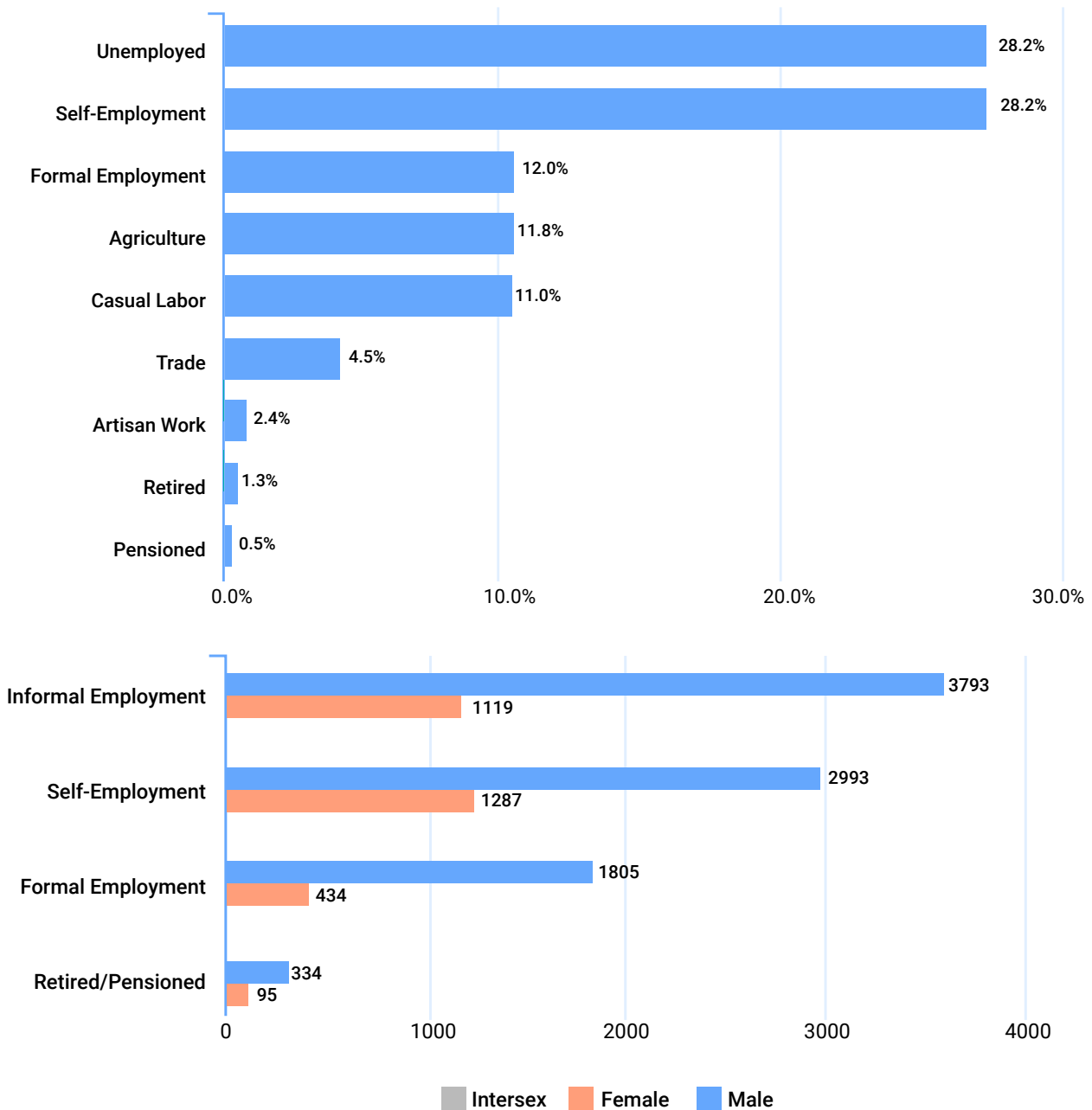
Livelihoods and Income Patterns

Employment Dynamics: The economy of Homa Bay Municipality is heavily reliant on informal and small-scale income-generating activities. According to the 2025 enumeration, 28.2 % of the working population is self-employed—mostly in small businesses or freelance services—while another 11.0 % engage in casual labor. Formal wage employment accounts for just 12.0%, reflecting the Municipality's limited capacity to absorb labor into structured sectors such as education, health, or administration.

Unemployment remains a concern, affecting 28.2% of working-age residents. Young people face particularly high barriers to entry, with few opportunities for apprenticeships, internships, or skills bridging. Gender disparities are especially

evident: while 86.3% of men are employed, only 74.9% of women have jobs. Moreover, men hold over four times as many formal jobs (1,805) as women (434), suggesting unequal access to training, capital, and employer networks.

Chart 21. Employment Categories



These patterns highlight the need for inclusive job creation, especially through policies that formalize and support existing informal enterprises. Interventions such as licensing of micro-enterprises, youth apprenticeships, and targeting women in procurement could ease access to economic opportunity.

Household Income Levels: Household incomes in the Municipality reflect wide disparities and frequent precarity. More than one in four households (26.1%) have no regular income, while another 12.9% survive on under Ksh 2,000 per month. These income levels leave families highly vulnerable to shocks, from illness to food price fluctuations or seasonal job losses. Only about 14% of households report monthly incomes above Ksh 10,000, limiting their capacity to invest in better housing, schooling, or livelihoods.

The most common sources of income are small-scale trade, casual labor, and low-yield farming. Very few residents benefit from pensions (0.34%) or retirement benefits (0.84%), underscoring the fragility of old-age financial security and the absence of comprehensive social protection systems.

Education and Employment Link: The data reveals a strong and consistent link between education levels and employment outcomes. Individuals without formal schooling experience the highest unemployment rate at 42% and are often locked out of formal jobs—only 5% of those employed from this group hold such positions. In contrast, 62% of university-educated residents are in formal jobs, reflecting the premium placed on certification in Kenya’s job market.

Interestingly, TVET has emerged as a highly effective pathway: among the 661 residents with TVET credentials, only 6% are unemployed, suggesting that technical skills align with local labor demand and offer a viable alternative to university education. However, these

opportunities remain underutilized due to stigma or the lack of training centers.

Food Security and Economic Resilience

Food Access and Vulnerability

Food security across Homa Bay Municipality is deeply intertwined with income instability and limited agricultural engagement. With 26.1% of households reporting no income and another 12.9% earning below Ksh 2,000 monthly, a significant portion of the population struggles to meet daily food needs. These households are highly sensitive to even minor price increases in staple foods, and many lack financial buffers such as savings or social support systems.

The socioeconomic data does not directly capture household food acquisition methods; however, insights drawn from employment trends indicate that most households depend on market purchases rather than homegrown food. Only 13% of working adults are involved in farming, fishing, or livestock—highlighting limited integration of urban and peri-urban food production in the Municipality’s livelihood systems. For many casual laborers and small traders, access to food hinges on daily income, which is often inconsistent or seasonal.

Agriculture and Livelihoods

Despite its largely urban setting, Homa Bay Municipality still retains pockets of agricultural activity that are vital to both food access and household income. According to the study, 207,685 hectares in the county are under food crops, with just 21,211 hectares under cash crops and 7,872 hectares in horticulture. Staple food crops include maize, beans, cassava, sweet potatoes, and cowpeas, while sugarcane, sunflower, groundnuts, and pineapples serve as the main cash crops.

These patterns reveal a dual challenge: low value capture from food production, and under-utilization of high-value horticulture or agro-processing potential. Agricultural activities remain heavily affected by climate unpredictability, pest outbreaks, and limited access to extension services. Furthermore, irrigation infrastructure is poorly developed, leaving farmers at the mercy of erratic rainfall. The low adoption of modern technologies—due to cost, training gaps, and labor shortages—limits both yield and food availability during lean periods.

Blue Economy and Irrigation

As a Municipality located along Lake Victoria, Homa Bay's food security landscape is also shaped by fisheries, water access, and lake-based farming. There are seven active fish landing beaches Kananga, Angalo, Koginga, Lela, Achich, Ombogo, and Ngegu serving as important economic and food hubs. However, these sites face ecological stress and land use conflicts. The absence of a formal Marine Spatial Plan has led to disorganized development, pollution, and encroachment on fish breeding areas, especially around Samunyi and Rang'wena stream estuaries.

The blue economy holds substantial potential to supplement food and income sources through fishing, aquaculture, and eco-tourism. Infrastructure improvements like the new fish market under construction at Koginga Beach and rehabilitation of the municipal pier could enhance fish trade and lake transport. Yet, water-based horticulture and irrigation remain underdeveloped. Smallholder irrigation along the lake exists but suffers from weak infrastructure and poor environmental safeguards, such as agrochemical runoff and siltation from construction dumping.

Trade, Commerce, and Financial Inclusion

Informal Trade and Market Dynamics: Trade and microenterprise are the economic heartbeat of Homa Bay Municipality. The study reveals that 30.4% of the working population is self-employed, a significant majority of whom operate in the informal sector—running kiosks, market stalls, or offering services like tailoring, *boda boda* transport, and food vending. An additional 4.2% are involved in retail trade, and 2.6% in artisanal work. These small-scale enterprises thrive in open-air markets, road junctions, and peri-urban centers, forming the dominant livelihood strategy for low- and mid-income households.

However, the growth of these informal businesses is constrained by spatial pressure, competition, and lack of access to formal infrastructure. For instance, most vendors operate without licenses or permanent structures, exposing them to evictions and seasonal sales drops due to weather. The enumeration also highlights how consumer spending patterns remain limited—with 40% of households earning under Ksh 2,000, purchases prioritize essentials like food and water, limiting market vibrancy and stunting commercial expansion.

Financial Access and Savings: Despite vibrant microenterprise activity, financial inclusion in Homa Bay remains low. The report notes that over 40% of residents depend on informal income sources (self-employment, casual labor, trade), often without pay slips, asset records, or collateral requirements traditionally demanded by banks and formal lenders. This structural exclusion prevents many from accessing credit, saving securely, or building long-term financial resilience.

Although the enumeration does not provide direct data on savings rates or financial account ownership, it strongly suggests that most low-income residents lack access to mainstream banking. In such an environment, mobile money platforms like M-Pesa are likely the most accessible and widely used financial tools, enabling day-to-day transactions, remittances, and basic savings. Demand for savings and credit cooperatives and microfinance services is implied by the entrepreneurial base, particularly among traders and home-based businesses.

Gendered Economic Participation: The gender divide in Homa Bay's economic life is stark. Women are underrepresented in formal employment—with only 434 formally employed women compared to 1,805 men—and face a

significantly higher unemployment rate (25.1% vs. 13.7% for men). Yet, women are highly active in self-employment (1,287 women), often managing micro-businesses that are crucial to household survival. These include fish vending, grocery stalls, tailoring, and child-care services.

Barriers to women's full economic participation include limited access to credit (due to lack of land titles or collateral), mobility restrictions, unpaid care burdens, and exclusion from decision-making spaces. These constraints not only undermine women's income-earning potential but also reduce household and municipal economic growth. Unleashing women's economic potential could yield significant benefits for food security, education, and the resilience of communities.

SYNTHESIS

SWOT Analysis

Sector / Theme	Strengths	Weaknesses	Opportunities	Threats
Population & Demographics	<ul style="list-style-type: none"> Youthful, energetic, and educated population (50% under 35) Strong community passion for change Internal migration enhancing cohesion Presence of a working-age economic base 	<ul style="list-style-type: none"> Economic strain on households High youth unemployment (15%) Overdependence on informal sector Intergenerational dependency Low youth involvement in agriculture Poor services in informal areas 	<ul style="list-style-type: none"> Youth-focused programs (digital economy, agribusiness) Urban upgrading in informal zones Women empowerment initiatives Shared city vision by local and national government 	<ul style="list-style-type: none"> Rising social vulnerabilities (unemployment, dependency) Environmental degradation due to informal growth Urban sprawl and service inequality
Education	<ul style="list-style-type: none"> University and tertiary institutions present Equitably distributed primary schools Private institutions supplement public education 	<ul style="list-style-type: none"> Uneven access in rural areas Poor infrastructure in some schools Limited investment in digital infrastructure Lack of quality standards in schools 	<ul style="list-style-type: none"> Infrastructure improvement Expansion of early childhood development & vocational training ICT integration & school digitalization Use of tertiary institutions as regional education hubs 	<ul style="list-style-type: none"> Teacher shortages Infrastructure vulnerable to weather events Difficulty adapting to curriculum reforms

Health	<ul style="list-style-type: none"> ● Public facilities dominate (67.8%) ● Government-supported community clinics ● Variety of service points and levels ● Community Health Programs and Social Health Insurance Funds (SHIFs) to promote Universal Health Coverage 	<ul style="list-style-type: none"> ● Low insurance coverage (61.1%) ● Long distances to facilities in rural areas ● Personnel shortages ● Out-of-pocket healthcare dependence ● Poor facility sanitation 	<ul style="list-style-type: none"> ● Upgrading and expanding rural health centers ● Mobile health services ● Scale SHIFs and public-private partnerships ● Improve disease prevention and surveillance ● Strengthen sanitation and health system integration 	<ul style="list-style-type: none"> ● HIV, non-communicable diseases, and respiratory diseases prevalent ● Environmental and sanitation-related health risks ● Overreliance on donor support ● Public distrust in service delivery
Economy & Markets	<ul style="list-style-type: none"> ● High informal trade participation ● Mixed-use zones support commerce ● Market lands available- Artisan & agri-based activity presence 	<ul style="list-style-type: none"> ● Congested markets with poor sanitation ● Inadequate infrastructure (storage, drainage) ● Lack of policy on informal trading and livestock ● Limited trader credit access 	<ul style="list-style-type: none"> ● Upgrade informal markets ● Create designated vending zones ● Expand industrial zones for value addition ● Funding support for sustainable market development 	<ul style="list-style-type: none"> ● Informal traders vulnerable to eviction & regulation ● Insecurity in market zones ● Vulnerability to economic shocks
Security & Safety	<ul style="list-style-type: none"> ● Existing police presence ● Community policing & awareness of hotspots ● Land allocated for security services ● Gender-based violence and child protection recognized 	<ul style="list-style-type: none"> ● Limited access to law enforcement in peri-urban areas ● Weak police-community coordination ● Poor legal support for vulnerable groups ● Inadequate lighting and public infrastructure 	<ul style="list-style-type: none"> ● Expand urban lighting and integrate into planning ● Support for community safety structures ● Legal aid & rescue centers ● Collaboration with civil society & stakeholders 	<ul style="list-style-type: none"> ● Increasing youth-driven petty crimes ● GBV and child abuse underreported ● Police mistrust ● Crime deterring investments and public engagement

Recreation & Open Spaces	<ul style="list-style-type: none"> Youth interest in sports and cultural events Stadium and community centers exist Some informal spaces allow recreation 	<ul style="list-style-type: none"> Only 0.3% of land for recreation Lack of organized programs and cultural facilities Funding and land constraints Uneven distribution of play spaces 	<ul style="list-style-type: none"> Integrate recreation into housing and neighborhood planning Develop youth-targeted programs (sports, arts) Convert idle public land to recreation Partner with private sector and NGOs 	<ul style="list-style-type: none"> Youth idleness and crime risk Shrinking public space due to urban pressure Fragmented community ties
Land Use & Environment	<ul style="list-style-type: none"> Lake Victoria provides water and transport Fertile, well-drained land Strong environmental community action (for instance, cleanups) Existing river networks 	<ul style="list-style-type: none"> Pollution, weak waste systems Urban sprawl due to outdated plans- Unregulated development and weak enforcement Poor environmental safeguards 	<ul style="list-style-type: none"> Land use plan to reduce vulnerability Nature-based flood mitigation Eco- and cultural tourism potential Renewable energy development Mainstreaming climate into planning 	<ul style="list-style-type: none"> Encroachment of wetlands and riparian areas Rising lake levels and flooding Population pressure on resources
Housing & Settlements	<ul style="list-style-type: none"> High permanent structures and home ownership 	<ul style="list-style-type: none"> Prevalence of temporary housing in informal settlements Weak enforcement of building codes Poor waste management in congested areas 	<ul style="list-style-type: none"> National affordable housing programs Enforcement of existing building and planning regulations 	<ul style="list-style-type: none"> Flooding and heat stress in informal areas Use of weak materials in high-risk zones
Transport & Mobility	<ul style="list-style-type: none"> Multiple transport modes (road, boda, water, air) Presence of Kabunde Airstrip Lake Victoria transport potential Boda boda supports last-mile connectivity 	<ul style="list-style-type: none"> Poor road quality in areas Missing walkways, terminals, and safety structures No formal landing sites for BMUs Unregulated boda boda sector 	<ul style="list-style-type: none"> Non-motorized transport and pedestrian network expansion Upgrade of terminals and landing sites Water-based transport tourism Private-public partnerships in road upgrades 	<ul style="list-style-type: none"> Floods disrupting transport Unsafe water vessels Vandalism and political interference

Energy Access	<ul style="list-style-type: none"> ● Presence of Kenya Power and Lightning Company grid ● Growing adoption of solar energy ● Political goodwill for expansion 	<ul style="list-style-type: none"> ● Blackouts, limited coverage ● High cost of electricity ● Overreliance on biomass fuels ● Poor charcoal regulation enforcement 	<ul style="list-style-type: none"> ● Clean cooking & solar programs ● Carbon credits and renewable energy funding ● Public awareness and green campaigns 	<ul style="list-style-type: none"> ● Environmental degradation from deforestation ● Global fuel price volatility
Waste Management	<ul style="list-style-type: none"> ● Active community groups and plans for materials recovery facility ● County support for cleanups- Community interest in learning 	<ul style="list-style-type: none"> ● Lack of waste recovery centers ● Poor segregation and awareness ● Few trucks and overwhelmed services ● Weak enforcement 	<ul style="list-style-type: none"> ● Recycling and composting initiatives ● Climate financing and open funding ● Turning waste into income (manure, animal feed, energy) 	<ul style="list-style-type: none"> ● Environmental degradation ● Climate change impacts ● Resistance to behavior change
Water & Sanitation	<ul style="list-style-type: none"> ● Lake Victoria proximity ● Gravity-based systems supported by topography ● Partner support (CBOs, NGOs) ● Existence of storage zones 	<ul style="list-style-type: none"> ● Aged infrastructure ● Inadequate utility coverage ● Illegal connections and water cartels ● Limited public awareness ● Cost recovery challenges 	<ul style="list-style-type: none"> ● Rainwater harvesting promotion ● Climate-resilient water planning (2050 vision) ● Integration with smart metering and IT ● Decentralized treatment facilities 	<ul style="list-style-type: none"> ● Rising lake levels and pollution ● Spread of water-borne diseases ● Climate variability
Telecommunication & ICT	<ul style="list-style-type: none"> ● Strong mobile phone ownership ● Youth willingness to adopt digital economy ● Affordable smartphones and internet growth 	<ul style="list-style-type: none"> ● Slow connectivity in areas ● Lack of public ICT hubs ● Poor cyber security and data protection ● Digital illiteracy among older generations 	<ul style="list-style-type: none"> ● Digital hubs and public WiFi zones ● National broadband rollout ● Digital economy as job creator ● Integration with other service sectors 	<ul style="list-style-type: none"> ● Digital divide between connected/unconnected ● Power outages affecting network reliability



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CROSSCUTTING ISSUES

Socio-Economic Inequalities and Marginalization

The 2025 enumeration reveals that Homa Bay Municipality faces entrenched socio-economic disparities, particularly among youth and marginalized communities in informal settlements. A key challenge is the high rate of youth unemployment, with young people reported as jobless within the municipality. While many youths engage in informal or self-employment, these jobs often lack financial stability, social security, and growth potential. Furthermore, skill acquisition opportunities are

limited—only 3.3% of the youth are enrolled in TVET programs—highlighting significant barriers to accessing employment-relevant training. Educational dropout rates remain high, further diminishing long-term employability. Additionally, public investment in recreational infrastructure is minimal, with only 0.3% of municipal land allocated for leisure and community spaces. This shortage contributes to increased youth idleness and exposure to social vices, including crime and substance abuse, particularly in underserved neighborhoods such as Asego and Arujo.

Gender disparities compound these inequalities, particularly in land ownership, employment, and access to essential services. The data indicate that only 40.36% of women in Homa Bay Municipality own land, compared to 48.63% of men, limiting women's ability to access credit, secure housing, or invest in agricultural livelihoods. This disparity is particularly pronounced among female-headed households, of which 43.91% are tenants, and 1,347 such households report having no source of income. Women also face barriers to formal employment, with many concentrated in low-income informal sectors that lack job security and economic mobility. Access to healthcare is disproportionately constrained in rural and informal settlements, where maternal and reproductive health services are scarce. Moreover, only 5.6% of community initiatives are directed toward addressing critical issues such as gender-based violence and child protection, leaving many women and children vulnerable without legal, social, or rehabilitative support. These interconnected challenges underscore the need for equitable service delivery, gender-responsive policies, and inclusive urban planning to improve the socio-economic conditions of Homa Bay's most vulnerable populations.

Environmental Degradation and Climate Vulnerability

Homa Bay Municipality faces acute environmental and climate-related risks, with flooding emerging as the most severe hazard. The enumeration indicates that 63.07% of households have been affected by flooding, followed by 16.71% impacted by landslides, and 13.20% by fire outbreaks. The areas most affected include Kobwola Kogwang, which accounts for 20.06% of all reported disasters—13.52% of its households directly experiencing flooding. Asego (8.71%) and Arujo (7.92%) are similarly vulnerable. By contrast, Kanam, with only 3.35% of total reported disasters, has the lowest exposure to environmental hazards. During the peak rainy season (March–May), a substantial 74.76% of residents report being affected by seasonal floods, with flood durations ranging between two days and one week. Alarming, 46.8% of flood-affected households are forced to relocate during these events due to destruction of homes, crops, and infrastructure. The flooding is intensified by the degradation of wetlands and riparian zones, poor urban drainage, and unregulated settlement expansion, especially in low-lying and informal areas.



In addition to climate disasters, environmental degradation is escalating due to unsustainable energy use, agricultural runoff, and weak waste management systems. According to the survey, 51.6% of households depend on traditional biomass fuels (33.3% use firewood and 25.5% use charcoal), contributing to deforestation, air pollution, and carbon emissions. The backflow of Lake Victoria—attributed to increased rainfall and lake volume—has led to the destruction of shoreline infrastructure, including road sections such as the Shauri Yako–Samunyi corridor, and eroded riparian vegetation critical for biodiversity and fish spawning. This has resulted

in the migration of fish species and aquatic birds, reducing access to artisanal fishing and food sources. Moreover, pollution from agricultural chemicals and stormwater runoff has led to eutrophication of lake waters, severely depleting oxygen and killing aquatic life. Plastics washed into the lake through storm drains have made beaches visibly polluted, damaging tourism potential. These environmental stressors, compounded by unplanned urban growth and weak regulatory enforcement, present escalating risks to human health, food security, and infrastructure sustainability in Homa Bay Municipality.



Governance, Land Tenure, and Institutional Gaps

Governance challenges and insecure land tenure systems significantly constrain equitable development and orderly urbanization in Homa Bay Municipality. According to the enumeration, 36.3% of households are tenants, while 4.4% are classified as squatters—reflecting a high proportion of residents living without secure land rights. Land ownership remains deeply contested, particularly in informal settlements where disputes and threats of eviction are prevalent.

Gender disparities further intensify this issue: 48.63% of men own land, while only 40.36% of women do. Female-headed households are particularly vulnerable, with 43.91% relying on rental accommodation and at least 1,347 households (largely female-led) reporting no income source to support land acquisition or secure housing. These conditions create a fragile housing landscape prone to legal uncertainty, forced evictions, and inter-community tensions over land use.

In parallel, institutional and planning deficiencies hamper the Municipality's ability to manage

urban growth and environmental risks effectively. The expansion of informal settlements, especially around ecologically sensitive wetlands and riparian zones, has occurred largely in the absence of enforceable zoning laws or land use regulations. These areas are increasingly encroached upon by low-income households seeking land, contributing to unregulated development, biodiversity loss, and heightened disaster risks such as flooding. Moreover, only 0.3% of the Municipality's land is dedicated to recreational and public spaces, indicating limited capacity for inclusive spatial planning.

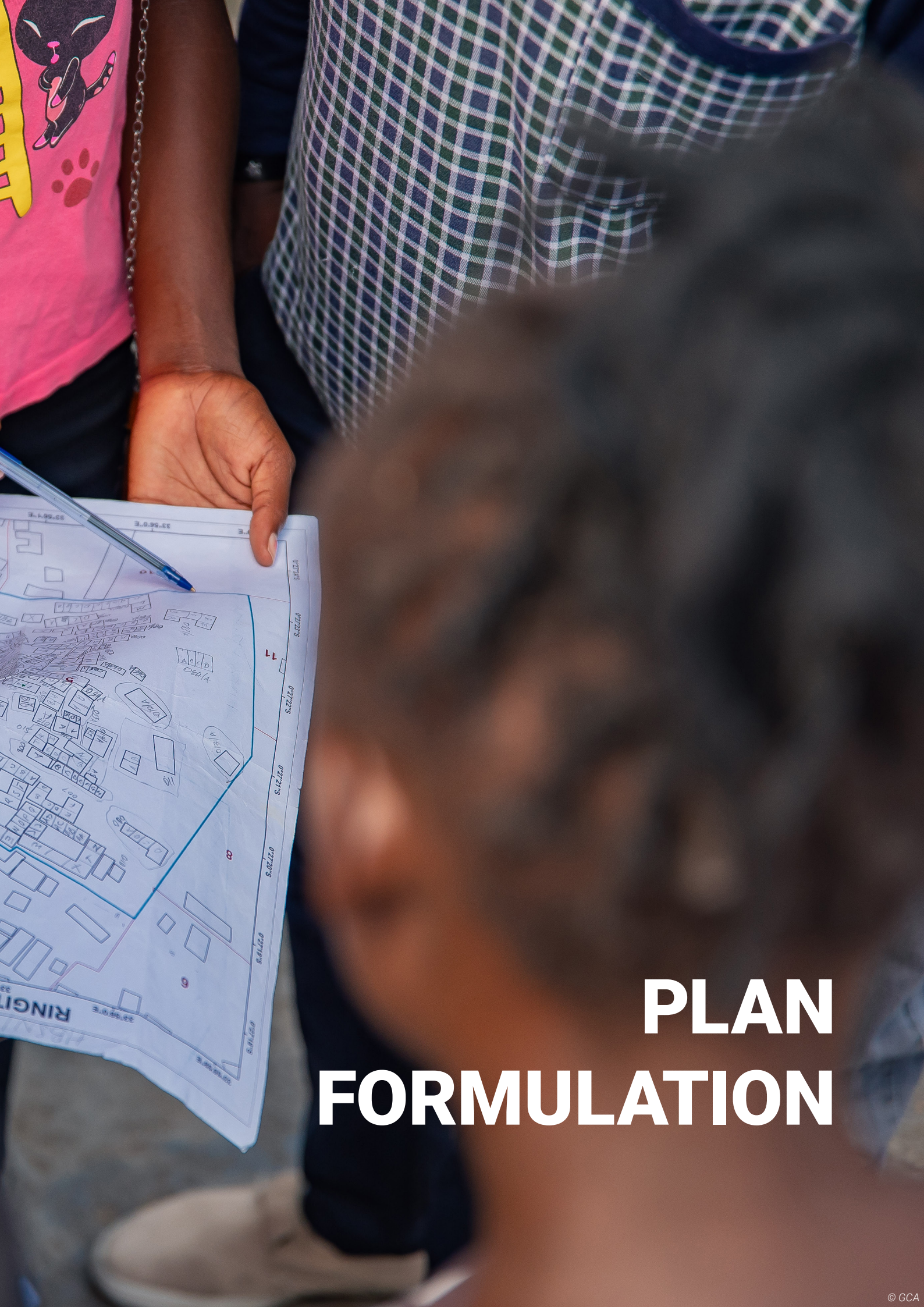
Although institutional structures like the Climate Change Steering Committees and Climate Resilience Innovation Hub have been established, enforcement gaps persist at the grassroots level. Community engagement remains underdeveloped in many areas, and resource constraints limit the Municipality's capacity to implement its climate action policies fully. The lack of robust, participatory governance mechanisms continues to hinder coordinated responses to environmental, social, and infrastructural challenges, further exacerbating the vulnerabilities of residents living in informal and underserved settlements.

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TI SHEET 5



PLAN FORMULATION



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ALTERNATIVE PLANNING MODELS

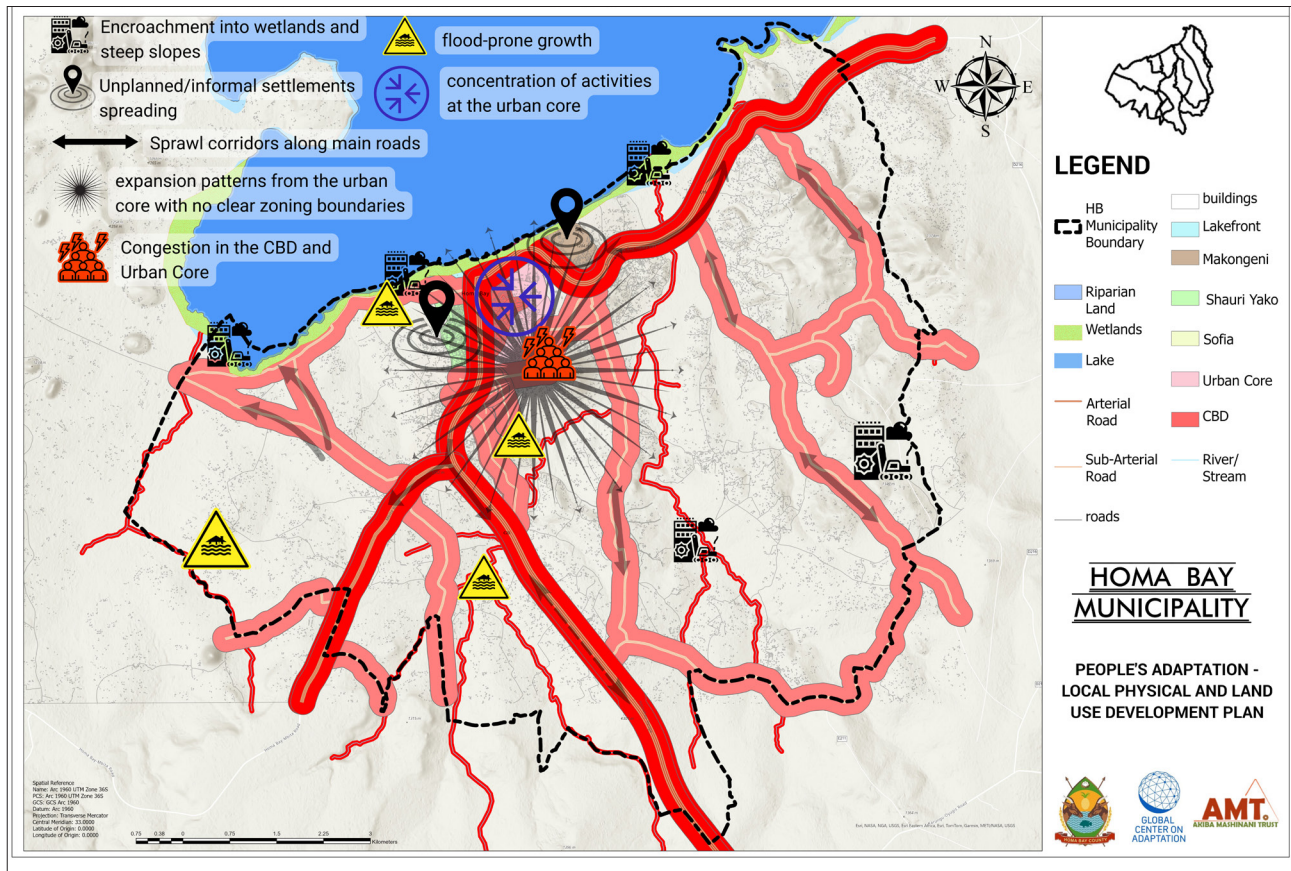
This chapter presents four spatial development models that illustrate alternative pathways for Homa Bay's future urban growth. Each model reflects different planning assumptions, investment choices, and development patterns, offering a basis for comparison and informed decision-making.

Business as Usual

In this intervention, no proactive planning or policy

changes are made, and development proceeds under existing trends and market forces. Homa Bay would retain a spatial structure where growth is concentrated around the town center due to existing infrastructure. However, this growth would be uncoordinated and haphazard, with settlements and businesses sprawling along roads and into available—often environmentally sensitive—land. Nodes like Kodooyo and Got Kokech would see little to no planned development, while the urban core sprawls into peri-urban and agricultural zones.

Map 21. Nil-Scenario Development Concept



The anticipated outcomes in this intervention include:

- **Urban sprawl and informality:** Uncontrolled expansion and densification of informal settlements like Shauri Yako, Sofia, and Makongeni would continue, with structures extending along roads and lacking proper layout.
- **Infrastructure strain:** Rapid, unregulated growth would overwhelm water, sanitation, drainage, and electricity systems. Informal areas would suffer service deficits, worsening public health risks and sanitation challenges, especially in flood-prone zones.

- **Congestion and mobility issues:** Concentration of economic activity in the CBD would lead to increasing traffic congestion, especially on major roads and junctions. Public transport would become overcrowded, with declining road safety and efficiency.
- **Housing shortages and urban decay:** The demand for affordable housing would far exceed formal supply, resulting in overcrowded, poorly serviced informal dwellings. Haphazard construction would degrade the town's livability and visual appeal.

The key features and outcomes of this model include:

- **Compact urban growth:** Growth is contained within the existing town footprint, preserving rural land, protecting wetlands and reducing sprawl.
- **Service Delivery Efficiencies:** Concentrated population supports economies of scale for services like water, sanitation, public transport, and social infrastructure (schools, hospitals, markets).
- **Improved Mobility:** With more people living near jobs and amenities, walking and cycling become viable. Investment in urban roads, sidewalks, and public transit within the core becomes justifiable, reducing emissions and commute times.

On the other hand, risks and limitations of this model include:

- **Congestion and infrastructure strain:** Centralization could overwhelm CBD roads and utilities.
- **Peripheral neglect:** Outlying areas may stagnate, lacking investment or services. Residents in areas like Kanyabala or Got Kokech would face long commutes and limited local opportunities, deepening spatial inequality.

- **Housing market pressure:** Core land prices and rents may rise sharply, risking gentrification and displacement.

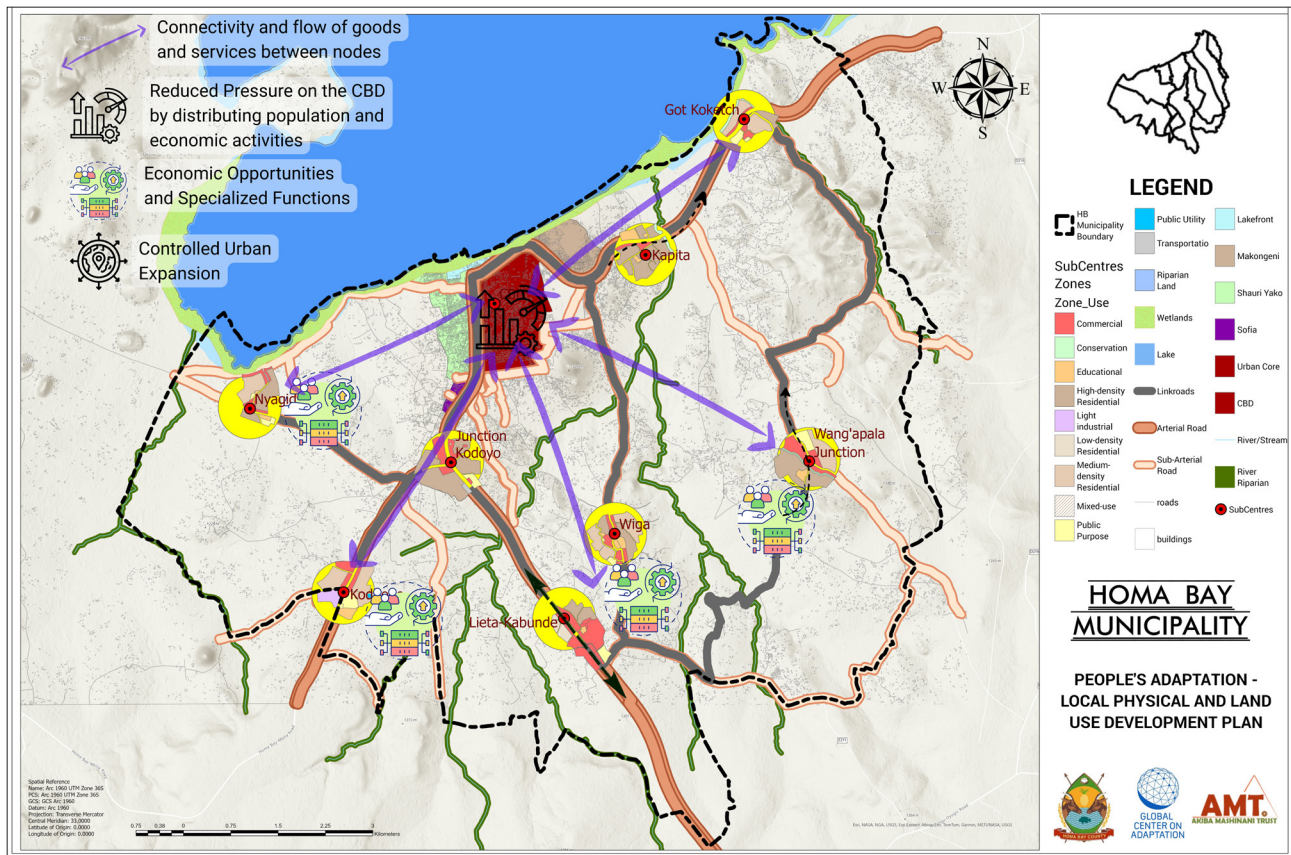
Informal areas like Shauri Yako, Makongeni, and Sofia lie within the core and are critical to this model's success. They must be upgraded through in-situ redevelopment: improving infrastructure, securing tenure, and guiding safe, multi-story housing. If not upgraded, these settlements will bear the brunt of population pressure, undermining the compact city vision. Integrating them is essential to making the model socially sustainable.

This model offers a clear, efficient urban growth path by consolidating development in Homa Bay's core. However, the remaining areas of the municipality will remain rural and underdeveloped.

Polycentric Development Model

This model envisions Homa Bay growing through multiple planned urban nodes—such as Kodoyo, Kapita, and Got Kokech—complementing the main CBD. Each node would serve a distinct function (e.g. transport, residential, industry) based on its strategic location. Growth would be distributed, reducing pressure on the CBD and bringing services and jobs closer to residents.

Map 23. Polycentric Development Concept



The key features and outcomes of this model include:

- **Decongestion of CBD:** By redirecting development to sub-centers, the model reduces traffic and service pressure in Homa Bay town. Residents can access employment, transport, and markets in nearby nodes, easing over-reliance on the central area.
- **Improved local access:** Peripheral communities benefit from nearby services (e.g. health centers, schools, water points), reducing travel distances and promoting equitable development across the municipality.
- **Distributed economic growth:** Each node could attract specialized investments—e.g., agro-processing in Got Kokech, housing in Kapita—generating jobs and economic resilience through diversification.

- **Planned urban expansion:** Growth is directed to specific nodes, avoiding random sprawl. Green buffers and agricultural land are preserved between urban clusters, aligning with sustainable land use principles.

The challenges and risks include:

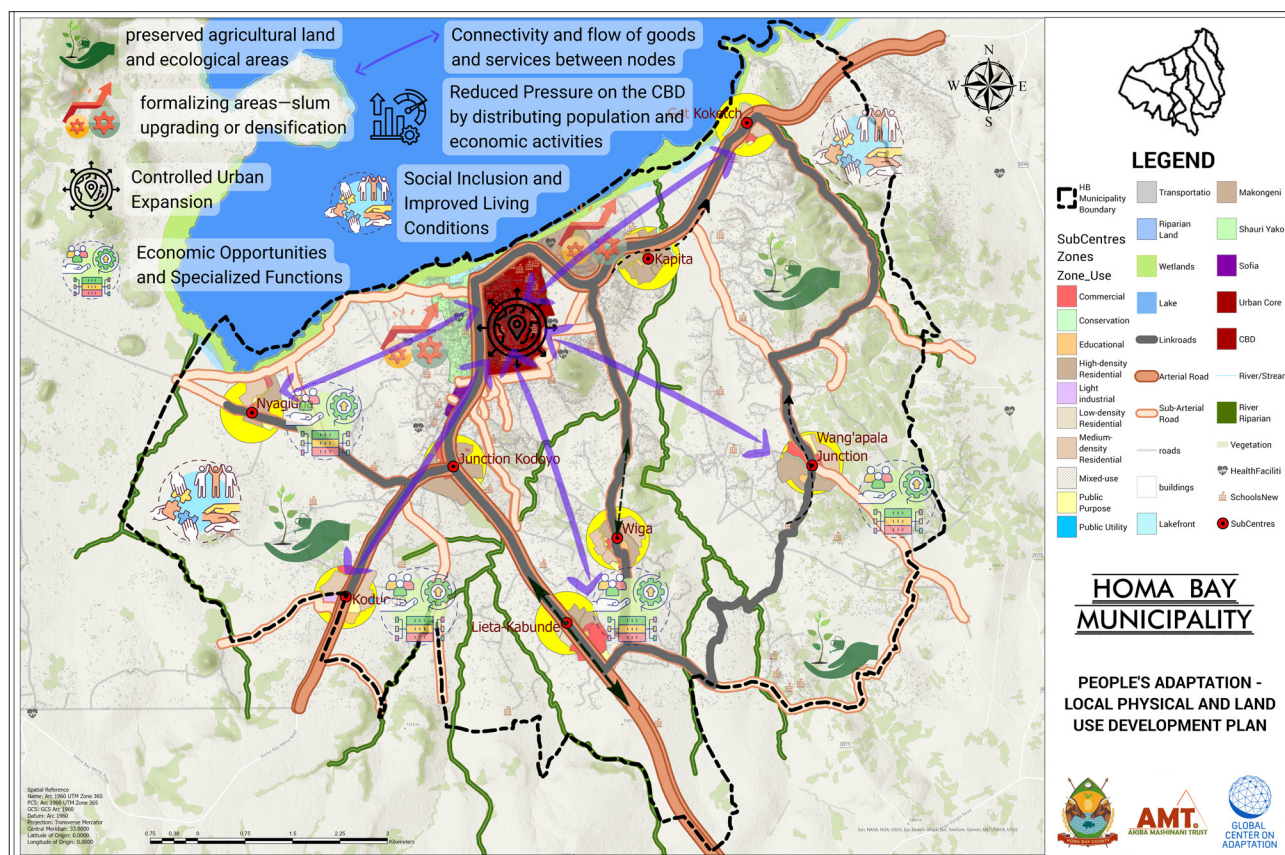
- **High infrastructure costs:** Extending roads, utilities, and services to multiple nodes is more expensive and complex than focusing on one center.
- **Uneven growth:** Some nodes may flourish while others stagnate, leading to inefficient use of resources or underutilized infrastructure.
- **Mobility issues:** Without strong transport planning, inter-node commuting could increase travel time and transport costs, especially if jobs and housing are not well-aligned within nodes.

While future growth is redirected to new nodes, existing informal settlements (Shauri Yako, Sofia, Makongeni) must still be upgraded. Basic infrastructure improvements, tenure regularization, and slum upgrading are essential to improve conditions. Meanwhile, new affordable housing in secondary centers can reduce future pressure on these areas and provide relocation options. Each node needs clear functions, infrastructure support, and connectivity. Without proper staging and governance, the model risks fragmenting growth and leaving some areas underdeveloped. The polycentric model offers a more balanced and resilient urban future for Homa Bay—if supported by coordinated planning, investment in infrastructure and transport, and simultaneous upgrading of existing informal settlements

The Preferred Scenario: A Hybrid, Integrated Development Model

The Integrated Development Model presents a comprehensive and balanced strategy that blends the strengths of both monocentric densification and polycentric dispersion. This “preferred scenario” supports a hierarchical urban structure with a strong core in Homa Bay CBD and coordinated development of secondary and tertiary centers (e.g., Kodoyo, Kapita, Got Kokech, Makongeni/Arujo, and Rangwena). It is guided by principles of sustainability, inclusivity, climate resilience, and efficient mobility and serves as the foundation for development control and project phasing.

Map 24. Integrated Development Concept



The CBD is densified and upgraded to anchor high-order services, commerce, and administration, while secondary nodes absorb part of the growth. These centers are planned to be functionally complementary and well-connected, supported by transport corridors. Land use is coordinated, flood-prone lakefront areas are conserved, housing is directed to elevated zones, and industrial activity is clustered. Climate resilience measures—like drainage planning, green belts, and waterfront protection—are embedded.

The expected outcomes for this model include:

- **Balanced growth:** Distributes development pressure away from the CBD, reduces congestion, and boosts investment across the municipality.
- **Improved services and mobility:** Facilities are distributed by center hierarchy—for instance, the CBD hosts the referral hospital, with dispensaries in sub-centers.

- **Economic development:** Stimulates business and job creation across—for instance, tourism in the CBD and agro-processing in Kodoyo enhancing resilience and local revenue.
- **Infrastructure and environment:** Aligns infrastructure investment with phased growth, avoiding costly sprawl. Preserves natural areas, enhances drainage, and supports climate-smart development.
- **Social inclusion:** Integrates vulnerable communities by upgrading informal settlements, expanding affordable housing, and improving living conditions to reduce poverty and strengthen cohesion.

In this scenario, settlements like Shauri Yako, Sofia, and Makongeni are treated as integral to urban growth, not obstacles. Interventions include in-situ upgrading, tenure regularization, social housing and community facilities to



improve health, resilience and enhance quality of life.

These settlements, especially Shauri Yako near the CBD, are reimagined as central, functional neighborhoods supporting inclusive urban vitality.

Despite its strengths, this model is complex and costly. It demands strong institutional capacity, strict enforcement of development control, phased investment, and political and community support. Prioritization, for instance, upgrading the CBD and one pilot node, beginning informal

settlement upgrades immediately, is essential. Funding must come from County, national, donor, and PPP sources.

The Integrated Model charts a path for a sustainable, inclusive Homa Bay—linking a strong urban core with vibrant, connected nodes and upgraded informal settlements. It addresses spatial imbalance, service deficits, climate risks, and urban poverty through a unified, phased strategy. If implemented well, it positions Homa Bay as a resilient city-region, ready for equitable growth.



PLAN PROPOSALS

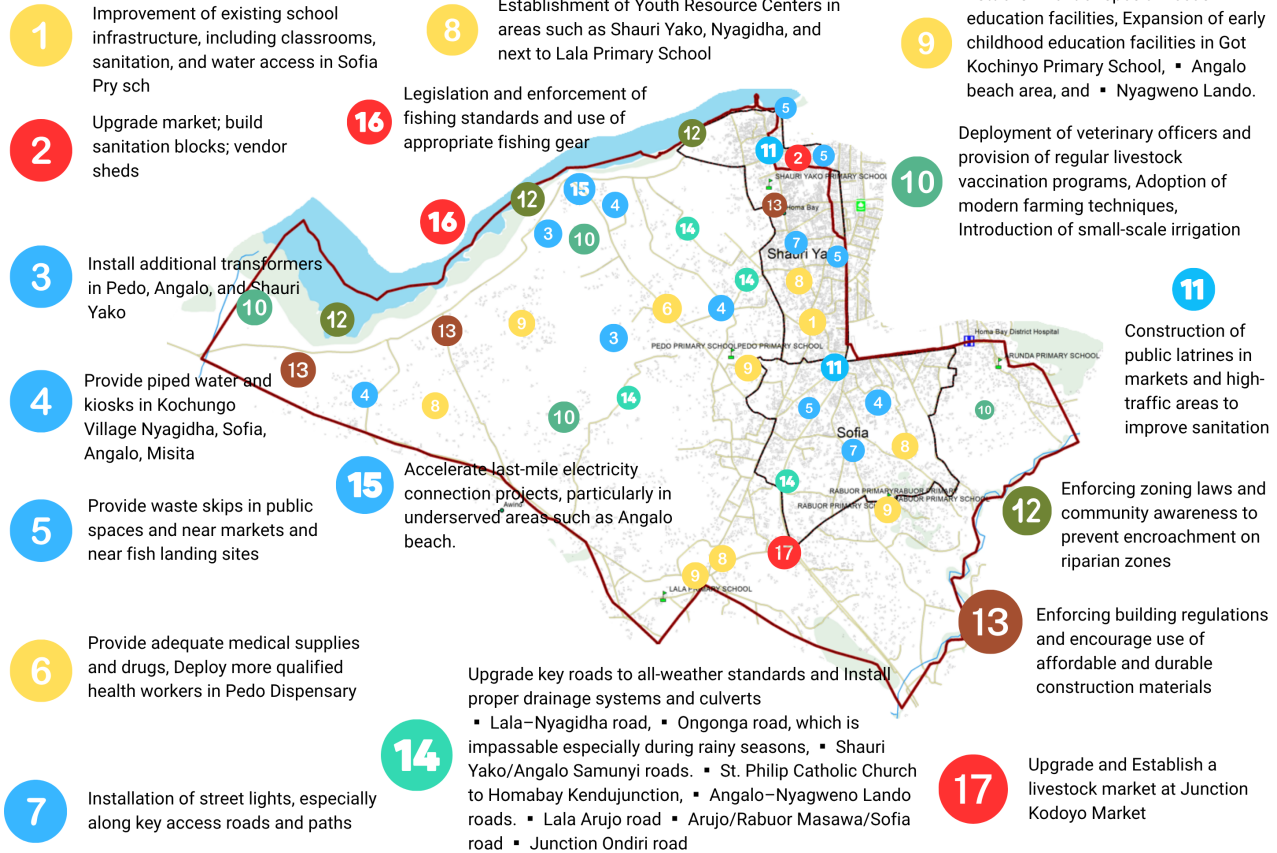
This chapter presents the outcomes of community participation, highlighting locally identified priorities and proposed interventions across sub-locations. It outlines the proposed land use plan, detailing spatial allocations for each use in line with community aspirations and technical assessments. The chapter also provides a land use budget, quantifying land allocation across sectors to ensure balanced and sustainable development. Finally, it sets out sectoral strategies that guide the implementation of spatial and socio-economic interventions, aligning land use planning with infrastructure, environment, housing, mobility, water, sanitation,

and other critical sectors. Together, these components provide an integrated framework for inclusive and sustainable urban development.

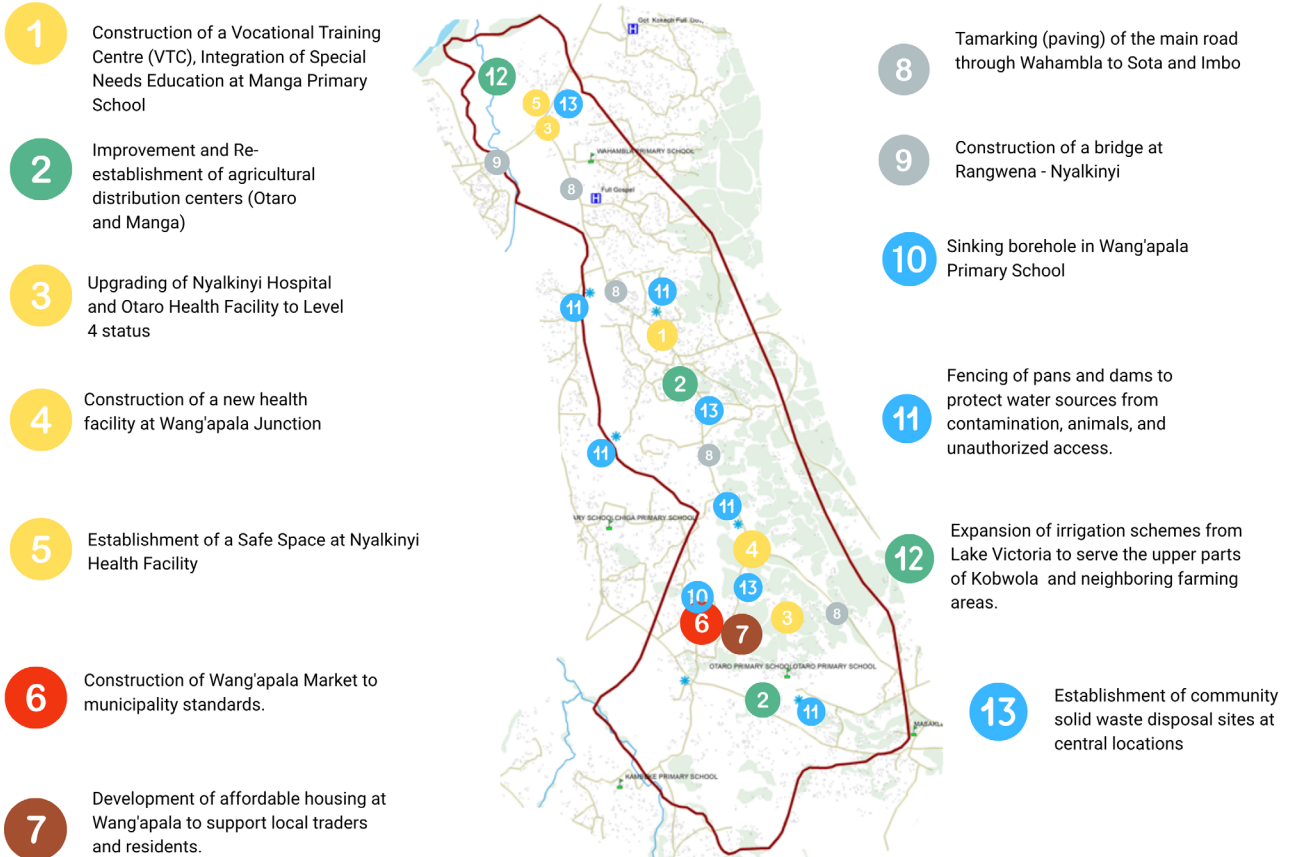
Community Participation Outcomes

During the planning process, community members were engaged at the sub-location level to identify and prioritize local challenges and propose practical solutions. The resulting community proposals are illustrated in the diagrams below.

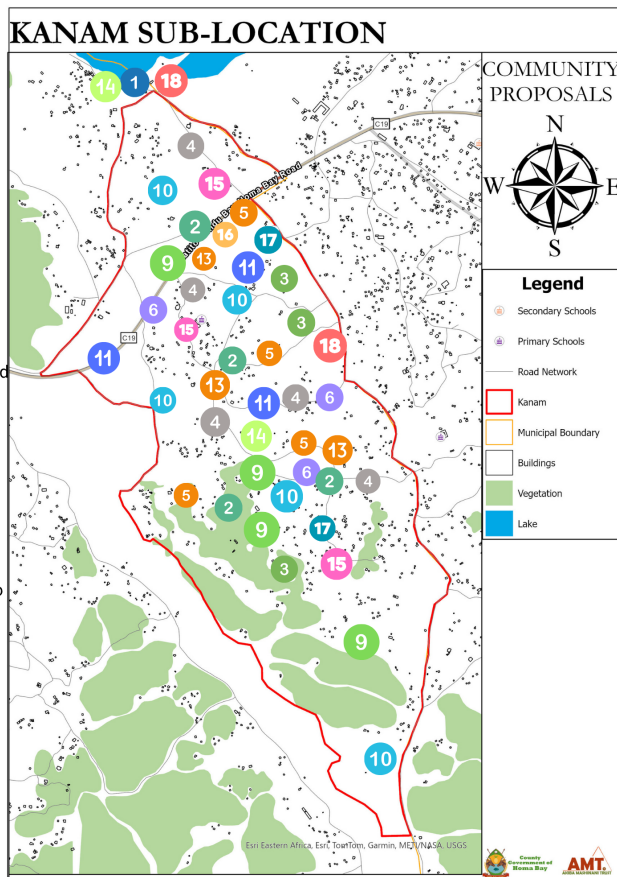
ARUJO SUBLOCATION PROPOSALS



KOBWOLA KOGWANG SUBLOCATION PROPOSALS



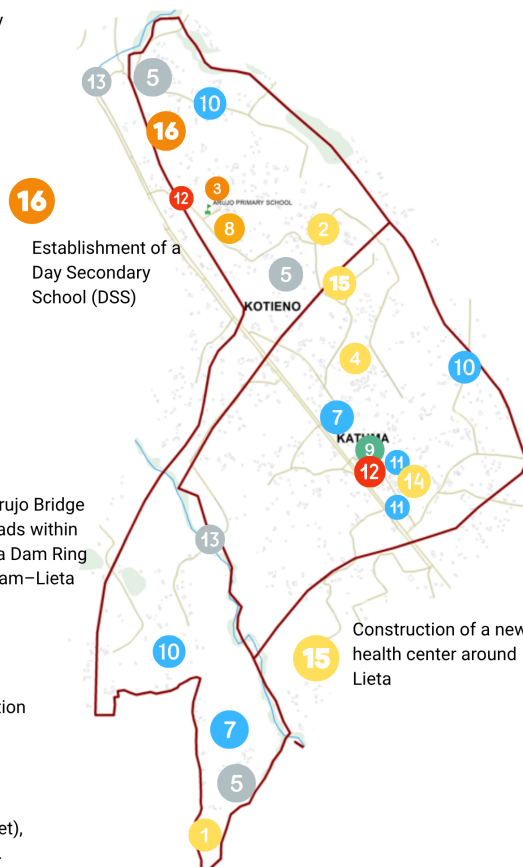
- 1 Provision of water boats at Ngengu beach
- 2 Provision of waste receptacles in market areas
- 3 Tree planting especially in public facilities
- 4 Tarmacking of roads in the area
- 5 Provision of street lights and floodlights in the area
- 6 Provision of culverts and drainages along the roads
- 7 Piping from HOMAWASCO to serve the area
- 8 Connection to the national grid in the sub-location
- 9 Building cattle dips in the area



- 10 Construction of water points
- 11 Provision of street lights along roads and flood lights in centres
- 12 Construction and connection of toilets to the sewer line
- 13 Upgrading of all markets to modern standards
- 14 Enforcement along the lake to prevent chemicals that encourage water hyacinth growth from being poured into the lake
- 15 Construction of more social infrastructure in the area
- 16 Old Ngegu Market to be converted into a social hall
- 17 Building of a resource centre at Ngegu
- 18 Patrol boats to monitor fishing activities and promote security

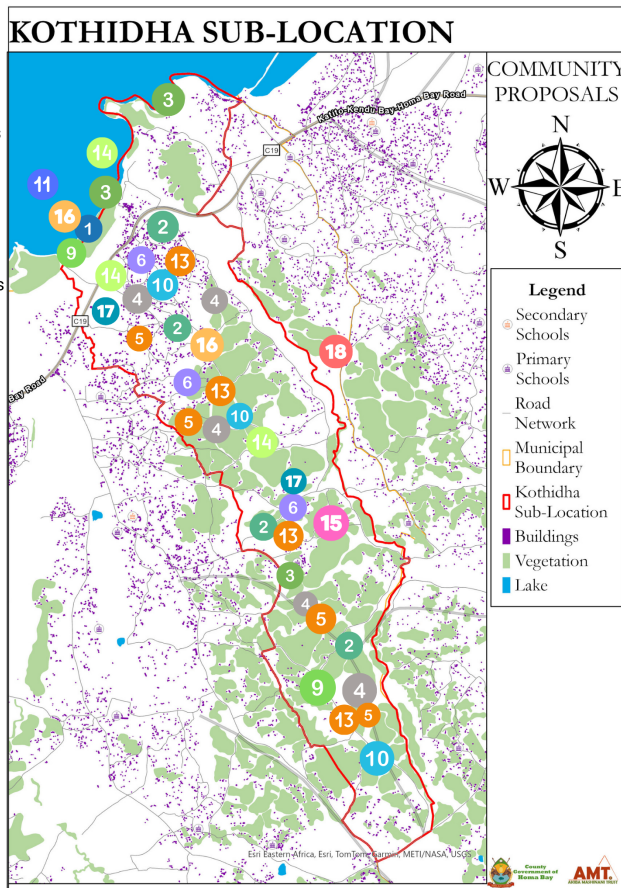
KOTIENO & KATUMA SUBLOCATIONS PROPOSALS

- 1 Completion of Riwa Health facility
- 2 Construction of a new health facility at Lieta
- 3 Upgrade Lieta-Kabunde Comprehensive School and Arujo primary to municipal level standards
- 4 Construction of a new health center at Lieta-Kabunde (next to ward office)
- 5 Priority Road Improvements: Old Arujo Bridge Road to Lieta-Kabunde, Estate Roads within Lieta and Arujo clusters, Riwa Orwa Dam Ring Road to Arujo Bridge, Riwa-Orwa Dam-Lieta Market-Anda Bridge Road
- 6 Construction of a water tower at Kabunde to support water distribution
- 7 Drilling of a new borehole at Riwa Village, Plot 880 B (near the market), Pamba's Home, Odira Orego.



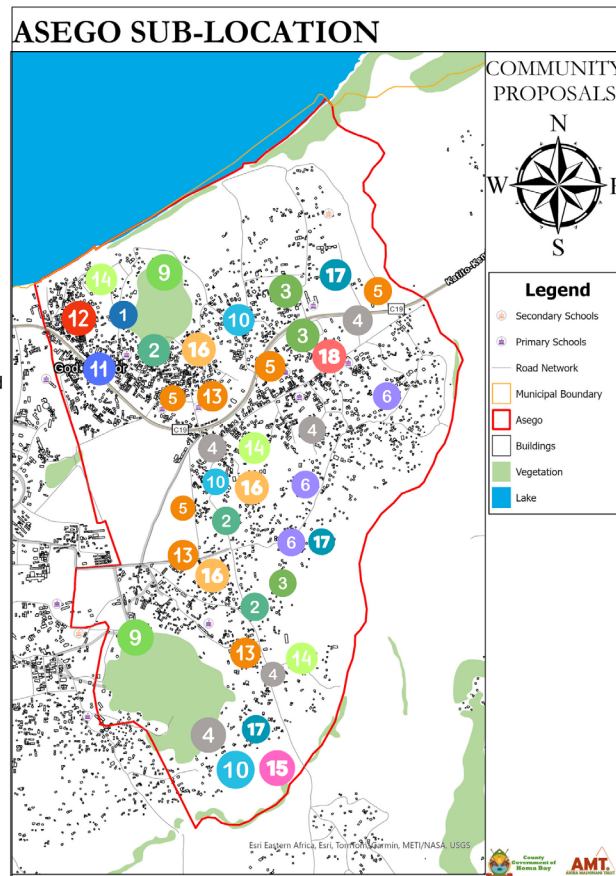
- 8 Establishment of an (ECDE) center at Arujo Primary School and at Alara Village
- 9 Construction of a cattle dip at Lieta (Kabunde area) near Kabunde Market
- 10 Last-mile electricity connectivity for areas including Lieta-Alara, Riwa A Village, and parts of Arujo Cluster
- 11 Freetlights installation at Lieta-Kabunde Market, Arujo and Kabunde Boda Boda stages, Riwa-Orwa Ring Road
- 12 Provide waste skips in Lieta-Kabunde Market, Arujo Primary Junction/Boda Boda Stage, Riwa-Kalakuodhi Market.
- 13 Proper construction and reinforcement of bridges: Obambo Kotieno Bridge connecting Got Kokelo, Bridge connecting Divine Mercy
- 14 Establish a security post (chief's camp) in CIH Kabunde

- 1 Provision of electricity at Achich Beach
- 2 Provision of waste receptacles in market areas
- 3 Regulation of sand mining
- 4 Tarmacking of existing roads
- 5 Provision of street lights and floodlights in the area
- 6 Provision of culverts and drainages along the roads
- 7 Last mile connection of HOMAWASCO water
- 8 Last mile connection of Electricity
- 9 Recreational areas to be constructed

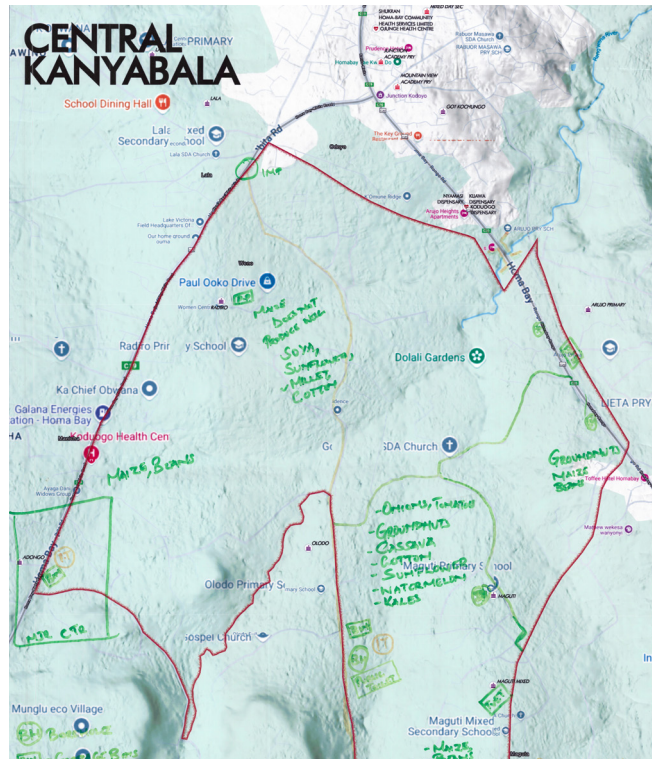
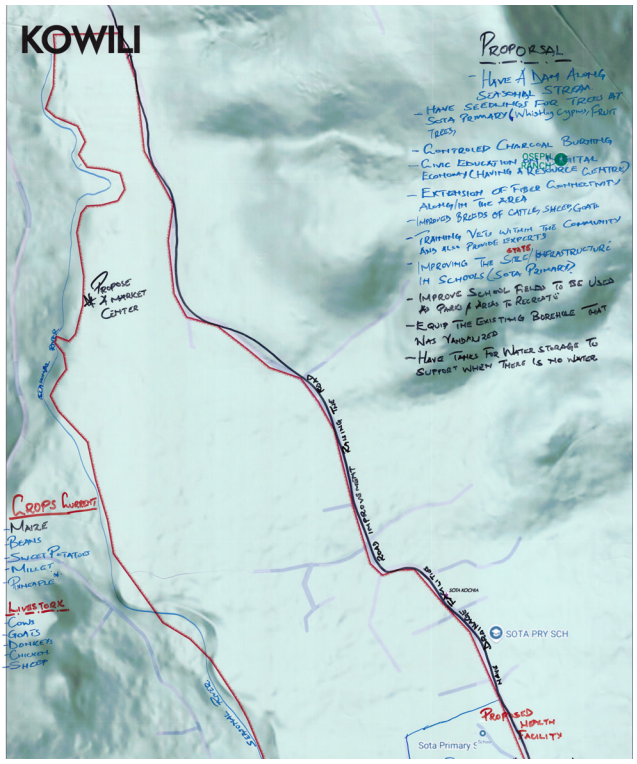


- 10 Construction of water points, dams and boreholes
- 11 Security enforcement patrols at the beaches and Lk Victoria
- 12 Construction of a sewer line in the area
- 13 Upgrading of all markets to modern standards
- 14 Irrigation from the Lake
- 15 Provision of a fruit canning industry in the area
- 16 Provision of cold storage facilities near the lake
- 17 Construction of new dispensaries/health facilities

- 1 Upgrading of Makongeni health facility to a level 4 facility
- 2 Provision of waste receptacles in market areas
- 3 Tree planting especially in public facilities
- 4 Opening and tarmacking of new roads
- 5 Provision of street lights and floodlights in the area
- 6 Provision of culverts and drainages along the roads
- 7 Last mile connection of HOMAWASCO water
- 8 Last mile connection of Electricity
- 9 Recreational areas to be constructed



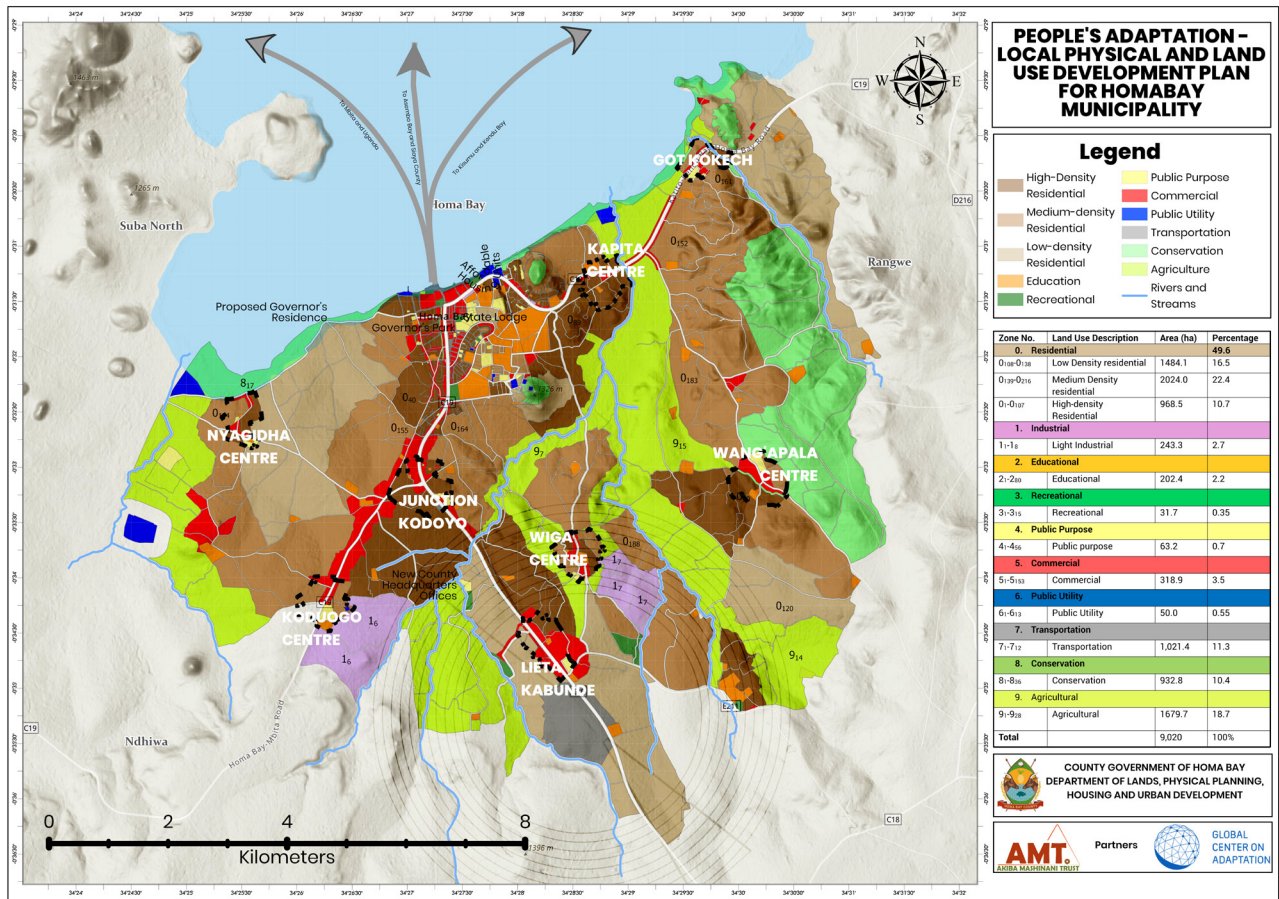
- 10 Construction of water points
- 11 Borehole construction at Makongeni primary school
- 12 Construction of a new sewer line and repair of the current one
- 13 Upgrading of all markets to modern standards
- 14 Provision of larger water tanks
- 15 ECDE centre to be constructed at rangwena
- 16 vertical expansion of schools in the area
- 17 Construction of new dispensaries
- 18 Construction of a social hall



Land Use Plan

The proposed land use plan is as indicated in the map below.

Map 25. Land Use plan



Land Use Budget

The land use budget for the proposed land use plan is as indicated in the table below.

Zone No.	Land Use Description	Area (ha)	Percentage
0. Residential			46.5
0 ₁ -0 ₂₈	Low Density residential	1367.2	15.2
0 ₂₉ -0 ₁₀₇	Medium Density residential	1979.4	21.9
0 ₁₀₈ -0 ₂₁₄	High-density Residential	848.5	9.4
1. Industrial			
1 ₁ -1 ₁₂	Light Industrial	243.5	2.7
2. Educational			
2 ₁ -2 ₆₈	Educational	201.7	2.2
3. Recreational			
3 ₁ -3 ₁₃	Recreational	132.4	1.5
4. Public Purpose			
4 ₁ -4 ₅₅	Public purpose	85.1	0.9
5. Commercial			
5 ₁ -5 ₁₅₀	Commercial	496.1	5.5
6. Public Utility			
6 ₁ -6 ₁₃		69.6	0.8
7. Transportation			
7 ₁ -7 ₁₂	Transportation	968.9	10.8
8. Conservation			
8 ₁ -8 ₃₄	Conservation	932.9	10.3
9. Agricultural			
9 ₁ -9 ₂₅	Agricultural	1694.7	18.8
Total		9,020	100%

Sectoral Strategies and Proposed Interventions

Environment and Natural Resources

1. Protect and restore ecological assets using ecosystembased adaptation

- Demarcate and protect riparian reserves along Lake Victoria's shoreline and major rivers such as Rangwena and Arujo. Use ecosystembased solutions—vegetated buffers with indigenous trees and wetlands—to stabilise banks, slow runoff and reduce erosion and flooding, reflecting the hydrological benefits of healthy forests and watersheds. Riparian zones should serve as wildlife corridors and carbon sinks while providing recreational green spaces.
- Rehabilitation of degraded land and abandoned quarries—including the abandoned quarry near Makongeni Primary School—through conversion into community parks or wetlands. Large scale afforestation, agroforestry and silvicultural interventions will restore at least 100 000 ha of degraded land, as recommended for county level programmes. Establishment of community owned tree nurseries will ensure that women, youth and marginalised groups are involved in restoration activities.

2. Increase urban tree/forest cover and biodiversity

- Adoption of a 10 % tree cover target within the municipality. Expansion of municipal wide tree planting campaigns on hillsides, open lands, road reserves, schools and public institutions in every ward, prioritising indigenous and drought tolerant species. Promotion of agroforestry and green school programmes, with digital tools used to monitor survival rates, will enhance biodiversity, reduce erosion and improve air quality.
- Development of urban green corridors along all major roads, pedestrian networks

and transport corridors throughout the municipality. Integration of trees, shrubs and permeable pavements will reduce urban heat and support groundwater recharge. Green infrastructure provides hydrological benefits and builds resilience to heavy rainfall.

3. Promote renewable energy and clean cooking

- Acceleration of adoption of solar, biogas and other clean energy technologies across the municipality—including households, markets, institutions and small businesses—to reduce dependence on woodfuel and kerosene. Household air pollution causes thousands of deaths annually in Kenya; cleaner fuels and technologies reduce indoor air pollution, deforestation and greenhouse gas emissions. Provision of incentives for photovoltaic installations on public buildings and market stalls and establishment of community based financing schemes for clean cookstoves and biogas digesters are recommended.

4. Enhance waste management and pollution control

- Implementation of a circular economy solid waste management system. Introduction of waste segregation, recycling and composting in every market, institution and residential neighbourhood will divert at least 90 % of collected waste away from disposal sites, drawing on examples where recycling practices are prioritised. Establishment of designated waste collection points at markets and secondary centres, and provision of composting programmes for organic waste, are necessary. Exploration of methane capture and waste to energy initiatives at landfill sites and design of climate proof waste facilities will help withstand flooding.
- Creation of vegetative buffer zones around industrial and processing sites. Planting of dense tree and shrub belts will act as natural odour and particulate filters, reducing impacts

on nearby roads and settlements. Particular attention is required for ochong'a processing activities along the lakeshore and adjacent transport corridors, using green buffers to filter smells and particulate matter. Establishment of similar buffers around markets and industrial areas along major roads is also important. Enforcement of polluterpays principles and the strengthening of antipollution bylaws are necessary.

5. Foster climatesmart agriculture and urban greening

- Promotion of climatesmart urban agriculture such as kitchen gardens, rooftop gardens and vertical farms in neighbourhoods and markets across the municipality to enhance food security, microclimates and household incomes. Support for crop diversification, rainwater harvesting, smallscale irrigation and reduction of postharvest losses is essential. Provision of training via farmer field schools should ensure participation of women and youth.
- Promotion of agroforestry and soil conservation practices in periurban areas to reduce erosion and enhance carbon sequestration. Establishment of demonstration plots and linking of farmers to climate information services are recommended.

6. Strengthen disaster risk management and earlywarning systems

- Development and operationalisation of a municipal disaster preparedness and response plan covering all wards and sectors, integrating climate projections, vulnerability assessments and ecosystembased solutions. Strengthening of coordination with county disaster management committees and creation of contingency funds for emergency preparedness.
- Installation of communitybased earlywarning systems for floods and storms using mobile alerts, local radio and digital platforms in

every ward and settlement. Collaboration with the meteorological department to provide timely forecasts and advisories and training of volunteer responders will ensure that warnings reach vulnerable households.

7. Undertake strategic environmental and climate assessments

- Conduct a strategic environmental and social assessment of development plans to identify climate risks, opportunities and cumulative impacts. Include climatechange scenarios and evaluate adaptation and mitigation options. Use the findings to develop indicators for monitoring progress.
- Mapping and digitisation of municipal boundaries, riparian reserves and protected areas using GIS will prevent encroachment and support climateresilient landuse planning. Extension of mapping to roads, markets and industrial zones will identify areas for green infrastructure and climateproofing. Maintenance of an uptodate inventory of public and private land parcels supports transparent decisionmaking.

8. Promote inclusive environmental governance and community stewardship

- Strengthening of local environmental committees and communityled conservation initiatives. Provision of training on climate change, ecosystem management and disaster risk reduction, and ensuring equitable participation of women, youth and persons with disabilities in decisionmaking and resource stewardship.
- Establishment of a municipal climate change unit to coordinate adaptation and mitigation actions, mobilise finance and liaise with county and national institutions. Building of partnerships with civil society, private sector and academia will leverage expertise and resources.

Climate Actions

The climate actions proposed under this Plan are as indicated in the table below.

ISSUE	CAUSES	SECTORS	ADAPTATION	INTERVENTION
Flooding	<ul style="list-style-type: none"> ● Increase in impermeable surfaces ● Increase in precipitation intensity 	<ul style="list-style-type: none"> ● Human settlements and housing ● Transport ● Social amenities ● Physical infrastructure 	<ul style="list-style-type: none"> ● Greening ● Climate resilient and green building materials ● Adoption of Nature-based Solutions (NbS) 	<ul style="list-style-type: none"> ● Policy on NbS ● Continuous mapping and conservation of community tree planting initiatives
Urban Heat	<ul style="list-style-type: none"> ● Compact development ● Urban deserts (diminished green spaces) ● Thermal inertia ● Concrete jungles ● Waste heat 	<ul style="list-style-type: none"> ● Human settlements and housing ● Transport ● Physical Infrastructure ● Pavement ● Economy 	<ul style="list-style-type: none"> ● Green buildings (for instance, green roofs, green walls, cool roofs and water fountains) ● Green infrastructure (open spaces) ● Climate resilient infrastructure ● Early warning 	<ul style="list-style-type: none"> ● Preparation of Heat Action Plans ● Incentivize greening ● Community tree planting initiatives ● Early warning systems
Drought	<ul style="list-style-type: none"> ● Reduced precipitation (prolonged dry season) ● Deforestation ● Overextraction of Water ● Urbanization (increase in population) 	<ul style="list-style-type: none"> ● Agriculture ● Water 	<ul style="list-style-type: none"> ● Drought tolerant crops ● Encourage irrigation ● Early warning 	<ul style="list-style-type: none"> ● County to establish early warning systems ● Community tree planting initiatives
Strong Winds	<ul style="list-style-type: none"> ● Deforestation ● Difference in temperature and pressure 	<ul style="list-style-type: none"> ● Human settlements and housing ● Physical infrastructure 	<ul style="list-style-type: none"> ● Wind breakers 	<ul style="list-style-type: none"> ● County to establish early warning systems.
Rising water Levels	<ul style="list-style-type: none"> ● Increased siltation ● Increased precipitation ● Tectonic activities ● Lake sand mining 	<ul style="list-style-type: none"> ● Blue economy ● Human settlements and housing ● Agriculture 	<ul style="list-style-type: none"> ● Shoreline management ● Building dams across the major rivers 	<ul style="list-style-type: none"> ● Enforcing riparian guidelines to avoid encroachment ● Reclaiming encroached land ● Sand mining regulation

Urban Governance and Land Use Management

1. **Strengthening institutional capacity and coordination**

- Capacity enhancement of county staff and recruitment of development control and enforcement officers across the municipality. Training programmes should focus on integrating climate change considerations into planning, zoning and building control, as well as environmental and strategic assessments. Deployment of development control officers in every ward will improve monitoring and enforcement of climateresilient building codes and landuse regulations.
- Promotion of interdepartmental coordination between planning, environment, disaster management and public works departments to ensure that urban growth aligns with climate resilience objectives. Regular coordination meetings and shared databases will facilitate cohesive decisionmaking.

2. **Advancing sustainable land use and safeguarding public land**

- Civic education across all wards on climateadaptive land use planning, zoning regulations and building codes. Public awareness campaigns should emphasise the risks of building in floodprone zones, the benefits of green infrastructure and the need for adherence to climateresilient design standards.
- Identification, surveying and securing of land for critical public infrastructure and green amenities. Strategic locations identified in the development plan should include sites for flood control structures, stormwater retention basins, green corridors, parks, urban agriculture plots and emergency

shelters. Securing of public land protects these areas from encroachment and facilitates adaptation measures.

- Implementation of a countywide digital epermitting platform to streamline development approvals. This platform should incorporate environmental impact assessments, climaterisk screening and public feedback loops, enabling more efficient and transparent development control.

3. **Creation and maintenance of a digital Land Information System**

- Establishment of a municipalitywide digital Land Information System (LIS) as a central repository for land records, ownership data, zoning maps, hazard zones and climatesensitive areas. The system should employ remote sensing and GIS technologies to map and monitor riparian buffers, green spaces, public lands and informal settlements.
- Public access and transparency. The LIS should provide userfriendly interfaces for residents, investors and planners to access land information, submit queries and obtain data for informed decisionmaking. Integration with the epermitting platform will enable realtime tracking of applications and approvals.

4. **Strengthening public participation and accountability**

- Establishment of mechanisms for public engagement and feedback in planning and landuse decisionmaking processes. These could include wardlevel planning forums, townhall meetings, digital platforms and participatory mapping exercises. Special outreach should target women, youth and marginalised groups to ensure inclusive participation.

- Regular audits and performance evaluations of planning and enforcement functions. These evaluations should assess compliance with climate resilient zoning and building standards, service delivery timelines, and the effectiveness of public engagement. Findings should be published and used to inform continuous improvement.

5. **Promotion of inclusive governance and capacity building**

- Continuous professional development for planners, surveyors, enforcement officers and community leaders on climate resilient urban management, digital tools and participatory planning. Training should cover MRV+ technologies, remote sensing and climate risk assessment techniques.
- Support for community stewardship by empowering neighbourhood associations and local committees to monitor land use practices, report encroachments and contribute to climate adaptation initiatives. Provision of civic education and capacity building workshops will strengthen local ownership.

Human Settlements and Housing Sector

1. **Upgrading Informal Settlements and Improving Living Conditions**

- Implementation of in situ upgrading should proceed in Makongeni, Shauri Yako and Sofia informal settlements. Upgrading must include construction of paved roads and footpaths, climate proofed storm drainage, safe water kiosks, adequate sanitation facilities and street lighting across every cluster and connecting road. Drainage systems must be designed for heavy rainfall, incorporating nature based solutions such as vegetated channels and permeable surfaces

to reduce flooding and erosion. Settlement layouts should provide communal green spaces to mitigate heat stress and integrate solid waste sorting and collection points to prevent waste from blocking drains and exacerbating flood risks

- Regularisation of land tenure must involve climate sensitive surveying and planning of the informal settlements in Makongeni, Shauri Yako and Sofia. Issuing titles or secure leases will encourage residents to invest in resilient housing materials, rainwater harvesting systems and energy efficient improvements. Community driven planning should integrate hazard maps to keep infrastructure and housing clear of high risk flood zones and riparian reserves.

Relocation of households in hazardous areas shall involve the construction of safe, planned housing in less vulnerable sites within the municipality. The new housing should incorporate elevated foundations, flood resistant materials, adequate sanitation, renewable energy systems and communal green areas. Relocation programmes must be voluntary and accompanied by compensation, livelihood support and access to transportation and services.

2. **Expanding Affordable and Social Housing**

- Development of social housing units is proposed in high density zones within Shauri Yako, Makongeni and Sofia. These units should use locally available, low carbon construction materials and green building technologies, ensure proper ventilation and insulation and include communal rainwater harvesting and solar energy systems. Multi storey designs will maximise land efficiency while leaving space for green corridors and playgrounds.

- Provision of incentives for affordable housing projects should be municipality wide, including subsidised trunk infrastructure, reduced development charges and expedited approval for proposals meeting green building standards. Incentives should prioritise projects that incorporate renewable energy, on site waste segregation and recycling facilities, and universal design principles that protect vulnerable groups.
- Supporting access to housing finance should involve partnerships with banks, microfinance institutions and national affordable housing programmes to provide climate responsive finance products. Loans or grants could support the adoption of sustainable building materials, energy efficiency upgrades and rainwater harvesting.
- Promotion of incremental housing construction in informal settlements and low income estates should be achieved through the provision of technical assistance and material subsidies. Building guidelines should emphasise durable, climate resilient materials (e.g., stabilised soil blocks), natural lighting, cross ventilation and integration of small scale solar and biogas systems. Training programmes can help residents plan phased upgrades that improve comfort and reduce climate risks.

3. **Planning, Infrastructure and Heritage Preservation**

- Implementation of zoning and development control regulations must require all new residential developments within the municipal boundary to comply with climate risk mapping, restrict construction in flood prone or riparian areas, and enforce setbacks from Rivers Rangwena and Arujo. Development control officers should conduct regular inspections to ensure compliance with green building standards and waste management requirements.
- Provision of essential trunk infrastructure in planned expansion zones and residential growth areas should include climate resilient roads, sewerage, storm water drainage and piped water networks. These systems must be designed for greater rainfall variability and incorporate emergency overflow channels and green infrastructure, such as bioswales and retention ponds. Road designs should incorporate street trees and non motorised transport infrastructure to improve microclimates.
- Preparation of detailed area plans for peri urban expansion zones and vacant public land parcels should integrate land uses, hazard mapping, green corridors and mixed use zoning. Plans must emphasise compact growth, high density housing near transport corridors, and protection of riparian reserves and hillsides. Community consultation is essential to ensure inclusive, climate resilient layouts.
- Encouragement of infill development in vacant plots within Homa Bay CBD will make more efficient use of infrastructure and reduce pressure on undeveloped lands. Guidelines should favour mixed use, medium height buildings with green roofs and facades, on site renewable energy and shared rainwater harvesting.
- Preservation and rehabilitation of historical buildings such as the Post Office and St Paul's Cathedral should incorporate climate adaptation measures—repairing roofs to withstand intense rainfall, improving natural ventilation and using durable local materials. Adaptive reuse of heritage structures can provide cultural venues or community facilities.
- Phased removal of asbestos roofing, prioritising public buildings, should include safe handling and disposal protocols, replacement with energy efficient roofing

materials and training for local contractors. Removing hazardous materials will reduce health risks and enable installation of solar panels.

- Establishment of guidelines for sustainable building practices across all new developments should mandate the use of climate responsive materials, passive cooling and heating design, on site renewable energy, and low flow water fixtures. Guidelines should align with national green building codes and incorporate climate information such as rainfall and temperature projections
- Public education on land succession and inheritance is necessary for multi generational housing areas to reduce conflicts and support secure tenure. Programmes should include information on how secure land rights enable investment in climate resilient improvements.
- Integration of climate resilience into housing designs in informal settlements and new residential zones should involve raising floor levels, using flood resistant materials, incorporating shading and ventilation to reduce heat stress, and establishing early warning and evacuation plans for extreme weather.
- Promotion of renewable energy and rainwater harvesting systems must be municipality wide. All new developments should install rooftop solar panels and rainwater tanks, with incentives for retrofitting existing homes. Training programmes can build local capacity for installation and maintenance.

4. **Balanced Urban Growth through Secondary Centres**

- Preparation of detailed Local Physical Development Plans (LPDPs) and infrastructure investment frameworks

for secondary centres—Lieta Kabunde, Junction Kodoyo, Got Kokech, Wiga, Nyagidha, Koduogo, Wang’apala Junction and Kapita—should embed climate resilient urban design. Each LPDP should map flood prone areas, designate green corridors, propose resilient transport networks and allocate land for renewable energy installations and water harvesting.

- Prioritisation of infrastructure development in secondary centres should focus on resilient road connections, storm water management, sewage systems, and market facilities. Priority projects might include raised footbridges over seasonal streams, community scale solar mini grids and climate proofed market stalls.
- Incentives for residential and mixed use projects in secondary centres should encourage investment in climate resilient buildings, mixed land uses and affordable rentals. Incentives could include density bonuses for developments that provide public green spaces, invest in renewable energy systems or offer affordable housing units.
- Decentralisation of public amenities and services—such as schools, health centres, administrative offices and recreational spaces—should be undertaken so that residents in secondary centres have access to social services without commuting to the core city. Facilities should be designed with off grid renewable energy systems, rainwater harvesting and resilient structures.

Transport Sector

Road Transport: The Plan adopts a low-carbon, climate-resilient approach to transport infrastructure. It proposes four classes of roads within the Municipality—arterial, sub-arterial,

collector, and local access roads—designed to enhance mobility while reducing greenhouse gas (GHG) emissions and improving resilience to extreme weather events.

- The expansion and modernization of the **B1 highway** segment traversing Homa Bay Municipality—from Sero, through the town centre, to Ngegu—into a 60-metre climate-resilient road reserve will incorporate green infrastructure and stormwater management systems. The road, currently being dualled by KENHA from Junction Koduogo to Makongeni, will integrate climate-proofed drainage, vegetation buffers for cooling, and provisions for future low-carbon mobility, including public transport lanes and non-motorized transport (NMT) corridors.

- A **2 km non-motorized transport corridor** along the waterfront will promote inclusive, low-carbon mobility through walking and cycling. The scenic route will integrate permeable paving for stormwater percolation, green landscaping for carbon sequestration, and solar-powered lighting to reduce emissions and enhance security.
- To ensure equitable and climate-smart infrastructure provision, industrial access roads will maintain a 15-metre width to support efficient freight movement and reduce idling emissions through improved flow design. Residential roads will retain a minimum 9-metre width with integrated drainage, green strips, and energy-efficient street lighting.

Map 26. Proposed Road Network

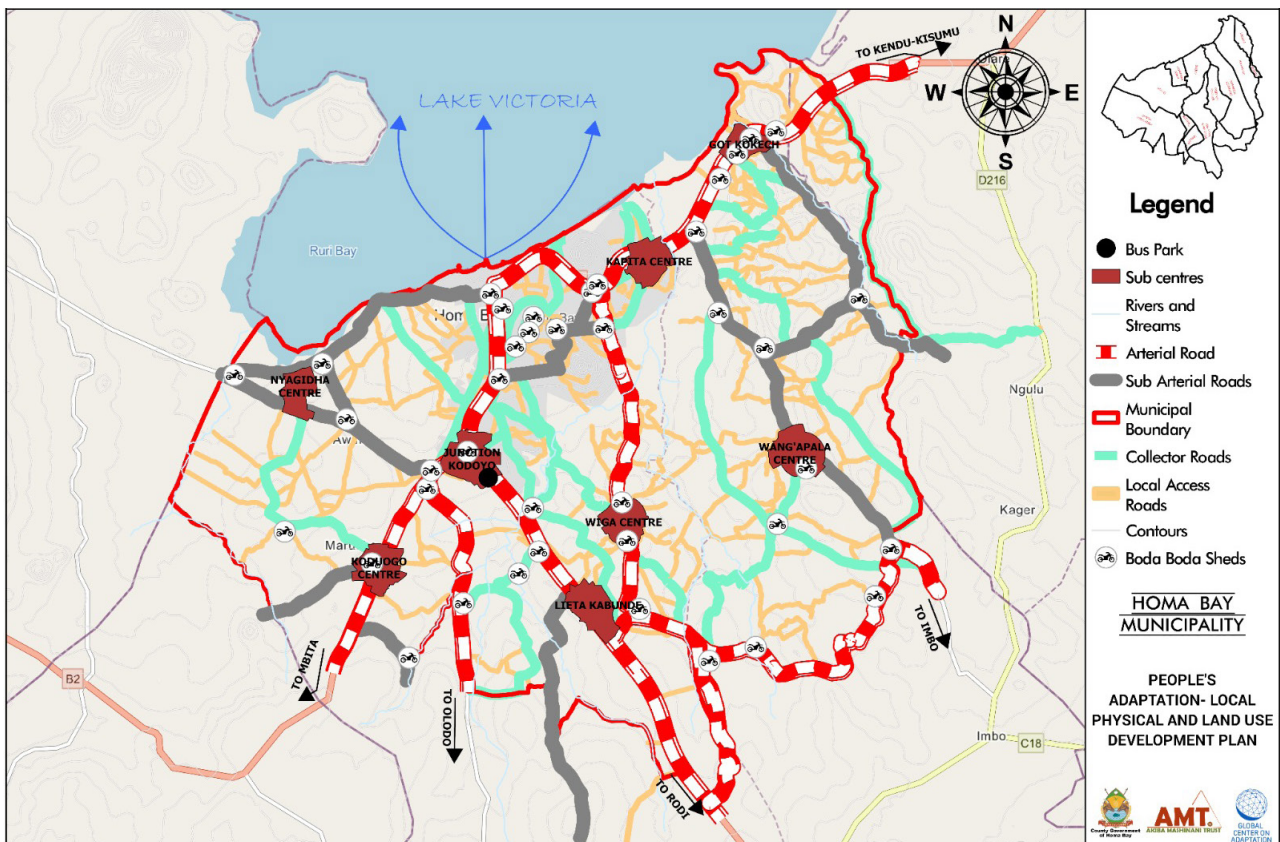
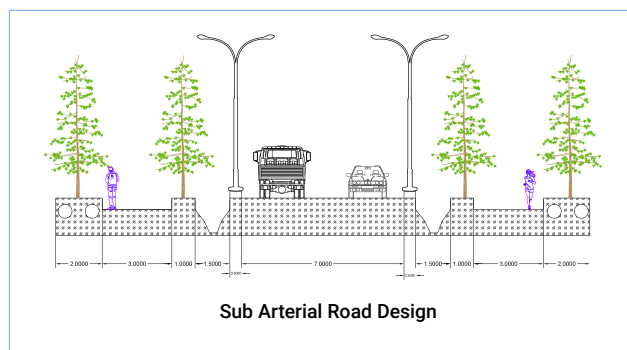
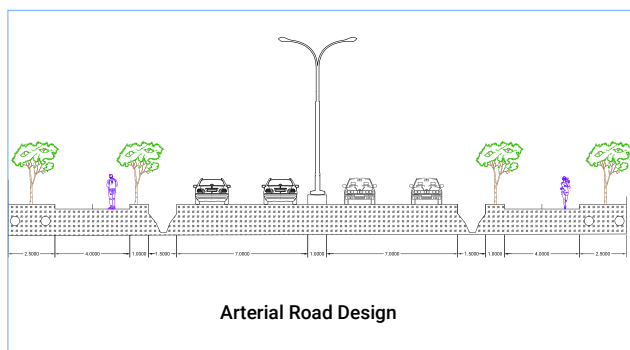


Figure 3. Road Designs



- To reduce congestion and idling emissions at intersections, climate-smart interchanges are proposed at Kodoyo Junction and the proposed Bypass Junction. These will employ sustainable materials and designs that enhance drainage and prevent flooding, supporting climate adaptation and long-term resilience.

The Plan also enhances informal public transport resilience by constructing 20 boda boda sheds across key transport nodes, each incorporating solar roofing, rainwater harvesting, and waste segregation facilities. Complementing these will be climate and safety training for 1,000 riders, pedestrians, and fisherfolk, emphasizing road safety, first aid, and environmental stewardship.

To improve public transport efficiency and reduce carbon intensity, the Plan proposes a new modern bus terminal near Junction Koduogo as a primary intercity and regional transit hub. The existing bus station will be repurposed into a Kisumu-bound service stop to minimize inner-

town congestion and reduce vehicular emissions.

Accessibility across the Municipality will be improved through expansion of 22 km of arterial roads (40 m reserves), 34 km of sub-arterial roads (30 m reserves), 65 km of collector roads (18 m reserves), and 345 km of local access roads (12 m reserves). All road designs will integrate:

- Climate-proofing elements, including efficient stormwater systems and semi-permeable NMT pavements to enhance percolation and reduce flood risk;
- Urban greening and tree planting for carbon sequestration, cooling, and air quality improvement;
- Energy-efficient LED and solar-powered street lighting; and
- Dedicated utility and climate adaptation corridors to accommodate future water, power, and communication infrastructure without further land disruption.

These interventions position Homa Bay Municipality as a model for sustainable, low-emission, and climate-resilient urban mobility, contributing to Kenya's transition toward a green economy.

Water Transport

The Plan advances a low-carbon, climate-resilient blue economy approach to water transport, which prioritizes climate-proof lakefront and inland water infrastructure, sustainable fisheries, and resilient transport systems. The proposals emphasize adaptation to lake-level variations, increased storm intensity, and the need for inclusive, safe, and low-emission mobility across Lake Victoria.

The proposals on water transport include:

- Fast-track the rehabilitation and operationalization of the Homa Bay Pier into a modern, climate-resilient passenger and cargo terminal. The upgraded facility will integrate renewable energy systems (such as solar lighting and power for operations), improved docking infrastructure capable of withstanding fluctuating lake levels, and green design elements that minimize shoreline erosion. Installation of sustainable drainage and waste management systems will ensure protection of lake water quality.
- The Pier will function as a key hub in the regional low-carbon lake transport network, connecting Homa Bay to Mbita, Kisumu, Siaya, Kendu Bay, and Suba. Its modernization will support climate-smart logistics, stimulate eco-tourism, and strengthen the resilience of cross-county trade and mobility.
- Construct and equip eight standardized Beach Management Units (BMUs) at strategic landing sites along the Homa Bay lakefront. Each BMU will feature resilient

port infrastructure—jetties and ramps designed for fluctuating water levels, solar-powered cold storage, sanitation blocks with water reuse systems, and waste-separation facilities to reduce lake pollution. Vegetated buffers and mangrove restoration zones will be established where feasible to stabilize the shoreline and sequester carbon.

- Community-based management structures will be strengthened for adaptive governance of BMUs, ensuring sustainable resource use, environmental compliance, and equitable benefit-sharing in accordance with the County Climate Change Act. Integrating ecosystem-based adaptation principles, these water transport facilities will enhance livelihoods while conserving aquatic ecosystems vital to the municipality's long-term climate resilience.

Stormwater and Urban Drainage Infrastructure

The management of stormwater in Homa Bay Municipality will be undertaken as a climate adaptation and urban resilience measure, focusing on disaster risk reduction, flood management, and sustainable human settlements. The drainage system will be integrated within the broader transport network, recognizing that roads are major runoff conduits and opportunities for green infrastructure deployment.

The strategy will align with the expansion of 22 km of arterial (40 m reserves), 34 km of sub-arterial (30 m reserves), 65 km of collector (18 m reserves), and 345 km of local access roads (12 m reserves), embedding climate-resilient design standards at every level.

Key Interventions:

- Primary drainage systems along arterial and sub-arterial roads will be designed for rapid yet regulated conveyance of stormwater, incorporating sediment traps, check dams,

and flood detention features to prevent erosion and downstream flooding.

- Secondary and tertiary drains along collector and local access roads will intercept runoff through vegetated swales and bio-retention channels that filter pollutants before discharge.
- Semi-permeable pavements on sidewalks and parking areas will enhance infiltration, while roadside greenery and trees will promote evapotranspiration and carbon sequestration.
- Retention basins, infiltration trenches, and water pans will be constructed in low-lying zones such as Shauri Yako, Sofia, and Wiga to regulate runoff and support urban water harvesting—turning stormwater into a resource for irrigation and landscaping.
- Grey-water reuse and filtration systems will be adopted in high-density areas to reduce demand on freshwater supplies and prevent overloading of drainage networks.
- Designs will follow ecosystem-based adaptation principles, using green buffers and native vegetation to improve microclimates, lower ambient temperatures, and enhance biodiversity. Routine desilting, culvert maintenance, and enforcement of development control—including setbacks from natural drainage lines—will safeguard investments against climate-induced damage.

These integrated measures will not only reduce flood risk and infrastructure loss but also advance low-carbon urban growth and improve water security.

Water and Sanitation Sector

The Plan envisions a climate-resilient, low-carbon, and inclusive water and sanitation system that enhances Homa Bay Municipality’s adaptive capacity to climate variability—particularly droughts, floods, and changing precipitation patterns—while reducing greenhouse gas (GHG) emissions from the water supply and wastewater sectors.

Water Sector: The Plan prioritizes the climate-proofing of water infrastructure through expansion, efficiency, and sustainability measures designed to secure reliable water supply under changing climatic conditions. The proposals under the water sector include:

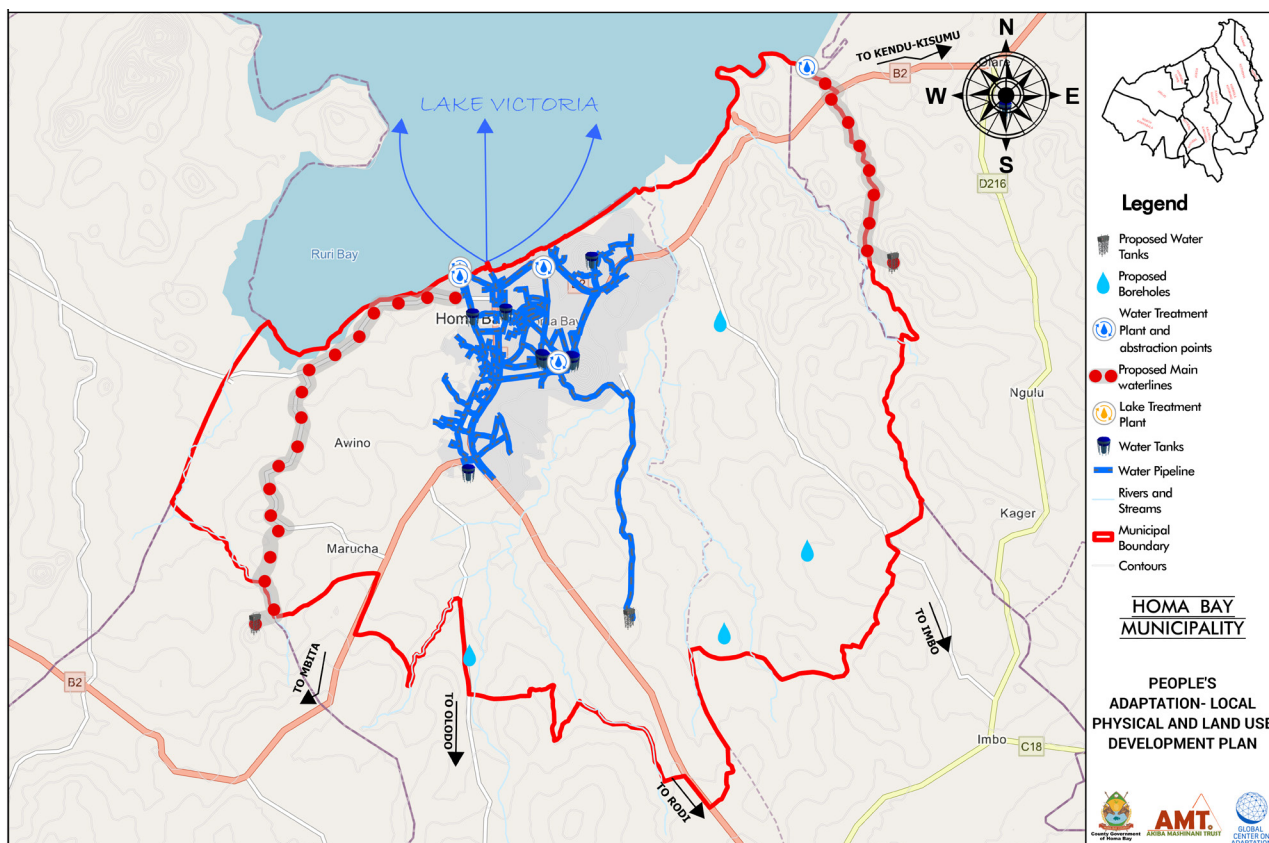
- Upgrading the Ngegu Water Treatment Plant into a *Central Flocculation Unit (CFU)* with enhanced treatment efficiency and capacity—raising daily output from 240 m³ to 1,800 m³. The upgrade will integrate *energy-efficient pumps, solar power systems, and automated flow control* to reduce carbon intensity and operational vulnerability to power disruptions.
- Expansion of the Lakefront Water Treatment Plant from 8,800 m³ to 11,800 m³ daily capacity to meet growing urban demand. The plant will be climate-proofed with elevated intake systems, sediment control structures to manage lake turbidity during storm events, and resilient shoreline protection measures to prevent climate-induced damage.
- Installation of 14 km of DN 200 water mains connecting upgraded plants to new high-level storage tanks, designed with leak detection systems and corrosion-resistant

materials to extend lifespan under variable climatic conditions.

- Construction of new water storage tanks—1,000 m³ at Got Kabok and 900 m³ at

Manera—to improve system redundancy and climate resilience. These will include solar-powered pumping and telemetry systems for efficient water management.

Map 27. Proposed Water Reticulation Network



- Expansion of storage capacity at Kabunde, Got Asego, Junction Kodoyo, and Simenya to address increasing demand linked to population growth and climate-driven stress on water resources.
- Development of two new boreholes in Olodo and Wang’apala, each with 80 m³ elevated tanks powered by renewable energy. These decentralized groundwater sources will improve resilience to drought and provide redundancy during supply interruptions.
- Preparation of detailed engineering designs incorporating climate-risk screening, energy audits, and sustainable design

principles. A last-mile water connection program will ensure equitable access to safe water, targeting informal settlements and marginalized areas to advance Kenya’s goal of universal water access by 2030.

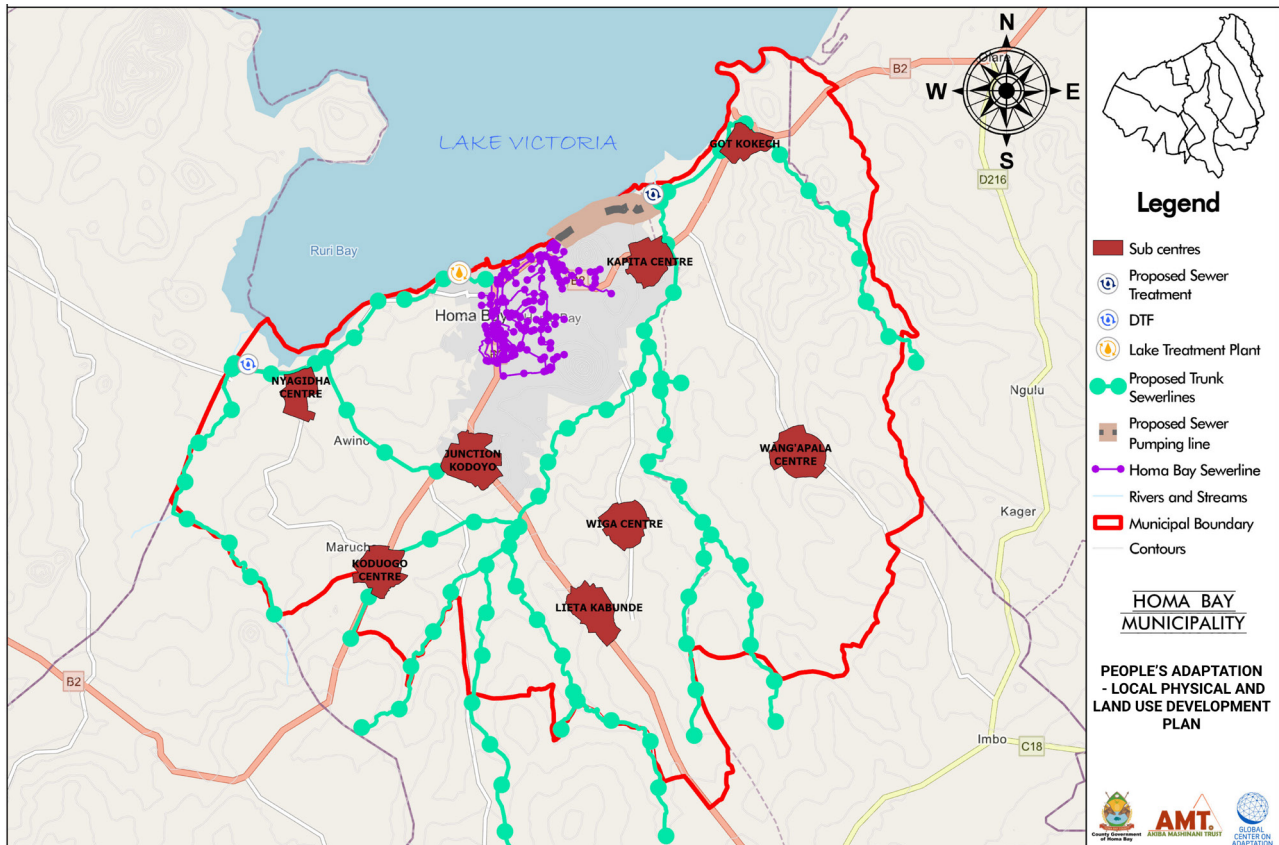
Sanitation Sector: The sanitation strategy adopts a climate-smart and ecosystem-based approach, focusing on pollution control, methane reduction, and wastewater reuse to support both human health and environmental integrity. The sanitation proposals include:

- Construction of 54 km of trunk sewer lines (DN 400) along natural river corridors,

designed with flood-resilient materials and elevated manholes to withstand heavy rainfall and surface runoff. The network will

support phased expansion and integrate green buffers to reduce erosion and protect waterways as shown in the map below.

Map 28. Proposed Sewer Reticulation Network



- Installation of sewer mains (DN 315–375) along major roads to enhance wastewater conveyance from residential, institutional, and commercial premises, with strategically placed manholes for maintenance and flood control.
- Construction of a modern centralized sewer treatment plant at Rangwena, incorporating *anaerobic digesters for biogas recovery, constructed wetlands for tertiary treatment, and solar power systems* for energy efficiency. The surrounding natural wetland will act as a *biofiltration buffer*, improving effluent quality before discharge into the environment.
- Establishment of a Decentralized Treatment Facility (DTF) in Arujo Sublocation, providing

localized, climate-resilient sanitation solutions for peri-urban areas not yet connected to the central system. The DTF will use modular technology that can adapt to future population and climate changes.

- Rehabilitation of the existing treatment plant, including odor control upgrades and conversion into a primary treatment unit, integrating *energy recovery systems* to reduce operational emissions.
- Installation of a new pumping system and 2.01 km of DN 200 pumping main to transfer wastewater efficiently to the Rangwena facility, minimizing spillage and improving resilience to system overloads during heavy rains.



- Development of 16 climate-friendly public sanitation facilities at markets and high-traffic areas, equipped with *rainwater harvesting, solar lighting, and faecal sludge treatment units*.

Routine maintenance, monitoring, and community engagement will be institutionalized to strengthen climate governance and adaptive capacity at the municipal level.

These measures will collectively promote circular sanitation, improve water quality in Lake Victoria, and mitigate methane emissions from unmanaged wastewater—directly contributing to Kenya’s low-carbon and climate-resilient urban development pathway.

Energy and ICT Sector

The Plan adopts a low-carbon, climate-resilient, and inclusive approach to energy and digital infrastructure development, advancing Kenya’s

national goals for clean energy transition and digital transformation. These interventions aim to reduce greenhouse gas emissions, strengthen adaptive capacity, and support innovation-driven economic growth across Homa Bay Municipality.

ICT Infrastructure for Climate-Smart Development

The Plan proposes the installation of 484 km of telecommunication ducting along the municipal road network to form the backbone of a climate-smart digital infrastructure grid. This will enhance communication resilience during extreme weather events and enable data-driven management of urban services such as traffic control, energy use, and disaster response.

The establishment of integrated resource and ICT centres across eight secondary subcentres, along with a central digital innovation hub adjacent to Tom Mboya University, will advance digital inclusion and climate knowledge sharing.

These centres—equipped with internet access, computer labs, co-working spaces, and renewable energy backup systems—will serve as incubators for green enterprises, youth-led innovation, and e-governance platforms that improve climate monitoring and early-warning systems. Wi-Fi hotspots in schools and market centres will enhance digital literacy and access to e-learning, particularly in climate education, agricultural extension, and disaster preparedness.

Energy Sector (Clean and Resilient Energy Systems)

The Municipality's energy strategy emphasizes clean, reliable, and equitable power access.

Upgrade of 45 transformers across residential and commercial zones will improve grid stability and reduce transmission losses, directly cutting energy waste and associated emissions.

The modernization of the existing power station will incorporate smart grid technologies and energy-efficient systems to enhance capacity and climate resilience, ensuring a stable power supply even during high-temperature or storm conditions.

Installation of 30 high-mast solar-powered lights at strategic points—including markets, growth nodes, and informal settlements—will improve security, support vibrant nighttime economies, and reduce fossil-fuel-based lighting.

To expand access and equity, the Plan proposes solar mini-grids in off-grid areas, harnessing the region's strong solar potential. These decentralized systems will power homes, schools, businesses, and community services—promoting productive use of renewable energy in refrigeration, agro-processing, and water pumping.

Solar mini-grids will displace diesel generators, reducing GHG emissions and air pollution while stimulating local enterprise. Their deployment supports scaling up decentralized renewable energy systems and strengthening energy security through diversification.

Complementary civic education and awareness programs will promote clean energy adoption, energy efficiency, and conservation. These campaigns will empower residents to participate in Kenya's green transition, reduce household energy costs, and build social ownership of the municipality's climate commitments.

Together, these interventions establish Homa Bay as a leader in climate-smart energy and digital transformation.

Solid Waste Management

The Municipality's solid waste management strategy adopts a circular economy and low-emission framework for sustainable waste management, GHG reduction, and pollution control.

Land acquisition for a Material Recovery Centre (MRC) marks a key first step in developing climate-resilient waste infrastructure. The MRC will function as a central facility for sorting, recycling, and processing both organic and inorganic waste using energy-efficient, low-emission technologies. The Centre will promote waste-to-resource systems—converting organic waste into compost and biogas, and recyclable materials into marketable products—thereby reducing methane emissions from open dumpsites.

To enhance service delivery and coverage, the Plan includes the purchase of three specialized

waste collection trucks, improving efficiency and reducing illegal dumping, particularly in flood-prone settlements where uncollected waste often clogs drainage systems and increases flood risks.

The installation of 1,300 waste receptacles along non-motorized transport corridors will ensure litter control and promote behavioral change toward responsible disposal. These bins, made from recycled or locally available sustainable materials, will complement NMT corridors designed for low-carbon urban mobility.

A robust civic education program will promote waste segregation at source, encouraging households and businesses to separate biodegradable, recyclable, and hazardous waste. This initiative, aligned with NCCAP's waste hierarchy approach, will improve processing efficiency, create green jobs, and build environmental stewardship within the community.

The Plan emphasizes institutional capacity building and public-private partnerships (PPPs) to ensure sustainable financing, operational efficiency, and innovation in waste recovery. Over time, these measures will lead to reduced emissions, cleaner urban environments, and improved climate resilience in public health and infrastructure.

Social amenities

To ensure a socially inclusive, equitable, and well-serviced urban environment, the Plan proposes a comprehensive framework for the development and enhancement of social amenities within Homa Bay Municipality. These amenities should be spatially distributed, responsive to population dynamics, and structured to serve diverse community needs. Emphasis will be placed on infrastructure that supports safety, accessibility, functionality, and continuity of services.



Health Facilities

The health sector is proposed to enhance access to equitable and quality healthcare through the upgrading and development of facilities that are safe, inclusive, and resilient to climate risks. Consistent with the National Climate Change Action Plan (NCCAP 2018–2022) and Kenya’s NDC commitment to climate-proof public services, all new and existing health facilities within Homa Bay Municipality will be designed to operate efficiently under changing climatic conditions—reducing heat stress, conserving water and energy, and ensuring continuity of essential care during floods, droughts, and disease outbreaks.

Proposed Health Interventions

1. Upgrading of Existing Health Facilities

Existing Level 3 health centres at Nyalkinyi, Makongeni, and Wiga are proposed to be upgraded to **Level 4 climate-smart hospitals**. The buildings will incorporate passive ventilation and daylighting, reflective roofing, and heat-resistant materials. Each facility will include a **solar-PV power system** with battery backup to guarantee uninterrupted services and reduce grid emissions. **Rainwater harvesting tanks, grey-water reuse systems, and elevated foundations** will enhance resilience to both drought and flooding.

2. Construction of New Level 3 Health Centres

New facilities are proposed at **Kothidha** and **North Kanyabala**, designed as **green primary-care hubs**. They will integrate solar-powered cold-chain storage, low-flow plumbing fixtures, and landscaped tree belts for cooling and air purification. Site planning will avoid flood-prone areas and use permeable paving to support groundwater recharge.

3. Establishment of Specialized Units

A **dedicated mental-health unit** will be operationalized within the Homa Bay County Referral Hospital, while a **rehabilitation and recovery centre** for substance-dependency patients will be established within the Correctional Facility Zone. Both will apply **biophilic design principles**—open courtyards, natural lighting, and shaded outdoor therapy gardens—to improve patient recovery and create small urban green lungs.

4. Emergency and First-Aid Response Posts

First-aid stations are proposed at **Arujo Bridge, Got Kokech, and Rangwena Bridge** as part of the wider municipal emergency network. Each post will feature **solar lighting, rainwater-harvesting tanks, and climate-resilient communication systems** for early warning and rapid response.

5. Development of an Elderly-Care Facility/Rescue Centre

An **elderly-care centre** is proposed within the municipality to provide day-care and residential services in an age-friendly, low-carbon setting. The design will include **natural ventilation, insulated walls and roofs, solar-PV energy, and green outdoor spaces** to moderate heat and promote well-being.

6. Youth-Friendly Health Services

Youth corners in existing and new health centres will be enhanced with **digital-health platforms** powered by renewable energy. These spaces will double as **community education hubs** on climate awareness, nutrition, and public health.

Education Infrastructure

The education sector is proposed to strengthen access to inclusive, safe, and quality learning

environments that are climate-resilient and resource-efficient. Informed by the National Climate Change Action Plan, the Municipality in collaboration with the County and National Government will ensure that new and existing education facilities integrate renewable energy, efficient water systems, green learning spaces, and sustainable materials to enhance comfort, reduce operational costs, and safeguard learners during climate extremes such as heat waves, heavy rainfall, and flooding. Each institution will also serve as a centre for environmental stewardship, promoting awareness and behavioural change among young people toward sustainable living.

Proposed Interventions

1. Upgrading of Existing Education Institutions

The existing 38 public primary and junior secondary schools and 12 secondary schools are proposed for upgrading into **climate-smart learning institutions**.

- Buildings will utilize **natural ventilation, reflective roofs, and shaded courtyards** to reduce classroom heat stress.
- **Solar photovoltaic systems** will supply clean electricity for lighting, ICT, and laboratories, reducing dependence on grid energy and cutting carbon emissions.
- Each school will install **rainwater-harvesting systems** with first-flush filters to provide reliable water for sanitation and kitchen use.
- **Permeable paving, tree planting, and drainage improvements** will minimize surface runoff and prevent erosion during heavy rains.

2. Development of a New Secondary School at Kothidha

A new secondary school is proposed for **Kothidha** to address the education demand

in the area. The facility will be designed as a **model green campus**, incorporating:

- Energy-efficient classrooms with **daylighting and cross-ventilation**;
- **Solar-powered ICT labs**;
- **Water-efficient toilets and constructed wetlands** for wastewater recycling;
- A **vegetated buffer zone** around the compound for microclimate regulation and biodiversity enhancement.

3. Upgrading of Special Needs and Higher Learning Institutions

The **Ogande Special Needs Education Facility** is proposed to be modernized to national standards using **accessible, inclusive, and energy-efficient designs**. It will include shaded outdoor play areas, stormproof roofs, and solar lighting. The **Kenya Medical Training College (Homa Bay Campus)** is proposed to be expanded with climate-resilient lecture halls and hostels featuring **solar hot-water systems, waste segregation, and grey-water reuse**. **Student hostels** at Tom Mboya University are proposed to be constructed with **low-carbon building materials, natural ventilation, and rainwater storage** to ensure comfortable living conditions in hotter seasons.

4. Vocational Training and Skills Development

New **vocational training centres** are proposed for **Maguje (Kanyach Kachar)** and **Maguti (Central Kanyabala)**, designed as **green enterprise hubs** powered by solar mini-grids. Training programs are proposed to include **renewable energy systems, sustainable construction, and waste recycling** to equip youth with green skills and create local jobs aligned with the circular economy.

5. Adult Literacy and Digital Learning Hubs

Adult education centres and **digital learning hubs** are proposed to be established across the Municipality to expand access to education for out-of-school youth and adults. Facilities are proposed to use **solar power** and **energy-efficient ICT equipment**, with rainwater harvesting for hygiene and sanitation. Learning content will integrate community awareness on climate adaptation, nutrition, and waste management.

6. Greening and Eco-Learning Initiatives

Each public school is proposed to dedicate at least **10 % of its land area to tree planting and greening activities**, creating living laboratories for environmental education. These green areas will also act as **carbon sinks** and **stormwater buffers**, aligning with national targets for increasing forest cover to 10 %. Partnerships with community groups will support tree nurseries, composting projects, and clean-energy demonstrations (e.g., biogas systems for school kitchens).

Recreational and Sports Amenities

The recreation and sports sector is proposed to promote healthy lifestyles, social cohesion, and environmental sustainability through the provision of accessible and climate-resilient public spaces. In alignment with the National Climate Change Action Plan (2018–2022), recreational infrastructure is proposed to integrate green design, flood management, and ecosystem restoration to mitigate heat stress, enhance biodiversity, and create low-carbon leisure environments that improve urban livability.

Proposed Interventions

1. Lakefront Recreational Corridor

The Lakefront Area is proposed to be

transformed into a **climate-adaptive recreational corridor** supporting water sports, leisure walking, and outdoor events.

- The design is proposed to integrate **permeable pavements, native vegetation buffers**, and **rain gardens** to manage stormwater and prevent erosion.
- **Solar-powered lighting** and **waste segregation stations** are proposed to ensure safety and environmental integrity.
- **Shade trees** and **cooling green zones** are proposed to moderate heat along pedestrian promenades and family rest areas.

2. Community Green and Open Spaces

It is proposed that the Municipality expand and rehabilitate green spaces across all neighbourhoods.

- Existing open grounds within schools and health facilities are proposed to serve as **dual-purpose community recreation areas** outside institutional hours under structured management agreements.
- These shared spaces are proposed to include **tree belts, benches from recycled materials**, and **drainage features** to control surface runoff.
- **Rainwater harvesting for irrigation** and **composting units** are proposed to support landscape maintenance sustainably.

3. Upgrading of Existing Stadia and Playgrounds

The Municipality's existing stadia and playgrounds, including the park opposite the County Referral Hospital, are proposed to be upgraded using **inclusive, climate-resilient design principles**.

- Upgrades are proposed to include **bioswales** for drainage, **solar lighting, accessible pathways**, and **low-carbon bleacher materials**.

- Green buffers are proposed around facility perimeters to serve as **windbreaks and dust filters**.
- Facilities are proposed to include **rainwater collection systems** for turf irrigation and **recycling bins** to minimize waste.

4. Development of New Recreational Parks and Playgrounds

New public parks and children’s playgrounds are proposed to be developed across the eight designated development nodes.

- Each park is proposed to incorporate **indigenous tree planting, permeable pathways**, and **solar-powered amenities** such as lighting and charging points.
- In flood-prone zones, parks are proposed to integrate **detention ponds and bioswale networks** that double as stormwater buffers during heavy rains.

5. Shauri Yako Linear Park Rehabilitation

The polluted Shauri Yako stream corridor is proposed to be rehabilitated and converted into a **linear green park** with walking trails, native trees, and constructed wetlands for water purification.

- The linear park is proposed to act as an **ecological buffer**, improving biodiversity and reducing flood risk while providing a continuous pedestrian and cycling route.

6. Civic Park at County Headquarters

A landscaped civic open space is proposed adjacent to the new County Government Headquarters to serve as a venue for public gatherings and cultural events.

- The park is proposed to include **climate-adaptive landscaping, rainwater retention basins**, and **solar-powered public lighting**.

7. Youth Sports Academy and Golf Course Development

A **Youth Sports Academy** is proposed to be

established to promote professional training, mentorship, and green sports development.

- The facility is proposed to integrate **solar energy systems, rainwater harvesting**, and **wastewater recycling** for pitch irrigation.
- Land is also proposed to be reserved for a **sustainably managed golf course**, incorporating **drought-tolerant turf species, integrated pest management**, and **water-efficient irrigation systems** to minimize environmental impact.

8. Policy Integration and Land Allocation

The Municipality’s zoning regulations are proposed to require that adequate land for public open spaces and recreation be allocated in all new developments.

- Plot subdivisions, particularly within residential and institutional zones, are proposed to dedicate areas for **playgrounds, green buffers, or communal parks** as a condition for development approval.

Security and Administration

Proposed to strengthen public safety, local governance, and community trust through the establishment of integrated, climate-resilient administrative and security facilities. In alignment with the National Climate Change Action Plan, these facilities are proposed to utilize green building principles, renewable energy, and smart technologies to ensure continuous public service delivery and emergency response under changing climatic conditions. The approach promotes secure, inclusive, and low-carbon urban management.

Proposed Interventions

1. Development of Integrated Administration and Security Centres

It is proposed that **Integrated Administration**

and Security Centres be constructed in **Wiga, Nyalkinyi, Wang'apala, Nyagidha (North Kanyabala), and Junction Kodoyo**.

- Each centre is proposed to consolidate administrative, civil, and security functions while incorporating **solar power systems, rainwater-harvesting tanks, and natural ventilation** to reduce operational costs and improve resilience during power or water disruptions.
- The design is proposed to include **energy-efficient lighting, passive cooling, and heat-reflective roofs** to ensure thermal comfort and reduce energy use.
- Landscaping with **indigenous trees and vegetative buffers** is proposed to reduce heat, filter air, and serve as windbreaks.

2. Inclusion of Community and Civic Facilities

The administrative centres are proposed to integrate **libraries, innovation spaces, and multipurpose community halls** that support civic education, disaster awareness, and environmental training.

- Each facility is proposed to serve as a **climate information hub**, hosting public awareness sessions on climate adaptation, waste management, and renewable energy.
- Public Wi-Fi and ICT workspaces are proposed to support digital governance and low-carbon communication.

3. Climate - Responsive Design and Infrastructure

The buildings are proposed to adopt **low-carbon construction materials** such as compressed earth blocks or stabilized soil bricks where viable, locally sourced to minimize embodied emissions.

- Roofs are proposed to be fitted with **solar photovoltaic panels**, and windows oriented for **maximum daylight and cross-ventilation** to minimize reliance on artificial lighting and mechanical cooling.

- **Permeable pavements** and **rain gardens** are proposed for site drainage, reducing surface runoff and flood risk.

4. Enhancement of Public Lighting and Security

In high-density and informal neighbourhoods such as **Makongeni, Sofia, and Shauri Yako**, it is proposed that public lighting be expanded using **solar-powered high-mast lights** and **LED streetlights**.

- The lighting system is proposed to be designed to improve visibility, deter crime, and enable safe pedestrian mobility after dark while minimizing carbon emissions and operational costs.
- Footpaths are proposed to incorporate **reflective paving** and **vegetated edges** for pedestrian safety and comfort.

5. Community Policing and Social Safety Networks

The Municipality is proposed to strengthen community policing structures through the integration of **early-warning systems** and **digital communication platforms**.

- ICT-based reporting channels are proposed to link local security committees with the central command, improving coordination and rapid response during extreme weather or disaster-related emergencies.
- Regular environmental clean-up and safety awareness campaigns are proposed to enhance trust and cooperation between the public and local enforcement agencies.

6. Green Infrastructure and Environmental Integration

All administrative and security installations are proposed to include **rainwater harvesting, grey-water reuse systems, and waste segregation points** to support sustainable operations.

- Site planning is proposed to incorporate **vegetative stormwater buffers** and

drainage channels to mitigate flooding, particularly in low-lying areas.

- **Native landscaping** will improve aesthetics, reduce maintenance needs, and sequester carbon.

Disaster Risk Management

The disaster risk management is proposed to strengthen preparedness, response, and recovery capacity within the Municipality to reduce vulnerability to both natural and human-induced hazards. In line with the National Climate Change Action Plan (2018–2022), the interventions are proposed to enhance coordination, improve early-warning systems, and ensure that municipal emergency infrastructure is climate-resilient, accessible, and adequately equipped to serve the growing urban population.

Proposed Interventions

1. Development of a Municipal Emergency and Disaster Risk Management Plan

It is proposed that the Municipality develop and implement a **comprehensive Emergency and Disaster Risk Management Plan** to guide preparedness, coordination, and response actions.

- The plan is proposed to outline clear roles, communication channels, and standard procedures among agencies during emergencies.
- It is further proposed to integrate **climate-risk mapping** and **community-level contingency planning**, particularly for flood-prone and high-density neighbourhoods such as Makongeni, Shauri Yako, and Sofia.

2. Establishment of a Central Fire and Disaster Response Centre

A **centralized Fire and Disaster Response Operation Centre** is proposed to be established **near the current Ministry of**

Roads offices, strategically located to allow easy access to water from **Homawasco** in case of fire incidents within the Municipality.

- The facility is proposed to be designed with **climate-resilient features**, including natural ventilation, solar backup power, and water-efficient fittings.
- A dedicated **training and maintenance yard** is proposed to ensure readiness and effective response.
- **Water storage tanks and hydrant connections** are proposed within the compound to enhance firefighting capacity.

3. Acquisition and Modernization of Firefighting Equipment

It is proposed that the Municipality acquire **modern firefighting equipment**, including water tenders and rescue tools, to improve response efficiency.

- Regular maintenance and refresher training for fire personnel are proposed to maintain operational readiness.
- Safety drills and public demonstrations are proposed to raise community awareness on fire prevention and emergency procedures.

4. Establishment of Satellite Emergency Response Posts

It is proposed that smaller **satellite emergency posts** be established in key wards such as Arujo, Wiga, and Got Kokech to ensure timely first response before support from the central station arrives.

- These posts are proposed to be equipped with **basic fire equipment, first-aid supplies, and two-way communication systems** connected to the central control room.
- Construction is proposed to use durable, low-maintenance materials suited to local weather conditions.

5. Early-Warning and Public Communication Systems

The Municipality is proposed to operationalize a **community-based early-warning and alert system** using mobile messaging, local radio, and public-address infrastructure.

- Ward-level disaster focal persons are proposed to be trained and linked to municipal command structures for rapid information flow.
- Partnerships with community groups and institutions are proposed to strengthen local response networks.

6. Capacity Building and Community Preparedness

It is proposed that **training and awareness programs** on disaster preparedness be conducted across neighbourhoods, schools, and institutions.

- Community volunteer teams are proposed to be formed and equipped for first response during floods, fires, and other emergencies.
- Public awareness campaigns are proposed to include **climate-change adaptation measures, safe waste disposal, and flood-risk reduction practices**.

7. Infrastructure and Drainage Improvements for Risk Reduction

To minimize disaster losses, it is proposed that drainage systems and culverts within flood-prone areas be routinely desilted and maintained.

- Vegetative buffers and embankments are proposed along rivers and drainage channels to reduce erosion and flood intensity.
- Development control enforcement is proposed to ensure safe building setbacks from riparian zones and natural drainage corridors.

Special and Inclusive Facilities

To strengthen social welfare, inclusivity, and public health by upgrading and expanding community support infrastructure that caters to vulnerable and marginalized groups. In alignment with the National Climate Change Action Plan, these facilities are proposed to incorporate climate-resilient design, renewable energy, and environmentally responsible systems to ensure comfort, safety, and operational reliability in all weather conditions. The interventions are also proposed to promote dignity, equality, and family-friendly public spaces throughout the Municipality.

Proposed Interventions

1. Upgrading and Operationalization of the Makongeni Rescue Centre

The **Makongeni Rescue Centre** is proposed to be upgraded and equipped to function as a safe, climate-resilient shelter for vulnerable children and survivors of abuse.

- The facility is proposed to integrate **solar power systems** for lighting and water heating, reducing dependence on grid electricity.
- **Rainwater harvesting tanks** and **efficient sanitation units** are proposed to enhance hygiene and reliability of water supply during drought periods.
- Natural ventilation, shaded courtyards, and reflective roofing are proposed to provide thermal comfort and reduce indoor heat during hot seasons.
- The centre is also proposed to include **training and counselling rooms** to support psychosocial rehabilitation and reintegration into the community.

2. Establishment of a Drug Rehabilitation and Community Recovery Facility

A **dedicated drug rehabilitation facility** is proposed within the Makongeni Rescue Centre compound to offer counselling, treatment, and community-based recovery programmes.

- The facility is proposed to apply **green design features**—daylighting, cross-ventilation, and green courtyards—to create a calm, restorative environment for recovery.
- Solar energy and water-efficient fixtures are proposed to reduce operational costs and environmental impact.
- Partnerships with community health volunteers and social workers are proposed to strengthen local support and reintegration.

3. Creation of Family-Friendly and Inclusive Public Amenities

To promote dignity and inclusivity in public spaces, it is proposed that **designated breastfeeding areas** and **smoking zones** be established in strategic locations such as markets, bus termini, and major recreation areas.

- The breastfeeding stations are proposed to include **comfortable seating, clean water access, and solar-powered lighting** for safety and hygiene.
- Designated smoking zones are proposed to be **clearly marked and ventilated**, located away from high pedestrian traffic to protect non-smokers from passive smoke.
- These interventions are proposed to promote public health, environmental cleanliness, and equitable use of shared spaces.



LAND USE POLICY AND ZONING REGULATIONS

Map 29. Urban Core

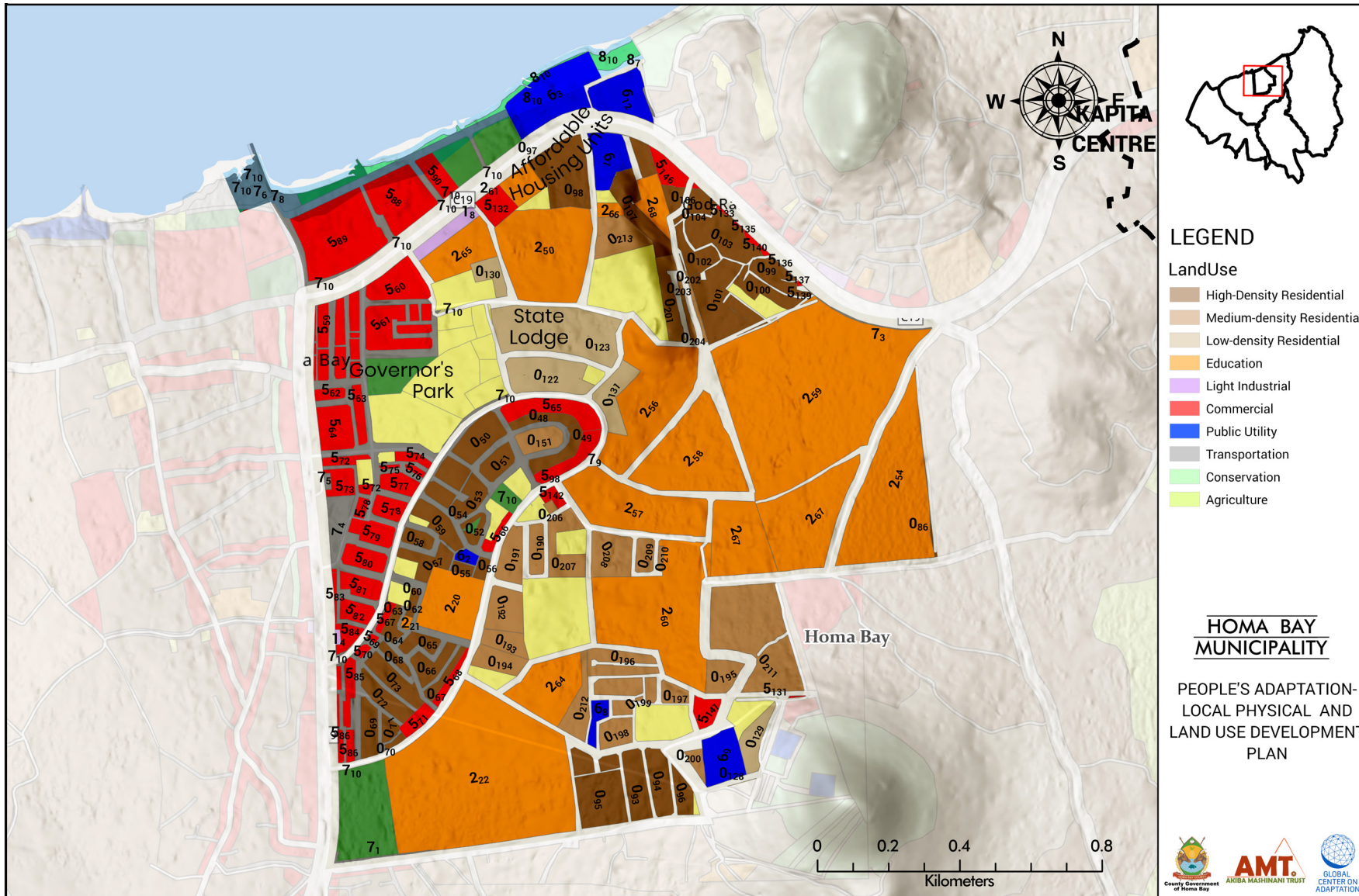


Table 13. Urban Core

Land use	Description	Location	Existing/ Proposed	Area size (Ha)	G.C % (Max)	Setback			FAR (Max)	No. of Floors	Min Plot Size (Ha)	Type of development allowed	Additional Development Conditions
						Front	Side	Rear					
0 ₅₁ -0 ₅₄	High-Density Residential	CBD	Proposed	1.56	65%	2m	2m	1.5m	350%	G+8	0.1	Apartments, hostels, rental housing	Minimum 10% of open space allocated for child play zones; each block must provide 1 baby care room per 50 households; 1 parking space per 2 units (1-2 bed), 2 for 3-bed; promote shared laundry and compost areas
0 _{48-50,55-69,71-73,86,93-104,106-107}	High-Density Residential	Urban Core	Proposed	28.14	65%	2m	2m	1.5m	350%	G+8	0.1	Apartments, hostels, rental housing	
0 ₉₁ -0 ₉₃	Medium-Density Residential	CBD	Proposed	0.77	60%	2m	1m	1.5m	250%	G+3	0.06	Family housing, backyard units, rentals	Pocket play areas encouraged within yards; allow co-located day-care rooms in shared units; off-street parking for at least 50% of units; bioswales along plot boundaries
0 _{151,190-213}	Medium-Density Residential	Urban Core	Proposed	21.69	60%	2m	1m	1.5m	250%	G+3	0.06		
0 _{122,123,130,131}	Low-Density Residential	State Lodge area	Proposed	8.40	30%	6m	3m	6m	50%	G+1	0.2	Bungalow, Maisonette	Maintain low density; landscape front yard; no subdivisions below 0.2 Ha.
0 _{128,129}	Low-Density Residential	Urban Core	Proposed	0.87	30%	6m	3m	6m	50%	G+1	0.1	Bungalow, Maisonette	
1₄	Light Industrial – Fuel Station	CBD	Existing	0.06	70%	6m	3m	3m	150%	G+2	0.1	Fuel station, mini-mart	Clearly fenced service area; maintain 10m separation from any residential zone; no public waiting areas allowed near fuelling bays

1 ₁₂	Light Industrial – Kenya Industrial Estates	Urban Core	Existing	0.73	70%	6m	3m	3m	150%	G+2	0.2	Assembly workshops, light manufacturing, storage	Provide loading/unloading area, pollution control measures, and landscaping buffer
2 ₂₀	Educational (Homa Bay Primary School)	CBD	Existing	0.36	50%	5m	5m	5m	200%	G+2	0.1	Primary school, offices, sanitation	Child play zones mandatory; provide adjacent baby rest pod for caregivers; link to pedestrian network and cycle stands
2 ₂₂	Educational Homa Bay High School	Urban Core	Existing	18.22	40%	5m	3m	3m	100%	G+4	0.5	Classrooms, laboratories, dormitories, admin blocks, assembly halls	Provide adequate playfields, secure fencing, staff housing blocks, and buffer from noisy uses
2 ₅₀	Educational St. Martha's Girls Sec	Urban Core	Existing	6.03	40%	5m	3m	3m	100%	G+4	0.5		
2 ₆₅	Educational Lake Primary School	Urban Core	Existing	2.03	50%	5m	5m	5m	75%	G+2	0.1	Primary school, offices, sanitation	Child play zones mandatory; provide adjacent baby rest pod for caregivers; link to pedestrian network and cycle stands
2 _{21,64,66}	Educational (private schools)	Urban Core	Existing	2.99	50%	5m	5m	5m	100%	G+2	0.1		
2 ₆₁	Educational ECDE & Primary School	Adjacent to affordable housing	Proposed	0.83	30%	5m	5m	5m	75%	G+2	0.1		

2 ₅₆₋₅₈	Educational Tom Mboya University	Urban Core	Existing	15.73	30%	10m	4m	4m	50%	G+6	10.0	Lecture halls, libraries, labs, admin blocks, hostels, auditoriums	Ensure universal access, landscaping, fire safety, and integration with existing facilities
2 _{54,59,67}	Educational Tom Mboya University Extension	Urban Core	Proposed	35.95	30%	10m	4m	4m	50%	G+6	10.0		
3 ₂	Recreational – Governor’s Park	CBD	Existing	1.41	10%	3m	3m	3m	20%	1 (open)	0.05	Public green space, seating lawns	Include infant swing/play zone, open lawn area and walking circuit; use solar path lights; preserve native trees
3 ₃₋₄	Recreational – Community Grounds		Proposed	1.14	10%	3m	3m	3m	20%	1	0.05	Event grounds, informal sports	Youth and child play corners required; incorporate shaded resting gazebos; rain gardens around perimeter
3 ₁	Recreational – Children’s Park	Lakefront	Proposed	1.31	20%	3m	3m	3m	20%	1 (open)	0.05	Children’s play areas, family zones, lawns	No commercial buildings, fully accessible, seating, soft fencing Multi-use space, pedestrian access only, art installations encouraged
3 ₂	Recreational – Auditorium / Events	Lakefront	Proposed	3.45	20%	3m	3m	3m	20%	1	0.1	Amphitheatre, cultural events, open air shows	

3 ₅	Recreational – Arboretum	Lakefront	Proposed	1.10	20%	0m	0m	2m	20%	G+1	0.5	Walking trails, gazebos, interpretive shelters, kiosks	Must plant only indigenous species; pedestrian-only zones; no commercial buildings beyond small kiosks; preserve 20 m buffer to shore
4 ₂₅	Public Purpose – High Court & Police	CBD	Proposed	0.69	55%	6m	3m	3m	150%	G+4	0.1	Judicial, police offices	Must include family waiting shelter; link to adjacent child play/quiet garden; accessible ramps and shaded buffer planting, Provide Proper Housing for the officers within the premises
4 _{26,32,35-37,38-40}	Public Purpose – Public and Government Offices	CBD	Existing/ Proposed	0.66	50%	6m	3m	3m	200%	G+3	0.1	Administrative blocks, civil registry	Day-nursery or lactation pod required for female staff or visiting public; green courtyards must include seating & trees
4 ₅	Public Purpose – Medical Facility	CBD	Existing	0.09	45%	5m	3m	3m	150%	G+2	0.05	Dispensary, clinic, public health	Baby care room required; short-stay parking (1–2 bays); public sanitation block to include family-friendly stalls
4 ₄₃	Public Purpose – Homa Bay County Teaching and Referral Hospital	Urban Core	Existing	3.78	50%	5m	3m	3m	100%	G+4	5	Hospital wards, outpatient clinics, labs, staff quarters, admin offices	Provide emergency vehicle access, fire lane clearances, 20 m buffer from adjacent residences

4 _{25-40, 42,45, 47-54}	Public Purpose	Urban Core	Existing	20.13	50%	5m	3m	3m	100%	G+2	0.30	Office blocks, meeting halls, training rooms, satellite police post	Cohesive vehicular circulation, secure perimeter fencing, universal access lift provision
4 ₄₆	Public Purpose	Urban Core	Proposed	0.55	50%	5m	3m	3m	100%	G+2	0.30		
5 ₆₄	Commercial – Municipal Market	CBD	Existing	0.74	75%	3m	2m	3m	300%	G+6	0.05	Fresh produce, cooked food stalls	Designated boda boda stand with lay-by; lactation pod or day-nursery in market plaza; trash zone fenced; solar lighting in all aisles
5 _{2-5₄}	Commercial – General	CBD	Proposed	2.66	80%	3–6m	0–2m	3m	300%	G+6	0.05	Retail shops, offices, eateries	Dedicated boda boda bay per block (min. 4m x 6m), clearly marked; pedestrian crossings must remain clear; promote bike racks
5 _{59-87, 91,98, 131-142, 146}	Commercial – General	Urban Core	Proposed	20.20	80%	3–6m	0–2m	3m	300%	G+6	0.05		
5 ₈₈₋₉₀	Commercial – General & Mainly Hospitality Based	Lakefront	Proposed	13.61	80%	3–6m	0–2m	3m	300%	G+6 (Bonus G+7)	0.05–0.07	Shops, cafés, hotels, market stalls, boat services	Public linkages required, keep lake view corridors open, night lighting
6 ₁	Public Utility – Water Intake	Lakefront	Proposed	1.42	40%	6m	3m	3m	50%	G+1	0.05	Water abstraction and treatment	Restricted access, 20m buffer from public spaces, protected shoreline zone
6 ₃	Public Utility – Sewer Plant	Lakefront	Proposed	8.19	40%	6m	3m	3m	40%	G+1	0.1	Sewerage treatment and polishing wetlands	Not adjacent to residential zones, odor mitigation mandatory

6 ₂	Public Utility – Power Station	CBD	Existing	0.20	60%	6m	3m	3m	50%	G+1	0.1	Substation, grid node	Public not allowed on-site; 10m landscape buffer required on all edges; EV charger integration encouraged nearby
6 _{7,9}	Public Utility	Urban Core	Existing	3.24	60%	6m	3m	3m	50%	G+1	0.1	Electrical substations, pumping stations, telecom exchanges	Secure compound; noise & visual screening; all access tracks ≤6 m wide; maintain 10 m equipment clearance zones
7 ₆	Transportation – Existing Pier	Lakefront	Proposed	1.10 (est.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ferry docking, boat boarding, transport	Publicly owned, 6m building buffer, connects to NMT routes
7 ₁₀	Transportation – NMT Lane	Lakefront	Proposed	0.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Bike and pedestrian lanes, e-mobility access	Minimum width 2.5m, integrated tree canopy, connect across all zones
7 ₁	Transportation – Parking / Pick-up Node	CBD	Existing/ Proposed	0.08	N/A	–	–	–	N/A	0	N/A	Public parking, bus/taxi/boda stands	Formal boda boda stand required with bollards separating walkways; mini child wait zone encouraged near ticket area; night lighting and safety patrols

8₁₀	Conservation – Lakefront Buffer	Lakefront	Proposed	1.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Vegetative buffers, passive recreation, nature paths	No permanent structures, signage for conservation, co- managed by CBOs
9₂₀	Fish Landing Site (Near Modern Fish Market)	Lakefront	Proposed	0.42	≤30%	2m	2m	2m	N/A	1	0.05	Boat docking, fish offloading, basic cleaning & cold storage	Integrated with fish market, waste collection required, secure storage, health & safety compliance

Map 30. Urban Expansion & Inclusion

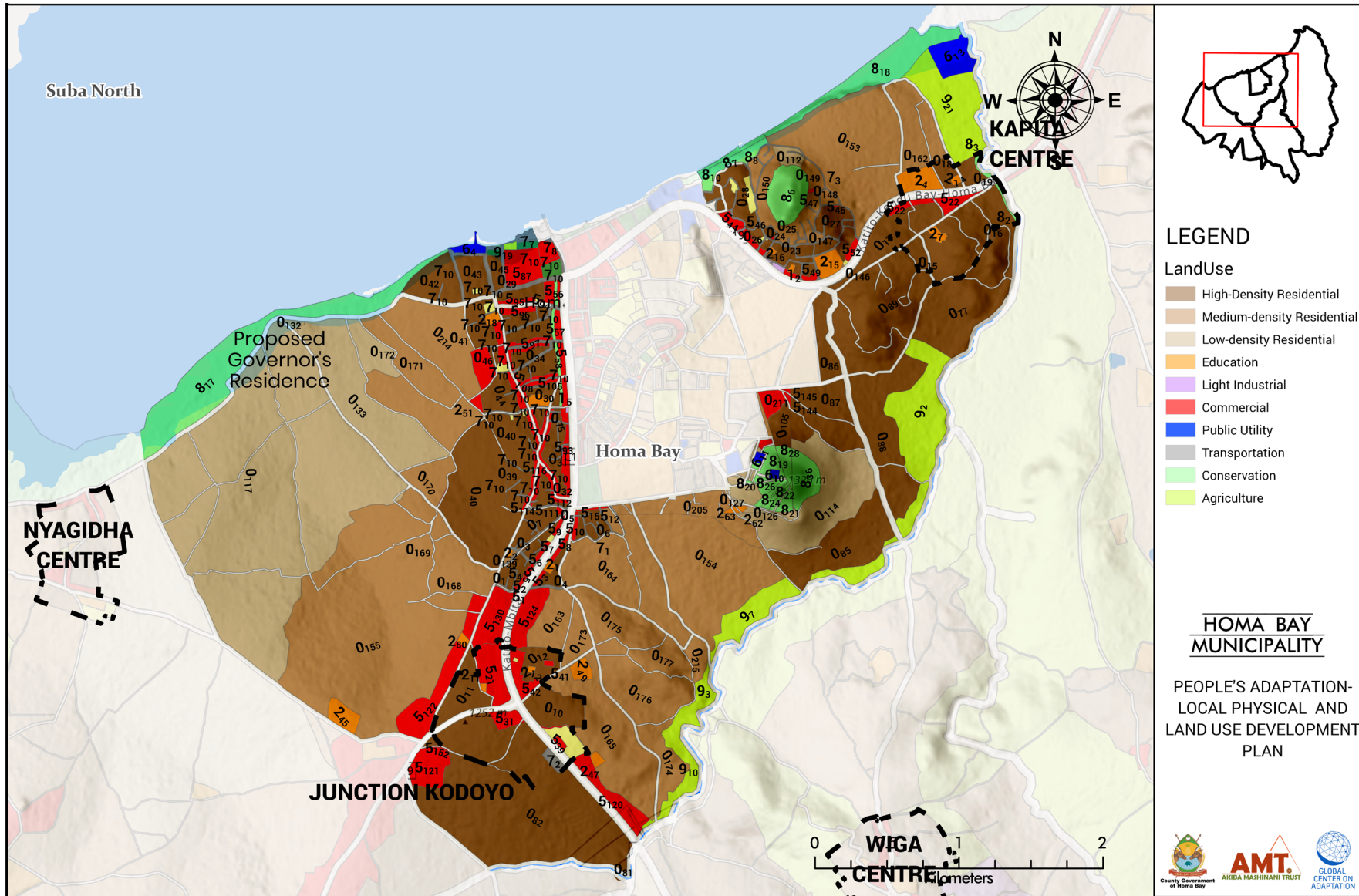


Table 14. Urban Expansion & Inclusion

Land use	Description	Location	Existing/ Proposed	Area size (Ha)	G.C %	Setback			P.R	No. of Floors	Min Plot Size (Ha)	Type of development allowed	Additional Development Conditions
						Front	Side	Rear					
O ₁₁₂	Low-density Residential Bishop's House	Makongeni	Existing	2.14	30%	6m	3m	6m	50%	G+1	0.2	Bungalow, Maisonette	Maintain low density; landscape front yard; no subdivisions below 0.2 Ha.
O _{114,117,124-129,132,133}	Low-Density Residential	Arujo	Proposed	291.44	30%	6m	3m	6m	50%	G+1	0.2		
O _{42,43,45}	Medium-Density Residential	Shauri Yako	Proposed	16.07	50%	3m	2m	2m	250%	G+3	0.05	Family units, backyard units, rentals, home-based businesses	25% green space, rooftop/garden play area, sanitation, waste zone, greywater use, rent-control incentives
O ₁₄₇₋₁₅₀	Proposed Medium-density Residential Zones	Makongeni	Proposed	15.33	50%	3m	2m	2m	250%	G+3	0.05	Detached/ Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	Encourage plot amalgamation; provide 3m fire breaks; allow home businesses.
O _{139,164}	Medium-density Residential Zones	Sofia	Proposed	1.51	50%	3m	2m	2m	250%	G+3	0.05	Detached/Semi-detached, Multi-family dwelling (walk-up flats)	Encourage plot amalgamation; provide 3m fire breaks; allow home businesses.

0 _{153-155, 162-165, 168-176, 205,211, 214}	Medium-density Residential Zones	Arujo Pedo Asego Rangwena	Proposed	454.44	50%	3m	2m	2m	250%	G+3	0.05	Detached/Semi-detached, Multi-family dwelling (walk-up flats)	
0 _{32,39, 40,41, 44,46, 215-228}	High-Density Residential	Shauri Yako	Proposed	6.46	65%	1.5m	1m	2m	350%	G+7	0.05	Social housing, apartments, hostels, daycare, shared laundries	25% green space, rooftop/garden play area, sanitation, waste zone, greywater use, rent-control incentives Mandatory sewer connection; shared parking; vertical expansion encouraged. 10% of plot for communal open space Roof water harvesting encouraged
0 ₂₃₋₂₈	High-density Residential Zones	Makongeni	Proposed	19.58	65%	1.5m	1m	2m	350%	G+7	0.05	Apartments, Mid-rise flats	
0 ₁₋₇	High-density Residential Zones	Sofia	Proposed	13.81	65%	1.5m	1m	2m	350%	G+7	0.1	Apartments, Mid-rise flats	
0 ₁₀₋₁₂	High-density Residential Zones	Junction Kodoyo	Proposed	22.46	60%	3m	2m	2m	350%	G+6	0.1	Apartments, Mid-rise flats	
0 ₁₅₋₁₉	High-density Residential Zones	Kapita	Proposed	19.62	60%	3m	2m	2m	350%	G+6	0.1	Apartments, Mid-rise flats	
0 _{1-7,23-47, 74-77, 81,82, 85-89, 105}	High-density Residential Zones	Arujo Asego	Proposed	455.13	65%	3m	2m	2m	350%	G+6	0.1	Apartments, Mid-rise flats	

1 ₁₋₃	Light Industrial Zones Eon Energy, Shell Petrol Service station, Dune Deck Millers	Makongeni	Existing	0.37	70%	6m	3m	3m	150%	G+2	0.1	Fuel stations, Jua Kali workshops, Grain mills	Require pollution controls; enforce buffers; prohibit residential use.
1 ₆	Petrol Station	Shauri Yako	Existing	0.06	70%	6m	3m	3m	150%	G+2	0.1	Fuel station	Pollution buffer, secure fencing, no residential adjacency
2 ₂	Educational Zone	Sofia	Existing	0.19	30–50%	5m	5m	5m	50%	G+4	0.5	Primary school, Junior Secondary, ECD	Reserve expansion space; allow sports grounds; shared community use encouraged.
2 ₁₅	Educational Zone Got Rabuor Primary	Makongeni	Existing	2.78	50%	5m	5m	5m	75%	G+2	0.1	Primary school, Junior Secondary, ECD	Reserve expansion space; allow sports grounds; shared community use encouraged. Elevated floors, playgrounds, sanitation, public accessibility
2 ₁₈	Educational Institutions	Shauri Yako	Existing	0.72	50%	5m	5m	5m	75%	G+2	0.1	ECD, Primary, Secondary schools	
2 ₄	Rangwena Primary School	Kapita	Existing	4.12	50%	5m	5m	5m	75%	G+2	0.1	Primary school, Junior Secondary, ECD	
2 ₁₄	King Solomon Junior Academy			0.37	50%	5m	5m	5m	100%	G+2	0.1		
2 ₇	Junction Academy	Junction Kodoyo	Existing	0.22	50%	5m	5m	5m	100%	G+2	0.1		

2 _{18,19,45,47-51,62,63}	Educational Institutions	Arujo	Existing	9.62	50%	5m	5m	5m	75%	G+2	0.1	Primary school, Junior Secondary, ECD, Secondary schools	
3 ₆	Public Park / Recreational	Shauri Yako	Proposed	0.39	≤20%	3m	3m	3m	N/A	1 (open)	0.05–0.1	Parks, courts, tree reserves	No commercial use, solar lights, benches, bioswales
3 _{1,6,8,9}	Recreational	Arujo Asego	Proposed	3.12	≤20%	3m	3m	3m	N/A	1 (open)	0.05–0.1		
4 ₁₄₋₁₅	Public Purpose Monato SDA Church Harvest Land Ministries	Makongeni	Existing	0.21	40%	6m	3m	3m	100%	G+1	0.1	Church, Assembly, Faith-based Institutions	Provide sanitation blocks, allow community use, secure fenced compounds.
4 ₁₆	Public Purpose Makongeni Health Centre	Makongeni	Existing	0.33	50%	6m	3m	3m	100%	G+3	0.1	Dispensary, Maternity Ward, Health Services	Emergency access, disability access, allow for future extension, allow staff quarters.
4 ₁₈	Public Purpose Women Centre	Makongeni	Existing	1.10	60%	6m	3m	3m	150%	G+3	0.3	Social hall, training facilities, empowerment programs, meeting rooms, offices	Include accessible design, and public sanitation Incorporate natural light, shaded outdoor gathering spaces, and gender-sensitive planning
4 ₁	Public Purpose Glorious Chapel Church	Sofia	Existing	0.18	40%	6m	3m	3m	100%	G+2	0.1	Church, Assembly, Faith-based Institutions	Provide sanitation blocks, allow community use, secure fenced compounds.

4 ₁₉₋₂₄	Faith-based / Civic Public Purpose	Shauri Yako	Existing	~1.00	40–60%	6m	3m	3m	150%	G+2	0.1	Churches, admin offices, NGO facilities	Sanitation facilities, shared-use encouraged, fencing
4 ₁₂	Public Purpose Kingdom Hall of Jehovah's Witnesses	Junction Kodoyo	Existing	0.08	40–60%	6m	3m	3m	150%	G+2	0.1	Churches, admin offices, NGO facilities	Sanitation facilities, shared-use encouraged, fencing
4 ₂	Public Purpose		Proposed	3.06	40–60%	6m	3m	3m	150%	G+2	0.1	Churches, admin offices, NGO facilities	Sanitation facilities, shared-use encouraged, fencing
4 ₁₉₋₂₄	Public Purpose	Arujo Asego	Proposed	1.29	40–60%	6m	3m	3m	150%	G+2	0.1	Churches, admin offices, NGO facilities	Sanitation facilities, shared-use encouraged, fencing
5 _{44,48-52}	Commercial Zones Makongeni Shopping Centre	Makongeni	Existing	1.18	80%	3–6m	0–2m	3m	240%	G+3	0.05	Shops, Restaurants, Guest houses, Offices, Mixed-use buildings	Allow upper-floor housing; enforce front veranda/arcade; provide loading bays.
5 ₄₃	Commercial Zone Villa Rosa Mystica Hotel	Makongeni	Existing	0.06	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, shops	Max 10% expansion with approval Renovations must follow current standards
5 ₄₅	Emmaus Inn Hotel	Makongeni	Existing	0.04	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, shops	Must integrate sustainability and minimize conflicts
5 ₄₇	Ubuntu Hill Hotel	Makongeni	Existing	0.11	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, shops	
5 ₄	Commercial zone Amboss Hotel	Sofia	Existing	0.27	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, Shops	

5 ₁₅₁	Commercial zone Hotel Dalawa	Sofia	Existing	0.06	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, Shops	
5 ₁₄	Commercial zone	Sofia	Existing	0.04	80%	3–6m	0–2m	3m		G+3	0.05	Shops, Restaurants, Guest houses, Offices, Mixed-use buildings	Allow upper-floor housing; enforce front veranda/ arcade; provide loading bays.
5 ₅₆	Commercial Zone – Soko Mjinga	Shauri Yako	Existing	1.00	75–80%	3–6m	0–2m	3m	240%	G+3	0.05	Shops, stalls, eateries, salons, micro-businesses	Formal stall layout, night lighting, vending bays, raised floors
5 ₃₉	The Key Ground Restaurant and Conference Centre	Junction Kodoyo	Existing	0.48	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, Shops	Max 10% expansion with approval Renovations must follow current standards Must integrate sustainability and minimize conflicts
5 ₄₁	Prudence Hotel			0.26	70%	2m	2m	2m	240%	G+3	0.05		
5 _{21,31,42}	Commercial zone		Proposed	12.18	70%	3–6m	0–2m	3m	240%	G+3	0.05	Shops, Restaurants, Guest houses, Offices, Mixed-use buildings	Allow upper-floor housing; enforce front veranda/ arcade; provide loading bays.
5 ₂₂	Commercial zone	Kapita	Proposed	3.21	70%	3–6m	0–2m	3m	240%	G+3	0.05		
5 _{53-58,87,91-97,99-124,130-131,143-145,152}	Commercial zone	Arujo Asego	Proposed	62.49	70%	3–6m	0–2m	3m	240%	G+3	0.05		

5 ₁₃	Sofia Market	Sofia	Proposed	0.19	70%	2m	2m	3m	100%	G+3	0.3	Market stalls, fresh produce sheds, butcheries, eateries, loading zones, public toilets, cold storage	Provide: Ablution blocks Adequate pedestrian access and paved walkways
5 ₄₆	Makongeni Market	Makongeni	Proposed	0.45	70%	2m	2m	3m	100%	G+3	0.3	Market stalls, fresh produce sheds, butcheries, eateries, loading zones, public toilets, cold storage	Fixed stalls with hard-standing and sheltered surfaces Loading/unloading bays Integrated waste management (bins, collection areas) Proper drainage and flood control systems Space for informal traders and small vendors Fire safety features (hydrants, extinguishers)

6 ₄	Public Utility Lake Water Treatment Plant	Shauri Yako	Existing	1.41	60%	0m	0m	2m	100%	G+1	0.30	Treatment works, clarifiers, filter beds, control rooms	Provide 6 m service driveway; noise/visual screens; 10 m buffer from adjacent non-utility uses
6 _{10,11}	HOMAWASCO water storage tanks	Asego hill		0.90	60%	0m	0m	2m	100%	G+1	0.30	Ground / elevated water reservoirs, pump houses	Equip with overflow protection; maintain 3 m perimeter fence; integrate landscaping to screen tanks
6 ₁₃	Public Utility Sewer Treatment Plant		Proposed	6.19	60%	0m	0m	2m	100%	G+1	0.30	Primary / secondary treatment, sludge drying beds, admin office	Odor control units required; locate sludge-handling area ≥ 20 m from property line; all access drives ≥ 6 m wide
7 ₃	Transportation Roads & Access	Makongeni	Proposed	19.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Roads, Footpaths, Utilities corridor	Enforce full reserve widths; install NMT facilities; reserve fire break paths.
7 ₁	Transportation Roads & Access	Sofia	Proposed	12.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
7 _{1-3,6-8,10}	Transportation Roads & Access		Proposed	24.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
8 ₂₋₃	Conservation Zone River Rangwena Riparian	Kapita	Proposed	0.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Riparian conservation, Passive recreation, Nature trails	Strict no-build; promote reforestation; enable eco-tourism and cultural use.
8 ₆	Conservation Zone Got Rabuor Hill	Makongeni	Proposed	9.32	5%	N/A	N/A	N/A	N/A	N/A	N/A	Hill conservation, Passive recreation, Nature trails	

8 _{9-11,17-28,35}	Conservation Zone	Arujo Asego Rangwena	Proposed	71.72	10%	15m	10m	10m	0.1	G+1	1.0	Nature trails, observation platforms, small ranger cottage	• No earthworks or vegetation removal beyond trails
8 ₇	Riparian buffer	Makongeni	Proposed	3.69	20%	10m from active stream edge			1:0.2	G+1	0.05 ha	Eco-sensitive residential structures (e.g. raised timber or light-frame houses), Passive recreation areas (e.g. walking trails, seating areas), Urban agriculture (without agro-chemicals), Environmental education facilities, Nature-based tourism kiosks or information points, Rainwater harvesting systems	All development requires a site-specific (EIA), Only pervious materials may be used for paths or floors, Native vegetation must be preserved; any removal must be replaced at a 2:1 ratio, Fencing must be permeable, no wastewater discharge or pit latrines permitted – sealed systems or compost toilets only, Rain gardens and bioswales must be incorporated to manage runoff

8 ₈	Riparian reserve	Makongeni	Proposed	1.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ecological restoration (tree planting, wetland recovery) Nature-based flood control infrastructure (e.g., gabions, swales) Passive public recreation (e.g., walking trails, boardwalks – no buildings)	Strict prohibition of all building, paving, dumping, excavation, or cultivation, Boundaries to be demarcated and fenced using natural materials, Managed access only for restoration or monitoring activities, all interventions (e.g. tree planting) must use indigenous species.
8 ₉	Conservation – NMT Green Corridor	Shauri Yako	Proposed	1.62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cycle lanes, walkways, pedestrian rest points	Minimum 2.5m width, universal access, trees every 10–12m
9 _{2,3,12, 20-22}	Agricultural zone	Arujo Asego Rangwena	Proposed	77.31	10%	10m	5m	5m	0.3	G+1	0.25	Mixed crop farming, fish ponds, livestock keeping, agroforestry	Prevent encroachment into riparian areas, no subdivision below 0.25 ha, promote climate-smart techniques

Map 31. Agro-Conservation Reserve

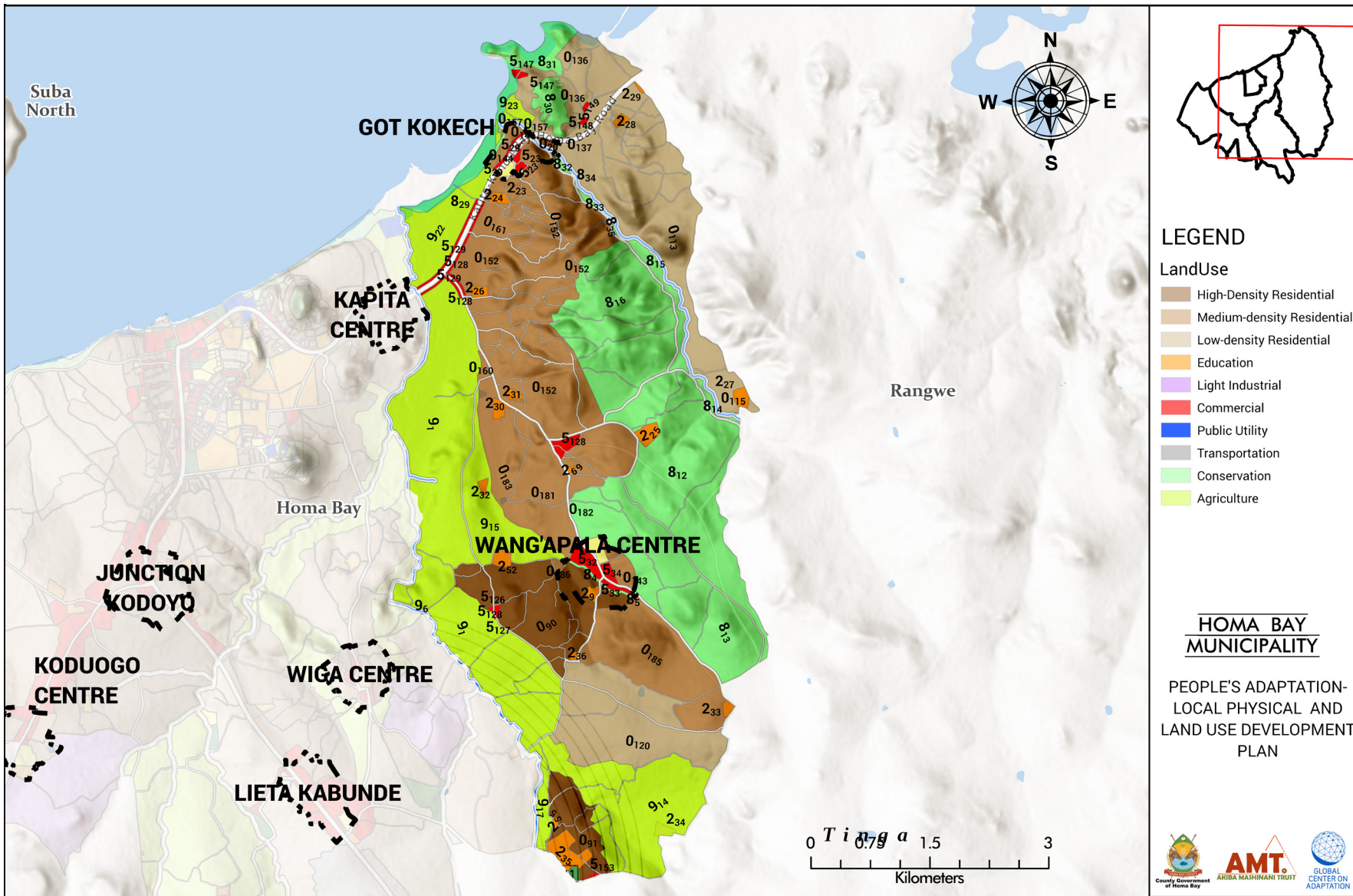


Table 15. Agro-Conservation Reserve

Land use	Description	Location	Existing/ Proposed	Area size (Ha)	G.C %	Setback			P.R	No. of Floors	Min Plot Size (Ha)	Type of development allowed	Additional Development Conditions
						Front	Side	Rear					
O _{113,115,120}	Low-density Residential	Kothidha Kobwola Kanam Kowili Kanyach Kachar	Proposed	431.30	30%	6m	3m	6m	40%	G+1	0.2	Bungalow, Maisonette	Maintain low density; landscape front yard; no subdivisions below 0.2 Ha.
O ₁₄₃	Medium-density Residential	Wang 'apala Junction Centre	Proposed	12.67	50%	3m	2m	2m	250%	G+3	0.05	Detached/ Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	Pocket play areas encouraged within yards; allow co-located day-care rooms in shared units; off-street parking for at least 50% of units; bioswales along plot boundaries
O ₁₄₄	Medium-density Residential	Got Koketch Centre	Proposed	7.00	50%	3m	2m	2m	250%	G+3	0.05		
O _{152,157,160,161,181-183,185,186,188}	Medium-density Residential	Kothidha Kobwola Kanam Kowili Kanyach Kachar	Proposed	753.76	40%	4m	3m	4m	200%	G+3	0.1	Detached/ Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	

0 ₂₀	High-Density Residential	Got Koketch Centre	Proposed	2.65	60%	3m	2m	2m	300%	G+6	0.1	Apartments, Mid-rise flats	25% green space, rooftop/garden play area, sanitation, waste zone, greywater use, rent-control incentives Mandatory sewer connection; shared parking; vertical expansion encouraged. 10% of plot for communal open space Roof water harvesting encouraged
0 _{90,91}	High-Density Residential	Kothidha Kobwola Kanam Kowili Kanyach KacharA	Proposed	108.63	60%	3m	2m	2m	300%	G+6	0.1	Apartments, Mid-rise flats	
2 ₂₄	Got Koketch Primary	Got Koketch	Existing	2.89	50%	5m	5m	5m	75%	G+3	2.0	Classrooms, laboratories, dormitories, admin blocks, assembly halls	Provide adequate playfields, secure fencing, staff housing blocks, and buffer from noisy uses
2 ₂₅	Kopiyo Primary	Kopiyo	Existing	5.91	50%	5m	5m	5m	75%	G+3	2.0		
2 ₂₆	Wahambla Primary	Kobwola	Existing	2.74	50%	5m	5m	5m	75%	G+3	2.0		
2 ₂₈	Ngegu Primary	Ngegu	Existing	2.17	50%	5m	5m	5m	75%	G+3	2.0		
2 ₃₀	Nyalkinyi Primary	Nyalkinyi	Existing	3.53	50%	5m	5m	5m	75%	G+3	2.0		

2 ₃₂	Nyatago Kachar Primary	Kanyach Kachar	Existing	1.84	50%	5m	5m	5m	75%	G+3	2.0		
2 ₃₃	Masakla Primary	Masakla	Existing	2.02	50%	5m	5m	5m	75%	G+3	2.0		
2 ₃₄	Maguje Primary	Maguje	Existing	3.14	50%	5m	5m	5m	75%	G+3	2.0		
2 ₃₆	Wang'apala Kibuola Primary	Wang'apala	Existing	0.92	50%	5m	5m	5m	75%	G+3	2.0		
2 ₅₂	Chiga Primary	Chiga	Existing	4.39	50%	5m	5m	5m	75%	G+3	2.0		
2 ₅₅	Ogande Special Primary	Ogande	Existing	0.77	50%	5m	5m	5m	75%	G+3	2.0		
2 ₂₉	Ngegu Blessings Academy	Ngegu	Existing	0.58	70%	5m	3m	3m	75%	G+3	2.0		
2 ₃₁	Nyalkinyi Secondary	Nyalkinyi	Existing	2.07	50%	5m	3m	3m	75%	G+4	2.0		
2 ₃₅	Ogande Girls Secondary	Ogande	Existing	13.88	50%	5m	3m	3m	75%	G+4	2.0		
3 ₁₂	Recreational	Kothidha Kobwola Kanam Kowili Kanyach Kachar	Proposed	1.90	10%	3m	3m	3m	10%	1 (open)	0.05	Public green space, seating lawns	Include infant swing/play zone, open lawn area and walking circuit; use solar path lights; preserve native trees

4 ₈	Public Purpose Maram SDA Church	Got Koketch Centre	Existing	0.44	50%	6m	4m	4m	150%	G+2	0.10	Libraries, town halls, social halls, police & fire stations	Provide universal access ramps; ample drop-off bay (8 m length); screen service yards; integrate public plaza in front
4 ₄	Public Purpose		Proposed	2.41	55%	6m	3m	3m	150%	G+4	0.1		
4 ₁₀	Public Purpose	Wang'apala Junction Centre	Proposed	5.13	55%	6m	3m	3m	150%	G+4	0.1		
5 ₃₂₋₃₄	Commercial	Wang'apala Junction Centre	Proposed	13.35	70%	3m	2m	2m	240%	G+4	0.05	Shops, offices, mixed-use buildings, open-air markets, retail	Controlled signage size and height, include service lanes, rooftop gardens encouraged on 3+ storey buildings
5 _{23,28,29,36}	Commercial	Got Koketch Centre	Proposed	4.78	70%	3m	2m	2m	240%	G+3	0.05		
5 _{126,128,147-149}	Commercial	Kothidha Kobwola Kanam Kowili Kanyach Kachar	Proposed	95.99	70%	3m	2m	2m	240%	G+3	0.05		
8 ₁	Conservation	Got Koketch Centre	Proposed	2.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Vegetative buffers, passive recreation, nature paths	No permanent structures, signage for conservation, co-managed by CBOs
8 _{4,5}	Conservation	Wang'apala Junction Centre	Proposed	2.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Vegetative buffers, passive recreation, nature paths	No permanent structures, signage for conservation, co-managed by CBOs

8 ₁₂₋ 16,36-40	Conservation	Kothidha Kobwola Kanam Kowili Kanyach Kachar	Proposed	776.09	10%	15m	10m	10m	10%	G+1	1.0	Nature trails, observation platforms, small ranger cottage	No earthworks or vegetation removal beyond trails
9 _{1,8,14,} 15,17, 21,23, 24	Agricultural	Kothidha Kobwola Kanam Kowili Kanyach Kachar	Proposed	868.22	10%	10m	5m	5m	30%	G+1	0.25	Mixed crop farming, fish ponds, livestock keeping, agroforestry	Prevent encroachment into riparian areas, no subdivision below 0.25 ha, promote climate- smart techniques

Map 32. Future Urban Fringe

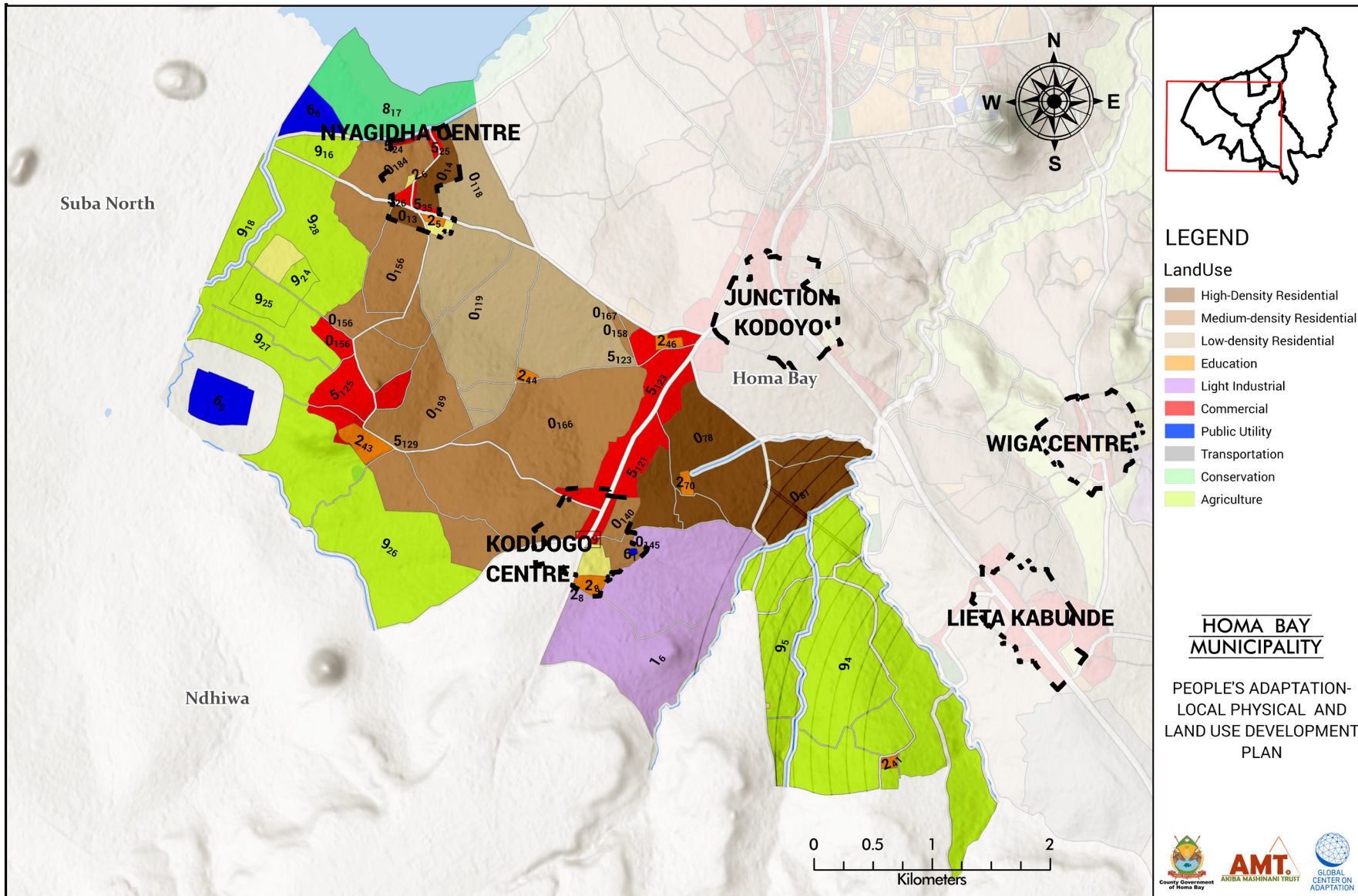


Table 16. Future Urban Fringe

Land use	Description	Location	Existing/ Proposed	Area size (Ha)	G.C %	Setback			P.R	No. of Floors	Min Plot Size (Ha)	Type of development allowed	Additional Development Conditions
						Front	Side	Rear					
O ₁₁₈₋₁₁₉	Low-density Residential	Arujo Kanyabala	Proposed	211.47	30%	6m	3m	6m	40%	G+1	0.2	Bungalow, Maisonette	Maintain low density; landscape front yard; no subdivisions below 0.2 Ha.
O _{140,145}	Medium-density Residential	Koduogo Centre	Proposed	13.88	50%	3m	2m	2m	250%	G+3	0.05	Detached/Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	Pocket play areas encouraged within yards; allow co-located day-care rooms in shared units; off-street parking for at least 50% of units; bioswales along plot boundaries
O _{156,158, 166,167, 184,189}	Medium-density Residential	Arujo Kanyabala	Proposed	364.86	40%	4m	3m	4m	200%	G+3	0.1	Detached/Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	

0 _{13,14}	High-Density Residential	Nyagidha Centre	Proposed	15.55	60%	3m	2m	2m	350%	G+6	0.05	Apartments, Mid-rise flats (6 storeys)	25% green space, rooftop/garden play area, sanitation, waste zone, greywater use, rent-control incentives
0 _{78,81}	High-Density Residential	Arujo Kanyabala	Proposed	134.74	60%	3m	2m	2m	350%	G+6	0.05	Apartments, Mid-rise flats (6 storeys)	Mandatory sewer connection; shared parking; vertical expansion encouraged. 10% of plot for communal open space Roof water harvesting encouraged
1 ₈	Light Industrial	Kanyabala	Proposed	160.00	70%	6m	3m	3m	200%	G+1	0.1	Small scale assembly; food & beverage processing; warehousing	Emission controls for any odor or dust generating processes All loading bays and parking on site Storm water detention & oil interceptor required Boundary walls ≥2 m high and landscaped buffer against adjacent non-industrial uses

2 ₅	Educational Nyagidha Primary School	Nyagidha Centre	Existing	1.17	50%	5m	5m	5m	75%	G+2	0.1	Classrooms, laboratories, dormitories, admin blocks, assembly halls	Child play zones mandatory; provide adjacent baby rest pod for caregivers; link to pedestrian network and cycle stands
2 ₆	Educational			0.29	50%	5m	5m	5m	75%	G+2	0.1		
2 ₄₁	Educational Maguti Primary	Maguti	Existing	1.43	50%	5m	5m	5m	75%	G+2	0.1		
2 ₄₃	Magare Primary	Kanyabala Magare	Existing	7.80	50%	5m	5m	5m	75%	G+2	0.1		
	Bishop Okulu Magare Girls Secondary		Existing		50%	5m	5m	5m	100%	G+4	0.5		
2 ₄₄	Yawo Primary	Kanyabala		1.55	50%	5m	5m	5m	75%	G+2	0.1		
2 ₄₆	Lala Primary	Arujo		2.25	50%	5m	5m	5m	75%	G+2	0.1		
4 ₅	Nyagidha SDA church	Nyagidha Centre	Existing	0.52	50%	6m	4m	4m	80%	G+2	0.10	Libraries, town halls, social halls, police & fire stations	Provide universal access ramps; ample drop-off bay (8 m length); screen service yards; integrate public plaza in front
4 ₃	Public Purpose		Proposed	1.97	55%	6m	3m	3m	150%	G+4	0.1		
4 ₆	Public Purpose	Koduogo Centre	Proposed	6.02	55%	6m	3m	3m	150%	G+4	0.1		
4 ₄₁	Public Purpose	Arujo Kanyabala	Proposed	31.54	55%	6m	3m	3m	150%	G+4	0.1		

5 _{24-26,35}	Commercial	Nyagidha Centre	Proposed	4.07	70%	3m	2m	2m	240%	G+3	0.05	Shops, offices, mixed-use buildings, open-air markets, retail	Controlled signage size and height, include service lanes, rooftop gardens encouraged on 3+ storey buildings
5 _{121,123,125,129}	Commercial	Arujo Kanyabala	Proposed	90.25	70%	3m	2m	2m	240%	G+3	0.05		
6 ₁	Public Utility Water pan	Koduogo Centre	Existing	0.46	60%	0m	0m	2m	100%	G+1	0.30	Water storage/ reservoir basin	Naturalize embankments; provide 5 m maintenance strip; no structures within 1 m of embankment toe
6 ₅	Public Utility Material Recovery Centre	Kanyabala	Proposed	39.18	60%	0m	0m	2m	100%	G+1	0.30	Recycling plant, sorting yard, baling/storage sheds	Dust & noise controls; impervious yard with drainage to treatment; perimeter fence & gate; stormwater oil/grit separator
6 ₆	Decentralized Treatment Facility	Arujo	Proposed	13.09	60%	0m	0m	2m	100%	G+1	0.30	Small-scale sewage treatment, sludge drying beds	Odor abatement units; 10 m buffer from any residential use; emergency overflow weir; secure 2 m perimeter access walkway
8 ₁₇	Conservation	Arujo Kanyabala	Proposed	63.10	10%	15m	10m	10m	10%	G+1	1.0	Nature trails, observation platforms, small ranger cottage	No earthworks or vegetation removal beyond trails
9 _{4-7,16,19}	Agricultural	Arujo Kanyabala Katuma	Proposed	618.26	10%	10m	5m	5m	30%	1	0.25	Mixed crop farming, fish ponds, livestock keeping, agroforestry	Prevent encroachment into riparian areas, no subdivision below 0.25 ha, promote climate-smart techniques

Map 33. Administrative & Mobility Zone

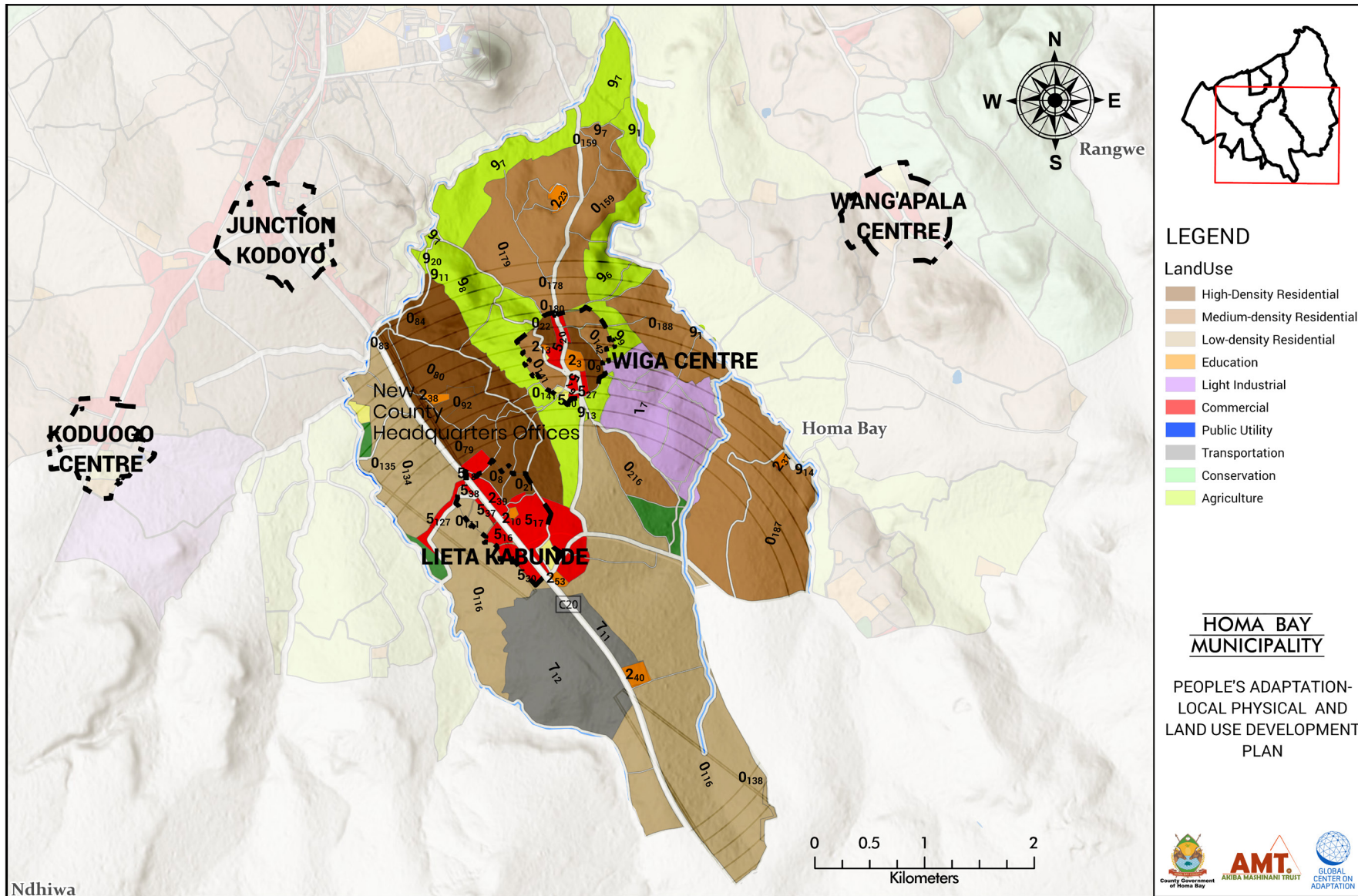


Table 17. Administrative & Mobility Zone

Land use	Description	Location	Existing/ Proposed	Area size (Ha)	G.C %	Setback			P.R	No. of Floors	Min Plot Size (Ha)	Type of development allowed	Additional Development Conditions
						Front	Side	Rear					
O₁₁₁	Low-density Residential	Lieta-Kabunde Centre	Proposed	6.05	30%	6m	3m	6m	40%	G+1	0.2	Bungalow, Maisonette	Maintain low density; landscape front yard; no subdivisions below 0.2 Ha.
O_{116, 121}	Low-density Residential	Kalanya Kanyach Kachar Katuma Kotieno Kanyabala	Proposed	244.47	30%	6m	3m	6m	40%	G+1	0.2		
O₁₄₁₋₁₄₂	Medium-density Residential	Wiga Centre	Proposed	19.60	50%	3m	2m	2m	250%	G+3	0.05	Detached/ Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	Pocket play areas encouraged within yards; allow co-located day-care rooms in shared units; off-street parking for at least 50% of units; bioswales along plot boundaries
O_{159, 177-180, 187-188}	Medium-density Residential	Kalanya Kanyach Kachar Katuma Kotieno Kanyabala	Proposed	318.33	40%	4m	3m	4m	200%	G+3	0.1	Detached/ Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	

0 _{8,21}	High-Density Residential	Lieta-Kabunde Centre	Proposed	8.86	60%	3m	2m	2m	300%	G+6	0.05	Apartments, Mid-rise flats (7 storeys)	25% green space, rooftop/garden play area, sanitation, waste zone, greywater use, rent-control incentives
0 _{9,22}	High-Density Residential	Wiga Centre	Proposed	11.16	60%	3m	2m	2m	300%	G+6	0.05	Apartments, Mid-rise flats (7 storeys)	
0 _{79,80,83,84,92}	High-Density Residential	Katuma Kotieno	Proposed	139.56	60%	3m	2m	2m	300%	G+6	0.05	Apartments, Mid-rise flats (7 storeys)	
1 ₉₋₁₁	Light Industrial	Kalanya	Proposed	82.38	25%	10m	6m	6m	150%	G+1	0.10	Light assembly, warehousing, agro-processing, and logistics	No heavy or pollutive industry allowed, greenbelt buffer mandatory on perimeter, night-time operation noise controls

2₃	Educational Wiga Primary Wiga Secondary School	Wiga Centre	Existing	3.03	50%	5m	5m	5m	75%	G+2	0.1	Nursery schools, primary, secondary schools, teacher training institutes	Noise-buffering from adjacent uses, pedestrian access from main roads, boundary fencing to meet safety standards
2₁₃	Educational	Wiga Centre	Existing	0.30	50%	5m	5m	5m	75%	G+2	0.1		
2₁₀	Educational	Lieta-Kabunde Centre	Existing	0.79	50%	5m	5m	5m	75%	G+2	0.1		
2_{13,23,37-40,53}	Educational	Kalanya Kanyach Kachar Katuma Kotieno	Proposed	11.43	50%	5m	5m	5m	75%	G+2	0.1		
3₁₁	Recreational	Kalanya Katuma	Proposed	119.50	15%	6m	3m	3m	20%	1	0.5	Public parks, playgrounds, stadiums, nature trails	Public access must be guaranteed, lighting required for evening safety, event spaces to include eco-toilets

4 ₁₁	Public Purpose Haven Church	Wiga Centre	Existing	0.12	50%	6m	4m	4m	80%	G+2	0.10	County offices, churches, clinics, public halls, police posts	Ensure disability access ramps, signage, and open waiting areas; all public buildings to include tree planting plans
4 ₁₃	Public Purpose Wiga Catholic Church	Wiga Centre	Existing	0.10	50%	6m	4m	4m	80%	G+2	0.10		
4 ₉	Public Purpose	Lieta- Kabunde Centre	Existing	2.86	50%	6m	4m	4m	80%	G+2	0.10		
4 ₅₅	Public Purpose Homa Bay County Government Headquarters	Kanyabala	Proposed	2.39	50%	6m	4m	4m	80%	G+2	0.10		
5 _{16-18, 30,37,38}	Commercial	Lieta- Kabunde Centre	Proposed	49.51	70%	3m	2m	2m	240%	G+3	0.05	Shops, offices, mixed-use buildings, open-air markets, retail	Controlled signage size and height, include service lanes, rooftop gardens encouraged on 3+ storey buildings
5 ₄₀	Commercial	Wiga Centre	Existing	0.43	70%	3m	2m	2m	240%	G+3	0.05		
5 _{19,20, 27}	Commercial	Wiga Centre	Proposed	6.80	70%	3m	2m	2m	240%	G+3	0.05	Shops, offices, mixed-use buildings, open-air markets, retail	Controlled signage size and height, include service lanes, rooftop gardens encouraged on 3+ storey buildings
5 _{127,150}	Commercial	Kalanya Katuma Kotieno	Proposed	56.65	70%	3m	2m	2m	240%	G+3	0.05		

7 11,12	Transportation	Kalanya Kanyach Kachar Katuma Kotieno Kanyabala	Proposed	115.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Roads, Footpaths, Utilities corridor	Enforce full reserve widths; install NMT facilities; reserve fire break paths.
9 1,8- 14,18-20	Agricultural	Kalanya Kanyach Kachar Kanyabala	Proposed	916.27	10%	10m	5m	5m	30%	1	0.25	Mixed crop farming, fish ponds, livestock keeping, agroforestry	Prevent encroachment into riparian areas, no subdivision below 0.25 ha, promote climate-smart techniques	



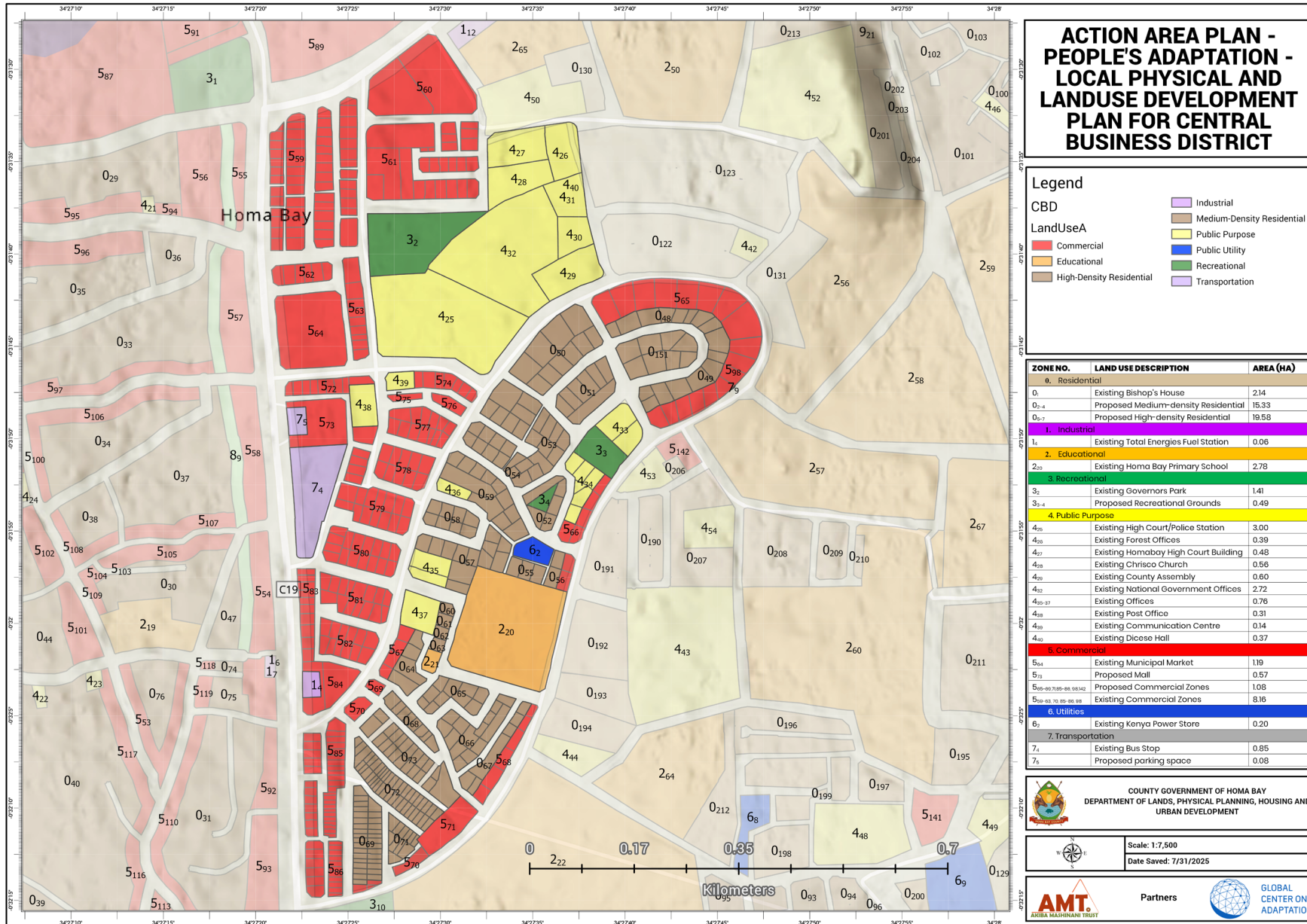
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ACTION AREA PLANS

This chapter presents detailed Action Area Plans for six strategic zones within the Municipality: the CBD, Makongeni, Sofia, and Shauri Yako informal settlements, the Lakefront, and the Kabunde Airstrip buffer zone. Each Action Area Plan outlines the specific spatial interventions, infrastructure upgrades, land use adjustments, and development priorities tailored to the unique needs and opportunities of the area.

The chapter emphasizes inclusive upgrading of informal settlements, enhancement of economic functions in the CBD, unlocking lakefront potential for recreation and tourism, and safeguarding the airstrip buffer zone for future expansion and safety. Collectively, these Action Area Plans provide a localized zoning regulations aligned with the broader municipal land use strategy.

Central Business District

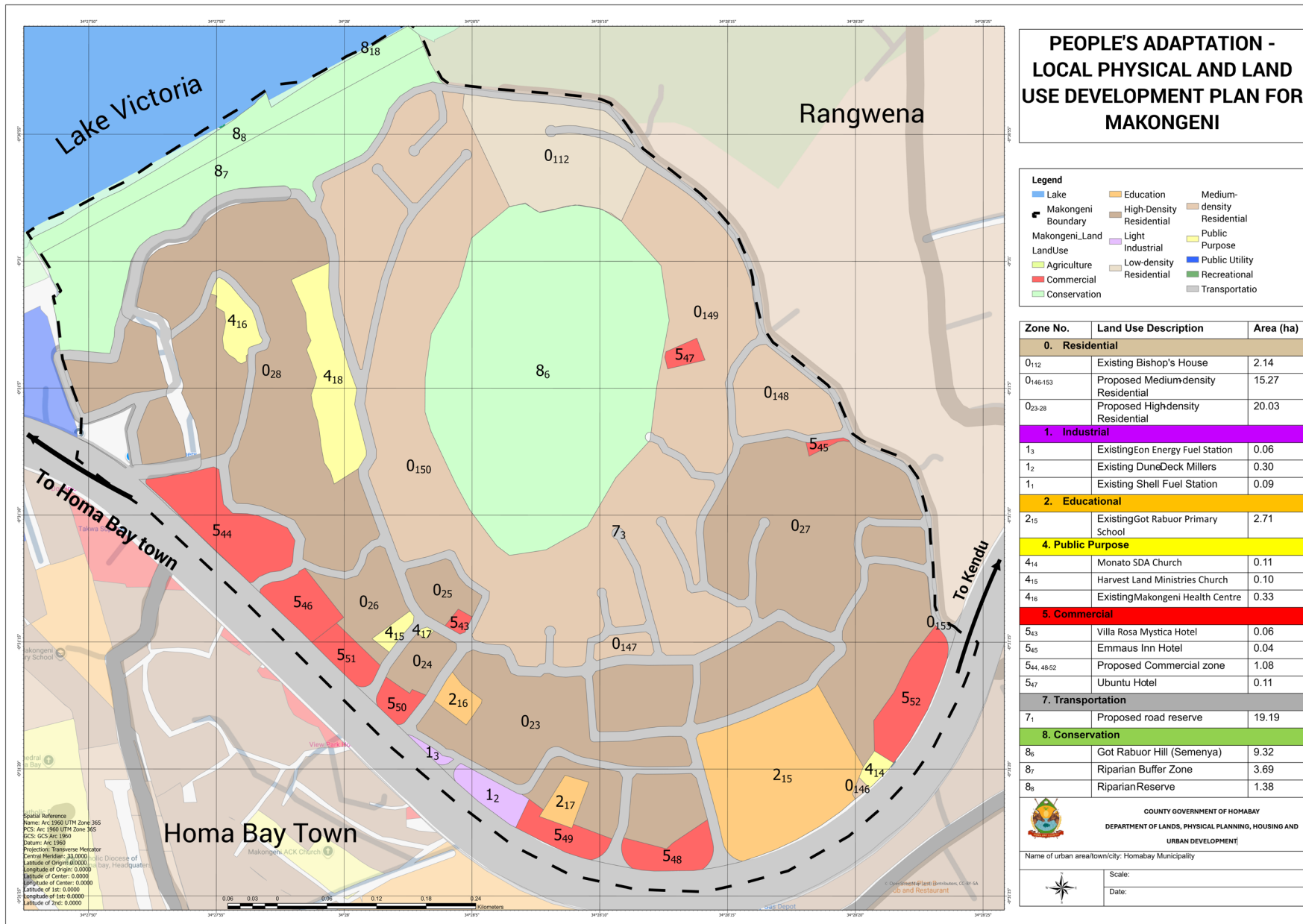


Zone Code	Description	Area size (Ha)	GC %	Setback			Plot. Ratio %	No. of floors	Min plot size (Ha)	Type of development allowed	Climate adaptation strategies	Additional development conditions
				Front	Side	Rear						
0	High-Density Residential (O ₅₁ -O ₅₄)	1.56	65%	2m	2m	1.5m	350%	G+8	0.1	Apartment, hostels, rental housing	Rooftop gardens, greywater reuse, solar heaters, permeable surfaces	Minimum 10% of open space allocated for child play zones; each block must provide 1 baby care room per 50 households; 1 parking space per 2 units (1-2 bed), 2 for 3-bed; promote shared laundry and compost areas
0	Medium-Density Residential (O ₉₁ -O ₉₃)	0.77	60%	2m	1m	1.5m	250%	G+3	0.06	Family housing, backyard units, rentals	Rainwater harvesting, shaded streets, native hedges	Pocket play areas encouraged within yards; allow co-located day-care rooms in shared units; off-street parking for at least 50% of units; bioswales along plot boundaries
1₄	Industrial – Fuel Station	0.06	70%	6m	3m	3m	150%	G+2	0.1	Fuel station, mini-mart	Oil separators, pollution buffers	Clearly fenced service area; maintain 10m separation from any residential zone; no public waiting areas allowed near fueling bays
2₁	Educational (Homa Bay Primary School)	0.36	50%	5m	5m	5m	75%	G+2	0.1	Primary school, offices, sanitation	Shaded courtyards, stormwater soakaways	Child play zones mandatory; provide adjacent baby rest pod for caregivers; link to pedestrian network and cycle stands
3₂	Recreational – Governor’s Park	1.41	10%	3m	3m	3m	20%	1	0.05	Public green space, seating lawns	Tree canopies, bio-retention ponds	Include infant swing/play zone, open lawn area and walking circuit; use solar path lights; preserve native trees

3 ₃₋₄	Recreational – Community Grounds	1.14	10%	3m	3m	3m	20%	1	0.05	Event grounds, informal sports	Swales, cooling grass mounds	Youth and child play corners required; incorporate shaded resting gazebos; rain gardens around perimeter
4 ₂₅	Public Purpose – High Court & Police	0.69	55%	6m	3m	3m	150%	G+4	55%	Judicial, police offices	Solar PV, ventilated offices	Must include family waiting shelter; link to adjacent child play/quiet garden; accessible ramps and shaded buffer planting, Provide Proper Housing for the officers within the premises
4 _{26,32,35-37,38-40}	Public Purpose – Public and Government Offices	0.66	50%	6m	3m	3m	200%	G+3	50%	Administrative blocks, civil registry	Solar integration, bioswales	Day-nursery or lactation pod required for female staff or visiting public; green courtyards must include seating & trees
4 ₂₅	Public Purpose – Medical Facility	0.09	45%	5m	3m	3m	150%	G+2	45%	Dispensary, clinic, public health	Shaded waiting areas, water reuse	Baby care room required; short-stay parking (1–2 bays); public sanitation block to include family-friendly stalls
5 ₆₄	Commercial – Municipal Market	0.74	75%	3m	2m	3m	300%	G+6	0.05	Fresh produce, cooked food stalls	Elevated stalls, stormwater reuse	Designated boda boda stand with lay-by; lactation pod or day-nursery in market plaza; trash zone fenced; solar lighting in all aisles
5 _{2–54}	Commercial – General Commercial	2.66	60%	6m	3m	3m	50%	G+1	0.1	Retail shops, offices, eateries	Green façades, water harvesting	Dedicated boda boda bay per block (min. 4m x 6m), clearly marked; pedestrian crossings must remain clear; promote bike racks

6 ₂	Public Utility – Power Station	0.20	0.20	60%	6m	3m	3m	50%	G+1	Substation, grid node	Elevated transformers, green fencing	Public not allowed on-site; 10m landscape buffer required on all edges; EV charger integration encouraged nearby
7 ₁	Transportation – Parking / Pick-up Node	0.08	N/A	–	–	–	N/A	0	N/A	Public parking, bus/taxi/boda stands	Permeable paving, tree canopy	Formal <i>boda boda</i> stand required with bollards separating walkways; mini child wait zone encouraged near ticket area; night lighting and safety patrols

Makongeni Informal Settlement



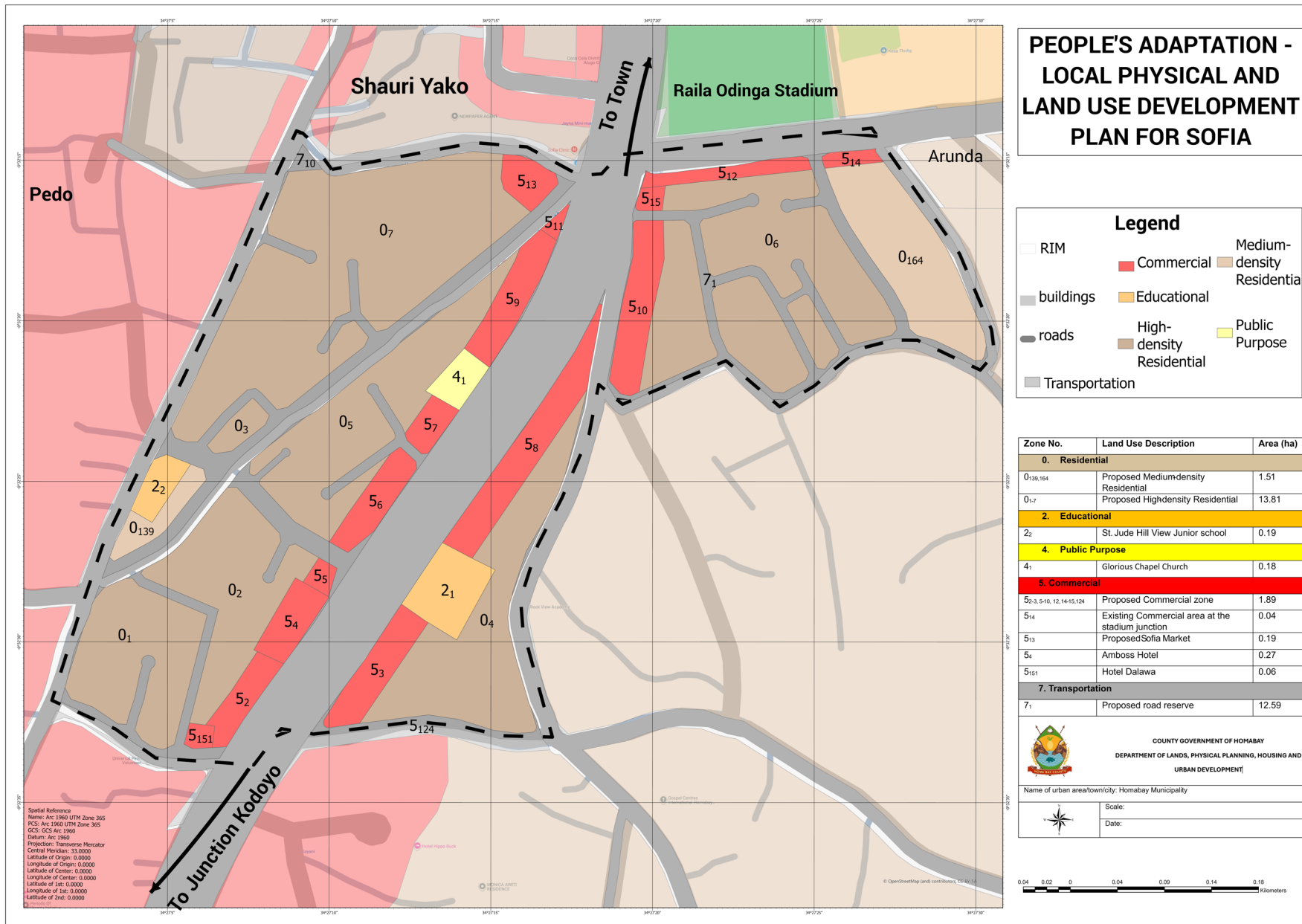
Zone	Description	Area (Ha)	G.C%	Setback			Plot Ratio	No. of floors	Min plot size (Ha)	Type of development allowed	Additional development conditions
				Front	Side	Rear					
0 ₁₁₂	Low-density Residential Zone Bishop's House	2.14	30%	6m	3m	6m	50%	G+1	0.2	Bungalow, Maisonette	Maintain low density; landscape front yard; no subdivisions below 0.2 Ha
0 ₁₄₇₋₁₅₀	Proposed Medium-density Residential Zones	15.33	50%	3m	2m	2m	250%	G+3	0.05	Detached/Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	Encourage plot amalgamation; provide 3m fire breaks; allow home businesses
0 ₂₃₋₂₈	Proposed High-density Residential Zones	19.58	65%	1.5m	1m	2m	350%	G+7	0.05	Apartments, Mid-rise flats (6–7 storeys)	Mandatory sewer connection; shared parking; vertical expansion encouraged
1 ₂₋₃	Light Industrial Zones Existing Eon Energy Shell Petrol Service stations Dune Deck Millers	0.37	70%	6m	3m	3m	150%	G+2	0.1	Fuel stations, Jua Kali workshops, Grain mills	Require pollution controls; enforce buffers; prohibit residential use
2 ₁₅	Existing Educational Zone Got Rabuor Primary	2.78	50%	5m	5m	5m	75%	G+2	0.1	Primary school, Junior Secondary, ECD	Reserve expansion space; allow sports grounds; shared community use encouraged
4 ₁₄₋₁₅	Public Purpose Monato SDA Church Harvest Land Ministries	0.21	50%	5m	3m	3m	100%	G+2	0.30	Church, Assembly, Faith-based Institutions	Provide sanitation blocks, allow community use, secure fenced compounds

4 ₁₆	Public Purpose Makongeni Health Centre	0.33	50%	6m	3m	3m	100%	G+2	0.1	Dispensary, Maternity Ward, Health Services	Emergency access, disability access, allow for future extension, allow staff quarters.
4 ₁₈	Public Purpose Women Centre	1.10	60%	3m	2m	3m	150%	3	0.3	Social hall, training facilities, empowerment programs, meeting rooms, offices	Include accessible design, and public sanitation Incorporate natural light, shaded outdoor gathering spaces, and gender-sensitive planning
5 _{44,48-52}	Commercial Zones Makongeni Shopping Centre	1.18	80%	3-6m	0-2m	3m	240%	G+3	0.05	Shops, Restaurants, Guest houses, Offices, Mixed-use buildings	Allow upper-floor housing; enforce front veranda/arcade; provide loading bays.
5 ₄₃	Villa Rosa Mystica Hotel	0.06	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, shops	Max 10% expansion with approval
5 ₄₅	Emmaus Inn Hotel	0.04	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, shops	Renovations must follow current standards
5 ₄₇	Ubuntu Hill Hotel	0.11	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, shops	Must integrate sustainability and minimize conflicts

5 ₄₆	Proposed Makongeni Market	0.45	70%	2m	2m	3m	100%	2	0.3	Market stalls, fresh produce sheds, butcheries, eateries, loading zones, public toilets, cold storage	<p>Must provide designated loading/unloading bays</p> <p>Include sheltered stalls and paved walkways</p> <p>Integrate waste management facilities (bins, collection point)</p> <p>Provide gender-responsive and disability-accessible sanitation</p> <p>Ensure proper drainage and flood control features</p> <p>Allocate space for informal traders and small-scale vendors</p> <p>Incorporate fire safety measures (e.g., hydrants, extinguishers)</p>
7 ₃	Transportation Roads & Access	19.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Roads, Footpaths, Utilities corridor	Enforce full reserve widths; install NMT facilities; reserve fire break paths

8 ₆₋₈	Conservation Zone	9.32	5%	N/A	N/A	N/A	N/A	N/A	N/A	Hill conservation, Passive recreation, Nature trails	Strict no-build; promote reforestation; enable eco-tourism and cultural use
	Got Rabuor Hill										
	Riparian buffer	3.69	20%	10m from active stream edge			20%	1	0.05 ha	Eco-sensitive residential structures (e.g. raised timber or light-frame houses), Passive recreation areas (e.g. walking trails, seating areas), Urban agriculture (without agro-chemicals), Environmental education facilities, Nature-based tourism kiosks or information points, Rainwater harvesting systems	All development requires a site-specific Environmental Impact Assessment; only pervious materials may be used for paths or floors; native vegetation must be preserved; any removal must be replaced at a 2:1 ratio; fencing must be permeable; no wastewater discharge or pit latrines permitted – sealed systems or compost toilets only; rain gardens and bioswales must be incorporated to manage runoff
	Riparian reserve	1.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ecological restoration (tree planting, wetland recovery) Nature-based flood control infrastructure (e.g., gabions, swales) Passive public recreation (e.g., walking trails, boardwalks – no buildings)	Strict prohibition of all building, paving, dumping, excavation, or cultivation; boundaries to be demarcated and fenced using natural materials; managed access only for restoration or monitoring activities; all interventions (e.g. tree planting) must use indigenous species

Sofia Informal Settlement



PEOPLE'S ADAPTATION - LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLAN FOR SOFIA

Legend

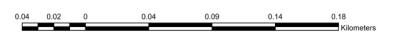
- RIM
- Commercial
- Medium-density Residential
- buildings
- Educational
- High-density Residential
- Public Purpose
- roads
- Transportation

Zone No.	Land Use Description	Area (ha)
0. Residential		
0 _{139,164}	Proposed Mediumdensity Residential	1.51
0 ₁₋₇	Proposed Highdensity Residential	13.81
2. Educational		
2 ₂	St. Jude Hill View Junior school	0.19
4. Public Purpose		
4 ₁	Glorious Chapel Church	0.18
5. Commercial		
5 _{2,3,5-10,12,14-15,124}	Proposed Commercial zone	1.89
5 ₁₄	Existing Commercial area at the stadium junction	0.04
5 ₁₃	Proposed Sofia Market	0.19
5 ₄	Amboss Hotel	0.27
5 ₁₅₁	Hotel Dalawa	0.06
7. Transportation		
7 ₁	Proposed road reserve	12.59

COUNTY GOVERNMENT OF HOMABAY
DEPARTMENT OF LANDS, PHYSICAL PLANNING, HOUSING AND URBAN DEVELOPMENT

Name of urban area/town/city: Homabay Municipality

Scale: _____
Date: _____

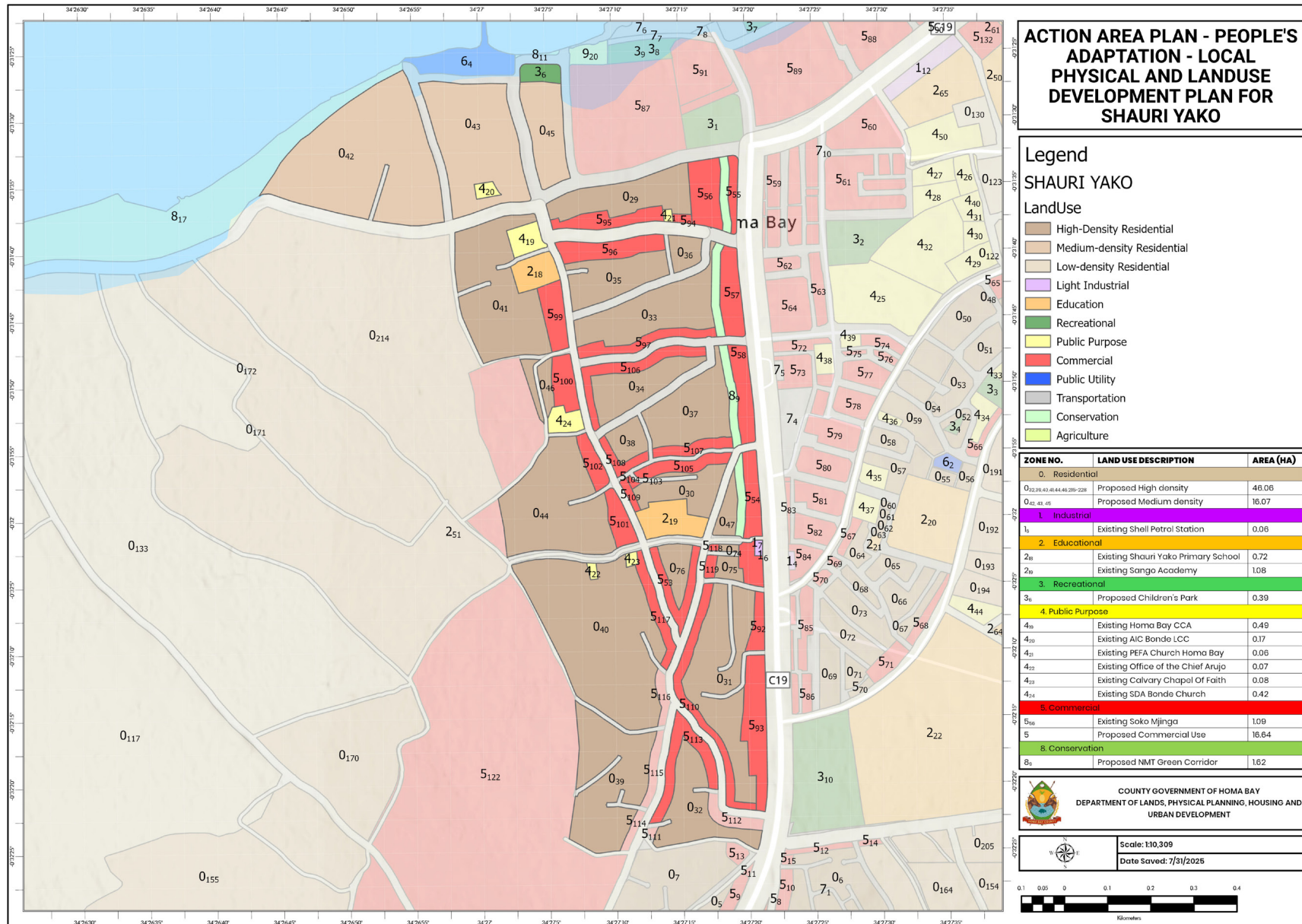


Spatial Reference
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PCS: Arc 1960 UTM Zone 36S
Datum: Arc 1960
Projection: Transverse Mercator
Central Meridian: 33.0000
Longitude of Origin: 0.0000
Latitude of Center: 0.0000
Longitude of Center: 0.0000
Latitude of 1st: 0.0000
Latitude of 2nd: 0.0000

Zone	Description	Area size (Ha)	G.C %	Setback			P.R	No. of Floors	Min Plot Size (Ha)	Type of development allowed	Additional Development Conditions
				Front	Side	Rear					
0 _{139, 164}	Proposed Medium-density Residential Zones	1.51	50%	3m	2m	2m	250%	G+3	0.05	Detached/Semi-detached, Maisonette, Multi-family dwelling (walk-up flats)	Encourage plot amalgamation; provide 3m fire breaks; allow home businesses
0 ₁₋₇	Proposed High-density Residential Zones	13.81	65%	1.5m	1m	2m	350%	G+7	0.05	Apartments, Mid-rise flats (6-7 storeys)	Mandatory sewer connection; shared parking; vertical expansion encouraged
2 ₂	Existing Educational Zone	0.19	50%	5m	5m	5m	75%	G+2	0.1	Primary school, Junior Secondary, ECD	Reserve expansion space; allow sports grounds; shared community use encouraged
4 ₁	Public Purpose Glorious Chapel Church	0.18	50%	5m	3m	3m	100%	G+2	0.30	Church, Assembly, Faith-based Institutions	Provide sanitation blocks, allow community use, secure fenced compounds
5 _{2-3, 5-10, 12, 14-15, 124}	Proposed Commercial Zones	1.89	80%	3-6m	0-2m	3m	300%	G+3	0.05	Shops, Restaurants, Guest houses, Offices, Mixed-use buildings	Allow upper-floor housing; enforce front veranda/arcade; provide loading bays
5 ₁₄	Existing commercial zone	0.04	80%	3-6m	0-2m	3m	300%	G+3	0.05	Shops, Restaurants, Guest houses, Offices, Mixed-use buildings	Allow upper-floor housing; enforce front veranda/arcade; provide loading bays

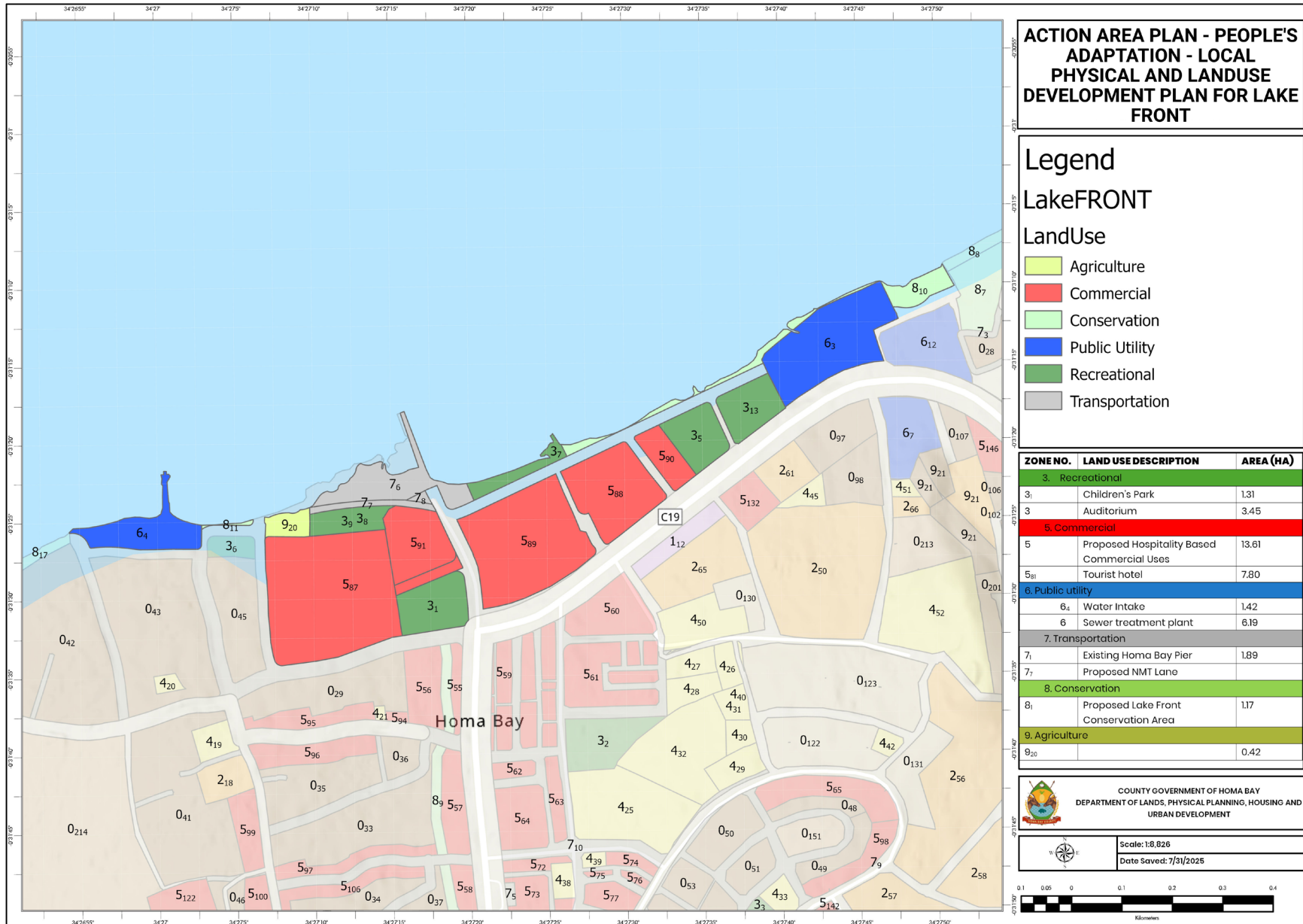
5 ₁₃	Proposed Sofia Market	0.19	70%	2m	2m	2m	240%	G+3	0.05	Market stalls, fresh produce sheds, butcheries, eateries, loading zones, public toilets, cold storage	<p>Provide central waste collection points, central water points, ablution blocks and public bathrooms</p> <p>Provide adequate pedestrian access</p> <p>Provide fixed stalls and hard-standing surfaces</p> <p>Designate common entry/exit points</p> <p>Designate a fire assembly point</p>
5 ₄	Commercial zone Amboss Hotel	0.27	70%	2m	2m	2m	240%	G+3	0.05	Restaurants, Guest houses, Shops	<p>Max 10% expansion with approval</p> <p>Renovations must follow current standards</p>
5 ₁₅₁	Commercial zone Hotel Dalawa	0.06	80%	3–6m	0–2m	3m		G+3	0.05	Restaurants, Guest houses, Shops	<p>Must integrate sustainability and minimize conflicts</p>
7 ₁	Transportation Roads & Access	12.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Roads, Footpaths, Utilities corridor	<p>Enforce full reserve widths; install NMT facilities; reserve fire break paths.</p>

Shauri Yako Informal Settlement



Zone	Description	Area size (Ha)	GC%	Setback			Plot Ratios % / FAR	No. of Floors	Min Plot Size (Ha)	Type of Development Allowed	Additional Development Conditions
				Front	Side	Rear					
0 _{32,39,40,41,44,46,215-228}	Proposed High-Density Residential	6.46	65%	1.5m	1m	2m	350%	G+7	0.05	Social housing, apartments, hostels, daycare, shared laundries	25% green space, rooftop/garden play area, sanitation, waste zone, greywater use, rent-control incentives
0 _{42,43,45}	Proposed Medium-Density Residential	16.07	50%	3m	2m	2m	250%	G+3	0.05	Family units, backyard units, rentals, home-based businesses	30% green cover, modular extensions, rainwater harvesting, bioswales
1 ₆	Light Industrial – Petrol Station	0.06	70%	6m	3m	3m	150%	G+2	0.1	Fuel station	Pollution buffer, secure fencing, no residential adjacency
2 ₁₈	Educational Institutions	0.72	50%	5m	5m	5m	75%	G+2	0.1	ECD, Primary, Secondary schools	Elevated floors, playgrounds, sanitation, public accessibility
3 ₆	Public Park / Recreation	0.39	10%	3m	3m	3m	20%	1	0.05	Parks, courts, tree reserves	No commercial use, solar lights, benches, bioswales
4 ₁₉₋₂₄	Faith-based / Civic Public Purpose	1.00	50%	5m	3m	3m	100%	G+2	0.30	Churches, admin offices, NGO facilities	Sanitation facilities, shared-use encouraged, fencing
5 ₅₆	Commercial Zone – Soko Mjinga	1.00	70%	2m	2m	2m	240%	G+3	0.05	Shops, stalls, eateries, salons, micro-businesses	Formal stall layout, night lighting, vending bays, raised floors
8 ₉	Conservation – NMT Green Corridor	1.62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cycle lanes, walkways, pedestrian rest points	Minimum 2.5m width, universal access, trees every 10–12m
7	Transportation Network	~Varied	N/A	N/A	N/A	N/A	N/A	N/A	ROW Widths 9–12m	Roads, alleys, paths, footways, Cycling paths	Public access preserved, drains, trees, lighting

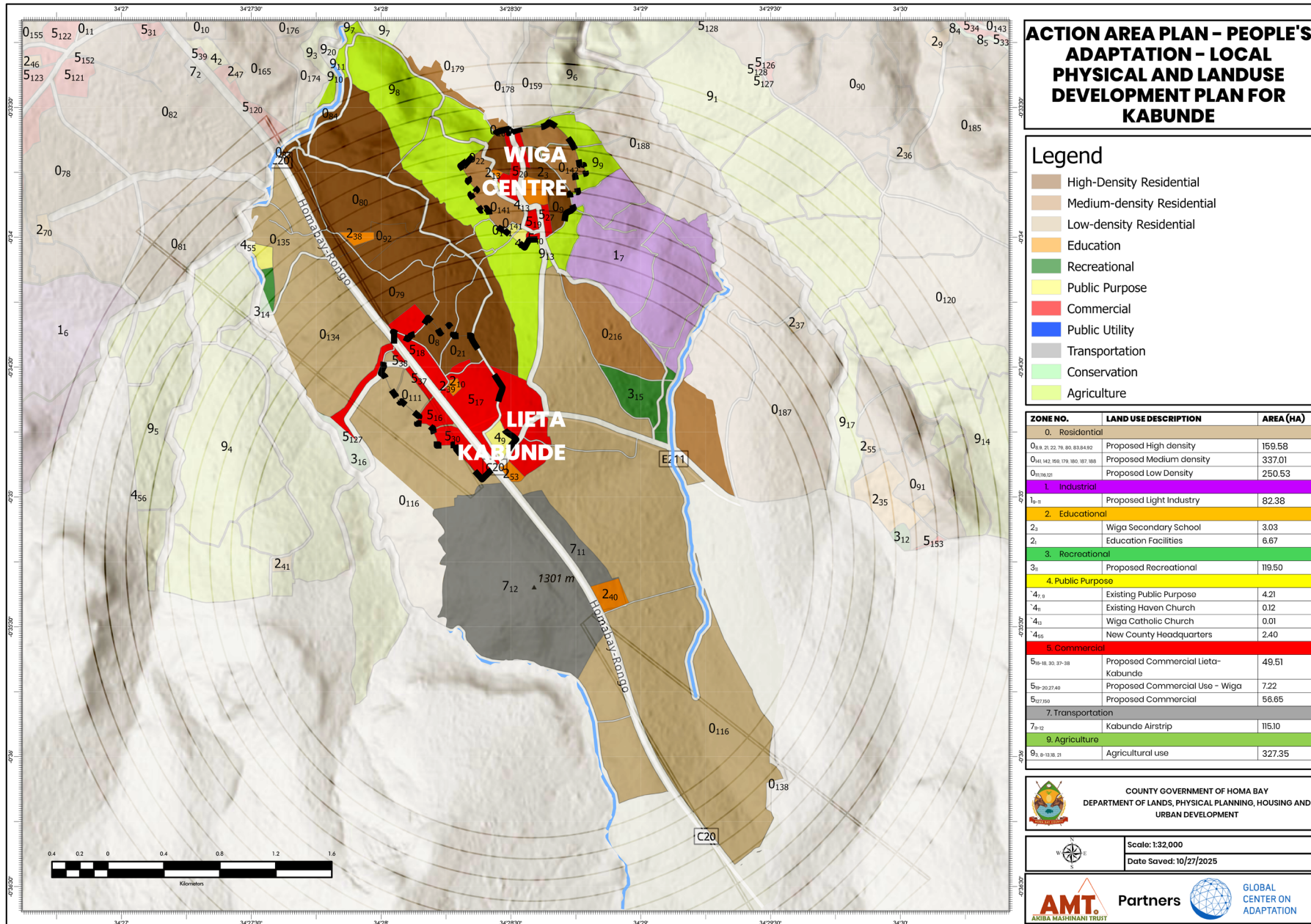
Lakefront



Zone	Description	Area Size (Ha)	G.C %	Setback			P.R % / FAR	No. of Floors	Min Plot Size (Ha)	Type of Development Allowed	Climate Adaptation Strategies	Additional Development Conditions
				Front	Side	Rear						
3 ₁	Recreational – Children’s Park	1.31	10%	3m	3m	3m	20%	1	0.05	Children’s play areas, family zones, lawns	Permeable pavements, native shade trees, rain gardens, solar lighting, grass swales	No commercial buildings, fully accessible, seating, soft fencing
3 ₂	Recreational – Auditorium / Events	3.45	20%	3m	3m	3m	20%	1	0.1	Amphitheatre, cultural events, open air shows	Landscaped berms, elevated stage, bioswales, solar AV lighting	Multi-use space, pedestrian access only, art installations encouraged
5	Commercial – General & Mainly Hospitality Based	13.61	75–80%	3–6m	0–2m	3m	300%	G+6 (Bonus G+7)	0.05–0.07	Shops, cafés, hotels, market stalls, boat services	Green roofs/walls, passive cooling, greywater recycling, raised floors, silt-trap drainage	Public linkages required, keep lake view corridors open, night lighting
6 ₁	Public Utility – Water Intake	1.42	40%	6m	3m	3m	50%	G+1	0.05	Water abstraction and treatment	Flood-resilient infrastructure, fenced intake zones, vegetated buffers	Restricted access, 20m buffer from public spaces, protected shoreline zone
6 ₂	Public Utility – Sewer Plant	8.19	40%	6m	3m	3m	40%	G+1	0.1	Sewerage treatment and polishing wetlands	Constructed wetlands, noise/smell buffers, bio-fencing, retention ponds	Not adjacent to residential zones, odor mitigation mandatory
7 ₁	Transportation – Existing Pier	1.10 (est.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Ferry docking, boat boarding, transport	Floating structures, resilient decking, solar security lights	Publicly owned, 6m building buffer, connects to NMT routes
7 ₂	Transportation – NMT Lane	0.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Bike and pedestrian lanes, e-mobility access	Shaded walkways, bioswales, rain capture, universal access	Minimum width 2.5m, integrated tree canopy, connect across all zones

8₁	Conservation – Lakefront Buffer	1.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Vegetative buffers, passive recreation, nature paths	15m no-build buffer, vetiver hedges, native grass cover, erosion control	No permanent structures, signage for conservation, co-managed by CBOs
9₂₀	Fish Landing Site (Near Modern Fish Market)	0.42	≤30%	2m	2m	2m	N/A	1	0.05	Boat docking, fish offloading, basic cleaning & cold storage	Raised platforms, non-slip surfaces, water-efficient fish washing zones, shaded holding areas, drainage with silt/oil separation	Integrated with fish market, waste collection required, secure storage, health & safety compliance

Kabunde buffer zone



Zone	Description	Area Size (Ha)	G.C %	Setback			Plot Ratio / FAR	No. of Floors	Minimum Plot Size (Ha)	Type of Development Allowed	Climate Adaptation Strategies	Additional Development Conditions
				Front	Side	Rear						
0 (Residential)	Inclusive of proposed High, Medium, and Low-Density Residential zones within Leta Kabunde and Wiga Centre. Designed to accommodate growing housing needs while ensuring environmental integration and service accessibility.	783.71	35% (low), 50% (medium), 70% (high)	5m	3m	3m	80% (low) – 240% (high)	1–m3	0.05 (high), 0.1 (medium), 0.2 (low)	Detached dwellings, townhouses, rental flats, apartments, and low-rise mixed-use in high-density areas	Promote green roofing, greywater reuse, orientation for passive ventilation, permeable paving, and household tree planting	Ban on high walls, enforce housing typology consistency, require on-site water storage and composting pits for units over 3 households

1 (Industrial)	Proposed light industry zone in the southern buffer of the airstrip. Reserved for non-polluting, small-scale production and storage activities integrated with logistics corridors.	82.38	70%	6m	3m	3m	150%	G+2	0.2	Light assembly, warehousing, agro-processing, and logistics	Use of bio-swales for runoff, noise-buffering trees, solar-powered operations, water recycling units	No heavy or pollutive industry allowed, greenbelt buffer mandatory on perimeter, night-time operation noise controls
2 (Educational)	Covers Wiga Secondary School and planned public school sites. Positioned to serve current and future populations across Kabunde settlements.	6.03	50%	5m	5m	5m	75%	G+2	0.1	Nursery schools, primary, secondary schools, teacher training institutes	Incorporate shaded walkways, natural daylighting, ventilated classrooms, and rooftop water harvesting	Noise-buffering from adjacent uses, pedestrian access from main roads, boundary fencing to meet safety standards

3 (Recreational)	Major green and sports zone east of Kabunde centre for active and passive leisure. Enables communal cohesion and ecological buffering.	119.50	10%	3m	3m	3m	20%	1	0.05	Public parks, playgrounds, stadiums, nature trails	Tree retention targets, retention ponds for stormwater, indigenous landscaping, and minimal concrete use	Public access must be guaranteed, lighting required for evening safety, event spaces to include eco-toilets
4 (Public Purpose)	Distributed across Kabunde and Wiga, includes religious institutions, administrative headquarters, and social infrastructure.	9.63	50%	5m	3m	3m	100%	G+2	0.30	County offices, churches, clinics, public halls, police posts	Encourage daylighting and solar backup, rainwater storage tanks, community gardens on setbacks	Ensure disability access ramps, signage, and open waiting areas; all public buildings to include tree planting plans

5 (Commercial)	Spans Wiga and Leta Kabunde centres, accommodating growing trade and service industries. Prioritizes pedestrian-friendly, vertically-integrated businesses.	17.21	70%	3m	2m	2m	240%	2-4	0.05	Shops, offices, mixed-use buildings, open-air markets, retail	Mandate solar panels, shared waste management, shaded walkways, rainwater reuse systems	Controlled signage size and height, include service lanes, rooftop gardens encouraged on 3+ storey buildings
6 (Public Utilities)	Utilities like telecom towers, water reservoirs, and energy substations supporting Kabunde's infrastructure systems.	~5.00 (estimated)	20%	6m	4m	4m	40%	1	0.1	Water, power, tele communications, and emergency service infrastructure	Site slope management, buffer planting, secure fencing with native vegetation, noise reduction technologies	Safety zones required around towers, night lighting should be downward-shielded to reduce light pollution

7 (Transportation)	Includes Kabunde Airstrip and key roads. Designed with aviation safety and connectivity principles.	116.50	10%	20m	10m	10m	As per KCAA/ ICAO standards	N/A	N/A	Runway, access roads, parking, future transit hubs	Establish OLS buffers (0–3 km), vegetated barriers for noise, bio-retention basins	No tall structures in 3 km radius, flight path must remain obstacle-free, align with county mobility strategy
8 (Conservation)	Slopes, wetlands, and riparian lands earmarked for ecosystem preservation, erosion control, and biodiversity habitat.	~200.00 (estimated)	5%	10m	6m	6m	10%	1	1.00	Nature reserves, afforestation zones, eco-tourism, wetlands	Ban impervious surfaces, encourage wetland protection, zero-fence zones, native species replanting	No subdivision allowed, ecotourism structures must be raised or removable, annual ecological audits required
9 (Agriculture)	Largest land use block, supports food security through diversified rural production. Buffer to low-density housing.	327.35	10%	10m	5m	5m	30%	1	0.25	Mixed crop farming, fish ponds, livestock keeping, agroforestry	Drip irrigation, windbreaks, minimal tillage, composting pits	Prevent encroachment into riparian areas, no subdivision below 0.25 ha, promote climate-smart techniques

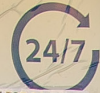
Maji

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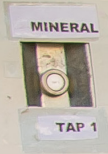


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HOMA BAY COUNTY



Mineral
Water
TAP 1

vice



Filtered Water
TAP 2

Filtered Water
TAP 3



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WATER TANKS LIMITED

MSAF

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COUNTY GOVERNMENT

COMMUNITY

ROAD TO IMPLEMENTATION



IMPLEMENTATION FRAMEWORK

This chapter outlines the institutional, financial, and accountability mechanisms necessary to operationalize the People’s Adaptation-Local Physical and Land Use Development Plan for Homa Bay Municipality. It provides a structured implementation framework detailing the

roles and responsibilities of key stakeholders, including county departments, municipal boards, community organizations, and development partners. The framework emphasizes inter-agency coordination, community participation, and phased implementation.

The implementation framework for the Plan is as indicated in the table below.

Sector	Sub Sector	Proposal	Location	Actor	Timeframe (years)		
					0-2	3-5	6-10
Physical Infrastructure	Road transport	Expansion of 18 km of B1 to 60 m Road Reserve	Within the Municipality (From Ngegu - Sero	KENHA, County Department of LPPHUD, County Department of Roads, Residents			
		Expansion of 22 kms of arterial roads to 40 m Road Reserve	Within the Municipality (From Junction Kodoyo – Past Adongo Primary)				
		Expand 34 kms of Sub Arterial Roads to 30m reserve	Within the Municipality	KURA, County Department of LPPHUD, County Department of Roads, Residents			
		Expand and improve 65 kms of Collector Roads to 18 m road reserve	Within the Municipality				
		Expand and improve 345 kms of Local Access Roads to 12 m road reserve	Within the Municipality				
		Construct new bus station	Near Junction Kodoyo	County - Department of Urban Development, Department of Roads, Public Transport, actors, residents			
		Acquisition of land for road expansion and construction of new bus station	Within the Municipality	KENHA, KURA, County Department of LPPHUD, and county department of roads			
		Construct 2 interchanges at Junction Kodoyo and for the proposed Bypass	Junction Kodoyo, B1-Bypass junction	KENHA			
		Construct 20 <i>boda boda</i> sheds within the Municipality	Within the Municipality	County – department of cooperatives, MCAs			

		Train 1000 <i>boda boda</i> riders, pedestrian and fisher folks on transport safety	Within the Municipality	NTSA, <i>boda boda</i> riders, fisher folks, County Department of Roads			
	NMT	Construct 2 km NMT track along the lake front	Along the lake front	County Department of Roads			
	Water transport	Operationalize pier	Existing pier	Ministry of Roads and Transport			
		Construction of 8 beach management units along the lake front	Along the Lake front	County department of blue economy, BMUs, Fisher folks			
	Water	Expand Ngegu water treatment plant to be a central flocculation unit (CFU) from 240m ³ to 1800m ³ a day	Ngegu	Lake Victoria water works development agency, HOMAWASCO, AFD, other implementing partners and residents			
		Expand Lake front water treatment plant from 8,800m ³ to 11,800m ³	Lake front				
		Install 14Km of water main lines to the storage tanks (DN 200)	To Got Kabok and Manera				
		Install new storage tanks – 1000M ³ at Got Kabok, 900m ³ in Manera area	Got Kabok, Manera				
		Expansion of storage facilities – Kabunde from 80m ³ to 300m ³ , Got Asego from 770m ³ to 1800m ³ , Junction Kodoyo from 50m ³ to 200m ³ and Simenya from 100m ³ to 500m ³	Kabunde, Got Asego, Junction Kodoyo, Simenya				
		Drill 2 boreholes with 80m ³ storage facility in Olodo and Wang'apala					
		Prepare detailed designs for implementation and last mile connection	Within the Municipality				

Sewer	Construct 54 kms of trunk sewers (DN 400)	Within the Municipality	Lake Victoria water works development agency, HOMAWASCO, AFD, other implementing partners and residents			
	Construct main lines (DN 315-375)	Within the Municipality				
	Construct new sewer treatment plant	Rangwena				
	Construct new DTF	Arujo Sub location				
	Acquire land for DTF and construction of new sewer line	Arujo and Rangwena				
	Install a sewer pumping station at the existing sewer treatment plant	Existing sewer treatment plant				
	Install 2.01 km pumping line from existing to proposed sewer treatment plant (DN 200)	Makongeni area				
	Prepare detailed designs for implementation and last mile connection	Within the Municipality				
	Construction 16 public toilets within Markets	Within markets		County department of trade, business people, development partners, residents		
Solid Waste management	Acquisition of land for the proposed MRC	West of Bishop Magare	Homabay Municipality, KUSP, waste collectors, residents			
	Construction of MRC					
	Purchase 3 truck for waste collection	Within the Municipality				
	Install waste 1,300 receptacles along the NMT corridors	Along NMT corridors				
	Civic education on waste segregation	Within the Municipality				
Telecommunication	Install 484 km of telecommunication duct along the road network	Within the Municipality	County Department of Energy, Utility providers, Youths, Residents			

	Energy	Install and upgrade 45 transformers within the Municipality	Within the Municipality	KPLC, development partners, customers			
		Upgrade the existing power station	Near Raila Odinga Stadium				
		Install 30 high mast lights in all the markets, development nodes and informal settlements	Markets, development nodes, informal settlements				
		Install solar mini grids in areas not covered by national grid	Within the Municipality				
		Civic education on use of clean energy solutions	Within the Municipality				
Social Infrastructure	Education	Upgrade 38 primary and junior secondary schools to CBC-compliant institutions	Municipality	Ministry of Education, County Government, Education Sector WG			
		Upgrade 12 secondary schools to CBC-compliant status	Municipality	Ministry of Education, County Government, Education Sector WG			
		Construct new secondary school	Kothidha	Ministry of Education, County Government, NG-CDF			
		Upgrade Ogande Special Needs Education Facility	Kanyach Kachar	Ministry of Education, County Government, NCPWD			
		Construct hostel facilities at Tom Mboya University	Asego	Tom Mboya University, Ministry of Education, Development Partners			
		Upgrade Kenya Medical Training College facilities	Homa Bay Town	KMTC, Ministry of Education, Development Partners			
		Construct vocational training center	Maguje, Maguti	County Government, Ministry of Education			

		Roll out ICT infrastructure in schools	Municipality	Ministry of Education, ICT Authority			
		Establish adult literacy centers	Municipality	Ministry of Education			
	Health	Upgrade Level 3 health facilities to Level 4	Municipality	Ministry of Health, County Government			
		Upgrade Level 4 to Level 5 health facilities	Municipality	Ministry of Health, County Government			
		Construct Level 3 health centers	Kothidha, North Kanyabala	Ministry of Health, County Government			
		Construct integrated safe space	Municipality	Ministry of Health			
		Operationalize mental health unit	Homa Bay Town	Ministry of Health			
		Establish roadside first aid stations	Arujo & Rangwena Bridges	Ministry of Health, KRCS, Red Crescent			
		Construct elderly care facility	Municipality	Ministry of Health, Gender Dept.			
		Establish youth-friendly corners in health centers	Municipality	Ministry of Health, UNFPA			
Security & Administration	Governance & Security	Construct integrated administration/security centers	Municipality	Ministry of Interior, NG-CDF			
Recreation	Sports & Leisure	Redevelop lakefront for sports & recreation	Lakefront	County Government			
		Develop parks and inclusive playgrounds within the town center and all the nodes.	Municipality	County Government			
		Upgrade municipal stadium	Municipality	County Government			
		Establish youth sports academy	Municipality	County Government, Ministry of Sports			

Cemetery		Construct cemetery and crematorium	North Kanyabala	County Government		
		Develop digital burial registry	Municipality	County Government		
Library & Innovation	Knowledge & Community	Construct libraries and innovation centers	Municipality	County Government		
		Deploy mobile library vans	Municipality	County Government		
Disaster Risk Management	Emergency Management	Develop disaster plan and early warning systems	Municipality	Homa Bay Municipality		
		Construct fire and disaster response HQ	Municipality	Homa Bay Municipality		
		Develop disaster risk policy	Municipality	Homa Bay Municipality		
Trade & commerce	Markets & Trading	Develop market security and safety plan	Municipality	Homa Bay Municipality		
		Upgrade market infrastructure with WASH, stalls, lighting	Municipality	Homa Bay Municipality, Trade Department		
Housing and Human Settlements	Upgrading informal settlements	Implement comprehensive settlement upgrading, including construction and improvement of roads, footpaths, storm drainage, water kiosks, sanitation facilities, and street lighting	Informal settlements (Makongeni, Shauri Yako, Sofia)	County Government (LPPH&UD), KISIP (National Govt/World Bank), Community Committees, NGOs, KUSP 2		
		Regularize land tenure by, planning, surveying and issuing titles or secure leases to residents holding informal or undocumented land rights	Informal settlements and unplanned residential clusters (Makongeni, Shauri Yako, Sofia)	County Government (LPPH&UD), Ministry of Land and Physical Planning, National Land Commission, Community Leaders		
		Identify, assess, and safely relocate households situated in high-risk, hazardous, and flood-prone areas to safer planned housing, providing financial and logistical support for reconstruction (RAP)	High-risk flood zones and riparian encroachment areas within informal settlements (particularly in low-lying areas of Makongeni, Shauri Yako, and Sofia)	County Government, National Disaster Management Agencies, Humanitarian Organizations, NGOs, Development partners.		

Affordable and social housing	Facilitate development of new affordable housing projects through public-private partnerships and national housing programs	Designated housing sites within Homa Bay town (e.g. ongoing 11acre Makongeni housing project)	County Government (LPPH&UD), National Housing Corporation, Private Developers, Kenya Mortgage Refinance Company			
	Develop social housing units in the proposed high-density residential zones within informal settlements, prioritizing low-income and vulnerable households	High-density zones in Shauri Yako, Makongeni, and Sofia informal settlements	County Government (LPPH&UD), National Housing Corporation, Development Partners, Community Groups			
	Provide incentives such as subsidized infrastructure provision, fast-tracked plan approvals, and reduced development charges for projects meeting affordability criteria	Municipality-wide	County Government, County Assembly, Department of Lands, Physical Planning, Housing and Urban development, Developers			
	Support access to housing finance via partnerships with micro-finance institutions and mortgage lenders, including linking to national affordable housing schemes	Municipality-wide	Financial Institutions, County Housing Dept., NGOs, Youth & Women Groups			
	Promote incremental housing construction by providing technical assistance and material support (e.g., cement subsidies) to low-income households	Informal settlements and low-income estates (Makongeni, Shauri Yako, Sofia, etc.)	County Social Services, NGOs, Community Savings Groups, Private Suppliers			
	Proper planning in new and existing developments	Enforce zoning and development control regulations—including minimum plot sizes, building setbacks, maximum plot coverage, and provisions for open spaces—to prevent overcrowding and ensure adequate amenities	All new development areas within the municipal boundary	Department of Lands, Physical Planning, Housing and Urban Development, Municipal Board, Enforcement Officers, Developers, Community Leaders, NEMA		

		Provide essential trunk infrastructure such as access roads, water supply lines, sewer networks, drainage, street lighting, and electricity connections in newly developing residential areas to promote orderly growth and livability	Planned expansion zones and designated residential growth areas as identified in the land use plan	County Government, Utility Agencies (Water, Energy), National Government, Private Sector (developers)			
		Develop detailed area plans—including layouts, subdivisions, public amenities, and infrastructure—for undeveloped or public land parcels earmarked for mixed-income housing development.	Peri-urban expansion zones, large vacant public land parcels identified for future growth	County Urban Planning Unit, Housing Department, Community representatives, land owners			
		Encourage infill development in vacant plots and low-density zones within the urban core for higher density, mixed-use housing.	Vacant plots within Homa Bay CBD	Department of LPPH&UD, Developers, Landowners, National Land Commission (NLC)			
		Preserve and rehabilitate buildings of historical importance	Post Office St. Paul’s Cathedral	County Government of Homabay, National Museums of Kenya, Planning Dept., Community Heritage Groups			
		Conduct phased removal and replacement of asbestos roofing, prioritizing public buildings.	Municipality-wide (public buildings, then residential areas)	County Health Dept., NEMA, Infrastructure Dept., Building Owners, County Commissioner			
		Establish and enforce clear guidelines and standards for sustainable building practices (e.g., eco-friendly materials, rainwater harvesting, energy efficiency) in all new housing developments	Municipality-wide (applicable to all new construction permits)	Department of Lands, Physical Planning, Housing and Urban development, Municipal Board, National Construction Authority, Developers			

		Strengthen public education on land succession and inheritance to stabilize multi-generational settlements.	Multi-generational housing areas (Makongeni, Shauri Yako, Sofia)	County Lands Dept., Community Leaders, Civil Society, NGOs, Department of Stakeholder Engagement and Public Participation			
		Integrate climate resilience criteria into housing designs and settlement upgrading projects—including flood-resistant construction, elevated foundations, proper drainage systems, and tree planting for shade and erosion control	Informal settlements (Makongeni, Shauri Yako, Sofia) and new residential zones	County Physical Planning, Housing Department, Climate Change Unit, Development Partners, NGOs			
		Promote adoption of renewable energy solutions (e.g., solar home systems, solar street lighting) and rainwater harvesting systems in all new developments to enhance resilience and reduce vulnerability to climate-induced disruptions	Municipality-wide (mandatory in new housing projects and settlements upgrading)	County Energy Department, Housing and Physical Planning Dept., Private Sector (renewable energy firms), NGOs			
	Balanced urban growth	Prepare detailed Local Physical Development Plans and infrastructure investment frameworks for secondary urban centers to guide growth, enhance their attractiveness, and encourage population dispersal from the congested urban core.	Secondary centers: Lieta-Kabunde, Junction Kodoyo, Got Kokech, Wiga, Nyagidha, Koduogo, Wang’apala Junction, Kapita	County Physical Planning Dept., Urban Development Dept., Community Leaders			
		Prioritize infrastructure development (roads, water, electricity, drainage, ICT) in identified secondary centers to improve connectivity, livability, and capacity to attract residential and economic activities.	Lieta- Kabunde, Junction Kodoyo, Got Kokech, Wiga, Nyagidha, Koduogo, Wang’apala Junction, Kapita	County Government, Utility Agencies, National Govt., Private Developers			

		Offer incentives (fast-track approvals, reduced land rates, infrastructure support) to developers investing in residential and mixed-use projects in secondary centers.	Lieta- Kabunde, Junction Kodoyo, Got Kokech, Wiga, Nyagidha, Koduogo, Wang'apala Junction, Kapita	County Government, Physical Planning Dept., Private Developers			
		Promote strategic decentralization of public amenities (schools, health centers, markets, recreational spaces) to secondary centers to encourage equitable urban development and reduce pressure on central infrastructure.	Lieta- Kabunde, Junction Kodoyo, Got Kokech, Wiga, Nyagidha, Koduogo, Wang'apala Junction, Kapita	County Government, Health & Education Depts., Trade Dept., Developers			
Environment, Climate Change, and Disaster Management	Natural resources	Demarcate and protect all riparian reserves along the lake shore and rivers (establish no-settlement buffer zones), and relocate activities or structures currently encroaching these sensitive environmental areas	Lake Victoria shoreline within Municipality, River estuaries, and streams (e.g., River Rangwena, River Arujo)	County Environment Dept., National Environment Management Authority (NEMA), County Lands Dept., Local Administration, Community Leaders, CBOs			
		Launch and sustain an urban reforestation and tree-planting campaign to increase urban tree cover, targeting indigenous species and fruit trees planted in public open spaces, road reserves, schools, hillsides, and institutional compounds	Hillsides and open lands (Got Asego, Got Rabuor hills, road reserves, schools, public institutions)	Community Forest Associations, Schools, NGOs, Youth Groups, CBOs, Kenya Forest Service, NEMA			
		Promote the transition to clean, renewable, and energy-efficient alternatives to charcoal and firewood, including incentives and subsidies for LPG use, solar home systems, and energy-efficient cooking stoves, aimed at reducing deforestation and air pollution	Municipality-wide (targeting households, eateries, and institutions)	County Energy Department, Private Energy Companies, Women's Groups, NGOs, Development Partners			

		Enforce strict anti-pollution regulations, monitoring and responding promptly to illegal waste disposal and pollution incidents; implement regular lake-shore clean-up drives, and conduct community education on environmental conservation	Lake Victoria shoreline, drainage channels, informal dumping hotspots	County Environment & Public Health Departments, NEMA, Beach Management Units, Law Enforcement Agencies, Community Groups			
		Introduce ecosystem-based approaches such as planting and rehabilitation of wetlands and riparian vegetation buffers to enhance flood control, improve water quality, and protect biodiversity	Riparian corridors along Lake Victoria shoreline, River Rangwena, River Arujo, and flood-prone areas	County Environment Dept., NEMA, Community Conservation Groups, NGOs, CBOs			
		Implement community-led conservation programs and environmental stewardship training sessions to raise local awareness and active involvement in natural resource protection	Municipality-wide, with special emphasis on high-risk and ecologically sensitive zones	County Environment Department, Schools, NGOs, CBOs, Media, Community			
		Reclaim the abandoned quarry near Makongeni Primary School to convert into a public green space or park.	Abandoned quarry site near Makongeni Primary School	County Environment Dept., Physical Planning, Community Leaders, NGOs, Makongeni Primary School			
	Climate resilience and disaster risk management	Formulate and operationalize a Municipal Disaster Preparedness and Response Plan, Climate risk profile covering floods, fires, droughts, disease outbreaks, and other climate-related emergencies; include establishing early-warning systems (e.g., SMS flood alerts), community disaster drills, and designation of emergency evacuation centers	Municipality-wide (with particular emphasis on high-risk zones such as lakeshore and informal settlements)	County Disaster Management Committee, Meteorological Department, Red Cross Society, NGOs, Community Leaders, FLLoCA Program			

		Conduct ongoing public awareness and education campaigns on climate change impacts, adaptation strategies, disaster risk management, and environmental stewardship; integrate climate education programs into school curricula and community forums	Municipality-wide (public forums, schools, community halls, local media including radio programs)	County department of Environment, Early Year Education Department, Civil Society Organizations, Media Outlets, Schools, Youth and Women Groups, FLLoCA Program			
		Promote climate-smart agriculture and urban greening strategies (including urban farming, backyard gardens, and agroforestry) within residential communities and schools to enhance local food security and resilience to climate shocks	Municipality-wide, with a focus on peri-urban wards and informal settlements	County Agriculture Department, Environment Department, NGOs (agriculture/climate resilience), Community Farmer Groups, Schools			
		Conduct Strategic Environmental Assessment (SEA) for implementing the LPLUDP.	Municipality-wide	Department of Lands, Physical Planning, Housing and Urban Development County Environment Dept., NEMA, Independent Environmental Experts			
	Green infrastructure	Develop green infrastructure corridors along roads with shaded, walkable paths, permeable paving, and stormwater absorption features.	Major roads and pedestrian corridors within Municipality	County Physical Planning & Environment Depts., Roads Dept., Developers, NGOs			
		Mandate use of permeable paving materials in public open spaces, parking areas, and footpaths to reduce runoff and flooding.	Municipality-wide	County Physical Planning, Roads & Public Works Depts., Developers			
		Establish designated waste collection points in all emerging and existing secondary centers and markets to improve waste management.	Sub centers, markets, emerging settlements	County Environment & Waste Management Unit, Market Committees, Private Collectors, CBOs			

	Environmental governance	Digitize and demarcate municipal boundaries clearly, including environmentally protected zones, to enhance environmental governance and reduce conflicts.	Municipality-wide (including conservation and riparian zones) Got Rabuor, Got Asego, Riparian land	County Physical Planning & Lands Dept, NEMA, Survey of Kenya, WRA			
		Conduct inventory and digitization of all public and Private land parcels for environmental, utility, and public-use zoning purposes.	Municipality-wide	County Lands & Physical Planning Dept., ICT Dept., National Land Commission, County Land Registrar			
Urban Governance and Land Use Management	Institutional capacity	Enhance capacity and staffing of Development control and Enforcement officers for efficient development control and compliance monitoring.	Municipality – Within the Planning Area	Municipality, County Department of Lands, Physical Planning, Housing and Urban Development, National Land Commission (for training), FAO, Other Development Partners, County Public Service Board			
		Land use planning	Conduct civic education and on land use planning, zoning regulations, building codes, environmental guidelines.	Municipality-wide (barazas in wards, radio/media outreach)	County Physical Planning & Lands Department, Civil Society Organizations, Media, Community Leaders		
	Identify, survey, secure, and bank land for strategic public infrastructure and amenities		Strategic sites identified in the development plan (public purpose plots and infrastructure corridors)	County Lands Department, National Land Commission, Legal Affairs, Community Leaders, Developers			

		Develop and operationalize a county-wide digital e-permitting platform integrated with NEMA approvals	Municipality-wide (digital platform accessible to all applicants)	County Physical Planning & ICT Units, e-Government Agency, NEMA, Professional Bodies (Architects & Engineers), Developers		
Public participation and accountability in land management		Establish and maintain an accessible digital Land Information Management System (LIMS)	Municipality, County Department of Lands, Physical Planning, Housing and Urban Development, National Land Commission (for training), FAO, Other Development Partners, County Public Service Board	Municipality, County Department of Lands, Physical Planning, Housing and Urban Development, National Land Commission (for training), FAO, Other Development Partners, County Public Service Board		
		Strengthen mechanisms for continuous public participation and feedback in planning and land-use management decisions, including public hearings, community planning forums, and complaint management systems.	Municipality-wide (ward-level community forums, stakeholder consultations)	County Lands and Physical Planning Dept, Civil Society, Community Leaders, NGOs, Dept of Stakeholder Engagement and Public Participation		
		Conduct regular audits and performance evaluations of urban planning and enforcement activities to enhance accountability and improve responsiveness to community needs and planning guidelines.	County Physical Planning & Enforcement units (Municipality-wide audit coverage)	County Auditor, County Planning & Enforcement Units, Civil Society Organizations, External Auditors		

Capital Investment Plan

The capital investment plan is as indicated in the table below.

Project Impact Project Priority **H - High | M - Medium | L - Low**

Sub-Sector	Project detail	Lead institutions	Project impact – contribution to strategy	Project priority	Projects estimated cost	Project financing model
Road transport	Expansion of 18 km of B1 to 60 m Road Reserve	KENHA	H	H	Ksh 6.75B	EXCHEQUER
	Expansion of 22 kms of arterial roads to 40m Road Reserve		H	H	KSH. 7.3B	World Bank
	Expand 34 kms of sub-arterial roads to 30 m reserve	KURA	H	H	KSH. 9.7B	EXCHEQUER KUSP
	Expand and improve 65 kms of collector roads to 18 m road reserve		H	M	KSH. 14.9B	KISIP
	Expand and improve 345 kms of local access roads to 12 m road reserve		M	M	KSH. 60.4B	World Bank
	Construct new bus station	County Department of Roads	H	H	KSH. 236M	County Allocation, Development partners
	Construct 20 <i>boda boda</i> sheds within the Municipality	County Department of Cooperatives	H	H	KSH. 6M	County Department of Trade, MCAs
	Train 1000 <i>boda boda</i> riders, pedestrian and fisher folks on transport safety	County Department of Roads	H	H	KSH. 1.6M	County department of roads, NTSA and development partners

Water transport	Operationalization of the pier	Ministry of Roads and Transport	H	H	-	Ministry of Roads and Transport
	Construction of 8 beach management units along the lake front	County department of blue economy	H	M	KSH. 38.4M	Department of fisheries and blue economy
Water	Expand Ngegu water treatment plant to be a central flocculation unit (CFU) from 240m ³ to 1800m ³ a day	Lake Victoria water works development agency	H	H	KSH. 23.3M	World Bank, AFDB, Exchequer, Other development partners
	Expand Lake front water treatment plant from 8,800m ³ to 11,800m ³				KSH. 48.1M	
	Install 14Km of water main lines to the storage tanks (DN 200)				KSH. 85M	
	Install new storage tanks – 1000M ³ at Got Kabok, 900m ³ in Manera area				KSH. 15.7M	
					KSH. 13.9M	
	Expansion of storage facilities – Kabunde from 80m ³ to 300m ³ , Got Asego from 770m ³ to 1800m ³ , Junction Kodoyo from 50m ³ to 200m ³ and Simenya from 100m ³ to 500m ³				KSH. 8.2M	
					KSH. 6.3M	
	KSH. 29M					
	KSH. 13.3M					
	KSH. 12M					

Sewer	Construct 54Kms of trunk sewers (DN 400)	Lake Victoria water works development agency	H	H	KSH. 767M	World Bank, AFDB, Exchequer, Other development partners
	Construct of main lines (DN 315 – 375)				KSH. 13.6M per Km	
	Construct new sewer treatment plant				KSH. 188M	
	Construct new DTF				KSH. 4.6M	
	Acquisition of land for DTF and new sewer treatment plant				KSH. 35M	
	Install a sewer pumping station at the existing sewer treatment plant				KSH. 11.3M	
	Install 2.01Km of pumping line from existing to proposed sewer treatment plant (DN 200)				KSH. 12.2M	
	Prepare detailed designs for implementation and last mile connection				KSH. 100M+	
	Construction 16 public toilets within Markets	County Department of Trade	H	H	KSH. 32M	
Solid Waste management	Acquisition of land for the proposed MRC	Homa Bay Municipality	H	H	KSH. 6M	KUSP, KISIP
	Construction of MRC				KSH. 4M	
	Purchase 3 truck for waste collection				KSH. 30M	
	Install 1300 waste receptacles along the NMT corridors				KSH. 35M	
	Civic education on waste segregation				KSH. 2M	
Telecommunication	Install 484 Km of telecommunication duct along the road network	County Department of Energy	H	M	KSH. 79M	

Energy	Install and upgrade 45 transformers within the Municipality	KPLC	H	H	KSH. 22.5M	
	Upgrade the existing power sub-station		H	H	KJSH. 100M	
	Install 30 high mast lights in all the markets, development nodes and informal settlements		H	H	KSH. 30M	
	Install solar mini grids in areas not covered by national grid	County Department of Energy				
	Civic education on use of clean energy solutions				KSH. 2M	LREB
Disaster Risk Management	Develop a multi-agency Municipality Emergency and Disaster Risk Management Plan	Homa Bay Municipality	M	M	KSH. 3M	Multi-sectoral inter-agency
	Construct an integrated Disaster and Fire Response Operation Centre	Homa Bay Municipality	H	H	KSH. 120M	Grants and partnerships
	Develop a Municipality Disaster Risk Policy	Homa Bay Municipality	M	M	KSH. 3M	Multi-sectoral, inter-agency
Environment & Climate Resilience	Urban Greening & Reforestation	County Environment Dept, CBOs	M	M	KSH. 10M	County / CBO / CSR
	Demarcate and protect Lake Victoria shoreline and rivers (Rangwena, Arujo); restore riparian buffers using native vegetation and ecosystem based flood control structures	Municipality; County Environment Dept.; NEMA	H	H	KSH. 15M	County & national funds; donor grants
	Promote climate smart agriculture, urban gardens and agroforestry; provide training and support to farmers and residents	Municipality; County Agriculture Dept.; NGOs; research institutions	M	M	KSH. 60M	County budget; agricultural extension programmes; donor funds

Education	Upgrading the existing 39 primary and Junior Secondary schools	Ministry of Education, County Govt of Homabay, County Education WG Partners	M	M	KSH. 520M	Multi-sectoral, inter-agency
	Upgrading the existing 12 secondary schools	Ministry of Education, County Govt of Homabay, County Education WG Partners	H	H	KSH. 220M	Multi-sectoral, inter-agency, Partnerships
	Construction of a Secondary School in Kothidha	Ministry of Education, County Govt, NG-CDF, Education WG Partners	H	M	KSH. 60M	NG-CDF + Gov + Dev. Partners
	Improvement and Equipping of Special Needs Facility at Ogande	Ministry of Education, County Govt, NG-CDF, Disability Council, Homa Bay Municipality	H	M	KSH. 40M	Inter-agency, NG-CDF
	Construction of Hostel Facilities for Tom Mboya University	Tom Mboya University, Dev. Partners, Ministry of Education	M	L	KSH. 200M	Public Private Partnerships
	Improvement of Kenya Medical Training College – Homa Bay	KMTC, Ministry of Education, Dev. Partners	H	H	KSH. 80M	PPP / Government grants
	Construction of Vocational Training Centre at Maguje	County Govt of Homa Bay, Dev. Partners, Ministry of Education, Homa Bay Municipality	M	M	KSH. 50M	County + Dev. Partners
	Construction of Vocational Training Centre at Maguti	County Govt of Homa Bay, Dev. Partners, Ministry of Education, Homa Bay Municipality	M	M	KSH. 50M	County + Dev. Partners

Health	Upgrading Level 3 Health facilities to Level 4	Ministry of Health, County Govt, Health Sector WG Partners	H	H	KSH. 100M	Govt + Dev. Health Partners
	Upgrading Level 4 Health facilities to Level 5	Ministry of Health, County Govt, Health Sector WG Partners	H	H	KSH. 150M	Govt + Dev. Health Partners
	Construction of Level 3 Facilities in Kothidha and North Kanyabala	Ministry of Health, County Govt, Health Sector WG Partners	M	H	KSH. 120M	Govt + Donor support
	Construction of Integrated Safe Space	Ministry of Health, County Govt, Health Sector WG Partners	H	M	KSH. 30M	Multi-sectoral Partners
	Mental Health Facility at County Referral Hospital	Ministry of Health, County Govt, Health Sector WG Partners	H	H	KSH. 40M	Grants + Government budget
	First Aid Response at Accident Hotspots	Ministry of Health, KRCS, Red Crescent, County Govt	M	M	KSH. 20M	Red Cross, Government
	Public Care Facility for the Elderly	Ministry of Health, Gender Dept, County Govt	M	M	KSH. 25M	Govt + Dev. Partners
Security and Administration	Admin and Security Facilities at all Proposed Centers	Ministry of Interior, NG-CDF	H	H	KSH. 100M	NG-CDF + Govt
Recreation	Land for Sports Complex	County Government of Homa Bay	Low	Low	KSH. 300M	Private Investors / PPP
	Lakefront Development for Water Sports	County Government, Tourism Ministry	M	M	KSH. 50M	PPP / Tourism grants
	Playgrounds and Parks (e.g. Opp. Referral Hospital)	County Government	H	H	KSH. 30M	County + Donors
	Upgrade Playgrounds and Stadia	County Government	H	H	KSH. 80M	Govt / Dev. Partners

Cemetery	Cemetery and Crematorium	County Government	M	M	KSH. 20M	County Government Budget
Library and Innovation	Integrated Library, Social Hall, Innovation Centre	County Government, Development Partners	H	H	KSH. 70M	PPP / County Budget
Urban Governance & Land Use Management	Digital Land Information & E-Planning System (GIS, e-permitting)	County Lands & Planning Dept	H	M	KSH.50M	County Government / Development Partners
	Enforcement Capacity (Vehicles and equipment)	County Physical Planning Dept	M	M	KSH.20M	County Government
	Conduct municipality wide civic education on land use planning, zoning regulations and building codes	Municipality; County Planning Dept.; civil society	M	M	KSH.15M	County Government
Land	Public Land Acquisition for Housing & Services (~20 hectares)	County Lands Department	H	M	KSH.60M	County Government
Housing and Human Settlements	Affordable/social housing - Construct ~1 500 units with green technologies	NHC; Municipality; private developers	H	H	KSH.3.0B	PPPs; Affordable Housing Programme
	Urban planning & infill development - Prepare detailed area plans; encourage infill & LPDPs for secondary centres	Municipality; County Planning Dept.; MoLPP	M	M	KSH.300M	County and Municipal funds; technical assistance & donor grants
	Resettlement & safe housing - Relocate households from flood zones; build resilient houses	Municipality; County Housing Dept.; NHC	H	H	KSH.700M	National & county funds; PPPs
	Develop & enforce green building guidelines; provide training	Municipality; Kenya Green Building Society; NCA	M	M	KSH.10M	County budget; donor support
Total					KSH 107.65 billion	

Monitoring and Evaluation Indicators

Sector	Sub-sector	Projects	Monitoring Institutions	Success indicators	Outcome Indicators
Physical infrastructure	Road transport	Expansion of 18 km of B1 to 60 m Road Reserve	KRB	18 km of kilometers of B1 road expanded to 60 m reserve	Improved regional connectivity and travel time reduction on B1
		Expansion of 22 kms of arterial roads to 40m Road Reserve		Acres of land acquired for roads and compensation completed	Improved traffic flow and reduced congestion
		Expand 34 kms of Sub Arterial Roads to 30 m reserve		22 km of kilometers of arterial roads expanded to 40m reserve	Improved intra-urban mobility and connectivity between neighborhoods
		Expand and improve 65 kms of Collector Roads to 18 m road reserve		484 Kilometers of drainage and utility relocation works completed	Reduced travel time
		Expand and improve 345 kms of Local Access Roads to 12 m road reserve		34 km of sub-arterial roads expanded to 30m reserve	Increased land values and development potential along corridors
				Number of access points and junctions improved or signalized	Enhanced safety for motorists and pedestrians
				65 km of collector roads upgraded to 18 m standard	
				% of works completed on walkways, street lighting, and signage	
				345 km of local access roads upgraded to 12 m reserve	

		Construct new bus station	Homa Bay County Department of public works and infrastructure, Homa Bay Municipality	One new bus station constructed and operational	Improved public transport efficiency and reduced congestion in the CBD
		Construct 20 <i>boda boda</i> sheds within the Municipality		20 <i>boda boda</i> sheds constructed at designated locations Number of riders using the sheds daily	Reduced roadside congestion, enhanced safety, organized <i>boda boda</i> operations
		Train 1000 <i>boda boda</i> riders, pedestrian and fisher folks on transport safety	NTSA	1000 individuals trained on transport safety	Increased awareness and adoption of road safety practices
	Water transport	Operationalization of the pier	Ministry of Roads and Transport	Pier fully equipped, functional, and receiving scheduled boat traffic	Increased lake transport activity and economic linkage with surrounding regions
		Construction of 8 beach management units along the lake front	Homa Bay County department of fisheries and Blue Economy	8 BMUs constructed and handed over to community/user groups	Improved fish handling, hygiene, and beach operations Strengthened local capacity for resource governance and revenue collection

Water	Expand Ngegu water treatment plant to be a central flocculation unit (CFU) from 240m ³ to 1800m ³ a day	HOMAWASCO	Ngegu plant expanded and operational at 1,800m ³ /day capacity	Improved water treatment capacity and supply reliability to urban population
	Expand Lake front water treatment plant from 8,800m ³ to 11,800m ³		Plant expanded and functioning at new design capacity	
	Install 14Km of water main lines to the storage tanks (DN 200)		14 km of DN 200 mainlines installed, tested, and in use	Enhanced water distribution network efficiency and reach
	Install new storage tanks – 1000M ³ at Got Kabok, 900m ³ in Manera area		2 new tanks constructed and connected to supply system	Improved water storage and supply consistency in Got Kabok and Manera
	Expansion of storage facilities – Kabunde from 80m ³ to 300m ³ , Got Asego from 770m ³ to 1800m ³ , Junction Kodoyo from 50m ³ to 200m ³ and Simenya from 100m ³ to 500m ³		Kabunde tank expanded from 80m ³ to 300m ³ , Got Asego tank expanded from 770m ³ to 1,800m ³ , Junction Kodoyo from 50m ³ to 200m ³ and Simenya from 100m ³ to 500m ³	Improved operational flexibility and buffer storage across supply zones
	Drill 2 boreholes with 80m ³ storage facility in Olodo and Wang’apala		Two boreholes drilled, equipped, and connected to storage and distribution	Increased water access and resilience in underserved areas
	Prepare detailed designs for implementation and last mile connection		Designs completed, approved, and ready for procurement and implementation	Clear cost estimates and timelines for donor/government funding

	Sewer	Construct 54Kms of trunk sewers (DN 400)		54 km of trunk sewer constructed and operational	Increased wastewater conveyance capacity
		Construct of main lines (DN 315 – 375)		Kilometers of DN 315–375 main lines constructed	Reduced raw sewage discharge and environmental contamination
		Construct new sewer treatment plant		New plant constructed, commissioned, and treating sewage to required standards	
		Construct new DTF		DTF constructed, commissioned, and serving designated zones	
		Acquisition of land for DTF and new sewer treatment plant		Legal acquisition and registration of land parcels completed	
		Install a sewer pumping station at the existing sewer treatment plant		Pumping station and 2Km of pumping line installed, tested, and operational	
		Install 2.01Km of pumping line from existing to proposed sewer treatment plant (DN 200)			
		Prepare detailed designs for implementation and last mile connection		Designs completed, approved, and ready for procurement and implementation	Clear cost estimates and timelines for donor/government funding
		Construction 16 public toilets within Markets		16 market toilets constructed, connected to sanitation system, and open for public use	Improved hygiene and dignity for traders and customers

	Solid waste management	Acquisition of land for the proposed MRC	Homa Bay Municipality	Land for MRC legally acquired and registered	Increased capacity for waste sorting, recycling, and reduction of landfill waste Reduced illegal dumping and open burning of waste Improved waste collection coverage and efficiency Improved livelihoods through creation of green jobs Enhanced environmental aesthetics
		Construction of MRC		MRC constructed and equipped for operation	
		Purchase 3 truck for waste collection		3 fully equipped waste trucks procured and in operation	
		Install 1300 waste receptacles along the NMT corridors		1,300 bins installed at strategic points	
		Civic education on waste segregation		Number of public education campaigns held; % of population reached	
	Telecommunication	Install 484 Km of telecommunication duct along the road network	Communication Authority of Kenya	484 km of ducts installed and mapped for future fiber/cable use	Enhanced ICT infrastructure to support smart city development
	Energy	Install and upgrade 45 transformers within the Municipality	EPRA	45 transformers installed or upgraded and energized	Improved electricity reliability and reduced power outages
		Upgrade the existing power sub-station		Substation upgrade completed and capacity enhanced	Improved power quality and load management
		Install 30 high mast lights in all the markets, development nodes and informal settlements	Homa Bay County department of energy	30 high mast lights installed and operational	Increased security in informal and high-traffic areas
		Install solar mini grids in areas not covered by national grid		Sola mini-grid systems installed and supplying power in identified areas	Increased access adoption of clean energy and energy efficient technologies
		Civic education on use of clean energy solutions		Number of outreach activities conducted and beneficiaries reached	

Social amenities	Disaster Risk Management	Develop a multi-agency Municipality Emergency and Disaster Risk Management Plan	Homa Bay County Department of Governance and Special Projects	DRM Plan developed, validated, and adopted	Enhanced coordination and preparedness for emergencies across agencies
		Construct an integrated Disaster and Fire Response Operation Centre		Emergency centre constructed, staffed, and equipped with fire and response tools	
		Develop a Municipality Disaster Risk Policy		Disaster risk policy document approved by County Assembly	
	Education	Upgrading the existing 39 primary and Junior Secondary schools	Ministry of Education	39 schools rehabilitated and expanded with improved learning facilities	Improved learning environment, enrollment, and academic performance
		Upgrading the existing 12 secondary schools		12 schools upgraded with classrooms, labs, and sanitation blocks	Enhanced transition rate and performance at secondary level
		Construction of a secondary school in Kothidha		New school constructed, staffed, and operational	
		Improvement and equipping of special needs facility at Ogande		Special needs facility upgraded with assistive equipment and staff	Improved access and inclusion for learners with disabilities
		Construction of hostel facilities for Tom Mboya University	Tom Mboya University	Hostel blocks completed and occupied	Improved student accommodation, retention, and welfare
		Improvement of Kenya Medical Training College – Homa Bay	KMTC	Facility renovated and medical training equipment installed	Enhanced capacity for training healthcare professionals
		Construction of Vocational training centre at Maguje	Homa Bay County Educational and Vocational Department	Two VTCs constructed and equipped	Increased access to technical and vocational skills training
Construction of vocational training centre at Maguti					

	Health	Upgrading Level 3 Health facilities to Level 4	Homa Bay County Department of Health and Medical Services	Facilities equipped with inpatient wards, labs, and maternity units	Expanded range of services and improved healthcare access	
		Upgrading Level 4 Health facilities to Level 5				
		Construction of Level 3 facilities in Kothidha and North Kanyabala		New health centers constructed, staffed, and offering health care services		
		Construction of integrated safe space		Safe space constructed and operational with case management staff		Strengthened support for survivors of GBV and vulnerable children
		Mental health facility at County Referral Hospital		Mental health facility built, equipped, and licensed		Improved access to mental health treatment and de-stigmatization
		First Aid response at accident Hotspots		First aid kits and signage installed; responders trained		Reduced fatalities and improved emergency care at hotspots
		Public care Facility for the elderly		Homa Bay County department of Gender and Social Inclusion		Facility built with residential and medical care units
	Security and Administration	Admin and security facilities at all proposed centers	Ministry of Interior and National Coordination	Admin/security blocks completed at proposed centers	Improved facility operations, safety, and service delivery	
	Recreation	Land for golf course	Homa Bay Municipality	Parcel of land legally acquired and reserved for recreational use	Secured space for future development of tourism and leisure assets	
		Lakefront development for water sports		Lakefront cleared, access infrastructure and safety features installed	Increased tourism and youth engagement in water-based recreation	
Playgrounds and parks (e.g. opp. referral hospital)		Number of playgrounds/parks completed and open to public		Improved access to green and recreational spaces for families and children		

		Upgrade playgrounds and stadia		Number of existing sports grounds renovated and equipped	Improved sporting performance, youth development, and community events
	Cemetery	Cemetery and crematorium		Cemetery and crematorium constructed and managed	Improved access to dignified burial and cremation services
	Library and innovation	Integrated library, social hall, innovation centre		Integrated facility constructed with digital library, meeting rooms, and innovation labs	Increased access to knowledge, civic engagement, and innovation among youth
Environment, land and urban government	Environment & climate resilience	Urban greening & reforestation (~50,000 trees)		50,000 trees planted Number of public spaces, schools, road reserves, and riparian areas greened	Improved urban microclimate and air quality Reduced surface runoff and soil erosion Enhanced urban aesthetics and biodiversity
	Urban governance & land use management	Digital land information & E-Planning system (GIS, e-permitting)	Homa Bay County department of Lands, Physical, Planning, Housing and Urban Development	GIS-based land database developed and operational Number of planning permits processed through e-system	Improved transparency, efficiency, and accountability in land administration Increased compliance with land use and zoning regulations
		Enforcement capacity (personnel, vehicles and equipment)		Number of active field inspections and compliance operations conducted monthly	Improved enforcement of development control and environmental regulations Reduced cases of illegal construction and land encroachment
	Housing	Public land acquisition for housing (~20 ha)		20 hectares of land legally acquired and registered for housing	Improved access to social and affordable housing





CONCLUSIONS



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The People’s Adaptation - Local Physical and Land Use Development Plan for Homa Bay Municipality provides a bold and forward-looking framework to guide climate resilient spatial development, infrastructure investments, and service delivery over the next decade. Rooted in the voices of the people and shaped by data-driven analysis, this Plan reflects a shared vision for a more equitable, resilient, and sustainable Homa Bay.

Through a locally led approach, communities identified pressing challenges and co-created solutions to address issues such as informal settlement upgrading, flood risk management, limited access to basic services, land tenure insecurity, and climate change impacts. The resulting proposals—captured in Action Area Plans, a Land Use Plan, and sectoral interventions—are tailored to the realities of each neighborhood and aligned with broader County and national development priorities.

The Plan emphasizes inclusive urban growth, improved mobility, enhanced water and sanitation access, protection of natural ecosystems, and the promotion of local economic development especially around key assets like the lakefront, the CBD, and transport nodes such as Kabunde Airstrip. It also prioritizes the needs of vulnerable groups, including women, youth, persons with disabilities, and informal workers, ensuring that urban transformation benefits all residents.

Implementation of this Plan will require strong inter-agency coordination, effective governance, adequate financing, and continuous community engagement. It will also demand adaptive planning that responds to changing climate conditions and socio-economic dynamics. The establishment of a transparent reporting mechanism will be critical to accountability and long-term impact.

Ultimately, this Plan is not an end, but a foundation—a people-driven roadmap for building a just, green, and prosperous Homa Bay Municipality. With collective commitment

and strategic action, the vision can be turned into reality and ensure that every resident lives in dignity, safety, and opportunity.

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