



# Urban transformation and the politics of shelter

## Understanding Nairobi's housing markets

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## Partner organisations

Slum Dwellers International Kenya (SDI Kenya) works closely with Kenya's slum dweller federation Muungano wa Wanavijiji and its urban poor fund Akiba Mashinani Trust (AMT). This tripartite Muungano Alliance works to improve shelter, services and quality of life of slum dwellers through policy advocacy and dialogue with government officials, civil society and the private sector. See [www.muungano.net/about](http://www.muungano.net/about)

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This working paper presents findings and recommendations from research on access to shelter and services in Nairobi, Kenya. It is part of a three-city study in East Africa also covering Mogadishu, Somalia and Hawassa, Ethiopia. Guided by political economy analysis, the two-year research project investigated why and how city dwellers make certain shelter choices, and generated recommendations to improve access to adequate shelter and basic services for the most vulnerable urban residents.

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# Acronyms and abbreviations

AMT	Akiba Mashinani Trust, Kenya
ATMs	Automatic water dispensers ('water ATMs')
CAHF	Centre for Affordable Housing Finance in Africa
CBD	Central business district
CBO	Community-based organisation
DRC	Democratic Republic of Congo
EARF	East Africa Research Fund
FGD	Focus group discussion
FLT	Fresh Life Toilets
GDP	Gross domestic product
GNI	Gross national income
ID	Identity document
IIED	International Institute for Environment and Development
KENSUP	Kenya Slum Upgrading Programme
KII	Key informant interview
KIHBS	Kenya Integrated Household Budget Survey
KISIP	Kenya Informal Settlement Improvement Project
KKL	Kwangu Kwako Ltd
KMRC	Kenya Mortgage Refinance Company
KNBS	Kenya National Bureau of Statistics
Ksh	Kenyan shilling
Muongano	Muongano wa Wanavijiji, the Kenyan homeless people's federation
NCA	National Construction Authority
NCWSC	Nairobi City Water and Sewerage Company
NGO	Non-governmental organisation
NHC	National Housing Corporation
NLC	National Land Commission
NMT	Non-motorised transport
NSSF	National Social Security Fund
PLWD	People living with disabilities
PPA	Physical Planning Act
PPP	Purchasing power parity
PPPs	Public-private partnerships
SACCO	Savings and credit cooperative organisation
SAPs	Structural Adjustment Programmes
SDG	Sustainable Development Goal
SPA	Special Planning Area
SDI	Slum Dwellers International
UN	United Nations
UN-Habitat	United Nations Human Settlements Programme
VAT	Value-added tax
WASH	Water, sanitation and hygiene
Wasreb	Water Services Regulatory Board

# Summary

Standing alongside Nairobi's well-known slums are high-rise tenements and other 'informal' housing types that contravene planning and building regulations. The city is undergoing a shift from low-rise shacks to multistorey tenements – about 70 per cent of Nairobi's residents live in single-room units in informal settlements and tenements (KNBS 2019b). Residents may consider tenements as an improvement on shacks but high-density tenements are still very unsafe, with poor services and infrastructure and of low-quality construction (Table 1). Despite the president's recent promise to prioritise affordable housing in his Big 4 Agenda, there are still major shortfalls in government capacity and a longstanding failure to plan for low-income shelter.

This working paper is based on a recent mixed-methods study in Nairobi. We analysed shelter transformations across the metropolitan area, with a focus on understanding multiple exclusions and informal rental housing markets. We discuss Nairobi's informal submarkets and barriers to affordable shelter, while identifying ways to foster more inclusive housing strategies.

## A city of diverse but low-quality housing

Nairobi is growing rapidly and, according to the latest census, Nairobi City County has a population over 4.397 million (KNBS and Republic of Kenya 2019). Most housing is rented: about 34 per cent of households rent a single room in informal settlements and another 36 per cent live in single-room tenements (KNBS 2019b). Shacks in an informal settlement ('slums') are mainly made of iron sheets (wall and roof), and structures are usually one storey or sometimes two storeys. By contrast, tenements are five to ten storeys 'walk-ups' built of stone, steel and/or concrete. Tenements help to meet Nairobi's booming demand for low-cost housing, particularly given its population growth and escalating land prices. But in recent years, Nairobi has suffered several high-profile collapses of poorly constructed tenements (see eg Murimi 2016). There are also ageing public housing units with informal extensions, and homes that are a mix of shelter types (Table 1).

Our research shows that investors in Nairobi's low-cost rental housing market can realise up to four times better returns than those selling formal middle and high-income housing. This is based on estimating the rental yield

and payback period for a unit in Mukuru (an informal settlement), as compared to the upmarket housing area of Kilimani. Nairobi's rental market for single rooms is a significant economic subsector that generates at least US\$372.2 million annually (see Section 4.6). Given this sector's scale and profitability, any efforts to improve Nairobi's shelter must engage with private providers in the city's burgeoning informal rental market.

## Barriers to delivering affordable housing in Nairobi

Failures of city planning and land governance have left a major vacuum that has encouraged the proliferation of Nairobi's inadequate low-cost housing. As explained below, other key barriers to affordable housing delivery are linked to Nairobi's infrastructure deficits, lack of affordable housing finance, and residents' low incomes.

### Ineffective city planning, poor land administration, and infrastructure deficits

In both shacks and tenements, infrastructure is often provided by fragmented state agencies and informal actors that leave major shortfalls in household-level connectivity. Many low and middle-income households still lack adequate roads, public water or sewer provision. Public water and sewerage networks typically exclude households in informal settlements and tenements. In Nairobi's peri-urban areas and satellite towns, residents must rely upon their own on-site infrastructure (such as septic tanks) and small-scale private providers that are often inadequate. Nairobi also has a major mismatch between spatial planning and its infrastructure investments.

Furthermore, planners' development control strategies have proved ineffective in addressing Nairobi's rapid expansion. There are related challenges linked to Nairobi's inappropriate or poorly enforced planning regulations. Moreover, land development is outpacing the city's capacity for infrastructure delivery, and the cost of land is often prohibitive, contributing to the unaffordability of housing. According to several key informants, speculative investments in Nairobi have resulted in a highly commodified and dysfunctional land market. More fundamentally, inadequate shelter and land provision are rooted in the city's corruption and unresponsive governance (Section 4).

Table 1. Shelter typology for low-income households

SHELTER TYPE	MAIN BUILDING MATERIAL	BUILDING HEIGHT OR DENSITY	BASIC SERVICES	SETTLEMENT PATTERN
Shacks	Iron-sheet roof; iron sheets and mud walls; sometimes temporary materials.	Usually single storey (ground level) but occasionally two storeys. Typical single-room unit is 100 ft <sup>2</sup> .	Highly inadequate, with shared water and sanitation (ie public taps, pit latrines) and often pay-per-use. Electricity provided by legal or illegal connections. Mainly unpaved or poorly paved narrow streets and footpaths.	Can vary in their layout, as follows:  <b>Spontaneous:</b> Organic layout, incremental housing construction (eg Mathare 4B).  <b>'Planned layout':</b> Often begins with well-defined street and plot patterns but later crowded and may encroach on streets (eg Mathare 4A).  <b>Hybrid layout:</b> Organic alongside 'planned layout' (eg Mukuru).
Tenements	Quarry-stone walls; steel and concrete.	Five to 10 walk-up storeys, with street-front ground-floor units occupied by businesses  Typical single-room unit is 100 ft <sup>2</sup> .	Each floor has shared sinks, taps and toilets/ bathrooms, though in some buildings water is only available on ground floor. Sometimes connected to public sewer, or a cesspool is emptied by exhauster trucks.  Typically, all units have electricity. Streets are narrow and unpaved.	'Planned layouts' with a defined street layout and standardised plot sizes (eg 30x60 ft, 40x80 ft, or 50x100 ft). Blocks usually cover the entire plot (100 per cent plot coverage), with narrow streets between blocks. Balconies are inward looking or street facing, with lower floors having very limited sunlight. Each block has a centralised (single) entrance/ exit that fronts the street.
Ageing low-cost public housing	Row stone houses, with informal extensions, (typically of iron sheets, resembling shacks).	Often lower density and low building heights.	At first, well-planned infrastructure but now highly inadequate after densification and neglected maintenance. Open spaces are rare, as informal extensions proliferate.	Located near the city centre, originally with adequate services and amenities but varied shelter types (eg Shauri Moyo, Mbotela, Bahati). Main houses are complete units with varied designs; informal extensions typically offer single-roomed units for sub-letting or expanded family occupancy.
Mixed shelter	Combination of shacks, tenements, and stone-walled structures, with single-room units and informal extensions.	Ranges from single-storey shacks and low-rise row units to multistorey tenements.	Basic services typically accessed using a mix of approaches common in shacks and tenements.  On-site and service schemes, provision is better but increasingly overwhelmed by overcrowding.	Heterogeneous settlement patterns with wide variations in physical layout and type of structures. Sometimes half-built tenement blocks have shacks on the highest floor, particularly in areas undergoing transition (eg Maili Saba, Dandora)



### Lack of affordable housing finance

Housing finance is available only to wealthy households. Just 10 per cent of Kenya's population can afford a formal house costing US\$10,000 (without subsidy) and a monthly mortgage repayment of US\$174 (Gardner *et al.* 2019). There is an urgent need to focus on expansion of affordable **rental** housing, since Nairobi's low-income majority relies on renting and benefits from its flexibility (Gilbert 2016).

### Low incomes and insecure livelihoods

The prevalence of low incomes and insecure informal livelihoods (such as vending, construction or other casual jobs) are significant barriers to providing decent and affordable shelter. Social factors such as gender, disability, migration status and ethnicity, may also interact with residents' financial constraints (see also Section 7).

### Ways forward

To better meet the needs of the city's low-income majority, and respond to this complex informal housing market, Nairobi's planning systems and infrastructure delivery approaches must be reformed. As a positive start, affordable housing was recently selected as one of Kenya's 'Big 4' policy priorities, and President Kenyatta promised to build 500,000 affordable homes by 2022, creating opportunities for developing more inclusive strategies. Nairobi County has also announced plans to redevelop its ageing public housing and to upgrade the informal settlement of Mukuru (Section 5). Nairobi will also require a range of integrated policies and approaches to promote affordable housing, as follows.

#### Improve access to safe, affordable rental housing

- Home ownership is not the solution to shelter deficits: Nairobi needs multiple tenure and occupancy arrangements, with an emphasis on decent affordable rental housing and economic development strategies targeting low-income residents.
- Appropriate, well-enforced policies and regulations on rental housing can improve tenants' living conditions. Working with informal rental housing providers, who are often overlooked, will be critical. Future interventions can leverage their much-needed private capital, but redirect it to better-quality shelter.
- Tenements need responsive planning and design and health regulations, as well as initiatives to improve infrastructure and ensure minimum housing standards are met.

### Develop comprehensive, joined-up strategies

- Kenya's government and development partners should promote access to affordable construction and housing finance; enhance the capacities of city planning and other stakeholders in housing; and improve the supply of well-planned land and bulk infrastructure to reduce developers' costs.
- The city needs to integrate housing strategies with more inclusive economic development strategies. This will require investment in the informal economy to improve productivity (such as enhancing informal workers' skills and access to infrastructure) and provide secure work environments.
- Nairobi can combine strategies for new housing developments with improvements in existing shacks and tenements, using approaches such as in-situ upgrading, land readjustment and redevelopment.
- Policymakers and government need to offer incentives encouraging adequate, affordable low-cost shelter production.

#### Support small-scale housing providers and organised groups

- In some settlements (such as Maili Saba), residents have incrementally constructed low-cost units, but cannot afford technical expertise and usually struggle to access construction finance due to lack of legal tenure. With support from government and financiers, these small-scale housing providers can deliver low-cost housing more effectively.
- Assistance is also needed for organised groups of low and middle-income households – such as savings and credit cooperative organisations (SACCOs), housing cooperatives and community groups – who may access land but often lack the funds for decent housing construction and infrastructure.

#### Promote equitable infrastructure delivery and work with communities to co-produce solutions

- Infrastructure provision has been highly skewed, resulting in the neglect of low-cost housing areas. At minimum, a redistributive strategy to provide roads, water and sewerage should be prioritised in Nairobi's development expenditure (by national and county government agencies and also development partners).
- To extend coverage to underserved areas, the government must strengthen the capacities of Nairobi's public water and sanitation agencies.

- To overcome fragmentation in service delivery, there is an urgent need for better coordination between city planning strategies and infrastructure delivery, land use and service provision.
- Providers should partner with local residents and local organisations to co-produce appropriate, affordable modes of shelter, infrastructure and service delivery.

### Reform land governance

- Nairobi requires a reliable land information system: developing a secure, updated and transparent system will reduce the risks of mismanagement and corrupt transactions.
- Such a system would facilitate land-based infrastructure financing (Berrisford *et al.* 2018), helping to address key shortfalls in provision.
- Better integration of land-use and infrastructure planning can provide a strategic framework for shelter delivery, resolve land conflicts and facilitate future interventions.

## 1

# Introduction

This is one of three working papers covering the main findings from a research project led by the International Institute for Environment and Development (IIED) on shelter in East Africa. This research project examines systems of shelter provision in three East African cities: Nairobi, Hawassa and Mogadishu. It was designed to identify policy-relevant, locally driven solutions to improve shelter at scale for vulnerable groups, including low-income women and men, displaced people, and people with disabilities. The methodology underpinning the study recognises that gender, poverty, displacement and ethnicity can act as major axes of discrimination that impede access to land, shelter and services in East African cities. The research has explored the three cities' histories, political settlements and variations in housing, in order to generate new insights that can inform more inclusive, affordable shelter interventions. In addition, the research process has provided opportunities for knowledge sharing and spaces for dialogue between communities and local officials, using shelter as an entry point to foster more responsive local governance.

## 1.1 Methodology

Our mixed-methods study in Nairobi analysed shelter transformations across the metropolitan area, with a focus on understanding multiple exclusions and informal rental housing markets. In particular, we conducted 72 qualitative interviews and 17 focus group

discussions (FGDs) with low-income households in central, peripheral and satellite areas. These respondents also varied in their types of shelter and infrastructure provision. Additionally, we conducted key informant interviews (KII) with national and city-level officials (in city planning, housing etc), utilities agencies, shelter finance practitioners, academics, civil society leaders, developers, contractors, land/housing brokers, community leaders, landlords and property caretakers/agents, and informal/small-scale utility providers. We also conducted secondary data analysis, using academic and grey literature on shelter, land and infrastructure; Kenya's official data and international agencies' reports; and Kenyan market research on shelter, land prices and housing finance. We commissioned two background studies on shelter finance and relevant policy frameworks by Kenyan academics.<sup>1</sup>

Furthermore, we conducted a land and housing markets survey and spatial analysis of shelter, land and infrastructure across the metropolitan area, creating an array of new maps and generating a low-income shelter typology (Table 1). The land and housing markets survey focused on establishing current prices of land and shelter sales, and the monthly rents paid for various types of shelter (low-cost to high-cost units).<sup>2</sup> The survey also examined the patterns of residential developments and their related drivers (eg infrastructure provision and nature of demand), and issues facing access to and shelter conditions in the local areas. To

<sup>1</sup> Mary Mutinda (Strathmore University) wrote a background report on housing finance; Smith Ouma (Cardiff University) analysed Kenya's policy framework on housing and land.

<sup>2</sup> For the land and markets survey, we sampled 46 areas across Nairobi and five in satellite towns (Athi River, Kamulu, Kitengela, Ruaka, Mlolongo). The respondents were land brokers/dealers, housing agents, local leaders and long-term residents.

delve into key shifts and the multifaceted challenges facing low-income households, we developed case studies of Nairobi's large informal settlements of Mukuru and Mathare Valley (see Section 5). The latter is undergoing a shift from low-density shacks to high-rise tenements; Mukuru is still dominated by shacks but will be the site of a pathbreaking multisector upgrading project with strong community participation.<sup>3</sup> Case studies were informed by our secondary data analysis, as well as primary data collection with residents in these areas.

The research team has ample experience of community-led approaches in Nairobi's low-income areas, as well as an understanding of the complex constellation of actors involved in the city's shelter delivery. Nairobi-based practitioners and researchers conducted the fieldwork and analysis, with support from IIED in London.<sup>4</sup> Our research benefited from well-established linkages with Kenya's slum-dweller federation Muungano wa Wanavijiji and its supporting non-governmental organisations (NGOs) Slum Dwellers International Kenya (SDI Kenya) and Akiba Mashinani Trust (AMT), which has fed into the case studies (see also Weru 2004; Lines and Makau 2017). During the research, we also held several stakeholder workshops in Nairobi with government officials, civil society representatives, academics and residents to validate findings and deepen the analysis. The workshops included short presentations with facilitated plenary sessions that enabled the participants to provide feedback on emerging issues and policy implications.

We incorporated a gender and inclusion lens throughout the primary and secondary data analysis, such as discussing women and girls' burdens linked to inadequate water, sanitation and hygiene (WASH) provision (Box 1), gender aspects of Kenya's shelter and land policies (Section 6), and an intersectional analysis of vulnerable groups' access to shelter (Section 7).

Although we include findings from across its metropolitan area, time limitations meant that we could not fully analyse Nairobi's informal housing submarkets, the often-sensitive politics of land or housing, or key infrastructure sectors. For instance, we lacked the capacity to thoroughly examine the wide array of informal service providers, shelter patterns in satellite towns or other emerging trends, and proposed changes in Nairobi's transport (including a Bus Rapid Transport network to be launched in late 2019). Our KIIs did explore Nairobi's politics of shelter (Section 3), but it is inevitably challenging to probe into allegations of corruption, land grabbing or other sensitive topics. Nevertheless, our shelter typology, spatial and qualitative data, and case studies can all support a multifaceted understanding of Nairobi's informal housing markets. We also identify promising practices such as the key role of savings and credit cooperative organisations (SACCOs) and the Mukuru Special Planning Area (SPA) that can inform more progressive shelter policy and practice in other cities of the global South.

<sup>3</sup> See also Section 5.2 and [www.muungano.net/mukuru-spa](http://www.muungano.net/mukuru-spa). We drew upon EARF-supported documentation from Mukuru and background research from consortia that are helping to upgrade the settlement.

<sup>4</sup> Baraka Mwau, a consultant with experience of working in several informal settlements and tenements (including with UN-Habitat), led the primary data collection as well as spearheaded the analyses of spatial and qualitative data. Alice Sverdlik (IIED researcher) supported with secondary data analysis and analysis of qualitative data; SDI Kenya's director Jack Makau also contributed to the analysis and recommendations.

# 2

## General overview

### 2.1 Study setting

Nairobi serves simultaneously as Kenya's primate city, political capital and key economic hub, as well as a regional hub for East Africa. Its urban form is still strongly shaped by patterns of segregation initiated by British colonial authorities, and many informal settlements are located in the same low-lying eastern areas where African residents were confined in the colonial era (Hake 1977, also below). Already home to over 4 million people (UN-DESA 2018), Nairobi is currently undergoing complex transformations in its shelter provision especially in its peripheral areas, emerging satellite cities, and the ongoing shift from shacks to high-rise tenements (Gatabaki-Kamau and Karirah-Gitau 2004; Huchzermeyer 2007; Diang'a and Hayangah 2011).

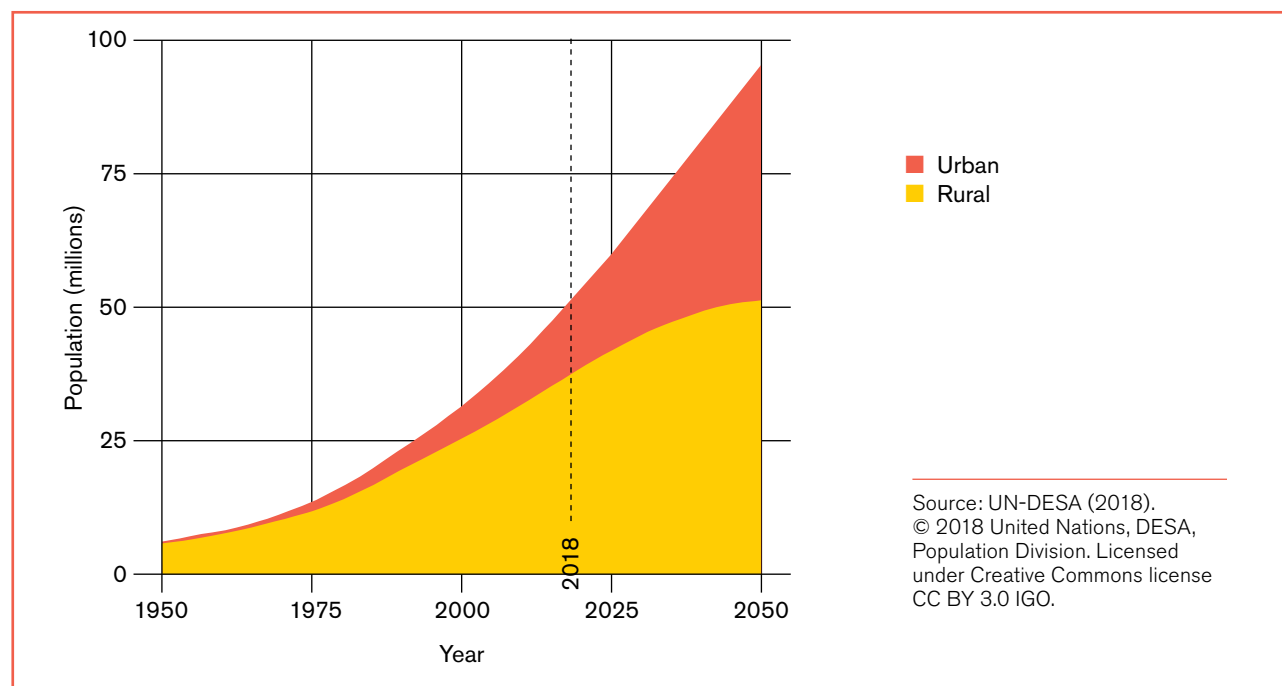
Housing provision in Nairobi is overwhelmingly private and informal (ie unregulated, contravening official norms), but this study will explore its wide array of informal submarkets as well as a highly exclusionary formal market catering for wealthy households. It will also analyse the politics of land and shelter, noting the progressive potential of Kenya's 2010 Constitution, recent decentralisation reforms, and political commitment to affordable housing as part of the president's Big 4 Agenda. But to overcome its major shelter deficits, Nairobi will require joined-up, inclusive policies across its heterogeneous metropolitan area and greater policy recognition of informal rental housing, which is often overlooked in favour of strategies favouring home ownership.

### 2.2 Kenya's urbanisation and shelter provision context

There is an urgent, significant unmet demand for affordable housing in Nairobi, yet improved supply through formal markets remains elusive. At national level, 244,000 housing units in different market segments are needed annually, but the current production is less than 50,000 units (World Bank 2017a: 26), which is skewed towards middle and high-income market segments. It is not clear whether Nairobi's substandard housing units (ie shacks and tenements) are considered within the 50,000 figure or whether they form part of the deficit. As discussed below, Nairobi's thriving market for single rooms produced by informal providers has generated highly inadequate shelter (Section 4). Additionally, rapid rates of urbanisation are only increasing the housing deficit and further hampering efforts to address Nairobi's future shelter needs.

Kenya's average annual urban growth rate is currently 4.23 per cent, with 28 per cent of its population living in urban centres (totalling 15 million city dwellers). It is projected that by 2050, the country's urban population will approach the 50 per cent mark (Figure 1). In 2018, the UN estimated that Nairobi's population was 4.386 million, with an annual average rate of change of 3.81 per cent from 2015–2020 (UN-DESA 2018). The capital's fast-paced growth will likely continue: from 2020–2025, its projected average annual rate of change may reach 3.94 per cent (ibid). According to Kenya's latest Census, Nairobi City County has a population of 4.397 million and Kenya's total population

Figure 1. Kenya's urban and rural population as % of total population, 1950 to 2050



reached 47.56 million, jumping from 37.7 million in 2009 (KNBS and Republic of Kenya 2019: 5 and 7). But the initial Census report lacks detailed figures on Kenya's urbanisation rates or detailed findings for Nairobi's informal settlements, which are expected in subsequent reports.<sup>5</sup>

Nairobi's primacy is unrivalled: in 2015, 32.3 per cent of Kenya's urban population lived in Nairobi, far above 9.1 per cent in Mombasa and just 2.5 per cent in Kisumu. Projections suggest that Nairobi will accommodate over 31 per cent of Kenya's urban population from 2020–2035, highlighting its continued primacy, with Mombasa remaining home to under 9 per cent of urban Kenyans (UN-DESA 2018). But there are conflicting projections of Kenya's urban transition, and additional studies are needed, particularly given the data gaps on informal settlements where the low-income majority reside.<sup>6</sup>

### 2.2.1 Urbanisation without structural transformation: informality and stark inequalities

While urbanisation has been associated with structural economic transformation, this has yet to be achieved in Kenya and many other sub-Saharan African nations (Lall *et al.* 2017; World Bank 2017b). For the last five years, Kenya's economic surveys have reported the

dominant share of the informal sector in creating new jobs, while formal job creation remains extremely limited (Figure 2 and KNBS 2019b). This has dire implications for housing finance because conventional methods (eg mortgages and construction loans from banks) are struggling to respond to the widespread prevalence of low, erratic incomes in Kenya's informal economy (CAHF 2018; also Section 4.1 on finance).

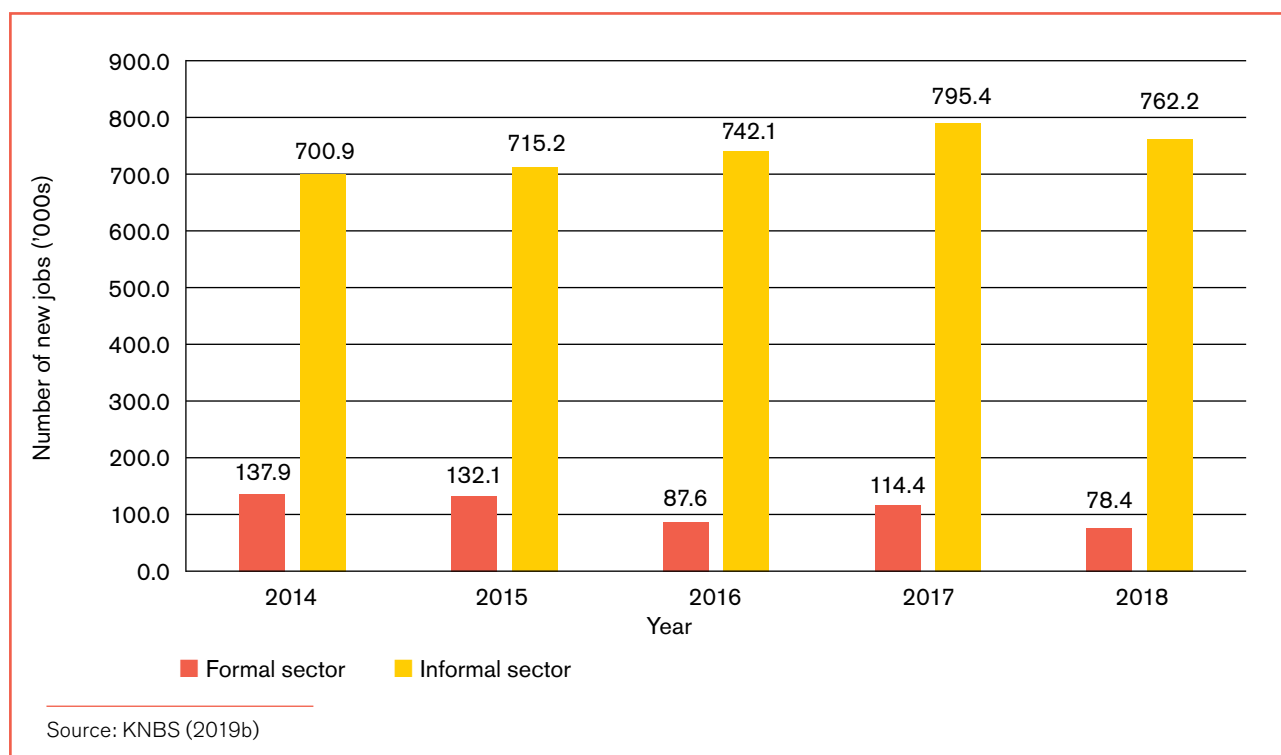
Kenya's gross domestic product (GDP) was valued at US\$79.263 billion in 2017, which rose to US\$87.9 billion in 2018 (World Bank a). Nairobi's economic output was recently calculated as 21.7 per cent of the national GDP (KNBS 2019a: 7), far lower than past estimates of up to 60 per cent of the national GDP (see Institute of Economic Affairs 2011: 4). But the national debt reached 57 per cent of GDP in 2017 (substantially above just 38 per cent in 2012), and rising indebtedness can potentially stymie the government's plans to implement its ambitious housing and other domestic agendas (CAHF 2018: 161; Section 6).

Meanwhile, in 2015 the World Bank reported that 36.1 per cent of Kenyans lived below the national poverty line, although such statistics may significantly underestimate urban poverty levels (Satterthwaite 2004). Kenya's Human Development Index (HDI) in 2018 was measured as 0.59 (UNDP), with a gross national income (GNI) per capita (2011 purchasing power parity or PPP) of US\$2,961 and 54.3 per cent

<sup>5</sup> However, it does note the population of Nairobi's sub-counties with large informal settlements, such as Kibra (Kibera) with 185,777 people and Mathare sub-county with 206,564 residents (KNBS and Republic of Kenya 2019: 20). See Section 5.1 for a case study of Mathare Valley.

<sup>6</sup> For instance, the Kenya Vision 2030 (Republic of Kenya 2007; 2012) indicated that by 2030, 63 per cent of the country's population will reside in urban centres. The World Bank (2011) had already put the urban share at 22 per cent of the total population by 2010 and projected a slightly higher than 50 per cent urban share by 2050, with rural-urban migration as the main driver.

Figure 2. New jobs created by Kenya's informal and formal sectors, 2014 to 2018



of the total employment classified as 'vulnerable'. There were stark, gender-inequitable differences in GNI per capita between male Kenyans (2011 PPP US\$3,398) and female Kenyans (2011 PPP US\$2,529) (UNDP).

While statistics on the population living in Kenyan informal settlements ('slums') are contested, similar to other cities of the global South, it is clear that the prevalence of informal urbanisation is very high. According to UN monitoring data for Sustainable Development Goal (SDG) 11, the proportion of Kenya's urban population living in slums declined from 54.9 per cent in 1990 to 46.5 per cent in 2016.<sup>7</sup> Kenya's population and housing census of 2009 reported that 36.2 per cent of Nairobi's population lived in slums (KNBS 2012: 60). However, other government reports suggest that 60 per cent of urban residents live in slums.<sup>8</sup> Our study has focused on Nairobi's largely informal housing markets, in order to enhance understanding of how low-income groups typically access shelter and services.

Findings from the UN's Joint Monitoring Programme (JMP) underscore Kenya's persistent disparities in urban water and sanitation. In 2017, 85 per cent of Kenya's urban households had 'at least basic' water provision; regarding sanitation, 35 per cent of urban households had 'at least basic' provision, 44 per cent had limited (shared) and 19 per cent unimproved

provision (UNICEF and WHO 2019: 114). But levels of services vary markedly by income level: in 2017, about 61 per cent of Kenya's poorest urban quintile had access to basic drinking water, as compared to 96 per cent of the richest quintile with basic drinking water. Inequalities in sanitation provision are even more profound: in 2017, about 13 per cent of the poorest Kenyan city dwellers had basic sanitation and 34 per cent had limited sanitation versus 80 per cent of the richest quintile who had basic sanitation. Furthermore, the poorest urban quintile's access to basic water fell markedly from 85.8 per cent in 1990 to 61 per cent in 2017. Access to basic sanitation was nearly static for the poorest urban residents, dropping slightly from 13.6 per cent in 2000 and 13 per cent in 2015. Official data from Kenya's Water Services Regulatory Board (Wasreb) indicate that in 2017–2018, Nairobi had 80 per cent water coverage and 50 per cent sewerage coverage, although just six hours of supply per day (Wasreb 2019: 16). But in many of Nairobi's low-income areas, residents rely not upon sewers but rather 'on-site' sanitation, such as pit latrines that retain excreta on the plot and may not be regularly emptied (see also Section 3.7.4). Such disparities have major implications for the health and well-being of Nairobi's low-income residents, as well as negatively affecting the local environment where excreta are often indiscriminately dumped.

<sup>7</sup> See the SDG Country Profile for Kenya (UN-DESA): <https://country-profiles.unstatshub.org/ken#goal-11>

<sup>8</sup> 'The Kenyan urban housing sector is characterised by large urban slums without proper sanitation. Informal settlements house 60 per cent of urban population.' Republic of Kenya (2012).



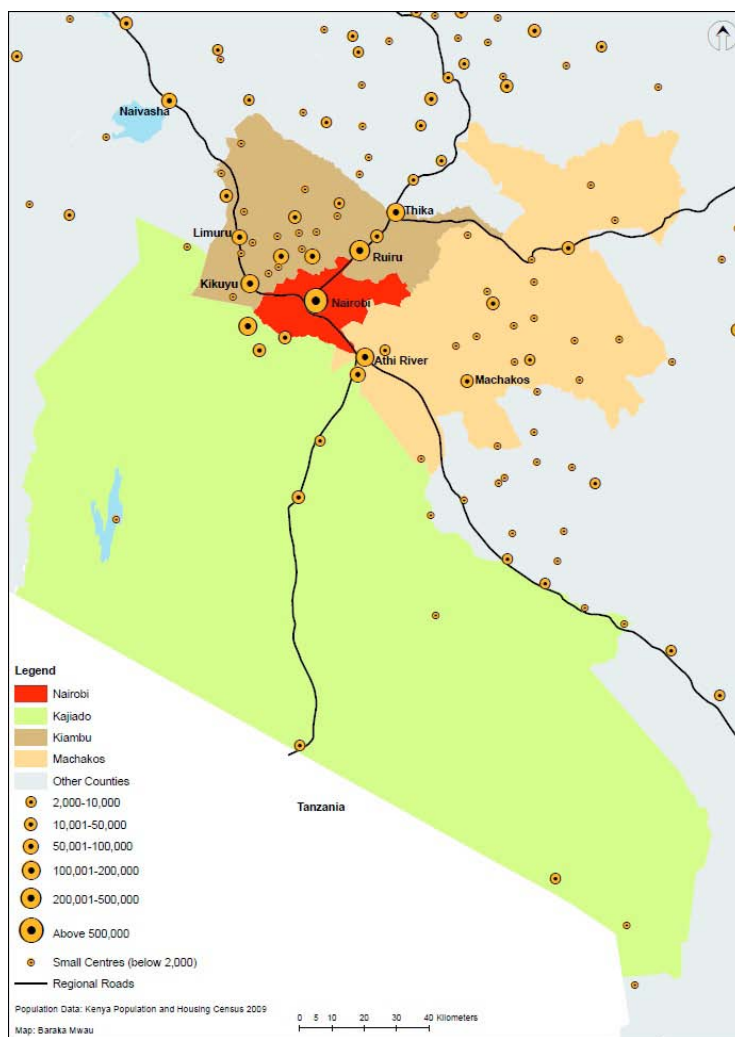
Findings on energy access are not readily available at the urban level, but United Nations data for SDG 7 (clean energy) suggest that the proportion of Kenya's population with access to electricity increased substantially from 10.9 per cent in 1993 to 63.81 per cent in 2017 (UN-DESA).<sup>9</sup> However, such trends may mask the persistent shortfalls in reliable or clean energy in Nairobi, such as the use of illegal electricity providers or continued challenges in implementing pre-paid electricity meters (Section 3.7, also see Figueroa 2016).

### 2.2.2 Historical growth and planning in Nairobi

Established in 1899 as a transportation and administrative centre for the Kenya–Uganda Railway, Nairobi is still grappling with legacies of colonial planning: segregation and paltry shelter for low-income residents. Nairobi has experienced three broad phases of growth, each with varying impacts on its urban form:

- Colonial planning phase during the colonial administration established racial zoning and segregation, facilitated by the 1905 (Plan for a Settler Capital), 1905, 1927 and 1948 (Nairobi Master Plan for a Colonial City) plans and related restrictive policies and regulations targeting native Africans. This was also the period of early growth of informal settlements.
- After Kenya's independence in 1963, Nairobi underwent rapid growth and proliferation of informal developments (1963–1990s), with diminishing capacity for government in planning, housing and infrastructure delivery. The Structural Adjustment Programmes of the 1980s resulted in highly privatised housing and utility markets.
- More recently, Nairobi is experiencing densification, rapid sprawl and growth of satellite towns (late 1990s to the present) (see Figure 3).

Figure 3. Map of Nairobi City and satellite towns



Map © Baraka Mwau based on data from KNBS (2012)

<sup>9</sup> See the SDG Country Profile for Kenya (UN-DESA): <https://country-profiles.unstatshub.org/ken#goal-7>



During the colonial era (1899–1963), Nairobi's growth was guided by various plans, with the main motivation for planning and development being racial segregation and control of the native African population growth. The planning model and its spatial manifestation created distinct kinds of settlements/sectors/zones based on class, as follows:

- North and West sectors were European reserves
- North and East sectors were defined as the Asian Sector
- East and Southeast sector were defined as the African Sector, and
- Southeast to South sector was a small enclave for Asian labourers.

Key issues during colonial-era planning included a policy of urban containment, substandard housing and infrastructure for African natives, and the genesis of Nairobi's single-roomed housing markets (eg Shauri Moyo, Kariokor). Single-roomed housing was not intended for family occupancy, but rather designed as hostels (bachelor housing) for the working African man who was not expected to stay with his family in the city (Hay and Harris 2007; Martin and Bezemer 2019; also Section 3.1). Nairobi's shelter challenges are rooted in the exclusionary legacies of colonial planning, which still influence contemporary concerns (Macharia 1992; Gatabaki-Kamau and Karirah-Gitau 2004: 161).

The city's legacy of racial segregation has been reproduced socioeconomically in the post-independence era. Areas initially intended for European residents were subsequently transformed into modern Nairobi's elite upmarket areas; meanwhile, informal settlements and tenements now occupy the former African areas (Mwaniki *et al.* 2015).

Nairobi's most rapid growth occurred in the independence period, largely due to rural-urban migration. Indeed, Kenya's urban growth rates were the highest at this time, with census reports of 1969 and 1979 reporting growth rates of 6.3 per cent and 7.1 per cent, respectively (NPCD 2018). Nairobi's present-day administrative boundary is based on the 1963 boundary changes, which demarcated 696km<sup>2</sup> of land. Since then, the city's population density increased markedly from 493 persons per km<sup>2</sup> in 1963 to 4,510 persons per km<sup>2</sup> in 2009 (Mwaniki 2017). Nairobi's population increase after independence is shown in Figure 4.

Nairobi's population is overwhelmingly youthful, with most residents below the age of 30 and few residents over 50 (Figure 5). Given its sizable youth population, it is projected that Nairobi's shelter demand will increase significantly in the coming years, but in the context of low incomes and widespread youth unemployment. Meanwhile, many elderly residents in Nairobi's informal settlements continue living with younger generations

Figure 4. Nairobi's population growth

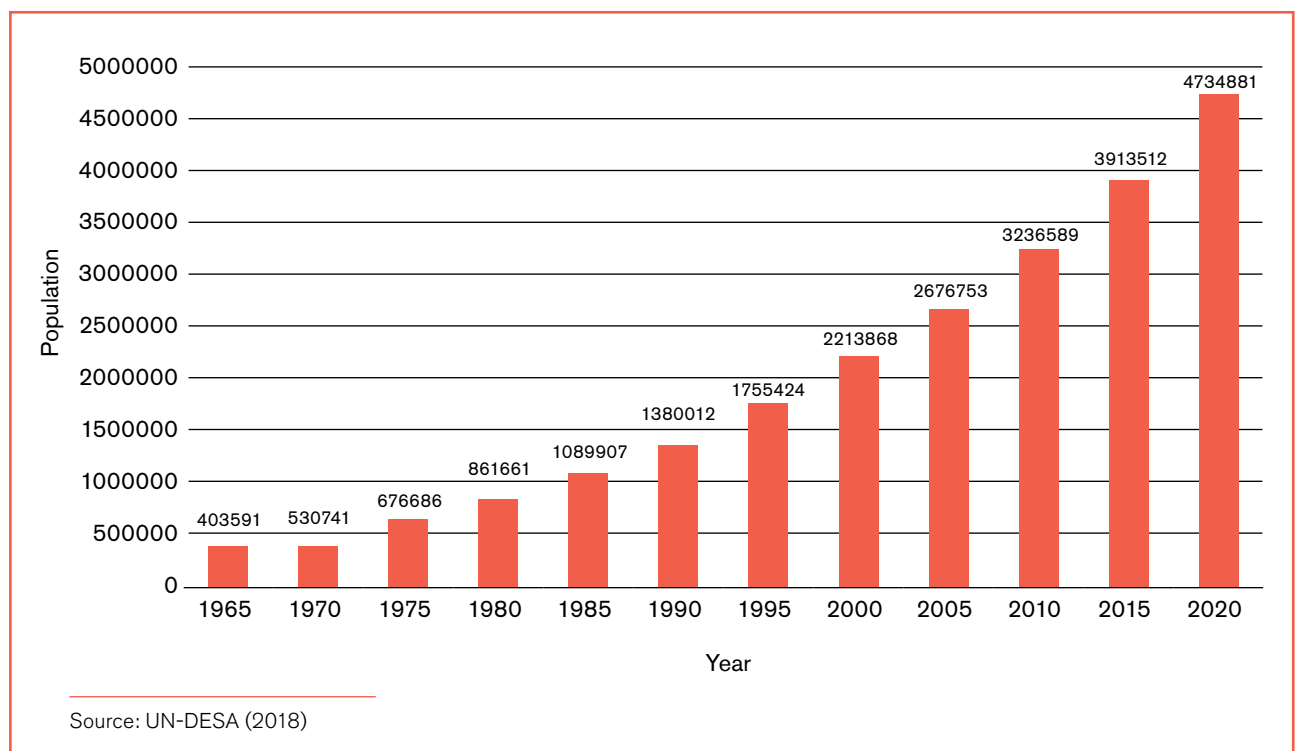
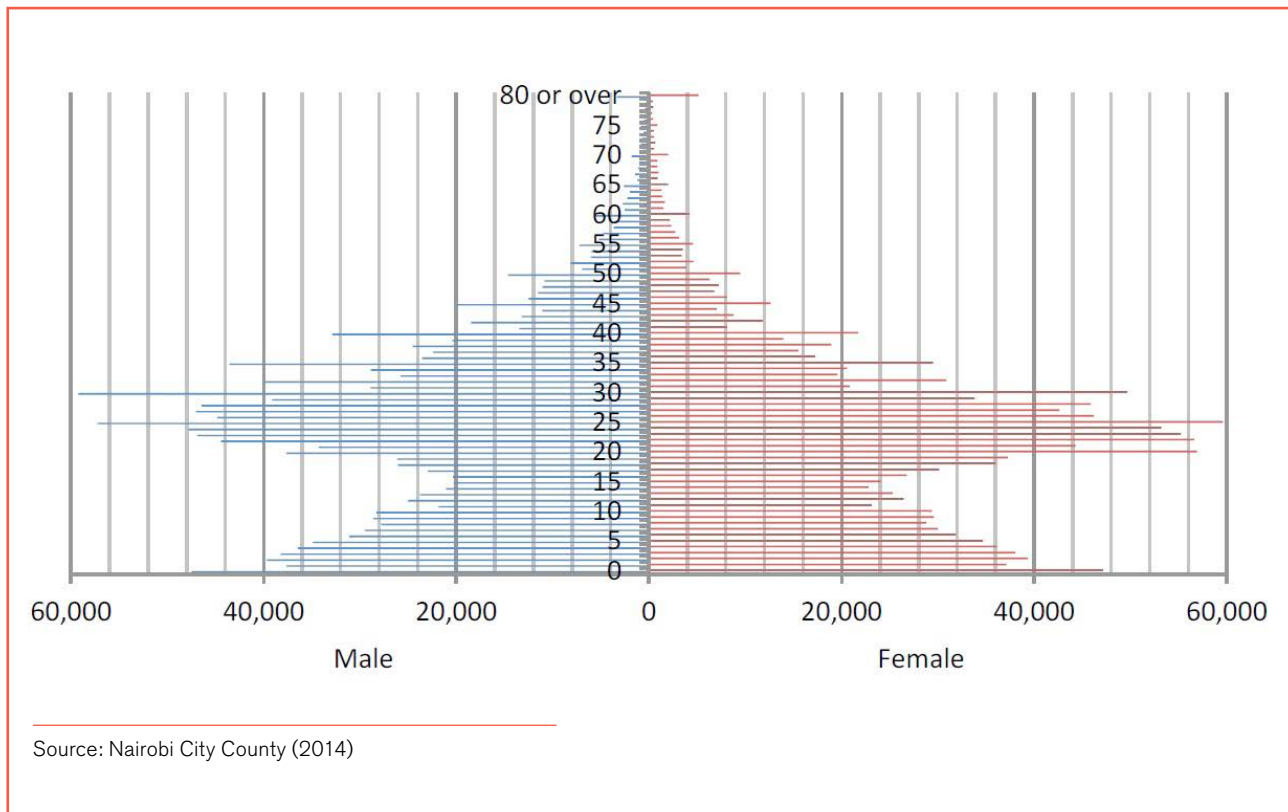


Figure 5. Nairobi's population structure by age



(often providing care for their grandchildren) and poverty amongst both elderly and younger residents of informal settlements remains common (Aboderin *et al.* 2017). Nairobi's older residents may return to their rural areas upcountry, underscoring the rural-urban linkages that remain important throughout their lifecycle. In 2016, Kenyans' life expectancy was 64 years for males and 69 for females, though these statistics are not available for Nairobi in particular (World Health Organization).

Like other African cities, Nairobi has recently aspired to 'world-class' city status (modernisation) while striving to erase legacies of colonial planning that contributed to inequitable shelter and infrastructure provision (Myers 2015; Watson 2014). But Nairobi's ongoing changes in urban form and its ambitious plans have unfolded in a context of weak urban planning and inadequate capacity to deliver infrastructure, services and housing. In the next section, we examine Nairobi's politics of shelter provision and key interventions in greater detail (see also Section 6).

## 3

# The politics of access to shelter and services

Kenya now has a devolved government, and housing provision has attracted the attention of policymakers at both national and county levels. Before 2010, Kenya's decentralisation reforms created local governments that were tasked with providing municipal services (d'Arcy and Cornell 2016; Cheeseman *et al.* 2016). Kenya's 2010 Constitution went further to recognise a range of economic and social rights, including access to 'accessible and adequate housing' and 'the highest attainable standard of health' (Kenya Law). Furthermore, it instituted 47 county governments with directly elected governors and county assemblies; county governments were granted additional responsibility for county-level planning, housing provision and service delivery. However, Kenyan counties face persistent challenges with raising enough own-source revenues, and their budgets have 'barely covered their inherited recurrent expenditures and liabilities' (World Bank 2016: 15). President Kenyatta recently prioritised affordable housing in his Big 4 Agenda, and there are a range of upgrading interventions by both national and international agencies. But, as argued below, few of these interventions have successfully benefited Nairobi's low-income households. Entrenched socio-spatial inequalities – rooted in the colonial era – are becoming ever more complex, given Nairobi's multiple housing submarkets and ongoing metropolitan expansion (see below and Section 4).

## 3.1 Tracing the origins of Nairobi's shelter and service provision

Despite the colonial administration's determination to prevent Africans living in urban areas and to eradicate informal settlements, these areas emerged across the city to house African residents. Among the first informal settlements was Mathare Valley, whose formation was linked to the colonial displacement of Nairobi's native Africans (Majale 2000: 4; see also case study in Section 5.1). Colonial-era restrictions imposed on Africans included limitations on free movement (including rural-urban migration), hostel housing such as the first African estate called Kariokor (1929)<sup>10</sup> and legislation treating Africans' presence in the city as temporary (eg the Vagrancy Act 1922). Above all, the colonial administration deliberately failed to plan and provide housing for Nairobi's majority African population (Macharia 1992: 226; Gatabaki-Kamau and Karirah-Gitau 2004: 62).

Having inherited a major housing shortfall, Kenya's government in 1963 faced an even more acute shelter crisis precipitated by rapid rural-urban migration after independence. During this period, the government actively engaged in planning, financing and constructing

<sup>10</sup> The current shelter provision for the majority of the city's population (low income) echoes the colonial legacy of hostels, where single rooms were provided to African men who were not expected to live with their wives and children in the city. However, the current provision has more to do with socioeconomic factors than the colonial apartheid policies.

housing, but still could not match the demand. Most programmes were targeted at civil servants and, hence, were unable to match the magnitude of the low-income housing challenge, which manifested in Nairobi's burgeoning informal settlements. The government created the National Housing Corporation (NHC), through the Housing Act No 17 of 1953, mainly to focus on housing provision for Africans (in 1959, its mandate was extended to housing for Asians and Europeans).<sup>11</sup> However, the NHC has been unable to deliver affordable housing, especially for low-income residents, and it has since shifted towards provision of housing for middle-income households. For instance, NHC was involved in the creation of the Buruburu estate that involved the construction of 4,710 units for middle-income residents (Odwallo 2008: 1). But the NHC's supply currently has little impact in addressing the prevailing shelter demand, even within the middle-income market.

Otherwise, in the 1970s and 1980s, the major public interventions in Nairobi's low-cost housing were 'site and service schemes', mainly funded by the World Bank and Kenyan government. These projects were designed to offer serviced plots with paved roads, electricity, water and sewerage; they also facilitated access to finance for housing units. In Nairobi, such sites were set up in sections of Mathare North and Kayole, and as fully planned new estates (eg Dandora, Umoja). However, the 'site and service' model was unsustainable and largely failed to achieve its intended objectives, mostly because of irregular plot allocations through corrupt practices, as well as due to market-driven displacement and gentrification. In particular, many initial beneficiaries sold their serviced sites to richer individuals who developed multi-dwelling units (Republic of Kenya 2004; Syagga 2006; Klopp 2008; Durand-Lasserve *et al.* 2007; Durand-Lasserve and Selod 2009; Payne *et al.* 2009; Midheme and Moulart 2013; Huchzermeyer 2008; Mwaniki *et al.* 2015).

Recognising this failure, the state subsequently rescaled its housing provision under the Structural Adjustment Programmes (SAPs), ushering in the dominance of private providers and corporatised utilities. The SAPs introduced by the World Bank and International Monetary Fund, in Kenya as elsewhere in the global South, resulted in the privatisation of public goods including housing and utilities.<sup>12</sup> It led to the rise of private-sector dominance in Nairobi's housing sector (Amis 1984) and the withdrawal of the state from direct housing provision, in favour of housing 'enablement'.<sup>13</sup> Notably, the SAPs resulted in skewed delivery where decent housing was prioritised for wealthy households and the middle class, creating an exclusive formal housing market. Additionally, SAPs resulted in the

corporatisation of Kenya's public utilities: part of the outcome was the formation of the Nairobi City Water and Sewerage Company (NCWSC) and Kenya Power in electricity.<sup>14</sup> In housing, only a small fraction of Nairobi's population managed (or currently manages) to benefit from government housing, while private rental units are now entrenched across the city. Indeed, as an earlier Nairobi study observed, 'there are good reasons to believe that renting will continue to dominate housing markets, as it has remained the main form of tenure for urban residents since before independence' (Andreassen 1989: 25).

During the same period (1980s), low-quality tenements began to emerge at scale, including in site and service schemes such as Dandora and Mathare North (Huchzermeyer 2007: 715), and they proliferated due to the loosened regulatory environment. According to a planner interviewed for this study,

*'Tenementation' as a phenomenon was a perfect response to housing scarcity amid a lack of standards for housing. It became a big problem not only because of the units that are provided, but also because [of] inadequate infrastructure services and amenities. All you [ie tenant] needed was a desperate access to a unit. It was a take-or-leave sort of situation [...] Now occupying such units is considered as a norm. They [tenants] do not know that it ought to work differently.*

KII, senior planner, State Department of Urban Development

This quote underscores the importance of the state rolling back (ie market deregulation) and taking up enablement, while also neglecting vital housing regulations and standards. Consequently, private rental markets in Nairobi have produced substandard shelter at scale, including low-quality tenements (see Section 4.5).

More recently, the largest single housing development project undertaken by a government agency in post-independence Nairobi was the Nyayo Estate (Figure 6). This is a National Social Security Fund (NSSF) project whose construction began in 1999, located in Embakasi ward. In 2014, NSSF announced sales for the sixth phase, when the development had 4,774 residential units already taken up under the Sectional Properties Act (Kiragu and Mwangi Ltd 2014). Currently, the gated community development has over 40,000 residents (KTN News 2018). Despite numerous challenges such as delays in construction and transparency concerns in the units' allocation to subscribed buyers (Ngigi 2011), this project is considered a landmark in Kenya's public housing, mainly due to its scale and demonstrating that

<sup>11</sup> See [www.nhckkenya.co.ke](http://www.nhckkenya.co.ke)

<sup>12</sup> For more on SAPs and housing in the global South, see Pugh (1994a) and Buckley and Kalarickal (2006).

<sup>13</sup> For discussion of 'enablement' see Chiodelli (2016) and Pugh (1994b).

<sup>14</sup> The SAPs also led to the current approach of contracting Nairobi's garbage collection to private companies.



Figure 6. Satellite image showing Nyayo Estate



Source: Google Earth (2019)

government agencies can play a direct role in housing provision. These units' prices are usually lower than prevailing market rates, hence generating high demand from prospective buyers.

Nairobi today faces several challenges in providing adequate housing for low-income residents, including on its periphery. While lacking in key services and infrastructure, Nairobi's poorly planned peripheral areas and satellite cities are increasingly the site of new housing because of greater land availability. Such areas are undergoing rapid land subdivisions and conversion from agricultural use to urban real estate. Developments are unfolding (via formal and informal construction processes) that generate housing units that range from single-roomed shacks and tenements to apartments, maisonettes and bungalows for higher-income groups.<sup>15</sup> These developments may require long-distance commuting to access livelihoods, and such speculative land and housing markets significantly disadvantage Nairobi's low-income majority (see also Section 4.8).

### 3.2 Civil society interventions: micro-level upgrading and challenges of scaling up

Meanwhile, NGOs and community organisations have attempted to intervene in the low-cost housing sector, but their scale of delivery is overall insignificant. Most civil society projects have focused on improving shelter and enhancing access to home ownership or better rental units through upgrading of informal settlements. Such projects have sometimes struggled to scale up or to recognise the many axes of difference in informal settlements (eg landlord/tenant divides, variations in incomes or ethnicity). For instance, in Mathare 4A, the Amani Housing Trust led a redevelopment project resulting in a low-rise housing scheme with reticulated services. But the area rapidly transformed into an informal settlement where original units have since

<sup>15</sup> For instance, in Ruaka, Thindigua and adjacent areas of Kiambu County, there is a mix of spontaneous rural-urban growth with 'pop-up' and linear high-rise developments (for rental and purchase), and pockets of gated communities (for middle-income households) co-existing with rural homes or farms. Examples of peripheral developments for low-income groups are Muungano wa Wanavijiji's Katani Greenfield Housing Project and Jamii Bora's Kaputei Housing Project in Kajiado County. See [www.muungano.net/browseblogs/2014/02/04/katani-greenfield-housing-project-breaks-ground](http://www.muungano.net/browseblogs/2014/02/04/katani-greenfield-housing-project-breaks-ground) and [www.affordablehousinghub.com/jamii-bora-brings-a-holistic-approach-affordable-housing](http://www.affordablehousinghub.com/jamii-bora-brings-a-holistic-approach-affordable-housing).

been extended, altering the design and space to cater for increased low-cost housing demand. Ultimately, the community-managed project collapsed because of intra-settlement differences and failure to manage conflicts:

*The assumption that the Mathare 4A was a homogenous group was wrong. The differences between the former dwelling owners, the tenants and the large ethnic groups polarised the community, resulting in frequent conflicts of interest which impacted negatively on the implementation of the programme (Diang'a 2012: 7).*

In Huruma,<sup>16</sup> Kenya's slum-dweller federation Muungano wa Wanavijiji implemented a pioneering community-led upgrading project benefiting both structure owners and tenants, but it has struggled to scale up. This initiative is enabled by a memorandum of understanding (MOU), signed with Nairobi City Council in 2003, which permitted flexibility on official housing standards when upgrading the settlement (Lines and Makau 2017: 46). The city council also agreed to release the land where the project sites are located, while Muungano and its support NGO Pamoja Trust successfully negotiated with residents so that both tenants and structure owners could benefit from upgraded shelter (Weru 2004: 60). To date, there are 145 upgraded structures in Kambi Moto while in the nearby settlement of Ghetto, 34 units and 40 foundations have been constructed (Lines *et al.* forthcoming: 6). But the project has moved slowly and faced several challenges, including the rising costs of building materials and tenant/structure-owner dynamics. It remains difficult to meet the needs of short-term tenants; to manage structure owners' expectations if they wish to buy more than one house; and to prevent outsiders who wish to rent out upgraded structures (*ibid.*: 6). But in a recent innovation to reduce costs, Ghetto's loans for foundations can benefit lower-income households (who would otherwise struggle to afford a completed unit), and small repeat loans are available for incremental construction (*ibid.*: 23). More broadly, the initiative has developed appropriate housing designs and created new modes of delivery, albeit on a small scale and with recent adjustments to foster greater affordability.

Finally, Muungano and partners are collaborating with Nairobi's county government to prepare a large-scale upgrading plan for Mukuru, an informal settlement located in the industrial area. Mukuru marks a major milestone in Kenya's planning legislation because, for the first time, an informal settlement was officially recognised as an SPA. In Mukuru, SPA plans are still being finalised with strong community participation and should result in multi-sectoral upgrading interventions

(see Mukuru case study in Section 5.2). As another outcome of the SPA declaration, Nairobi County's Integrated Development Plan (for 2018–2022) has assigned funds for more planning processes to upgrade informal settlements (Nairobi City County 2018a: 119–122).

### 3.3 Recent national-level informal settlements upgrading programmes

At the national level, Kenya has had two major informal settlement upgrading programmes:

- Kenya Slum Upgrading Programme (KENSUP), and
- Kenya Informal Settlement Improvement Project (KISIP) (initiated in 2011 and still ongoing as KISIP-Phase II).

KENSUP focused on improving both housing and infrastructure, while KISIP is more narrowly focused on infrastructure. Below we offer a brief review of these two large-scale initiatives.

KENSUP has faced multiple challenges in its implementation, including the displacement of its intended low-income beneficiaries in Kibera. The project had an estimated financial requirement of US\$13 billion; it was initiated in 2001 (to run until 2020) by the government of Kenya, and later 'complemented and supplemented by UN-Habitat [the United Nations Human Settlements Programme]' which offered technical cooperation (UN-Habitat 2008: 7). In Nairobi, KENSUP included upgrading of Kibera Soweto East, which has resulted in the construction of '822 housing units in Soweto and 245 market stalls' as well as the 'relocation of 1,200 households from Soweto East to decanting site in Lang'ata' (Ministry of Transport, Infrastructure, Housing & Urban Development a). But this initiative in Soweto East faced several challenges, including court battles between the government and affected structure owners (Kiplagat 2009), financing problems (Muiruri 2009), and the controversial displacement of Kibera residents in the decanting site by non-beneficiaries (Muungano 2013; Schramm 2017). Overall, KENSUP's record was extremely dissatisfactory: by 2008, even UN-Habitat (a major implementing partner) acknowledged it was a failing programme, partly linked to poor coordination.<sup>17</sup>

KISIP-I was initiated to complement KENSUP, with financing mainly from a World Bank loan to the Kenyan

<sup>16</sup>Huruma is part of the wider Mathare Valley Huruma area, which is bounded by Outering Road in the east and Pangani in the West, and in between Thika Road (northern) and Juja Road (southern). The area has a mix of shelter typologies including private rental shacks and tenements.

<sup>17</sup>'Communication between UN-Habitat and its KENSUP partners, particularly the Ministry of Housing, has been marred with difficulties [...] The fragmentation within UN-Habitat has also caused a lack of effective implementation structure, which has contributed to UN-Habitat's failure to deliver enough tangible results in the programme' (UN-Habitat 2008: 9).



government to support urban infrastructure, planning and tenure security.<sup>18</sup> The programme targeted 15 municipalities countrywide, each of which would be selected according to the perceived magnitude of informal settlements. The programme primarily focuses on institutional strengthening, infrastructure provision, promoting land tenure security and planning for urban growth, to be attained through the preparation of five-year development plans (Ministry of Transport, Infrastructure, Housing & Urban Development b). After the closure of KISIP-I, the World Bank and Kenyan government created KISIP-II to extend Phase I. According to the World Bank (2019a), the programme closes in November 2019, and as of September 2018, the programme had improved tenure security for 50,130 people, as well as establishing 7,306 new piped water connections and 4,730 new sewerage connections, among other achievements.

Although KISIP has enhanced access to infrastructure, it has failed to stem the proliferation of informal settlements and, more broadly, past upgrading interventions have struggled to address the complexity and ongoing transformations in Nairobi's (predominantly informal) development. The limited impacts of Nairobi's prior upgrading programmes are associated with various factors at national and city level, including land tenure complexities; conflicting interests and rationalities of various individuals such as politicians and settlement leaders, local groups, international agencies and other non-state actors (including NGOs); inadequate planning and implementation capacities; ineffective programme/project design; financing problems; corruption and lack of political goodwill; inadequate policy framework for upgrading; and scaling-up challenges (Andreasen 1989; Dafe 2009; Fernandez and Calas 2011; Huchzermeyer 2008; Diang'a 2012; Muraguri 2011; Etyang 2011; Obala and Mattingly 2014).

### 3.4 The Big 4 Agenda and public-private partnerships to support affordable housing

In a positive entry point for future shelter interventions, affordable housing was recently selected as one of Kenya's key policy priorities. As part of the Big 4 Agenda, launched in December 2017, President Kenyatta promised to build 500,000 affordable homes by 2022. The Big 4 Agenda focuses on manufacturing, food security and nutrition, universal health coverage, and affordable housing.<sup>19</sup> The Big 4 may create

important opportunities for developing inclusive housing strategies, and it represents a major shift from longstanding governmental neglect of the sector. But as we discuss below, there are again concerns that low-income households may not benefit from the initiative.

In particular, the government of Kenya seeks to reduce construction costs, unlock land for development, and improve the mortgage finance market. The Affordable Housing Programme (AHP) will not only target households with higher incomes (between Ksh50 and 150,000) but also those earning under Ksh20,000 and between Ksh20 to 50,000 (Republic of Kenya 2019). It aims to create 350,000 jobs in the construction sector, and key strategies are to provide tax incentives as well as bulk infrastructure and land, but it is largely incumbent upon developers to reduce costs (*ibid*: 12). County governments will be responsible for delivering the housing units (eg Nairobi County has pledged to construct 67,800 units), but they often lack housing policies or clear strategies for implementation (Omenya 2018; World Bank 2016). The Big 4 is complemented by significant World Bank funds for affordable housing: the World Bank approved US\$250 million for the Kenya Affordable Housing Finance project, including support for the Kenya Mortgage Refinance Company (KMRC), which will not only serve commercial banks but also SACCOs and microfinance institutions (see Box 2 on SACCOs).<sup>20</sup>

The president's affordable housing strategy already faces significant funding challenges, and it still relies heavily on the private market, with potential to exclude low-income tenants. From 2013–2017, government expenditure on housing had already more than doubled from Ksh6.1 billion to Ksh16.5 billion (US\$59 million to US\$162 million) (KNBS 2019a: 178). However, Kenya's external debt recently rose sharply, and this may negatively affect the government's ability to meet its shelter goals (CAHF 2018). Furthermore, the president's plans have been criticised for prioritising market-based approaches over slum upgrading and rental housing, with particularly negative implications for the poorest (Omenya 2018). The programme will require 60 per cent private-sector funding, and it remains unclear how upgrading and low-cost social housing will be funded (*ibid*: 42). Omenya (2018) argues for focusing instead on affordable rental units (*ibid*: 44) and notes that the government should learn from past mistakes, such as the unaffordable units produced in Kibera's KENSUP upgrading (see also recommendations in Section 8.2.1 on rental housing).

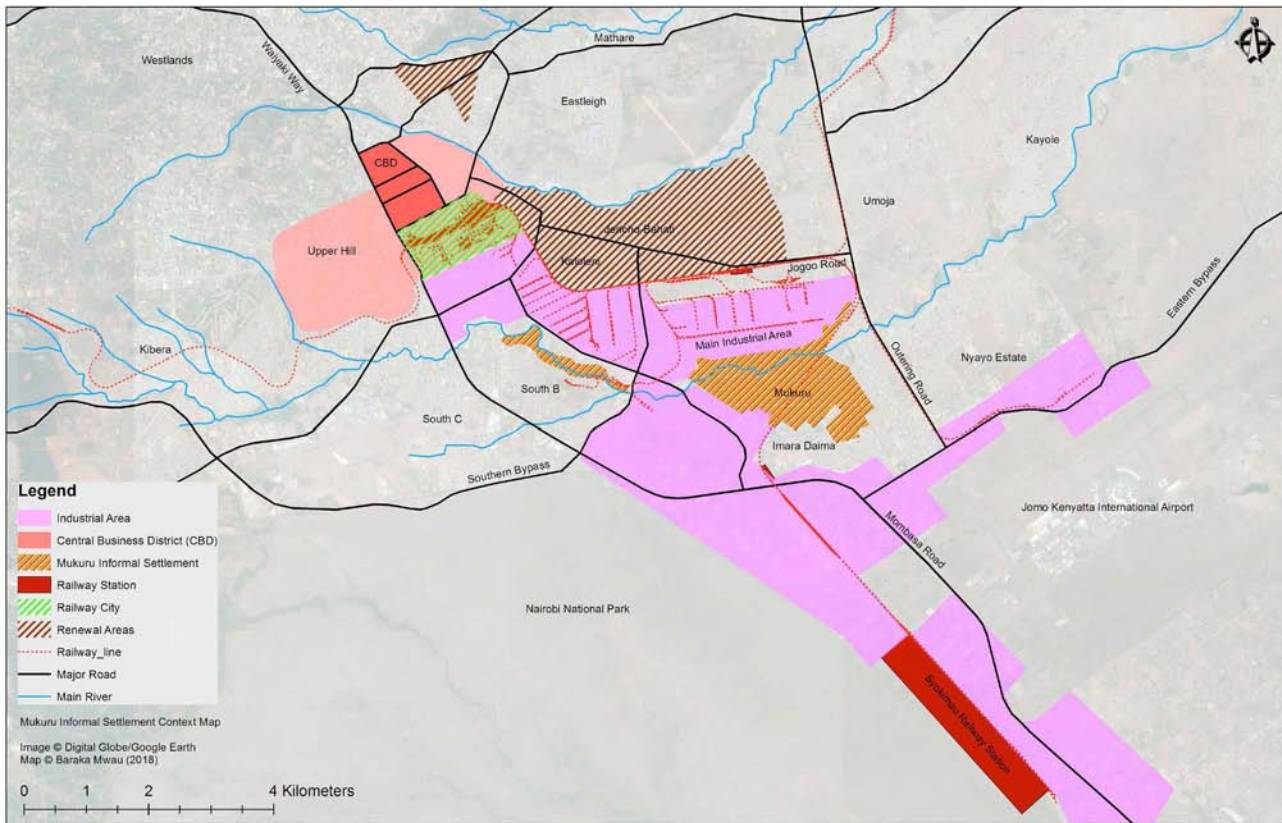
Moreover, there have been significant under-investments in housing at the national and county levels, and funding has often been skewed towards wealthier areas. An

<sup>18</sup> KISIP's other financiers are the Swedish International Development Cooperation Agency (Sida) and the French Development Agency (AFD).

<sup>19</sup> See [www.president.go.ke/affordable-housing](http://www.president.go.ke/affordable-housing)

<sup>20</sup> For more information, see World Bank (2019c) and Construction Kenya (2019).

Figure 7. Map of central Nairobi showing the city centre and sites earmarked for renewal



Map © Baraka Mwau

Urban Development Department official admitted that the government has not allocated significant funds for housing over the past decades; in a scathing assessment, he declared ‘there is no serious institution focused on providing housing loans,’ which are given only to wealthier workers (KII, national government). He also noted that currently, only 6 per cent of county budgets is spent on urban infrastructure and services, and such investments are highly inequitable (eg repairing potholes in wealthy neighbourhoods).

The challenges of mass public housing have recently encouraged alternative approaches such as establishing an enabling environment for shelter development and support for public–private partnerships (PPPs). Key among the enabling options that have been instituted since 2016 is a 50 per cent reduction in tax for developers constructing more than 400 units per annum (Cytonn 2017). Since late 2017, the government has also committed to establishing partnerships with the private sector to supply low-cost housing. In particular, Nairobi’s satellite areas of Mavoko, Athi River and Kitengela have been identified as major housing areas, where the government will provide land and trunk infrastructure, while private-sector providers will construct affordable housing. The pilot project will

result in the construction of 8,000 housing units in Mavoko by 35 privately contracted companies, serving as prototypes to be used to fill the housing deficit throughout the country (Cytonn 2018).

Additional ongoing government initiatives in Nairobi’s shelter include the planned redevelopment of old neighbourhoods in a section of Eastlands with old public housing stock (eg Kaloleni, Shauri Moyo, Kamukunji etc). Currently, a World Bank and national government-financed planning process is underway under the Nairobi Metropolitan Services Improvement Project (NaMSIP), while Nairobi City County will commence construction in Pangani and has earmarked other estates (Uhuru, Joseph Kangethe and Suna estates) for its redevelopment programme (Kinyanjui 2019a). These initiatives, as well as the Mukuru SPA process, will target housing in centrally located areas (Figure 7). While they demonstrate the county government’s renewed interest in addressing the shelter deficit, it is still unclear how such projects will cater for or affect their low-income residents. This is particularly the case, as these projects are occurring in well-located neighbourhoods and current low-income households may be displaced by gentrification.



### 3.5 Key actors and roles in low-cost rental markets

Nairobi's socio-spatial polarisation is growing ever more complex, as low-income residents live not just in informal settlements but increasingly in tenements, and shelter is provided by a wide array of usually private, informal actors but with ambivalent, sometimes contradictory roles played by state actors (Table 2). The decisions, interests and rationales of the various actors all significantly influence the outcomes of Nairobi's informal rental submarkets, as well as affecting future interventions in these submarkets.

Fundamentally, the absence of deliberate state regulation of low-cost rental submarkets is a major catalyst to produce substandard units. But the state, through different agencies or acts of various officers, can still aid the production of these units in different ways – so the state is not totally absent in the informal housing markets. For instance, city planning authorities may reject approvals for housing construction (eg where title deeds are lacking), but another state agency (eg the provincial administration like the area chief) can aid the construction of the same building by issuing a 'form of approval' that sits outside the formal planning and building regulations – this is common practice in informal settlements.<sup>21</sup> There are also contractors and builders operating in these areas who will construct unapproved buildings, as well as practitioners (often called 'quacks') who provide design services to these developers. This research established that designs are often copied as plots in these areas and have a uniform size (eg 40 x 80 feet) and supply is mainly a standardised single-room unit (eg 10 x 10 feet). Hence, contractors with experience with plots and tenement buildings will likely reproduce the design (and building specifications) to other developers as part of the contracting agreement. Meanwhile, the city's licensing agency for businesses also issues business permits to premises operating in unapproved ('illegal') buildings. Similarly, a public school could be built in a locality where a subdivision scheme was not approved, as well as connections to electricity etc by public utility agencies. Such forms of permissions offer a measure of legitimacy in informal rental submarkets and some tenure security.

However, critical concerns arise as to what makes the city planning authority absent to the extent that entire areas in Nairobi can be developed without planning approvals. In this environment, cases of corrupt dealings help to enable Nairobi's persistent unapproved shelter

constructions. The 'wait and see' policy and turning a 'blind eye' by the city authorities can also be interpreted as a 'silent policy' or 'acceptance' of these shelter typologies (Table 1). Fundamentally, this exemplifies the failure of urban planning in Nairobi (Section 3.6).

Additionally, the absence of the state has created room for other (non-state actors) to act in a manner that frequently substitutes for the state, sometimes in violent or coercive ways. For instance, local gangs in areas with disputed land ownership can play the role of regulator. These gangs often collect 'protection fees' from developers who invest in such areas; they are also important actors in informal land markets, especially in areas where cases of illegal land invasions and subdivisions are reported.

*When you buy a piece of land and you don't develop it immediately, someone will dump sand in it without notifying you. When you get ready to build, you must pay for that sand [...] and that can be Ksh100,000. This will prompt the plot owner to sell it at Ksh200,000 and share half of that money with the person claiming payment for the sand [...] or simply pay to proceed with the construction.*

FGD with Mukuru residents

Lands without legal title deeds are highly susceptible to construction of shacks or tenements because such areas cannot meet the threshold for planning approvals (due to the lack of formal tenure). But action by these non-state actors can make the land investible albeit with major risks. Even when land is irregularly or illegally acquired, low-income and vulnerable groups cannot access it due to the risky monetary transactions involved, weak influence or simply their inability to afford.

*During the grabbing period when people were trying to own at least a plot, the vulnerable and 'weak' did not get any share.*

FGD with Dandora women

Notably, both shacks and tenements are high-risk investments but with lucrative returns (Section 4). Eventually, settlements emerging from land subdivisions lacking authentic legal ownership often are 'illegal' or 'informal', which tends to act as a barrier to provision of infrastructure and services. While some end up attaining de facto tenure, others become vulnerable to evictions linked to conflict over property rights. Indeed, cases of private developers evicting other developers have been witnessed in these areas recently, such as Nyama Villa in Kayole (Odenyo 2019).

<sup>21</sup> For instance, 'within informal settlements [...] one only requires permission from area chief and probably village elders in some areas' (Kil, informal contractor, Mathare Valley). This argument was corroborated by participants in most FGDs and Kils with community leaders.

For housing developers in informal rental submarkets, high returns and relatively low capital investment are the main motivation. To tap into the market, the formal processes become a barrier. Hence, interventions to

accelerate access to affordable housing for the lower-income groups must first recognise the power relations embedded in the governance arrangements producing this kind of shelter (see Table 2).

Table 2. Summary of key actors and their roles in Nairobi's shack and tenement provision

CATEGORY OF ACTOR	DESCRIPTION OF ROLES AND IMPLICATIONS	
	SHACK DELIVERY	TENEMENT DELIVERY
Tenants	In both shacks and tenements, tenants provide a ready market for developers, structure owners and landlords. In some instances, tenants have supported landlords/structure owners to protest certain decisions or actions by state agencies (eg demolitions/ evictions).	
Landlords/structure owners/developers	Structure owners invest in the top structure, which sometimes includes purchase of the space, but usually without legal ownership of land. Their main motivation is to profit from rental income.	Developers/landlords invest in construction of the tenement building, including purchase of land (depending on the area, land ownership varies from legal or quasi-legal to illegal). Their main motivation is again to profit from rental income.
Land dealers (land-buying companies, brokers/agents etc)	Brokers connect prospective landlords with space for construction of shacks, act as witnesses to informal transactions of space access, and sometimes act as caretakers. They also influence the costs of land access.	Make land available through formal and informal, legal, quasi-legal or illegal means. Agents collect rent and resolve tenant issues on behalf of the landlord.
Contractors (informal and formal)	Informal, small-scale contractors are usually hired by structure owners to build shacks. In some settlements (eg Kibera and Mathare Valley), more experienced contractors are now constructing multi-level shacks (ground floor plus one).	Both formal (registered) and informal (unregistered) contractors are engaged by tenement developers/landlords to construct buildings. In other circumstances, contractors are hired by a project manager on behalf of the landlord/developer. Contractors also provide designs to developers, which has contributed to the 'mimicking approach' of building designs of tenement areas where plot sizes are the same.
Built environment practitioners (planning, land surveying, engineers, architects)	Land-survey practitioners are often involved in informal ('planned') land subdivisions (eg Maili Saba). Architects and planners have been involved in various upgrading projects, including providing alternative designs to conventional shelter standards (formally or informally).	Design professionals are involved in varied ways in tenement production, including provision of building designs, construction advice and management, and land subdivisions. This is done formally or informally.
Courts and legal practitioners	Land/space conflicts in informal settlements often end up in courts for determination. Legal practitioners have also been involved in legitimising land transactions in informal settlements (executing sale agreements). Court orders on land evictions have been issued in the past.	Some landlords/developers engage the services of lawyers to draw up agreements (eg between the land vendor and the developer), and for representation in court when city authorities halt construction. In the past, Kenyan courts have issued various notices barring the city authorities from stopping construction works.

CATEGORY OF ACTOR	DESCRIPTION OF ROLES AND IMPLICATIONS	
	SHACK DELIVERY	TENEMENT DELIVERY
Government agencies, including county officers, chiefs, national agencies such as the National Construction Authority (NCA)	<p>Nairobi's zoning code identifies various areas as permissible for 'informal settlements'.</p> <p>Chiefs (provincial administration) in most settlements were found to legitimise sale transactions (of space/land or structures), keep records of claims over space or allocations, resolve rental conflicts, approve construction, and supervise government projects in their localities.</p> <p>Police can be involved in land evictions where court orders have been issued.</p>	<p>City planning: lack of approvals or enforcement on unapproved construction implies a 'silent policy' of enabling tenement production. Regularisation of previously unapproved buildings (eg in Pipeline-Embakasi) amounts to official acceptance of tenements. Cases of corruption in the tenement submarket have been linked to various state officers. Some chiefs were found to provide 'informal approvals' to developers/landlords and to witness land transactions. State officers have also been involved in authorising the demolition of condemned buildings.</p>
Politicians	<p>In both shacks and tenements, politicians' presence is often associated with land issues (sometimes reflecting official corruption, but at other times agitating for land tenure security and improved services), as well as the mobilisation of votes (patronage). For elected politicians, their failure to allocate meaningful budgets for shelter and service improvement in slums and tenements or to enact appropriate rental regulations for low-cost units ultimately contributes to low-quality housing. Small projects are often used as tokens during political campaigns.</p>	
Caretakers and agents	<p>These act as intermediaries between the tenant and landlord; they permit occupancy, collect rent and execute punitive measures (including eviction) in case of rental default.</p>	<p>Most landlords in tenements employ the services of caretakers or agents, who undertake building maintenance, rent collection, rent dispute resolution (on behalf of the landlord), basic maintenance of hygiene (eg cleaning of common areas) and sometimes evictions of tenants.</p>
Local gangs	<p>In many settlements, gangs charge 'protection fees' during construction. They sometimes facilitate access to space for prospective landlords; they can be involved in rent collection and illegal tapping of utility networks. They also act as community security in some cases, but also as agents who conduct evictions.</p>	<p>Gangs can charge 'protection fees' and sometimes influence flow of construction materials onto sites. In some tenement areas, gangs can be involved in provision of informal services (water, garbage collection and electricity).</p>

Primary data sources: Klls with landlords, developers, caretakers/agents and community leaders. Secondary data sources: Huchzermeyer (2007; 2011); Maina and Mwau (2019); Obala and Mattingly (2014); Gulyani and Talukdar (2008); Talukdar (2018).

## 3.6 Government incapacity and abdication of planning responsibility for housing

According to several officials interviewed for this research, Nairobi's government is marred by a severe incapacity for shelter interventions and has largely abdicated its responsibility for planning. A former official noted that it was during the SAPs that the government 'lost our way', resulting in unregulated land markets and a lack of quality control on housing for both low and middle-income residents, and the planning mandate of the state weakened significantly (KII, ex-City Hall). As another official noted despairingly,

*For now, anybody can do what he/she wants irrespective of even the location [because] you can build in a swamp and anywhere else you get a plot [...] Being driven by the issue of speculation of urban land [...] nobody bothers about planning.*

KII, national government, Urban Development Department

Given the profound disregard for planning and minimal state responsibility for housing, it is unsurprising that housing developers in Nairobi can proceed almost unfettered 'even in a swamp'.

Along with rampant land speculation and an inadequate housing policy framework, there are several underlying drivers for Nairobi's low-quality, highly inadequate shelter. Key factors in the city's hazardous housing production include excess bureaucracy, difficulties in complying with the law, and bribery of inspectors (KII, academic/architect). At the institutional level, major challenges include siloed departments, poor implementation of policy, and limited technical capacity: another official critiqued the national agency mandated with housing for only rarely developing a housing policy (which is never implemented), and it operates 'as a closed cell' rather than in collaboration with other key players (KII, national government). He argued that the ministry lacks technical capacity, while city-level leaders' major challenge is their mindset, as they do not believe it is their duty to house residents.

Nairobi also has a long history of politicised land deals and irregular land allocations, which have often been inflected by Kenya's ethnic politics and served to marginalise low-income urban households (Klopp and Lumumba 2019; also Section 4.9 below). As with housing development, land markets are largely controlled by private interests and corrupt politicians:

*Land investment [is left to] the private sector and the private sector is so poorly regulated such that they push for more profits every year from every investment they make [...] Land was used as a tool to control the city politics.*

KII, Nairobi County Government

## 3.7 Prevailing institutional framework and its implications for service delivery

Nairobi's inequitable, highly skewed infrastructure delivery is a major factor undermining delivery of decent shelter for low-income households. In informal settlements, the lack of reticulated sewers has led some structure owners to provide poor (dry or wet) sanitary systems; other structure owners provide no sanitation at all. In tenements, most developers are compelled to construct cesspools that are serviced by exhauster trucks at a cost (see Section 3.7.4).<sup>22</sup> Developers noted that this is an additional cost to construction, which could be reduced if the areas were served by the public sewer network. More broadly, key institutional challenges in Nairobi's service delivery include:

- Commitment issues and a lack of synchronised planning and budgeting
- Coordination challenges for institutions in a single sector (eg water) and interdependent sectors (eg water, city planning), and
- Budget constraints and reliance on ineffective funding mechanisms.

In the following sections, we discuss these concerns in Nairobi's water, sanitation, electricity and transport sectors, focusing on access for low-income households.

### 3.7.1 Water supply: escalating water scarcity and inequitable access to services

For many years, Nairobi has delayed vital investments in bulk water supply and distribution, generating inequitable impacts since the most-affected residents have been low-income households. A draft distribution masterplan indicated that as of January 2017, the city's daily water demand was 669,888 cubic metres, against a realisable production capacity of 530,000 cubic metres (Athi Water Services Board 2017).

<sup>22</sup> However, in Pipeline, a lobby group for developers called the Lucky Summer Welfare Association has invested in their own sewer network.



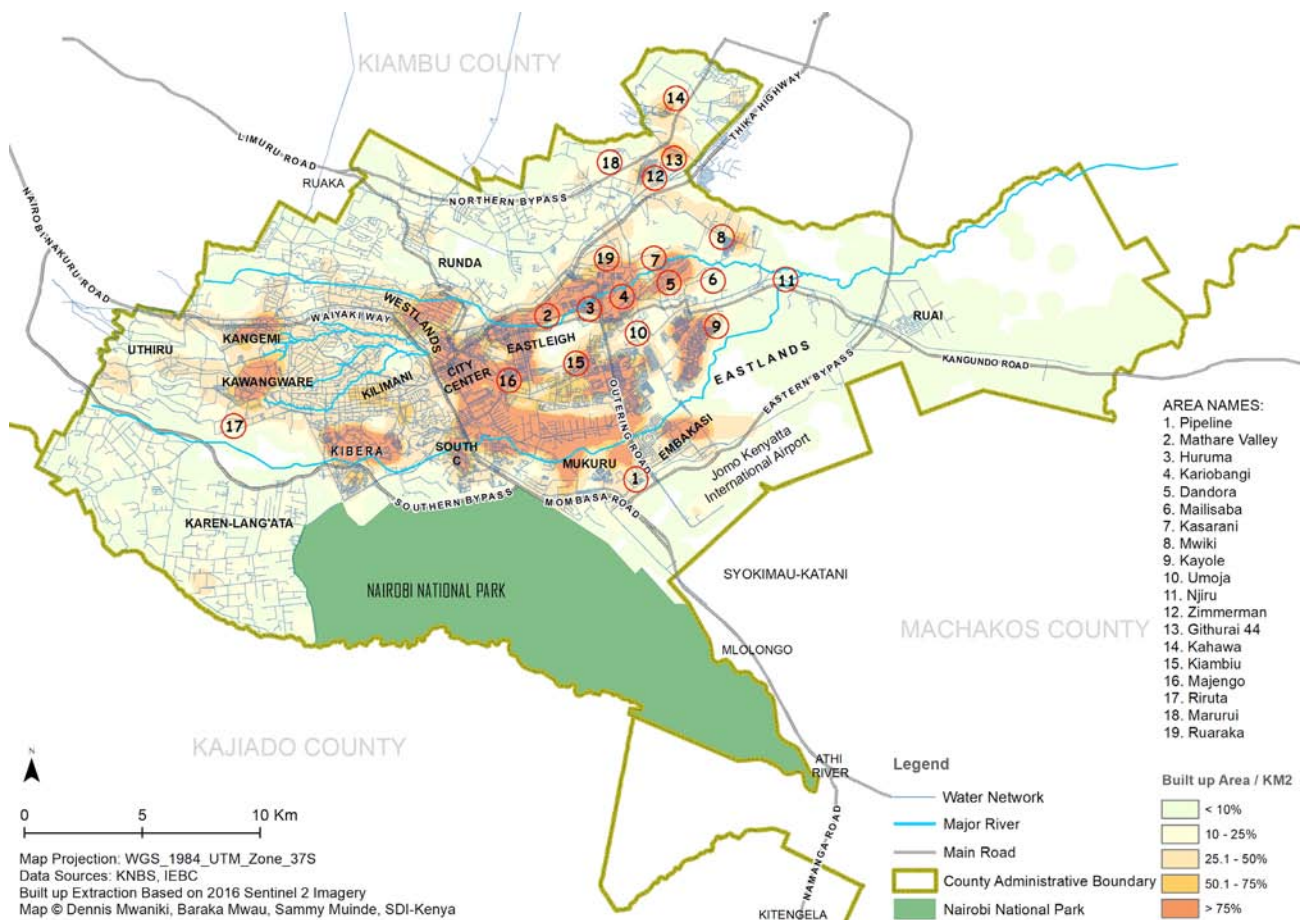
Recently, NCWSC reported its infrastructure processes 526,000 cubic metres against a demand of 790, 000 cubic metres, per day (Kinyanjui 2019b), implying the city is water constrained mainly due to its inadequate infrastructure.

Efforts to improve the city's supply capacities at the Ndakaini Thika Reservoir have attracted high political stakes and therefore sometimes delayed projects, including the Northern Water Collector Tunnel (that is currently under construction (Oates and Marani 2017; Koech 2017). These high political stakes often reveal inter-basin planning and water governance challenges, which Nairobi and other counties relying on the water basin must address for environmental sustainability. Other major recent investments in water supply have been channelled into constructing main distribution lines, rehabilitating bulk storage facilities in the city, and contracting water and sewerage treatment plants for satellite towns (Athi Water Services Board a). This agency is charged with developing the main water and

sewerage infrastructure in the city region, and it has 11 service providers under it, including NCWSC (Athi Water Services Board b).

Inequalities and persistent shortfalls in water supply are a reality in Nairobi, even in middle-income areas. A study by the Global Water Operators Partnerships Alliance (GWOPA *et al.* undated) indicates that most neighbourhoods in Eastlands are the worst covered in terms of piped water distribution (Figure 8). Subsequently, the situation has deteriorated after the increase in densities in those areas, especially with the continued construction of high-rise tenements. Such strain is even emerging in Nairobi's middle-class neighbourhoods, especially where there is densification without improvements in infrastructure. For example, 'in South C, [you] have now the sites with old bungalows [low-rise] that are being redeveloped into seven-storey (or more) apartments, but there have been many questions about the capacity of the areas' infrastructure' (KII, Kilimani Project Foundation).

Figure 8. Main distribution network of water in Nairobi



However, it is again low-income groups who suffer disproportionately from Nairobi's overall water deficit. In recent years, NCWSC has maintained a rationing schedule (Equitable Water Rationing Programme), which seeks to achieve a fair balance in distribution of limited water supplies. This schedule has resulted in Nairobi overall having a daily average supply of six hours (Wasreb 2019). But residents of shacks, informal settlements and tenements still under-consume water, even during times of constant supply, due the following factors:

- In-house facilities (eg taps, sinks) are not fitted and residents (mainly women and girls) often have to queue to access water, then sometimes must transport it lengthy distances.
- Shared water facilities often result in low levels of consumption, with high levels of recycling (eg using laundry wastewater to flush the toilet or clean the floor).
- Purchasing water (usually on a daily basis) has led to greater consciousness of consumption.

Furthermore, insecure land tenure is a factor influencing Nairobi's inequitable access to water, and the utility has struggled to expand service provision, particularly in informal settlements. While the NCWSC has increased investments in informal settlements, insecure land tenure still prevents it from achieving the desired connectivity levels. These areas are considered high risk for NCWSC, which prioritises serving areas with better cost-recovery potential and increased revenue streams. A senior manager explained that external grants play a key role in financing water supply projects for informal settlements and while NGO partnerships are underway, coverage is still inadequate.

*NCWSC have collaborations with NGOs working in informal settlements, and there are multilateral and bilateral donors, including national government agencies that are financing various special programmes [...] but coverage is still very poor [...] A lot of investments are needed in extending main sewer network and individual household connections and modern water dispensers.*

KII, NCWSC informal settlements regional manager

### 3.7.2 Efforts to extend household water connections in informal settlements

NCWSC has recently attempted to expand provision in informal settlements. While past efforts have sought to increase household connections in informal settlements, this has left the utility with a significant sum of unpaid bills and challenges in collecting revenue. According to the utility's billing office, as of May 2018, there were 4,680 disconnections in informal settlements, with unpaid bills estimated at Ksh219 million (US\$2.19 million). At city level, nearly half of the utility's connections (552,707) are non-active, and non-revenue water rates are as high as 38 per cent (Wasreb 2019). Even when disconnections are high, the availed supply is often turned into illegal connections.

*In some instances, where our presence is weak, the local cartels<sup>23</sup> 'hijack' [ie take over] our assets, cut off household connections, and revert to community taps that run as illegal water-vending businesses.*

KII, NCWSC billing manager

In another case, the utility's efforts to undertake settlement-wide coverage in Kosovo (Mathare Valley) resulted in a project collapse, which consequently created a 'free water zone'.<sup>24</sup> This has presented operational challenges to NCWSC and left it struggling to effectively extend household connections in informal settlements and tenements.

In shacks and tenements, various factors may hinder households' connectivity as follows:

- **Vandalism of reticulation pipes:** The utility blamed this on informal water vendors and the lack of community ownership. But at settlement level, several leaders blamed the utility for allowing only limited public participation and relying on local contacts who lacked the legitimacy to represent community interests.
- **Metering challenges:** Landlords, structure owners and tenement developers are usually reluctant to incur installation costs for individual meters in their units. While the utility finds it less risky to have the landlord/structure owner take responsibility for the meter, they usually decline because their tenants could default on bills and relocate without paying.

<sup>23</sup> Informal water providers are commonly known as 'cartels' in Nairobi's informal settlements.

<sup>24</sup> In 2007, Nairobi Water took the drastic step of disconnecting Mathare's water in order to eradicate informal water providers (cartels). But without alternative water sources, diarrheal outbreaks in the settlement increased rapidly. Widespread protests ensued and 26,000 households in Mathare were left without water, although the utility subsequently installed free standpipes. Ultimately, Nairobi Water worked with civil society groups, including Muungano wa Wanavijiji, to create community-managed water kiosks that helped to eliminate the water cartels in Mathare (Lines and Makau 2017: 55–57, see also Mathare Valley case study in Section 5.1).

More positively, the utility is currently training its staff on how to work with low-income residents and to build partnerships with community-based organisations (CBOs): 'There is a lot of synergy working with them [CBOs], they assist where we have deficiencies, including capacity building' (KII, NCWSC informal settlements regional manager). Additionally, recent efforts to increase supply in informal settlements include the installation of automatic water dispensers ('water ATMs') (Wesangula 2016). These have significantly lowered the per unit cost of water and reduced queuing times, thanks to faster transactions, and the facility is open 24 hours per day. Households with access to ATM water can now enjoy the official subsidised rates charged by the utility of Ksh35 (US\$0.35) per cubic metre (Wasreb 2015). But the ATM project is facing several challenges, including:

- Vandalism mainly attributed to informal water providers, who feel threatened by the technology
- Difficulties finding a central, secure place to install the machine (owing to congestion in informal settlements and vandalism), and
- Operational challenges as highly subsidised unit prices significantly reduce profits from water sales.

As a result, few third-party operators find the ATM technology attractive: 'Managing a water kiosk with a water ATM is a waste of time, unless NCWSC pays one a good retainer. You can't make reasonable profit from the sales' (water kiosk operator in Kosovo, Mathare Valley). The utility agreed that water profits were limited and noted the challenge of finding secure locations, particularly due to the solar panels.

*We cannot have [the ATM] stand isolated because it is solar powered [with a panel]. The approach currently is to have it installed in somebody's premises. If we get someone willing to host it, we negotiate to partly compensate his/her commitment, which we [NCWSC] are offering an incentive of 40 per cent pay from the total sale [...] But we realise that is still not good enough because we have fixed the water tariff very low; hence, cash from sales is very low.*

KII, NCWSC informal settlements regional manager

Given the challenges of expanding formal piped-water connections, small-scale and informal water suppliers have emerged as the leading alternative for most households, including in middle-income areas. Some vendors target landlords and developers in underserved peripheral areas: 'My main customers are landlords and developers who need water; we target areas such as Joska, Kamulu and Malaa. These areas have no piped

water connections' (KII, water vendor, Ruai Area; also 3.7.3 below).

But as vendors' services are increasingly costly and unreliable (especially in dry seasons), many developers and landlords are opting to drill their own boreholes to service their tenants. This is witnessed across Nairobi, including in middle and upper-income neighbourhoods. Water vendors source water from borehole operators as well as from the city's main network (either legally or illegally). Other alternative water sources for the vendors are wells and streams. However, most of these services are unreliable, costly (compared to the city's main supply) and low quality. According to a Kasarani water vendor, 'The costs depend on the socioeconomic status of the residents. For example, in Fedha Estate, water is expensive'. Kasarani is considered as a low-income residence, but vendors can charge higher prices in Fedha, which is considered a middle-income area. In fact, this study established that in areas perceived as middle and upper class, consumers pay a premium for water trucking. This is despite efforts to regulate vendors, especially those doing water trucking.

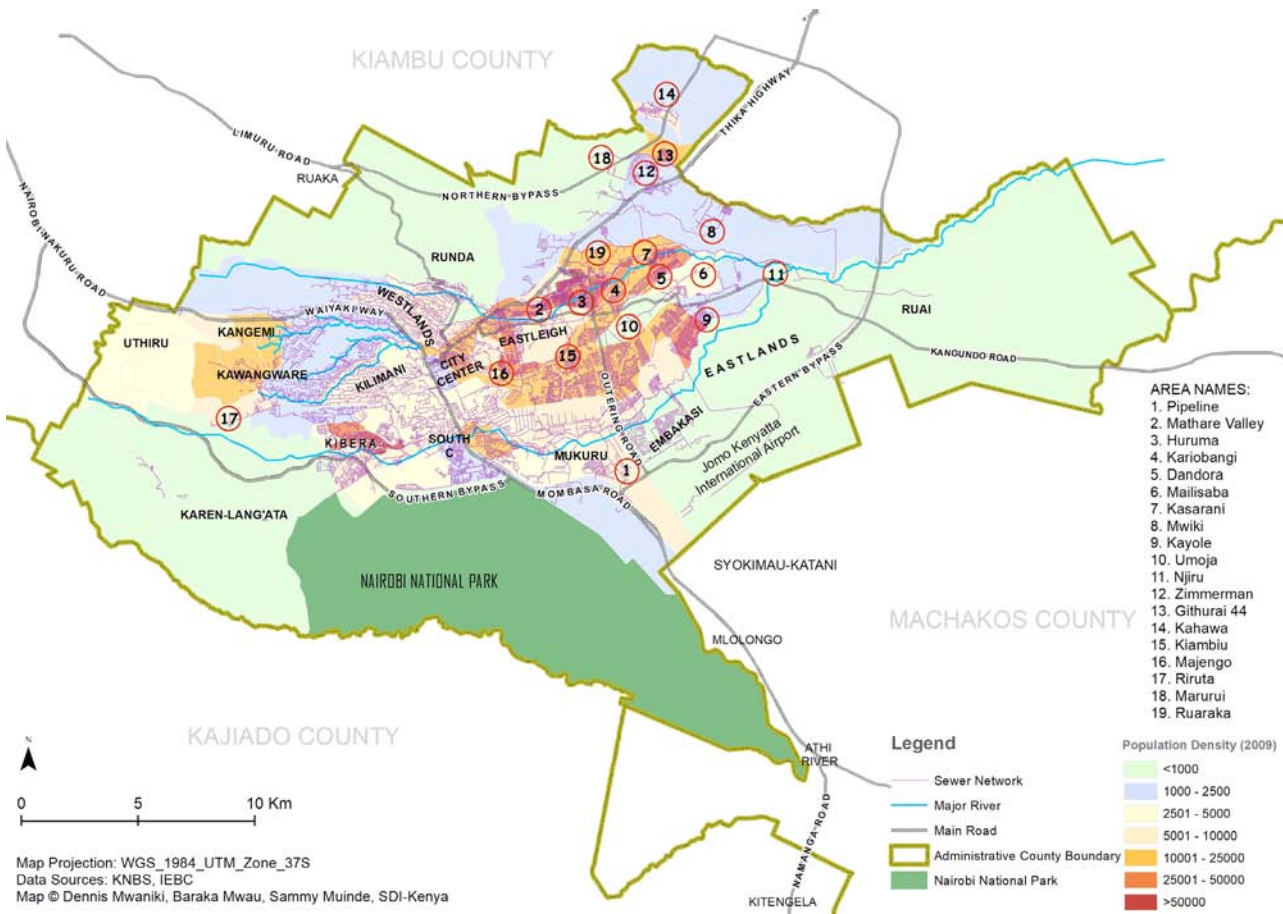
### 3.7.3 Private small-scale providers: a key role in providing water in peripheral and satellite areas

In the city's peripheries and satellite towns, residents face their own challenges when accessing water and land development often precedes infrastructural delivery. After years of development, the Athi Water Services Board (c) is currently undertaking 'Laying of 26km water pipeline from Kiambu to Embakasi [and] construction of a 14,000m<sup>3</sup> storage tank at Embakasi [to] provide additional 100,000 m<sup>3</sup>/day water to residents living in Utawala, Embakasi, and Ruai areas'.

In Athi River, the water company buys bulk water from an already struggling utility, the NCWSC. Consumption of this bulk water supply has led to competition between industries, including the export processing zone (EPZ), and domestic use. With unreliable and inadequate supply, many residents are forced to rely on borehole supply and vendors (handcarts and trucks). The fast-growing town of Kitengela is almost entirely reliant on borehole water supplies and other private services. In another fast-growing satellite town called Ruiru, the utility (Ruiru-Juja Water and Sewerage Company) has inadequate capacity to meet the needs of the fast-growing capacity, especially if supply is extended to the local new town developments. So far, indications are that the Tatu City Water and Sanitation Company will source part of its bulk supply from this utility (Tatu City undated; Wasreb).



Figure 9. Public sewer network coverage



### 3.7.4 Sanitation and sewerage services

Based on FGDs with residents, paid toilet facilities can comprise 5 to 8 per cent of daily household expenditures in informal settlements. There are recent efforts to extend networked sewers to some informal settlements, such as Kibera.<sup>25</sup> However, the investments are still inadequate, and many informal settlements are in dire need of appropriate sewerage (see also Figure 9). Compared to shacks, tenements typically provide better sewerage since developers of tenements are often

compelled to provide sewerage solutions, either on-site by integrating cesspools beneath the ground floor or connecting to the city's sewerage network (where coverage is available). But owing to the limited coverage of the city's sewer network, most tenements rely on cesspools, which have created a business of sewerage exhaustion services. Inadequate water, sanitation and hygiene (WASH) often has gender-inequitable impacts in Nairobi's low-income settlements, as explained in Box 1.

<sup>25</sup> According to Athi Water Services Board (d), there has been 'rehabilitation and extension of the sewerage system in Soweto, Silanga and Laini Saba Villages in Kibera'.



## BOX 1. GENDER AND INADEQUATE WASH

Research in Nairobi (and elsewhere in the global South) has confirmed that women and girls are particularly affected by the lack of privacy and dignity linked to meagre toilets; often endure long queues at water taps; and disproportionately shoulder the care burdens linked to diarrhoeal illness.<sup>26</sup> In Pipeline, some women in tenements said they only receive water once a week and must manage the household's meagre consumption for laundry, cleaning toilets and drinking (Pipeline women FGD). Women or girls typically shoulder the burden of carrying water up multiple flights of stairs, and women again are typically tasked with cleaning toilets, particularly to ensure their children's health.

Similarly, in Nairobi's informal settlements, maintenance of shared latrines is usually the women's responsibility: 'It is we women who live within the plot that manage toilets, even if it means buying water for washing the toilets' (Ngei-Huruma FGD). As another woman explained, this unequal division of labour is rooted in long-established gender norms: 'I always wash the latrine of the place I stay, but some men cannot. Cultural norms play a role in this. We have been brought up being told that all domestic work is for a woman' (ibid). Landlords may employ (male or female) caretakers to clean the shared latrines, but in other plots it is usually the women who clean the toilets for free (Mukuru kwa Reuben FGD). Toilet maintenance can play a pivotal role in promoting safe use and public health, making it crucial to recognise

women's central role in supporting safe WASH (see also Kwiringira *et al.* 2014 for Kampala).

Meanwhile, women and girls in insecure informal settlements often fear to go outside to use public toilets at night. Instead, they may resort to makeshift solutions that make them feel humiliated or helpless (Sommer *et al.* 2015). In Mathare, many women use public toilets during the day, but at night they often use bags or containers, which is especially humiliating when sharing a single room with other relatives (Winter *et al.* 2019).

Women and girls often bear the time poverty, physical burdens and foregone income linked to water collection in Nairobi's low-income settlements. During water shortages, residents in tenements may have to buy from hand carts (reaching Ksh50–70 during shortages), while women must save their laundry water to flush toilets and deploy other stressful coping strategies (Pipeline mixed FGD). Research in Kibera found that women who collect water may need several hours during a water shortage (when prices again increase markedly), while they may reduce cooking, forgo showers or miss work due to the exigent water-collection tasks (Crow and Odaba 2010:739). Inadequate WASH may imperil the health of all household members, but the time burdens, gendered insecurity at night, and psychosocial burdens are often particularly acute for women and girls.

### 3.7.5 Electricity: risky informal connections and challenges of implementing prepaid services

Access to electricity has increased markedly for low-income households, especially in informal settlements where power had been inaccessible. Using World Bank funds, Kenya Power has been able to scale up access to electricity: in Nairobi's slums, the project connected 174,000 new households to electricity by 31 December 2017 (World Bank b). The World Bank's output-based payments are triggered after verifying households' working connections with pre-paid meters and thanks to subsidies from the World Bank and Kenya Power, Nairobi households pay just US\$12 to connect rather than the usual charge of US\$150 (World Bank 2015).

But many households in informal settlements already had access to power, and informal providers have tried to undercut formalisation, making it a challenge to transform electricity provision. In these settlements, residents could often access power through their landlords<sup>27</sup> or through informal cartels (independent groups that typically bribe Kenya Power officials and illegally resell electricity). Although these illicit practices often contribute to fire outbreaks as a result of hazardous wiring, Nairobi's informal providers typically allow unmetered use, low-cost connections, and extended repayment times. As a result, some customers may be reluctant to formalise their connections due to the flexibility and unrestricted use that the illegal providers have enabled. Following Kenya Power's attempted formalisation, there were widespread instances of vandalism by cartels, while residents and

<sup>26</sup> See Ray (2007) for a review of gender and water; O'Reilly (2016), Burt *et al.* (2016) and Tilley *et al.* (2013) for gender and sanitation reviews; Chant and McIlwaine (2015) for gender, WASH and other services in slums.

<sup>27</sup> In some structures, landlords objected to each unit having its own connection. This was notable for landlords/structure owners who charged their tenants extra cash for electricity access. During Kenya Power's formalisation, individual connections implied the landlord/structure owner would lose their pre-existing income from electricity.

community leaders also criticised poor maintenance and incomplete project implementation.

*Kenya Power installed 'tokens' [prepaid meters] in this settlement, but if they got spoilt, they would not repair. Also, not all houses were installed [...] The project died because of that [selective installation] [...] There is no way I will pay for electricity while my neighbour is getting it for free.*

FGD with residents of Mathare Valley

While illegal connections are popular in the informal settlements, residents are quite aware of the dangers posed by those connections, especially the associated fires. Based on a survey with 264 households in the informal settlement of Mukuru Fuata Nyayo (62 per cent of whom were female respondents), the predominant cooking fuels were paraffin (46 per cent) and charcoal (33 per cent), with just 14 per cent using gas and 6 per cent electricity to cook (University of Nairobi and Red Cross 2016: 21). Highlighting the prevalence of fires, over 90 per cent of respondents reported experiencing fire at the neighbourhood level, and 54 per cent had experienced fires at the household level (ibid: 22). These residents noted that Mukuru's leading causes of fires were illegal/faulty electricity connections (43 per cent), as well as residents' careless use of electronics (30 per cent) or stoves (13 per cent) (ibid: 24).

### 3.7.6 Transportation

Nairobi's leading transport options are walking or using 14-seater minibuses (locally called *matatu*), which are both essential for low-income households (Rasmussen 2012; McCormick *et al.* 2013). Regarding the modal split, private cars account for only 15 per cent of all trips in the city, while walking comprised about 45 per cent, public transport (including *matatu*) about 40 per cent and cycling a mere 1 per cent (Nairobi City County 2015: 3). Despite having adopted a non-motorised transport (NMT) policy in 2015, just 20 per cent of Nairobi County's transportation budget is allocated

to NMT and public transit, even as an estimated 80 per cent of residents utilise these modes (Campbell *et al.* 2019: 87; also Cummings and Obwocha 2018).

In particular, it is low-income residents who are more likely to walk (especially women), which is associated with elevated risks of injuries or fatalities due to Nairobi's inadequate provision for NMT. Research by the Japan International Cooperation Agency (JICA) found the highest rates of walking amongst low-income Nairobi residents (earning under US\$23/month in 2013), with 56 per cent of these residents' trips per day being on foot (cited in World Bank 2016: 89). Pedestrians and street vendors in Nairobi are also at increased risk of being killed or suffering serious injuries.<sup>28</sup> There is a clear need for improved pedestrian safety measures benefiting street vendors and other low-income residents, who depend heavily upon walking for work, school or other essential activities (cf. Ogendi *et al.* 2013). Pedestrian safety is a major health and livelihoods concern in Nairobi, although few studies have analysed travel patterns for residents of the city's low-income areas in particular. In an important exception, a 2004 survey with over 1,500 residents of Nairobi's informal settlements found that women were far more likely to walk than men (62 per cent versus 48 per cent) (Salon and Gulyani 2010: 650). Strategies to improve Nairobi's NMT and promote pedestrian safety, in turn, may have gender-equitable impacts.

Regarding access to employment opportunities, Nairobi's car users are at an advantage compared to *matatu* users or pedestrians. As indicated in Table 3, Nairobi's car users can access 31 per cent, 58 per cent, and 77 per cent of total opportunities within 30, 45, and 60 minutes respectively, under congested conditions that are common in the city (Avner and Lall 2016). Meanwhile, just 4 per cent, 10 per cent, or 20 per cent of Nairobi's opportunities are available to those who use *matatu* or walk for 30, 45, or 60 minutes respectively (ibid). However, the car represents only 13 per cent of trips for all purposes while *matatus* and walking remain the main modes, representing 28 per cent and

Table 3. Share of Nairobi's opportunities accessible in a given timeframe depending on transport mode used

	CARS		MATATUS + WALKING	WALKING ONLY
	UNCONGESTED	CONGESTED	CONGESTED	UNCONGESTED/ CONGESTED
< 30 mins	57%	31%	4%	3%
< 45 mins	85%	58%	10%	7%
< 60 mins	96%	77%	20%	11%

Source: Avner and Lall (2016)

<sup>28</sup> For instance, Nairobi's road accident data from 2014 indicated that out of 723 fatalities, as many as 507 (70 per cent) were pedestrians, followed by 101 passengers (14 per cent) (Nairobi City County 2015: 5).

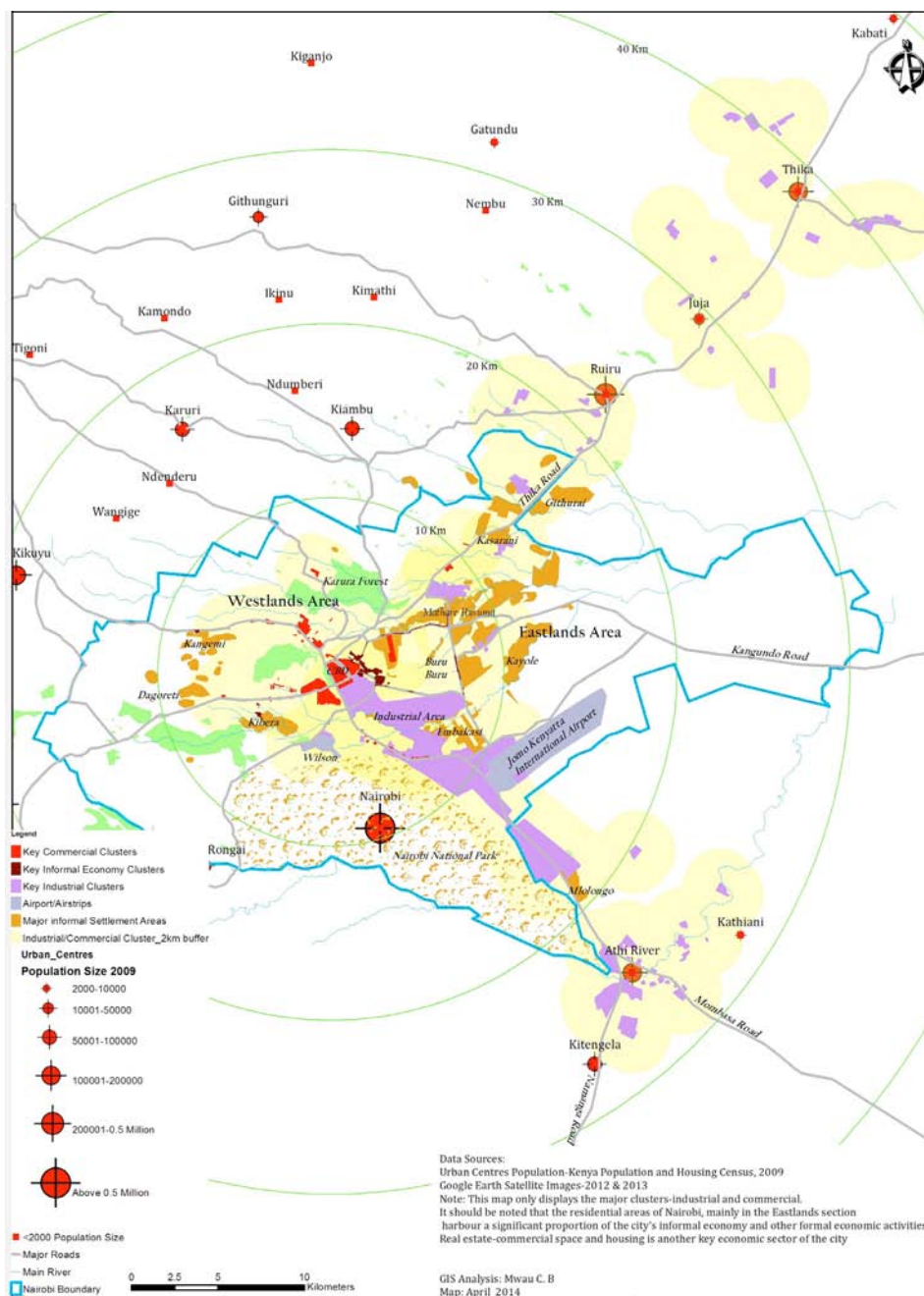
41 per cent respectively of all trip mode shares (JICA 2014, cited in Avner and Lall 2016).

While part of the reason for Nairobi's sub-optimal public transport has been blamed on the *matatu*, there are also considerable challenges related to the poor conditions of road infrastructure. Informal settlements and other unplanned areas have poor public transport networks, and public transport in these areas is limited to the often-paved main roads. Indeed, shortfalls in well-paved, connected road infrastructure is a citywide problem (UN-Habitat 2013). But past research is usually at the city level, and it remains crucial to analyse households' transport expenditure in informal settlements and other

low-cost housing areas (including how it relates to their housing choices).

Some informal settlements and planned low-cost areas (eg public social housing) are centrally located in close proximity to Nairobi's city centre, industrial areas and sub-centres with job opportunities (see also Figure 10). But other barriers can hinder the mobility of low-income and other residents who prefer NMT, such as inadequate pedestrian and cycling infrastructure, as well as the unaffordability of public transport that go hand-in-hand with NMT. While most (if not all) of Nairobi's roads have pedestrian flow, very few roads have dedicated paved pedestrian walkways.

Figure 10. Map showing informal settlements in relation to main commercial/industrial clusters



Map © Baraka Mwau (2014)

Furthermore, Nairobi's recent transport infrastructure investments reveal a continued bias towards a car-oriented city, while still fostering sprawl and speculation in land and high-income shelter. Large-scale infrastructure has been dominated by investments in road expansion and the construction of new bypass roads (JICA 2006). While some road construction has allocated paved space for cyclists and pedestrians, their purpose and functions do not directly serve the city's low-cost housing areas and NMT users. Rather, many roads serve to link the city with its broader metro region, spurring more car use and sprawl, extending commuter distances, and perhaps shifting housing investments further from the urban core (Klopp 2012). The Thika Superhighway has been critiqued for facilitating land speculation, gated communities and other high-income housing construction along its route (Manji 2015: 219).<sup>29</sup> More generally, Kenyan road construction has often been linked to corruption in contracting and ethnic chauvinism (ie benefiting politicians' co-ethnics) while also struggling with limited funds for maintenance

(ibid: 214). The Thika Superhighway also failed to integrate land-use planning and has led to additional traffic congestion and missed opportunities to generate municipal revenue related to land value increase (see also Berrisford *et al.* 2018). Six bus rapid transit (BRT) corridors are expected to be launched in Nairobi to eventually hold 950 high-capacity buses, although the project has faced severe delays (Kimani 2019; Igadwah 2019). More broadly, in several challenges, recent transport investments have not yet sought to decongest Nairobi, promote safe NMT, or develop a reliable paratransit or public transport system (Klopp 2012; Cummings and Obwocha 2018).

Regarding railway transportation, the city's commuter train services are unreliable and serve a very small fraction of the population. Nevertheless, the few services that exist mainly serve low-income residents, and have great potential for improving transportation for these households. Proposals are underway to improve the commuter train services.

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<sup>29</sup> Low and middle-income rental housing units were also developed along the Thika Superhighway (eg in Zimmerman, Roysambu and Kasarani), so a mix of shelter types have emerged.

## 4

# Current state of housing provision

## 4.1 Exclusionary housing finance and formal shelter

Nairobi's formal housing market is vibrant but often inaccessible to the urban poor majority, who rely overwhelmingly on informal providers offering low-quality shelter. Official data underscore Nairobi's burgeoning residential sector, yet formal private developers inevitably cater for wealthier households. In 2013, Nairobi's private residential buildings (with a certificate of occupancy from the county government) had a reported value of Ksh45.2 million, rising markedly to Ksh74.2 million in 2017 (KNBS 2018a: 177). But from 2013–2017, the total private residential construction completed in Nairobi just increased slightly from 5,447 to 9,564 buildings (*ibid*: 176). In 2017, Nairobi's county government issued a mere 1,699 building permits for domestic class (80 per cent of the permits issued that year), which include residential construction (KPDA undated). These formal developments provide a small fraction of Nairobi's housing and are mainly developed in the middle and up-market housing areas. Indeed, the price of the cheapest formal unit (Ksh1.155 million or US\$11,500) is still out of reach for low-income residents (CAHF 2018: 161).<sup>30</sup>

Housing finance has remained biased towards wealthy Kenyans, reflecting the meagre formal housing production, financial institutions' similar focus on a narrow elite, and limited government support. Nationally, the formal construction industry has produced less than 10 per cent of total housing, all for the 'upper end of the affordability pyramid' (Gardener *et al.* 2019: 2). Furthermore, the mortgage market in Kenya has remained minuscule and unaffordable to even middle-class Kenyans. As of December 2017, Kenya had just 26,187 mortgages with a total value of Ksh223.2 million (Central Bank of Kenya 2018: 18). Loan conditions are extremely inaccessible to lower-income or middle-class Kenyans: in 2017, the average mortgage loan's maturity was 11.9 years and the average mortgage size was Ksh10.9 million in 2017, reflecting Kenya's increasing property prices (*ibid*: 19). The average mortgage is thus far beyond the means of ordinary Kenyans: according to the Centre for Affordable Housing Finance in Africa (CAHF), just 10 per cent of Kenya's population could afford a formal house costing US\$10,000 (without subsidy) and a monthly mortgage repayment of US\$174, located on a basic serviced site or upgrading scheme (Gardener *et al.* 2019:10). Indeed, CAHF estimated that only a third of Kenyans could afford a monthly mortgage of US\$87 for land purchase or incremental building (*ibid*).

<sup>30</sup> Furthermore, this unit is a bedsitter – too small for a typical family and located in the satellite town of Mlolongo (20km from the central business district or CBD), with correspondingly longer travel times to central Nairobi and fewer local jobs.



Kenya's mortgage market is still concentrated in a handful of institutions, which have highlighted an array of obstacles to affordable shelter finance and the need for new government interventions. As many as 75 per cent of Kenya's mortgage loans were provided by only six institutions, about 21 per cent by one medium-sized bank and the remaining 55 per cent by five large banks (Central Bank of Kenya 2018: 19-20). When asked about the main obstacles to Kenya's mortgage market, the leading banks highlighted the high cost of housing units (30 per cent), high cost of land for construction (27 per cent), high incidental costs like legal fees or stamp duty (26 per cent), challenges with titling (26 per cent), and low incomes (25 per cent). Key suggestions were to improve the availability of low-cost housing options, affordable long-term funds, government incentives for low-cost housing, and official provision of infrastructure to developers (*ibid*: 20). They also advocated for wider availability of alternative construction technologies and complete digitalisation of Kenya's land registries (see our recommendations in Section 8.2).

Reflecting its high housing costs and inaccessible mortgages, Nairobi has a major deficit in housing, and many residents rely on the cooperative sector, savings and/or incremental construction to fill the gaps. For Nairobi's homeowners (about 8 per cent of the city's total households), 43.5 per cent constructed their house with cash financing; another 15.4 per cent used loans or a combination of cash and loans; and 11.2 per cent solely used cash (KNBS 2018a, cited in Mutinda *et al.* 2019).<sup>31</sup> The widespread use of cash further underscores the limited reach of mortgages, with cash-financed incremental self-construction as the main alternative to mortgages in Nairobi (*ibid.*).

The shortfall in housing remains immense: for Nairobi in 2019, estimates suggest a delivery of only 26,000 units, and the metropolitan area's deficit is 2.1 million units, partly reflecting its rapid population growth (Cyttonn 2019: 7). Such dire figures are at odds with official shelter statistics, which have estimated that Kenya's total qualitative housing deficit at 1.9 million units (Government of Kenya 2019: 5).<sup>32</sup> The government does acknowledge that existing mortgages are too costly because of high interest rates and short repayment periods (*ibid*: 5). Instead of mortgages, as many as 90 per cent of Kenya's housing loans come from the cooperative sector: SACCOs provide credit more cheaply and can be used for incremental housing, periodic improvements, or to complete purchases (World Bank 2017a; Feather and Meme 2019). However, the inroads made by SACCOs remain limited and it is still difficult for the organisations to scale up their housing and land development (Box 2).

In a significant data limitation, official housing statistics do not report the shelter constructed illegally (without approval) mainly in Nairobi's informal submarkets. As a result, this gap makes it hard to accurately calculate Nairobi's housing supply or deficit. Shelter provided by the informal submarkets is largely substandard; therefore, much of this stock could constitute the city's supply backlog. An official admitted that the county government lacks official statistics on Nairobi's housing deficits, instead relying on Kenya National Bureau of Statistics (KNBS) household surveys (KII, county government, city planning). Such data gaps provide an important area for future research, so as to better analyse and improve the informal housing markets where most Nairobi residents live (see recommendations in Section 8.2).

<sup>31</sup> Another 28.2 per cent of Nairobi homeowners inherited their home (KNBS 2018a, cited in Mutinda *et al.* 2019: 5).

<sup>32</sup> In an alternative estimate, again underscoring the county's major shelter deficits and financing shortfalls, the Kenya Property Developers Association (KPDA) suggests that Kenya needs to develop 200,000 new units per year, four times above the 50,000 units currently being constructed (CAHF 2018: 162).

## BOX 2. SACCOS AND INCLUSIVE HOUSING FINANCE

Savings and credit cooperative organisations (SACCOS) are a leading source of Kenya's housing finance, but they may struggle to expand further and often lack capacity to manage shelter construction. Nationally, Kenyan SACCOS have an estimated 14 million members in 22,000 groups (Feather and Meme 2018: 98). Most SACCOS have lower interest rates (12 per cent in 2016) than commercial banks (14 per cent in the same year), and SACCOS enable members to save in order to collectively access credit, including for housing (Feather and Meme 2018; 2019). Members collectively determine, for example, the terms and conditions of their loans and interest rates on deposits, thereby providing an inclusive decision-making process. SACCOS are widespread in both rural and urban areas.

Taken together, SACCO assets account for about 50 per cent of Kenya's GDP (Feather and Meme 2018: 83). They have been recognised as the predominant source of Kenyan shelter finance, but are unlikely to grow without further support: 'The share of SACCO-financed housing is estimated to be as high as **90 percent** [but] SACCOS have only one main source of liquidity, which are member deposits. Without access to longer-term sources of finance, their loan portfolio will be unable to grow further' (World Bank 2017a: 28, emphasis added). Along with constraints due to members' deposits, SACCOS may also struggle with the technical aspects of housing (eg design, construction management) and face further capacity challenges when managing highly capital-intensive projects (Feather and Meme 2018: 97). Currently, Kenyan SACCOS provide investments for approximately 8,000 to 10,000

units annually (ibid) and offer a collective platform through which government can direct its affordable housing interventions.

Although SACCOS often target middle-class households when making shelter loans, they may have greater potential than shelter microfinance to reach low-income households, particularly with support from the new Kenya Mortgage Refinance Company (KMRC). KMRC will seek to serve SACCOS and microfinance banks that target low-income households (World Bank 2019b), helping to provide much-needed liquidity. SACCOS already have a key advantage for residents of informal settlements: development loans do not require having title to the property, as they are backed by savings and can therefore be non-collateralised (Feather and Meme 2019: 17). Microfinance housing loans similarly do not require security of tenure, but SACCOS can more readily mobilise higher-value loans thanks to their use of collective savings (ibid). Shelter microfinance in Kenya had about 120,000 borrowers in 2018, but few microfinance agencies specialise in shelter lending products and so these are still fairly niche products (ibid: 14). Meanwhile, SACCOS have already benefited from the backing of the Kenyan central government, an effective participation model for local communities, and a strong history of collective action and savings in Kenya (Feather and Meme 2018: 89). In the future, SACCOS can reach low-income households more effectively by adopting reforms such as providing deposit insurance, developing clearer and uniform practices, and consolidating their credit products (Feather and Meme 2019: 25).

## 4.2 High housing and land costs in Nairobi, with speculative investment and variations across the metro

Recent research confirmed the elevated housing prices in Nairobi, where a comparable house was costlier than in Kigali and Johannesburg; prices were driven largely by construction, value-added tax (VAT) and infrastructure. In particular, this benchmarking study found that the cost of the same 55m<sup>2</sup> house in Nairobi is 19 per cent higher than in Kigali and 61 per cent higher than in Johannesburg (Gardener *et al.* 2019: 19). The authors conclude that Kenya's construction costs are 51 per cent higher than in South Africa,

with labour costs (+35 per cent) and material costs (+62 per cent) helping to explain this stark difference. Although Nairobi's land costs are very high, CAHF found that land represented only 6 per cent of the cost of this 55m<sup>2</sup> house of US\$65,824 (on a 120m<sup>2</sup> plot, with two bedrooms and one bathroom). Major factors contributing to the 55m<sup>2</sup> house's elevated costs were construction at 44 per cent, VAT at 13.8 per cent, infrastructure at 12.6 per cent, developer mark-up of 9.9 per cent, and compliance costs at 5.8 per cent (ibid). These compliance and approval costs are linked to Kenya's professional services, registration costs and inefficient registration processes (ibid). On the other hand, the higher costs of land, infrastructure and compliance costs in Nairobi have the net effect 'that they offset the increased construction costs of verticalisation (multistorey development), due to the better utilisation of land and efficiencies in on-site

infrastructure provision' (ibid: 21). Additionally, formal markets in Nairobi are highly speculative and overpricing cannot be ruled out. Such considerations help to explain the proliferation of Nairobi's tenements, while also highlighting areas for improvement that can promote access to affordable shelter.

Nairobi's housing and land market is varied across the metropolitan area; there has been a recent slowing in upmarket segments, but strong growth in the satellite areas and widespread speculation in land. In July 2019, a property investment company noted the recent 'subdued performance' in Nairobi's high-end markets, which are experiencing a glut (Cytonn 2019: 4). In contrast, it found a positive outlook for mixed-use development – especially in upper mid-end markets and niche markets in low-end areas, as well as in satellite towns with infrastructure and affordable land (ibid: 8). Still, land prices are rising rapidly in satellite towns and prices per acre already are extremely high in the city. In Nairobi county, the average land price per acre is about Ksh220 million (US\$2.2 million), nearly 10 times Nairobi satellite towns' average price of Ksh23.7 million (US\$237,000) per acre (Cytonn 2019:11). Other research found that since 2007, metropolitan Nairobi's composite land index has increased 6.38-fold, although just 1.69 per cent over the past year (HassConsult 2019: 1). Growth in satellite areas is even more robust and rose over 8.9-fold from 2007, particularly in Juja (rising 16.39-fold since 2007) and Limuru Town (11.9-fold) (ibid). In satellite towns, apartments had average returns of 5.1 per cent, with strong performance by Ruaka and Lower Kabete at Ksh96,000 to 98,000 per m<sup>2</sup> (Cytonn 2019: 24). Such trends are similar to Nairobi's lower mid-end suburbs, with average annual returns of 5.3 per cent and average rental yields of 4.8 per cent, particularly around key commercial nodes like Kilimani or the central business district (CBD) (ibid: 23).<sup>33</sup>

More generally, land speculation has been observed as a key factor in Nairobi's rising land prices: 'A large number of land purchases are for speculation, where one holds on [to] land and once prices increase, the land is sold' (KII, architect/academic). A similar observation was by a land broker in Syokimau, who indicated that, 'Newly subdivided land mainly attracts speculators [...] rarely are home builders the first owners of the plot' (KII, land broker, Syokimau). This speculative behaviour is common in satellite towns and peripheral areas, raising the prices of eventual shelter construction as the land undergoes several transfers before development. Interviews indicate that the process of multiple transfers results in high prices (through speculation), which contribute to spiralling land

costs: 'Every land transaction comes with increased price [...] Usually, after a subdivision is done, the first few years are for speculation [...] In Syokimau, 2006–2009 were boom years with lots of transfers [...] Currently, land prices are very high but minimal transactions' (KII, Syokimau long-term resident).

Our field survey noted that lands in Nairobi's peripheral and satellite towns are mainly sold as small plots, commonly measuring 50 x 100 (0.12 acre) and 40 x 80 (0.07 acre) feet. These plots are considered more lucrative by land dealers; they are availed mainly through greenfield land subdivision schemes. The small plots redistribute land ownership but in a highly speculative market, where multiple transfers occur before construction is complete. Besides speculation, prices are usually determined by several factors including their location (in relation to general area, proximity to main roads or main infrastructure, proximity to amenities etc), level of services (on-site and in the area), type of soil, and type of ownership documents. Plots with title deeds have higher prices, as this implies secure tenure and lower risk for developers.

Peripheral areas and satellite towns have higher levels of home ownership than Nairobi's urban core, but they are still unaffordable to low-income households. More-prevalent home ownership is largely due to better land access in peripheral areas and satellite towns (especially for middle-income households) and delivery through incremental development, which begins with land acquisition and later phased construction. On the other hand, these modes of shelter delivery for middle-income residents have resulted in urban sprawl characterised by low-rise single-family units, infrastructure deficits and environmental degradation due to poor planning and ineffective urban management. Notably, prevailing land prices in both Nairobi and satellite towns have priced out the lower-income groups, constraining their access to low-cost shelter even in areas considered to have lower land prices. The (formal) shelter products designed as 'affordable' are mainly located outside Nairobi's satellite towns such as the Athi River-Kitengela area, Juja and Ongata Rongai (Karibu Homes, Erdemann Property Ltd;<sup>34</sup> Urbanis Africa 2018). But these products are still inaccessible: for example, amongst the cheapest unit in these submarkets is Urbanis Africa's two-bedroom bungalow in Kisaju (wider Kitengela area) selling at Ksh1.5 million (US\$15,000) but without finishes (Urbanis Africa 2018).

For many low-income households, investing in a home in peripheral and satellite areas would entail insupportable costs and lengthy commuting times, as these areas are mainly residential without work opportunities. Rather

<sup>33</sup> For instance, in Nairobi's South B and C areas, the average housing price per m<sup>2</sup> was Ksh99,059 and in Langata it was Ksh97,012 (Cytonn 2019: 23).

<sup>34</sup> See <http://karibuhomes.com> and <http://erdemann.co.ke/property/index.php/residential-property/great-wall-gardens>



than shoulder these costs and time burdens, lower-income households are compelled to live in substandard housing within Nairobi (largely because of access to jobs). This has contributed to Nairobi’s burgeoning rental market dominated by shack and tenement submarkets. In the following sections, we explore other trends in shelter demand and emerging spatial patterns across the metro area, as well as underscoring the need to rethink a narrow policy focus on home ownership.

### 4.3 Incomes and shelter affordability

Although shacks and tenements offer the cheapest rental units in Nairobi, they are not necessarily affordable to all. Many households still struggle to pay rent, as signalled by frequent cases of evictions and rent defaulting. Indeed, a study by Kwangu Kwako Limited (2017), a social enterprise focusing on low-cost shelter, established that ‘70 per cent of landlords find collecting rent from tenants as the primary challenge they face’. In this research, several structure owners were found to employ agents to manage their units including rent-collection.<sup>35</sup> In other areas, landlords impose harsh

measures to punish rent defaults using property agents: for instance, in Pipeline,

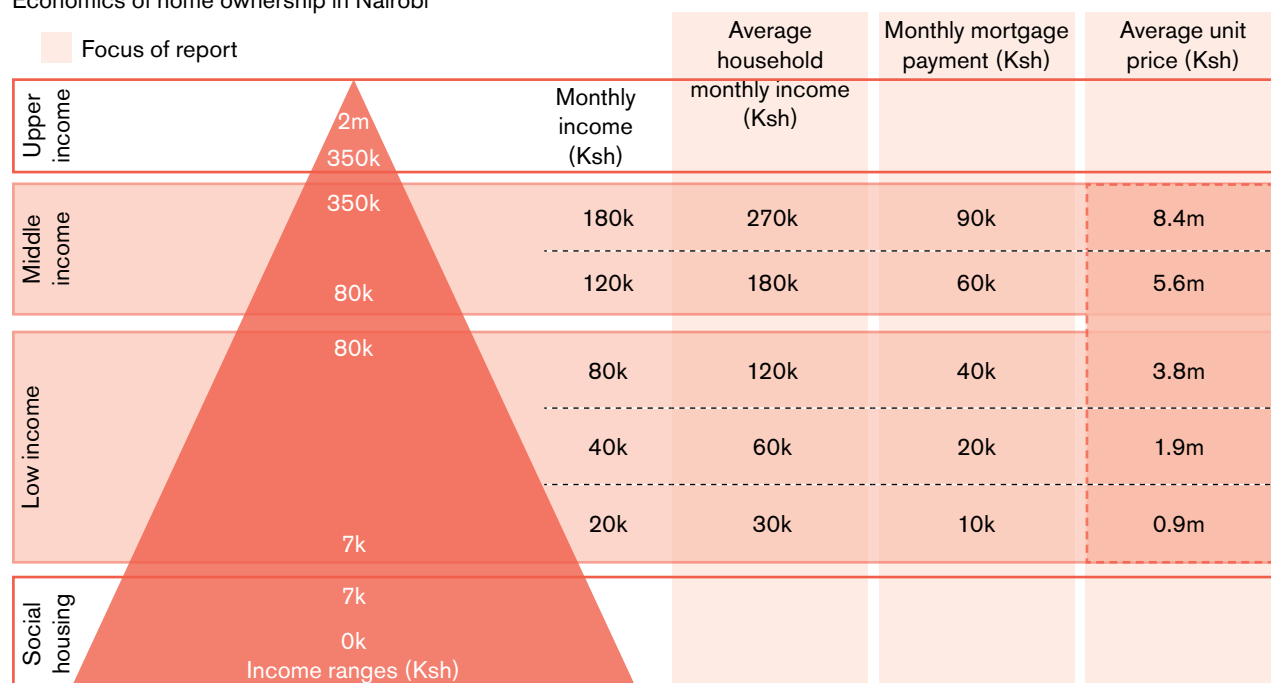
*If you are to be evicted because of unpaid rent, agents will lock your house [...] or confiscate your household items and keep them in their store [...] If a tenant wants to access their confiscated items, they first have to clear the rental arrears and sometimes storage charges – otherwise the agent auctions the items.*

FGD with Pipeline residents, mixed group

Several FGDs and interviews with residents revealed that although rents in shacks and tenements are widely deemed affordable, a number of households still struggle to pay (especially those with unreliable incomes). Meanwhile, analysis of Nairobi’s home ownership (Figure 11) indicates that with the prevailing financial conditions (mortgage with 14 per cent interest rate, 20 per cent down payment, 15-year repayment), lower-income households earning an average of Ksh30,000 (US\$300) can access a unit of Ksh0.9 million (US\$90,000) (KPDA 2018). But it is highly unlikely that lower-income households have sufficiently stable incomes to sustain a mortgage over that period, considering that informal livelihoods with erratic earnings are pervasive in Nairobi.

Figure 11. Market-based calculations of home-ownership access costs in Nairobi

Economics of home ownership in Nairobi



Notes: Assumes household size of 1.5 people, 15 year mortgage, 14% interest rate and 20% down payment

Source: KPDA (2018b)

<sup>35</sup> ‘Tenants pay rent through the agents or banks and present the payment slip. With that, we have seen improved rent payment.’ Landlord, FGD Kawangware (mixed group).

Even when relying on formal employment, many low-income households still cannot afford decent shelter in the prevailing housing markets. For instance, 'In Mukuru, majority of residents work in the industrial area for very low wages; accordingly, very few can access bank financing for housing' (KII, Mukuru house broker). For households earning gazetted (official) minimum wages (ie lower-income groups in the formal sector), they can earn about Ksh12,926.55 (US\$129) per month (Republic of Kenya 2017: 1,675).<sup>36</sup> Assuming 20 per cent is the typical household expenditure on housing and utilities<sup>37</sup> for Nairobi's lower-income groups (Lozano-Gracia and Young 2014: 29), the monthly incomes needed for shelter can range from Ksh2,585 (US\$26) and Ksh5,833 (US\$58). In Nairobi's shelter markets, that amount can only facilitate access to a unit in shacks or tenements.

Indeed, to manage their shelter expenditure, the study identified several coping mechanisms used by lower-income households including:

- Pooling income to occupy a single unit on 'agreed co-tenancy arrangements' (particularly among job-seekers, unemployed, unmarried and/or married persons planning to live with family in that unit<sup>38</sup>)
- Pooling income to rent a shared extra space, mainly undertaken by growing families (eg two or more households jointly rent an extra unit that can serve as a shared bedroom for adolescent children)
- Settling a section of the family elsewhere (eg in rural area or boarding school to reduce overcrowding), and
- In extreme cases, two households can co-share a unit after disruptions (eg evictions, loss of breadwinner).

Such measures reflect the inadequate, erratic earnings of Nairobi's low-income households, particularly those working in the informal economy.

### 4.3.1 Affordability and its impact on modes of shelter occupation

In Nairobi, rental is the primary mode of shelter occupation, and very few owner-occupiers have accessed their homes using mortgage finance, typically relying on cash or inheritance instead. According to KNBS (2018a: 29–33), 86.4 per cent of households in Nairobi live in rented units, and only 8.1 per cent live on an owner-occupied basis. Just 4.9 per cent live in units that they neither own nor pay rent for, but with the consent of the owner. Within owner-occupied units,

over 43 per cent have constructed their units using their own cash, 28.2 per cent have inherited, and only 17.8 per cent have purchased their units (ibid). Of the 17.8 per cent purchased units, 11.2 per cent paid using their own cash, another indication that mortgages and bank financing are not the preferred means of owning a home.

Our research established that buyers of most properties in the formal market do so for investment purposes, which has contributed to the speculative nature of the city's real estate. Notably, these buyers must look for tenants, and tenant occupancy is also predominant in middle-income housing markets. A significant fraction of Nairobi's formal residential development targets investors, not necessarily homeowners:

*Many people who can afford rent cannot afford to buy; majority of the market is people who buy as an investment, so they are not the ones who are living in those properties. They just buy for the rental income there that they are getting.*

KII, Cytonn Investments Ltd

Although some developers who target homeowners might focus on affordability, their units still attract a significant number of upper-income buyers seeking such units for investments: 'Housing designed for the middle-income [for incomes of between Ksh30,000 and Ksh100,000] is also bought by the upper class, mainly as investments and speculation' (KII, managing director, Karibu Homes Ltd).

The same phenomenon of investment is recurring in large-scale shelter projects in Nairobi's satellite towns. For example, a salesperson selling Great Wall Gardens-I in Athi River (a development by Chinese developer Erdemann Property Ltd) concluded that 'most buyers don't look for a unit to stay. It's an investment; many buy and then look for a tenant to occupy the unit' (KII, salesperson at Great Wall Gardens-I). Erdemann's shelter products are among the lowest priced in the formal markets, and the firm is perhaps the largest residential developer currently active in Kenya. One of its ongoing projects called the River Estate at Ngara (within the city centre) aims to deliver 2,720 apartment units, assembled as eight blocks of 34 floors each: 'A development that will gift the Kenyan capital its tallest homes' (Council on Tall Buildings and Urban Habitat).

Given the scarcity of affordable decent shelter for Nairobi's lower and middle-income residents, shelter production must match all categories of demand;

<sup>36</sup>Although Kenya's regulations on minimum wage are 'exclusive of housing allowance', it is observed that even when workers are paid such an allowance, the amount rarely has influence on their access to shelter.

<sup>37</sup>Households in shacks and tenements usually pay some utilities as part of a package within their rental costs, but they are still compelled to make additional payments to supplement utilities' deficits or poor services.

<sup>38</sup>'Agreed co-tenancy arrangements' are common among youth (unmarried persons) and married persons who are not living with family in that unit or the city. The research established that there is a considerable proportion of city dwellers (especially men) who have families but live separately from them eg between the city and rural areas. This separation is usually deliberate and tied to challenges of shelter affordability.

otherwise, competition across the income groups will keep having a displacement effect. Indeed, previous cases of 'displacement' have resulted in middle-income households occupying units meant for low-income groups, such as the Kibera decanting site for Soweto East (see Section 3.3, also Fernandez and Calas 2011). It underscores that the capacity to purchase a home is still a reserve of only a tiny fraction of Nairobi's population.

### 4.3.2 Revisiting home ownership approaches to Nairobi's housing challenges

It will be counter-productive to continue promoting home ownership if the incomes of most Nairobi households remain low and unstable. For Nairobi, households with a monthly expenditure below Ksh23,670 (US\$237) are considered low income; middle-income households have a monthly expenditure between Ksh23,670

(US\$237) and Ksh119,999 (US\$1,200), and upper-income households' expenditures exceed Ksh120,000 (US\$1,200) per month (KNBS 2019b: 53). In this research, several respondents in informal settlements indicated that their combined average household income is usually below Ksh25,000 (US\$250) per month, which is typically devoted to basic expenditures like rent, food, utilities, healthcare and education (Table 4), with many households having a significant spending deficit<sup>39</sup> as well as low-quality living conditions. Incomes for the lower-income groups can be derived from both formal and informal sectors.<sup>40</sup>

Based on Table 4, it is evident that lower-income groups cannot afford the rent or purchase costs of a decent house, even the lowest-cost house of Ksh1.5 million. Furthermore, many lower-income Nairobi households can only afford shelter finance if repayments are the same as the current monthly rents, due to their prevailing financial constraints (Lines *et al.* forthcoming). Earlier, a government study revealed that

Table 4. Typical household income and expenditure in informal settlements<sup>41</sup>

DAILY HOUSEHOLD BUDGET (AVERAGE HOUSEHOLD SIZE OF 4 PEOPLE)	AMOUNT IN KSH (US\$1 = KSH100)		
	MUKURU (SHACKS)	NGEI-HURUMA (TENEMENTS)	MATHARE VALLEY (SHACKS/TENEMENTS)
Breakfast	120	200	120
Lunch	200	150	70
Supper	200	300	300
Water	15	30	30
Toilet use	50	-	50
Transport	80	120	(most walk/work within)
Electricity cost averaged per day	10	10	10
Mobile phone charges (airtime and data bundles)	50	70	80
Total daily budget	725	880	660
Monthly budget (30x daily budget)	21,750	26,400	19,800
Average monthly rent (in area)	2,000	3,000	3,000
Total monthly budget (with rent)	23,750 (US\$237.5)	29,400 (US\$294)	22,800 (US\$228)

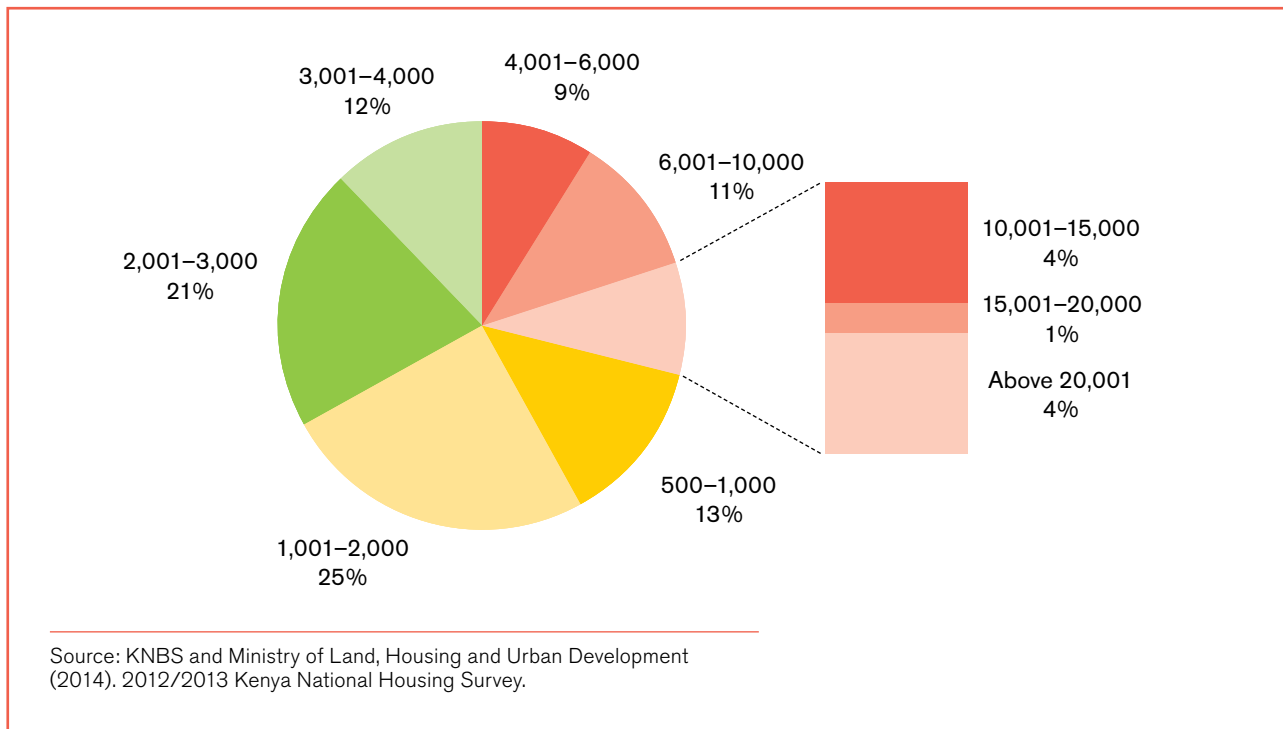
Note: Other regular expenditure is on healthcare and education, but these levels can vary across households.

<sup>39</sup> The study identified several coping mechanisms for spending deficit: informal borrowing from friends, relatives, *chamas*; taking out loans from mobile lending applications; and taking loans from microfinance institutions and SACCOs.

<sup>40</sup> As defined by KNBS (2019a: 53), in Nairobi, 'The lower income group comprises households with monthly expenditure below Ksh23,670 (current US\$236) in October 2005'. In 2016, the official minimum monthly wage for a general worker was Ksh12,927 (US\$129.3), a night security guard was Ksh14,421 (US\$144.2), with the Artisan Grade I determined as the upper level of a minimum wage at Ksh29,169 (US\$292) (Republic of Kenya 2017).

<sup>41</sup> FGD with residents (men and women) of Mukuru, Ngei-Huruma and Mathare Valley.

Figure 12. Proportion of households by rent paid per month in Nairobi (in Ksh)



80 per cent of Nairobi households pay rents below Ksh6,000 (US\$60) per month (Figure 12). Effectively, low incomes have driven these households out of conventional shelter finance. Even for the formally employed in these lower-income groups, it is likely that they also face a spending deficit.

Spending deficits often compel Nairobi's low-income households to source credit for other basic expenditure, with limited or no ambitions for housing credit (eg mortgages or construction loans). The Kenya Integrated Household Budget Survey (KIHBS) of 2015/16 indicates that in Nairobi, 33.9 per cent of households sought credit (KNBS 2018a). At national level, credit is mainly for paying subsistence needs (39.3 per cent) and school fees (20.9 per cent), with the main sources of credit being informal (ie merchant/shop, self-help groups, and relatives/friends/neighbours) while SACCOs are the most popular source of formal credit (KNBS 2018b: 129). In the prevailing economic conditions, respondents indicated that while quality shelter is desired, it should not result in major increases in expenditure. These households are willing to pay rent for decent shelter, and do not necessarily prefer to own.

Homeownership strategies must also reflect Kenya's rural-urban linkages, where established ties to rural areas have contributed to patterns of circular migration and upcountry investments. For many residents, their existence in Nairobi is perceived as transitional (ie during their working age) with an eventual plan to retire elsewhere. In this study, many city residents reported having strong rural ties, and their connections with rural

areas often serve as a safety net or as a way of instilling a sense of dignity (a place to call 'home'). For instance, Nairobi's household heads often already have or plan to invest in a rural or peri-urban home, which provides better access to land and housing. According to a resident of Mukuru informal settlement, she invested in homes in her rural area and Ruai (on Nairobi's outskirts) rather than in the city, which she explained as follows:

*Here in Nairobi we are passers-by [...] Should things get out of hand here in Nairobi, because Nairobi is not my home, I can go back home [ie to her village].*

Woman in Mukuru kwa Reuben FGD

In some cases, the rural home is already occupied by some relatives (eg spouse and children, while the other spouse works in Nairobi), which is an echo of the colonial legacy where native African families were forcefully separated by law. However, families' contemporary separation mainly has to do with economic and socio-cultural factors. For instance, faced with challenges of finding space for a growing family living in an overcrowded single room, some households opt to separate the family:

*It gets to a point where you [household head] have to look for a way to get a house for your grown-up children. If you can't afford [extra space], you can take some to the village [...] or yourself moves back to the village and leave the grown-up children in the city [...] or get a house together with other parents who have the same case.*

FGD with Mathare Valley women

In other cases, the rural home is used occasionally (eg during festive seasons or for short visits) with long-term use planned for retirement or if a family's urban livelihood unexpectedly collapses.

In contrast, there are also city residents lacking rural safety nets and who are unable to access decent shelter in rural areas. For instance, a resident of Kiamaiko-Huruma slums expressed the hopelessness at the idea of ever accessing better shelter:

*I have no place I think I can build. Our income is low and the place we used to search for livelihood was demolished, therefore, I have no hope. I have no place I can think of building because I was born here.*

Respondent in FGD with Kiamaiko-Huruma residents

Even those with a rural option may prefer to stay put in the city's crowded conditions because of personal challenges in rural areas:

*Some parents will tell you that in the village there are issues; hence, it is better they struggle with their children here in Nairobi [...] It is not because they love to.*

Respondent in FGD with Pipeline women residents

Such households require social housing interventions, particularly as they may lack sufficient savings to afford decent shelter in their older age.

### 4.3.3 Income inequalities, differentiated shelter costs and increased socio-spatial fragmentation

Nairobi's land and housing markets are highly fragmented, with extreme differences (in monetary terms) between low and high-end segments (Table 5). This study's rental survey across Nairobi revealed several submarkets, which are strongly shaped by stark income inequalities and signify the city's socio-spatial stratification. The Westlands area continues to accommodate mainly middle and upper-income households, with only a few informal settlements and areas with lower-income groups (such as Kangemi, Kawangware etc). Meanwhile, Eastlands is dominated by shelter for lower-income groups, as well as fragments of middle-income shelter usually delivered as small gated communities and standalone units in new areas (eg Ruai and Utawala).

According to this research, the lowest-priced unit costs just Ksh1,000 (US\$10) as lease paid annually, averaging Ksh83 per month: this highly subsidised

unit is offered by Kenya Railway under a programme to resettle project-affected persons along the city's commuter railway. These units are found in sections of Kibera and Mukuru. However, there have been cases of railway beneficiaries informally subletting these units to earn a rental income. Meanwhile, in Nairobi's normal private rental markets, the cheapest unit is a mud-walled house in Kinyango (Dandora area) costing Ksh500 (US\$5) per month. As a resident explained,

*For mud-walled houses, one can get for Ksh500–600 [...] They are mainly located next to the river and they also have no security gates [built as standalone structures, not in a courtyard].*

FGD with Dandora women residents

In contrast, our research established that Runda and Gigiri have the region's highest rents, which could go as high as Ksh550,000 (US\$5,500) per month. This extraordinary rental price is linked to the area's hosting of diplomatic offices, including UN offices and several embassies. However, and reflecting the city's fragmented character more generally, Gigiri's housing is not homogenous, but has pockets of informal settlements (eg Githongoro and Huruma) that accommodate lower-income groups. Monthly rent for a single-room unit (shack) in Githongoro is between Ksh2,000 and 3,000 (US\$20 to US\$30). Notably, most residents of Githongoro work locally in Runda as domestic workers, security guards, construction workers and casual workers.<sup>42</sup> Between these extremes is a wide array of units whose rents strongly depend on location, design and size, specifications and fittings, which serve a range of upper-lower income to higher-middle income groups (Table 5).

The above citywide analysis of rental values reveals entrenched income inequalities in Nairobi, with the largest fraction of residents being unable to afford decent shelter. Between the lower-income and middle-upper incomes are certain submarkets that cater for the upper lower-income and lower middle-income segments. These are the households paying monthly rents between Ksh10,000 (US\$100) and Ksh30,000 (US\$300), which enables access to units other than single rooms. Such units are not necessarily adequate, but they provide better spaces and have in-house utilities (eg toilet and water tap). The units are found in areas whose development has evolved through a combination of formal and informal processes, with high densities and inadequate infrastructure, although better than in informal settlements and tenement areas (eg Kasarani, Roysambu, Umoja and Donholm).

<sup>42</sup> 'Most people here work in the neighbouring Runda Estate.' Kili, resident (land owner) of Githongoro SG1.



Table 5. Rental rates in selected sections of Nairobi

AREA	MAIN SHELTER TYPOLOGIES AND MONTHLY RENT RATES (KSH)						
	SINGLE-ROOM SHACK	SINGLE-ROOM TENEMENT	BEDSIT/ STUDIO	1-BEDROOM APARTMENT	2-BEDROOM APARTMENT	3-BEDROOM APARTMENT	3+ BEDROOM HOUSES ON STANDALONE PLOT
Baba Dogo	2,500	3,500–4,000					
Kayole–Jua Kali	1,500	2,500–3,500					
Kosovo–Mathare	1,500–2,000	2,500–4,000					
Mailli Saba	2,000	3,000–4,000					
Pipeline–Kware	3,000	3,000–5,000	6,500–8,000	14,000–25,000			
Kamulu	1,500–2,000	2,000–3,000	5,000	8,000	10,000–15,000	15,000–25,000	Mainly owner occupied
Zimmerman	3,000	3,000–3,500	5,500–7,500	10,000–15,000	15,000–20,000	25,000–45,000	
Roysambu			10,000–13,000	12,000–25,000	18,000–35,000	30,000–50,000	
Thindigua (Kiambu county)			6,000–15,000	15,000–25,000	20,000–50,000	40,000–150,000	55,000–200,000
South B			8,000–15,000	18,000–40,000	30,000–60,000	40,000–60,000	
Kilimani/Lavington			30,000–40,000	50,000–120,000	80,000–250,000	180,000–250,000	160,000–450,000
Westlands			50,000–65,000	60,000–170,000	70,000–220,000	90,000–260,000	200,000–300,000
Runda/Gigiri							200,000–550,000

Note: Actual size and location, specifications (eg furnished or unfurnished), utilities and fittings, and quality of units vary; hence, some entries are presented as a range. Exchange rate: US\$1 = Ksh100.  
 Source: SDI Kenya, EARF Nairobi Research Team, Field Survey 2018

### 4.3.4 High-priced, overcrowded shelter for lower-income groups

Although assumed to be 'low-cost,' rents per m<sup>2</sup> for single-room housing units are sometimes more costly than formal rental units. As seen in Table 6, apartments for middle-class residents in Kileleshwa have a lower average cost per m<sup>2</sup> than single-room tenement units in Kawangware. Furthermore, such formal housing options provide multiple rooms and in-house utilities, but Nairobi's low-income households can pay more per unit space and for substandard housing conditions (Table 6). Similarly, a study in 2014 (Akiba Mashinani Trust *et al.*) revealed that lower-income households in Mukuru pay a penalty for their substandard shelter and services ('poverty penalty'). This shelter is associated with various costs, including the social, cultural and health burdens linked with overcrowding. Meanwhile, private housing providers employ various cost-cutting strategies, including working outside the formal processes of construction, to provide units that are affordable to low-income groups but that also maximise returns on investments:

*Delivery process of rental units for the low income must be faster, use cheap materials, and avoid regulations that increase production cost like not fitting certain in-house facilities.*

KII, Utawala contractor

Formal financiers do recognise the need to cater for low-income earners, but their residential projects remain focused on upper-income segments. A representative of a major bank noted despairingly that '70 per cent of my market is out,' because the majority of Kenyan residents' incomes are too low and construction costs too high (KII, financier). He noted that Nairobi's residential projects are usually intended for upper and middle-class Kenyans, leaving an oversupply as 'less than 2 per cent of Kenyans' can afford these units (*ibid.*). Compared to high and middle-class housing developers, low-cost informal developers constructing shacks or stone tenements can finance their construction far more quickly and enjoy higher returns.

Table 6. Nairobi rental costs per unit of space

AREA	TYPE OF UNIT	SIZE OF UNIT (M <sup>2</sup> )	RENT PER MONTH	AVERAGE COST/M <sup>2</sup>
Kileleshwa	Apartment	145	80,000	551
Kawangware	Single-room tenement	9	5,000	556
Mathare	Single-room shack	9	3,000	333

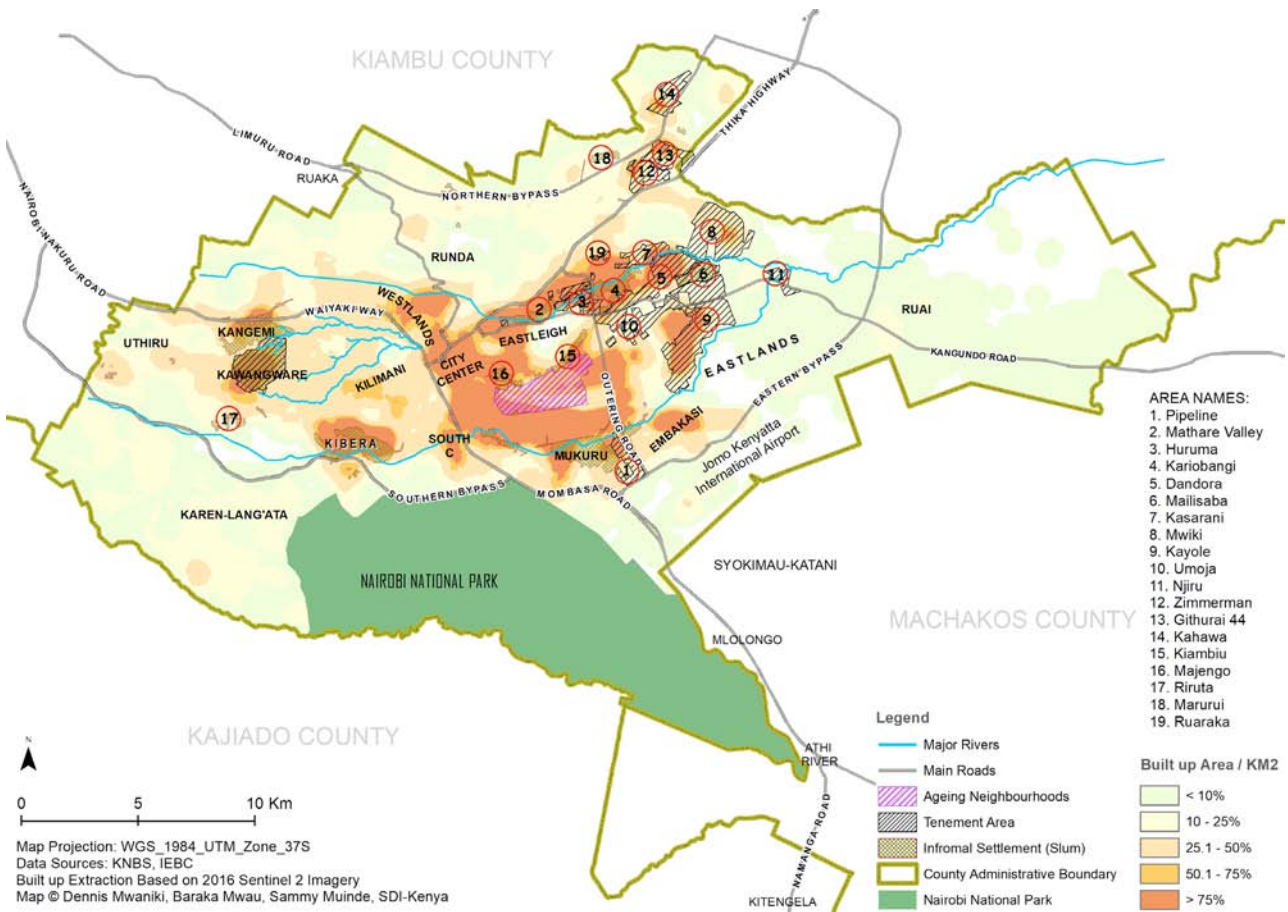
Source: Mary Mutinda, Strathmore University, prepared for this report

## 4.4 Low-cost shelter typologies

Nairobi has a variety of shelter typologies, which are differentiated by cost (rental/purchase), number of habitable rooms per unit, size of unit (plinth area), design, and the type of structure (eg apartment block, tenement block, town house, bungalow). Findings from our research linked low-income households mainly with single-roomed occupancy, which is provided through different approaches and building typologies. The study identified four approaches through which Nairobi's single-room and other forms of low-cost rental housing is typically provided: shacks, tenements, mixed shelter and ageing public housing (Table 1). Further analysis indicated that these shelter types have influenced various settlement patterns, with shacks mainly associated with informal settlements ('slums'). The subsequent section discusses the dominance of the single room as the main shelter typology for lower-income groups.

Meanwhile, the ongoing transformation in informal settlements is increasingly producing a mix of shelter types. In some parts of Nairobi, shacks and tenements are located next to each other, while they overlap in other areas. The latter is especially true in areas where shacks are gradually being transformed into tenements or flats with other units (eg one or two-bedroom units) such as in Umoja, Kariobangi, Huruma, Kangemi, and Kawangware. In the informal settlement of Mathare Valley, the area now has low-rise and multistorey shacks existing alongside tenement blocks, although they all provide single-room units (see case study in Section 5.1). Overall, shacks and tenements are in well-defined localities within the city; informal settlements are usually adjacent to tenements and newer settlements offering low-cost shelter dominated by tenements (Figure 13). Notably, the city's highest densities (whether built up or population densities) are found in areas dominated by shacks and tenements. However, the main dwelling type remains constant: single-roomed shelter.

Figure 13. Main informal settlements and tenement areas



## 4.5 The centrality of single-room housing and the tenement phenomenon

Single-roomed housing is Nairobi's most prevalent shelter type, which is largely provided by the private informal rental market at very high densities and extremely small units. Official data indicate that over two-thirds (69.5 per cent) of Nairobi's households occupy single-roomed units (KNBS 2018a). In particular, 36 per cent of Nairobi's households live in single-room tenements, while another 34 per cent live in single rooms made of iron sheets or mud, typically in informal settlements like Kibera, Mathare Valley and Mukuru (Mutinda *et al.* 2019). These cramped, poorly ventilated rooms measure on average just 3 by

3 metres. Meanwhile, Kenya's Housing Policy of 2004 (Republic of Kenya 2004: 9) defines the basic unit for urban low-cost urban housing as 'housing comprising a minimum of two habitable rooms, cooking area and sanitary facilities, covering a minimum gross floor area of **40 square metres** for each household' (emphasis added). Indeed, high densities in tenements and slums significantly contravene Kenya's planning and building regulations (see also Box 3). For instance, tenements usually have 100 per cent plot coverage, averaging seven walk-up floors and sometimes reaching 10 floors (eg Pipeline). Both tenements and one-room shacks are characterised by overcrowding, cultural inadequacy (especially for large families), and poor infrastructure. Very few households can afford to rent more than one room in the shack and tenement markets, even when faced with overcrowding.



Shack and tenement housing in Mathare Valley © Baraka Mwaui

### BOX 3. EXTREME DENSITIES IN TENEMENT DEVELOPMENTS

Single-room tenement housing is associated with extreme densities, where tens of households are concentrated in blocks occupying a small plot, usually not exceeding an eighth of an acre. The blocks normally cover 100 per cent of the plot and rise to as many as 10 floors; these are walk-ups without lifts. Utilities are shared at floor level, and sometimes on the ground floor only (eg a water tap). The design prevents the lower floors from enjoying direct sunlight, which compels households to rely on artificial lighting throughout the day (with associated costs). The lower floors face an added burden of poor ventilation. To provide flexibility, developers design single rooms with a connecting door (in case a tenant can afford to pay for two rooms). Characteristic tenement areas include Pipeline-Embakasi, Githurai, Mwiki, Kayole, and sections of Kawangware, Dandora, Umoja-Donholm, and Huruma-Mathare. They are semi-planned and often have quasi-legal status, and varied levels of land-tenure security. From a different perspective, tenements have contributed to compact, mixed-use

urban development. Nearly all street-fronting units on the ground floors are business premises. But the county government collects licence fees from these businesses, whose developments are classified by the same county officials as illegal (unapproved) developments.

Description of a typical tenement development:

- Average plot size/area (eg Pipeline area) = 30 x 60 feet (1,800ft<sup>2</sup> or 0.0413 acres or 0.0002 km<sup>2</sup>)
- Average household size = 3 (KNBS 2018)
- Average number of floors per tenement building = 7
- Average number of units per floor of a tenement building = 12
- Average population per tenement building = 252

Spatial analysis of population density in Nairobi indicates that areas dominated by tenement developments or where tenements co-exist with shacks, have the highest densities in the city.

Although tenements contravene city planning regulations and other regulations (eg public health), actors in these submarkets have developed substantial housing stock without facing official sanctions. Evidently, Kenyan authorities have turned a blind eye on this phenomenon, and perhaps aided it directly or indirectly. This raises significant questions on the effectiveness of the city's planning system; as noted

in Section 3, the interactions among various actors in housing and land delivery are characterised by corruption, informality and illegality. Without greater oversight and appropriate interventions from Kenyan policymakers, these complex governance arrangements will continue to channel much-needed finance into substandard low-cost units, given how lucrative the current model is already.



## 4.6 A multi-billion real-estate business founded on single-room shelter

Nairobi's private rental shelter business is massive and keeps attracting developers/investors in different submarkets. Investors are particularly interested in this submarket because of the relatively low capital requirements and shorter return on investment period, ready markets and low maintenance costs, which maximise profits. Based on research conducted for this project, investors in Nairobi's low-income rental housing market can realise up to four times better returns than those selling formal middle and high-income housing. This is based upon estimating the rental yield, as well as payback period, for a rental unit in the informal settlement of Mukuru and another in Nairobi's high-income area of Kilimani, as indicated in Table 7.

According to Kwangu Kwako (2017), a significant fraction (68 per cent) of landlords in informal settlements rely on rents as their primary source of income. An earlier study by Gulyani and Talukdar (2008) found that Nairobi's 'slum real estate' is huge and often

underestimated. In 2004, they estimated that this rental submarket received Ksh2.35 billion (US\$31 million). Currently, this amount is even larger, according to this study's estimates. Assuming an average rent of Ksh3,000 per month and that 69.5 per cent (1,033,929) of households (KNBS 2018a) reside in single rooms out of the city's 1,487,667 households (4.463,000 ÷ 3.0),<sup>43</sup> the cumulative rental income from these units is around Ksh3.1 billion or US\$31.01 million<sup>44</sup> per month. Thus, the total annual income from rental units is approximately **Ksh37.2 billion** (US\$372.2 million), which clearly demonstrates that this submarket, beyond providing shelter, is also highly significant to Nairobi's economy. The figures would be even higher if the estimates incorporated the earnings of informal utility providers, who thrive in Nairobi's informal settlements and tenements.

Fundamentally, this demonstrates that substantial capital has been invested in the production of low-cost rental shelter. Yet the city has been unable to leverage this vital capital or revenue streams for provision of improved low-cost shelter. This is partly due to the submarkets' lack of regulations and Nairobi's policies and practices, which have not meaningfully sought to transform living conditions in shacks and tenements.

Table 7. Comparing rental unit payback periods in Mukuru and Kilimani

FEATURE	MUKURU	KILIMANI
Type	1 room	2 bedrooms, 2 baths
Average size of unit	10m <sup>2</sup>	100m <sup>2</sup>
Purchase price	Ksh80,000	Ksh8,100,000
Price per m <sup>2</sup>	Ksh8,000	Ksh81,000
Rental (est)	Ksh2,000	Ksh80,000
Payback period	40 months	135 months
5-year implied yield	17.27%	-18.95%

Source: SDI Kenya/EARF market analysis/Mary Mutinda

<sup>43</sup> According to KNBS (2018a), the current Nairobi population is estimated to be 4,463,000 people, with a mean household size of 3.0.

<sup>44</sup> Currency conversion 1 US\$=100 Ksh.



## 4.7 Low-quality shelter: overcrowded and insanitary living conditions

This study has explored several challenges of occupying low-quality shelter, particularly due to overcrowding in a single room used as living room, bedroom, kitchen and sometimes as a bathroom (see for example Figure 14). Growing families bear the greatest burden of overcrowding, with socio-cultural imperatives often working to lower dignity for these families, due to the cultural inadequacy of the single room. A young woman in Mathare noted that it was difficult for her to feel comfortable given the lack of privacy:

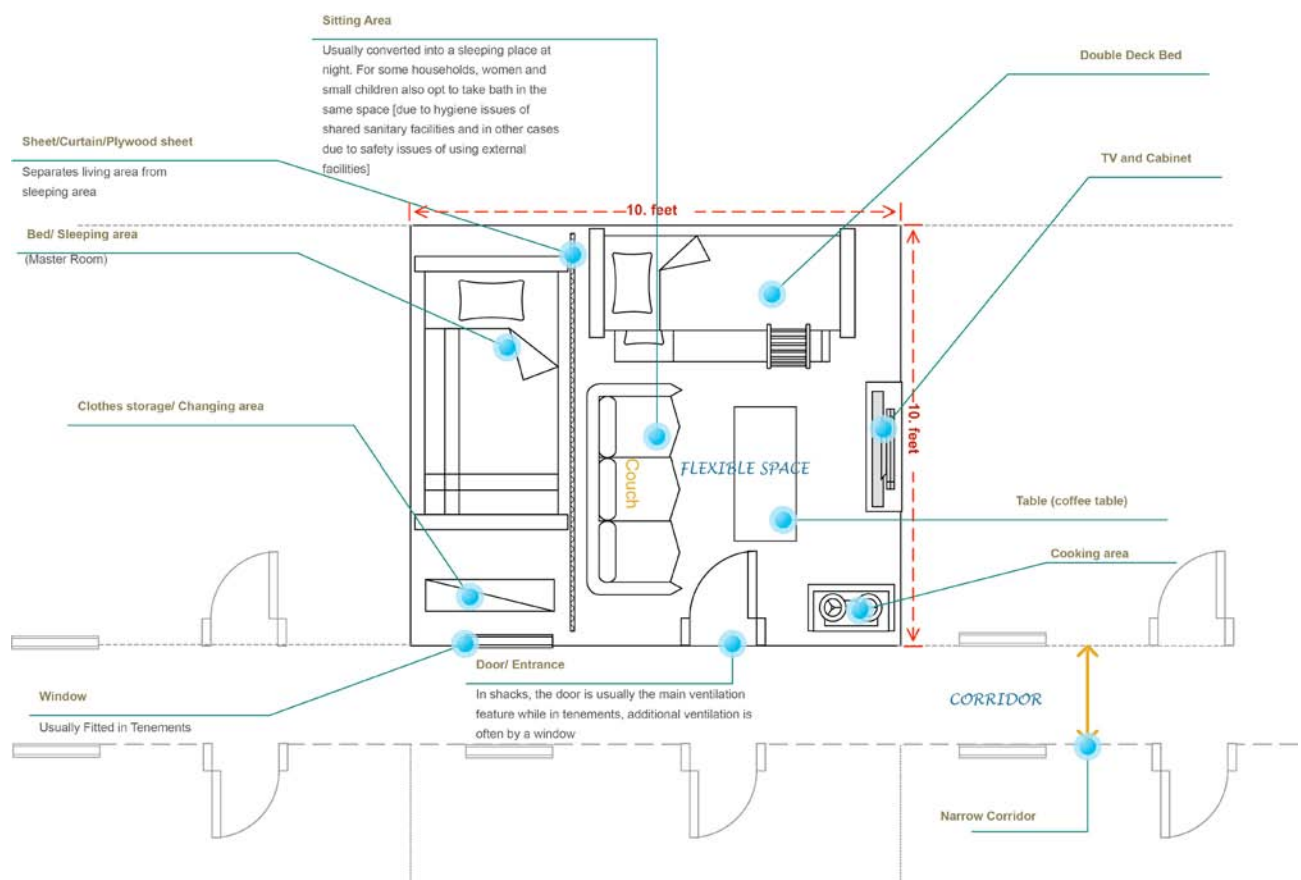
*The two bed spaces are separated by a curtain. When you come from the [outside] bathroom you dress behind the curtain in the children's bed space [also the living room], but you still feel uncomfortable knowing your father is just across the curtain.*

Female respondent in FGD with youth residents, Mathare

Others noted that overcrowding may compel families to separate, which may be linked to adverse coping strategies like early marriages and child labour: 'Circumstances force some children to early work – look for casual jobs – to afford rent for their own space' (FGD with women residents, Dandora). In other scenarios, 'most youth are forced to look for a way out of the house and start living alone' (male respondent in FGD with youth residents, Mathare).

Furthermore, there are major health risks associated with overcrowded, poorly designed units with inadequate ventilation and unclean water or energy provision, which may have gender-inequitable impacts. Shacks rarely have adequate ventilation. Although windows are available in tenements, the overall poor design of the block implies ventilation is again limited. This results in ongoing exposure to elevated levels of indoor air pollution, particularly in households cooking with paraffin and charcoal. Women and children are disproportionately exposed to the health risks of dirty fuels, as children are typically nearby or strapped to their mothers' backs as they cook (World Health Organization 2016).

Figure 14. Illustration of space adaptation in a single-room unit



Based on surveillance data in two informal settlements from 2003–2012, 30 per cent of women's deaths caused by injury were due to exposure to smoke, fire or flame as compared to just 12 per cent of men's (Mberu *et al.* 2015 for residents aged 15 or above). Inadequate water and sanitation are further public health challenges, with women and children again disproportionately affected (Box 1 on gender and WASH). Recently, the city has witnessed reports of cholera cases (Wahito 2019; Ministry of Health 2019), mainly occurring in the low-cost housing areas. Water provision is highly inadequate in both shacks and tenements, with reliance on vendors who resell water that is likely contaminated:

*The water safety is questionable because the pipes go through sewerage making the water very risky to drink untreated. We are forced to boil it or even use water treatment chemicals.*

KII, Mukuru resident

## 4.8 Ongoing transitions within low-cost shelter submarkets

Several informal settlements are undergoing transformations characterised by a shift from shacks to tenements, resulting in increased densities and crowding levels due to:

- In-situ gradual redevelopment (where a plot with shacks is cleared and a tenement is built, eg in Mathare Valley)

- Entire settlement transformation (where all shacks are demolished and tenements erected, eg part of Pipeline), and
- A phased transformation (where shacks are demolished then replaced with stone row-housing and later tenements, eg in Maili Saba).

In Mathare Valley, spaces with shacks are increasingly sold to new owners who prefer to develop tenements. This has triggered rising land prices, despite these lands lacking title deeds, and tenements' rents are higher as well (see Section 5.1 for case study on Mathare Valley).

Furthermore, the transformation from shacks to tenements may eventually rewrite existing (informal) rules of engagement between landlords and tenants, with new arrangements that are increasingly structured and formal. For instance, tenements are shifting towards signed rental agreements, deposits, identity verification, payment through bank deposits and mobile money, and tenant evictions in case of default. By the nature of the developments (requiring financing that ordinary informal settlement structure owners cannot afford), tenement developers are generally wealthier than shack landlords.<sup>45</sup> As a Mathare local leader explained,

*Most of the people investing the area's tenements are not residents, and rarely are they ordinary local structure owners. These are people with access to better financing as the construction is way too costly compared to shacks.*

KII, Mathare community leader



In-situ incremental shelter transition in Mathare Valley © Baraka Mwau

<sup>45</sup> There are still some exceptions when a developer (landlord) lives in the same building with tenants, though usually the landlord will occupy a different unit rather than the typical single-room tenement unit.

Several factors contribute to this shift from shacks to tenements: escalating demand for low-cost rental housing, de facto tenure security, capital inflow into the tenement submarkets or developers willing to venture into tenements, and a vibrant informal construction sector with diverse actors (eg contractors, suppliers, technicians). More fundamentally, it is rooted in the absence of the state in policy and regulation as well as power relations among the actors in 'hybrid' governance forms that have facilitated Nairobi's burgeoning informal rental housing markets (cf. Meagher 2012).

Although the ongoing transition has brought much-needed investments in low-cost rental housing, living conditions remain poor and tenements have generated major safety risks. According to a Kenyan official,

*Players in the low-cost rental housing are looking for quick money. The sector lacks adequate regulations on rental housing eg what should be the size of reasonable basic unit. That has been left to market forces, where the tenant is left vulnerable.*

Kll, senior policy officer, State Department of Urban Development

The new face of 'elite landlordism' is likely to further disadvantage Nairobi's low-income tenants, particularly if the markets remain unregulated. Indeed, tenements have been associated with some of the worst construction-related disasters in the city. For instance, a tenement that collapsed in April 2016 left tens of people dead. By 7 May 2016, the death toll had reached 45 (Murimi 2016). There are several crucial policy concerns arising from Nairobi's tenement production, as follows:

- **Unsafe buildings and poor services:** The persistence of unregulated high-rise construction has exposed tenants to safety risks, which are associated with both design and construction. The units are overcrowded and typically have low-quality infrastructure and services.
  - **Lack of green space and poor living environments:** Tenements result in 'concrete jungles' where buildings are poorly designed and the physical environment highly degraded. Blocks have 100 per cent ground coverage and no landscaping (greenery) is introduced. The only remaining space, the street space, is overwhelmed by competing uses. On some floors, tenants lack access to direct sunlight and ventilation is inadequate. Poorly designed buildings also reduce thermal comfort, especially when temperatures rise.
  - **Costs of retrofitting infrastructure:** The high densities are poorly designed, with inadequate spaces (right of ways) allocated, if any, to network infrastructure (eg water and sewerage). Improving this infrastructure may incur higher engineering costs in the limited street space than if the densification had been well planned.
- In the settlements experiencing phased transformation, various forms of transitional shelter exist. Security of tenure (de facto and de jure) has played a significant role in shaping the transformation. For example, in Kawangware-Kangemi and adjacent peri-urban areas, where most landowners have title deeds, it was established that venture agreements are gaining popularity. A developer leases the land for a period to build housing or commercial premises and returns are shared at agreed proportions between the two parties. These agreements are usually endorsed through legal practitioners. But despite the areas' secure land tenure, several landowners cannot undertake development due to financial constraints, family conflicts over inheritance, speculative landholding, and perceptions of losing possession of the land in case of joint ventures with developers. Essentially, the absence of a comprehensive spatial development framework has served to reinforce these challenges. Nevertheless, alternative approaches are emerging, including models that support landlords to deliver transitional shelter at affordable rates (see Box 4).

## BOX 4. EMERGING INTERVENTIONS FOR PROVIDING LOW-COST TRANSITIONAL SHELTER

There is an absence of an enabling framework for incremental shelter improvement. Nairobi's approach to improved shelter is often synonymous with conventional typologies, with an emphasis on improving access to formal homeownership. However, the mode of transitional shelter can offer an alternative pathway to accelerate delivery of improved housing. Interventions in transitional shelter are emerging, such as the work of Kwangu Kwako Ltd (KKL). KKL is a Nairobi-based start-up founded in 2015, with a focus on delivering improved low-cost shelter (in both construction and occupation). The company uses precast concrete panels that are manufactured off site, then transported and assembled on site. Its model combines fast delivery and low-cost construction to deliver shelter that is accessible to low-income households. It is also intended to be affordable by lower-income developers or landowners lacking access to credit for developing multistorey buildings but who could afford lower-cost credit. For instance, with a financing product charged below current bank lending rates (13 per cent) and for a repayment period of 5 to 7 years, a developer can earn a viable income and above repayments for an investment comprising 7 units (each 12 x 12 feet) costing Ksh1,000,000 (US\$10,000 excluding VAT) and generating monthly rental income of Ksh31,500 (US\$315). Based on its business analysis, KKL indicates that lowering lending rates (below current market rates) for the target developers/landlords will significantly promote upscaling of the model in informal settlements.

Overall, the model is promising for developers/landlords and tenants, as well as offering potential benefits for advancing affordable housing objectives. The key features of the approach are:

- Low-cost production, which enables affordability by small-scale developers, with relatively low maintenance costs
- Low-cost production with better shelter, which can incentivise tenants to pay reasonable extra costs, thereby maintaining affordability for lower-income groups, in addition to providing a sense of dignity, improved safety and public conditions, and
- Structures are made of durable materials, but with consideration to low-cost and convenient deconstruction, thus facilitating access to improved shelter in the transitional period while allowing room for long-term redevelopment.

Importantly, such models demonstrate the adaptive characteristics associated with the city's rental housing context, which is highly segmented and attracts investors with varied financial capabilities. Models of this nature offer a viable option for upgrading informal settlements, with opportunities for incrementalism combining public and private-sector investments. Essentially, with local planning and infrastructure provision, such models may provide an alternative pathway to addressing informal settlements. Above all, these ongoing transitions in Nairobi demonstrate that low-cost incremental shelter can be provided by formal and informal processes that can interact to provide novel solutions, which can evolve over time to meet the needs of low-income households.



Transitional housing model © Simon Dixon, Kwangu Kwako Ltd

Sources: Kwangu Kwako Ltd, [www.kwangukwako.com](http://www.kwangukwako.com); Kwangu Kwako Ltd (2019); Research notes from Kwangu Kwako Ltd office visit discussions; Kabale (2019).



## 4.9 Land markets in informal settlements

In informal settlements, land markets mainly operate outside of formal procedures, as land ownership is often contested. Tenure security is often legitimised through occupation licenses/certificates issued by the local authorities (Mutisya and Yarime 2011) and land companies. In other settlements such as Kawangware, many landowners possess title deeds but choose to invest in low-cost rental units (eg shacks). As discussed below, residents in Maili Saba have mobilised for regularisation, and although they only have de facto tenure, this has helped to upgrade shelter quality.

In Maili Saba, a complex web of actors worked together to dispossess an unsuspecting community after the land was no longer used as a sisal plantation. These actors in Maili Saba included local politicians, public land and planning officers, and local administration. Historical accounts reveal that the current tenure contestation could have been avoided, if transparent procedures were followed in changing the land use. Residents lacked formal title deeds and tried to mobilise for a new subdivision scheme:

*Upon checking the history of the land, we realised that the land was divided by a group of powerful persons into 42 pieces of different sizes from a single large parcel. We mobilised as a community and countered this with another subdivision driven by us and with support from a Ministry of Lands surveyor. Our subdivision resulted [in] 6,000 to 7,000 plots, which we started occupying [...] Our subdivision scheme was never approved or adopted as official government documents. But it has become a crucial reference document in our struggle for land title deeds [...] Up to date, the residents have never seen anyone coming to the settlement with a court order claiming that the land belongs to them [...] but we still don't have title deeds.*

Kil, community leader, Maili Saba

Through a combination of political patronage, shifting power relations and community mobilisation, the land remains under occupation of the community, and residents' de facto claim to tenure security has facilitated a gradual transformation in Maili Saba. De facto tenure and local politics (of patronage) can facilitate shelter transition, such as a shift to more durable dwellings even in the absence of title deeds. In the Maili Saba case, residents' lengthy agitation for land regularisation has created a sense of lower risk among the occupants of the land, in turn influencing a gradual transition from shacks to durable housing (including stone-walled, low-rise buildings and tenements). This is perceived as progression towards building a stronger case for property rights.

Furthermore, the lack of title deeds seems not to deter investments in tenement housing; this is also a notable feature in areas such as Mathare, Pipeline, Kayole and Huruma. In turn, these findings suggest that when urban planning and governance are ineffective, risk-taking and rent-seeking behaviours can facilitate land development.

We argue that the absence of formal documentation for land ownership has generated paradoxical outcomes in shelter quality. In some instances, this has created room for incremental housing improvement (outside the restrictive planning controls), resulting in affordable low-cost housing and gradual improvements over time as in Maili Saba. But on the other hand, the limited flow of capital for housing construction can also result in substandard (unregulated) housing, including low-quality shacks in informal settlements. And as noted above, the processes related to land acquisition and construction in these settlements often encompass various state and non-state actors, which makes it hard to delineate clearly between formal and informal (see Box 5).



## BOX 5. A TYPICAL LAND-TRANSFER PROCESS IN AN INFORMAL SETTLEMENT

According to our interviews with land brokers and community leaders as well as FGDs, land markets in informal settlements have a locally legitimised process of transferring land (although operating outside the legal land transactions process). These procedures and key actors are as follows:

- Brokers scout for potential buyers or a potential buyer scouts for land for sale. The entry point in informal settlements is often through community leaders, the local chief, local brokers or local gangs who have interests in land transactions.
- The buyer and seller are then linked; sometimes these parties may be represented by proxies.
- An 'ownership search' is conducted to identify the current owner or holder of the site. In areas lacking cadastre-related records, the use of a 'black book' (usually stored at the chief's office or held by a community leader or 'authorised person') is used as reference. A ballot certificate/card with a unique number is used to identify the land. Where land has share certificates or certificates of ownership, the search and transfers are usually within the relevant

institution (eg land-buying company, cooperative etc).

- An agreement is drafted and signed between the buyer and seller. Other signatories are witnesses: chief, buyer/seller witnesses, community leaders and brokers. Sometimes a lawyer is involved to facilitate a sale agreement.
- Money is then transferred to the seller, and the buyer is provided access to the land. The 'ballot card' (a numbered card issued after allocation of plots through a balloting process) exchanges ownership and a search for ownership status or change of ownership are recorded in the black book. In other cases, it is the share certificate/certificate of ownership which is transferred.

Importantly, the local administration plays an instrumental role in legitimising land sales/structure sales in informal settlements or in areas without formal land tenure (title deeds). Furthermore, the local administration was found to play the role of the planning authority by issuing permissions for construction or enforcing certain conditions.

## 4.10 Occupancy agreements and tenant mobility

Occupancy arrangements often vary between Nairobi's tenements and shacks. In shack housing, rental agreements are mainly verbal, and a tenant is rarely required to provide a one-month deposit before occupying a shack unit. But in tenements, most units are occupied only after a deposit is paid, which acts as security for the landlord in case the tenant defaults. In tenements, there are also cases of written agreements, particularly when the landlord has contracted an agent to manage the property (eg Pipeline area). In some cases, agents ask tenants for copies of their national identity document (ID) and undertake background checks on the potential tenant's credit rating. According to FGDs in the tenements of Pipeline and Ngei-Huruma, a deposit is often used and typically not refunded (especially where a condition is given that the deposit is available upon presenting a three-month notice prior

to exiting the unit). However, this is not the standard operation as there are landlords who refund the amount without such a complicated process. Respondents noted that it is hard to present three months' notice, as some move out within a short notice period.

Indeed, movements within Nairobi's informal rental units are very common. The main reasons for tenant mobility include change of workplace/employment dynamics, evicted rent defaulters, insecurity (particularly in Maili Saba and Dandora) and poor infrastructure (especially water and sanitation as tenants move out to find better-quality affordable provision).<sup>46</sup> Additionally, tenants may seek a slightly cheaper unit (related to financial challenges) but not necessarily in a different submarket. Larger households may seek additional space, but only a few can afford these costlier units. Similarly, Talukdar (2018) concluded that there is little upward mobility or across submarkets in Nairobi, but rather more of 'circular mobility' where most households move to units in the same submarket (eg shack-to-shack moves).

<sup>46</sup> For example, better hygiene can be a key determinant of staying or moving to another unit: 'The toilets [here] are clean. If you walk down towards the valley where it's more of a ghetto, with no sewerage, then the situation there is worse off [...] Open defecation is the norm' (household interview, Dandora).

## 4.11 Evictions and their impacts: lasting exclusions following displacement

Various forms of evictions in Nairobi have occurred:

- By the government, for example evictions from structures on riparian and road reserves. Recent evictions have lacked a resettlement action plan, exacerbating the vulnerabilities of affected households.
- By private developers/landowners, when a person claiming or having ownership of occupied land evicts the residents (usually with government presence either in the form of court orders, police offering security, or a combination of both).
- By landlords/structure owners, where tenants are evicted due to rent disputes. Compared to tenement landlords, structure owners in shacks are more likely to negotiate with tenants to create alternative payment options. In tenements, the 'distance' in relations between tenants and landlords is more defined and stringent. In FGDs from Pipeline, residents narrated ruthless accounts of agents evicting rent defaulters; in other circumstances, debt recovery agents are procured to deal with defaulters.

Where demolitions/evictions have affected several units, rent rates subsequently increase. As Huruma residents explained,

*Houses are expensive right now due to demolitions. A house that used to go for Ksh3,000 is now Ksh5,000 because the landlords have employed agents to help them collect the rent because they do not want to face the tenants.*

FGD with Huruma-Kiamaiko residents

Landlords, facing the wrath of tenants after a series of collapsed tenement buildings,<sup>47</sup> sought to hire agents to collect rent on their behalf. In turn, agents charged a mark-up price for their services, again resulting in increased rent.

### 4.11.1 Kibera evictions (2018)

After forcible evictions during July and August 2018, Kibera residents recalled the lasting psychological damage as well as rising rents and several economic losses. Over 20,000 households were forcibly uprooted due to the construction of a road (Golla 2018) and when interviewed in February and March 2019, evictees were still struggling to recover. One man reported rents rising from Ksh2,500 to 4,500 after the eviction, with further challenges such as his boys now sharing a room with girls and most of his customers relocating (household interview, Kibera man in single-room shack). Since his shoe-repair stall was bulldozed along with his home, he lost his stock and is now working in a makeshift shed located in a less central site. His major economic losses and rising rents, as well as decreased privacy and other negative impacts, were echoed amongst other evictees. A married woman with three children was given limited advance notice and lost nearly everything (including items stolen by fellow residents), leaving her 'furious' and shocked (household interview, Kibera woman in shared one-room mud house). Her rent had increased, and her household had to start afresh: they were 'buying things you didn't have money to buy [...] I have only a bed and a stove.' Her children now have to sleep on the floor, and she noted that their school performance declined initially.

Evicted households were acutely aware of these injustices, particularly around limited notice or non-existent compensation, and they voiced strong feelings of exclusion and outrage. A man born in Kibera said that his family had not received any notice, and it was 'chaotic and horrifying' as people stole from each other. Although he still works as a *matatu* tout, he is now reliant on candles after their electricity was cut. He argued passionately for compensation and better treatment. Furthermore, in a damning indictment, he declared that the roads will only usher in rich Kenyans:

*We are human beings, and they should have done it in a better way. We were promised compensation but up to now, nothing has ever happened [...] Kibera belongs to the rich because the roads are now being constructed to indicate that this is the material entry-point to build houses for the rich.*

Household interview, Kibera man in single-room mud shack

<sup>47</sup> For reports on several collapsed tenements in 2016, see <http://bit.ly/2BPcQKO> and similar incidents in 2018 <http://bit.ly/346iWT8>.

## 5

## Case studies

## 5.1 Mathare Valley case study

Mathare Valley is located about 6km northeast of Nairobi's CBD, in the valleys of the Mathare and Gitathuru rivers, and it is one of Nairobi's oldest informal settlements. Initially, the area was a stone quarry and was later razed by the British in the 1950s, when many residents were active participants in the nationalist movement (UC Berkeley *et al.* 2012). After independence in 1963, Mathare grew rapidly and had an estimated 30,000 residents in 1969 (University of Nairobi 1971). At the time, most homes were built from mud and wattle, but residents already had strong local leadership and organisations. They advocated successfully to stop demolitions, built a social hall, and improved water provision and security (Hake and Ross 1969). Similar to Nairobi's contemporary informal settlements, Mathare's structure owners in the 1960s would 'see their capital investment paid off in very short periods' (ibid: 59). In the late 1960s, Mathare already had large-scale land-buying companies and housing cooperatives that engaged in speculative construction (University of Nairobi 1971).

Mathare is now one of Nairobi's largest informal settlements but occupies just 0.89km<sup>2</sup> of land, with a flourishing informal economy that is strongly segmented by gender. By 2009, Kenya's census reported over 80,300 residents living in 13 villages (ie smaller sub-areas in Mathare), but other research estimated the population exceeded 188,000 in 2011 (UC Berkeley *et al.* 2012). A recent survey with 100 Mathare residents

found that 30 per cent of households are female headed and 69 per cent of women work within the settlement, largely in informal livelihoods, as compared to 31 per cent of men working in Mathare (Kovacic *et al.* 2019). Leading occupations in Mathare include small businesses and salons (especially for women) as well as construction and casual jobs, particularly for men (ibid: 624).<sup>48</sup> The wide array of local livelihoods, as well as Mathare's long history in Nairobi, underscore the need to respect and maintain informal settlements' vibrant social and economic ties.

Informal labourers' earnings are often erratic and difficult to estimate, but past studies in Mathare have found entrenched poverty and that food typically is the largest household expenditure. A recent survey with 550 Mathare women found that 25 per cent earned less than Ksh5,000/month (US\$50), while half earned from Ksh5,000 to 10,000 (US\$100), and another 24 per cent earned over Ksh10,000 (Winter *et al.* 2019: 4). Surveys by UC Berkeley in 2011 found that monthly household expenditures were about Ksh14,700 (Ksh85 to US\$1 at the time) (UC Berkeley *et al.* 2012). Rents averaged approximately Ksh1,200, while food comprised the biggest expenditure at Ksh6,500 (ibid: 23). More recently, our FGDs in Mathare indicate that the monthly rent for a single room ranges from Ksh1,800 to 3,000 (US\$18–30). Households' monthly expenditures on food, rent and utilities average Ksh20,000 (US\$200), which excludes key costs like healthcare or school fees. More generally, most households in Mathare struggle to meet their basic needs, often resulting in deficit financing through credit (mainly from informal sources).

<sup>48</sup> Mathare also has a range of food vendors selling low-cost, accessible items (Ahmed *et al.* 2015), with female food vendors predominately selling cooked food or fresh produce and men selling meat, dairy, or other higher-value items.

Although Mathare's housing is undergoing densification, there are stark internal variations in land and shelter provision as well as continued wrangling over land ownership. A woman who arrived in 1990 recalled that houses were made of mud, with only nylon bags on the roofs, but today units are typically made of iron sheets or concrete (Mathare women FGD). Another resident who arrived in 1975 recalled the lack of water (still a major concern) and the inadequate internal accessibility that led to their son's death in 1986 as the poor roads prevented their access to the hospital (Kosovo mixed FGD). Following Kenya's 2007 post-election violence, several structure owners in Mathare were forcefully displaced. Indeed, in some sections of Mathare (eg Number 10 village), local gangs can play a key role in displacing structure owners and determining rental prices, as well as facilitating buy-outs. Residents in Number 10 village also organised to resist rental hikes, which resulted in several structure owners transferring ownership to local owners.

*Number 10 has the lowest rent rate because the residents control amount of rent to be paid [...] If a landlord/structure owner sets high rent rates, they will not pay and you will not evict anyone [...] If a resident pays an increased rent without their [local gang] approval, then that attracts 'punishment'.*

#### Mathare recent migrants FGD

Recently, multistorey iron-sheet buildings are being erected by outside investors, who buy land from original landowners; tenements in the area are increasingly

catering for students.<sup>49</sup> The emergence of tenements in Kosovo village was also linked to rising demand for single-roomed housing by new migrants and job-seeking graduates, who appreciate Mathare's proximity to the town centre and Thika Highway (Kosovo mixed FGD).

However, these changes can be interpreted as a 'silent displacement' of the residents who cannot afford the new tenement units (usually priced at double the rental rate of shack units). Pressure for low-cost shelter in Kosovo is also influencing the emerging construction of multilevel shacks. This was especially linked to structure owners staying in the village and being unwilling to sell their spaces to tenement developers.

Mathare's land tenure is diverse and often contested: some villages are on public and others on private lands, with some having title deeds (which can facilitate access to a housing loan) and others still lacking titles. This tenure mix is also associated with the shelter typologies: for instance, villages with de facto tenure are increasingly transitioning to tenements (eg Kosovo, Gitathuru). Meanwhile, areas dominated by shack structures have highly contested ownership (eg Kiamutisya) or on public land but with strict controls on what can be constructed (eg Mathare 4B village). Furthermore, land costs decrease near the river, as these areas are at greater risk of demolition and environmental disasters such as flooding. Despite the persistent land tenure challenges, land transactions continue unabated, which is facilitating the ongoing shift from shacks to tenements. The transactions'



Emerging tenement landscape of Mathare Valley  
© Sammy Mutinda

<sup>49</sup> 'Some students from the nearby college [Kenya Medical Training College-Mathare] now live in Kosovo, and recently we are noticing more and more college students or graduates coming to seek housing' (KII, Kosovo community leader).



informal nature has still attracted outside capital into the profitable tenement business.

Mathare's infrastructure remains highly inadequate, despite recent efforts to formalise access to electricity or water (see also Section 3.7). A survey with 100 residents found that although 93 per cent had electricity, only half had access from Kenya Power and there was still a widespread presence of illegal power cartels (Kovacic *et al.* 2019: 622). In FGDs and interviews, Mathare residents confirmed that electrification has been largely unsuccessful, due to Kenya Power's poor implementation of pre-paid meters and residents' continued use of illegal providers that are more flexible and affordable. High-density tenements are further straining Mathare's inadequate infrastructure. But access to services can vary significantly across the villages, due to several factors associated with political patronage, disjointed interventions (mainly by civil society and government), and local governance arrangements where villages that are perceived as easy-to-implement projects typically benefit more.

Mathare is highly insecure (especially at night) and can be segregated by ethnicity, but ethnic violence remains rare and largely limited to electioneering times, when tensions run high between Kikuyu and Luos:

*During the elections, no one is supposed to cross each other's territory.*

Young woman in Mathare tenement

In the 2017 elections, violence and multiple deaths were reported in Mathare, some linked to opposing tribal factions (Auma and Anyango 2017; Reuters 2017; Human Rights Watch 2017). After electioneering periods, violence only occasionally erupts along tribal lines, but some residents may also struggle to access housing in villages where their tribe is less dominant. As one man explained,

*The area is segregated on tribal basis. One may find it hard finding a house in a region dominated by another tribe, out of fear.*

Man in Mathare stone house

Violence in the settlement is also associated with the control of resources such as land and utilities. High levels of insecurity are a key factor shaping access to sanitation, as women and girls in Mathare may fear to go outside to access toilets at night (see Box 1). A report by Mathare Social Justice Centre (undated) indicates a settlement with normalisation of violence, as well as elevated prevalence of extrajudicial killings.

Due to low incomes and unemployment challenges, youth in Mathare often experience stigma and barriers in the labour market. FGDs indicated that their residence in Mathare can become a source of discrimination during job recruitment, due to perceptions of criminality amongst slum youth:

*When you go for a job interview with youth from other areas [middle and upper income] or those whose parents are known, they are the ones given the opportunity. When you mention that you are from Mathare, they [recruiters] promise to call you back. But they never call back.*

Participant, Mathare youth FGD

Similarly, discrimination can occur within Mathare because elder residents may again associate the youth with criminal elements and hence deny them access to shelter:

*We must monitor the youth, especially single men, otherwise you might go away for your daily business only to come back and find your house empty. Because of this, we must be keen on who we allow to join our plot [building].*

Participant, Mathare youth FGD

However, it is important to note that informal settlements like Mathare still offer several advantages, including affordable housing, access to jobs, strong social networks and mutual aid. Youth noted that Mathare's living costs are affordable and they also appreciated its strong social ties:

*The advantage of staying here is that I intermingle with people easily [...] Should anything happen, these are my brothers because they will be ready to help me.*

Participant, Mathare youth FGD

Many residents in Mathare can walk to work, saving on transport costs. Additionally, in a study with Mathare youth seeking to explore their individual and community strengths (Dakin *et al.* 2015), young men and women highlighted their own industriousness and resourcefulness, rather than the stereotype of laziness, as well as the resilience created through overcoming adversity: 'Mathare has really made the people here grow [...] They have experienced the suffering [and] it has helped them to become used to the place [...] It makes them strong' (ibid: 184).



## 5.2 Mukuru case study

### 5.2.1 Overview

Mukuru residents face overlapping risks linked to poor-quality housing and infrastructure, which are compounded by environmental hazards and eviction threats due to the area's prime location. This large settlement has a population of 100,500 households (averaging three people per household), and it is located on 450 acres of mainly private lands about 7km from Nairobi's CBD (Mutinda and Otieno 2015). Many Mukuru households grapple with inadequate water and sanitation, hazardous electricity connections and industrial pollutants that combine to imperil their health and well-being (Sverdlik *et al.* 2019). Mukuru's location in the industrial area has exposed residents to a range of hazardous effluents. It is located near a range of noxious industries, such as chemical manufacturing, auto repair, and battery recycling facilities (UC Berkeley 2018: 18).<sup>50</sup>

Many Mukuru residents work nearby in the industrial area, but poverty and food security remain chronic concerns. In surveys with over 3,400 households from Mukuru and three other slums, residents typically devoted most of their incomes to food (52 per cent of household incomes) but regularly go hungry (Amendah *et al.* 2014: 4). Similarly, household surveys in Mukuru found that average incomes were about Ksh12,000 and expenditures of about Ksh6,700 with food comprising 52.2 per cent (Ksh3,488) and rent comprising 30.6 per cent (Ksh2,045), plus 6.5 per cent on water and 6 per cent on electricity (UC Berkeley *et al.* 2017: 18). There is also substantial variation within Mukuru, with rents averaging Ksh2,045 but varying across villages from Ksh1,580 to Ksh2,750 (*ibid.*: 22).

Although largely sidelined in Nairobi's past shelter interventions, Mukuru is scheduled to benefit from a pioneering multisectoral upgrading project. In 2017, Nairobi's county government declared it a Special Planning Area (SPA) following advocacy by Kenya's slum-dweller federation Muungano wa Wanavijiji. Muungano receives technical support from SDI Kenya and AMT (together known as the 'Muungano Alliance'), and their advocacy drew upon longstanding action research in Mukuru with universities and experienced advocates.<sup>51</sup> The SPA will generate a participatory, holistic upgrading plan that is co-produced by Mukuru residents and the county.<sup>52</sup> Muungano's prior work in Nairobi centred upon informal settlements found on public lands, but their successful advocacy in Mukuru

is a significant victory, particularly as many of Nairobi's other informal settlements are again located on private lands (Lines and Makau 2017: 60).

### 5.2.2 History of Mukuru: land and housing transformations

Mukuru was founded around 1958, and the settlement has grown rapidly despite persistent eviction threats from well-connected landowners. Initially, the land was owned by a white farmer named Reuben but after his death, local government took ownership of it (UC Berkeley *et al.* 2017: 6). President Moi began allocating the land in the 1980s: under conditions of the grant to the original recipients, the area was intended to be used for light industries and buildings developed within 24 months of registering the grant (Akiba Mashinani Trust *et al.* 2014: 48). Many of Mukuru's landowners are politically powerful, and some titles are now mortgaged to banks (Lines and Makau 2017: 63). Some land has remained undeveloped and unalienated; some has been sold to third parties on the open market, or currently unallocated but encroached upon (Akiba Mashinani Trust *et al.* 2014, Ouma *et al.* 2019).

Mukuru's main shelter typology is metal shacks with very few permanent dwellings, but there is increasing densification. About 90 per cent of Mukuru residents are tenants; most dwellings are single or double-storey shacks built of mud, galvanised iron sheets, and/or waste materials. A total of 22,871 structures have been identified in Mukuru: only 1,261 have 'permanent' building materials, while the other 21,610 are 'temporary' units (Sverdlik *et al.* 2019). Mukuru's typical metal shacks are provided by both small-scale, local owners and wealthy absentee landlords. A 2016 profile revealed that 30 per cent of its slum shacks are now double-storeyed, suggesting there is greater densification although the area currently has few tenements (Lines and Makau 2017: 32).

Some flood-prone areas of Mukuru are found along the low-lying banks of the Ngong River, and the riparian zone is at heightened risk of flooding and landslides. Degraded wetlands, impervious surfaces, and the ensuing surface runoff has led to greater concentration of sediments, which can block Mukuru's already poor drainage (UC Berkeley 2018: 31–32). Casualties and building collapses have even been recorded after flooding: on 12 May 2015, at least 10 people were killed in Mukuru after a building wall and mosque partially collapsed following six hours of heavy rainfall (Ombati 2015).

<sup>50</sup> The area's elevated air pollution levels are also due to widespread rubbish burning and unclean household cooking fuels (UC Berkeley *et al.* 2017), reflecting limited access to clean energy and solid waste management.

<sup>51</sup> 'Mukuru' is a summary term for a settlement made up of three neighbourhoods in Nairobi's industrial area: Mukuru kwa Reuben, Mukuru kwa Njenga, and Viwandani.

<sup>52</sup> See [www.muungano.net/mukuru-spa](http://www.muungano.net/mukuru-spa)

### 5.2.3 Mukuru's inadequate and hazardous housing and infrastructure

For residents enduring Mukuru's low-quality shelter, daily life usually entails an ongoing assault to their dignity and unfulfilled pledges from politicians. For instance, a female casual labourer with six children has lived for four years in a single room, which is part of a two-storey metal structure. They share a single bathroom and a single latrine with over 25 households, which is rarely emptied. They pay Ksh300 per month for illegal electricity, and she witnessed over 100 homes burnt in a fire. Her girls must fetch water after school, totalling Ksh50 per day; unusually, she uses Waterguard to treat the water. Although a nearby road has been upgraded and a few streetlights installed, their quality of housing is extremely poor and yet rents have risen from Ksh500 to over Ksh2,000 per month. As she lamented, politicians failed to deliver much-needed improvements and their shelter remains highly inadequate:

*Honestly, we live here out of sheer perseverance. It is not by choice. The house has so many holes in the [metal] walls [...] At night it is extremely freezing. [Politicians] promise us a lot of things during the elections time but upon the achievement of their goals, they disappear.*

Mukuru woman in single-room shack

Although WASH provision varies across the settlement, consumption is typically low and cholera outbreaks have been recorded, particularly during the rainy season. As many as 66 per cent of Mukuru residents live within a 15-minute walk of a water source, but they often encounter lengthy queues and water rationing, making access extremely onerous. There are also marked spatial variations within Mukuru: only residents in a few areas of Mukuru kwa Reuben and Viwandani live within 25m to 50m of each water point (Water, Sanitation and Energy Consortium 2018). In 2014, research with over 700 Mukuru residents found that the average person used just 21.6 litres of water per day and 98 per cent used a shared toilet facility (Patel and Chadhuri 2019: 5). Similar to Nairobi's other slums, Mukuru has suffered recurrent cholera outbreaks that are likely due to contaminated water connections and poor sanitation.<sup>53</sup>

Regular fire outbreaks in Mukuru are linked to the use of hazardous electricity and paraffin lamps; these risks are only heightened by high-density shacks and

inadequate access to emergency services. Although no comprehensive data on Mukuru's fires are available, our household interviews confirmed that fire outbreaks are common (see also University of Nairobi and Red Cross 2016). As in Nairobi's other informal settlements, Mukuru was the site of an electrification programme by Kenya Power and the World Bank,<sup>54</sup> but the initiative was hampered by informal providers who vandalised meters and by some residents' inability to afford pre-paid electricity tokens. As a tenant explained,

*We fully embraced the token system [but] there are those who were not pleased. They have since vandalised the meters, tapping electricity from the poles, and creating their own supply within the settlement.*

Male divorcee in Mukuru single-room shack

More generally, residents of Mukuru suffer a significant 'poverty penalty,' where households can only access higher-cost yet lower-quality services than in Nairobi's formal estates. The average structure in Mukuru (a 10-by-10-foot rented room without amenities) is 10 per cent to 26 per cent more expensive per square foot than formal estates in nearby Imara Daima with all services provided (Akiba Mashinani Trust *et al.* 2015: 74). A three-person household buys, on average, about three 20-litre containers of water per day (at Ksh3 to 5 per jerry can), totalling Ksh270 to 450 (Water, Sanitation and Energy Consortium 2018: 4). This monthly cost is about **nine times** higher than the comparable amount spent by residents in Nairobi's formal housing, again representing a 'significant poverty penalty' (*ibid.*). Such stark disparities helped to motivate the county government to declare the new SPA in Mukuru.

### 5.2.4 Special planning area (SPA) and politics of upgrading

Nairobi has several other upgrading projects, but the SPA is distinguished by its scale, governmental support, and multisectoral participatory approach. The settlement's elevated levels of pollution, hazardous service provision, and lack of prior interventions, as well as its immense potential due to its central location and vibrant livelihoods, all helped to spur the SPA declaration.<sup>55</sup> Under Kenyan legislation, Nairobi's county government must develop an integrated plan to redevelop the area within two years.

<sup>53</sup> However, Mukuru has also been the site of a successful eco-sanitation initiative called Fresh Life Toilets (FLT). Data from 2016 suggest that about 35 per cent of Mukuru's toilets are FLT, typically in Mukuru kwa Reuben (O'Keefe *et al.* 2015; Strathmore University 2016). Although residents often view FLT as an improvement on insanitary latrines, the cost of Ksh5 per use can be prohibitive, especially for large households.

<sup>54</sup> See [www.gprba.org/knowledge/multimedia/power-kenyas-urban-poor](http://www.gprba.org/knowledge/multimedia/power-kenyas-urban-poor).

<sup>55</sup> Kenya's Physical Planning Act (PPA) (2012) defined a 'Special Planning Area' as 'an area that cuts across the boundaries of two or more local authorities and which has spatial or physical development problems and is declared as a SPA. The newly enacted Physical and Land Use Planning Act (PLUPA), which has replaced the PPA under which the SPA was declared, provides a broader definition of the SPA under Section 52 and the conditions under which a SPA may be declared by a County Government. These include where (i) the area has unique development, natural resources, environmental potential or challenges; (ii) the area has been identified as suitable for intensive and specialized development activity; (iii) the development of that area might have significant effect beyond that area's immediate locality; (iv) the development of that area raises significant urban design and environmental challenges; or the declaration is meant to guide the implementation of strategic national projects; or guide the management of internationally shared resources' (UN-Habitat 2019: 6).

Participatory consultations have been conducted across the SPA, and plans should be finalised in the coming months. A set of eight consortia (with collectively over 40 organisations from academia, government, private sector and civil society) have synthesised data from Mukuru and developed plans to inform upgrading strategies. The consortia are housing, education, health, land, water, sanitation and energy, finance, and environment (aligning with county government departments). The coordination, community organisation and communication consortium is led by the Muungano Alliance (Figure 15). Funding for the SPA's implementation is still to be determined, but the SPA has already been made a statutory obligation of the county government and included in Nairobi County's integrated development plan (Makau and Weru 2018).

Throughout late 2018 and early 2019, around 50 initial local-level resident consultations took place, each session involving 60–80 residents representing their communities, and each focusing on the data, plans and needs for segments of Mukuru of around 8,000 households. These early consultations were at the sector (consortia) level for consortia 1, 2, 3, and 5 (Figure 15). Following these consultations, the next step was for consortia-level planning submissions for Mukuru to be drawn up. These sector-level contributions are being combined into one document – an integrated

development plan for the whole of Mukuru, which will eventually be approved and adopted by the county.

An initial version of this integrated plan was produced in October 2019 and will go through a community-validation process between November 2019 and February 2020. The community-validation process will again draw on the representative resident structures, established for the initial stages of consultation on the sectoral Mukuru data and planning work. The Muungano Alliance is also focused on maintaining community cohesion and momentum achieved to date through their mobilisation efforts (eg through activities to help address issues raised in consultations, like waste management), and through savings-group mobilisation, and programmes with youth groups.

In the short term, the sequencing of SPA investments will likely prioritise infrastructure; new funding models will likely be needed to achieve scale, such as county-level infrastructure or housing funds and further incentives for investing in low-cost housing in Mukuru (see UN-Habitat 2019). Valuable lessons from the Mukuru SPA already include the creation of participatory community planning mechanisms at scale, the use of large multidisciplinary consortia, and planning innovations that challenge existing planning standards for upgrading (ibid; Makau and Weru 2018).

Figure 15. Mukuru SPA planning consortia



## 6

# Policies and legal framework shaping access to land and housing

## 6.1 Policy and legislative reforms

This section examines the prevailing policies and legislation related to access to land and housing in Nairobi. Recently, Kenya's land and housing policy and legal framework underwent significant changes: the 2010 Constitution introduced a devolved system of government and subsequently necessitated legislative reforms in various sectors, including land (Bassett 2019; d'Arcy and Cornell 2016). Previously, numerous land laws existed, some with overlapping provisions. After 2010, these laws were reviewed and the National Land Commission Act was enacted to facilitate the creation of a National Land Commission (NLC), which among other functions currently manages Kenya's public lands. It also created the National Construction Authority (NCA) that regulates the construction industry. However, access to urban land and housing has remained highly constrained, with lower-income groups still marginalised, and there is a stark disconnect between policy and practice in Kenya.

## 6.2 Revisiting access to land and housing in post-2010 constitution

Kenya's 2010 constitutional reforms led to significant policy and legislative changes for the shelter sector, including the establishment of the universal right to adequate housing. Article 60(1) of the Constitution draws out the principles of land management in Kenya, with explicit recognition of equitable access, security of land rights, efficiency in land administration, and gender equity (including in legislation and customary practices related to land and property – see also Section 7 on gender). Another major stride forward in the 2010 Constitution was the recognition of housing and sanitation as rights for every citizen: Article 43(1) (b) states that every person has the right to accessible and adequate housing, and to reasonable standards of sanitation. The preamble of the Constitution (in paragraph five) expresses the commitment to nurturing and protecting the well-being of the individual, the family, communities and the nation, a function delegated by



the people of Kenya to the government.<sup>56</sup> According to Article 20(5), the application of the right to adequate housing is an obligation of the state which provides that if the state claims that it does not have the resources to implement the right, this should be adequately shown.<sup>57</sup>

Following the announcement that affordable housing would be part of the President's Big 4 Agenda, the government introduced the Sectional Properties Bill in 2019. The bill seeks to facilitate transactions in housing markets that provide units in blocks of flats/apartments. The Big 4 Agenda is also associated with renewed interventions to finance housing developments. In May 2019, the Central Bank launched the KMRC, 'with the sole purpose of providing secure long-term funding to primary mortgage lenders [banks and SACCOs] in order to increase availability and affordability of housing loans to Kenyans' (The National Treasury 2019, also Box 2 on SACCOs). KMRC is expected to address Kenya's housing finance deficit, but it remains unclear how it will influence low-cost shelter provision in Nairobi and other urban areas.

### 6.2.1 Persistence of land governance challenges

Currently, the country has four main land laws: the Lands Act of 2012, the Land Registration Act of 2012, the Community Land Act and the Physical and Land Use Planning Act. While these can be considered legislative milestones in the land and planning sector, there are numerous challenges such as ownership conflicts, insecure land tenure and its related factors such as co-existence of formal and informal land ownership systems, and illegal and irregular land ownership claims (Republic of Kenya 2009: 35).

The provision of shelter and services is also hampered by the shift to private ownership of land in Nairobi. This shift has been ongoing for decades, often as the result of illegal land grabs (Klopp 2000). As a senior county planner explained,

*Land grabbing in the city [was] heightened during the advent of multiparty [ie Kenyan multiparty elections in the 1990s], when land became a tool to manage the city politics. Much of the public land, both lands owned by the national government and the city council [defunct local authority] went private ownership.*

KII, senior county planner

The planner also highlighted the illegal dispossessions of privately owned land by other actors, including local gangs:

*There are also cases of private lands being invaded, subdivided and occupied illegally – most of those cases are now court matters. In those areas, it becomes difficult to enforce development regulations [...] These illegal developments are protected by local gangs.*

KII, senior county planner

Notably, the absence of authentic land-ownership records has not deterred transactions and construction in these areas. Such complex transactions still undermine land-titling interventions, as well as the realisation of planned development in Nairobi. As noted in another study (DFID 2015), the lack of effective institutions and negative political influence are major obstacles to effective planning and land management in Nairobi.

Essentially, private ownership of Nairobi's land implies that for the government to implement an affordable housing intervention, it must design appropriate mechanisms to engage the private sector to acquire land. Currently, much of what remains of county-owned public land is under ageing housing stock, which is earmarked for redevelopment (Nairobi City County 2018b). But this is still inadequate given the city's scale of housing deficit and future demand. Furthermore, the absence of legal ownership in sections of Nairobi has presented obstacles to efforts to diversify its revenue base through land-based financing (cf. Berrisford *et al.* 2018). Such revenue streams could contribute significantly to reducing the city's infrastructure deficit, generating more serviced land for development, including shelter delivery. Lack of documentation also prevents landholders from accessing finance and prevents designs from being approved, which hinders the delivery of housing.

Despite the policy reforms in the land sector, land administration remains inefficient, with dysfunctional land markets that are counterproductive to the principles of equitable access and sustainable development. While welcoming the recent affordable housing agenda, many key informants in this study expressed scepticism about the government's capacity to steer it, mainly citing corruption, vested interests, and unsuccessful past [similar] programmes:

*Delays to institutionalise an efficient land and planning administration system will continue to compound the problems and work against sustainable urban development, but continue to benefit a few actors profiteering from the current dysfunctional system.*

KII, senior planner, national government

<sup>56</sup> Preamble, Constitution of Kenya 2010 (Kenya Law).

<sup>57</sup> Article 20(5), Constitution of Kenya 2010 (Kenya Law).



Figure 16. A section of Maili Saba informal settlement, Nairobi



© Google Earth Image, illustration by Baraka Mwaui

As noted by Bassett (2019: 17), Kenya's planning and land reform 'provides a cautionary tale to land reformers showing how difficult it can be to dislodge entrenched interests and promote social justice through formal institutional change'. Addressing the city's land governance challenges will require a more political than technical approach and better integrating land-use strategies with infrastructure and city planning (see recommendations in Section 8.2).

### 6.2.2 Kenyan women's rights to property: progressive openings, few changes in practice

The 2010 Constitution sought to strengthen women's property rights, but such transformative potential remains difficult to realise in practice. Under the new constitution, gender discrimination was outlawed and any customary laws that contradict its ban on gender discrimination were 'deemed invalid' (Kameri-Mbote 2018: 23). In contrast, under the previous constitution, customary practices were allowed 'without a filter on whether they were harmful or not to women' (Musangi 2017: 6). Furthermore, the new constitution's Article 27 provides for equality in the family as well as protection of spouses' inheritance rights and of women's rights to the matrimonial home (Kameri-Mbote 2018: 23). In

another progressive provision, Article 60(f) provides that Kenya's land policy will seek to eliminate gender discrimination in law, customs and practices related to land and property (ibid: 29). But these guarantees are challenging to implement, particularly given the lack of gender-disaggregated data on land, Kenya's complex plural legal system, and gender-inequitable norms. As summarised by Kenya's NLC, 'In practice there continues to be a huge gap between the access and inheritance rights enshrined in the Constitution, land laws, family laws, and the reality [facing] many women' (Lukalo and Dokhe 2016: 31).

Relevant legislation and policies have established gender-equitable provisions, but key details may be difficult to put in practice or may disadvantage women in polygamous marriages. The National Land Policy (Republic of Kenya 2009) predated the constitution and recognised the inequalities between women and men regarding land ownership, while seeking to reduce these differences (Kameri-Mbote 2018: 32).<sup>58</sup> Subsequently, the Matrimonial Property Act (2013) established spouses' rights to own property in their separate names and gave either party the right to apply to a court for declaration of rights over contested property (Musangi 2017:13). However, the act only required spousal consent for transactions of matrimonial property in monogamous marriages, putting women in

<sup>58</sup> The 2009 National Land Policy also set the framework for subsequent constitutional changes, such as the establishment of the independent National Land Commission (NLC), addressing historical injustices in land, and the principles of land-use planning (Bassett 2019).

polygamous unions in a more precarious position (*ibid*). And although the act recognises spouses' monetary and non-monetary contributions to matrimonial property, women may face challenges when trying to prove such contributions (*ibid*). According to the UN's human rights experts, the Matrimonial Property Act 'effectively denies women the right to marital property upon divorce or death of their spouse' unless they successfully prove their contribution to acquiring such property when married.<sup>59</sup>

In further complexities, Kenya still has a plural legal system, and entrenched gender-inequitable norms and customary practices can undercut the above aspirations. Widows and unmarried, divorced or infertile women 'are at a significant disadvantage' and can rarely inherit land; women in polygamous unions 'may be even more vulnerable' (Lukalo and Dokhe 2016: 31). Ownership and access to land in Kenya remains highly male dominated, so that women will require additional support and government action to establish their claims to land (*ibid*). Even under the new constitution, Kenya's customary laws and religious laws still apply to property rights, inheritance, burial and marriage (Kameri-Mbote 2018: 23).<sup>60</sup> Kenya's customary laws and practices usually give women only secondary rights to land (ie through their husbands, sons or other male relatives) so that wives can rarely inherit land (Hakijamii *et al.* 2016). In a similar vein, daughters only rarely inherit from their parents on an equal footing with their brothers; women are instead 'absorbed' by their husbands' families (Musangi 2017: 7). Finally, Kenya's personal law does not apply to Muslims and Kenyan courts can decide conflicts between legal systems on a case-by-case basis, which has the potential to reinforce gendered inequities (Kameri-Mbote 2018: 26). Given these inequitable prevailing norms, customary practices and religious laws, Kenyan women thus 'continue to face discrimination through biased customary norms that [give] men more rights as compared to women' (Musangi 2017: 12).

Limited data on women's land access (including in cities) makes it difficult to monitor or advocate effectively for equitable strategies, but the scattered evidence suggests women are significantly disadvantaged. The Ministry of Lands and Physical Planning lacks data on women's title deeds, although it is now creating a Land Information Management System that should ultimately disaggregate data by gender (ActionAid Kenya *et al.*

2018: 1). But there is suggestive evidence that women are significantly disadvantaged in both the number of titles and land parcels allocated to them. In an analysis of over one million title deeds (of the approximately 3.2 million government-issued title deeds from 2013 to 2017), women only received 103,043 titles or 10.3 per cent of titles and 1.62 per cent of the hectares allocated (Kenya Land Alliance 2018). Although no findings were available for Nairobi, women in Mombasa received 34 per cent of titles and 31 per cent of the hectares that were titled (*ibid*: 26). Similarly, women have been sidelined in settlement schemes meant to benefit landless Kenyans: according to an analysis of schemes totalling over 241,000 allocations, just 21 per cent of recipients were female and women usually received smaller pieces of land (Kenya Land Alliance 2019). Further gender-disaggregated data are needed for Nairobi, but it is likely that women have again been marginalised from land access.

During evictions, women may face particular disadvantages, and existing legal protections have not been upheld in practice. Kenya's Land Laws Amendment Act (2016) has provisions on eviction, including special measures to protect women, children, the elderly and people with disabilities (Musangi 2017: 8). It also establishes mechanisms to ensure there is no arbitrary deprivation of property due to eviction, and to give affected persons the first priority in salvaging their property (*ibid*). But there are numerous instances of forced evictions in Nairobi, including large-scale Kibera demolitions in 2018 sharply criticised by the UN (OHCHR 2019). More generally, forcible displacement may have gender-inequitable impacts: during evictions, police or government forces are known to inflict sexual abuse or to harass women and girls; women often face additional violence after evictions, due to rising tensions and limited household resources (Centre on Housing Rights and Evictions 2013: 5). Women's gendered care burdens may also increase following evictions, while the loss of property and livelihoods may be especially difficult for women, who are more likely to work from home or within informal settlements (*ibid*, also Chen and Sinha 2016). Women in Nairobi's informal settlements have a higher prevalence of HIV/AIDS than men (Madise *et al.* 2012) and after evictions, it may be especially difficult for them to access medication, especially if their medical records are lost during the eviction (Musangi 2017: 7).

<sup>59</sup> See UNOCHR (2014): 'A group of United Nations human rights experts today urged Kenya to repeal sections of the Marriage and Property Act which effectively deny women the right to marital property upon divorce or death of their spouse, unless they can prove they made a contribution to the acquisition of the property during their marriage.' Also see discussion in Hakijamii *et al.* (2016: 5).

<sup>60</sup> This is because both sets of laws still coexist: 'Despite the provision for equality and non-discrimination on the basis of gender in formal law, gender equality is yet to be fully realised due to the existence and influence of conflicting formal and informal norms, which operate contemporaneously in a plural legal context' (Kameri-Mbote 2018: 40).

Despite the challenges analysed above, there are undeniably promising policy openings and additional data, legal reforms and capacity building can help to fulfil the potential in the Constitution. Advocates have called for carefully documenting women's land ownership, making it easier to monitor and track progress in the future (Hakijamii *et al.* 2016: 8). It is also important to enhance women's awareness of their rights and to research existing challenges, such as on

squatters' land rights and property violations of women's rights (Lukalo and Dokhe 2016: 38). Legislative reforms are needed to support equitable property rights and inheritance practices; there is a broader need to sensitise state officials and key stakeholders such as judges, police and community leaders (*ibid.*). In Section 7, we analyse the gender and inclusion concerns in Nairobi's informal housing.

## 7

# Gender and inclusion and their impacts on access to shelter and services

The low costs and flexibility of Nairobi's informal housing help explain its vital importance for low-income residents, but unregulated landlord/tenant relations and discrimination against a range of vulnerable groups can thwart their access to shelter. New tenants often require a local referral to access housing and such personal ties may be difficult to cultivate, particularly for migrants or those from different ethnic groups to their structure owners. Private landlords' prejudices and capriciousness often generate several barriers to housing, placing low-income tenants in highly insecure and tenuous positions. Many tenants rely upon ingenuity, negotiations with landlords, and their social networks both to access and cope with inadequate shelter. After discussing barriers based on gender, age, income and household size, this section considers barriers linked to residents' disability, ethnicity and migration status. Finally, it discusses recent evictees who faced rising rents as well as economic losses and psychosocial exclusion after being forcibly uprooted.

## 7.1 Gender, age, income and household size

A constellation of barriers has left many residents struggling to find shelter, often reflecting their gender, age, income and household size as well as the biases of private landlords. Some structure owners prefer not to rent to single men (often stereotyped as criminal), single mothers (seen as incapable of paying rent), or large families (because children may damage the plot's facilities). A single mother recalled facing prejudice from landlords and resorted to asking a local man to pose as her husband, since she was considered unable to afford rent on her own:

*When I was looking for a house, the landlords here demand to know whether one is married [...] I had to talk to a guy [and] he had to act like he was my husband to make things easier for me.*

Woman in Dandora, single-room tenement



Similarly, a young single mother was denied housing because landlords previously doubted her ability to pay:

*They say, 'You don't have a job and you do not have a husband' and they feel [you] may have problems paying rent.*

Single mother in Kawangware, bedsitter

Women with children are also believed to generate higher maintenance costs and utility bills, especially where landlords act as intermediaries with utility providers:

*In some plots, if you go hunting for a house, they will first ask [how] many children you have and if you have more than three children, they will not offer you a house [...] Landlords believe children will make the plot untidy by drawing on the walls.*

Dandora FGD

These findings underscore the gendered discrimination facing female tenants with children, particularly those in large households, and they may deploy the stratagem of using false husbands or endure lengthy search times before successfully finding a room.

Meanwhile, it seems rare for widows to face additional barriers in accessing shelter; their challenges may instead stem from insufficient incomes or being part of large households. Due to the higher costs of renting a bigger unit, larger households may face difficult trade-offs regarding privacy and crowding in small units versus costlier but less cramped shelter. A widow living in a single-room shack with her son and three grandchildren did not face prejudice as a widow, but rather struggled to access a unit large enough to accommodate her belongings and large household (Mathare 3B widow). Meanwhile, in a more complex case, a young widow spoke of her reliance on her mother's assistance to rent a single-room shack after her husband died in 2012 (Githongoro widow with three children). Her husband's brothers sent her away after he died, and she is still attempting to settle a court case in his rural area, suggesting the long-term hardship and severed family bonds linked to widowhood. In a contrasting case, a young widow returned to Mukuru and currently lives with her siblings and parents. She noted gratefully that there are 'always moments of joy as we live together. We are able to overcome all the challenges' (Mukuru widow in single-room shack), highlighting the restorative and vital role of family support even as she must occupy highly overcrowded shelter.

Although Kenyan norms dictate that teenage boys must occupy their own units when they come of age,

landlords may regard them as criminals and the solution of informal extensions may pose further challenges. To deal with the cultural expectation of boys requiring their own rooms, households in single-roomed housing may use various strategies.

*After Class 8, [a] boy is considered to be mature and can no longer live under one roof with the mother [...] I had to move out [...] Mine helped, but there are some parents who aren't economically stable and so one is forced to move out [with] friends.*

Young man in Maili Saba FGD

Two or more household heads can pool funds to rent an extra room for their teenage boys, though some low-income families cannot support their sons. There is also an ongoing rise of informal extensions, largely explained by the demographic realities of Kenya's burgeoning youth population:

*It is the age structure. We are currently having many youth [...] We are doing this extension [because] you want your children who are mature to stay there.*

KII, academic/architect

Although extensions can accommodate youth (particularly in areas with maisonettes or informal shacks), they can also contribute to spatial constraints and heightened pressures on infrastructure.

More generally, informal landlords often consider young men as potential criminals or too noisy, sometimes denying them housing for those reasons. Besides, the young men in these settlements are exposed to various forms of violence, including gang violence and cases of extrajudicial killings, making their everyday life full of risks (see Mathare Social Justice Centre<sup>61</sup>). Combined with the pervasive lack of jobs (including those with tertiary training), young men may face several difficulties in securing a unit for themselves even in the face of strong cultural pressures to do so.

*The youth [males] are denied [housing] depending their personality and presentation. They are judged by their appearance and by that they are denied a house to live in.*

Mukuru young man in single-room shack

*Most single men can rent a house, but [it is thought] he could be an armed robber.*

Ngei-Huruma FGD

Meanwhile, young women may encounter discrimination when trying to live alone and might be pressured into early marriage to find their own accommodation. An

<sup>61</sup> See [www.matharesocialjustice.org](http://www.matharesocialjustice.org).



unmarried single woman is often seen as promiscuous and likely to steal others' husbands on the plot:

*If you are unmarried, you cannot get a house because single ladies are deemed 'husband snatchers'.*

Mukuru kwa Reuben FGD

Furthermore, the inadequate space in single rooms and the cultural sensitivities of shared accommodation can act as a key driver for early (unwanted) marriages, as teenage girls may seek alternative shelter with men:

*It was such a shame living with my parents as an adult. I ran away from that house and to stay with a certain man. This leads to young girls going into early marriages in these settlements.*

Female in Mathare Valley FGD

The impossibility of living alone as a young woman due to poverty and prevalent gendered norms, as well as the desire to escape overcrowded family homes lacking in privacy, may all contribute to girls' early marriages in low-income areas.

By contrast, wealthier women rarely face significant barriers in accessing shelter and can often benefit from loans from SACCOs. Findings suggest that wealthier women can access housing thanks to participating in these groups, while low-income women are unable to benefit. An experienced private developer said women are the main housing investors in SACCOs and other savings groups, noting that women are considered serious investors:

*Most SACCOs are owned by women. They have their chamas [savings groups] and so you find that they are looking for areas to invest. Men [usually] start a SACCO and then some few years down the line they start [...] but ladies are the best investors.*

KII, Prittworld

Similarly, a research business analyst at Urithi housing cooperative observed that professional women are increasingly investing in land and housing, without necessarily being married:

*Single ladies [in] their mid-30s or early 30s who have a well-paying job are taking the opportunity provided by a SACCO to start investing in the sector.*

KII, Urithi

## 7.2 Homeless and street families

Another vulnerable population lacks access to any shelter ('homeless' or 'street families'), but existing organisations struggle to serve these residents. In the city centre, street families are the most notable face of homelessness; estimates suggest that Nairobi has over 60,000 street children (Kenya Children of Hope undated). This group perhaps suffers the direst consequences of inadequate shelter, as they lack access to schools and vital infrastructure (eg water and sanitation), with constant safety concerns especially for women and children. The city recently indicated that plans are underway to build a rehabilitation centre for street families, and several organisations are involved in rehabilitating them (The New Humanitarian 2003). In 2003, the Street Families Rehabilitation Fund was established and is now administered by the Ministry of Devolution and Arid and Semi-Arid Lands (ASALS).<sup>62</sup> However, the challenge is increasing and existing organisations seem overwhelmed. This has attracted the attention of Nairobi's County Assembly (Nairobi County Assembly).

Another form of homelessness is emerging: our research in several areas of Nairobi revealed that households are using roadside stalls as their shelter. The stall is used for business during the day but converted into the household's shelter by night. When the county recently demolished illegal stalls in Huruma, several households lost their shelter as well as their livelihoods. Some households (including those with children) currently live in their stalls to cope with unaffordable shelter.

*The [Huruma] demolitions targeted roadside stalls. But now, there is a huge problem, since about 25 households are looking for shelter. There is one lady near John Saga, who has not found a place to go after the demolitions. She stays on the street.*

Community leader in Huruma-Kiamaiko FGD

*I have severally seen children with school uniforms walk out of street stalls in South B area, which implies that these stalls double as 'homes' for some of the traders.*

KII, senior city planning official

<sup>62</sup> See [www.parliament.go.ke/sites/default/files/2019-06/V%26P%2030.5.2019.pdf](http://www.parliament.go.ke/sites/default/files/2019-06/V%26P%2030.5.2019.pdf).

## 7.3 Barriers linked to disability, migration status and ethnicity

### 7.3.1 Elderly and people living with disabilities

Low-income shelter is often highly inadequate for people living with disabilities (PLWD), whose quality of life and dignity are especially imperilled by deficient water and sanitation. In Shauri Moyo, a 55-year-old widow with arthritis faced major obstacles in accessing sanitation, and she often resorted to humiliating improvised solutions. Although the nearest latrine is about 100m away from her home, she struggles to walk to it and her arthritis also prevents her from squatting at the toilet.

*It's these knees, they are very painful when I move around [...] I will have to go to the toilet but before I get there, I will have soiled myself. Otherwise, I would have relieved myself in the house.*

Shauri Moyo widow in single room with extension

Her challenges in accessing sanitation resulted in acute shame, and her top priority is to provide water and toilets within the house. In Mukuru, a man with short stature struggled to walk over a large trench (particularly in the rainy season, which is 'disgusting and risky') and noted that 'the key area of concern [is] the toilets, because most of them have stairs' (Mukuru man in single-room shack). He recalled facing discrimination from landlords who doubted his capacity to pay rent. But he sometimes relies upon community support: he can borrow water during shortages from neighbours or friends, and neighbours help him to access water when his wife is away.

High-rise buildings typically pose significant challenges to elderly and disabled tenants, largely due to the imposing stairs and low-quality infrastructure. For residents of Pipeline, where tenements are mushrooming, 'the settlement has poor roads, making it unfriendly to walk as an old person' and 'flats are unfriendly for the elderly [...] It's difficult [to] live in the seventh floor, as climbing the stairs is tiresome' (Pipeline mixed FGD). For tenants with severe disabilities, it can be impossible to live in high-rise units. According to a woman in Maili Saba who lacks both arms, she can manage to live in ground-floor units, but tenements are 'the worst'.

*The houses are not in any way built [to be] considerate of [PLWDs'] unique needs and abilities. The toilets are quite challenging; if you trip, you just fall. [Are there certain types of housing PLWD can't access?] Maybe the tenements, but the ground-floor*

*houses they can manage well. These tenements are the worst.*

Maili Saba woman with disability in three-room shack

Tenements lacking lifts and adequate WASH or other services may again pose challenges to able-bodied tenants, but such shortfalls are particularly insurmountable for elderly residents and PLWDs. More generally, PLWDs can face severe mobility constraints in Nairobi's informal shelter that may have only minimal roads or sloping settlements along a riverbank:

*[In] informal housing, nobody cares [about PLWDs] [...] You are in crutches or in a wheelchair and the surface is not tarred, so the key issue then becomes access.*

KII, academic/architect

Providing accessible WASH, including in the rainy season, may offer particular health and well-being gains for PLWDs, who may also benefit from community support to reduce stigma (see also Jones 2013). Complementary interventions may be necessary to transform local attitudes and foster greater understanding for these residents. In Mathare, an able-bodied community health worker noted that even when she tries to assist PLWDs to access water, she is regularly insulted by her fellow residents.

*Sometimes when I am at the water point, I see some people who are physically challenged coming for water [...] When I intervene, insults are hurled at me [...] I know a certain young man who [is] deaf and dumb [...] When I take his jerry can and fetch water for him, the other residents tell that I like making myself look better than the rest.*

Mathare 3B widow in single-room shack

Efforts to tackle stigma and transform attitudes about PLWDs are crucial, particularly when low-income residents are competing to access scarce resources like water.

### 7.3.2 International migrants and refugees

Although the influx of migrants has sparked some discriminatory practices, a local referral can help newcomers to access housing. A Tanzanian man explained that migrants are thoroughly screened, but a local resident's referral can expedite the process of finding a unit:

*Being a foreigner, it is not easy [...] One is extensively scrutinised, to the extent that you have to be referred. It's easy for you if someone refers you.*

Tanzanian man in Mukuru single-room shack

A recent migrant from Sudan said he had used an intermediary to find a house in Mukuru, but it was 'not that hard' as long as he built rapport and paid an intermediary (Sudanese man in Mukuru single-room shack). But as he noted, in the absence of such connections, many landlords 'may decide not to give you the house, fearing you will be a cause of unnecessary trouble in the future'. Migrants' social networks with Kenyans (and side payments) can thus play a key role in fostering access to shelter, but they can still regularly encounter xenophobic sentiments.

Indeed, anti-foreigner attitudes seem pervasive in informal settlements, as immigrants are often accused of undercutting wages or threatening morality, and some migrants must pay higher rents than Kenyans. For instance, a landlord in Mathare claimed there are 'very many' Baganda immigrants (from Uganda), who are often perceived as immoral, criminal, and causing congestion.

*We have very many immigrants [the Baganda] [...] We are calling upon the government to intervene in order for us to get more space [...] The arrival of the immigrants [from Uganda] makes us feel not so safe because there could be thieves among them. Their kind of lifestyle is also a threat to the morality of our children.*

Mathare village elder and landlord in four-room shack

Youth in Huruma deplored the rising job competition with Tanzanian and Ugandan migrants, who are said to be 'willing to settle for less pay in the same job' such as selling food or shoes (Huruma-Kiamaiko FGD). An FGD in Mathare confirmed that Ugandans are widely regarded with suspicion: some landlords exclude them altogether from housing, while others persist in renting to them but opportunistically charge higher rents than to Kenyans (Kosovo FGD). Landlords' practice of extracting higher payments from migrants was also found in Uganda's capital Kampala, where some refugees paid rents exceeding those of host communities (Walnycki 2019).

For migrants who are somewhat wealthier, xenophobic sentiments still seem common and access to housing can again depend upon social networks. In a middle-income area of Nairobi, a Nigerian man used brokers to scout for housing but still took a month to find a vacancy, and more generally, Nigerians 'need to have a friend here' to find a house (Master's student in one-bedroom Zimmerman apartment). The caretaker initially asked several invasive questions (including his HIV status) and required a payment of Ksh1,000 before permitting him to enter the unit. He lamented that foreigners can be arrested for no reason or accused of committing fraud or economic crimes. Similarly, according to a Democratic Republic of Congo (DRC)

refugee, seeking a house in Nairobi required a local character reference:

*The ID is not an issue; they ask you to come with a Kenyan who can vouch for you to make sure you are who you say you are.*

DRC male in two-bedroom Zimmerman house

Although he feels safe in Nairobi and has learnt Swahili, he admits 'there are times [that] I wish that no one knows me [...] Some will say, "You should go back home" [or] "I will send you back to Congo".'

### 7.3.3 Barriers linked to ethnicity/tribalism

Nairobi's ethnic politics and related tensions in low-income settlements are well known (de Smedt 2009), yet such pressures typically only become acute and potentially violent during elections. In many informal settlements, it is common for residents to cluster in 'villages' dominated by particular ethnic groups. Ethnic ties can be utilised to find jobs (particularly for new migrants to Nairobi) or to provide other mutual support, but can also generate exclusionary and homogeneous residential patterns in some areas. For instance,

*We have had those issues of segregation based on ethnicity, to an extent that if you go to some areas you will meet only a particular tribe dominating that area.*

Dandora women FGD

Although residents may coexist peacefully in general, tensions can flare up around elections. In a pithy explanation, a man in Mathare noted that 'during this [elections] season, the political impatience gets fuelled by the tribal segregation of the villages within this area' (Mathare married man in single-room shack). Before elections, Kenyan politicians have a history of mobilising (often youth) residents along ethnic lines (Kagwanja 2005), which can lead to 'political impatience' and explosive incidents particularly in cases of electoral losses or perceived injustices.

Landlord/tenant tensions can also have ethnic dimensions, and residents may sometimes be evicted or struggle to participate in public meetings due to tribal tensions. Some landlords may prefer tenants to be from the same tribe as themselves: for instance, in Mathare's village of Kosovo, some elderly structure owners may choose their tenants based on their tribe.

*Most of the time, they [Kosovo structure owners] inquire the tribe to which one belongs to before one is given a house to rent and especially during the election period, it is harder for a Luo to get a house.*

Mathare recent migrants FGD

In another area of Mathare called Number 10, a Luhya resident explained that their home was burnt down by Luos ('Luos had an issue with other tribes including Luhyas') but their current village is tribally mixed and thus much better than their previous area (Mathare recent migrants FGD). These testimonies illustrate that even within the same informal settlement of Mathare, some areas are more homogeneous and others are more ethnically mixed, with markedly different risks of violence or forced evictions. And of course, residents may differ in their understanding of such risks: in Huruma, a resident noted that the challenge of tribalism is 'quite prevalent especially during the election period' with Luos and Kikuyus often on opposing sides. But another resident added that even to this day, Luos in Huruma often feel unable to speak at community meetings, suggesting that the concern extends beyond electioneering to daily simmering tensions.

*In some public participation meetings, Luos cannot speak, especially in Ghetto [a village in Huruma]. Those meetings are always there, but are mostly attended by the Kikuyus. We don't attend most of them because the moment a Luo stands up to speak, he is shut down even before he can say a word.*

Huruma-Kiamaiko mixed FGD, emphasis added

These socio-political tensions can become barriers to achieving inclusive interventions in Nairobi's informal settlements. Past shelter initiatives in these areas often faced difficulties in identifying beneficiaries and ensuring meaningful community representation; the legitimacy of some 'settlement leaders' can also be questioned on grounds of ethnic composition.

Potential flashpoints around elections, landlord/tenant relations, and public participation are ethnically linked challenges that should be carefully managed when intervening in informal settlements. During shelter initiatives, it will be important to vigorously mobilise participants across tribal lines and create inclusive spaces where all residents feel able to speak. Residents' perceived inability to participate in grassroots meetings may reflect the fact that community leaders can be sometimes from a particular tribe, which can inhibit broader participation by other ethnic groups. In response, it may be necessary to utilise outside facilitation or NGO support, particularly if local leaders are seen as exclusionary and biased towards their co-ethnics.

It is incumbent upon external agencies, government officials, and civil society actors to be mindful of ethnic tensions, while also recognising that these concerns are more likely to occur at certain times and in certain settlements. More positively, some settlements are more ethnically mixed and harmonious, which can offer lessons and opportunities for capacity building (eg community exchanges and leadership exercises to build on positive experiences).

## 7.4 Multiple exclusions and negotiability in accessing informal shelter

To address the exclusions in Nairobi's informal housing market, there is a need for detailed analysis recognising the complexity of vulnerable groups but not privileging a single axis of difference. As discussed above, financial constraints can interact with age, household size and gender norms to impose barriers on a range of tenants. This study analysed further axes of exclusion such as migration status, with some evidence that migrants face discrimination from landlords, higher rents and resentment for taking jobs from Kenyans. The inaccessible designs of shelter, WASH and other services, particularly in tenements, are highly problematic for residents with disabilities. Meanwhile, ethnicity often becomes salient and potentially violent during Kenya's elections; ethnic divides between structure owners and tenants can also influence housing access in low-income areas. Still, it is important not to overstate the influence of ethnicity and to understand several other axes of difference shaping access to shelter in Nairobi's complex informal housing markets.

More generally, renters in Nairobi's informal settlements must engage in ongoing negotiations that can result in both exclusionary and (occasionally) merciful ties with their landlords. The study found a few cases of landlords allowing tenants to stay rent free during times of crisis, though it is unclear how exceptional such examples may be. For instance, a single woman who has lived seven years in Dandora (four years in her current unit) has been ill for a year and her landlord allowed her to stay without paying.

*It depends with the landlord. There are those who will lock the house. Others will ask you to leave, while others will listen to your situation. There are those who confiscate your items.*

Dandora young woman in single-room shack

A widow similarly admitted to not having paid rent in three months, but that she had negotiated with her landlord to make a payment by the weekend (Mathare widow in single-room shack). In contrast, a young woman recalled her landlord becoming angry when she confronted him over an often-flooded unit, and when he later evicted her due to non-payment, it was a 'devastating' and 'scary' feeling (woman in Mukuru single-room shack). The constant negotiability and pivotal role of personal relationships are a hallmark of urban informality (Roy and AISayyad 2004; McFarlane 2012), requiring further scrutiny into Nairobi's informal rental market. Importantly, private landlords' preferences may vary, making it difficult to establish definitive patterns, and it is also essential to note that landlords in tenements may be less flexible than those in shacks.



## 8

# Conclusions

Nairobi is undergoing a shift from low-density shacks to multistorey tenements, and approximately 70 per cent of the city's residents live in single-room units in informal settlements and tenements. This informal rental market can be highly profitable: according to research for this project, property investors can realise up to four times greater returns compared to selling formal middle and high-income housing. Additionally, our estimates suggest that Nairobi's rental market for single rooms is a significant economic subsector, which annually generates at least US\$372.2 million annually. Although serving as a critical source of low-cost shelter, informal rental properties are typically overcrowded with poor services and infrastructure, creating a range of health risks and assaults to residents' dignity.

Despite the rising salience of housing policy in the President's Big 4 Agenda, there are key shortfalls in government capacity and longstanding abdication of planning responsibility for shelter. Nairobi's inadequate shelter and land delivery are rooted in the city's corruption, unresponsive governance, and lack of proactive urban planning. Land development is outpacing Nairobi's infrastructure delivery capacities, and the cost of land is often prohibitive, contributing to the unaffordability of housing. Prices of land have risen sharply in both core and peripheral areas. Due to persistent failures of land governance and city planning, a major vacuum has emerged and ushered in the proliferation of inadequate low-cost housing. Meanwhile, the Kenyan government's housing initiatives and efforts by international aid agencies, including recent upgrading interventions in Nairobi, have often struggled to scale up or failed to benefit low-income households.

Kenya's formal housing finance has remained the preserve of a tiny minority of wealthy households, and housing policy has focused upon supporting ownership, even as the vast majority of low and middle-income Nairobi households are tenants. Just 10 per cent of Kenya's population can afford a formal house costing US\$10,000 (without subsidy) and a monthly mortgage repayment of US\$174 (Gardner *et al.* 2019). When asked about the leading obstacles to Kenya's mortgage market, major banks have highlighted the high cost of housing units and land; high incidental costs like legal fees or stamp duty; challenges with titling; and low household incomes (Central Bank of Kenya 2018).

This study has particularly analysed Nairobi's proliferation of substandard types of informal shelter, such as shacks, tenements and rapidly urbanising peripheral areas. Tenements help to meet the rising demand for low-cost housing, yet similar to informal settlements, they are typically hazardous and ignored by formal planning. Although some residents may consider permanent, multistorey tenements as an improvement on corrugated iron or mud low-rise shacks in informal settlements, tenements are nevertheless highly unsafe and pose major challenges to policy and planning. Meanwhile, satellite towns and peripheral developments are typically located on cheaper lands but remain underprovided in terms of vital infrastructure and services, while lengthy commute times and poor transport provision often hamper residents' access to jobs.



The city's ongoing low-cost shelter transformations are almost purely driven by private (often informal) providers, and these providers remain poorly understood and rarely documented. Although these informal actors may produce low-cost units, there are also multiple exclusions in accessing such housing. Residents' financial constraints can interact with household-level factors such as age, family size and gender norms to impose barriers on a range of tenants. Additionally, there is some evidence suggesting that migrants face discrimination from landlords, higher rents and resentment for taking jobs from Kenyans. The inaccessible designs of shelter, WASH and other services (both in shacks and tenements) are highly problematic for PLWDs. Meanwhile, ethnicity often becomes salient and potentially violent during Kenya's elections; ethnic divides between structure owners and tenants can also influence housing access in low-income areas. But as argued above, it is important to understand how several axes of difference may simultaneously shape access to shelter in Nairobi's complex informal housing markets.

## 8.1 Future research needs

### 8.1.1 Shelter deficits, affordability and emerging trends

The county government currently lacks detailed data on Nairobi's shelter deficit, making it impossible to accurately project its housing demand or to develop appropriate planning responses. Additional data is particularly needed on informal rental housing trends, including the proliferation of tenements and transformations in other informal dwellings. This research should also delve further into housing affordability and the 'poverty penalty' linked to low-quality shelter; the latter findings can create a more nuanced analysis of the city's seemingly affordable shelter options that actually offer high-cost services and major shortfalls in quality. Subsequent research will also need to consider Nairobi's demographic trends and implications for housing provision – such as youth requiring their own units as households expand, the needs of elderly residents (including their circular migration patterns), and recent growth in international migrant or refugee populations. Similarly, there is very limited research into the implications of Nairobi's satellite towns and peripheral developments for low-income households (including in emerging new town developments), as well as the associated strains on infrastructure and services delivery.

### 8.1.2 Data is needed for developing inclusive housing and infrastructure strategies

Subsequent studies will need to assess the implications for residents' well-being of single-room occupancy, as well as appropriate strategies to promote their health and dignity. These initiatives may include working with residents and shelter providers to develop alternative designs and practical solutions to enhance building safety, ventilation, to improve access to clean energy, water and sanitation, and to create safer play spaces (among various possible interventions), while optimising urban qualities of mixed-use and appropriate densities. Additional research is also needed with PLWDs in shacks and tenements to better understand their barriers and coping strategies, again helping to develop more inclusive, appropriate interventions.

### 8.1.3 Private-sector investment in affordable shelter and inclusive shelter finance

Nairobi currently lacks mechanisms to tap the private sector and many providers of low-cost rental housing are poorly understood. Further research with private developers and structure owners (with attention to Nairobi's various housing submarkets) can uncover their ways of working and develop more effective ways of harnessing their contributions. There is again an urgent need for understanding and developing inclusive shelter finance products, which can move beyond the shortcomings of conventional mortgages (particularly for workers in the informal economy).

### 8.1.4 Innovative strategies to improve land governance and tenure security

Research can analyse how best to support titling in Nairobi, given its contested land tenure and escalating land values. This may include analysing the potential of communal land tenure and alternative tenure strategies. This research suggests that residents of Maili Saba have been able to gradually improve their housing, even in the absence of secure tenure, and many tenements are built on land without title deeds. Future research can help to explain how gradual improvements have been achieved in Maili Saba (including any lessons for informal settlements and tenement areas), and more broadly future studies can explore other emerging interventions to improve tenure security and land governance.

### 8.1.5 Assessments of SPA and other alternative shelter strategies

The precedent-setting Special Planning Area (SPA) in Mukuru may offer an opportunity to improve living conditions despite its location on contested lands, with ongoing participation by low-income residents rather than the top-down, often inappropriate strategies in past interventions. Since the SPA is still in its planning phase, future research can explore its implementation and analyse key lessons, challenges and possibilities of replication in other informal settlements. Similarly, future research can evaluate the impacts of transitional shelter models (eg those developed by Kwangu Kwako Ltd) and ways of creating an enabling framework for incremental construction.

## 8.2 Recommendations

Nairobi's shortfalls in shelter planning and policy are highly complex to address, and policymakers will need to develop housing strategies that extend beyond upgrading slums or supporting owner-occupied shelter. Our recommendations highlight the need for multi-pronged initiatives in housing, land, infrastructure and services, shelter finance, and economic development strategies that can bolster household incomes. We recommend the formulation of joined-up shelter policies and greater recognition of rental housing; the city also needs to reform its spatial planning and land governance systems and to provide further support for small-scale housing providers. Another priority is promoting equitable access to infrastructure and services, which can ensure last-mile connectivity for low-income households in both core and peripheral areas. We also note the importance of addressing multiple exclusions and working closely with low-income residents to design appropriate strategies across Nairobi's ever-evolving metropolitan area.

### 8.2.1 Improve access to safe and affordable rental housing

Given the predominance of renting, it is unhelpful to focus solely on homeowners and the following strategies can recognise the flexibility of rental units while also improving their quality and amenities.

- Home ownership is not the solution to shelter deficits: Nairobi needs multiple tenure and occupancy arrangements, with an emphasis on affordable rental housing.
- Appropriate, well-enforced policies and regulations on rental housing can improve tenants' living conditions. Working with informal rental housing providers, who are often overlooked, will be critical. Future

interventions can leverage their much-needed private capital, but redirect it to better-quality shelter.

- Tenements need updated planning, design and health regulations, as well as initiatives to improve infrastructure and ensure minimum housing standards are met.
- More broadly, the county government will need to reform its planning systems to move beyond development control; it should adopt a proactive approach to rental housing informed by ongoing transformations and that facilitates effective local-level planning.
- To address discrimination in the private market, officials can work with local organisations and respected grassroots leaders to develop stakeholder engagements at the local/neighbourhood levels and to help break down existing barriers to shelter.

### 8.2.2 Develop comprehensive joined-up housing strategies

Comprehensive, joined-up housing approaches are required, rather than the prevailing reactive stance. Efforts to develop holistic, forward-looking shelter interventions (Payne 2005) can more effectively accommodate Nairobi's rapid growth, while complementary strategies can improve infrastructure delivery and land management.

- Kenya's government and development partners should promote access to affordable construction finance; enhance the capacities of built environment professionals, finance agencies, and other stakeholders in housing; and improve the supply of land and bulk infrastructure to reduce developers' costs (Gardener *et al.* 2019; KNBS 2012; Mose *et al.* 2018).
- The city needs to combine strategies for new housing developments with improvements in existing shacks and tenements, using approaches such as in-situ upgrading, land readjustment and redevelopment. Policymakers can also provide incentives to developers to produce affordable shelter (including rental units), such as tax breaks, lower rates for borrowing, and subsidised building materials for low-cost housing.
- Working with communities in informal settlements is critical for the success of Nairobi's shelter and service interventions. This presents opportunities for co-producing solutions with residents (cf. Mitlin 2008), which can reduce the risks of displacement and foster local ownership, thereby promoting the interventions' long-term sustainability.

### 8.2.3 Support small-scale housing providers and organised groups

- In some settlements (eg Maili Saba), residents have incrementally constructed low-cost units, but cannot afford technical expertise and usually struggle to access construction finance. With support from government and financiers, these small-scale housing providers can deliver low-cost housing more effectively.
- Assistance is also needed for organised groups of low and middle-income households (eg SACCOS, housing cooperatives), who may access land but often lack the funds for decent housing construction and infrastructure.

### 8.2.4 Promote equity and participation in shelter and services provision

Nairobi's infrastructure provision has been highly skewed towards wealthy neighbourhoods, resulting in extremely insanitary and undignified living conditions for low-income residents. Recent attempts at electrification have sometimes been undermined by informal providers, and residents may revert to illegal alternatives if these are considered more flexible or affordable. Government, financiers and service providers should partner with low-income residents and local organisations to enhance their access to serviced land and co-produce appropriate, affordable modes of shelter, infrastructure and service delivery.

- A redistributive strategy to provide roads, water and sewerage (at minimum) should be prioritised in Nairobi's development expenditure, as well as by its public utilities and development partners.
- To extend coverage to underserved areas, the government must strengthen the capacities of Nairobi's public water and sewerage agencies. This includes providing adequate bulk supply for the city, extending the distribution network to underserved areas, and enhancing utilities' capacity to work with key stakeholders (including informal shelter and services providers).
- Strategies to provide electricity and water in informal settlements should develop community outreach strategies and work closely with residents to ensure wider uptake.
- To overcome fragmentation in service delivery, there is an urgent need for better coordination between city planning strategies and infrastructure delivery, land-use and service provision.
- Meanwhile, to foster gender-equitable service delivery, utilities should work with women and girls to design appropriate WASH facilities that may include adequate lighting, menstrual hygiene facilities, and

gender-segregated doors for public toilets. Similarly, it will be crucial to work with PLWDs to design appropriate WASH facilities in both shack and tenement areas.

### 8.2.5 Reform land governance

- Nairobi requires a reliable land information system: developing a secure, updated and transparent system will reduce the risks of mismanagement and corrupt transactions.
- Such a system can also facilitate land-based infrastructure financing (Berrisford *et al.* 2018), thereby helping to address key shortfalls in provision.
- Better integration of land-use and infrastructure planning can provide a strategic framework for shelter delivery, resolve land conflicts and facilitate future interventions.

### 8.2.6 Identify synergies between affordable housing and pro-poor development strategies

For low-income residents in Nairobi, erratic and insufficient earnings often represent a key barrier that may frustrate housing interventions. It is crucial to combine housing strategies with inclusive development interventions benefitting low-income workers, such as the following:

- Policymakers should foster decent work and job creation as well as support the provision of vital services (eg education, healthcare), upgrading workers' skills and training, and integrating the informal economy by improving worksites (eg well-designed and located markets, modern workshops); enhancing access to capital, infrastructure and equipment; and expediting registration for businesses (see also Chen *et al.* 2016; UN-Habitat 2019).
- Such interventions can help improve incomes, thereby promoting the affordability of decent shelter for informal workers and other low-income residents.
- Furthermore, adequate housing and infrastructure access can themselves foster inclusive growth, particularly for women whose livelihoods are often centred upon the home or informal settlements (Chen and Sinha 2016).
- Enhanced shelter access can create important possibilities to foster inclusive growth, especially if residents can access clean energy and WASH to support small enterprises; upgrading slums' infrastructure can also promote health (Corburn and Sverdlik 2017), such as by reducing WASH-related illnesses and reducing respiratory disease linked to unclean fuels.

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This working paper presents findings and recommendations from research on access to shelter and services in Nairobi, Kenya. It is part of a three-city study in East Africa also covering Mogadishu, Somalia and Hawassa, Ethiopia. Guided by political economy analysis, the two-year research project investigated why and how city dwellers make certain shelter choices, and generated recommendations to improve access to adequate shelter and basic services for the most vulnerable urban residents.

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