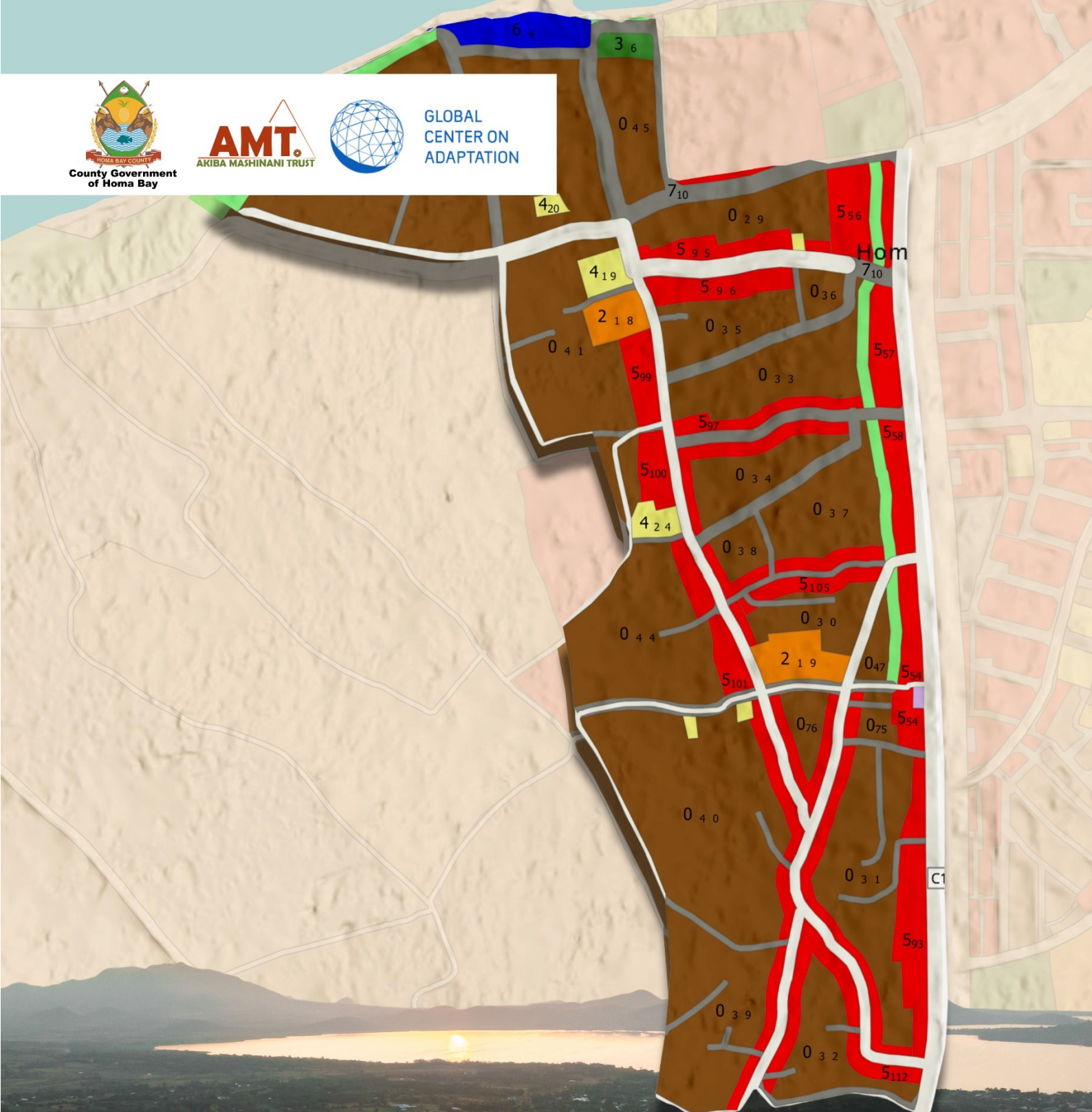




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SHAURI YAKO SETTLEMENT PLAN

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People's Adaptation Local Physical and Land Use
Development plan for Homa Bay Municipality

2025 - 2035

AUTHORS & ACKNOWLEDGEMENTS

THIS REPORT WAS DEVELOPED BY

Akiba Mashinani Trust (AMT)

This **People's Adaptation Plan for Shauri Yako Informal Settlement** builds upon the Makongeni Situational Analysis Report and integrates findings from a **Climate Risk Assessment by SUEZ Consulting**. The plan was developed under the **People's Adaptation Planning Framework**, financed by the **Global Centre on Adaptation (GCA)** through the **Africa Adaptation Acceleration Program**, and implemented for the **County Government of Homa Bay** as part of the **Local Physical and Land Use Development Plan (LPLUDP)**.

Contributors

Authors: Rex OTIENO, David MUSAU, and Edward THEURI

Supervised By: Charles OBONDO, Fredrick WAREGA, Maureen MUSYA,

Reviewed By: Victor ORINDI, Khushboo KHATRA, Alexandra HILLESHEIM, Estelle ROUHAUD, Amélie AGNEL, Georgina ANDRE

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We thank the residents of **Shauri Yako Settlement** and the community enumerators whose participation and lived experiences shaped this plan. Their collective efforts have enabled the creation of a truly **people-centred Plan and adaptation strategy**, positioning Shauri Yako for a more resilient future.

EXECUTIVE SUMMARY

Shauri Yako is a densely populated informal settlement within Homa Bay Municipality, home to an estimated 5,056 residents. The settlement is marked by precarious housing, insecure land tenure, limited access to basic services, and heavy reliance on informal livelihoods. Its flat, low-lying location adjacent to Lake Victoria, coupled with unplanned urban expansion and poor infrastructure, has made it highly vulnerable to climate risks. These vulnerabilities are reinforced by socio-economic inequalities, weak service delivery systems, and governance gaps that restrict the community's ability to adapt.

The Rapid Climate Risk Assessment carried out in early 2025 confirmed that flooding is the most persistent hazard in Shauri Yako, with flash floods and poor drainage systems frequently inundating homes, markets, and roads. These events lead to the overflow of pit latrines, contamination of water sources, and mobility disruptions that undermine livelihoods and public health. Rising land surface temperatures are also a growing challenge, with the widespread use of iron sheet roofing and limited vegetation cover amplifying heat stress in households and public spaces. During drought periods, residents face severe water scarcity and are often forced to rely on unsafe water from Lake Victoria or purchase costly water from vendors, further straining already fragile household economies.

The impacts of these hazards fall disproportionately on vulnerable groups. Women carry the heaviest burden during floods, often prioritizing the safety of children and the elderly over their own. They also spend more time and resources securing water during dry spells, limiting opportunities for income-generating activities. Youth, many of whom depend on casual labor or petty trade, lose livelihoods when markets and roads are submerged. Persons with disabilities and the elderly face greater risks due to limited mobility and inadequate access to safe evacuation routes or services. These overlapping vulnerabilities reinforce cycles of poverty, reducing the community's ability to recover from shocks.

To respond to these challenges, residents of Shauri Yako have identified clear adaptation priorities through participatory consultations and validation workshops. Key needs include the improvement of drainage and sanitation systems, the promotion of affordable climate-resilient housing materials, the strengthening of water supply infrastructure, and the establishment of reliable early warning and disaster management systems. Community members also emphasized the importance of affordable energy solutions, livelihood diversification, and the rehabilitation of open spaces into multifunctional green infrastructure that can mitigate floods, reduce urban heat, and provide recreational areas.

This People's Adaptation Plan translates community priorities into actionable strategies, focusing on flood risk reduction through drainage and nature-based solutions, climate-resilient building, and stronger local institutions. It forms part of the People's Adaptation – Local Physical and Land Use Development Plan (LPLUDP) for Homa Bay Municipality and aligns with the County Integrated Development Plan, County Climate Change Action Plan, and Kenya's National Adaptation Plan. Through this integration, Shauri Yako's priorities are embedded in the municipality's broader resilience agenda and aligned with global frameworks such as the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction. Financing combines community, county, and external resources, supported by transparent accountability mechanisms.

Ultimately, the Shauri Yako People's Adaptation Plan offers a community-owned roadmap for resilience. By reducing disaster impacts, safeguarding health, enhancing livelihoods, and prioritizing equity, the plan seeks to transform Shauri Yako into a safer, more inclusive, and sustainable settlement. Beyond physical infrastructure, it strengthens social cohesion, fosters environmental stewardship, and embeds locally led adaptation into governance systems, ensuring that residents are not only protected from climate shocks but also empowered to shape their collective future.

TABLE OF CONTENTS

AUTHORS & ACKNOWLEDGEMENTS	II		
EXECUTIVE SUMMARY.....	III		
TABLE OF CONTENTS	IV		
LIST OF MAPS	VI		
LIST OF FIGURES.....	VI		
LIST OF TABLES	VI		
1 INTRODUCTION.....	1		
1.1 Background and Rationale	1		
1.2 Objectives of the People’s Adaptation Plan	2		
1.3 Principles Guiding the Process.....	3		
1.4 Geographic and Administrative Scope ...	5		
1.5 Alignment with County, National and Global Frameworks.....	6		
1.6 Methodology Overview	7		
2 COMMUNITY PROFILING GUIDELINES.....	9		
2.1 Demographic & Socio-Economic Overview.....	9		
2.2 Livelihood Systems and Vulnerabilities	15		
2.3 Infrastructure and Services Baseline (WASH, Housing, Roads, Drainage, Energy, Health).....	17		
2.4 Land Use and Physical Planning Analysis	21		
2.5 Local Governance and Existing Community Structures	25		
3 CLIMATE RISK ASSESSMENT & VULNERABILITY ANALYSIS.....	27		
3.1 Climate Hazard Identification.....	27		
3.2 Vulnerability Analysis.....	28		
3.3 Exposure and Sensitivity Mapping	28		
3.4 Sensitivity to Climate Change Impacts .	29		
3.5 Interactions Between Hazard, Exposure, and Vulnerability (Climate Risk Framework)	30		
3.6 Capacity to Adapt.....	30		
3.7 Risk Scenarios and Projected Climate Change Impacts.....	31		
4 VISIONING & COMMUNITY PRIORITIZATION..	33		
4.1 Community-Driven Visioning Workshops	33		
4.2 Participatory Mapping of Aspirations and Risks	34		
4.3 Criteria for Prioritizing Adaptation Options	35		
4.4 Identification of Priority Areas of Intervention (Short, Medium, Long-Term).....	37		
4.5 Implementation Framework	44		
4.6 Integration with Broader Development Goals	47		
5 INTERVENTION STRATEGIES FOR CLIMATE RESILIENCE	48		
5.1 Water, Sanitation & Hygiene (WASH) Interventions	48		
5.2 Energy and Renewable Solutions.....	50		
5.3 Climate-Resilient Housing Interventions	52		
5.4 Livelihood Diversification & Social Protection.....	53		
5.5 Green Infrastructure & Nature-Based Solutions (NbS)	54		
5.6 Mobility & Access Interventions	56		
5.7 Governance & Institutional Strengthening	56		
6 INSTITUTIONAL FRAMEWORK & ROLES.....	57		
6.1 Stakeholder Roles & Responsibilities	57		
6.2 Coordination Mechanisms	58		
6.3 Integration with Development Planning & Budgeting	58		

7	MONITORING, EVALUATION, AND LEARNING (MEL)	59		
7.1	Community-Defined Indicators	59		
7.2	MEL Tools & Methodologies.....	60		
7.3	Feedback Loops & Adaptive Management	60		
8	FINANCING THE ADAPTATION PLAN	62		
8.1	Community Contributions	63		
			8.2	County Budget Alignment.....
			8.3	External Funding
			8.4	Tracking & Transparency Mechanisms
			8.5	Coordination with Ongoing Programs and
				Projects
				REFERENCES.....
				67

LIST OF MAPS

Map 1.1: National Context of Homabay Municipality	5
Map 1.2: County Context of Homabay Municipality	5
Map 1.3: Location of Arujo Sublocation and Shauri Yako Settlement in Homabay Municipality	5
Map 1.4: Location of Shauri Yako Settlement within Arujo Sublocation	6
Map 2.1: Building Footprint.....	14
Map 2.2: Transportation Network.....	19
Map 2.3: Settlement Morphology	23
Map 4.1: Land Use Plan.....	39

LIST OF FIGURES

Figure 2.1:Population Pyramid.....	10
Figure 2.2: Household head Gender Distribution.....	10
Figure 2.3: Tenure Security	14
Figure 2.4: Occupation.....	15
Figure 2.5: Primary Source of Waste Disposal.....	18
Figure 2.6: Solid Waste Disposal Method	18
Figure 2.7: Health care Facility accessibility	21

LIST OF TABLES

Table 2.1: Distribution of Population.....	9
Table 2.2: Financial Safety Net.....	17
Table 2.3: Water Source distance from the house	17
Table 2.4: Land Tenure Responses	23
Table 2.5: Ownership Documents.....	23
Table 3.1: Risk Scenarios	31



1 INTRODUCTION

1.1 Background and Rationale

1.1.1 Shauri Yako Context:

The development of this People's Adaptation Plan builds directly on two complementary studies: the Shauri Yako Situational Analysis Report and the Homa Bay Rapid Climate Risk Assessment (RCRA) Report (Field Research, 2025; Suez Consulting, 2025). The Situational Analysis provides the baseline evidence on the settlement's physical, social, and infrastructural conditions, while the RCRA Report offers a detailed examination of climate hazards, vulnerabilities, and exposure patterns. Together, these documents constitute the primary empirical foundation of this Plan, ensuring that its strategies are grounded in field-validated data and aligned with the broader climate-resilience framework for Homa Bay Municipality.

Shauri Yako is a densely populated informal settlement located in Arujo sub-location within Homa Bay Municipality, bordering Lake Victoria. With an estimated population of 5,056 residents and a population density of 4,595 persons per square kilometer, the settlement is marked by high levels of vulnerability across socio-economic, infrastructural, and environmental dimensions (Field Research, 2025).

The settlement is characterized by substandard housing, predominantly composed of semi-permanent and temporary structures built using iron sheets and earthen materials. Most dwellings lack adequate ventilation, privacy, and structural safety. Insecure tenure arrangements are widespread, with a large share of residents lacking formal land titles. Over 92% of the population rely on pit latrines, and 71% practice open dumping of solid waste, further compounding health and environmental vulnerabilities (Field Research, 2025).

Shauri Yako's economy is predominantly informal. The majority of residents engage in casual labor, petty trade, street vending, and fishing-related activities. Women dominate fish selling and small-scale trading, while youth often participate in boda boda transport or operate small kiosks. Formal employment opportunities are extremely limited, which leaves most households vulnerable to economic shocks, price volatility, and climate disruptions that directly affect informal market dynamics.

The settlement has a youthful and gender-skewed population, with 66.55% male and 33.40% female. Migration, particularly among youth from neighboring wards and counties, has driven growth. This influx has strained available infrastructure and services, including

education, healthcare, and public utilities. Vulnerable groups such as single mothers, persons with disabilities (PWDs), and the elderly face compounded challenges due to physical inaccessibility, social exclusion, and economic precarity.

1.1.2 Climate risk factors:

Shauri Yako faces a range of intensifying climate-related hazards, largely due to its geographical location, flat and low-lying terrain, proximity to Lake Victoria, and lack of structured infrastructure. These factors combine to heighten the settlement's exposure and vulnerability to extreme weather events and environmental stressors, which are having growing social and economic impacts on its residents. Findings from the Homa Bay County Rapid Climate Risk Assessment (RCRA) conducted by SUEZ Consulting (2025) confirm that these localized climate pressures are among the most acute within the municipality.

Flooding is one of the most persistent threats in Shauri Yako. Flash floods and backflows from Lake Victoria frequently inundate the northern parts of the settlement, especially during the rainy seasons, causing severe damage to homes and infrastructure and endangering lives. Poor drainage systems and the encroachment of riparian land for settlement worsen the situation. Flooded roads and overflowing latrines make mobility difficult and pose serious sanitation risks, contributing to the spread of waterborne diseases such as cholera and diarrhea (SUEZ Consulting, 2025).

Heatwaves and rising land surface temperatures are also becoming more severe. Analysis of satellite data between 2000 and 2020 shows that peak surface temperatures increased from approximately 28 °C to 33 °C, nearly doubling the frequency and intensity of extreme heat days (SUEZ Consulting, 2025). This trend is primarily driven by rapid, unplanned urban expansion, limited vegetation, and the widespread use of heat-absorbing materials such as iron-sheet roofing. As a result, residents face greater heat stress, dehydration, and general discomfort, especially in poorly ventilated homes.

Water scarcity during dry periods is another major concern. During droughts, clean water becomes both scarce and expensive, with local vendors charging up to KSh 30 per 20-litre jerrycan. Although Lake Victoria remains a nearby source, many residents rely on untreated lake water due to limited household connections and unreliable supply from HOMAWASCO. This dependence increases vulnerability to waterborne diseases and underscores the need for improved water infrastructure and safe storage systems (Field Survey, 2025; SUEZ Consulting, 2025).

These climate hazards have disproportionate impacts on vulnerable groups, particularly women and those working in the informal sector. Health risks rise during floods due to exposure to stagnant and contaminated water. Food security becomes fragile as flooding and drought disrupt local markets, kitchen-garden activities, and fish availability, driving up food prices affecting especially women traders who rely on small-scale commerce for their livelihoods. Income security is also threatened when roads become impassable or market spaces are submerged, cutting off economic activities and access to essential services, including education and healthcare (Field Survey, 2025; SUEZ Consulting, 2025).

1.1.3 Why is a locally led adaptation plan needed?

Top-down planning has failed to reach the granular realities of life in Shauri Yako. Past interventions focused on isolated infrastructure upgrades but lacked holistic integration with community needs or spatial vulnerabilities. The lived experience of climate risk has shown that:

One-size-fits-all solutions don't work: The community needs localized, micro-scale infrastructure solutions tailored to terrain, tenure patterns, and social structures.

Communities already practice adaptation: Residents use sandbags to prevent floodwater from entering homes, move to higher ground during heavy rains, and engage in rainwater harvesting but these practices lack technical reinforcement and financial support.

Trust and ownership matter: Data collection for this Plan was carried out by trained local community members (enumerators) who gathered household and spatial information through surveys and mapping exercises. Workshops engaged women, youth, elders, and persons with disabilities (PWDs) directly in hazard mapping, visioning, and solution design. This locally led approach strengthened community trust and ownership, making it more likely that the proposed interventions will be adopted, maintained, and scaled over time.

This People's Adaptation Plan is therefore not just a planning document, it is a platform for community voice, a tool for resilience Planning, and a bridge between local realities and institutional planning mandates.

1.2 Objectives of the People's Adaptation Plan

The Shauri Yako People's Adaptation Plan (PAP) provides an implementation roadmap for advancing locally led climate resilience actions identified through the Rapid Climate Risk Assessment (SUEZ Consulting,

2025) and the community planning process (Field Survey, 2025). The objectives below focus on translating these assessments into coordinated and funded interventions that strengthen the settlement's adaptive capacity and institutional integration.

1.2.1 Objective 1: Operationalize Climate Risk Reduction Measures

Implement priority interventions to reduce flood, heat, and drought risks identified in the RCRA and validated by the community. These include improved drainage, nature-based solutions, and household-level climate-proofing measures, ensuring that implementation begins within the first two years of the Plan.

1.2.2 Objective 2: Strengthen Community-Led Implementation and Governance

Formalize and support community-based structures including youth, women, and PWD groups to lead adaptation initiatives, coordinate with the County Climate Change Directorate, and sustain maintenance and monitoring activities. This objective reinforces the "locally led" foundation of the Plan.

1.2.3 Objective 3: Enhance Climate-Resilient Infrastructure and Services

Upgrade essential infrastructure particularly water, sanitation, access roads, and housing to meet resilience standards outlined in the Homa Bay County Climate Change Action Plan (2023-2027). Implementation will prioritize the most flood- and heat-exposed zones of Shauri Yako.

1.2.4 Objective 4: Institutional Integration and Policy Alignment

Ensure the full incorporation of the Shauri Yako People's Adaptation Plan within the broader **People's Adaptation – Local Physical and Land Use Development Plan (LPLUDP)** for Homa Bay Municipality, and maintain its alignment with county and national frameworks such as the CIDP (2023-2027) and Kenya's National Adaptation Plan (2015-2030). Integration is already established; continued emphasis will be on implementation, reporting, and policy feedback.

1.2.5 Objective 5: Resource Mobilization and Implementation Acceleration

Secure sustainable financing to operationalize the Plan through at least two external funding sources such as

donor grants, public-private partnerships, or the **Financing Locally Led Climate Action (FLLoCA)** mechanism by **Year 2**. Establish a joint **Community–County Implementation Committee** to oversee project execution, financial tracking, and capacity building. Resource mobilization remains a top priority to ensure that proposed interventions transition rapidly from planning to tangible action.

1.3 Principles Guiding the Process

The development of the Shauri Yako People's Adaptation Plan is grounded in six key principles that ensure the process is community-centered, equitable, informed by lived experiences, and designed for long-term sustainability. These principles have shaped how the Plan was co-created and how it will be implemented, monitored, and sustained over time.

1.3.1 Participation and Inclusion

The Plan is founded on the principle that effective climate adaptation must begin with the people most affected. Participation in Shauri Yako has been intentionally inclusive, involving a wide range of community members across age, gender, and ability. The planning process began with community-level household enumerations and continued through a series of participatory engagements, including focus group discussions, participatory mapping, sectoral dialogues, and a community-wide validation workshop.

During the validation workshop held on 1 April 2025, more than 100 residents of Shauri Yako took part, organized into three distinct groups to ensure inclusive representation: women, youth and PWDs, and men and elders. These groups provided sector-specific insights into climate impacts, existing coping strategies, and adaptation priorities. Community voices were also captured through risk mapping exercises and plenary feedback sessions.

This inclusive approach not only improved the quality of data collected but also created a sense of ownership among participants. Special effort was made to ensure that vulnerable groups especially women, youth, and PWDs had safe spaces to share their lived experiences and propose context-specific solutions.

1.3.2 Equity and Justice

The principle of equity and justice ensures that climate adaptation interventions do not reinforce or deepen existing social inequalities. In Shauri Yako, climate risks such as flooding, heatwaves, and water scarcity disproportionately affect low-income households,

informal traders, women-headed families, and persons with limited mobility or access to services.

This Plan recognizes that adaptation is not just a technical or environmental challenge it is also a matter of fairness. Therefore, adaptation strategies have been explicitly designed to prioritize the needs of those who are most vulnerable. For example, interventions targeting improved water access and sanitation will be implemented first in areas most prone to flooding and with the least infrastructure coverage. Safeguards have also been built into the planning framework to prevent the benefits of adaptation from being captured by wealthier or better-connected groups within the settlement.

1.3.3 Local Knowledge and Innovation

Local knowledge and innovation are essential to designing practical and effective adaptation measures. Throughout the planning process, the Plan has valued and integrated the traditional coping strategies and lived experiences of Shauri Yako residents. Elders, long-term residents, and community leaders have contributed historical perspectives on flooding patterns, heat stress periods, and shifts in fish stocks insights that complement scientific climate data.

Residents have also demonstrated a range of grassroots adaptation practices, including the use of sandbags to elevate house foundations during floods, manual irrigation of kitchen gardens during droughts, and temporary relocation to higher ground during extreme rainfall events. These examples illustrate the community's capacity for innovation and resilience. The People's Adaptation Plan builds upon these practices, formalizing them into structured interventions supported by technical assistance and policy integration.

1.3.4 Resilience Building

The People's Adaptation Plan adopts a holistic understanding of resilience that goes beyond infrastructure. While flood defenses, drainage systems, and improved housing form a core part of the plan, equal emphasis is placed on strengthening the social fabric and institutional capacity of the community. This includes supporting local organizations, youth groups, and women's collectives that play vital roles in service provision, information sharing, and collective action.

The Plan proposes the establishment of a joint community–county implementation committee to oversee project delivery, ensure community priorities remain central, and serve as a bridge to local government structures. It also promotes education and

training programs focused on climate awareness, green skills, and disaster preparedness. In doing so, the Plan aims to build long-term adaptive capacity that is embedded within the community's governance and development systems.

1.3.5 Accountability and Transparency

Transparency and accountability are essential to the credibility and success of the People's Adaptation Plan. To ensure public trust, all stages of the Plan have been documented and shared with the community through feedback sessions, digital tools, and printed summaries.

The implementation phase of the Plan will include mechanisms for ongoing public reporting, including community noticeboards, WhatsApp-based updates, and quarterly community review meetings. In addition, the planned establishment of local information hubs will help residents track the progress of adaptation actions and raise concerns or suggestions. By embedding community oversight into the Plan's governance structure, the Plan ensures that decision-makers are held accountable, and that implementation remains aligned with community priorities.

1.3.6 Sustainability

The long-term success of adaptation depends on the environmental, economic, and social sustainability of interventions. As highlighted in the *Homa Bay County Rapid Climate Risk Assessment* (SUEZ Consulting, 2025), sustainable adaptation requires both ecological restoration and institutional capacity. The Plan promotes **nature-based solutions** including tree planting, bioswales, and vegetated drainage corridors to manage flood risks and reduce urban heat. These interventions not only address immediate climate hazards but also enhance biodiversity, improve air quality, and create safe, multifunctional community green spaces. This aligns with the globally recognized priority of integrating biodiversity and ecosystems into climate adaptation strategies.

Economic sustainability is reinforced through **local job creation** in adaptation-linked sectors such as the construction of water kiosks, maintenance of sanitation blocks, and management of solid waste systems. **Social sustainability** is strengthened through community ownership, participatory maintenance, and local stewardship of shared infrastructure.

To ensure long-term sustainability through **knowledge transfer**, targeted **capacity building** was conducted for Homa Bay County officials and **Tom Mboya University** staff. This process equipped local institutions with the technical expertise needed to plan, monitor, and replicate adaptation measures effectively. By

embedding these skills locally and promoting inclusive benefit-sharing, the Plan ensures that its impacts endure well beyond individual projects or donor cycles.

1.4 Geographic and Administrative Scope

1.4.1 Identify the Specific Geographic Boundaries

The People’s Adaptation Plan focuses specifically on the Shauri Yako informal settlement, located in Arujo sub-location, within the administrative boundaries of Homa Bay Municipality, Homa Bay County. Shauri Yako is situated close to the northern edge of the municipality, adjacent to the shoreline of Lake Victoria, and shares boundaries and functional linkages with the neighboring informal settlements of Sofia and Makongeni.

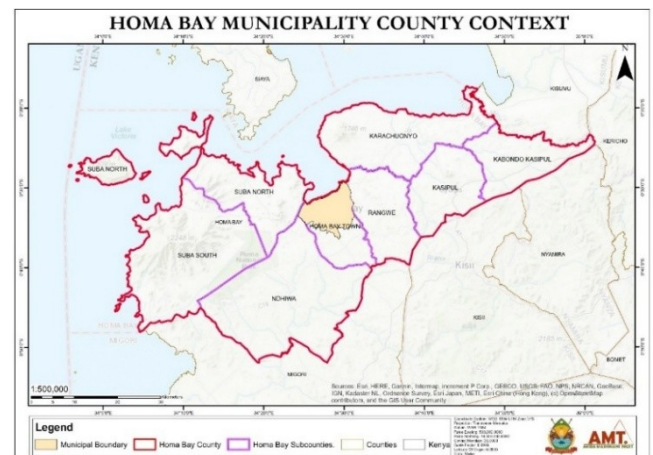
The geographic extent of Shauri Yako is generally defined by the following features:

- North: Bordered by the Lake Victoria shoreline and the HOMA WASCO Water Intake, with low-lying flood-prone areas extending into the lake buffer zone.
- West: Neighboring the Homa Bay Town central business district (CBD), with linkage to the main Municipal market separated from the CBD by the Main Homabay – Rongo C20 Road
- South: Connected to Sofia settlement.
- East: Adjacent to open peri-urban land and minor access roads that link Shauri Yako to the other parts of Arujo all the way to Nyagidha and the peri urban part of the Municipality.

The settlement is densely built, with a patchwork of temporary and semi-permanent structures occupying land previously designated as riparian, floodplain, or informal tenure zones. Access is primarily through informal footpaths and secondary roads that become impassable during the rainy season.



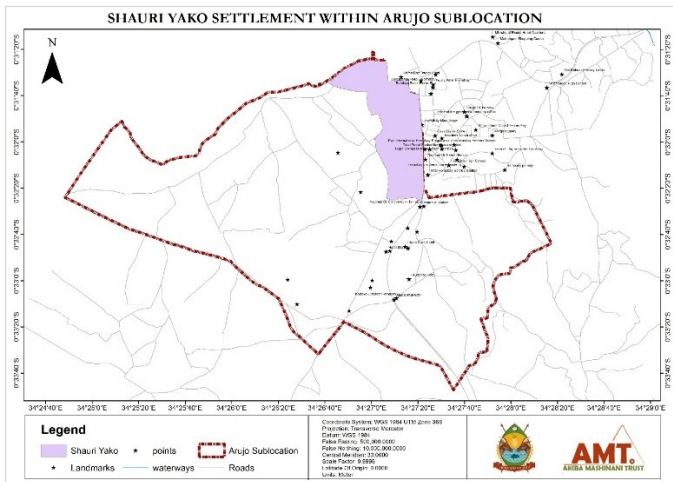
Map 1.1: National Context of Homabay Municipality



Map 1.2: County Context of Homabay Municipality



Map 1.3: Location of Arujo Sublocation and Shauri Yako Settlement in Homabay Municipality



Map 1.4: Location of Shauri Yako Settlement within Arujo Sublocation

While the focus of this Plan is Shauri Yako itself, many of the adaptation challenges particularly around drainage, flooding, water access, and informal housing are shared across the three settlements. Hence, coordination with adjacent planning efforts in Sofia and Makongeni, and the Municipality more widely, will be essential for cross-settlement infrastructure solutions, mobility planning, and disaster preparedness.

1.4.2 Administrative Context

Shauri Yako is located within Arujo sub-location, forming part of Arujo Ward in the larger Homa Bay Town Sub-County of Homa Bay County. This places the settlement within the devolved governance structure established under Kenya’s 2010 Constitution, which assigns service delivery and development planning responsibilities to county governments.

In the urban development framework, Shauri Yako falls under the jurisdiction of the Homa Bay Municipality, which oversees planning, infrastructure coordination, and service provision across the town’s urban core and its peripheral informal settlements.

1.5 Alignment with County, National and Global Frameworks

The Shauri Yako People’s Adaptation Plan (PAP) complements and strengthens existing planning and climate-policy frameworks across all levels of governance from the settlement to the county, national, and global scales. Its strategies ensure that locally identified priorities directly contribute to broader resilience and sustainable-development objectives, embedding community action within formal policy and investment systems.

1.5.1 County-Level Alignment

At the county level, the Plan directly supports the implementation of the **Homa Bay County Integrated Development Plan (CIDP III 2023–2027)** and the **County Climate Change Action Plan (2023–2027)** by translating county climate priorities such as improved drainage, resilient housing, and WASH infrastructure into settlement-scale actions.

It also draws its legal foundation from the **Homa Bay County Climate Change Act (2022)**, which provides the framework for mainstreaming climate adaptation into county development planning and budgeting. The Act establishes devolved climate-finance mechanisms that the Shauri Yako Plan can access for implementation.

In addition, the Plan informs and aligns with the **Homa Bay Municipality People’s Adaptation – Local Physical and Land Use Development Plan (LPLUDP)** by providing locally validated data, hazard mapping, and community priorities that guide spatial planning, zoning, and service delivery across the municipality.

Together, these alignments ensure that the People’s Adaptation Plan functions as a county-recognized instrument for locally led climate action and infrastructure upgrading.

1.5.2 National-Level Alignment

At the national scale, the Shauri Yako PAP advances Kenya’s overarching climate-resilience and development agenda through the following frameworks:

- **National Climate Change Action Plan (NCCAP 2023–2027)** – The Plan operationalizes the NCCAP’s pillars on climate-resilient urban development, nature-based solutions, and empowerment of vulnerable communities.
- **National Adaptation Plan (NAP 2015–2030)** – The Plan contributes to national adaptation priorities by addressing flood, heat, and drought risks within informal urban settlements and by strengthening institutional capacity for climate-informed planning.
- **Kenya National Disaster Risk Management Strategy (2023)** – The Plan supports risk-reduction and preparedness through community-based early-warning systems and disaster-management committees.
- **National Water and Sanitation Investment and Financing Plan (2023)** – The Plan reinforces national objectives for universal access to clean water and improved sanitation by promoting affordable water kiosks, drainage upgrades, and decentralized WASH systems.

- Through these linkages, the Shauri Yako PAP provides a mechanism for implementing national policies at the neighborhood level, demonstrating how locally led initiatives can translate policy commitments into tangible outcomes.

1.5.3 Global Level

At the global level, the Plan aligns with Kenya's international climate and development commitments, including:

The Paris Agreement (2015) (United Nations Framework Convention on Climate Change [UNFCCC], 2015) – By fostering local adaptation and low-carbon resilience, the Plan supports Kenya's Nationally Determined Contributions under Article 7 on adaptation.

The Sendai Framework for Disaster Risk Reduction (2015–2030) (United Nations Office for Disaster Risk Reduction [UNDRR], 2015) – The Plan advances priorities on understanding risk, strengthening governance, and enhancing community preparedness.

The Sustainable Development Goals (SDGs) (United Nations, 2015) –

- **SDG 13 – Climate Action:** Directly addressed through identification of hazards, risk-reduction measures, and community capacity-building.
- **SDG 11 – Sustainable Cities and Communities:** Promoted through inclusive, safe, and resilient urban upgrading.
- **SDG 6 – Clean Water and Sanitation:** Advanced through improved access to water, drainage, and WASH facilities.
- **Indirect contributions:** Strengthened livelihoods (SDG 1 – No Poverty), improved health outcomes (SDG 3 – Good Health and Well-Being), and climate-resilient infrastructure (SDG 9 – Industry, Innovation and Infrastructure).

Together, these alignments position the Shauri Yako People's Adaptation Plan as a localized pathway for achieving Kenya's global sustainability commitments.

Integration and Implementation

Integration of the Shauri Yako PAP within the **People's Adaptation – LPLUDP** institutionalizes community-driven priorities within Homa Bay's formal land-use and infrastructure-planning systems. Implementation will continue to reinforce the county, national, and global linkages outlined above through coordinated budgeting, capacity-building, and monitoring frameworks.

By embedding settlement-level actions in these nested systems of governance, the Plan bridges the gap

between local realities and policy frameworks transforming community resilience initiatives into sustained contributions to Kenya's climate- and development-goals architecture (SUEZ Consulting, 2025).

1.6 Methodology Overview

The Shauri Yako People's Adaptation Plan is grounded in a participatory and evidence-based process that integrates technical analysis with community engagement. The methodology brings together two complementary streams of inquiry **the Shauri Yako Situational Analysis** and the **Homa Bay Rapid Climate Risk Assessment (RCRA)** conducted in early 2025 under the *Homa Bay Urban Resilience Initiative*. Together, these form the analytical foundation for the adaptation priorities and actions presented in this Plan.

1.6.1 Situational Analysis Approach

The *Shauri Yako Situational Analysis Report (Field Survey, 2025)* provided the social, economic, and physical baseline for the settlement. The analysis employed a combination of **household surveys, direct field observation, spatial mapping, and focus group consultations** to document living conditions, service access, infrastructure gaps, and environmental challenges.

Data collection was led by community enumerators trained by Akiba Mashinani Trust (AMT) and Homa Bay Municipality, ensuring inclusivity and local knowledge integration. Surveys captured information on population demographics, household income, water and sanitation access, housing typologies, waste management, and mobility. Spatial data were collected through GPS mapping of key features such as drainage networks, public spaces, and flood-prone areas verified through transect walks across the settlement.

Qualitative insights were drawn from semi-structured interviews and small group discussions with residents, landlords, traders, and local leaders, enabling the analysis to capture the lived realities behind the statistics. This approach ensured that the situational profile reflected both the measurable conditions and the social dynamics shaping vulnerability in Shauri Yako.

1.6.2 Rapid Climate Risk Assessment (RCRA) Approach

The *Homa Bay Rapid Climate Risk Assessment (RCRA) Report (2025)* provided the climate hazard and exposure dimension of the analysis. The RCRA combined **hydrological modelling, geospatial analysis, and**

participatory validation workshops to identify climate-related risks specific to informal settlements within Homa Bay Municipality, with Shauri Yako as one of the focal sites.

Hydrological and hydraulic models were developed to simulate flood behavior under different rainfall scenarios, assessing variations in flood depth, velocity, and extent for 1-in-10 and 1-in-100-year events. These models were supported by topographical data, soil characteristics, and land-use mapping. Climate projections for temperature, rainfall intensity, and seasonal variability were drawn from CORDEX-Africa datasets and validated with Kenya Meteorological Department (KMD) data.

Community validation workshops followed, engaging residents in mapping flood hotspots, drainage blockages, and climate-related damages to housing, roads, and social infrastructure. These participatory sessions ensured that the technical outputs reflected local experience and that scientific risk modelling was grounded in lived evidence.

1.6.3 Integration and Synthesis

The findings of both analyses were consolidated to inform the *Shauri Yako People's Adaptation Plan*. The Situational Analysis defined the **baseline conditions** demographics, services, housing, and land-use patterns while the RCRA identified the **climate hazards and exposure pathways** affecting those systems. Together, they formed a comprehensive picture of vulnerability at both household and settlement scale.

These insights were then validated and expanded through the **community visioning and prioritization process** described in Chapter 4. During these sessions, residents reviewed analytical findings, refined risk maps, and co-developed adaptation priorities based on both technical evidence and local priorities. This integrated approach ensured that the Plan is not only scientifically sound but also locally owned and contextually grounded.



2 COMMUNITY PROFILING GUIDELINES

2.1 Demographic & Socio-Economic Overview

Much of the data presented in this section was collected through **locally led household (HH) enumerations** undertaken as part of the participatory planning process (Field Survey, 2025). Local enumerators trained community members conducted household interviews and spatial mapping exercises to gather information on demographics, livelihoods, housing, and access to basic services. This approach ensured accuracy, built community ownership of the data, and anchored the People’s Adaptation Plan in the lived realities of Shauri Yako residents.

2.1.1 Population Size & Composition:

Shauri Yako is a densely populated informal settlement in Homa Bay Municipality, home to an estimated 5,056 residents spread across approximately 1.1 square kilometers, resulting in a high population density of about 4,595 persons per square kilometer. The

settlement comprises 1,945 households, with an average household size of 2.6 individuals, though some dwellings accommodate as many as 10 to 14 members in multi-family arrangements. This relatively small average household size likely reflects a prevalence of single-occupant and transient rental units, a common feature in low-income urban environments. The high spatial density places considerable strain on available land, housing, public services, and infrastructure, exacerbating vulnerabilities related to sanitation, drainage, and climate-related risks.

Table 2.1: Distribution of Population

Gender	Population	Percentage
Male	3,584	70.89%
Female	1,440	28.48%
Intersex	1	0.02%
Total	5,056	100%

The settlement exhibits a youth-dominated demographic structure, with the largest share of household heads falling within the 20–24-year age bracket. This reflects strong rural–urban migration

patterns, as many young people move to Shauri Yako seeking income opportunities in the informal urban economy. Younger residents often rent single rooms or share congested housing units, creating intense competition for limited housing stock. While this youthful population offers significant labor force potential, it also poses challenges linked to high

unemployment rates, housing shortages, and limited access to education and vocational training. Older adults form a smaller proportion of the population, but elderly-headed households are particularly economically insecure and disproportionately vulnerable to climate-related hazards such as flooding and extreme heat events.

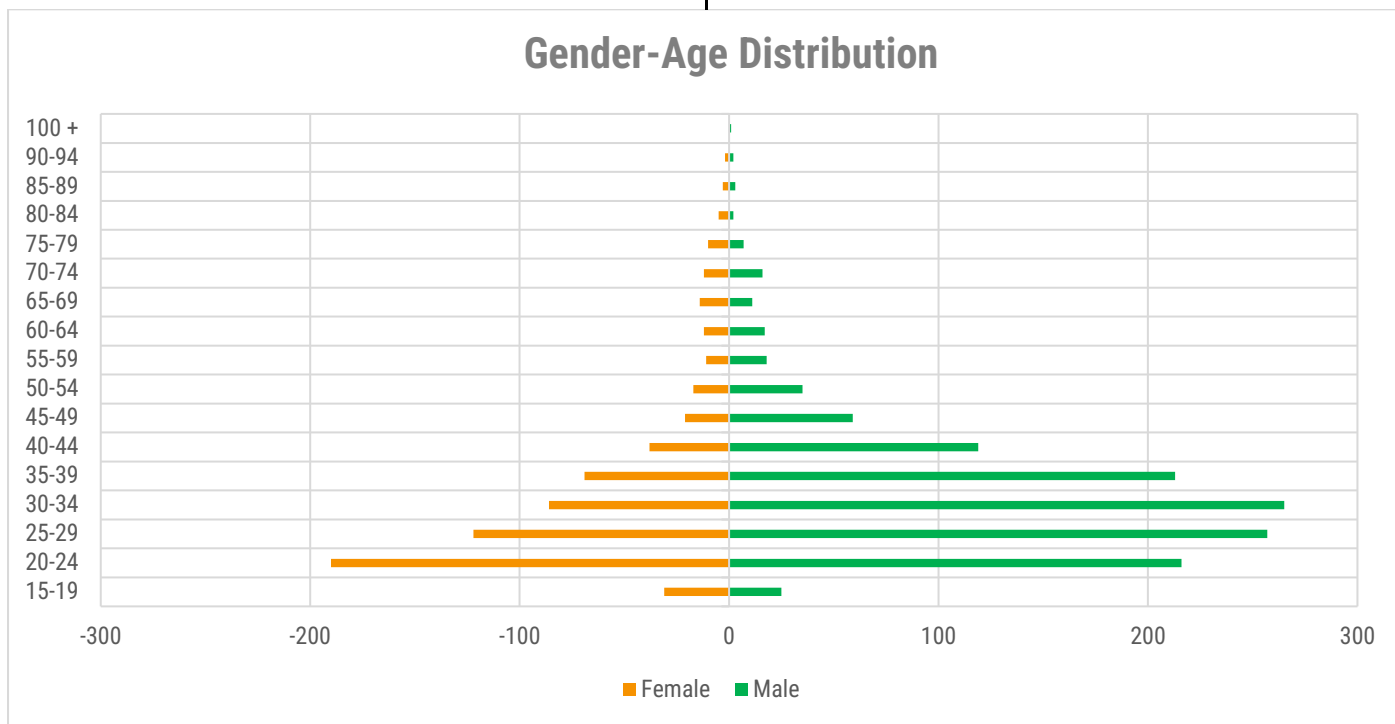


Figure 2.1: Population Pyramid

Gender distribution and household leadership patterns strongly influence Shauri Yako’s social dynamics. Among the 1,945 households surveyed, 66.67% are male-headed (1,285 households) and 33.16% are female-headed (645 households), with a small representation of intersex individuals (Field Survey, 2025). While this reflects traditional gender norms in which men are viewed as primary providers, the relatively high proportion of female-headed households many led by widows, separated women, or single mothers reveals a gradual shift in household structures driven by migration, widowhood, and increasing economic pressures.

Ethnically, Shauri Yako is predominantly Luo, aligning with broader Homa Bay County demographics. However, the settlement also includes minority groups from other parts of Western Kenya, contributing to its social and cultural diversity. Despite this diversity, the community remains largely united by shared socio-economic conditions, characterized by informal livelihoods, insecure land tenure, and collective strategies for coping with vulnerability.

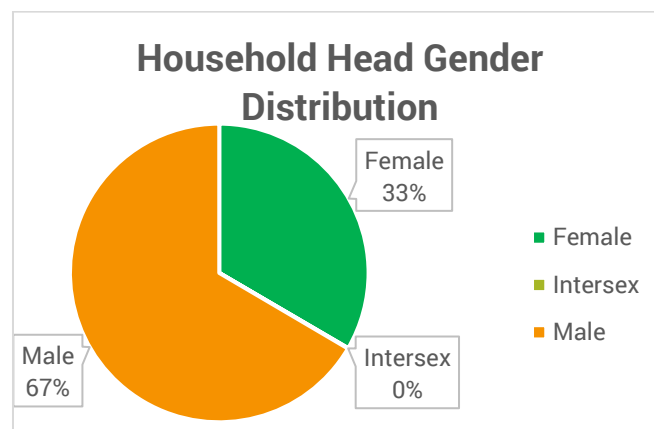


Figure 2.2: Household head Gender Distribution

2.1.2 Socio-Economic Indicators

Shauri Yako’s socio-economic profile reflects the structural challenges faced by many informal settlements in Kenya’s secondary cities. Employment is heavily informal, with the largest share of household heads (over 1,400 individuals) engaged in self-employment, such as running small kiosks, street vending, or freelance work. This is followed by casual laborers (753), including those in daily-wage construction, boda boda transport, or dock work along Lake Victoria. A sizable segment of household heads (1,029 respondents) identified as dependent students,

highlighting both the youthfulness of the population and the high proportion of economically inactive individuals. Only 515 respondents reported formal employment, underscoring the limited access to stable jobs within or near the settlement. These employment patterns render most residents highly vulnerable to economic shocks, climate-related disruptions, and inflationary pressures, especially given the volatile nature of the informal economy (Field Research, 2025).

Education levels further reveal systemic barriers to social mobility. According to the data, a majority of household heads have attained only basic education, with a substantial number not progressing beyond primary or lower secondary level education. This limits their access to formal employment and restricts their ability to benefit from skills-based economic opportunities. Access to basic services such as safe water, improved sanitation, and electricity remains inadequate across much of Shauri Yako. The situational analysis confirms that over 90% of households depend on pit latrines, often shared among multiple families, while water is primarily accessed through vendors or informal kiosks at a cost that spikes during dry seasons. Most residents rely on charcoal or firewood for cooking and use kerosene or informal grid tapping for lighting, increasing both health risks and fire hazards. These conditions combine to undermine general well-being, increase health burdens, and limit the capacity of the community to withstand climate-related stressors (Field Research, 2025).

2.1.3 Vulnerable Groups

Shauri Yako is home to a number of vulnerable groups who face compounded risks due to age, gender, disability, and socio-economic status. A significant portion of the settlement's households are headed by **young adults**, with **20.8% aged 20–24 years** and an additional **19.6% aged 25–29 years**. This youth dominance reflects both a high migration rate into the settlement and limited access to formal employment or training, making these groups particularly exposed to climate and economic shocks. As household heads, many of these young residents manage unstable incomes while supporting dependents, often in precarious housing conditions. Conversely, older age groups are underrepresented: only **8.1% of household heads are between 40–44 years**, and the percentage sharply declines beyond that age, suggesting that elderly residents are either marginalized or forced to relocate due to inadequate support systems or housing in the settlement (Field Research, 2025).

Female-headed households represent another vulnerable category. While exact percentages are pending disaggregated analysis, qualitative findings and

field consultations confirm that a substantial share of homes especially rental units are rented/owned by **single mothers, widows, or separated women**, many of whom operate informal businesses while managing childcare and domestic responsibilities. These women often reside in flood-prone zones, where overflowing latrines and limited access to clean water increase health risks (Field Research, 2025).

PWDs, though not consistently captured in the household enumeration dataset, were flagged during community validation as facing significant challenges in mobility, emergency evacuation, and sanitation access. Shared pit latrines, narrow unpaved alleys, and unlit footpaths present physical and safety barriers. **Children living in overcrowded households** face risks related to waterborne disease, malnutrition, and lack of safe play or learning spaces. These overlapping vulnerabilities demand targeted adaptation actions that go beyond infrastructure to address structural inequality and social protection (Field Research, 2025).

2.1.4 Economic Activities

Shauri Yako's local economy is overwhelmingly informal, with 32.7% of household heads engaged in self-employment, primarily in the form of small-scale businesses, street vending, and freelance services (Field Research, 2025). These activities range from selling groceries and second-hand clothes to operating food kiosks and performing minor repairs. This dominant sector reflects the lack of access to formal employment, limited educational attainment, and the entrepreneurial responses of residents to economic exclusion. Casual labor, including construction work, transportation (e.g., boda boda operations), and dockside tasks linked to nearby Lake Victoria, accounts for 15.1% of economic activity. These forms of work are seasonal, unstable, and highly sensitive to climate shocks such as heavy rainfall or flooding that disrupt mobility and market access. Meanwhile, only 7.4% of household heads report being in formal employment, primarily in teaching, office work, or public service positions typically held by individuals with secondary or post-secondary education (Field Research, 2025).

A notable 16.4% of household heads identified as dependent full-time students, suggesting a high concentration of youth without income-generating roles either still in school or in transition, often relying on family or informal support. Additionally, 9.3% of respondents were unemployed, further illustrating the precariousness of livelihoods in the settlement. The community is largely disconnected from formal agricultural or industrial employment, and there is limited evidence of organized farming or fishing as primary occupations, despite the proximity to Lake

Victoria. This economic landscape reveals deep structural vulnerability: incomes are unstable, social protections are minimal, and the existing livelihood systems are easily disrupted by climate hazards such as floods, heatwaves, or droughts. These factors underscore the importance of climate-proofing informal economic activities, supporting livelihood diversification, and integrating economic resilience strategies into local adaptation planning (Field Research, 2025).

2.1.5 Types of Settlement

Shauri Yako has developed through unplanned, incremental growth, forming a compact and irregular urban fabric that reflects both its rural origins and its rapid urbanization. The settlement's pattern is predominantly informal, characterized by a high-density layout with little spatial order, narrow footpaths in place of formal roads, and minimal provision for public open spaces or social amenities. This organic structure has evolved around economic and social networks rather than formal planning, resulting in a mosaic of residential and mixed-use plots that accommodate both living and livelihood activities.

The physical morphology of Shauri Yako is defined by tightly packed housing clusters separated by narrow access lanes that are often unpaved and prone to flooding. Structures are predominantly single-storey and constructed from semi-permanent materials such as iron sheets and mud walls, built close together without standardized plot boundaries. Drainage channels are shallow or absent, frequently blocked by waste or encroached upon by housing extensions. The absence of organized road reserves or pedestrian corridors restricts mobility, particularly during the rainy season when many routes become impassable.

Commercial activities are integrated into the settlement fabric, concentrated around the main road and the market area, where small kiosks, workshops, and food vendors line busy pathways. Beyond these active zones, the interior sections of the settlement are more residential but remain mixed in use, with many households operating small-scale businesses from their dwellings. The lack of spatial zoning or designated community spaces contributes to congestion and limits the availability of land for social infrastructure, green spaces, and emergency access routes.

Environmental constraints further shape the settlement pattern. Portions of Shauri Yako extend into low-lying

and flood-prone areas near Lake Victoria's riparian buffer. Poor drainage and the gradual infilling of natural water pathways have altered surface runoff, increasing local flood vulnerability. During heavy rains, water accumulates along the settlement's natural depressions and footpaths, affecting housing stability and sanitation facilities. Despite these risks, residents continue to adapt through incremental construction and informal modifications such as raised floors and makeshift drainage channels.

2.1.6 Housing Types and Conditions

Housing in Shauri Yako is predominantly informal and substandard, reflecting the socio-economic vulnerability of its residents and the area's historical development as an unplanned settlement. According to the situational analysis (Field Research, 2025), the majority of housing units in Shauri Yako are semi-permanent structures, constructed using a mix of corrugated iron sheets, mud walls, timber, and reused materials. A smaller proportion of homes are temporary or makeshift, with plastic sheeting and salvaged materials used especially in rental compounds and flood-prone zones. Only a limited number of households reside in permanent structures made of stone or cement blocks, usually owned by earlier settlers or higher-income landlords. These distinctions create a visible pattern of material-based inequality, with renters often inhabiting poorer quality units that lack insulation, ventilation, or flood resilience.

The physical condition of housing in the settlement poses serious risks during climate events. Structures are highly susceptible to flooding, especially in areas adjacent to blocked drainage paths or the lakeshore, where water backflow causes frequent inundation. The situational analysis report notes that many houses lack proper foundations, and those constructed using mud walls or timber frames experience rapid deterioration during heavy rains. Roofing materials mostly iron sheets contribute to heat stress during hot seasons, as they trap and radiate heat in the absence of ventilation. In dense rental zones, multi-household compounds share limited sanitation, leading to unhygienic conditions, especially when flooding causes latrine overflow. These poor housing conditions not only endanger physical health and safety but also restrict the community's capacity to adapt, recover, or invest in home improvements due to insecure tenure and limited financial means.

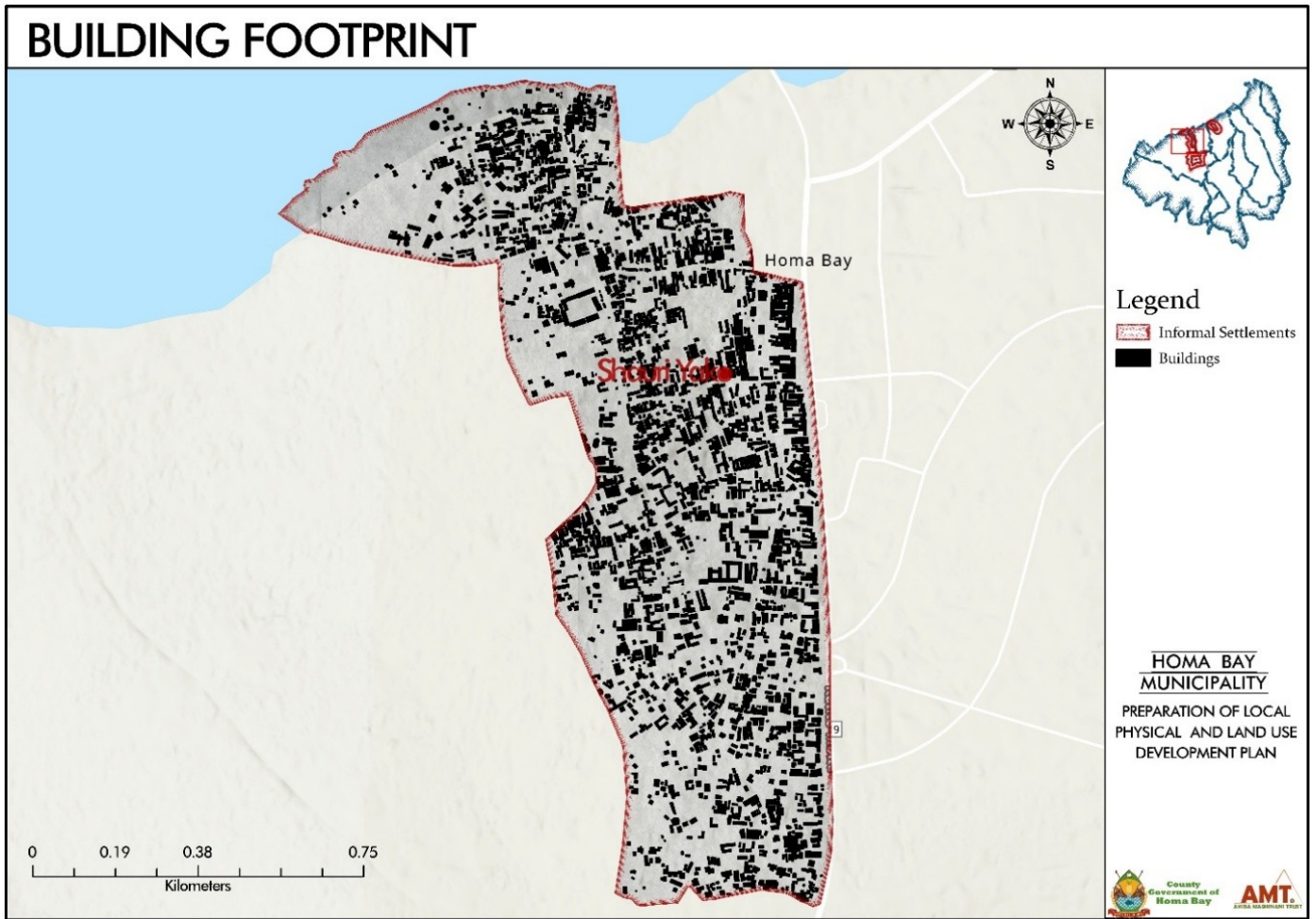


Photos 2.1: Precarious Housing Unit

2.1.7 Land Use & Spatial Organization

Shauri Yako is an unplanned informal settlement characterized by mixed and overlapping land uses, with minimal physical separation between residential, commercial, and service functions. The majority of the land is occupied by dense residential structures, with houses often packed together without standard setbacks or roads. These are interspersed with informal commercial stalls, kiosks, and mobile vendors operating within narrow footpaths and near communal infrastructure points such as water kiosks or boda boda stages. According to the situational analysis, the community lacks formal industrial or institutional zones, and there is no designated public recreational space within the settlement. Instead, open spaces often located in flood-prone areas are used for multiple, temporary purposes such as drying fish, parking boda bodas, or gathering for social events. The absence of formal zoning regulations has allowed land use to evolve organically but unsustainably.

From a spatial resilience perspective, this informal growth has created significant overcrowding and access challenges. Community mapping exercises revealed that many paths are too narrow for emergency vehicle access, and approximately 90% of homes are within 2–3 meters of adjacent structures, exacerbating fire risk and limiting ventilation. Residential areas abut open drainage lines and uncollected waste dumps, particularly near the lake edge and road corridors. Commercial activities concentrate near transport nodes and water points but often lack permanent structures, leaving traders exposed to flooding and displacement. The layout also lacks defined administrative blocks, hindering service delivery and infrastructure planning. These spatial patterns reduce the community's ability to respond to and recover from climate hazards, especially floods and heatwaves, and require targeted upgrading and reorganization to enhance resilience and equity in the built environment.



Map 2.1: Building Footprint

2.1.8 Land ownership and Tenure

Access to land in Shauri Yako presents a complex blend of formal recognition and informal practice. Among those who identify as landowners, 88.2% reported having legally recognized ownership documents, reflecting the area’s historical roots as rural land where original settlers acquired plots through family inheritance or early transactions under customary or freehold systems. However, 10.9% of owners stated

infrastructure investments they lacked any ownership documents, highlighting a subset of residents who likely acquired plots informally, through rental or subdivided arrangements not backed by legal registration. Despite these formal documents, urban planning structures have not kept pace with the transition from rural to urban status, meaning that land ownership often lacks corresponding development permissions or alignment with zoning frameworks. This disconnect limits residents’ ability to formally expand or improve housing and restricts access to public .

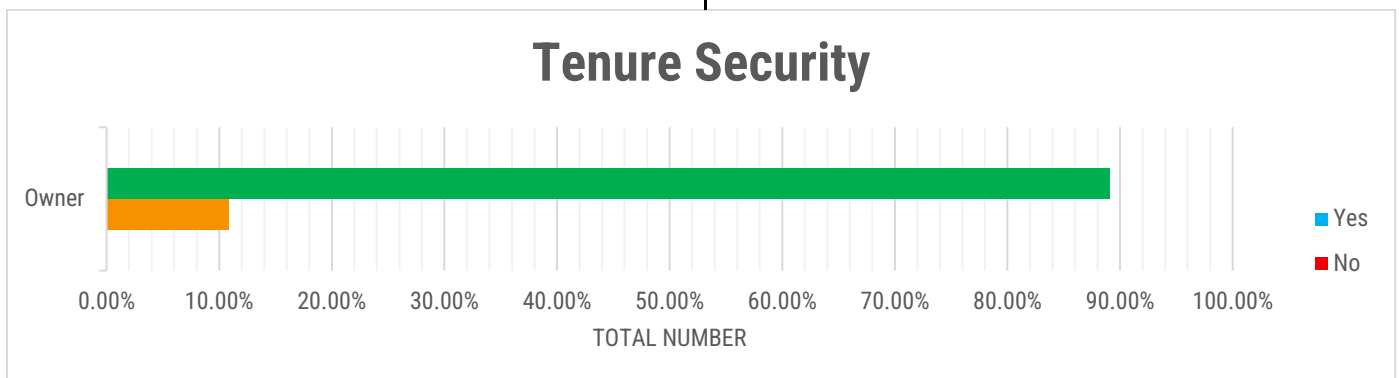


Figure 2.3: Tenure Security

Disputes over land are not uncommon and contribute to insecurity and tension within the community. While only

a small share of total respondents reported active threats of eviction, 20% of those who cited threats

attributed them to land ownership disputes, while 1.7% cited lack of legal land tenure as a factor (Field Research, 2025).

These disputes often stem from unclear or overlapping land boundaries, inheritance conflicts, or competing claims arising from unregistered sales. In areas where housing pressure is intense, informal subdivisions of plots especially by absentee landlords further complicate matters. Access to new land for expansion is constrained by environmental limits, especially near riparian zones, and by a lack of formal planning that would enable organized densification. These tenure and land access challenges hinder both individual investments in housing and community-wide upgrades needed for climate adaptation, underscoring the urgency of integrated land regularization and participatory planning strategies.

2.2 Livelihood Systems and Vulnerabilities

2.2.1 Primary Livelihoods

Shauri Yako's economy is overwhelmingly informal, with 35.5% of household heads engaged in self-employment, including small-scale trading, vending, tailoring, and artisanal services. These microenterprises operate from roadside stalls, kiosks, or home-based setups and serve as the economic backbone of the settlement. Another 16.6% of respondents reported working as casual laborers in construction or boda boda (motorbike taxi) services. These jobs offer day-to-day income but lack predictability and protection. Notably, only 12.1% of household heads are employed in formal sector roles such as teaching, clerical work, or public service, an indicator of low educational attainment and limited access to salaried employment. Unemployment affects 6.2% of household heads, while 16.4% and 18.6% are full-time students and children, many of whom remain financially dependent.

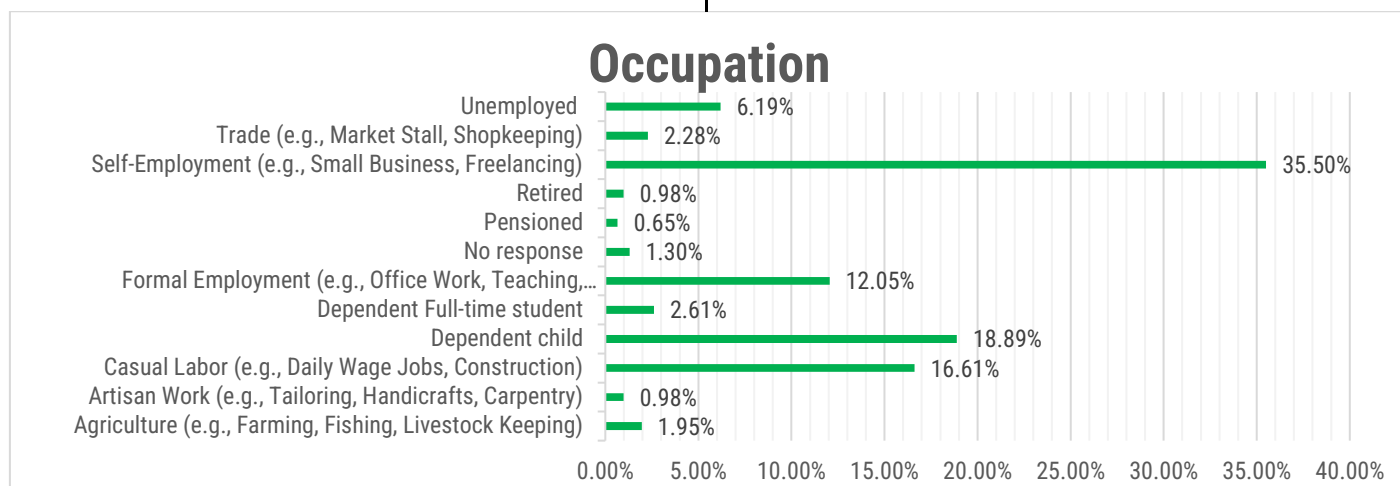


Figure 2.4: Occupation

These livelihood systems are highly sensitive to external shocks. Climate change impacts such as flooding, seasonal water scarcity, and extreme heat directly disrupt economic activity. For instance, heavy rains frequently render roads impassable, reducing customer access for traders and forcing casual laborers to forgo work. Informal food vendors suffer stock loss due to spoilage or water damage, and frequent power outages affect cold storage for fish sellers. Youth working in boda boda transport face heightened risks during flooding, while roadside kiosks are often displaced by erosion or stormwater runoff. In the absence of social safety nets, even minor disruptions can lead to food insecurity and income loss. These vulnerabilities highlight the urgent need to climate-proof local livelihoods and expand access to adaptive economic opportunities such as clean energy, resilient infrastructure, and vocational training.

2.2.2 Vulnerability of Livelihoods

Livelihoods in Shauri Yako are highly vulnerable to both environmental and socio-economic shocks. Most residents depend on informal income-generating activities such as vending, petty trade, boda boda transport, and casual construction work sectors that are highly sensitive to climate variability and economic instability. Survey data indicates that 36.8% of households have experienced direct livelihood disruption due to flooding, while over 63% reported flood exposure, underscoring the widespread nature of the threat (Field Research, 2025). Seasonal floods during the long rains (March–May) and short rains (October–December) frequently interrupt business activity by cutting off access routes, damaging stock, and closing informal stalls that lack flood-resilient infrastructure.

The impact is particularly severe for self-employed traders (32.7%) and casual laborers (16.1%), who form the two largest occupational groups in the settlement. These groups depend on daily operations and physical access to customers, construction sites, or transport hubs all of which are routinely compromised by flooding, heatwaves, and market disruptions. Boda boda riders are unable to operate on waterlogged or eroded roads, while open-air vendors lose merchandise from rain damage or lack of shelter. Rising lake levels have also begun encroaching on lakeside business zones and public spaces, further reducing safe areas for commerce and community gatherings.

Beyond these immediate effects, deeper systemic issues intensify vulnerability. As noted by Suez Consulting (2025), Shauri Yako's exposure to climate impacts is magnified by its dense and unplanned settlement pattern, poor drainage, insecure land tenure, and dependence on low-capital informal enterprises that lack insurance or financial buffers. Limited access to credit, weak institutional support, and inadequate basic infrastructure constrain residents' ability to recover after shocks and perpetuate cycles of loss and instability. These structural constraints mean that even minor climate events can trigger prolonged income insecurity for many households.

Strengthening livelihood resilience therefore requires an integrated approach combining drainage and access improvements, upgrading of trading spaces, and the establishment of microfinance and savings schemes that can buffer income loss during climate disruptions (Shauri Yako Situational Analysis Report, 2025; Suez Consulting, 2025).

2.2.3 Social Safety Nets and Support Systems

In the absence of formal welfare programs or structured economic support from the state, Shauri Yako residents rely heavily on community-based coping mechanisms to manage economic shocks such as income loss, price surges, or business disruptions. Informal social networks including *chamas* (rotating savings groups), youth associations, and church-based welfare collectives act as the first line of support during crises. Members pool resources to assist one another during financial strain, particularly for rent, school fees, and restocking business inventories after losses. Focus group discussions revealed that many small traders contribute daily or weekly savings to group funds, which they can borrow from during emergencies. These systems, while widely used, are limited in scope and

frequently overstretched during community-wide crises like prolonged floods or market closures.

Another common coping strategy involves borrowing from friends or extended family within the settlement or from rural relatives. However, as the situational analysis notes, these remittances are small, irregular, and often insufficient to buffer the effects of prolonged income loss. Informal moneylenders are also used but often charge high interest rates that deepen debt vulnerability. The lack of formal savings instruments, microinsurance, or government-backed emergency funds leaves residents especially self-employed and casual workers without reliable fallback options during economic downturns.

Households across Homa Bay's informal settlements depend primarily on informal solidarity systems and kinship networks for recovery from floods and droughts, yet these mechanisms are "irregular, limited in coverage, and easily overwhelmed during widespread climate shocks." The report emphasizes that chronic poverty, insecure livelihoods, and the absence of structured financial instruments significantly constrain adaptive capacity and deepen vulnerability to climate hazards. (Suez Consulting, 2025)

During past periods of flooding that disrupted trading and transportation, many households resorted to reducing daily expenditures or skipping meals, illustrating how fragile and limited the existing support systems are. Strengthening community resilience therefore requires investment not just in infrastructure but also in inclusive financial tools, group-based savings schemes, and climate-responsive social protection models.

2.2.4 Access to Resources

Access to resources in Shauri Yako is constrained not by total absence, but by structural inequalities and high costs that leave the majority of households vulnerable. According to the household survey, 74.3% of residents are tenants and only 23.6% own their homes, reflecting limited access to land as a secure asset; this is compounded by a sharp gender disparity, with only 6.3% of women owning land compared to 17.3% of men. Financial resources are equally fragile: 42% of households reported depending on informal savings groups (*chamas*) as their main safety net for emergencies, while fewer than 7% have access to formal credit or insurance.

Water access illustrates another inequity in Shauri Yako. Despite the presence of the Homa Bay Water and Sanitation Company (HOMAWASCO) within the municipality, service coverage remains limited and unreliable. Only about 27% of households reported

having a piped water connection, while over 60% rely on private vendors, often paying up to KSh 30 per 20-litre jerrycan during dry spells. During periods of intense rainfall or flooding, water infrastructure is frequently damaged or contaminated, while prolonged dry spells reduce supply from boreholes and surface intakes forcing residents to revert to untreated sources. Studies further note that water and sanitation systems in Homa Bay's informal settlements are highly sensitive to climate variability, with flooding leading to sewer overflow and contamination of shallow water points, and droughts intensifying scarcity and raising prices, thereby compounding the burden on low-income households (Suez Consulting, 2025).

Sanitation access is similarly constrained, with **89.2% of households** using pit latrines most of them shared and on a pay-per-use basis (Field Research, 2025). Many of these facilities are located in flood-prone zones and frequently overflow during heavy rains, creating serious health risks and further degrading nearby water sources (Shauri Yako Situational Analysis Report, 2025). Natural resources such as open spaces and riparian land, while vital for drainage, gardening, and recreation, are increasingly encroached upon or degraded by recurrent flooding and erosion, reducing their usability and safety (Kenya Homa Bay – RCRA Report; Field Research, 2025).

These constraints are not evenly distributed. Women and youth face greater barriers: women disproportionately bear the time and financial costs of water collection and caregiving, while youth migrants who make up the majority of new arrivals often lack land rights, stable incomes, or access to financial safety nets. Collectively, these challenges illustrate how limited and climate-sensitive access to water, sanitation, and land magnifies inequality and deepens vulnerability in Shauri Yako (Suez Consulting, 2025; Field Research, 2025).

Table 2.2: Financial Safety Net

Financial Safety Net	Percentage (%)
Informal Savings Groups (Chamas)	42%
Formal Credit & Insurance	7%
No Access / Other Means	51%

2.3 Infrastructure and Services Baseline (WASH, Housing, Roads, Drainage, Energy, Health)

2.3.1 Water, Sanitation, and Hygiene (WASH)

Shauri Yako residents face persistent challenges in accessing clean water, reliable sanitation, and safe hygiene services, with disparities in source, quality, and affordability shaping vulnerability across the settlement. Water sources are diverse but precarious: while 20.5% of households are connected to HOMAWASCO's piped system, nearly 22.5% of these still experience frequent supply disruptions, forcing reliance on alternatives such as water kiosks, boreholes, shallow wells, and informal vendors. The largest single category of water access is through vendors and kiosks, used by more than 35% of households, but these are unregulated and often expensive during dry spells. Proximity data from the household survey shows that 28.6% of households fetch water within 200m, but another 16.3% walk between 500m and 1km, while 10.4% walk more than 1km, increasing the time and physical burden, particularly on women and children. Quality remains a major issue: untreated Lake Victoria water, used directly by over 165 households 10.8% in the survey, exposes residents to waterborne diseases, while boreholes are reported to have salinity and contamination problems. Rainwater harvesting is practiced by only a small fraction (less than 3%), largely due to the cost of storage tanks (Field Research, 2025).

Table 2.3: Water Source distance from the house

Water Source distance from the house	Percentage of Households
Between 200m and 500m (5 to 10 minutes' walk)	33.83%
Between 500m and 1km (10 to 15 minutes' walk)	16.30%
Less than 200m (less than 5 minutes' walk)	28.64%
More than 1 km (more than 15 minutes' walk)	10.44%
No response	0.77%
Tap is in my house	10.03%

Sanitation services are even more constrained. The vast majority of households (89.3%) depend on pit latrines, almost all of which are shared by multiple households, often on a pay-per-use basis. Only 6.0% of households have access to flush toilets connected to a sewer, while a further 0.5% rely on septic tanks. Open defecation,

though relatively rare (0.26%), is still present, with a few cases reported both within the settlement and directly into Lake Victoria. The communal nature of sanitation is evident, as 88.6% of facilities are plot-level shared toilets, supplemented by 7.1% public toilets (free) and 1.1%

public toilets (pay-to-use). These facilities often lack adequate maintenance, lighting, and drainage, raising risks of contamination during floods and heightening concerns over privacy and security for women and children. (Field Research, 2025).

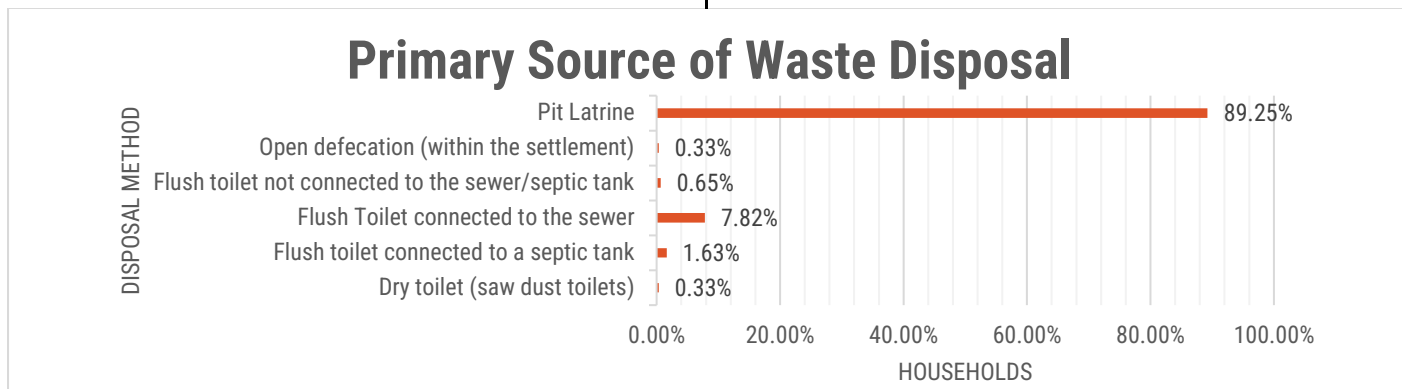


Figure 2.5: Primary Source of Waste Disposal

Hygiene practices are undermined by limited solid waste management: 71.7% of households dispose of waste by dumping, often in undesignated areas, while 28.7% resort to burning, with only 3.9% benefitting from formal municipal collection. This not only contaminates groundwater and surface water but also increases disease vectors and indoor air pollution. Together, these

factors mean that Shauri Yako’s WASH conditions are characterized by unreliable and unsafe water, heavily shared and unsafe sanitation, and poor waste disposal systems conditions that directly aggregates vulnerability to floods, cholera, diarrheal diseases, and other climate-sensitive health risks (Field Research, 2025).

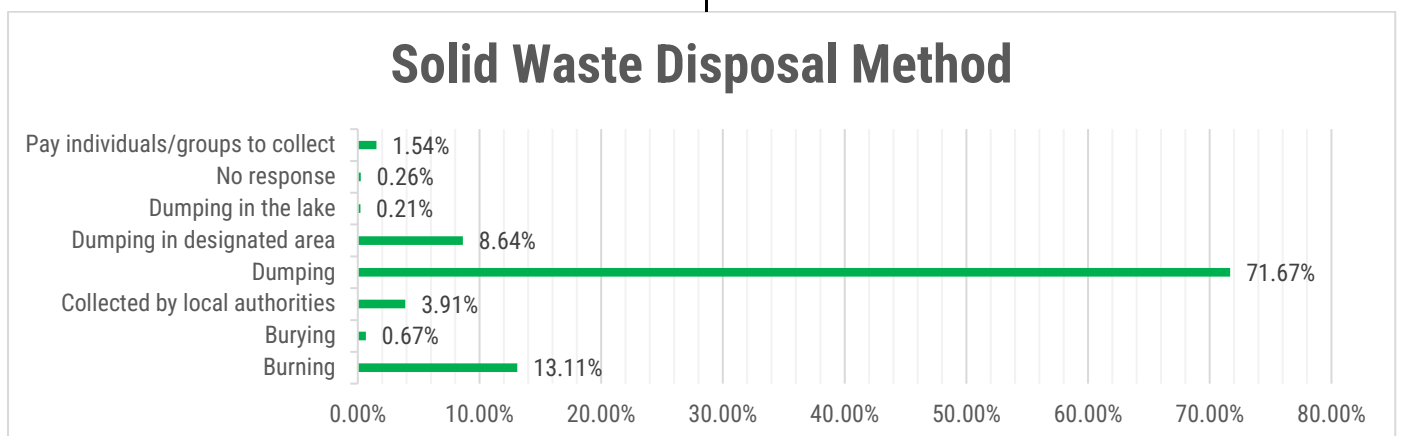


Figure 2.6: Solid Waste Disposal Method

2.3.2 Housing and Shelter

Housing conditions in Shauri Yako reflect both the economic realities of low-income urban residents and the risks posed by rapid, unplanned settlement growth. The majority of households (72.6%) live in rented units, while only 23.6% are homeowners, underscoring the dominance of rental housing and the limited capacity for residents to invest in long-term improvements. Shelter types are predominantly semi-permanent structures constructed from iron sheets, which are used for both roofing and walls by most households. While this choice reflects affordability, it raises concerns about insulation, heat retention, and fire hazards. More durable options, such as cement-plastered walls or concrete roofs, are

rare, meaning that a large share of the housing stock does not meet modern safety or resilience standards. (Field Research, 2025).

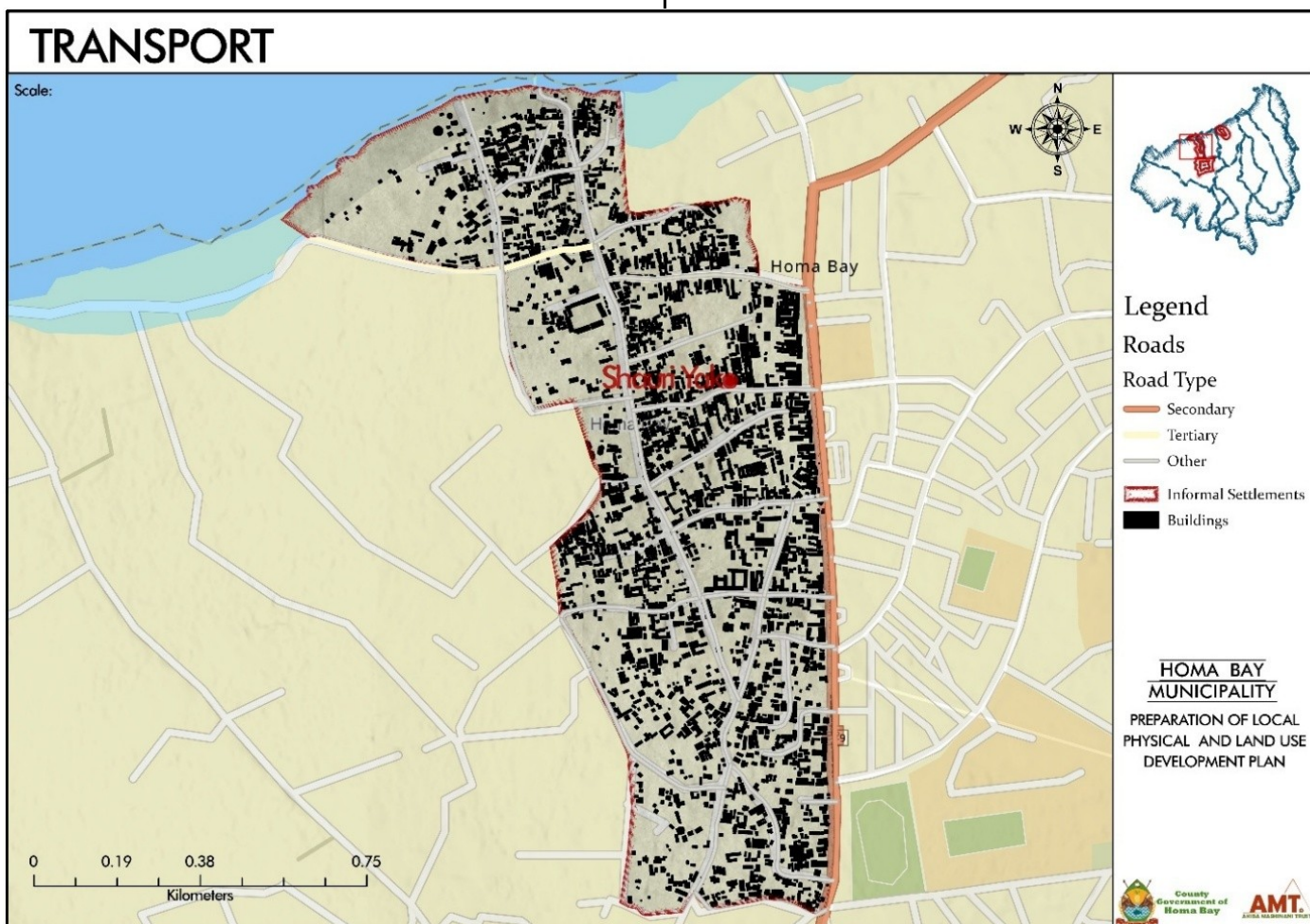
Space adequacy is another pressing issue. Survey data shows that the average household size is 3 persons, yet most families occupy only one or two rooms, with congestion especially acute among low-income renters. Larger households of 5–10 members often share the same limited space, reducing privacy and heightening exposure to indoor air pollution from charcoal or kerosene cooking. Rental costs are largely low-income oriented: 95% of tenants pay under KSh 5,000 per month, with the largest proportion (55.4%) paying between KSh 2,001–5,000, while 39.7% pay as little as KSh 1,000–2,000. Although affordability allows access

to shelter, it also reflects the prevalence of poor-quality, cramped units. (Field Research, 2025).

Housing vulnerability is further compounded by insecure tenure and the location of many dwellings in flood-prone zones. Informal construction practices, narrow access paths, and weak foundations leave homes highly exposed to flooding, erosion, and heat stress. Women and tenants are particularly disadvantaged: gender disparities in land ownership mean that female-headed households have fewer options for secure and resilient housing. Collectively, these conditions highlight that while Shauri Yako provides essential low-cost rental housing for Homa Bay's urban poor, the stock is structurally weak, overcrowded, and highly vulnerable to climate risks, underscoring the urgent need for incremental upgrading and safer construction practices.

2.3.3 Roads and Transport:

Transportation in Shauri Yako relies on a mix of walking, bicycles, motorcycles (boda bodas), and public minibuses (matatus), with walking being the most common mode due to affordability and the compact nature of the settlement. The road network is uneven: while most internal roads remain unpaved, narrow earth or gravel tracks that become muddy and nearly impassable during rains, the settlement has benefited from recent upgrades under the Kenya Informal Settlements Improvement Project (KISIP). Through KISIP, several access routes within Shauri Yako are currently being upgraded to tarmac, and the major arteries in and around the settlement are already paved, significantly improving all-weather accessibility. These improvements are expected to reduce travel times, curb flood-related disruptions, and enhance safety for both pedestrians and boda boda riders, who have long navigated poor road conditions.



Map 2.2: Transportation Network

Public transport plays a more limited role inside the settlement itself. Because Shauri Yako is relatively small and densely built, matatus primarily serve to connect the community to other parts of Homa Bay County and external destinations, rather than being used for internal

mobility. Within the settlement, residents largely depend on walking and boda bodas for daily movements. Boda bodas remain indispensable for last-mile connectivity, especially in unpaved interior zones, though their rapid

expansion raises safety concerns due to lack of regulation.

Connectivity has a direct impact on livelihoods: areas near tarmacked routes and boda boda stages host denser trading activities, while households in poorly connected sections face reduced access to markets, schools, and healthcare services. For informal workers, rainy-season flooding of earth roads leads to lost income when job sites become unreachable or customers cannot access businesses. Overall, Shauri Yako's transport infrastructure is in transition from fragile, flood-prone paths toward a more resilient network yet still characterized by high reliance on walking and boda bodas, limited internal matatu use, and vulnerability of unpaved segments to seasonal disruption.

2.3.4 Drainage Systems:

Shauri Yako has very limited stormwater drainage infrastructure, and this leaves much of the settlement highly prone to seasonal flooding. Household survey data shows that over 64% of households reported being directly affected by flooding or waterlogging in the past five years, with low-lying northern zones and areas near the market consistently identified as the most vulnerable. Informal drains and swales exist but are frequently blocked with waste or silt, preventing efficient runoff and leading to prolonged stagnation. Hydraulic modeling undertaken during the Rapid Climate Risk Assessment (RCRA) confirmed that two swales bordering the Shauri Yako market flood regularly, while the road to the pier on the north-west edge of the settlement is often submerged during heavy rains.

Topography worsens these issues: the settlement's northern plains, closer to Lake Victoria, lie at low elevation and are especially prone to water accumulation, while the southern elevated sections are less exposed. Community mapping and validation workshops reinforced this picture, with residents identifying the market area, clustered residential compounds near drainage channels, and narrow interior access lanes as the hotspots where floodwaters stagnate for several days before receding. Flood impacts extend beyond infrastructure: residents reported damage to homes, disruption of trading activities, contamination of pit latrines, and increased incidence of waterborne diseases following each rainy season. Vulnerable groups such as the elderly, children, and persons with disabilities face disproportionate risks due to mobility challenges and lack of safe evacuation routes.

The drainage system in Shauri Yako is fragmented, poorly maintained, and overwhelmed by seasonal rains,

resulting in repeated waterlogging and flood damage that erodes both livelihoods and public health.

2.3.5 Energy Access:

Energy access in Shauri Yako is uneven, with a sharp divide between lighting and cooking needs, compounded by affordability and reliability challenges. Electricity is the primary source of lighting for 71.1% of households, while 27% report using solar systems, often as backups during frequent grid outages. Despite this relatively high connectivity, power interruptions are common, with erosion and flooding frequently damaging poles and transformers. The unreliability of supply forces households to invest in costly alternatives such as solar lanterns, kerosene lamps, or battery-powered torches, which add to household energy expenditure.

Cooking energy presents a different profile: survey data shows charcoal remains the dominant fuel, used by 45.3–55% of households, reflecting its affordability and availability despite associated deforestation and indoor air pollution risks. Liquefied Petroleum Gas (LPG) is the second most used cooking source, reported by 17.5–28% of households, valued for its cleanliness and efficiency but limited by high upfront costs for cylinders and stoves. Firewood is still relied upon by about 13% of households, particularly in peripheral areas, while biogas (4.9%) and ethanol-based fuels (2.4–3.9%) have made modest inroads. Electricity is rarely used for cooking (2.1–8.1% of households), reflecting both high tariffs and unreliable supply.

From a sustainability perspective, Shauri Yako's reliance on charcoal and firewood heightens vulnerability to health risks such as respiratory illnesses, while also contributing to regional deforestation. Meanwhile, affordability remains a major barrier to transition: many low-income households cannot sustain the higher recurring costs of LPG or the upfront costs of solar home systems. Gendered impacts are notable, as women who are primarily responsible for cooking are disproportionately exposed to indoor smoke, while also bearing the financial burden of fuel purchases.

While electricity access for lighting is relatively widespread, Shauri Yako's energy landscape is dominated by unreliable grid supply and heavy dependence on non-renewable, polluting cooking fuels, underscoring the fragility of energy security in the settlement.

2.3.6 Health Infrastructure and Services:

Healthcare access in Shauri Yako is characterized by heavy reliance on public facilities, limited alternatives,

and a persistent burden of communicable and non-communicable diseases. Household survey data shows that 86.9% of residents depend on public hospitals for treatment, while 7.5% use private hospitals, 2.5% rely on community clinics, and fewer than 1% access pharmacies or school-based clinics as their primary source of care. Mobile clinics are scarcely used, accounting for about 1.4% of responses, reflecting gaps in outreach services. This concentration of demand in public hospitals has led to overcrowding, long waiting times, and strained resources, limiting timely care for residents.

Accessibility to facilities varies spatially: 35.8% of households are located within 500 meters to 1 km of a medical facility, allowing for relatively quick access, but others travel much farther, creating barriers in emergencies. Vulnerable groups pregnant women, children, the elderly, and persons with disabilities face heightened risks, as delays in transport often mean critical care is not reached in time. Maternal and child health services are available but under pressure: while vaccination programs run through public hospitals reach a majority of children, participants in community consultations noted frequent interruptions in drug supply, lack of maternal beds, and understaffed units, which undermine quality of care.

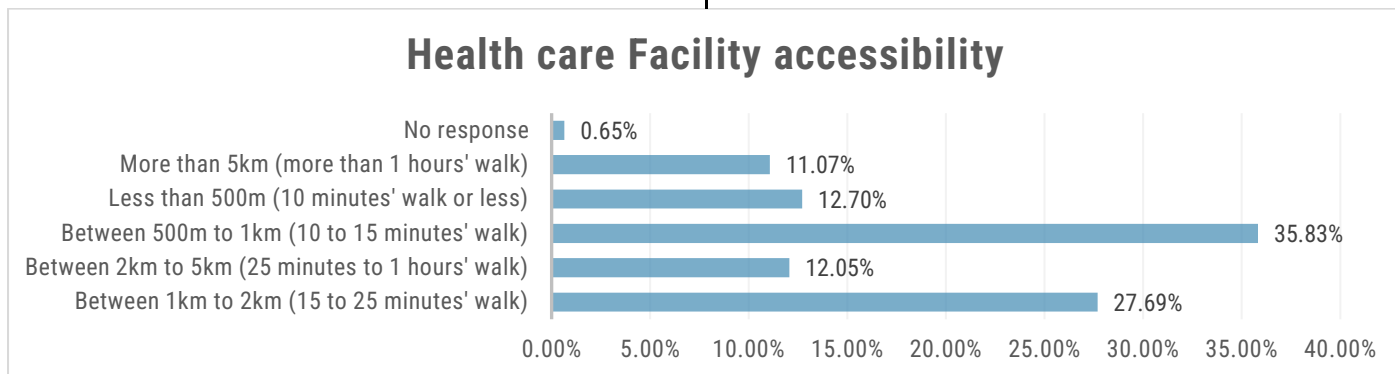


Figure 2.7: Health care Facility accessibility

The disease burden in Shauri Yako reflects the settlement's environmental and socio-economic vulnerabilities. Malaria is the most prevalent illness, driven by stagnant water and poor drainage, while diarrheal diseases, skin infections, and cholera outbreaks are common during floods. Alongside these, non-communicable diseases (NCDs) such as diabetes, hypertension, and asthma are rising, attributed to lifestyle shifts and lack of preventive care. Residents reported frequent out-of-pocket expenditure due to low medical insurance coverage, forcing many to delay care until conditions worsen.

Shauri Yako's healthcare landscape is defined by high reliance on overstretched public facilities, inconsistent access to emergency and maternal care, and a dual burden of infectious and chronic diseases, leaving residents vulnerable to both everyday health risks and climate-sensitive hazards.

2.4 Land Use and Physical Planning Analysis

2.4.1 Existing Land Use Overview

Land use in Shauri Yako is highly mixed and largely informal, reflecting the settlement's unplanned growth and limited regulatory enforcement. The majority of land is occupied by dense residential housing, dominated by

semi-permanent rental units constructed with iron sheets, mud, and timber. Residential compounds often double as spaces for small-scale commercial activities such as kiosks, food stalls, and boda boda repair points, creating overlapping residential-commercial land uses. There are informal commercial nodes concentrated around the market and along major access paths, though without designated zoning or adequate public infrastructure. Institutional land use is minimal: while schools and health centers exist within Homa Bay town, Shauri Yako itself has no formally planned institutional or industrial zones, forcing residents to rely on facilities outside the settlement.

Public utilities and recreational spaces are virtually absent. The situational analysis confirmed that no designated public recreational land exists within the settlement, and open spaces are typically encroached for informal housing or left as waste dumping sites. Vacant land is rare, with what exists located mainly in peripheral or flood-prone areas, often unsuitable for safe development. Indeed, flood zones are concentrated in the northern low-lying plains near Lake Victoria, where settlement density is high despite the risks of seasonal waterlogging.

The land use survey and GIS mapping exercise highlighted the distinction between formal and informal patterns: while some residents hold legal land ownership documents (88.2% of landowners reported

having formal title), the majority of structures are unplanned and fall within the informal category, often encroaching on wayleaves, riparian corridors, and drainage paths. This duality underscores the planning gap: Shauri Yako is legally integrated into Homa Bay Municipality yet functionally remains a predominantly informal settlement.

Integration with the Physical and Land Use Planning Act (2019) is essential in addressing these challenges. The Act requires county governments to prepare Local Physical and Land Use Development Plans (LPLUDP) that guide zoning, regulate density, and enforce sustainable land use. For Shauri Yako, this implies the need to formalize existing land use categories, designate safe residential and commercial zones, protect environmentally sensitive areas such as riparian buffers, and provide space for public utilities and recreation. Without such structured planning, the current mix of residential encroachment, informal commerce, and settlement in flood-prone areas will continue to heighten both environmental and socio-economic vulnerabilities.

2.4.2 Settlement Morphology and Spatial Patterns

The built environment of Shauri Yako is highly irregular, reflecting its evolution as an informal settlement with only limited integration into formal municipal planning. Plot sizes are generally small and irregularly shaped, especially in the central and northern sections of the settlement, where dense clusters of semi-permanent rental units dominate. These plots often lack clear demarcations, with housing structures tightly packed

and separated only by narrow footpaths or shared compounds. In contrast, the southern and peripheral areas of the settlement visible in the satellite image show larger plot sizes, often used for a mix of housing and small-scale agriculture, reflecting more recent expansion into peri-urban land.

The road hierarchy is weak and fragmented. The main access is provided by a few arterial roads some of which have been upgraded under KISIP but within the interior of the settlement, circulation relies on a dense network of narrow, unpaved paths. These paths are discontinuous and meandering, with limited connectivity, and are easily blocked during rains, contributing to flooding and poor accessibility. Unlike planned neighborhoods, Shauri Yako lacks a clear grid or radial street pattern: instead, the street density is highest around the market and commercial zones, where spontaneous clustering of kiosks and shops generates local hubs of activity, while peripheral residential areas are served by fewer, poorly connected access lanes.

The block layout is similarly unstructured. Blocks vary widely in size and form, with no consistent alignment of buildings to roads, resulting in a patchwork morphology. In some locations, structures encroach directly onto accessways or drainage paths, a hallmark of informal growth. The northern floodplain zone near Lake Victoria is particularly illustrative: here, dense informal housing has expanded into environmentally sensitive areas, increasing exposure to seasonal flooding. In contrast, near the southern edges, blocks are larger and more open, with visible green spaces and peri-urban agricultural plots, indicating a transitional morphology between informal housing and rural land use.



Map 2.3: Settlement Morphology

The morphology reveals the coexistence of informal growth patterns high-density, irregular plots, narrow winding paths, and unplanned block layouts with limited traces of planned development, mainly along major access roads where tarmacked surfaces and wider rights-of-way signal external interventions. This duality creates functional challenges in drainage, transport, and service delivery, while reinforcing vulnerability to climate risks concentrated in low-lying and congested sections of the settlement.

2.4.3 Land Tenure and Ownership Constraints

Land tenure in Shauri Yako is dominated by private freehold arrangements, though the majority of residents are tenants rather than owners. Survey data shows that 81.9% of land is privately held, while only 2.6% is public/government land, and 1.1% is under community tenure. Smaller proportions include ancestral land (6.1%) and those unsure of tenure status (7.4%). This mix demonstrates a clear predominance of privately owned plots; many subdivided for rental housing. However, tenure insecurity remains widespread at the household level: while 23.4% of residents are homeowners, nearly 72.6% are tenants, with landlords holding significant control over land and housing.

Table 2.4: Land Tenure Responses

Land tenure	No. of Households	Total %
Ancestral Land	118	6.07%
Community land	22	1.13%
Do not know	144	7.40%
No response	16	0.82%
Private land	1594	81.95%
Public Land/Government	51	2.62%

Most landowners reported having official proof of ownership, with 89.1% possessing legal documentation; however, the remaining 10.9% lack documentation, leaving them vulnerable to disputes, restricted access to credit, and difficulties in asserting claims. Land disputes are a recurring issue: 20% of households who reported eviction threats linked them to land ownership disputes, and 1.7% cited lack of legal tenure as the cause. These conflicts often stem from unclear or overlapping boundaries, inheritance disagreements, and unregistered sales, while absentee landlords contribute to unregulated subdivisions that complicate planning.

Table 2.5: Ownership Documents

Ownership Documents

	No	Yes	Total
Owner	10.86%	89.14%	100.00%

The dominance of tenancy, combined with unregistered or disputed plots, undermines long-term planning and investment. Tenants often lack incentives to improve housing or infrastructure, while landlords may prioritize short-term rental income over settlement upgrading. Gender disparities further deepen tenure insecurity: only 6.3% of women in Shauri Yako own land, compared to 17.3% of men, reflecting restrictive inheritance practices and limited financial access.

In planning terms, these tenure dynamics create significant constraints. Unclear ownership boundaries and overlapping claims delay infrastructure projects, while tenancy-driven housing models limit community participation in land regularization. Without addressing these tenure insecurities through systematic land registration, dispute resolution, and recognition of community land rights efforts to integrate Shauri Yako into formal urban planning will remain constrained.

2.4.4 Physical Planning Gaps and Challenges

Shauri Yako's physical planning is marked by the near-total absence of formal zoning and enforcement, which has allowed unregulated land use and settlement growth. The settlement is characterized by mixed and overlapping land uses, with residential houses tightly packed alongside kiosks, workshops, and open-air markets, often without separation or buffers. This lack of zoning has created incompatible land uses, such as schools and homes located adjacent to waste dumping areas, or residences sited along open drainage channels and flood-prone riparian corridors.

A major challenge is the absence of servitudes and wayleaves for infrastructure. Many internal access routes are too narrow to accommodate planned services such as roads, drains, or utility lines, with community mapping exercises showing that up to 90% of houses are built within 2–3 meters of each other. This leaves little room for emergency vehicle access or drainage easements, and contributes to chronic congestion, poor ventilation, and heightened fire risk. Informal encroachment onto road reserves and riparian zones further complicates planning, as these spaces are critical for mobility and stormwater management.

Despite these challenges, some planning frameworks exist on paper. The Physical and Land Use Planning Act (2019) mandates preparation of Local Physical and Land Use Development Plans (LPLUDP), and Homa Bay Municipality is in the process of developing one. However, enforcement in Shauri Yako has been minimal, with weak institutional capacity and limited resources

undermining the ability to implement zoning or remove incompatible land uses. As a result, the settlement remains effectively self-organized, with planning gaps manifesting in environmental degradation, inadequate infrastructure, and exposure to climate hazards.

2.4.5 Environmental Constraints and Land Suitability

Shauri Yako's environmental constraints are closely tied to its topography, soils, and proximity to Lake Victoria. The settlement exhibits a north–south elevation gradient, with the lowest areas near the lakefront at about 1,135 meters above sea level and rising to 1,340 meters in the southern uplands. These northern low-lying plains are heavily settled but are highly flood-prone and prone to waterlogging, limiting their suitability for further dense development. By contrast, the southern elevated zones offer more stable terrain suitable for structured residential growth, though steeper slopes in certain patches (up to 21.5% gradient) introduce risks of erosion and slope instability if not properly managed.

Soil conditions reinforce this spatial divide. The settlement's southern section is dominated by interstratified clayey soils, which are well-drained and moderately fertile, making them more suitable for construction and small-scale agriculture. In contrast, montmorillonitic soils in the northern and western sections have high shrink-swell capacity expanding when wet and contracting when dry leading to foundation instability, drainage problems, and waterlogging. This makes northern floodplain zones less appropriate for permanent structures without soil stabilization.

Environmental degradation compounds these natural constraints. Encroachment into riparian zones and wetlands has intensified flood risk, while deforestation for firewood and charcoal has reduced natural buffers against erosion. Waste dumping in open spaces and drainage lines further undermines land suitability, creating health and ecological risks.

From a planning perspective, these conditions suggest that southern, moderately sloped areas are more suitable for formal residential and institutional land uses, provided slope-sensitive construction techniques are applied. Conversely, northern low-lying floodplains should be restricted or carefully managed due to flood vulnerability and poor soil load-bearing capacity. Shauri Yako's environmental constraints flood-prone zones, unstable soils, steep slopes, and degraded ecosystems pose significant barriers to safe urban development unless explicitly integrated into land-use planning.

2.5 Local Governance and Existing Community Structures

2.5.1 Governance Framework:

Local governance in Shauri Yako operates through a layered mix of formal and informal structures that shape how decisions are made and implemented. At the formal level, the Homa Bay County Government and Municipality hold statutory authority under the County Governments Act and the Physical and Land Use Planning Act (2019), overseeing service delivery, infrastructure planning, and land-use regulation. The National Government remains present through the Local Administration structure. Within the community, the most influential governance system is the Nyumba Kumi initiative, a neighborhood-based security and organization framework introduced nationally to strengthen grassroots participation. Under this model, clusters of approximately 10–20 households are grouped under a Nyumba Kumi elder (chairperson), who liaises directly with community members on issues of safety, conflict resolution, and welfare, while also linking to the Assistant Chief and other administrative arms of government. This structure ensures that information and decisions flow both upward (to local authorities) and downward (to households), making it a critical platform for mobilizing residents during floods, health campaigns, or settlement planning. Alongside Nyumba Kumi, self-help groups, chamas, and youth associations provide additional organization around savings, livelihoods, and advocacy. Collectively, these overlapping governance mechanisms mean that while the County Government holds formal authority, day-to-day decision-making within Shauri Yako is mediated through community-based structures and local leadership, with Nyumba Kumi acting as the most immediate and trusted interface between residents and the state.

2.5.2 Community Organizations and Leadership:

Shauri Yako hosts a diverse set of community organizations that underpin daily life, social stability, and local governance. Faith-based institutions are especially influential: household survey data confirms that the vast majority of residents identify as Christian, with churches not only serving as centers of worship but also as hubs for education, childcare, and welfare support. These institutions frequently provide space for community meetings and emergency response activities, reinforcing their centrality in settlement life. Informal savings groups, or chamas, are another critical element of social organization. Data from the Situational

Analysis shows that over 40% of households rely on chamas as their primary financial safety net, highlighting their importance in helping families cope with shocks such as sudden medical expenses, rent obligations, or food insecurity. Women are particularly active in these networks, using them both as economic lifelines and platforms for advocacy around household and community welfare.

Community organizations also play a major role in disaster preparedness and adaptation. Evidence from the RCRA consultations shows that CBOs and youth groups are already active in flood response and awareness campaigns, working with churches and schools to provide temporary shelters and organize clean-up activities after heavy rains. During recent flooding events, these groups mobilized quickly to disseminate information, clear blocked drains, and assist vulnerable households, demonstrating the strength of localized response. Their integration into broader governance networks such as partnerships with settlement chiefs or the County Emergency Operations Center has also been recognized as a vital channel for enhancing resilience. These grassroots organizations therefore complement the Nyumba Kumi framework, ensuring that Shauri Yako's governance is not only security-driven but also socially responsive, adaptive, and rooted in community-led action.

2.5.3 Participation in Decision-Making:

Community participation in governance and planning processes in Shauri Yako is active but uneven, with both strengths and persistent barriers. The settlement has demonstrated strong involvement in consultative forums, including the climate risk and adaptation planning processes where over 50 residents women, youth, and persons with disabilities among them participated in mapping flood-prone areas and prioritizing adaptation actions (Suez Consulting, 2025). Faith-based groups, chamas, and community-based organizations (CBOs) also provide important channels for grassroots voices to reach local authorities, often linking through the Nyumba Kumi structure for upward communication.

Some community representatives have also taken part in the Ward Climate Change Planning Committee (WCCPC) meetings, established under the Homa Bay County Climate Change Act (2022), contributing to discussions on local adaptation priorities and resource allocation. However, participation in these formal spaces remains limited, as awareness of committee roles and meeting schedules is still low among residents.

Persistent barriers continue to affect inclusivity. Women, youth, and tenants are frequently underrepresented in formal decision-making processes, as land ownership and political patronage often determine who participates. Limited access to information further reduces engagement, with many residents citing poor communication from municipal authorities regarding planning or budgeting processes. Political exclusion and mistrust in local leadership also discourage participation, particularly among

marginalized groups who feel their priorities are often overlooked.

As a result, while Shauri Yako exhibits strong internal social organization and active local networks, its integration into formal governance structures remains constrained by information gaps, gender and tenure inequalities, and inconsistent recognition of community voices within municipal and county planning processes (County Government of Homa Bay, 2022; Field Survey, 2025).



2.5.4 Conflict Resolution Mechanisms:

Conflict resolution in Shauri Yako is primarily handled through a blend of traditional, community-based, and administrative structures that mediate disputes at different levels. At the household and neighborhood scale, the Nyumba Kumi system serves as the first point of contact, with cluster leaders facilitating dialogue among disputing parties and escalating unresolved cases to the Assistant Chief or settlement elders. Land and tenancy-related disputes common in Shauri Yako given that over 72% of households are tenants are often negotiated informally between landlords, tenants, and local leaders, though unresolved cases may be referred to the Chief's or, in more complex situations, the County Lands office or courts. Resource-use conflicts,

particularly over water points, drainage paths, or waste disposal sites, are typically managed through local leaders, which convene mediation meetings to prevent escalation. In instances where disputes involve external actors such as local government or utility providers, community representatives often through faith leaders, youth leaders, or chamas form delegations to engage with authorities. While these mechanisms have proven effective in maintaining social cohesion and avoiding violent confrontation, they are limited by power imbalances: tenants, women, and youth often have less influence in outcomes, and lack of legal tenure reduces the ability of many households to assert their rights in land conflicts. Nonetheless, these locally embedded systems remain the backbone of dispute management, ensuring that most conflicts are settled internally before reaching formal legal structures.



3 CLIMATE RISK ASSESSMENT & VULNERABILITY ANALYSIS

3.1 Climate Hazard Identification

3.1.1 Climate Hazard Profile of Shauri Yako

Flooding is the most recurrent and severe hazard in Shauri Yako. Hydraulic modelling and spatial analysis from the *Homa Bay Rapid Climate Risk Assessment* (SUEZ Consulting, 2025) indicate that during a 1-in-10-year rainfall event, **water depths reach up to 0.43 metres** in the northern market zone and adjacent residential clusters significantly lower than the 1.2 metres initially estimated. These recurrent floods disrupt mobility, damage dwellings, and contaminate shallow pit latrines, increasing health risks from waterborne diseases.

Temperature extremes add another layer of risk. Long-term climate data for Homa Bay County show an **increase of approximately +1.9 °C in mean annual temperature since 1950** (ERA-5 data; SUEZ Consulting, 2025). Hotter conditions, coupled with limited vegetation and dense iron-sheet housing, exacerbate heat stress and energy demand while lowering productivity for outdoor labourers and traders.

Prolonged dry periods also threaten water access and hygiene. During extended droughts, water scarcity drives up prices up to KSh 30 per 20-litre jerrycan and

forces many households to rely on untreated lake water. These compounding hazards flooding, heat, and drought expose households already constrained by low incomes and insecure tenure, showing how climate risks magnify existing socio-economic vulnerabilities (Field Survey, 2025; SUEZ Consulting, 2025).

3.1.2 Identify the Hazards Based on Data:

The identified hazards flooding, rising temperatures, and water scarcity are grounded in empirical data from the *Homa Bay Rapid Climate Risk Assessment* (SUEZ Consulting, 2025) and community mapping exercises (Field Survey, 2025).

Flooding primarily affects the low-lying northern section and the central market, where drainage is poor and runoff from adjacent slopes accumulates. The market area, identified as a high-risk zone, experiences **food depths exceeding 0.4 metres** during intense rainfall, periodically submerging stalls and informal businesses.

Heat stress intensifies health and economic vulnerability. Poorly ventilated iron-sheet dwellings trap heat, creating unsafe indoor temperatures during the hottest months. Outdoor workers such as street

vendors, casual labourers, and boda boda operators are **not immobilized** by heat but experience shorter working hours, dehydration, and reduced income due to lower productivity and fewer clients during extreme heat (SUEZ Consulting, 2025).

Drought and erratic rainfall further reduce access to clean water, undermining sanitation and increasing dependence on unsafe water sources. These conditions collectively demonstrate that climate hazards are not isolated environmental events but amplifiers of existing socio-economic fragility in Shauri Yako, particularly for low-income households and informal workers (SUEZ Consulting, 2025; Field Survey, 2025).

3.2 Vulnerability Analysis

Vulnerability in Shauri Yako is not evenly distributed but is shaped by both household characteristics and broader socio-cultural dynamics. Certain groups women-headed households, youth, PWDs, and the elderly experience disproportionate risks due to structural inequalities that amplify their exposure to climate hazards.

Female-headed households are particularly constrained by insecure land tenure and low incomes. Many households survive on less than **KSh 6,000 per month**, limiting their ability to invest in durable housing or water storage. With most lacking formal land titles, women are discouraged from making long-term improvements, even though they shoulder the heaviest caregiving responsibilities during floods and droughts. This combination of economic precarity, tenure insecurity, and social roles leaves them highly sensitive to shocks such as latrine overflows, rising water costs, and food shortages.

Youth, who form the majority of Shauri Yako's population, face a different but equally sharp vulnerability. Their livelihoods are tied to informal sectors such as boda boda transport, vending, and casual labour activities that are quickly disrupted by flooded roads or extreme heat. Without land ownership

or collateral, young people are also excluded from credit and investment opportunities, reinforcing cycles of dependency and limited adaptive capacity.

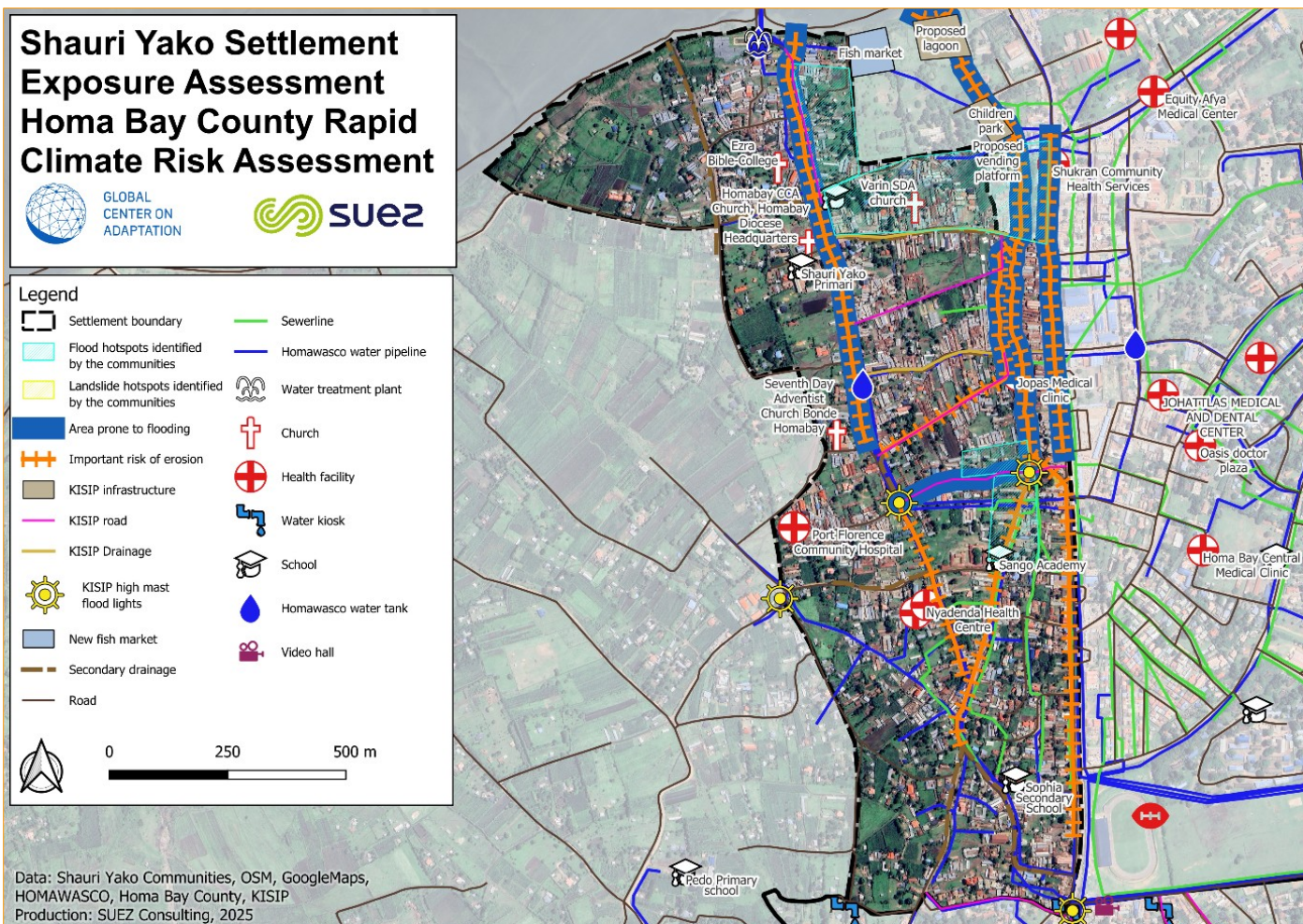
Persons with disabilities and older residents encounter mobility barriers that increase their risk during hazard events. Flooded pathways, damaged roads, and impassable access routes cut them off from health centres and safe water points. With limited representation in decision-making spaces, their specific needs are often overlooked, further entrenching their marginalization.

Taken together, these dynamics illustrate how vulnerabilities in Shauri Yako are not only about physical exposure to hazards but also about intersecting social inequities. The most vulnerable parts of the settlement are the **low-lying northern and north-eastern zones adjacent to the market and Lake Victoria's riparian edge**, where repeated flooding, poor drainage, and high housing density coincide with limited access to sanitation and safe water (SUEZ Consulting, 2025; Field Survey, 2025). In contrast, the slightly elevated southern and central clusters experience lower flood exposure but remain affected by heat stress and overcrowding.

3.3 Exposure and Sensitivity Mapping

3.3.1 Spatial Exposure Mapping

Mapping hazards and key assets in the settlement shows that Shauri Yako's most severe risks are concentrated in low-lying and densely settled pockets. The **flood exposure map** identifies the northern part of the settlement particularly around the market and adjoining residential clusters as highly exposed, with flood depths reaching **0.5–1.2 metres** during a 1-in-10-year rainfall event. Drainage swales cutting through the settlement are also recurrent hotspots, where overflow and erosion destabilize adjacent land and infrastructure. Proximity to Lake Victoria further exposes shoreline households to flooding and erosion, compounding risks in areas with the least formal drainage or protective barriers.



3.3.2 Asset Mapping:

Within these mapped hotspots lie the settlement's most critical assets. The central market, located in the lowest-lying zone, is regularly inundated, with flood levels of up to **1.0 metre** damaging stalls and halting trade. Schools and health centres are also positioned along vulnerable corridors, where flooded access roads cut off services during peak hazard periods. Field evidence shows electricity poles destabilized by saturated soils, water pipelines left exposed in flood channels, and pit latrines collapsing under flood pressure. With over **90% of households reliant on pit latrines**, such failures contaminate shallow wells and open drainage channels, creating acute health risks.

Together, the spatial mapping and asset analysis demonstrate that Shauri Yako's climate risks are highly localized yet deeply systemic. A handful of hotspots concentrate overlapping hazards and assets, meaning that even moderate events cascade into community-wide disruptions. This highlights the need for targeted interventions in these mapped zones to protect both infrastructure and the livelihoods that depend on them.

3.4 Sensitivity to Climate Change Impacts

Shauri Yako's exposure to hazards is intensified by the sensitivity of its core assets and sectors to projected climate shifts. The market area, identified in the flood hazard map with water depths of up to 1.0 metre during a 1-in-10-year event, is particularly sensitive because traders operate in temporary structures with no protective elevation. Even modest flood levels translate into complete disruption of commerce, rapid loss of perishable goods, and immediate income shocks for households reliant on daily trade. This economic fragility makes the market one of the most climate-sensitive institutions in the settlement.

Public health services demonstrate similar sensitivity. With at least one health facility located along a drainage swale (Figure 24), flood events not only block access routes but also trigger sanitation-related disease outbreaks at the very moment health services are least accessible. Pit latrines, used by more than 90% of households, overflow when flood depths exceed 0.5 metres, contaminating shallow wells and surface water. This direct link between climate hazards and the spread of waterborne diseases such as cholera and diarrhoea

highlights the acute sensitivity of the health sector to climate change.

Housing and basic infrastructure further amplify vulnerability. The majority of dwellings in Shauri Yako are constructed from iron sheets and earthen materials, which deteriorate rapidly under repeated flooding and trap excessive heat during periods of high temperature. Climate projections for Homa Bay indicate a **steady rise in mean maximum temperatures of about +1.5 °C to +2.0 °C by mid-century**, accompanied by **more frequent hot days exceeding 35 °C** (SUEZ Consulting, 2025). Poorly ventilated homes will therefore become increasingly uncomfortable and less habitable during prolonged heat events.

Exposed electricity poles and water pipelines mapped in hazard zones highlight how fragile utility systems are under both flood and heat stress. These sensitivities show that climate hazards do not only cause immediate disruptions but also accelerate the wear and breakdown of essential assets, pushing households into recurrent cycles of repair and loss (Field Survey, 2025; SUEZ Consulting, 2025).

3.5 Interactions Between Hazard, Exposure, and Vulnerability (Climate Risk Framework)

The climate risk profile of Shauri Yako can best be understood through the interaction of three interconnected dimensions **hazard, exposure, and vulnerability** as outlined in the *Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report* (2014). Flooding, prolonged dry spells, and rising temperatures are the dominant hazards identified in the *Homa Bay Rapid Climate Risk Assessment* (SUEZ Consulting, 2025).

Flooding is driven by poor drainage and encroachment on natural waterways, resulting in recurrent inundation of the northern market zone and adjacent residential areas. Drought conditions reduce access to clean water, especially for households relying on informal vendors and shallow wells. Meanwhile, increasing ambient temperatures projected to rise by **approximately +1.5 °C to +2.0 °C by mid-century** intensify heat stress across the densely built settlement (SUEZ Consulting, 2025).

These hazards intersect with the settlement's spatial layout and social fabric. Low-lying terrain, informal drainage swales, and proximity to the shoreline heighten exposure, while insecure tenure, limited infrastructure, and poverty constrain adaptive capacity. Together, these factors create a layered risk environment in which climate hazards amplify existing vulnerabilities, placing key assets such as markets, schools, and sanitation

systems under recurrent threat (Field Survey, 2025; SUEZ Consulting, 2025).

Vulnerability compounds this exposure. Insecure land tenure, low incomes (with many households living on less than KSh 6,000 per month), and reliance on informal livelihoods reduce the capacity of residents to adapt or recover. For women, youth, PWDs, and the elderly, social and economic marginalization deepens sensitivity to hazards, restricting access to safe housing, water, or emergency response. This triangular interaction of hazards intensifying, assets situated in exposed zones, and vulnerable groups lacking adaptive capacity creates systemic climate risk that cannot be addressed by isolated measures, but requires integrated, cross-sectoral adaptation planning.

3.6 Capacity to Adapt

Shauri Yako demonstrates a range of existing adaptive practices, but these remain largely informal and reactive. Community members employ temporary measures such as placing sandbags at doorsteps, elevating household items, and relocating to higher ground during flood events. Rainwater harvesting on rooftops and the use of makeshift drainage channels are also common, but these efforts are fragmented and lack technical reinforcement. While such practices reveal strong local knowledge and resilience, their limited scope means they provide only short-term relief rather than lasting protection.

Institutionally, the settlement benefits from being within the governance framework of Homa Bay County, which has established policies such as the County Climate Change Action Plan (2023–2027) and the Climate Change Act (2022). These instruments create an enabling environment for adaptation, but their implementation at settlement level remains constrained by weak coordination, limited technical expertise, and insufficient resources. As documented in the assessment, drainage and utility upgrades have often been undertaken without climate-proofing, highlighting the gap between policy intentions and practical outcomes.

Barriers to adaptation further reduce the community's capacity to cope. Low household incomes limit investments in durable housing or water storage facilities. Social inequalities also play a role: women and PWDs face exclusion from decision-making platforms, reducing their influence over local resource allocation. These overlapping barriers leave the community heavily dependent on external support, while constraining opportunities for scaling up grassroots initiatives into formalized, sustainable adaptation strategies.

3.7 Risk Scenarios and Projected Climate Change Impacts

3.7.1 Develop Risk Scenarios:

Short-term projections (time horizon 2021-2040) indicate that flooding will remain Shauri Yako’s most pressing hazard. Hydraulic modelling already shows

Table 3.1: Risk Scenarios

Name	Impact (depth)	Impact (velocity)	Impact (depth)	Impact (velocity)
	Short term vs Present (%)	Short term vs Present (%)	Medium term vs Present (%)	Medium term vs Present (%)
Average impact	2.40%	1.60%	4.70%	3.10%

Medium-term climate projections (2041–2060) for Homa Bay are modelled under two Representative Concentration Pathways (RCPs) used in the Homa Bay Rapid Climate Risk Assessment (SUEZ Consulting, 2025).

Under RCP 4.5, which assumes moderate greenhouse-gas emissions with effective global mitigation, mean annual temperatures are projected to rise by approximately +1.5 °C to +2.0 °C by mid-century. Although rainfall totals are expected to remain highly variable, extreme precipitation events will become more frequent and intense, leading to slightly higher flood peaks in low-lying areas. For Shauri Yako, this suggests not only more damaging floods but also longer periods of uncomfortable heat that worsen housing conditions and reduce productivity for outdoor and informal workers.

Under RCP 8.5, representing a high-emission trajectory with limited mitigation, Homa Bay could experience around +2.0 °C of warming by mid-century, accompanied by longer and more frequent heatwaves (SUEZ Consulting, 2025). These hotter conditions would significantly increase heat stress in Shauri Yako’s densely built environment, where iron-sheet roofing and poor ventilation trap heat. Combined with more intense downpours, this scenario points to increasing strain on housing, drainage, and public-health systems.

Drought impacts will also intensify across both scenarios. Short dry spells, already driving water prices to KSh 30 per 20-litre jerrycan, are likely to become longer and more frequent. Under RCP8.5, these dry periods will be followed by sudden, high-intensity rainfall, overwhelming drainage systems and causing cascading failures such as latrine overflows, road blockages, and contamination of water points. This cycle of alternating drought and flood will significantly undermine household resilience and food security, while also increasing reliance on unsafe water sources.

that a 1-in-10-year rainfall event produces flood depths of 0.5–1.2 metres in the market area and adjoining residential pockets. These depths are sufficient to damage homes, displace households, disrupt livelihoods, and contaminate sanitation systems. The probability of seasonal back-to-back flood events is also increasing, meaning that even within the next decade, residents may face multiple disruptive floods in a single year.

Taken together, the risk scenarios demonstrate a clear trajectory: without adaptation, Shauri Yako will face recurrent flooding in the short term, compounded by worsening drought and extreme heat in the medium and long term. Under RCP4.5, these risks are moderate but still disruptive, while under RCP8.5 they escalate into chronic and potentially unmanageable hazards. This progression highlights the urgency of adaptation planning that not only addresses immediate flood risks but also anticipates future heat and water scarcity challenges.

3.7.2 Projected Climate Change Impacts:

Projected climate shifts are **likely to compound** existing stresses across Shauri Yako’s infrastructure and services. Under medium-term projections (**RCP4.5**), even modest increases in flood depth **estimated at up to 5–10% above current levels** could overwhelm drainage swales and expose critical utilities. Infrastructure already documented as vulnerable, such as pipelines laid across flood channels and electricity poles destabilized by erosion, **may experience accelerated deterioration**.

In the health sector, sanitation failures are **expected to become more frequent**, as over 90% of households reliant on pit latrines remain at risk of overflow contamination during floods (Field Survey, 2025). These failures, combined with higher temperatures and stagnant floodwaters, **could increase the incidence** of cholera, diarrhoea, and malaria outbreaks placing additional pressure on health services that are themselves located within flood-prone areas (SUEZ Consulting, 2025).

Livelihoods are also **likely to face increasing strain**. Rising temperatures **projected to increase by approximately +1.5 °C to +2.0 °C by mid-century** could reduce productivity in the informal economy, particularly

among outdoor workers such as boda boda operators, traders, and construction labourers. The central market, already prone to flooding during heavy rains, **may experience more frequent disruptions**, leading to recurrent income losses for traders and periodic food-supply interruptions for households. Simultaneously, drought-induced water scarcity is **expected to sustain volatile prices**, with water costs frequently exceeding KSh 30 per jerrycan during prolonged dry spells. This combination of rising living costs and reduced earning capacity is **likely to deepen cycles of poverty and economic fragility** (SUEZ Consulting, 2025; Field Survey, 2025).

In the long term (**RCP8.5**), these impacts **could converge** into chronic displacement and systemic livelihood erosion. Prolonged dry spells are **projected to undermine** local food security, while intensified rainfall events **may expand** flood footprints beyond current hotspots, potentially inundating new residential pockets and disrupting mobility corridors. Persistent exposure to heat stress spanning longer portions of the year is **likely to heighten** health risks in poorly ventilated homes, compelling some residents to seek relocation. Collectively, these projections underscore that, without anticipatory adaptation, Shauri Yako faces not only episodic climate shocks but also **gradual, systemic disruption** of its social, economic, and physical systems.



4 VISIONING & COMMUNITY PRIORITIZATION

4.1 Community-Driven Visioning Workshops

4.1.1 Engagement Process

The community-driven visioning workshops in Shauri Yako were conducted in April 2025 as part of the participatory planning process for the People's Adaptation Plan. Guided by a [Community Facilitation Guide](#), the workshops adopted principles of inclusivity, equity, and evidence-based planning to ensure that discussions reflected the lived realities of residents.

In preparation, a detailed household enumeration exercise had been carried out, identifying 2,720 households within Shauri Yako. This numbering exercise, combined with the household questionnaire survey, provided a representative socio-economic baseline that informed the workshop design and helped prioritize community concerns.

Workshops were organized to bring together a diverse cross-section of residents, including women, men, youth, elderly people, and persons with disabilities. Participants were disaggregated into focus groups to create safe and open spaces for dialogue, thereby ensuring that traditionally underrepresented voices were heard. Each group session was structured around thematic areas such as water and sanitation, housing, livelihoods, public health, energy, and environment.

Facilitators applied participatory techniques including brainstorming, storytelling, group mapping, and role-playing to encourage active engagement. Rapporteurs and group representatives were appointed to document and present findings, ensuring ownership of the process by the community. Discussions emphasized lived experiences of climate risks such as recurrent flooding, erosion, and water scarcity and their impacts on livelihoods, education, health, and housing.

By combining local knowledge with data from the survey and situational analysis, the workshops produced a rich

set of community priorities and aspirations. These included demands for improved drainage and sanitation systems, affordable and reliable water access, resilient housing, safe roads, and expanded livelihood opportunities. The participatory process thus served as a critical bridge between technical assessments and community visioning, ensuring that the adaptation plan was rooted in both evidence and local realities.

4.1.2 Focus Areas for Visioning:

During the visioning sessions, community members articulated their aspirations for a safer, healthier, and more climate-resilient Shauri Yako. Drawing from household survey findings across 2,720 households, as well as priorities raised in the workshops, participants collectively identified several core areas of focus for their long-term vision.

Climate Resilience Goals featured prominently. Residents highlighted the urgent need to reduce flood risk, especially around the market and drainage swales where flooding regularly disrupted livelihoods and damaged homes. Improving access to safe and affordable water was also prioritized, with many households reporting frequent interruptions in supply and high costs of purchasing water from vendors. Women, who bore the brunt of water collection, emphasized the importance of expanding water kiosks within walking distance. The community further underscored the need to strengthen sanitation infrastructure, replacing overflowing pit latrines with more resilient facilities, and to promote housing improvements using durable, climate-resilient materials.

Long-term Sustainability was discussed in terms of social, economic, and environmental balance. Participants envisioned a future where resilient infrastructure such as improved drains, flood-safe markets, and upgraded housing would be maintained through collective responsibility and county support. They stressed that sustainability required livelihood strengthening, especially for informal traders and fisherfolk whose incomes were frequently disrupted by climate shocks. Residents also called for green infrastructure solutions, such as planting trees along flood paths and establishing small recreational spaces, which would serve both ecological and social needs. In doing so, the community emphasized inclusivity, ensuring that the needs of vulnerable groups women, youth, elderly persons, and PWDs were not sidelined but integrated into all future development planning.

4.1.3 Documentation and Reporting:

The outcomes of the visioning workshops in Shauri Yako were carefully documented to ensure that

community voices were preserved and could directly inform the adaptation planning process. Facilitators and rapporteurs, guided by the Community Facilitation Guide, maintained detailed written notes of plenary and breakout sessions, supported by photos and participatory maps generated by residents themselves. These records captured the diversity of perspectives across groups women, youth and persons with disabilities, and men and elders and provided a reliable basis for cross-checking against the household survey data.

Participatory mapping exercises produced visual evidence of flood-prone hotspots, eroded drainage swales, and locations lacking safe sanitation, alongside aspirational areas identified for new water kiosks, resilient housing, and green spaces. These maps, complemented by field observations and hydrological analysis, were compiled into workshop reports that highlighted both risks and opportunities within the settlement.

The findings from the workshops were synthesized into a clear community vision statement, reflecting the aspirations of the 2,720 households and articulating a shared pathway toward resilience. This statement emphasized equitable access to safe water and sanitation, flood protection, affordable and secure housing, strengthened health and education facilities, and expanded livelihood opportunities. The documentation not only validated the priorities already revealed in the household survey but also provided a narrative of community aspirations in their own words, ensuring legitimacy and ownership of the adaptation plan.

4.2 Participatory Mapping of Aspirations and Risks

4.2.1 Mapping Process

Participatory mapping exercises were facilitated in Shauri Yako to capture both the community's aspirations and their perceptions of risk. Residents used sketch maps and drawings to identify areas they wished to see developed or protected, such as potential community centers, water kiosks, drainage improvements, and green public spaces. At the same time, the exercises allowed participants to mark risk-prone locations, including flooded market zones, eroded drainage swales, waste-choked culverts, and households affected by sewer overflows. Special attention was given to areas where critical infrastructure, such as schools, health centers, and water pipelines, intersected with hazard zones.

These maps highlighted the dual reality of Shauri Yako: aspirations for improved infrastructure and services on

one hand, and pressing exposure to flooding, erosion, and sanitation failures on the other. The outputs complemented household survey findings, which showed that over 70% of households reported flooding impacts and that the majority relied on shared sanitation facilities that were vulnerable to overflow during heavy rains.

4.2.2 Tools and Techniques

To ensure inclusivity, the mapping used simple tools such as large printed community maps, sketch diagrams, and locally facilitated discussions, making the process accessible to women, youth, the elderly, and persons with disabilities. These community-generated maps were later validated against technical flood hazard assessments and hydrological modelling, which confirmed that hotspots identified by residents particularly around the Shauri Yako market and drainage swales were also the most exposed zones in expert analyses. The integration of local knowledge with technical evidence ensured accuracy while strengthening community ownership of the results.

4.2.3 Collaboration

The mapping process was highly collaborative. Community leaders, local government representatives, youth groups, and faith-based institutions all contributed to the discussions, ensuring that a wide spectrum of perspectives was reflected. The participatory format allowed residents to connect their daily experiences with broader resilience strategies, while county officials and technical experts provided feedback on feasibility and integration with municipal plans. This co-production approach not only generated reliable maps but also fostered trust and strengthened dialogue between the community and government stakeholders.

4.3 Criteria for Prioritizing Adaptation Options

4.3.1 Equity Check: Do Priorities Benefit the Most Vulnerable?

The prioritization of interventions in Shauri Yako was guided by the principle of equity, ensuring that actions addressed the needs of the most vulnerable groups particularly female-headed households (33.4%), youth, the elderly, and persons with disabilities. Short-term proposals, such as the expansion of water kiosks in underserved residential blocks and the construction of communal sanitation blocks in high-density clusters, were designed to provide immediate relief to those most

exposed to unsafe water and flood-prone latrines. These quick-win actions were relatively low-cost and could be implemented within existing county and community resources, making them essential first steps in reducing daily burdens that disproportionately affect women and children.

Medium-term priorities, such as drainage upgrades along the C19 road, training artisans in resilient construction, and formalizing roadside commercial strips, were identified as crucial for sustaining equity gains over the next 3–5 years. These actions not only reduce exposure to floods and unsafe housing but also create livelihood opportunities for youth and low-income earners. In the long term, structural investments like the settlement-wide stormwater system, progressive re-blocking and housing regularization, and the development of a climate-proof market hub were proposed to break the cycle of vulnerability. While these require substantial financing and extended timelines, they are critical for securing tenure, reducing overcrowding, and ensuring that vulnerable groups are not pushed further to the margins as the settlement develops. In this way, the sequencing of short, medium, and long-term actions reflects a deliberate strategy to meet urgent needs first, while laying the groundwork for deeper, systemic equity in the future.

4.3.2 Feasibility of Implementation

The feasibility of interventions in Shauri Yako was assessed in terms of technical, financial, and human resource capacities. Short-term actions such as drainage clearance, water kiosk expansion, sanitation blocks, and community disaster committees were considered highly feasible because they relied on existing county budgets, local labor, and community-based organizations. These measures could be rolled out quickly with minimal technical inputs, making them effective quick wins that demonstrate immediate results while building community confidence in the adaptation process. Their implementation also leveraged local social networks, such as youth groups and chamas, which already mobilize resources and collective action during crises.

Medium- and long-term interventions were recognized as requiring more complex technical and financial arrangements. For instance, lined drainage systems, resilient housing upgrades, and rainwater harvesting installations in schools demand skilled labor and targeted financing, but remain feasible within a 3–5 year horizon if integrated into the County Integrated Development Plan (CIDP) and supported by donor or PPP funding. Larger-scale investments like the settlement-wide stormwater system, re-blocking of residential layouts, and decentralized wastewater

treatment were categorized as long-term due to their capital intensity, land requirements, and the need for cross-institutional coordination. By sequencing interventions this way, feasibility was matched to available capacities in the short term, while preparing the institutional and financial foundations necessary for more transformative actions over time.

4.3.3 Direct Link to Identified Climate Risks

The proposed interventions for Shauri Yako were directly anchored in the settlement's most pressing climate risks including flooding, water scarcity, and extreme heat. Short-term actions such as desilting drains, sandbag protection, and installation of water kiosks were designed to immediately reduce household exposure to recurrent floods and unsafe water, risks that were consistently identified during workshops and validated by survey data showing that over 70% of households reported flood-related impacts. Similarly, communal sanitation blocks targeted the frequent overflow of pit latrines during heavy rains, which the community highlighted as a major driver of disease outbreaks. These actions offered a direct response to urgent hazards with immediate public health benefits.

Medium- and long-term measures were also structured to address specific risks. The construction of lined drainage channels and eventual settlement-wide stormwater management systems responded directly to the chronic inundation of access roads and the market area. Housing interventions, including the promotion of cool roofs and elevated foundations, addressed dual risks of extreme heat and flooding, particularly in high-density rental compounds built with iron sheets. Rainwater harvesting systems were proposed to reduce vulnerability to water scarcity during dry periods, while green corridors and bioretention areas were identified as ecosystem-based approaches to buffer against flood risks and urban heat islands. By linking each intervention to a clearly defined hazard, the plan ensures that adaptation efforts remain locally relevant, risk-driven, and effective in reducing the community's vulnerability to climate change.

4.3.4 Co-benefits of Interventions

The interventions were designed not only to address immediate climate risks but also to deliver multiple social, economic, and environmental co-benefits. Short-term actions such as sanitation block construction and hygiene campaigns directly improved public health while also reducing the unpaid care burden on women who often manage sick children during cholera or diarrheal outbreaks. Similarly, water kiosks reduced the time and financial cost of water access, freeing up

women and youth for education and income-generating activities. Early warning committees and street lighting also contributed to stronger community cohesion and improved safety, particularly for vulnerable groups such as women, children, and the elderly.

Medium- and long-term actions offered broader co-benefits. Resilient housing upgrades and re-blocking not only reduced flood and heat risks but also created opportunities for local artisans and youth to earn livelihoods through construction work. Rainwater harvesting and stormwater management systems improved water reliability, reduced disease incidence, and lowered household expenditure on emergency water purchases. Ecosystem-based solutions such as green corridors and bioretention parks enhanced biodiversity, provided recreational spaces, and contributed to cooler microclimates within the settlement. The development of climate-proof commercial hubs and markets generated stable income streams for traders while ensuring food security through safer storage and distribution systems. Collectively, these co-benefits demonstrated that climate adaptation in Shauri Yako could act as a catalyst for inclusive social development, improved health outcomes, and enhanced economic resilience.

4.3.5 Social and Political Acceptability

Community perceptions strongly shaped the prioritization of actions in Shauri Yako, with interventions gaining legitimacy when they reflected lived realities and cultural practices. During the workshops, residents consistently expressed frustration with recurring floods in the market area, the overflowing of pit latrines, and the high costs of water during dry periods. As such, interventions that directly targeted these daily challenges such as drainage improvements, new water kiosks, and communal sanitation facilities received the strongest support. These were perceived not only as technically appropriate but also as culturally acceptable solutions, since they responded to long-standing concerns voiced by women, youth, and elders alike. Housing upgrades were also widely endorsed, especially when framed as incremental improvements using affordable materials rather than costly relocation, which residents feared could lead to displacement.

From a political perspective, the proposed actions aligned closely with county leadership priorities under the CIDP and the emerging Local Physical and Land Use Development Plan. County officials participating in the workshops emphasized the urgency of improving drainage and WASH services, while community leaders highlighted the need to integrate livelihood protection and safety measures into adaptation efforts. Interventions such as formalizing commercial strips

along the main roads were seen as politically favorable because they combined community needs with opportunities for revenue generation and orderliness in urban space. Similarly, proposals for green corridors and bioretention areas were well-received when presented as multifunctional spaces flood buffers, recreational zones, and safe gathering points rather than purely technical works. This alignment between community aspirations and local government priorities increases the likelihood that the proposed actions will be implemented, supported, and maintained over time, ensuring their long-term sustainability.

4.4 Identification of Priority Areas of Intervention (Short, Medium, Long-Term)

4.4.1 Short-Term Interventions:

During the community workshops and technical assessments, residents of Shauri Yako identified a set of urgent, short-term interventions (0–2 years) aimed at delivering immediate improvements to resilience and daily living conditions. These actions were designed to address the most pressing vulnerabilities highlighted through the household survey and the *Homa Bay Rapid Climate Risk Assessment* (SUEZ Consulting, 2025).

Flood management and drainage clearance emerged as the highest priority. Residents reported that the market area, drainage swales, and the C19 road were repeatedly inundated during heavy rainfall, disrupting livelihoods, damaging stock, and cutting off mobility. Community members called for the regular clearing and repair of blocked drains, desilting of channels, and temporary sandbag protections around vulnerable hotspots. These low-cost measures were viewed as essential to reduce immediate exposure to flooding while more permanent infrastructure solutions are planned.

Improved access to safe water was also prioritized. The household survey confirmed that only 20.46% of Shauri Yako households were connected to piped water, with frequent disruptions reported by 22.54% of respondents. During the dry season, households were forced to rely on costly or unsafe alternatives, often collected from Lake Victoria. Residents therefore prioritized the installation of additional communal water kiosks, repairs to leaking and exposed water pipes (some located directly in flood paths), and stricter regulation of informal vendors.

Sanitation upgrades were identified as another urgent need. Over 89% of households in Shauri Yako relied on pit latrines, most of which overflowed during floods, contaminating compounds and water sources. The community therefore requested the construction of

flood-resilient communal sanitation blocks, rehabilitation of existing pit latrines, and better waste management services, including regular solid waste collection to prevent drains from clogging.

The residents highlighted community safety and public health as immediate concerns. Flooding around the Shauri Yako market and schools was reported to trigger outbreaks of waterborne diseases, while lack of street lighting contributed to insecurity during night hours. As part of short-term measures, the community proposed temporary public health campaigns, installation of solar-powered streetlights in flood-prone paths, and greater enforcement of waste disposal regulations.

4.4.2 Medium-Term Interventions:

In the medium term (3–5 years), the community of Shauri Yako envisioned and validated interventions that move beyond temporary fixes to provide more durable solutions to recurrent flooding, water insecurity, poor housing quality, and fragile infrastructure. These proposals combined residents' lived experiences with technical options presented by planners and engineers, ensuring feasibility and long-term functionality.

A central priority was the upgrading of drainage infrastructure. Residents repeatedly highlighted that poorly designed and blocked drains intensified flooding, particularly around the market and access roads. Technical proposals therefore focused on constructing lined, climate-resilient drainage channels, fitted with debris traps to reduce blockages and overflow. These were designed to integrate with natural water flow paths identified in hydrological studies, thus reducing erosion and property damage in lower-lying parts of the settlement.

Improving housing resilience was another priority. The household survey revealed that the majority of homes in Shauri Yako relied on corrugated iron sheets for roofing (72.5%) and were vulnerable to both floods and heat extremes. To address this, interventions included promotion of stronger, flood-resistant and fire-safe building materials, technical training for local artisans in resilient construction, and targeted support to landlords and tenants for affordable retrofitting. Residents, particularly women and youth, emphasized the need for financial mechanisms or subsidies that would allow low-income households to access these materials.

Water security was identified as a daily stressor, especially during dry seasons when households were forced to purchase expensive or unsafe water. Medium-term actions therefore included the installation of additional water kiosks, the rehabilitation of existing piped systems, and the introduction of rainwater harvesting systems at both household and communal

levels. Technical advice emphasized the need for durable storage facilities and filtration systems to ensure safety and sustainability.

Upgrading community infrastructure was also prioritized. Roads within Shauri Yako, many of which are unpaved, were frequently rendered impassable during rains, disrupting access to schools, health facilities, and markets. Residents called for the graveling and eventual paving of key access roads, coupled with proper grading and integration into the drainage system. Complementary interventions included the construction of raised market platforms to protect traders' goods from floodwaters, reflecting the community's request for safer trading spaces.

Public health and environmental management featured prominently in medium-term goals. Participants noted repeated outbreaks of cholera and diarrheal diseases linked to poor sanitation and stagnant floodwaters. To address this, residents proposed expansion of communal sanitation facilities, upgrading of existing pit latrines to more flood-resilient eco-toilets, and improved waste management systems that included designated collection points and community sensitization on safe disposal. Technical solutions added value by recommending separation of stormwater and sewage systems to minimize contamination during floods.

Medium-term interventions included capacity-building measures. Residents expressed interest in acquiring practical skills such as masonry, drainage maintenance, and urban farming that would enable them to contribute to the construction, maintenance, and long-term sustainability of new systems. Local youth groups, in particular, saw this as an opportunity for income generation while strengthening the community's adaptive capacity.

4.4.3 Long-Term Interventions:

In the long term (beyond 5 years), the community and technical teams identified interventions that would transform Shauri Yako into a safer, healthier, and more resilient settlement. These actions were strategic in nature, requiring sustained investment, institutional partnerships, and integration into broader urban planning frameworks.

The most urgent long-term priority was the construction of comprehensive stormwater management systems. While short- and medium-term drainage interventions were intended to offer relief, residents and engineers alike recognized the need for a permanent, settlement-wide drainage network. This would include reinforced concrete drains, retention basins, and culverts, designed to manage peak flows from increasingly intense rainfall events. Where possible, these grey systems were to be

complemented with nature-based features such as bioswales and infiltration trenches that not only manage runoff but also improve water quality and recharge groundwater.

Linked to this was the proposal for ecosystem-based flood protection measures. The flat terrain and proximity to Lake Victoria make Shauri Yako particularly vulnerable to lake backflows and heavy storm surges. Technical studies identified opportunities for green corridors and bioretention areas on underutilized or degraded plots within the settlement. These vegetated buffers would serve multiple purposes: slowing runoff, reducing sediment and pollutant loads, mitigating heat, and creating safe green public spaces for the community. Residents saw these areas not only as protective infrastructure but also as opportunities for recreation, small-scale urban farming, and social interaction.

Another long-term intervention focused on upgrading housing and settlement planning. The situational analysis showed that most housing units in Shauri Yako were semi-permanent and highly vulnerable to flooding and extreme heat. Over time, the vision was to incrementally replace substandard housing with climate-resilient structures, designed with durable, affordable, and thermally efficient materials. This included ensuring secure tenure arrangements that would incentivize residents to invest in improvements without fear of eviction. In parallel, technical experts recommended progressive re-blocking and zoning adjustments, to create space for essential infrastructure like roads, drainage, sanitation blocks, and green corridors.

Residents also highlighted livelihood resilience and urban services as long-term goals. Beyond improved market facilities, they aspired to see the establishment of permanent, flood-proof trading hubs, vocational training centers, and expanded health and education infrastructure. Technical teams reinforced this vision by proposing the integration of energy-efficient public buildings, small-scale renewable energy systems (e.g., solar-powered water pumping), and expansion of waste-to-resource initiatives that could generate jobs while improving environmental conditions.

Long-term resilience required strong institutional integration. Community members consistently emphasized the need for sustained government presence, stronger partnerships with local organizations, and accountability mechanisms to ensure that infrastructure is maintained. The proposed interventions therefore included the strengthening of a joint community–county resilience committee and Ward Climate Committees, tasked with overseeing implementation, mobilizing resources, and ensuring that

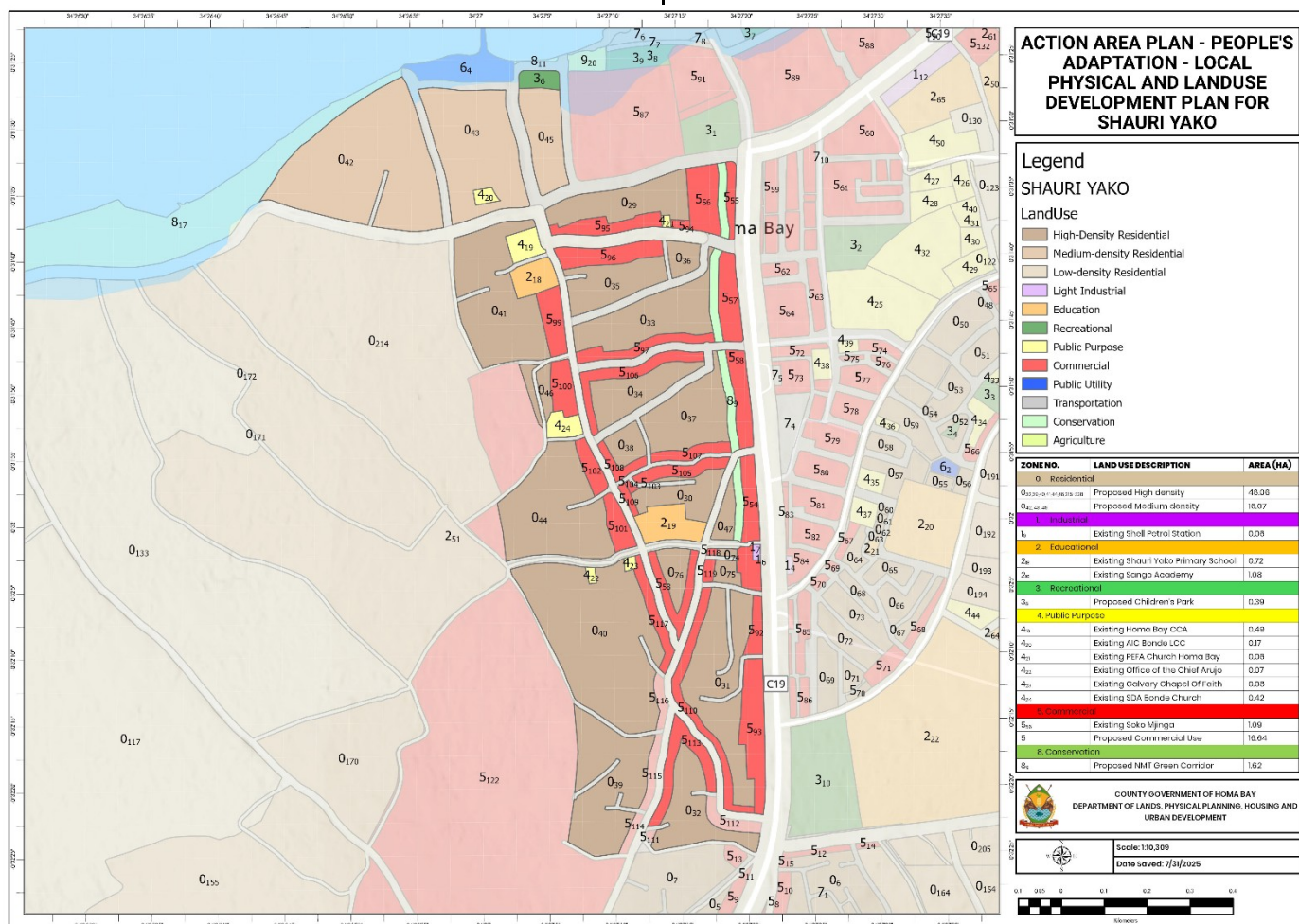
adaptation measures remain responsive to future climate risks.

Together, these long-term interventions envisioned a transformation of Shauri Yako from a settlement trapped in cycles of flooding and deprivation into a resilient urban neighborhood anchored in sustainable infrastructure, secure housing, healthy ecosystems, and inclusive governance.

4.4.4 Action Plan Development:

Prioritized List of Interventions

The community workshops, household survey, and technical assessments produced a set of priority interventions for Shauri Yako. These were structured into short-, medium-, and long-term actions and aligned with the proposed land use zoning plan. The list below reflects both urgency and feasibility.



Map 4.1: Land Use Plan

1. Drainage and Flood Management

Short-Term (0–2 years):

- Development of a checklist for climate resilient infrastructure projects
- Regular clearance and desilting of blocked drains, especially around Shauri Yako market (Zone 5.1) and main access routes.
- Temporary flood protection measures using sandbags in hotspots identified by residents.
- Development of infiltration techniques on individual plots (permeable paving,

infiltration pits, vegetated swales and small trenches, rainwater harvesting tanks with overflow directed to infiltration areas)

- Strengthening of the waste management system (pre-collect, collect, sensitization, disposal sites)

Medium-Term (3–5 years):

- Construction of lined stormwater drains with silt traps along the main roads (C19 and adjoining corridors in Zones 5.9 and 5.10).

- Pilot installation of small-scale retention basins at community open spaces.
- Consolidation of major roads impacted by flooding

Long-Term (5+ years):

- Settlement-wide integrated drainage system combining grey infrastructure (reinforced drains and culverts) with green infrastructure (bioswales and rain gardens) located in Zone 8 – Conservation corridor (1.62 ha).
- Flood-buffer zones reinforced along riparian edges near Lake Victoria.

2. Water Security and Sanitation

Short-Term (0–2 years):

- **Expand water kiosks** in underserved residential blocks (**Zones 0.5 and 0.6**) to improve equitable access and reduce reliance on unsafe surface sources during droughts.
- **Reinforce the water supply system** through rapid assessment and repair of existing infrastructure, including **leaking or eroded pipelines**, using **climate-resilient materials** less prone to corrosion or flood damage.
- **Regulate and support water vendors** to ensure fair pricing and quality standards during dry spells, reducing the exploitation of households when water scarcity peaks.
- **Implement last-mile connections** within the settlement, extending distribution networks from main lines to community standpipes and household taps, ensuring that all clusters especially those in **low-lying flood-prone areas** can access reliable and safe water even under climate stress.

Medium-Term (3–5 years):

- **Install rainwater harvesting systems** in schools (**Zone 2.1 – Shauri Yako Primary, Zone 2.2 – Sango Academy**) and public facilities to serve as supplementary water sources during dry periods, supporting water conservation under changing rainfall patterns. also ensuring all new development proposals are embedding household-level roof catchment systems

- **Construct eco-toilets and communal sanitation blocks** in high-density residential clusters (**Zone 0.1**) and at the **children's park (Zone 3.1, 0.39 ha)** to improve hygiene and reduce flood-related contamination from pit latrines.
- **Pilot decentralized greywater recycling units** to reuse household wastewater for non-potable purposes such as cleaning and irrigation, easing pressure on water supply systems during drought.

Long-Term (5–10+ years):

- **Separate sewerage and stormwater systems** by constructing new trunk lines within **public utility zones (6.1 and 6.2)** to minimize cross-contamination during heavy rains and prevent overflow into residential zones.
- **Scale up decentralized wastewater treatment systems** to reduce pollution entering **Lake Victoria**, improving downstream water quality and contributing to ecosystem-based climate resilience.
- **Upgrade main supply networks** from HOMA WASCO to accommodate **last-mile household integration**, ensuring that increased service capacity can withstand projected flood and drought variability (SUEZ Consulting, 2025).

3. Resilient Housing and Settlement Upgrading

Medium-Term:

- Promotion of affordable resilient building materials (stabilized soil blocks, raised slabs, cool roofing) and training of local masons to construct safer homes.
- Incremental upgrading in high-density residential zones (**Zone 0.1, 44.06 ha**) to reduce overcrowding and vulnerability.

Long-Term:

- Re-blocking of residential layouts in medium-density areas (**Zone 0.2, 16.07 ha**) to create space for access roads, drainage, and utilities.
- Gradual replacement of substandard housing with climate-resilient permanent units, linked to secure

tenure regularization, development of climate resilient affordable housing units.

4. Livelihoods and Commercial Infrastructure

Short-Term:

- Construction of raised trading platforms in the existing Soko Mjinga Market (Zone 5.1) to reduce stock losses during floods.
- Training delivered on climate-smart agricultural practices and techniques

Medium-Term:

- Formalization of new commercial strips (Zone 5.2) along the C19 road and other arterial routes, ensuring small traders have safer, flood-proofed stalls.

Long-Term:

- Development of a climate-proof central market hub with cold storage, solid waste collection, and sanitation facilities, linked to wider municipal market systems.

5. Community Health, Education, and Safety

Short-Term:

- Public health campaigns on hygiene during flood seasons.
- Installation of solar-powered streetlights in dark, flood-prone alleys to improve safety and mobility.

Medium-Term:

- Expansion of sanitation facilities and waste management around schools and churches (Zones 4.1–4.6).
- Designation of the children's park (Zone 3.1) as a safe, multi-use space combining recreation and disaster assembly.

Long-Term:

- Establishment of a permanent community health center in a public purpose block (Zone 4.2 or 4.3), ensuring accessibility during floods.

6. Early Warning and Community Preparedness

Short-Term:

- Creation of community disaster committees in each residential cluster, with youth volunteers trained in first aid and rapid response.

Medium-Term:

- Installation of simple flood gauge posts in identified hotspots and integration with SMS/WhatsApp alerts for households.

Long-Term:

- Integration of the Shauri Yako community system into the county Emergency Operations Center, ensuring sustainable linkages with formal disaster management frameworks.

Thematic Area	Intervention	Timeline	Location / Zoning Reference	Responsible Actors	Resources / Financing Pathways
Drainage & Flood Management	Drain clearance, desilting, sandbagging hotspots	Short (0–2 yrs)	Market & access routes (Zones 5.1, 5.9, 5.10)	Community groups, County Works Dept.	Low-cost, community labor; County routine works budget; CBO support
	Lined stormwater drains with silt traps	Medium (3–5 yrs)	Along C19 & main roads (Zones 5.9, 5.10)	County Works, NGOs, Youth groups	County infrastructure budget; donor support (urban resilience programs)
	Integrated drainage (grey + green: bioswales, rain gardens, retention basins)	Long (5+ yrs)	Conservation Corridor (Zone 8, 1.62 ha)	County Works, NEMA, Community Committees	Capital-intensive; donor grants (NbS projects); PPP for maintenance
Water & Sanitation	New water kiosks, repair leaking pipes	Short	Residential clusters (Zones 0.5, 0.6)	HOMAWASCO, CBOs	HOMAWASCO O&M budget; FLLoCA grants; community contribution
	Rainwater harvesting tanks at schools & public facilities	Medium	Schools (Zones 2.1, 2.2)	School Boards, County Education Dept.	County education budget; NGO WASH programs; School PTA
	Communal sanitation blocks & eco-toilets	Medium	High-density (Zone 0.1), Children’s Park (Zone 3.1)	County Health, NGOs, Faith orgs.	Donor-funded WASH pilots; County Health budget
	Sewer–stormwater separation & decentralized wastewater	Long	Public Utility (Zones 6.1, 6.2)	County Water & Sanitation, HOMAWASCO	High investment; County water budget; Green Climate Fund
Housing & Settlement Upgrading	Resilient building materials & artisan training	Medium	High-density (Zone 0.1, 44.06 ha)	NGOs, County Housing, Youth Groups	Micro-grants; climate innovation funds; local cooperatives
	Re-blocking & upgrading of housing layouts	Long	Medium-density (Zone 0.2, 16.07 ha)	County Planning, AMT, Community	Municipality LPLUDP budget; donor support for tenure security
Livelihoods & Commercial	Raised trading platforms	Short	Soko Mjinga Market (Zone 5.1)	Market Committees, County Trade Dept.	County Trade budget; CDF allocations
	Formalized roadside commercial strips	Medium	C19 Road (Zone 5.2)	County Trade Dept., Private investors	PPPs; small trader cooperatives
	Climate-proof central market hub	Long	Expanded commercial area (Zone 5.2)	County Trade & Industry, PPPs	County budget + PPP with traders’ association
Community Health, Education & Safety	Hygiene campaigns, solar streetlights	Short	Settlement-wide	County Health, NGOs, Youth Committees	NGO health campaigns; County streetlight program

	Expanded sanitation & waste in schools & churches	Medium	Public Purpose Zones (4.1–4.6)	County Education, Faith orgs.	Faith-based org contributions; County Education funding
	Children's Park as safe space & assembly point	Medium	Zone 3.1	County Planning, Community	County Parks budget; CSR sponsorships
	Permanent community health center	Long	Zone 4.2 or 4.3	County Health, Donors	County health budget; donor-supported health programs
Early Warning & Preparedness	Community disaster committees & youth brigades	Short	Residential blocks	Chiefs, County Disaster Mgmt., CBOs	Community volunteerism; NGO capacity-building
	Flood gauges & SMS alerts	Medium	Drainage hotspots	County Disaster Unit, Red Cross	Red Cross, mobile networks CSR, County DRM budget
	Integration with County Emergency Ops Center	Long	Settlement-wide	County Disaster Mgmt., Community Committees	County disaster budget; donor-supported resilience programs

4.5 Implementation Framework

The implementation of the **Shauri Yako People's Adaptation Plan** will follow a **phased, integrated approach** that balances urgent quick-win actions with medium-term upgrades and long-term structural transformations. This framework ensures that interventions are not only responsive to immediate needs but also contribute to sustainable, climate-resilient urban development.

Implementation phases and priority actions are detailed in **Section 4.3**, which outlines the specific short-, medium-, and long-term interventions. This framework focuses on how those actions will be coordinated, financed, and sustained over time.

To ensure sustainability, implementation will align with formal planning and budgeting instruments such as the **People's Adaptation - Local Physical and Land Use Development Plan (LPLUDP)** and the **County Integrated Development Plan (CIDP III, 2023–2027)**, while leveraging partnerships across government, private sector, civil society, and the community.

Phased Timelines (Overview)

- **Short-Term (0–2 years):** Quick-win, community-led actions that deliver immediate risk reduction and visible impacts.
- **Medium-Term (3–5 years):** Capacity-building and infrastructure strengthening to consolidate gains and scale adaptation.
- **Long-Term (5–10+ years):** Transformative investments to achieve durable, climate-resilient settlement upgrading.

4.5.1 Coordination Mechanisms

Implementation will be overseen by a **Community Implementation Committee (CIC)**, which will serve as the primary coordinating platform for adaptation actions in Shauri Yako.

Composition:

- **Community representatives** (women, youth, persons with disabilities, landlords, and tenants).
- **County technical departments** (Works, Housing, Water & Sanitation, Health, Disaster Management, Physical Planning).

- **Civil society organizations and NGOs** active in WASH, housing, and livelihoods.
- **Private sector actors** (traders' associations, small contractors, and suppliers of resilient building materials).

Leadership and Reporting:

The Committee will be **co-chaired by a representative from the County Climate Change Directorate** and the **Shauri Yako community leadership (through the Residents' Association)**. This dual structure ensures balanced oversight between county institutions and local stakeholders.

Alignment with County and National Frameworks:

The CIC will work in close coordination with the **Ward Climate Change Planning Committee (WCCPC)** and the **Financing Locally Led Climate Action (FLLoCA)** program to:

- **Access climate-finance opportunities** for implementing priority interventions identified in this Plan.
- **Integrate locally defined actions** into the County Climate Change Action Plan and FLLoCA investment pipeline.
- **Benefit from technical capacity-building** provided through FLLoCA's planned review and update of the *Participatory Climate Risk Assessment (PCRA)* reports, which will further refine climate data for Shauri Yako (SUEZ Consulting, 2025).

Transparency and Communication:

The Committee will provide **quarterly progress updates** to residents through community barazas, public noticeboards, and digital platforms (e.g., WhatsApp groups). Meeting minutes and progress summaries will be shared publicly to strengthen accountability, transparency, and community trust.

4.5.2 Alignment with Planning Instruments

All interventions are tied into formal county planning processes, ensuring that they are budgeted, legally recognized, and integrated into broader development agendas:

- The CIDP III (2023–2027) provides the medium-term planning framework where Shauri Yako's prioritized interventions will be costed and scheduled.

- The Peoples Adaptation – Local Physical and Land use Development Plan for Homabay Municipality defines zoning and land allocations, ensuring that interventions align with designated residential, commercial, public utility, and conservation areas.
- The County Climate Change Action Plan (CCCAP) provides the climate resilience framework for mainstreaming adaptation actions into county budgets and annual development plans.

Timeframe	Key Interventions	Expected Outputs	Lead Actors	Supporting Actors
Short Term (0–2 years)	<ul style="list-style-type: none"> - Regular drain clearance & sandbagging in hotspots (Zones 5.1, 5.9, 5.10) - Installation of new water kiosks in underserved clusters (Zones 0.5, 0.6) - Hygiene campaigns & temporary health outreach - Raised trading platforms at Soko Mjinga Market (Zone 5.1) - Formation of community disaster committees & training of youth brigades 	<ul style="list-style-type: none"> - Reduced flood impacts during rainy seasons - Improved access to clean water - Safer trading environment - Community early warning structures in place 	<p>County Works Dept. HOMAWASCO County Health Dept. Market Committees</p>	<p>CBOs, Youth groups, Faith orgs, NGOs</p>
Medium Term (3–5 years)	<ul style="list-style-type: none"> - Construction of lined stormwater drains along C19 (Zones 5.9, 5.10) - Rainwater harvesting at schools & communal facilities (Zones 2.1, 2.2) - Eco-toilets & sanitation blocks (Zone 0.1, Zone 3.1) - Training artisans in resilient building materials & techniques (Zone 0.1 housing upgrade) - Formalization of roadside commercial strips (Zone 5.2) - Flood gauges & SMS-based alerts installed 	<ul style="list-style-type: none"> - Improved drainage efficiency - Safe & affordable sanitation coverage - Increased water storage & reliability - Safer housing structures - Structured trading spaces - Community-based flood early warning active 	<p>County Physical Planning County Housing Dept. County Trade Dept. County Disaster Unit</p>	<p>NGOs, Faith institutions, Private sector, Red Cross</p>
Long Term (5–10+ years)	<ul style="list-style-type: none"> - Settlement-wide integrated stormwater management system (Zone 8 – Green Corridor, Lake buffer) - Progressive re-blocking and upgrading in medium-density zones (0.2) - Replacement of substandard housing with resilient permanent structures - Sewer-stormwater separation & decentralized wastewater treatment (Zones 6.1, 6.2) - Climate-proof central market hub with cold storage (Zone 5.2) - Establishment of permanent health center (Zone 4.2/4.3) - Integration of Shauri Yako disaster system into County Emergency Ops Center 	<ul style="list-style-type: none"> - Flood-safe settlement-wide infrastructure - Secure tenure & improved housing - Reliable sanitation system - Expanded livelihoods & economic resilience - Improved health access - Institutionalized disaster preparedness 	<p>County Works Dept. County Health County Trade & Industry County Disaster Mgmt.</p>	<p>Donor agencies, PPP investors, Community committees, HOMAWASCO</p>

4.6 Integration with Broader Development Goals

4.6.1 Capacity Building:

A central achievement of the Shauri Yako People's Adaptation Plan process was the deliberate strengthening of local institutional and technical capacity. Beyond identifying community priorities, the project served as a living laboratory for training Homa Bay County Government officials and lecturers from Tom Mboya University in the design and application of Rapid Climate Risk Assessment (RCRA) tools. Through facilitated workshops, participatory mapping exercises, and joint sectoral deliberations, these actors acquired practical skills in hazard identification, vulnerability mapping, and the co-production of adaptation options. This approach ensured that knowledge was retained locally, reducing dependency on external consultants and embedding resilience planning within county and academic institutions.

The capacity-building dimension directly reinforces Kenya's devolved governance framework, where county governments are mandated to lead in service delivery, urban planning, and climate adaptation. By equipping county staff with the ability to integrate risk assessment into planning and budgeting processes, the plan strengthens institutional readiness to mainstream adaptation into the County Integrated Development Plan (CIDP) and the Local Physical and Land Use Development Plan (LPLUDP). For Tom Mboya University, the experience enriched the academic base, creating a pool of lecturers able to teach, mentor, and guide future professionals in urban resilience and climate adaptation. Together, these efforts not only delivered a technically sound adaptation plan for Shauri Yako but also left behind a sustainable legacy of skills, partnerships, and institutions capable of driving locally led climate action in line with national policies such as the National Adaptation Plan and global frameworks on locally led adaptation.

4.6.2 Strategic Planning Opportunities

Despite its constraints, Shauri Yako presents several opportunities for more structured and climate-resilient planning. The southern and south-eastern upland

sections, where slopes are moderate and soils are more stable, hold potential for densification and redevelopment through incremental upgrading and improved infrastructure. These areas could accommodate higher-density housing blocks or mixed-use redevelopment without the severe flooding risks observed in the northern floodplain. In contrast, the northern low-lying flood-prone zones are less suited to further residential expansion; here, opportunities lie in open space preservation and the introduction of green infrastructure such as bioswales, retention ponds, and riparian buffers, which can reduce flood risk while providing community green spaces.

The central market area and its immediate surroundings also present opportunities for redevelopment and spatial re-organization. Currently overcrowded with informal kiosks and poorly drained swales, the area could benefit from structured layouts that integrate commercial stalls, drainage, and pedestrian circulation. Similarly, road corridors already upgraded under KISIP provide a backbone for more orderly growth, allowing adjacent informal blocks to be gradually reconfigured.

In terms of land management, Shauri Yako would benefit from land readjustment and regularization. This could include plot re-blocking, where extremely narrow and irregular plots are consolidated and realigned to create servitudes for roads, drainage, and utilities. Community consultations highlighted that residents recognize the need for such interventions, particularly to secure access routes for emergencies and reduce overcrowding. Regularization of tenure through formal registration and recognition of ownership would encourage residents and landlords to invest in more durable housing and services.

Open space management offers a strategic opportunity. Vacant or degraded parcels, particularly in flood-prone northern edges and near drainage channels, could be preserved for multifunctional use: as flood buffers, public recreation grounds, or localized markets that reduce congestion in the core. Integrating these spatial adjustments with the Physical and Land Use Planning Act (2019) framework would allow Shauri Yako to transition from a congested informal settlement into a more resilient, mixed-use neighborhood, while safeguarding vulnerable land for ecological and community functions.



5 INTERVENTION STRATEGIES FOR CLIMATE RESILIENCE

5.1 Water, Sanitation & Hygiene (WASH) Interventions

This section outlines the intervention strategies designed to enhance water security, improve sanitation services, and ensure equitable access to clean water in Homabay Municipality. These interventions are critical in addressing the vulnerabilities posed by climate change, particularly erratic rainfall patterns, prolonged droughts, and flooding. By focusing on resilient water and sanitation systems, the municipality can better manage its water resources, reduce the impact of climate variability, and ensure that all residents have access to safe water and sanitation facilities.

5.1.1 Climate-Proofing Water Infrastructure

Shauri Yako residents face persistent water insecurity, largely because existing supply systems are both unreliable and highly exposed to climate hazards.

Household survey data shows that a majority of residents either rely on shallow wells, informal vendors, or directly fetch untreated water from Lake Victoria when piped supply is interrupted. This practice is not only costly but also increases vulnerability to waterborne diseases, particularly during floods when contamination is widespread. The community validation workshops further emphasized that kiosks connected to HOMAWASCO lines often become dysfunctional during heavy rains, either due to damage to supply pipes or disruption of electricity needed for pumping. To address these challenges, the plan proposes upgrading the Pumping station with solar-powered pumps. This intervention ensures continuity of service during power outages, reduces reliance on costly electricity, and provides resilience against seasonal disruptions. Elevated tanks, in particular, allow for stable water pressure and gravity-fed distribution, ensuring that vulnerable households especially women and children tasked with water collection can access clean water even during emergencies.

In parallel, there is a need to protect water supply lines from flood erosion. The drainage swales in Shauri Yako have repeatedly exposed underground and surface pipes to damage, leaving communities without water during peak flooding seasons. Residents reported broken pipes surrounded by stagnant floodwaters, which often mix with solid waste and raw sewage, worsening public health risks. To climate-proof the system, protective casing and reinforcement of critical pipelines will be undertaken, particularly in low-lying corridors near the market and along flood-prone paths. These measures will be combined with localized drainage improvements to reduce scouring around pipe installations. By strengthening water infrastructure in this way, the community will secure safer and more reliable access to water, reduce the risk of contamination, and improve adaptive capacity against recurrent flooding. This proposal is strongly aligned with community priorities, which placed improved water access and affordable supply at the top of immediate adaptation needs during the April 2025 workshops.

5.1.2 Rainwater Harvesting and Water Conservation

In Shauri Yako, the heavy reliance on unsafe sources such as untreated lake water or costly vendors highlights the urgent need for diversified and reliable water supply systems. Household survey data shows that residents often spend up to KSh 30 per jerrycan during dry seasons, a burden that disproportionately affects low-income families, especially female-headed households who manage daily domestic water needs. During the community validation workshops, women consistently emphasized the time lost queuing for water and the risks they face when fetching it from unsafe points. To ease this pressure, the Plan proposes scaling up household-level roof catchment systems and communal rainwater harvesting tanks. These systems would reduce dependency on unreliable piped supply, cut household expenditure, and ensure safer access to water during both dry spells and emergencies. By capturing and storing rainfall from iron-sheet rooftops, households can meet part of their daily domestic needs such as cooking, washing, and sanitation, while communal facilities like schools and health centers can serve as neighborhood water hubs during supply interruptions.

Rainwater harvesting also contributes to long-term water security by reducing pressure on HOMAWASCO systems, which are frequently disrupted by flooding and pipe damage. For Shauri Yako, where roofs are predominantly made of corrugated iron sheets, the infrastructure for harvesting already exists, but households lack the storage and treatment facilities to

make this option viable. The Plan therefore prioritizes the installation of affordable plastic or ferro-cement tanks at both household and community levels, coupled with simple filtration or chlorination systems to ensure potability. In addition, water conservation awareness campaigns will be rolled out through community-based organizations and schools to instill practices such as reusing grey water for kitchen gardens and reducing wastage. Together, these measures will not only provide safer and cheaper water access but also strengthen community resilience against both seasonal droughts and intensifying rainfall variability.

5.1.3 Drainage and Flood-Safe Sanitation

One of the most urgent challenges in Shauri Yako is the collapse of sanitation systems during floods. Over 92% of households depend on pit latrines, many of which are located in low-lying zones that flood seasonally. When these latrines overflow, raw sewage mixes with stagnant floodwaters, contaminating nearby footpaths, market spaces, and even shallow wells. Community consultations revealed that during heavy rains, women and children are unable to safely reach schools or health centers because of submerged roads and overflowing toilets. This problem is compounded by the lack of organized drainage, as existing swales are often blocked with solid waste or poorly maintained. To address this, the Plan prioritizes rehabilitating key drainage swales near Shauri Yako market and residential clusters, using both grey engineering (lined drains, culverts) and nature-based measures such as vegetated bioswales. These interventions will improve runoff management, reduce water stagnation, and protect sanitation facilities from inundation.

At the same time, flood-proofing sanitation infrastructure is essential to reduce public health risks. The community has already adopted improvised measures such as raising toilet bases with sandbags, but these are neither sustainable nor safe. The Plan proposes constructing raised, flood-resilient communal toilets, designed with elevated slabs and sealed pits to prevent contamination during floods. Where possible, eco-friendly technologies such as composting toilets will be introduced to reduce dependency on unsafe pits. These facilities will be strategically located in flood-prone clusters, ensuring access for women, children, and persons with disabilities. Combined with drainage improvements, this integrated approach will significantly reduce exposure to waterborne diseases such as cholera and diarrhea, while also improving mobility and dignity for residents during floods. Moreover, by linking construction to community groups and local artisans, the project will generate jobs and

reinforce ownership, ensuring long-term maintenance and sustainability.

5.1.4 Climate-Resilient Wastewater and Solid Waste Management

Waste management in Shauri Yako remains one of the most pressing sanitation concerns. Survey data indicates that over 71% of households dispose of waste through open dumping, often directly into drainage channels or flood-prone spaces. During floods, this waste is carried into roads and living areas, creating blockages that worsen waterlogging while contaminating surface and groundwater sources. The lack of a functional sewer network further compounds risks, as pit latrines and wastewater frequently seep into floodwaters. Residents, particularly women and children, bear the brunt of these conditions through heightened exposure to diarrheal diseases and unsafe living environments. To address this, the Plan proposes establishing localized, decentralized wastewater management systems, such as bio-digesters and small-scale biofiltration pits, which can be attached to communal sanitation blocks. These systems not only treat wastewater safely at source but can also generate biogas, offering a dual benefit of improved sanitation and affordable clean energy.

Complementing these measures, the Plan emphasizes circular economy approaches to solid waste management, tapping into existing community practices where youth and women's groups already engage in informal recycling. Pilot projects will support waste-to-value enterprises, such as plastic recycling, composting organic waste for kitchen gardens, and biogas production from market waste. By linking these micro-enterprises to formal county waste systems, Shauri Yako can gradually move away from open dumping toward more sustainable and climate-resilient waste management. Additionally, community sensitization campaigns will target behavioral change, focusing on proper disposal and separation of waste at household level. Together, these interventions will not only reduce flood-related contamination but also create livelihoods, improve public health, and build long-term environmental resilience.

5.2 Energy and Renewable Solutions

5.2.1 Solar Energy Applications

Energy access in Shauri Yako is both limited and unreliable, with frequent blackouts during rainy seasons and erosion incidents damaging transformers. These interruptions directly affect water supply kiosks, health centers, and household livelihoods, since most

communal water points rely on electricity-powered pumps. During community workshops, residents reported that lack of reliable power during floods often forces them to turn back to untreated lake water, heightening exposure to waterborne diseases. To address this challenge, the Plan proposes deploying solar-powered pumping systems at key communal water kiosks and health facilities. This will ensure uninterrupted supply of clean water and critical services during climate-related disruptions, while also reducing household dependency on costly private vendors. By cutting energy costs, solar pumps will help stabilize water prices, making water more affordable for low-income households and particularly benefitting women traders and caregivers responsible for daily water provision.

In addition, solar street lighting will be installed along flood-prone access routes and public spaces, including the main pathways leading to the market and schools. These areas often become unsafe during floods, with women and girls reporting insecurity when moving at night. Reliable solar lighting will not only improve safety but also support emergency response, as residents and community disaster committees can better coordinate evacuation or relief activities after dark. This intervention aligns strongly with Shauri Yako's adaptation priorities by combining climate resilience with co-benefits such as enhanced public safety and social inclusion. Over the longer term, the adoption of solar solutions also sets the foundation for cleaner, low-carbon energy transition in the settlement, reducing reliance on unsustainable grid power and promoting decentralized resilience.

5.2.2 Biogas and Waste-to-Energy Initiatives

Organic waste accumulation is a major problem in Shauri Yako, especially around the market and residential clusters, where poor collection systems result in widespread dumping into open drains and flood paths. During floods, this waste not only blocks drainage but also mixes with sewage, creating severe health risks. At the same time, most households still depend on charcoal and firewood for cooking, both of which are expensive, unsustainable, and harmful to health due to indoor air pollution. To tackle both challenges, the Plan proposes introducing biogas digesters that can convert market and household organic waste into clean cooking gas. Pilot digesters will be located in communal sanitation facilities and markets, where waste volumes are highest, ensuring a steady feedstock for energy production. This approach reduces methane emissions, cuts indoor air pollution, and provides an affordable

alternative to charcoal, directly benefitting women and children who shoulder the burden of cooking.

Beyond household benefits, biogas production also creates an opportunity for waste-to-energy micro-enterprises led by youth and women's groups. With technical training and small-scale financing, community-based organizations can manage biogas units, sell surplus gas, and market the by-products such as organic slurry for kitchen gardens. This circular economy approach not only strengthens livelihoods but also incentivizes better waste collection and segregation at the household level. By linking biogas to sanitation and waste interventions already prioritized under WASH (Section 5.1.4), this strategy delivers multiple co-benefits: safer sanitation, cleaner cooking, reduced flood risk, and new income streams. Over time, the expansion of biogas systems will form part of a broader transition toward renewable energy in Shauri Yako, complementing solar power interventions and embedding climate resilience in daily community practices.

5.2.3 Energy-Efficient WASH Infrastructure

The WASH sector in Shauri Yako is among the most energy-dependent, with water pumping, sanitation blocks, and wastewater treatment all requiring consistent power supply. Yet, as highlighted during community workshops, frequent blackouts during rainy seasons and erosion around transformers interrupt these services, forcing residents to resort to unsafe alternatives. For example, when pumping stations are down, families must fetch untreated water from Lake Victoria, increasing exposure to cholera and diarrhea outbreaks. To address this, the Plan proposes upgrading communal water kiosks and sanitation facilities with energy-efficient systems, including solar-powered boreholes and low-energy water treatment technologies. These systems not only lower operational costs for HOMAWASCO and local water operators but also ensure that clean water and safe sanitation remain available during climate-related shocks.

Complementing energy upgrades, efficiency measures will also focus on retrofitting sanitation blocks with low-energy lighting, ventilation, and water-efficient fixtures, reducing both energy and water waste. For instance, integrating solar lighting in sanitation areas will make them safer at night, particularly for women and children who often face insecurity when accessing facilities in darkness. In addition, introducing energy-efficient pumps and compact treatment units will help reduce recurrent maintenance costs and improve reliability, allowing the County and community to redirect resources toward scaling services. These measures align directly with adaptation priorities identified in

Chapter 4, as they combine cost savings, resilience to floods and power cuts, and improved service quality for vulnerable groups. Over time, the energy efficiency approach will also reinforce a shift toward low-carbon, climate-smart infrastructure in Shauri Yako, ensuring that WASH services are not only resilient but also sustainable.

5.2.4 Promotion of Clean Cooking Technologies

Most households in Shauri Yako continue to rely on charcoal and firewood for cooking, exposing families to harmful indoor air pollution and contributing to deforestation in the wider Homa Bay region. Community validation workshops highlighted that charcoal is not only costly but also unsafe, with women reporting high household expenditures on fuel and increased respiratory illnesses among children. At the same time, alternatives such as ethanol or biofuel stoves remain inaccessible due to high upfront costs and limited distribution. To reduce these risks, the Plan prioritizes the promotion of clean cooking technologies, such as improved biomass stoves, ethanol stoves, and household-level biogas units. Pilot programs will target women's groups and landlords of rental housing blocks, offering subsidies and micro-finance options to make cleaner stoves and fuels more affordable. This will directly reduce household energy burdens, improve health, and create safer living conditions for women and children who spend the most time indoors.

Reducing household vulnerability, scaling up clean cooking technologies presents opportunities for women-led cooperatives and youth enterprises. Training and financing schemes will support local entrepreneurs to distribute, maintain, and even locally assemble improved cookstoves. This approach aligns with the principles of the County's clean energy transition and complements waste-to-energy initiatives described earlier (Section 5.2.2), ensuring that households benefit from locally produced, affordable alternatives. By positioning women and youth at the center of distribution networks, this intervention enhances both gender equity and livelihood diversification, while also contributing to emission reductions. Over the long term, widespread adoption of clean cooking technologies will improve health outcomes, reduce dependence on unsustainable fuels, and anchor Shauri Yako in broader national and county energy transition strategies.

5.3 Climate-Resilient Housing Interventions

5.3.1 Building Practices

Housing in Shauri Yako is highly vulnerable to climate shocks, with most structures built from iron sheets and earthen walls that offer little protection against floods, extreme heat, or strong winds. Community workshops revealed that during heatwaves, *mabati* (iron-sheet) houses become unbearably hot, forcing some families to spend nights outdoors, while floods regularly erode foundations and collapse poorly built rental units. To address these vulnerabilities, the Plan promotes the adoption of climate-resilient building practices, emphasizing affordable yet durable materials such as stabilized soil blocks, compressed interlocking bricks, and cool roofing options. These materials provide better insulation, resist flood damage, and are locally available, making them both cost-effective and practical. In the short term, demonstration projects will be piloted in partnership with local artisans and universities to showcase construction techniques and raise awareness among landlords and tenants.

At the same time, upgrading existing housing stock through incremental retrofitting will be prioritized to improve safety for the most vulnerable residents. Simple measures such as raising floor levels, reinforcing wall bases with stone, and replacing rusted iron sheets with reflective or insulated alternatives can significantly reduce exposure to climate hazards. By linking these improvements to local skills training programs, especially for youth and women artisans, the initiative will also create jobs and strengthen community capacity to sustain housing upgrades. Importantly, these practices will be embedded within broader settlement planning, ensuring that new construction respects drainage patterns and avoids riparian encroachment. By anchoring resilient building practices in local materials, skills, and labor markets, Shauri Yako can gradually shift from fragile housing stock toward safer, healthier, and climate-adapted homes.

5.3.2 Regulatory Frameworks

The absence of clear and enforceable building guidelines in Shauri Yako has contributed to a cycle of unsafe housing, where rental units are constructed using poor-quality materials in flood-prone areas without adherence to basic safety standards. As a result, households remain trapped in precarious living conditions, with little incentive or ability to invest in upgrading. To break this cycle, the People's Adaptation Plan emphasizes the establishment and enforcement of climate-sensitive regulatory frameworks. These will

include minimum standards for ventilation, floor elevation, and material quality, as well as provisions for incremental retrofitting of existing structures. Importantly, the regulatory framework is designed not as a punitive tool, but as an enabling mechanism that aligns household investments with safer, long-term outcomes. By embedding such standards within the County's development control processes, informal housing in Shauri Yako can gradually transition toward safer and more resilient forms.

This approach is reinforced through zoning regulations proposed under the Local Physical and Land Use Development Plan (LPLUDP), which are directly linked to the broader People's Adaptation Plan. The zoning framework identifies opportunities for urban renewal through social housing, where high-risk zones can be restructured into safer, planned housing blocks. Here, the BETA policy on social housing provides a strategic entry point, enabling Shauri Yako to benefit from government-supported affordable housing initiatives. By integrating zoning with climate adaptation priorities, land previously vulnerable to flooding or informal encroachment can be repurposed for planned, multi-storey social housing that optimizes land use while reducing exposure to hazards. This creates a pathway where tenure regularization, urban renewal, and climate resilience converge, transforming Shauri Yako into a safer, more dignified living environment. In doing so, the Plan not only reduces physical vulnerability but also aligns with national urban renewal strategies, ensuring that Shauri Yako is no longer left behind in Kenya's social housing agenda.

5.3.3 Access to Secure Land Tenure

Unlike many informal settlements in Kenya, land tenure in Shauri Yako is relatively more secure, with a significant number of property owners possessing ownership documents. This contrasts with typical urban informal contexts where tenure insecurity is a key barrier to upgrading. The situational analysis highlights that while tenancy arrangements are widespread driven by the settlement's rental housing market landlords generally hold legal or semi-formal claims over their plots. As such, large-scale evictions or forced displacement are not perceived by the community as an immediate risk. Instead, the main concern lies in the quality of rental housing and the limited incentives for landlords to invest in improvements beyond basic repairs. Tenants, who make up the majority of residents, are often locked out of housing upgrades due to lack of bargaining power and the fluctuating nature of rental prices.

This context creates a clear link between tenure security and the willingness to invest in climate-resilient housing.

Where landowners hold documentation, they are more inclined to undertake permanent upgrades such as reinforced foundations, stabilized soil block walls, or improved roofing, as these investments are protected by legal recognition. However, without regulatory nudges and financial incentives, many landlords prioritize short-term rental income over long-term resilience. To address this, the Plan proposes coupling housing resilience initiatives such as access to affordable resilient building materials (Section 5.3.1) with incentive schemes for documented landowners. These could include subsidized construction materials, technical training, or conditional grants for retrofitting rental blocks. By directly linking tenure security with investment incentives, Shauri Yako can unlock private capital for resilient housing, reducing dependence on donor or county funding while ensuring that tenants benefit from safer and healthier living environments. Over time, this strategy will enable a gradual but sustained transformation of the settlement's housing stock, grounded in the relatively strong tenure foundation already present.

5.4 Livelihood Diversification & Social Protection

5.4.1 Diversification of Income Sources

Shauri Yako's economy is dominated by informal livelihoods petty trade, boda boda transport, fish vending, and casual labor which are highly vulnerable to climate shocks such as flooding and heatwaves. The land use framework within the People's Adaptation Plan therefore proposes to strategically integrate livelihood diversification opportunities into the broader physical and spatial organization of the settlement. Under the zoning regulations, flood-buffer areas unsuitable for housing can be repurposed for urban agriculture, including kitchen gardens, poultry units, and aquaponics. These land-based interventions enhance food security while generating income streams that are less exposed to disruptions in trade during floods. Community workshops also highlighted youth interest in eco-enterprises and waste recycling, making it essential to allocate dedicated spaces for green business hubs within the settlement's land use plan.

The Plan further proposes establishing micro-enterprise clusters around Soko Mjinga Market, the main commercial hub for Shauri Yako residents and the major roads within the settlement. These clusters would provide formalized space for vendors, artisans, and value initiatives such as, plastic for recycling collection, and fish-smoking sheds adapted to climate risks. Strategically integrating these economic zones into the land use plan ensures that livelihoods are spatially

organized, reducing congestion while improving access to drainage and sanitation. By doing so, economic activities become more resilient to climate shocks and better supported by basic infrastructure. This structured approach, aligned with the Local Physical and Land Use Development Plan (LPLUDP), will diversify income sources, strengthen household resilience, and create new pathways for women and youth to benefit from planned urban renewal in Shauri Yako.

5.4.2 Strengthening Community Safety Nets

In Shauri Yako, community safety nets such as *chamas*, women's groups, and youth savings associations already play a critical role in supporting households through economic and climate-related shocks. Data from the Situational Analysis shows that over 40% of households rely on such groups as their primary financial fallback, underlining their importance in community stability. However, these safety nets are currently informal, scattered, and often lack the spatial and institutional support to scale up their functions. The People's Adaptation Plan therefore proposes to embed safety nets within the land use framework by designating cooperative and community spaces within the zoning plan. These spaces strategically located near Soko Mjinga Market and other key commercial nodes will act as hubs for savings groups, micro-credit services, and climate insurance schemes. By providing structured locations for such groups, the settlement will ensure that community safety nets are more accessible, better organized, and able to expand their services to larger segments of the population.

At the same time, the integration of social safety nets into the physical plan creates opportunities to link them directly with climate adaptation initiatives. For example, *chamas* could co-manage savings products tied to waste-to-value enterprises, green infrastructure maintenance, or emergency response funds. Youth groups could be supported with cooperative workspaces near designated green hubs to anchor their recycling and eco-enterprises. By spatially organizing and strengthening these groups, the settlement reduces vulnerability not only through financial buffers but also through active participation in adaptation projects. This structured approach ensures that Shauri Yako's long-standing culture of collective action becomes a formal driver of resilience. In doing so, the land use plan does not just reorganize physical space it also creates a stronger social fabric capable of withstanding climate shocks while promoting inclusive economic growth.

5.4.3 Social Protection and Public Works

Shauri Yako's vulnerability to recurrent floods, poor drainage, and seasonal food insecurity places an additional burden on low-income households that depend on unstable informal livelihoods. To address this, the People's Adaptation Plan proposes embedding social protection measures directly into the land use framework through zoning-linked public works programs. Specific flood-buffer zones, drainage corridors, and designated green infrastructure areas will be maintained through cash-for-work and food-for-work schemes, offering households both income and food security during climate shocks. These programs will prioritize youth, women, and persons with disabilities, ensuring that the most vulnerable are engaged as active contributors to settlement renewal. By linking social protection with planned land uses, the approach ensures that adaptation actions such as clearing drains, planting vegetation buffers, or rehabilitating flood-prone spaces are sustained over time while also generating short-term employment.

In parallel, the Plan proposes to formalize community stewardship agreements where residents who participate in maintaining drainage systems, green corridors, or waste collection hubs are compensated through county-supported stipends or credit schemes managed by local cooperatives. This model, already familiar through small-scale clean-up activities organized by CBOs, will be scaled up as part of the settlement's spatial strategy. Social protection will thus go beyond passive welfare, evolving into a productive safety net system that ties household well-being to the upkeep of critical infrastructure. In the long term, these public works programs will improve the functionality of Shauri Yako's physical environment, enhance community ownership of assets, and strengthen the local economy. By institutionalizing them in the land use plan, social protection becomes not only a response to climate shocks but also a structured driver of resilience and equitable urban renewal.

5.5 Green Infrastructure & Nature-Based Solutions (NbS)

5.5.1 Ecosystem Services Enhancement

Shauri Yako's vulnerability to flooding and erosion is closely tied to the absence of green buffers and the encroachment of riparian zones. Floodwaters from uphill catchments regularly erode soils along drainage swales and access roads, while the lack of tree cover has amplified heat stress within the settlement. The zoning plan provides a framework to reverse these vulnerabilities by allocating conservation areas (Zone 8

– 1.62 ha Green Corridor) and recreational spaces (Zone 3 – 0.39 ha Children's Park), which can be transformed into ecological buffers that also deliver community benefits. These areas will be rehabilitated through tree planting, grassing of flood-prone channels, and establishment of vegetated strips along major circulation routes. Indigenous species such as bamboo and vetiver grass will be prioritized to stabilize soils, reduce surface runoff, and filter waste before it enters Lake Victoria. By integrating these ecological functions into officially designated land use zones, the Plan ensures long-term protection of riparian corridors and reduces settlement exposure to climate hazards.

Beyond conservation zones, the strategy extends into market and road environments, particularly around Soko Mjinga Market (Zone 5a – 1.04 ha commercial hub) and the dense residential corridors marked in red on the zoning plan. Here, roadside tree planting and shaded pedestrian pathways will create urban cooling effects while also supporting floodwater absorption. Fruit trees and multipurpose woodlots can be planted in open spaces and community-managed plots, adding food and livelihood co-benefits. The Children's Park (Zone 3) will double as a shaded cooling island, with permeable landscaping that absorbs excess rainfall during storms. Together, these ecosystem service enhancements transform underutilized or vulnerable spaces into multifunctional assets that reduce risk, improve liveability, and strengthen community ownership. By embedding these interventions into the zoning framework, Shauri Yako anchors environmental resilience directly into its urban renewal pathway, ensuring that adaptation is not peripheral but central to future land use planning.

5.5.2 Nature-Based Infrastructure Development

While ecosystem restoration strengthens Shauri Yako's environmental base, the settlement also requires functional infrastructure designed with natural systems in mind to cope with frequent flooding and drainage failures. The Green Corridor (Zone 8 – 1.62 ha) presents an opportunity to construct bioswales and raingardens that will run parallel to circulation routes, capturing stormwater directly from road surfaces and preventing waterlogging in densely built residential areas. Unlike conventional drains that quickly channel water downstream, these vegetated systems slow runoff, promote infiltration, and filter out solid waste and contaminants before they enter Lake Victoria. In addition, roadside infiltration strips can be introduced along the main access routes leading to Soko Mjinga Market (Zone 5a), ensuring that both vendors and customers retain access during heavy rains. By aligning

such hybrid infrastructure with designated transport and commercial zones, the settlement ensures that drainage also supports economic continuity and safe mobility.

The Children's Park (Zone 3 – 0.39 ha recreational space) can also be developed as a demonstration of dual-use infrastructure, integrating play areas with shallow retention basins and permeable landscaping. These basins can temporarily store runoff during storms while remaining safe and accessible for everyday use. Similarly, conservation strips marked in the zoning plan can accommodate constructed wetlands and infiltration gardens that treat greywater and stormwater at community scale, reducing contamination of open drains. Unlike tree planting or greening alone, these investments combine engineered design with ecological processes, delivering both flood protection and urban services. Embedding such nature-based infrastructure within Shauri Yako's land use plan ensures that adaptation solutions are practical, cost-effective, and capable of addressing the settlement's chronic drainage and flood challenges in a sustainable way.

5.5.3 Bioretention and Urban Cooling

Shauri Yako faces compounded risks from both seasonal flooding and extreme heat. Streets and compounds paved in concrete or compacted soils accelerate surface runoff during rains, while the lack of shaded public spaces intensifies urban heat stress. The zoning framework and additional development conditions provide an opportunity to systematically introduce bioretention areas across the settlement, ensuring that stormwater management and heat reduction are embedded within land use planning. Beyond the Children's Park (Zone 3) and Green Corridor (Zone 8), the Plan identifies vacant utility servitudes, road reserves, and open residential pockets as suitable sites for multi-functional bioretention features. These shallow, vegetated depressions will intercept stormwater, allow infiltration, and improve water quality, while doubling as shaded micro-parks that can host small kiosks, benches, or play areas. By spreading these features across residential and mixed-use zones, the approach ensures that benefits are not centralized but equitably distributed throughout Shauri Yako.

The Additional Development Conditions also require that new housing and institutional developments integrate landscaping and provide a percentage of open space. This condition will be operationalized by mandating courtyard-style housing clusters with integrated rain gardens, providing both natural cooling and on-site water absorption. Along major access roads leading to Soko Mjinga Market (Zone 5a), linear bioretention strips will be introduced, reducing the frequent waterlogging

that currently disrupts trade. Conservation edges within the zoning map will also be rehabilitated with tree-lined bioswales, providing both erosion control and shaded circulation routes for pedestrians and cyclists. Together, these measures create a network of distributed bioretention sites, embedded not just in large public spaces but also in everyday residential, transport, and market areas. This network transforms Shauri Yako's fragmented open spaces into climate-adaptive assets that regulate floods, mitigate heat, and improve quality of life for residents.

5.5.4 Community Co-Management of Green Assets

The long-term success of Shauri Yako's green infrastructure depends not only on its technical design but also on community ownership and stewardship. The zoning regulations create clear opportunities for this by earmarking spaces such as the Green Corridor (Zone 8), the Children's Park (Zone 3), market buffer zones around Soko Mjinga (Zone 5a), and circulation strips linked to drainage easements for public use. These allocations provide a structured basis for establishing community-led maintenance committees, composed of local CBOs, women's groups, and youth associations already active in sanitation and waste management. Under this arrangement, residents would be directly involved in tree planting, upkeep of bioswales, cleaning of raingardens, and regular monitoring of bioretention sites, ensuring that the ecological functions envisioned in the zoning plan are sustained over time.

Co-management will also strengthen the link between livelihoods and resilience. For example, youth groups tasked with maintaining the green corridor could earn stipends under public works programs (Section 5.5.3), while women's cooperatives could run small businesses around seedling nurseries or composting linked to green asset upkeep. Community centers and cooperative hubs, as proposed in the zoning regulations, can double as training and coordination points for these activities. Embedding co-management responsibilities into the land use framework ensures that public spaces do not fall into neglect but instead become living assets, where environmental stewardship is tied to economic incentives and social cohesion. By formally integrating local participation into the governance of green spaces, the People's Adaptation Plan secures not only climate resilience but also a culture of shared responsibility, anchoring adaptation in the daily lives of Shauri Yako residents.

5.6 Mobility & Access Interventions

Shauri Yako's adaptation plan is not only a resilience framework but also functions as a land use and zoning plan, guiding how circulation and access corridors are planned and managed. The zoning regulations identify dedicated circulation corridors, market access routes, and utility easements, which provide a structured basis for mobility interventions. Within these zones, the plan proposes the integration of non-motorized transport (NMT) lanes, shaded pedestrian walkways, and organized boda boda stages, ensuring that movement within the settlement is safe, efficient, and climate-sensitive. These proposals are particularly important for roads linking residential areas with Soko Mjinga Market, schools, and health facilities, which are daily lifelines for residents. By embedding climate-resilient mobility directly into the zoning framework, the plan ensures that future road and transport upgrades are not piecemeal but systematically tied to broader urban renewal and resilience goals.

Equally, the zoning regulations emphasize inclusive and multifunctional circulation design, ensuring that access routes serve both everyday needs and emergency functions. Universal design features such as ramps, wide walkways, and tactile paving will be incorporated into key corridors to guarantee accessibility for women, youth, and persons with disabilities. Open spaces and utility reserves identified in the zoning framework will be aligned with circulation corridors, enabling them to double as emergency evacuation routes and staging areas during climate disasters. This dual-purpose design reflects the plan's integrated approach treating mobility not just as movement but as part of a zoning-led adaptation strategy that enhances safety, social cohesion, and long-term resilience in Shauri Yako.

5.7 Governance & Institutional Strengthening

Strengthening governance and institutional capacity is central to ensuring that the adaptation strategies identified for Shauri Yako move from paper to practice. Community consultations revealed that residents already have strong traditions of collective action

through *chamas*, CBOs, and youth groups, but these efforts are often fragmented and under-supported by formal institutions. To address this, the Plan proposes establishing a Shauri Yako Climate and Development Committee, composed of representatives from women, youth, PWDs, elders, market vendors, representative of the Ward Climate Committees and landlords. This body will serve as a bridge between the community and county departments, ensuring that decisions reflect lived realities while also aligning with broader development priorities. By institutionalizing such participatory structures, governance becomes more inclusive, responsive, and capable of sustaining adaptation beyond short-term projects.

A second area of focus is on accountability and coordination mechanisms. The Plan calls for structured linkages between Shauri Yako's community institutions and existing county frameworks such as the County Climate Change Action Plan (CCCAP) and the County Climate Change Fund (CCCF). These mechanisms will ensure that funding allocations, project reporting, and monitoring systems are transparent and participatory. For instance, quarterly review meetings can be held within the settlement, where progress is reported publicly, and residents provide feedback. By combining grassroots oversight with county-level mandates, these mechanisms build trust and reduce the risks of elite capture or neglect of community priorities.

Importantly, the Plan also emphasizes integration with national financing mechanisms, especially the Financing Locally Led Climate Action (FLLoCA) framework. By aligning local priorities with FLLoCA, Shauri Yako can directly access earmarked resources for climate resilience, ensuring that community-driven interventions are not left dependent on donor cycles alone. Linking with FLLoCA also provides an avenue for scaling successful pilots such as resilient housing or drainage upgrades into county-wide programs that benefit other informal settlements. This alignment situates Shauri Yako as a demonstration site for devolved climate finance, showcasing how local planning can leverage national mechanisms for maximum impact.



6 INSTITUTIONAL FRAMEWORK & ROLES

This section outlines the structures and key roles required for effective climate adaptation in Shauri Yako. As the People's Adaptation Plan is one of the action areas of the Local Physical and Land Use Development Plan (LPLUDP), its implementation depends on strong coordination and alignment with county and community institutions. The framework emphasizes collaboration, accountability, and integration of adaptation into ongoing development processes, ensuring that resilience-building is not treated as a stand-alone initiative but as part of the settlement's broader urban renewal pathway.

6.1 Stakeholder Roles & Responsibilities

Community Groups

Community organizations including CBOs, *chamas*, market associations, and youth groups will play a central role in participatory, implementation, and monitoring. These groups will be supported to strengthen their organizational capacity, ensuring they can actively co-

manage adaptation projects such as waste-to-value enterprises, drainage maintenance, and early warning systems. Their lived experiences and local knowledge will remain the foundation of decision-making, helping to ensure that interventions are culturally appropriate, equitable, and sustainable.

6.1.1 County Government

The Homa Bay County Government will lead the adaptation process through its line departments: Water, Environment and Climate Change; Housing and Urban Development; Public Health; and Roads and Transport. Its role will be to regulate, coordinate, and facilitate adaptation interventions while ensuring policies are conducive to resilience. The county will also provide technical expertise, integrate adaptation into the County Integrated Development Plan (CIDP), and channel resources through financing mechanisms such as the County Climate Change Fund (CCCF) and Financing Locally Led Climate Action (FLLoCA).

6.1.2 NGOs & Development Partners

Non-governmental organizations and development partners will complement county and community efforts by providing technical expertise, capacity-building support, and resource mobilization. They will serve as key facilitators of innovation and pilots, supporting scaling-up once interventions prove effective in Shauri Yako. Their contribution will be aligned with community priorities, ensuring external support strengthens not replaces local capacities.

6.1.3 Academia

Tom Mboya University and other academic partners are proposed to play a lead role in future data collection and applied research to strengthen evidence-based adaptation in Shauri Yako. While earlier collaboration focused on capacity building for community leaders and county staff, the next phase will emphasize generating localized data and technical evidence to guide ongoing interventions.

This will include the collection and analysis of climate and hydrological data, settlement-level vulnerability mapping, and monitoring of adaptation outcomes such as water access, drainage performance, and public health indicators. The University's involvement will ensure that future planning and investment decisions are grounded in reliable local evidence and continuous learning.

6.1.4 Private Sector

The private sector will be encouraged to invest in climate-resilient services and infrastructure in Shauri Yako. This includes supporting innovations in affordable resilient building materials, renewable energy systems, and waste recycling. Through partnerships with community groups and the county government, private actors will help create inclusive business models that generate livelihoods while embedding climate resilience into local markets.

6.2 Coordination Mechanisms

To ensure effective coordination among all stakeholders, the existing **Community Implementation Committee (CIC)** for Shauri Yako will serve as the primary platform for collaboration on adaptation activities. This multi-stakeholder body will work **through existing frameworks**, particularly the **Ward Climate Change Planning Committee (WCCPC)** under the **Financing Locally Led Climate Action (FLLoCA)** program, rather than creating a separate structure.

The CIC will bring together representatives from **community groups** (including women, youth, and persons with disabilities), **county technical departments**, **NGOs and civil-society partners**, **Tom Mboya University**, and the **private sector**.

Key functions of the CIC (in coordination with the WCCPC):

- Facilitating joint planning, information exchange, and collective decision-making between community and county actors.
- Monitoring project progress and ensuring transparency through regular public reporting and community feedback sessions.
- Coordinating grassroots action with county and national frameworks, including the County Climate Change Action Plan (CCCAP) and FLLoCA investment planning.
- Resolving conflicts and promoting equitable participation and benefit-sharing among stakeholders.
- Maintaining open communication with the County Climate Change Directorate and the Municipal Planning Board, ensuring that lessons learned and progress updates inform broader climate and development planning.

6.3 Integration with Development Planning & Budgeting

Adaptation in Shauri Yako will be mainstreamed into county and national development planning processes, ensuring coherence between the People's Adaptation Plan and the LPLUDP, CIDP, and CCCAP. This integration guarantees that resilience is not treated as an isolated project but as part of the long-term development strategy for Homa Bay Municipality.

Budget alignment is a key pillar: adaptation actions will be costed and integrated into county annual budgets, with financial tracking systems established to monitor expenditures and commitments. External resources from NGOs, development partners, and the private sector will complement county allocations, ensuring blended financing.

Climate resilience indicators will be incorporated into county monitoring and evaluation systems. These indicators will track both physical outcomes (e.g., number of drainage upgrades completed, households with resilient housing) and social impacts (e.g., reduced disease outbreaks, improved household incomes). By embedding monitoring and accountability into the institutional framework, the Plan ensures transparency, continuous learning, and responsiveness to community needs.



7 MONITORING, EVALUATION, AND LEARNING (MEL)

This section outlines the monitoring, evaluation, and learning framework for the Shauri Yako People's Adaptation Plan. The framework is designed to ensure continuous assessment of interventions, enable adaptive management, and embed accountability. It builds on insights from the Situational Analysis, RCRA, community validation workshops, and zoning regulations, ensuring that monitoring reflects both community-defined priorities and technical resilience outcomes.

7.1 Community-Defined Indicators

Community engagement during the RCRA validation workshops and household survey highlighted resilience as more than infrastructure: it encompasses dignity, safety, and opportunities for livelihoods. Therefore, indicators will be co-developed with community groups to reflect both tangible and intangible outcomes of adaptation.

Inclusive Indicator Development: Indicators will be shaped through participatory sessions with women, youth, PWDs, and market associations, capturing diverse perspectives.

Context-Specific Metrics: Examples include:

- Percentage of households with access to climate-resilient water sources (WASH).
- Reduction in the number of flood events disrupting access to Soko Mjinga Market and schools.
- Number of housing units retrofitted or built with resilient materials.
- Community perceptions of safety in public spaces (qualitative indicator from validation meetings).
- Equity Considerations: Indicators will track access by vulnerable groups such as female-

headed households, PWDs, and informal tenants ensuring that benefits are not skewed toward landowners or wealthier residents.

7.2 MEL Tools & Methodologies

Monitoring in Shauri Yako will combine quantitative measurements from technical assessments with qualitative narratives from community monitoring.

Data Collection Tools:

- Household surveys (building on the 2025 baseline data).
- Participatory mapping of flooding hotspots, as piloted in RCRA workshops.
- Scorecards developed by CBOs to track service delivery (e.g., water supply reliability, solid waste management).
- GIS-based dashboards to map drainage, housing upgrades, and NbS progress.

Quantitative & Qualitative Approaches:

- Surveys to capture household access to resilient infrastructure.
- Key informant interviews with chiefs, health workers, and market leaders.
- Community storytelling to capture less tangible outcomes, such as empowerment or reduced stress from climate shocks.

Technology Integration: Mobile apps will be piloted for reporting flood incidents, blocked drains, or service interruptions in real time.

Capacity Building: Local youth and CBO representatives will be trained as “community monitors” to gather data, ensuring MEL is participatory and inclusive.

7.3 Feedback Loops & Adaptive Management

The MEL system will prioritize learning and adaptation rather than only tracking compliance.

- Real-Time Feedback: Community monitors will report regularly into ward-level climate platforms, with findings shared in public barazas and market committee meetings.
- Learning from Experience: Lessons from early pilots (e.g., flood-resilient toilets, bioswales) will be documented to guide scaling and replication.
- Adaptation of the Plan: Results from MEL will feed back into the Shauri Yako Climate and Development Committee and be reviewed annually with county officers to adjust priorities and budgets. For instance, if bioswales underperform, design standards will be modified.
- Stakeholder Involvement: Evaluations will bring together community groups, county departments, NGOs, academia, and private sector actors. This ensures that community voices are not overshadowed by technical actors, but instead shape the settlement’s long-term adaptation pathway.

Sector / Theme	Indicator	Baseline (2025)	Target (by 2030)	Source of Verification
WASH & Drainage	% of households accessing safe, climate-resilient water sources (solar kiosks, rainwater harvesting).	<40% rely on safe kiosks; many depend on vendors or lake water	80% households reliably access safe water.	Household survey; CBO scorecards.
	Number of functional, flood-resilient communal toilets.	92% of households use pit latrines; prone to flooding	At least 10 upgraded communal sanitation blocks.	County health dept. reports; community mapping.
	Number of drainage corridors rehabilitated with green/grey systems.	2 functional swales; often blocked	5 priority corridors fully rehabilitated.	GIS mapping; field inspections.
Housing	% of new/retrofitted houses using resilient materials (stabilized blocks, cool roofing).	Minimal use; majority rely on iron sheets	40% of rental stock incorporates resilient materials.	Building permit data; community surveys.

	Community perception of safety and comfort in housing (heat, flooding).	Frequent complaints of overheating & erosion	≥70% report improved housing safety & comfort.	Focus group surveys; participatory MEL sessions.
Livelihoods & Markets	Number of active micro-enterprise clusters at/around Soko Mjinga Market.	Informal, unorganized, prone to flooding	3 formalized clusters (waste-to-value, fish processing, poultry).	Market association records; CBO monitoring.
	% of households with diversified income sources (≥2 livelihoods).	Majority rely on petty trade/fishing; high climate risk	60% households report ≥2 income sources.	Household survey; <i>chama</i> records.
Green Infrastructure (NbS)	Area of settlement covered by new/rehabilitated green buffers (trees, bioswales, bioretention).	Tree cover <15%; riparian degraded	≥5 ha restored/green corridors established.	GIS mapping; photo evidence.
	Number of functional multi-use green spaces (parks, corridors, bioretention areas).	0 functional	3 multi-use zones fully operational.	Municipal reports; site inspections.
Governance & Participation	Functionality of Shauri Yako Climate & Development Committee (meetings held annually).	Not established	≥4 meetings per year, with minutes published.	Committee reports; community barazas.
	% of women, youth, and PWDs participating in planning and monitoring processes.	Participation fragmented	≥50% representation in all MEL activities.	Attendance sheets; independent audits.
	Number of adaptation projects accessing funds via CCCF/FLLoCA.	0	At least 5 projects funded through devolved climate finance.	County finance records; project audits.



8 FINANCING THE ADAPTATION PLAN

This section lays out the principles and strategies for financing the adaptation plan, ensuring that the necessary resources are mobilized, allocated, and managed in a transparent and equitable manner. The financing strategy should be structured to address

immediate, short-term needs as well as long-term resilience goals. In developing this section, it is crucial to emphasize sustainable, inclusive financing practices while aligning local, county, and external resources with the overall climate adaptation objectives.

Section

Focus Area

Proposals for Shauri Yako

8.1 Community Contributions	8.1.1 Identification of Local Contributions	<ul style="list-style-type: none"> • Harness existing <i>chamas</i> and savings groups (over 40% of households rely on them) to pool resources for adaptation through community led projects that also improve on the livelihoods and provide income. • Encourage in-kind contributions such as labor, local materials (sand, ballast, timber), and community clean-up drives. • Leverage informal economy actors (market traders, boda boda operators) through small levies earmarked for climate resilience. • Engage landlords to reinvest a fraction of rental income into flood-proofing, drainage, and sanitation improvements.
	8.1.2 Mechanisms for Contribution	<ul style="list-style-type: none"> • Establish a Community Climate Resilience Fund managed jointly by residents and local leaders. • Use neighborhood levies, voluntary contributions, or service-linked fees (e.g., market stall charges) to channel resources. • Integrate digital tools (mobile money) for transparent contributions.
	8.1.3 Equity & Inclusivity Considerations	<ul style="list-style-type: none"> • Design safeguards so vulnerable groups (women-headed households, PWDs, elderly) are not overburdened. • Promote community labor-sharing schemes where those unable to pay can contribute through voluntary service. • Ensure equitable benefit distribution across zones of Shauri Yako.
8.2 County Budget Alignment	8.2.1 Linking to County Development Plans	<ul style="list-style-type: none"> • Align financing with Homa Bay's CIDP III (2023–2027), County Climate Change Action Plan (CCCAP 2023–2027), and Climate Change Act (2022). • Integrate Shauri Yako PAP into the Local Physical and Land Use Development Plan.
	8.2.2 Budgeting for Adaptation	<ul style="list-style-type: none"> • Mainstream PAP priorities into county budgets for WASH, housing, drainage, and health. • Ensure recurrent county budget lines for maintenance of adaptation infrastructure.
	8.2.3 Advocacy for Climate Budgeting	<ul style="list-style-type: none"> • Lobby for climate budget tagging in county financial frameworks. • Leverage County Climate Change Fund (CCCF) to prioritize Shauri Yako interventions. • Support a county-led communication and sensitization campaign to raise community awareness on the adaptation process, their roles, contribution mechanisms, and available technical and financial support.
8.3 External Funding	8.3.1 Global and Multilateral Climate Funds	Leverage financing from the Green Climate Fund (GCF) , Adaptation Fund , and Global Environment Facility (GEF) to support large-scale flood-risk management and nature-based solutions (NbS) identified in the RCRA. Priority projects include integrated stormwater drainage and wetland restoration for flood attenuation. (<i>Source: SUEZ Consulting, 2025; Homa Bay RCRA – Flood Measures NbS Action Sheet</i>)
	8.3.2 Development Partners and	Engage with UN-Habitat , World Bank , UNDP , and the African Development Bank (AfDB) to co-finance medium-term interventions such as lined drains, community sanitation blocks, and resilient market infrastructure. These align with ongoing national programs on urban resilience

	Bilateral Agencies	and informal settlement upgrading. (Source: SUEZ Consulting, 2025; Action Sheets – Drainage & Resilient Building Materials)
	8.3.3 Non-Governmental and Civil Society Programs	Partner with NGOs and donor-funded resilience initiatives such as GIZ, DANIDA, USAID, and Practical Action to implement community-scale early warning systems, livelihood diversification programs, and training in resilient construction. (Source: Homa Bay RCRA – Early Warning Systems Action Sheet; Field Survey, 2025)
	8.3.4 Research and Academic Partnerships	Strengthen collaboration with Tom Mboya University and regional research centers to mobilize research-linked grants for climate data generation, hydrological modeling, and NbS design. These partnerships can also attract support from academic donors such as DAAD and the British Council. (Source: SUEZ Consulting, 2025; Homa Bay RCRA Action Sheet – Checklist VF)
	8.3.5 Private Sector and PPPs	Promote Public–Private Partnerships (PPPs) with local developers, small contractors, and microfinance institutions to co-finance small-scale resilience projects, including household-level roof catchment systems, solar-powered streetlights, and affordable resilient building materials. (Source: Homa Bay RCRA – Resilient Building Materials Action Sheet; SUEZ Consulting, 2025)
	8.3.6 County and Devolved Climate Finance Mechanisms	Access devolved finance through the County Climate Change Fund (CCCCF) and FLLoCA frameworks to co-finance Shauri Yako’s adaptation priorities. Advocate for climate budget tagging in the County Integrated Development Plan (CIDP) to ensure sustained allocations for settlement upgrading. (Source: SUEZ Consulting, 2025; Homa Bay County CCCAP, 2023–2027)
8.4 Tracking & Transparency Mechanisms	8.4.1 Clear Financial Reporting	<ul style="list-style-type: none"> Annual public financial reports shared via community forums and noticeboards.
	8.4.2 Use of Digital Tools for Monitoring	<ul style="list-style-type: none"> Community dashboards and WhatsApp/SMS updates on funds and projects.
	8.4.3 Independent Oversight Mechanisms	<ul style="list-style-type: none"> Establish audit committees with community reps, local CBOs, and faith-based leaders.
	8.4.4 Stakeholder Engagement in Monitoring	<ul style="list-style-type: none"> Hold quarterly review meetings and participatory budgeting forums. Involve residents in decision-making on allocation and expenditure.

8.5 Coordination with Ongoing Programs and Projects

The implementation of the Shauri Yako People's Adaptation Plan will build upon and coordinate with existing development programs and projects that already address urban resilience, infrastructure, and community livelihoods in Homa Bay County. Aligning the Plan's actions with these initiatives ensures complementarity, maximizes resource use, and embeds climate adaptation within existing institutional frameworks.

8.5.1 Kenya Informal Settlements Improvement Project (KISIP II)

The **Kenya Informal Settlements Improvement Project (KISIP II)** implemented by the State Department for Housing and Urban Development in partnership with county governments remains a cornerstone for upgrading informal settlements in Kenya. In Homa Bay, KISIP II has supported interventions such as settlement mapping, basic infrastructure improvement, and tenure regularization in selected areas.

The Shauri Yako People's Adaptation Plan complements KISIP's objectives by integrating **climate resilience and adaptation measures** into future upgrading processes. For instance, actions on drainage rehabilitation, flood mitigation through nature-based solutions, and the promotion of resilient building materials align directly with KISIP's focus on improving infrastructure and living conditions. Coordination with KISIP will help ensure that the lessons and physical investments made under the project incorporate climate-proofing standards and benefit from community structures already established through the program.

8.5.2 Financing Locally Led Climate Action (FLLoCA)

The **Financing Locally Led Climate Action (FLLoCA)** program provides a national framework that devolves climate finance to the county and community levels. The Shauri Yako Plan is closely aligned with FLLoCA's objectives by translating local adaptation priorities into actions eligible for climate financing through the County Climate Change Fund (CCCCF).

Through this linkage, Shauri Yako can access predictable, performance-based grants to implement small- and medium-scale resilience actions, such as community drainage rehabilitation, water harvesting, and tree planting. By integrating its locally identified priorities into the county's FLLoCA processes, Shauri

Yako will demonstrate how **settlement-level planning can operationalize devolved climate finance**, serving as a model for other informal settlements in Homa Bay County.

8.5.3 County-Level and Partner Initiatives

Several ongoing county-level programs also contribute to the enabling environment for adaptation in Shauri Yako. These include initiatives by the **Department of Water, Sanitation, Environment, Energy and Climate Change**, which leads implementation of the **Homa Bay County Climate Change Action Plan (2023–2027)** and oversees climate-responsive projects such as water supply improvement and environmental restoration. Similarly, the **Department of Lands, Physical Planning, Housing, and Urban Development** implements housing and infrastructure programs that can incorporate resilient design principles promoted through this Plan.

8.5.4 Community-Led and Civil Society Initiatives

Shauri Yako hosts several grassroots organizations, savings groups, and youth networks engaged in solid waste management, urban greening, and livelihood activities. These groups represent a vital social infrastructure for adaptation. By linking adaptation actions to their ongoing initiatives such as waste recycling, drainage maintenance, and neighborhood tree planting the Plan strengthens local ownership and accountability.

Community structures established during the Situational Analysis and RCRA processes, particularly youth and women's groups, will be instrumental in leading implementation at neighborhood level. Their involvement ensures that adaptation actions respond to local realities and that benefits reach vulnerable groups most affected by climate hazards.

8.5.5 Coordination Mechanism

To harmonize these diverse initiatives, the Plan proposes the establishment of a **Shauri Yako Adaptation Coordination Committee (SYACC)**. This body will comprise representatives from community structures, the County Departments of Environment and Urban Development, and development partners. Its functions will include:

- Coordinating ongoing and new projects relevant to Shauri Yako's adaptation priorities.
- Facilitating data sharing and joint monitoring among partners.

- Ensuring that adaptation investments align with the Homa Bay County Climate Change Act (2022) and the County Climate Change Action Plan (2023–2027).

Through this coordination framework, the Shauri Yako People’s Adaptation Plan will operate as a practical, collaborative platform that integrates community-led resilience actions into ongoing programs, ensuring sustainability, coherence, and visibility within county and national adaptation processes.

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