



# Financing for Resilient and Green Urban Solutions in Mombasa, Kenya





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Sunset in Mombasa port, Kenya  
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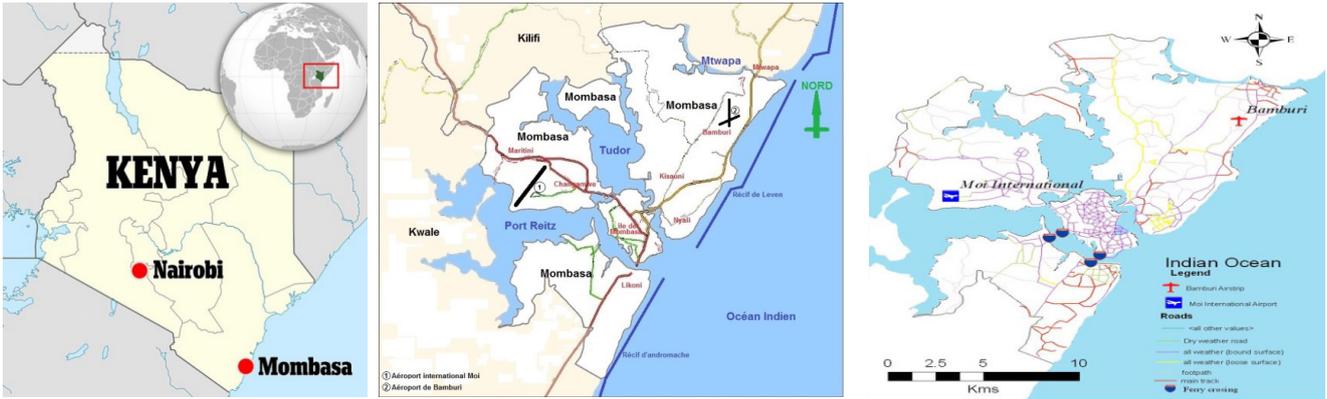
## ACRONYMS

A.D.	Anno Domini
AfDB	African Development Bank
AGOA	US Government's African Growth and Opportunity Act
AMI	Akiba Mashinani Trust
BAU	Business As Usual
BPS	Budget Policy Statement
BRT	Bus Rapid Transport
CAHF	Centre for Affordable Housing Finance in Africa
CBR	Central Bank Rate
CIDP	County Integrated Development Plan
CSR	Corporate Social Responsibility
CTA	Commodity Trading Advisor
CWSB	Coast Water Services Board
EIA	Environmental Impact Assessment
ERC	Energy Regulatory Commission
ERS	Economic Recovery Strategy for Wealth and Employment Creation
GPS	Global Positioning System
GDP	Gross Domestic Product
GESIP	Green Economy Strategy and Implementation Plan
GHG	Green House Gas
GIZ	Gesellschaft für Internationale Zusammenarbeit GmbH
HfH	Habitat for Humanity International
HMF	Home mortgage finance
ICT	Information and Communication Technology
IDA	International Development Association (of the World Bank)
IFC	International Finance Corporation (of the World Bank)
IPP	Innovation Policy Platform (of the World Bank)
ISUDP	Integrated Strategic Urban Development Plan
JICA	Japan International Cooperation Agency
KAA	Kenya Airports Authority
KeNHA	Kenya National Highways Authority
KES	Kenya Shillings
KERRA	Kenya Rural Roads Authority
KfW	Kreditanstalt für Wiederaufbau
KGBS	Kenya Green Building Society
KIHBS	Kenya Integrated Household Budget Survey
KISIP	Kenya Informal Settlement Improvement Project
KMP	Kenya Municipal Program (of the World Bank)
KNBS	Kenya National Bureau of Statistics

KNBS	Kenya National Bureau of Statistics
KNEB	Kenya Nuclear Electricity Board
KPA	Kenya Ports Authority
KURA	Kenya Urban Roads Authority
LAIFOMS	Financial Operating Management System
LED	Light-emitting Diode
LNG	Liquefied Natural Gas
LPG	Liquid Petroleum Gas
MCG	Mombasa County Government
MDGs	(UN) Millennium Development Goals
MFI	Micro Finance Institution
MPARD	Mombasa Port Area Road Development
MW	Mega Watts
MTP	Medium Term Plan
NEMA	National Environment Management Authority
NHC	National Housing Corporation
NGO	Non-Governmental Organization
NCCRS	National Climate Change Response Strategy
ODA	Official Development Assistance
OECD	The Organization for Economic Co-operation and Development
PPP	Public Private Partnership
ROE	Return on Equity
SACCO	Savings and Credit Cooperative
SAGA	Semi-Autonomous Government Agency
SEZ	Special Economic Zone
SIDA	Swedish International Development Cooperation Agency
SOE	State Owned Enterprise
SPA	Service Provision Agreement
SPV	Special Purpose Vehicle
STS	Seasonal Ticketing System
TICAD	Tokyo International Conference on African Development
UN	United Nations
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNSOA	United Nations Support Office for AMISOM
UPVC	Un-plasticized Polyvinyl Chloride
USAID	United States Agency for International Development
USD	United States Dollars
VDS	Vision Delivery Secretariat
WRMA	Water Resources Management Authority

# Executive Summary

## City Profile



Mombasa, located in southeastern Kenya on the Indian Ocean, is the second largest city in the country and the nation's major seaport. The city, which is located on an island separated from the mainland by Tudor Creek and Kilindini Harbor, had a population of 939,370 people according to a 2009 census. The official language is Swahili and the city is populated mostly by the Muslim Swahili people. The Swahili name for the city is Kisiwa Cha Mvita, which translates "island of war." Mombasa is also an internationally famous tourist destination particularly for visitors from Europe.

It is centered on Mvita island but the city spreads out to the mainland beyond Tudor Creek and Kilindini Harbor. First settlement on the island dates back to 900A.D. and the town later emerged as an important trade center with links to Yemen, India, Persia, and China. Spices, gold and ivory were its chief exports at the time. After its discovery by the Portuguese explorer Vasco da Gama in 1498, Mombasa was captured and came under Portuguese rule in 1511. The town was later taken over by the Sultan of Oman in 1698. In 1837, Mombasa was annexed by Sayyid Said, the Sultan of Zanzibar (Tanzania). Zanzabari rule continued until 1898 when the British assumed control of the city. Mombasa then became the capital of British East Africa and the sea terminal for the Uganda Railway which was started in 1896. It is the gateway to Eastern Africa and the great lakes region. Beyond the East African Community region, the port of Mombasa also serves the Democratic Republic of Congo, South Sudan and southern Ethiopia. This gives the port great economic significance far beyond the borders of Kenya with regard to the import and export of goods. The city of Mombasa is also an internationally famous tourist destination particularly for visitors from Europe. In character, it is an increasingly multi-cultural and multi-racial city.

From 2009 to 2018, Mombasa's population increased 3.9% per year, which is 1.3% points higher than the national average population growth of 2.6% per year. Population distribution and settlement patterns in the Mombasa County are influenced by proximity to vital social and physical infrastructure networks

such as roads, housing, water and electricity. Other factors that influence settlement patterns include accessibility to employment opportunities and security. The total population of the county in 2009 was 939,370 persons of which 486,924 were male and 452,446 were female. The total population was projected to be 1,266,358 persons in 2018 and will rise to 1,433,689 persons by 2022<sup>1</sup>. Mombasa being the second largest city in Kenya after Nairobi, attracts a significant portion of rural to urban migrants, especially those in search of employment. The increasing population has subsequently increased demand for residential units, commercial offices, retail centers and land to serve the needs of the residents<sup>2</sup>.

### Mombasa City County integrated development plan

The first County Government of Mombasa integrated development plan covered the period 2013 to 2017. It was prepared in accordance with the County Government Act of 2012 which stipulated the objectives and conditions as well as content of the plan. Special attention was paid to development of transport, water and sanitation. The plan identified the need for affordable housing, corresponding infrastructure and urban services. National government projects dominated the strategic opportunities listed. The County department of planning, land and housing went further to outline a programme through which it would target people as a valuable resource and committed itself to initiate and create a supportive environment for economic activities to thrive. It aimed to create employment, improve living standards of inhabitants and make Mombasa a vibrant, regional commercial hub.

The FRUGS study aimed to identify needs for affordable housing, corresponding infrastructure, and urban services in Mombasa. Availability of clean drinking water, good sanitation, electricity and health care services were documented in the study which also sought to address low carbon and climate resilient development. The target group of the study were the urban lower, lower middle and middle-income households. Mombasa County

government has a department of Land, Housing and Physical Planning that deals with matters pertaining land, housing and physical planning. This department concerns itself with Mombasa City County Architecture, county housing and settlement policies and legislations, integrated development planning, county physical planning, land survey and mapping, boundaries and fencing, land rates, rents and levies and county housing development. The department has recognized that the growing population in the County exerts pressure on existing units of housing, creating a huge demand for quality and affordable housing. It grapples with the challenge that land ownership in most areas is not guaranteed as most of the residents do not legally own land and the land they live on is owned by absentee landlords.

### Housing Needs and Challenges

Mombasa County government is currently developing various plans to improve the living standards of low and medium income housing. For instance, through the Kenya Informal Settlement Improvement Programme (KISIP), Mombasa County has upgraded

various informal settlements such as Jomvu Kuu, Jomvu Mikanjuni, Mkomani and Ziwa la Ng’ombe. The County has also formalized Kalahari, Kwarasi, Fuata Nyayo, Gana Hola, Likoni 203 and Majaoni. This is a major step toward provision of housing to people living in informal settlement areas. Other ongoing development plans partly focusing on housing include the Mombasa Gate City Master Plan financed by JICA, urban renewal and redevelopment of old estates.

According to the County’s department of housing, Mombasa has an estimated total housing deficit of 380,000 units. The annual housing supply is only 4,000<sup>3</sup>. By 2035, the housing shortage will rise to 650,000 housing units<sup>4</sup>.

Housing prices are too high, compared to the household income level. The average housing price in Mombasa is KES 5.7 million (see Table E1). According to a newly-released report by Kenya Integrated Household Budget Survey (KIHBS), a fifth of Mombasa residents own 78.2 per cent of the wealth. 60 per cent of Mombasa residents control only 4.7 per cent of resources in the port city<sup>5</sup>.

**Table E1** Housing Types and Prices

Housing Type	Housing Unit Size (Square Metres)	Housing Price in 2018 (KES)	Average price per square metre
Studio	42	2.4 million	57,416
One Bedroom	68	3.6 million	54,312
Two Bedroom	88	7.1 million	89,220
Three Bedroom	114	9.7 million	90,348
Average	78	5.7 million	72,824

Source: Cytonn Real Estate

## Infrastructure

With respect to basic infrastructure, Mombasa County, in collaboration with the national government, has taken various development initiatives aimed at improving infrastructure and urban services. For instance, Kenya Municipal Programme (KMP) aims at strengthening local governance and improve service delivery in selected municipalities, including Mombasa. The programme has four components namely; institutional strengthening, support in development of strategic urban plans, investment in infrastructure and service delivery such as solid waste facilities, motorized and non-motorized transport facilities (including bus parks, access roads, sidewalks and paved paths), street lighting, markets, storm water drainage, disaster management and prevention (facilities and equipment), public parks and green spaces and finally to provide support in project management, monitoring and evaluation. Currently the County is in the process of developing Integrated Strategic Urban Development Plan dubbed Mombasa Vision 2035-MV35. This is a regional physical development plan that integrates digital topographical mapping, strategic sector plans, structure plan, development control and capital investment plans for Mombasa County. Other plans that are under development include a Comprehensive Development Master Plan in the Mombasa Gate City, Mombasa Urban

Renewal and Redevelopment of old estates and Master Plan on Logistics in Northern Economic Corridor.

## Transport

Approximately 40 to 45 percent of the population of the city of Mombasa travels from, through and to the Island on a daily basis using public and private transport. Traffic jams during the peak hours are common since more than 1 million people enter and leave Mombasa Island on an ordinary day. The traffic congestion and malfunctions of the ferry services are due to underdeveloped transport infrastructure. This highlights the need to raise finance so as to develop alternative transport solutions such as the proposed construction of a second bridge between Tudor area (northern part of Mombasa Island) to Mshomoroni (North Mainland) and the improvement of the ferry services at Likoni and Mtwongwe with new vessels and reconstructed approach roads.

From 2012 to 2020, the Kenyan Government has planned to heavily invest in infrastructure (see Table E2). Mombasa has a big share of that investment, particularly relating to port facilities expansion and upgrading, roads, railways, water and etc.

**Table E2 Infrastructure Investment in Kenya 2012 – 2020.**

	Industry	Amount (US\$ Million)
1	Energy (power and others)	19,808
2	Ports	4,800
3	Roads	9,000
4	Water and Sanitation	4,567
5	Railway	7,248
6	Aiports	906
7	Tourism	2,050
8	ICT	7,850
9	Local Government	2,000
10	Housing	2,901
11	Public Works	1,000

Source: Working%20Paper%20WPS-01-16.pdf

As the Mombasa port expands, it requires the comprehensive plan and finance of the Mombasa port, and explore ways on how to improve the port's linkage to railway, highway and city road system, and conduct environmental impact assessment of port expansion, and financing the development and management of port facilities.

Mombasa is a hub for shipping activities, as the port expands, the city increasingly suffers from serious traffic bottlenecks which hindered the flow of cargo in and out of the port of Mombasa.

The government plans to undertake several road projects which include the dual carriageway of the Mombasa-Mariakani Highway, Dongo-Kundu Bypass and Mombasa Northern Bypass which will be set to increase Mombasa port efficiency. The Mombasa-Mariakani Highway costs EUR250 million.<sup>6</sup>The first phase of Dongo-Kundu Bypass costs KES11 billion, and the second phase of Dongo-Kundu Bypass costs KES30 billion<sup>7</sup>.

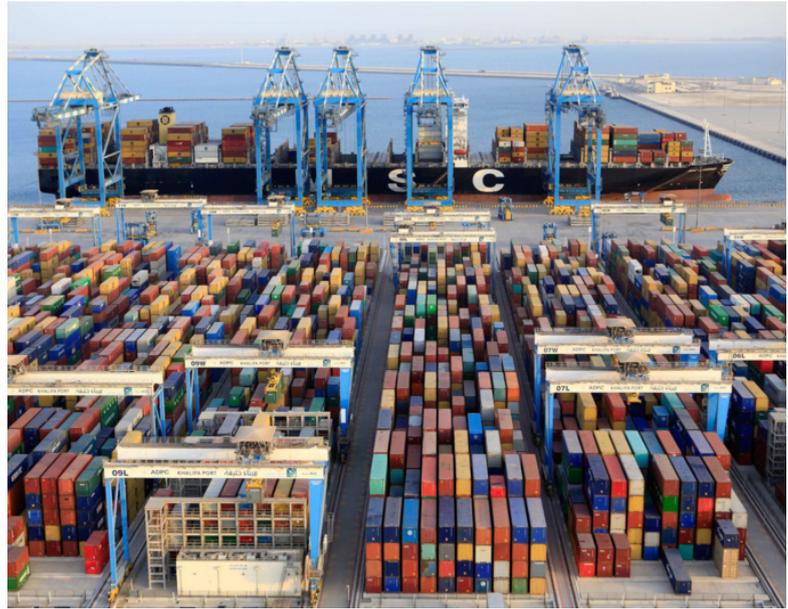
There will also be the construction of the six-lane Mombasa-Mariakani road at a cost of KES 22 billion with funding from the European Investment Bank, Africa Development Bank and the national government.

The 18km long Dongo-Kundu Bypass Highway, also known as Mombasa Southern Bypass seeks to connect Mombasa West Mainland with Mombasa South mainland, and forms part of a three-phase plan to decongest Mombasa and opens up south coast for business and tourism.

The Port Reitz-Moi Airport road project is jointly funded by the British government through TradeMark East Africa and the national government to the tune of KES5.2 billion.

It consists of a reinforced concrete, dual carriageway flyover and two-lane road and provides the necessary connection to the newly constructed second container terminal at the Mombasa port (see Figure E1).

Figure E1 Mombasa Port Facilities



Source: <https://dlca.logcluster.org/display/public/DLCA/2.1.1+Kenya+Port+of+Mombasa>

Further FRUGS can conduct quick assessment of each project and their funding situations. It can explore the blended finance opportunities and possibilities for KfW and other DFIs to partner with.

For the city road network, Mombasa needs to integrate different modes of transport and to penetrate/extend further into the residential areas. The use of bicycles and public means of transport are strongly encouraged where the city transport can be designed to serve its residents more effectively and sustainably. This will require to update the road system designs that favor rapid mass transport and encourage cycling for health and fitness of local residents and foreign visitors to the city. Partnerships with coastal cities in the world can provide Mombasa for peer learning and will help Mombasa to take the right decisions in planning and financing road infrastructure and should be explored. Further research on foreign best practices and case studies can feed into the design and finance of Mombasa road infrastructure system improvement.

## Energy and power

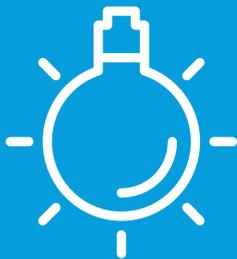
Our survey findings were that 53 % of the households who participated in focus group discussions used electricity and charcoal as their main source of energy for lighting and cooking respectively. About 11 % of the households in the survey used solar lighting. Through the Rural Electrification Authority (REA) primary schools electrification project, 90 primary schools in Mombasa County have been connected to the national grid. Additionally, in Kenya and by extension Mombasa County, 60 % of the population living in urban areas has access to main grid electricity. The county government of Mombasa has three thermal power generating stations namely; Kipevu I with installed capacity of 73.5 MW, Kipevu II with installed capacity of 74 MW and Kipevu III with installed capacity of 120 MW. Kipevu III is the largest diesel plant in East Africa and comprises of 7 diesel engines. The Kipevu power plants produce surplus power which is fed into the national grid. Nonetheless, the county recognizes that it has a high potential for generation of solar and wind energy, but this remains unexploited. Consequently, the county is putting deliberate efforts to find alternative source of energy (green power plant generation such as recycling of waste, solar and wind) using Public Private Partnership (PPP). Moi International Airport in Mombasa plans to put up a solar power plant as it seeks less reliance on grid electricity<sup>8</sup>.

## Water and waste management

Many households in the low to low middle-income groups have to share tapped water and much of it goes to waste due to poor maintenance of infrastructure. The majority of households in such neighborhoods depend on water vendors whose motivation is more profit-oriented. Access to affordable, clean drinking water and good sanitation must remain high on the priority list of government services to be provided to Mombasa residents, and the harvesting of rain and channeling of storm water should be reviewed so as to become more common place. Further research will support sustainable approaches of a water supply and saving system.

Coast Water Services Board (CWSB ) is one of the main developers of water and waste management in Mombasa County and in the city of Mombasa. It has also extended the water and sanitation services to informal settlements (Ziwa La Ng'ombe, Matopeni, ShauriYako, Kisumu Ndogo, Maweni and V.O.K) and rehabilitated Mombasa west mainland sewerage. Plans are in place for expanding capacity of water sources in terms of volume and quality and to rehabilitate the distribution network. A 15 per cent shortfall in water supply (approximately 60000m<sup>3</sup>/day) might persist beyond the 2035 time line by when the plan will be fully implemented. The Board recently replaced distribution lines and 40.23 km of trunk mains of diameters 160 mm to 700 mm. It conducted ancillary works, water works, bulk meters, rehabilitated water storage tanks and supplied sewer maintenance equipment in Mombasa County. The World Bank has been sponsoring several water infrastructure projects in Mombasa County through CWSB.

Mombasa County generates approximately between 700 and 875 tons of solid waste per day with a collection rate of 80%. The dumping sites in Mombasa include; Kibarani that receives 645 ton/day, Shonda (10 ton/day) and Mwakerunge (20-25 ton/day). These dumping sites cause serious air and water pollution. The waste generation is expected to rise to 1,241 tons/day in 2025 and 1,877 tons/day in 2040. This calls for the County government to develop and implement a sustainable solid waste management system.



53 % of the households use electricity and charcoal as their main source of energy for lighting and cooking respectively.

## Financing for housing, urban infrastructure and services in Mombasa

This study of Mombasa city considered financial instruments available and their features, particularly with regard to making housing and corresponding infrastructure affordable. Their impacts on the financial system level and the sustainability and resilience of the system were explored. New financial systems and sources were examined with a view of accommodating greater private sector funding and participation in financing and delivery of green and climate-resilient urban development in housing and infrastructure, which are still very new concepts in Kenya.

In Kenya as elsewhere in Africa, for achievement of scale, microfinance institutions are required to investigate becoming deposit-taking banks even though this will bring more regulatory requirements and the need for branch infrastructure. Banks will remain important financiers, in particular in the early stages of new infrastructure projects. Since they, which have mostly short-term liabilities, banks are not well-placed to hold long-term assets on their balance sheets for an extended period of time. Therefore, a much broader group of investors needs to be targeted. Bonds would be suitable instruments for large institutional investors, such as pension funds and insurance companies with their long-term liabilities. Development banks and export credit agencies, which have a crucial role in financing infrastructure investments in both developing and developed countries, have a role to play in Kenya since they may be able to enhance the efficiency of their finite resources by the judicious use of financial instruments such as guarantees or mezzanine capital. In addition, other new forms of finance, such as infrastructure investment funds, can be developed to help tap into some of the vast resources of international capital markets.

For infrastructure development, apart from the current main financing instruments of bank loans, Kenyan Government is looking to a variety of business models to increase private sector participation and promote public-private partnership. It can make infrastructure an asset

class that is more accessible to a broader group of investors. In this light, it would help to diversify the large risks of infrastructure projects across many groups of investors. In addition, the vast resources of capital market, which are currently hardly tapped by infrastructure projects, are much more accessible with a boarder mix of financial instruments. Infrastructure bonds and infrastructure funds carry a high potential; and other financial instruments, such as collateralized infrastructure loans for instance, may also attract substantial investor demand.

## Greening the economy

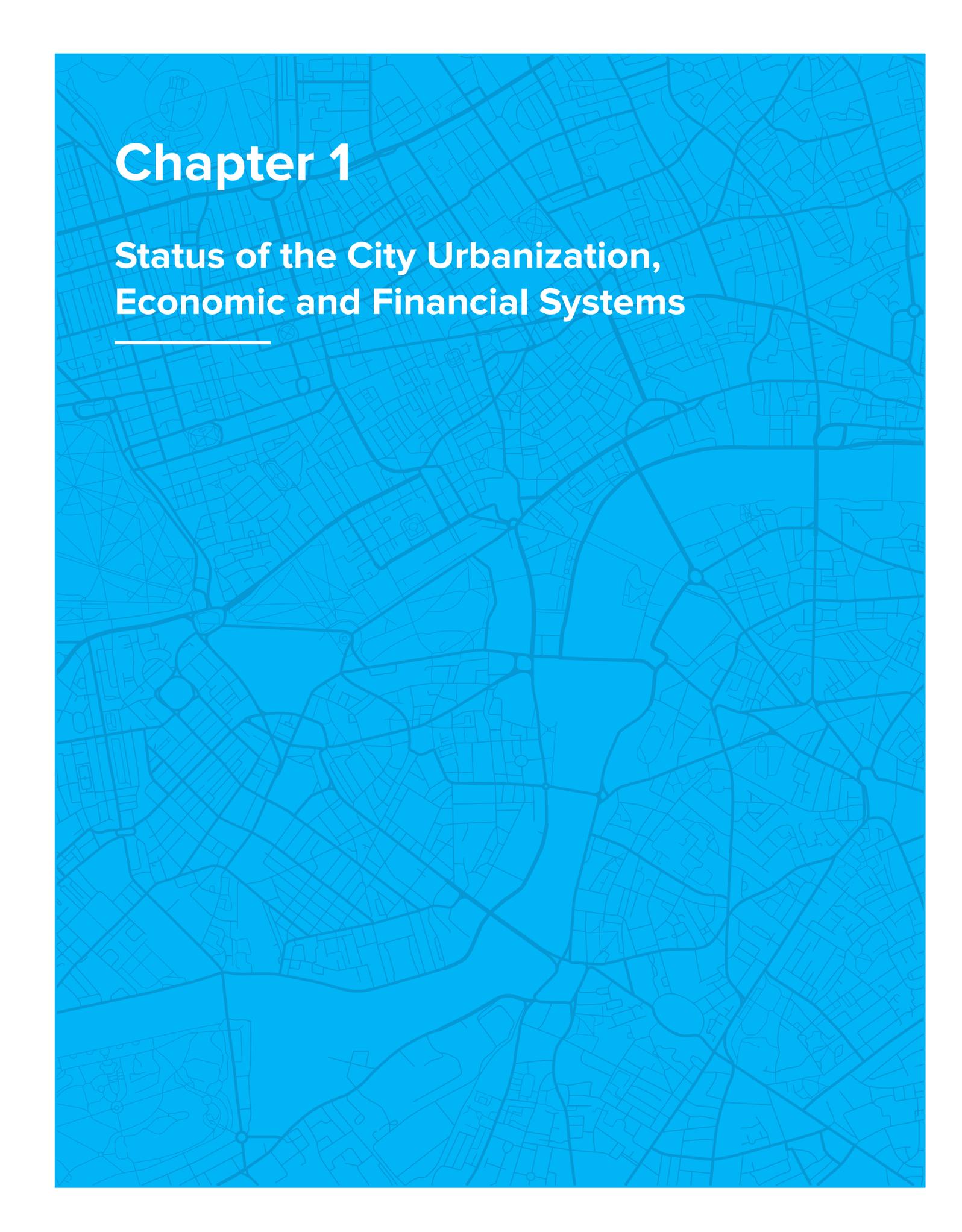
Despite the concept of low-carbon and climate resilient development being quite new in Kenya, it is particularly applicable to the City of Mombasa. Being a coastal city, rising sea levels will eventually become a reality and occasional severe events such as Tsunamis cannot be ruled out. The city architecture and infrastructure currently follow normal building standards which could expose inhabitants to periodic distress when unpredictable weather and nature put them through tests for resilience. It is also necessary to preserve the mangrove forests that occupy the coastal intertidal zones so that they can prevent shore line erosion and provide the green space that will become highly valued in cities of the future. The National Climate Change Response Strategy (NCCRS) produced in 2010, puts the cost of implementation of a low carbon growth path at an average annual cost of KES 235 billion for the next 20 years. The Green Economy Assessment Report for Kenya further proposes investing an estimate of about 2 percent of GDP per annum in green economy scenarios. The total investment cost identified was approximately KES 1.2 trillion between 2012 and 2030 or roughly KES 70 billion annually. The models indicate that such levels of investment in green economy could generate higher growth than the case of business as usual. Greening the housing and infrastructure sector in Mombasa will create much needed work and help to address the issue of much needed employment while securing projects undertaken at great cost to the economy.

The report concludes by translating investment needs into implementable projects many of which are in the pipeline by the County Government of Mombasa. Creating a pipeline of suitable projects requires a coherent and trusted legal framework for infrastructure projects. The policies and legal frameworks have to be in place at all levels of government to support investment in the long term. It is recommended to put these in place and with

help of development partners, the County of Mombasa can set up agencies to act as central points for the development of large infrastructure projects. Through them, it can build up the necessary expertise and realize enormous efficiency gains that will enable national and county governments to successfully undertake a much larger number of projects so as to lift the living standards of dwellers of Mombasa city.



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# Chapter 1

## Status of the City Urbanization, Economic and Financial Systems

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## 1.1 Brief History of the City

Mombasa, located in southeastern Kenya on the Indian Ocean, is the second largest city in the country and the nation's major seaport (<http://www.blackpast.org/gah/mombasa-kenya-ca-900-d>). The city, which is located on an island separated from the mainland by Tudor Creek and Kilindini Harbor, had a population of 939,370 people according to a 2009 census. The official language is Swahili and the city is populated mostly by the Muslim Swahili people. The Swahili name for the city is Kisiwa Cha Mvita, which translates "island of war." Mombasa is also an internationally famous tourist destination particularly for visitors from Europe.

According to creation myths, Mombasa was founded by two rulers: Mwana Mkisi and Shehe Mvita. More likely the city was founded by Arab traders who settled there as they did in other cities along the Indian Ocean coast of East Africa. Those early Arab settlers intermarried with local people, creating the Muslim-dominated culture in the city.

Kenyan historians place the founding of Mombasa as around 900 A.D. The town was prosperous enough to be described by the Arab geographer Al Idrisi, who mentioned it in his writings in 1151, and by the Moroccan traveler Ibn Battuta, who visited it in 1331. During this period Mombasa emerged as an important trade center with links to Yemen, India, Persia, and China with spices, gold, and ivory as its chief exports.

In 1498 Portuguese explorer Vasco da Gama became the first known European to reach Mombasa. His visit awakened Portuguese interest in the city. Two years later the Portuguese returned to survey the city. The Portuguese finally captured Mombasa in 1593, building Fort Jesus to ensure establishment of their rule. Mombasa became Portugal's main trading center on the East African coast.

The city came under the rule of the Sultan of Oman in 1698. In 1837 Mombasa was annexed by Sayyid Said, the Sultan of Zanzibar (Tanzania). Zanzibari rule continued until 1898 when the British assumed control of the city. Mombasa became the capital of

British East Africa and the sea terminal for the Uganda Railway which was started in 1896. The British introduced Indian laborers who constructed the railroad. After its completion in 1900, they stayed and became a part of this increasingly multicultural, multiracial city. Mombasa under the British sent cotton, cloves, and coffee to Europe and the Americas. When Kenya became independent in December 1963, Mombasa had a population of 191,000. The city remains a major trading port.

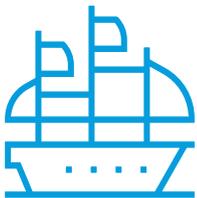
### Political system

Kenya embraced a devolved structure of government after promulgating a new constitution in 2010. The devolved government of the Republic of Kenya, proposed during the making of the new constitution, is primarily geared towards achieving two main objectives:

- Involve the people in governance
- Allow better supervision and implementation of policies at the grass root level

Chapter eleven of the Constitution spells out the manner in which the devolved government operates. Under several Articles of the Chapter, principles of devolution are provided and it is stipulated that urban areas and cities are categorized under national legislation. Part 5 outlines the relationship between devolved governments and requires county governments to operate financial management systems that comply with any requirements prescribed by national legislation. Chapter twelve deals with public finance and spells out how national revenue should be equitably shared between the two levels of government, and in particular, the criteria to be taken into account in determining the equitable shares provided for under Article 202 and in all national legislation concerning county government enacted in terms of this Chapter.

In the Fourth Schedule of the Constitution, the roles to be played by each level of government are clearly outlined. The national government takes responsibility for, among other things, national economic policy and planning, national statistics on population, the economy and society in general, transport and



In 1498 Portuguese explorer Vasco da Gama became the first known European to reach Mombasa

communications, including in particular - road traffic, construction and operation of national trunk roads, standards for the construction and maintenance of other roads by counties and issues related to development of railways. The national government also has responsibility over housing policy and national public works. It takes charge of energy policy including electricity and gas supply as well as capacity building and technical assistance directed at counties. Kenya's central government is structured through the Constitution with administrative and policy making powers being distributed to its three arms namely Executive, Legislature and Judiciary<sup>9</sup>.

Part 2 of the Fourth Schedule of Kenya's Constitution further explains the role of county governments, of which those relevant to this study of cities include control of air pollution, noise pollution and other public nuisances. County governments take care of local transport needs such as road construction, street lighting, traffic and parking, public road transport, ferries and harbors, except where the harbors handle international and national shipping matters. Aspects of county planning and development include statistics, land survey and mapping, boundaries and mapping, housing, electricity and gas reticulation. Public works and services under county governments include management of storm water drainage systems in public places, water and sanitation services. The county government, which is complimented by the local administration of the national government, constitutes of a county assembly and county executive.

The Constitution of Kenya under the First Schedule establishes 47 counties, each with its own government. See Figure 1.1. County governments are headed by Governors and consist of a county assembly and a county executive. The county assembly is made up of members elected from different wards in the county. The county governor is the head of the county executive. Voters in each county elect their governor and deputy governor directly. The governor then appoints other members of the county executive committee, with the approval of the county assembly (KNBS, 2014). The responsibilities of the county assembly include:

- Exercising the powers of enacting laws at the county level
- Acting as an oversight instrument on the county executive
- Approval of plans and policies for smooth operation and management of resources and county institutions, including the development and management of its infrastructure.

Even at county level, democratic principles are observed. The people elect the members of the county assembly at Ward level. All the same, additional slots are reserved for nominations. This ensures that membership is well distributed by gender, marginalized groups and persons with disability. The county assembly is headed by a county Speaker who by law is not supposed to be a member of the assembly. The county executive on the other hand is charged with the responsibility of exercising executive power at the county level, implementing laws for administration of the county as well as carrying out other executive functions of the county. The county executive gives the people an opportunity to be more actively involved in lawmaking (Table 1).

**Figure 1.1: The Counties of Kenya**



Source: <http://www.geocurrents.info/cartography/customizable-maps-kenya>

**Table 1.1: Political units of Mombasa County (Constituencies and wards)**

County's Electoral Wards by Constituency	No. of Electoral wards
Mvita	5
Kisauni	7
Changamwe	5
Likoni	5
Nyali	5
Jomvu	3
Total	30

Source: County Government of Mombasa Annual Development Plan, 2015-16

There were 10 county departments under the office of the Governor of Mombasa at the time the first CIDP was developed in 2013, namely:

- Tourism and Culture Development
- Trade, Energy and Industry
- Youth, Gender and Sports
- Transport and Infrastructure
- Lands, Planning and Housing
- Education and Children
- Health Services
- Agriculture and Livestock Development
- Finance and Economic Planning
- Water, Environment and Natural Resources

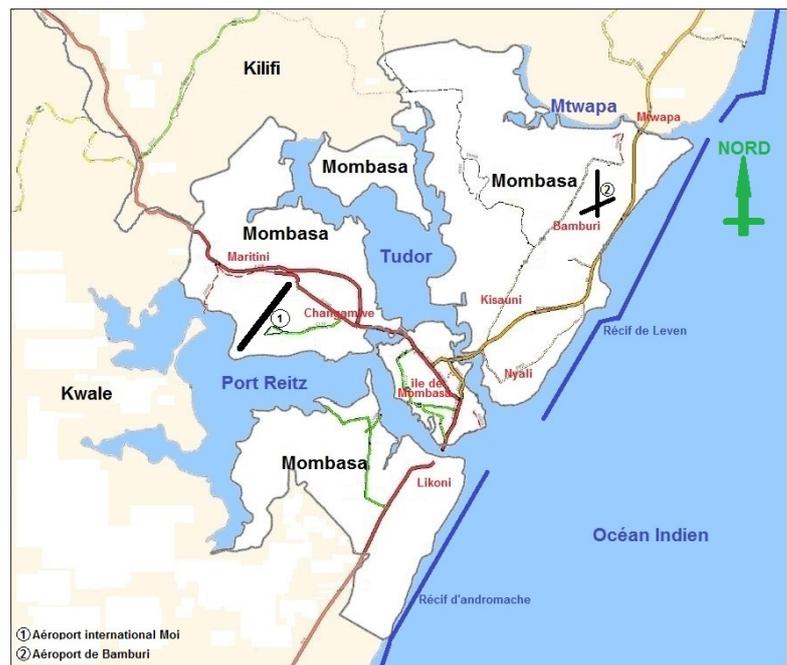
## 1.2 Geographic Characteristics of the City

### Position and Size

Mombasa County covers an area of 229.9 km<sup>2</sup> excluding 65 km<sup>2</sup> of water mass which is 200 nautical miles into the Indian Ocean. It borders Kilifi County to the North, Kwale County to the South West and the Indian Ocean to the East. The County lies between latitudes 3°56' and 4°10' South of the Equator and between

longitudes 39°34' and 39°46' east of Greenwich Meridian. The County also enjoys proximity to an expansive water mass as it borders the Exclusive Economic Zone of the Indian Ocean to the East. See Figure 1.2.

**Figure 1.2: Location of Mombasa County**



Source: <https://www.google.com>

## Transportation links and networks

The city hosts the main sea port in the East African Community which additionally serves the Democratic Republic of Congo, South Sudan and south of Ethiopia. This gives the port great economic significance far beyond the borders of Kenya with regard to the import and export of goods. Liquid bulk items, mostly petroleum, oil and lubricants, are the single greatest import item by weight. Without these imports, Kenya's economy (and most other countries of the EAC), which depends on imports for all of its petroleum needs, would grind to a halt. The next four largest items by weight (maize clinker, wheat, iron and steel), are critical in meeting Kenya's food needs and in supporting its vibrant construction industry (World Bank, 2010). Since 2005 the weight of transit goods has risen 38 percent from 3,202 to 4,412 ('000'DWT). Uganda was the largest market for transit goods in 2009 consuming 80 percent of the imports, with eastern DRC the second largest destination. Improving physical infrastructure for offloading cargo in Kilindini Port and integration of railway and road network linkages will equip the Port to handle increased volume of goods and reduce stress placed on land transport, leading to faster and more efficient intermodal connections. Progress in this area, however, has been poor.

Past failure of the railway system development resulted in a large number of new truck movements in and around the port contributing to the growing problem of truck congestion, parking and road deterioration. Rail transport which carried around 80 percent of goods transiting Mombasa in the early 1970s then had capacity which gradually declined due to lack of government investment in railways (World Bank, 2010). To address this problem, the Government of Kenya has placed great emphasis in improving railway transport in its development blueprint. The Standard Gauge Railway is one of the Vision 2030 flagship projects in infrastructure development. Commissioned in 2013, the project took 4 years to connect Nairobi and Mombasa with a new multi-billion dollar Mombasa-Nairobi railway that will eventually stretch from the port city of Mombasa all the way to Kigali in Rwanda and Juba in South Sudan. The standard

gauge railway is the largest project to be undertaken in the country in 50 years! (<http://www.vision2030.go.ke/projects/?pj=197>). The railway is expected to divert freight and passenger traffic away from roads and to provide rapid inter-city connections thereby decongesting them and improving safety.

## 1.3 The Population Growth and Urbanization Patterns

### Population Size and Composition

Population distribution and settlement patterns in the County are influenced by proximity to vital social and physical infrastructure networks such as roads, housing, water and electricity (County Government of Mombasa, 2015). Other factors that influence settlement patterns include accessibility to employment opportunities, and security. Mombasa population growth rate was 3.6 percent at which rate if it continued per year since 1999, it was projected to be 1,052,802 in 2012 and to rise to 1,271,920 persons by 2017. A density trend for different civic wards is given in Figure 1.3. Starting in 1979, for an area of 219km<sup>2</sup>, average population density in Mombasa County was recorded at 1559/km<sup>2</sup>, 2109/km<sup>2</sup> in 1989, 3038/km<sup>2</sup> in 1999 and 4291/km<sup>2</sup> in 2009, a change of 3.51 percent per year from 1999 - 2009. It was projected at 4892/km<sup>2</sup> in 2015<sup>10</sup>.

**Figure 1.3:** Change in population density in Mombasa city as projected since 2009 for civic wards

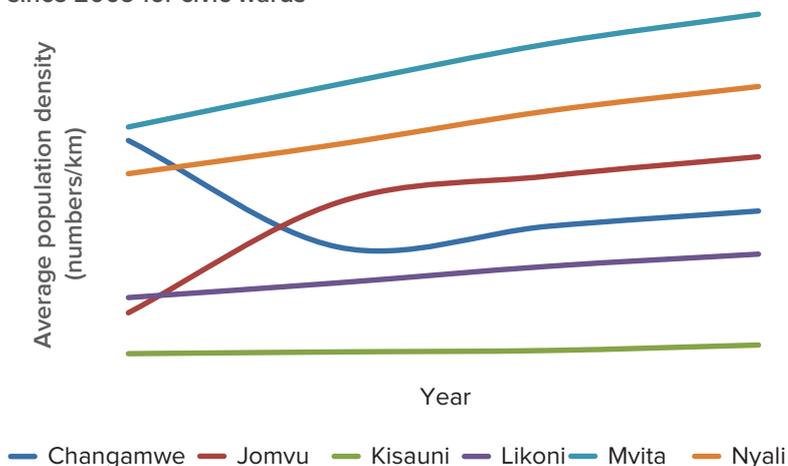


Table 1.2 shows the county population growth of Mombasa County. The total population of the county in 2009 was 939,370 persons of

which 486,924 and 452,446 were male and female respectively.

**Table 1.2: Population growth trend of Mombasa County since 1979**

	Year			
	1979	1989	1999	2009
Population	341,148	461,753	665,018	939,370
Change in population (%)	-	35.3	43.7	41.2

Source: <https://www.citypopulation.de/php/kenya-admin.php?adm2id=01>

### Future Projection of Urbanization by 2030

**Kenya’s urban population stood at 25.6 percent of total population (2015) with a rate of urbanization of 4.34 percent (2010-15 est.).** This rate applies to major cities like Nairobi whose population stands at 3.9 million and Mombasa whose current population is 1.1 million respectively<sup>11</sup>.

slums of Mishomoroni, Junda and Kisumu Ndogo in Kisauni (County Government of Mombasa, 2015).

The land adjudication process for Shika-Adabu and Vyemani settlement schemes is in progress. There are other proposed schemes in the county namely; Maweche, Kibundani, Ujamaa-Shonda and Kidungunyi. There are also sparsely populated areas in the outskirts of the County which include Mwakirunge-Maunguja, Mwangala, Mreroni and the Mkupe Jetty area. These areas are least developed in terms of infrastructure such as road network, electricity and water supply. Education and health facilities are also scantily available in these areas making the inhabitants vulnerable to poverty and disease incidences.

## 1.3 The Population Growth and Urbanization Patterns

### Population Density and Distribution

The County had a population density of 6,131 persons per km<sup>2</sup> in 2009 which was attributed to increased numbers of people seeking employment in the manufacturing, service and processing industries, the Port of Mombasa, Kenya Ferry Services, Container Freight Terminals, go downs and hotels. Highly populated areas are in Majengo, Bamburi, Bangladesh, Mikindani, Jomvu, Miritini, Migadini, Port Reitz, Mishomoroni and Bombolulu among others. The County has various settlement schemes namely Mwakirunge, Jomvu-Kuu, Bububu-A, Shika-adabu, Vyemani, Mwembelegeza and Majaoni. Despite efforts being made to settle people, the County still has a very large number of landless people most of whom live in the city’s

### 1.3.1 Current Status of Urbanization and Household Structure

#### Land and Housing

Land ownership in most areas of Mombasa County is not guaranteed as most of the residents do not legally own the land they live on. It is owned by absentee landlords. A number of informal settlements exist in the County. The growing population continues to exert pressure on existing units of housing, creating a huge demand for quality and affordable housing (County Government of Mombasa, 2015)<sup>12</sup>. The

city and the whole county experience physical planning challenges due to the proliferation of slums, lack of a well-planned sewerage system, lack of effective solid waste management system/unplanned waste disposal points and other infrastructural facilities (County Government of Mombasa, 2014).

## 1.4 The Economic System, Structure and Development

Like the rest of the Kenyan economic system, Mombasa City has a market economy<sup>13</sup>. It is characterized by a few state-owned infrastructure enterprises while it maintains a liberalized external trade system. Its population largely depends on jobs that are included in “wholesale and retail trade, transport, government, financial, professional, and personal services’ sectors which the World Bank defines as services. In 1980, services sector accounted for 47 percent of Kenya’s overall GDP. In 1990, it accounted for 51 percent, in 2000 it stayed constant at 51 percent, and in 2011, the services sector accounted for 58 percent of Kenya’s overall GDP.

Kenya’s economy grew by 5.7 percent in 2013, up from 4.5 percent growth in 2012. The increase in growth in 2013 was supported by improved activities in agriculture, forestry and fishing (5.1 percent), manufacturing (5.9 percent), wholesale and retail trade (9.2 percent), financial and insurance activities (9.3 percent) and information and communication (13.5 percent). The economy is estimated to have expanded by 5.5 percent in the third quarter of 2014 compared to a revised estimate of 6.2 percent in the same period of 2013. The growth was mainly supported by robust growths in; construction (11.0 percent), finance and insurance (9.9 percent), wholesale and retail trade (7.2 percent); information and communication (6.6 percent); and agriculture and forestry (6.2 percent). All the sectors of the economy recorded positive growth except accommodation and food services (hotels and restaurants) which have consistently been on the decline since 2014 (County Government of Mombasa, 2015b).

### Wholesale and retail trade

Mombasa has a thriving services industry. The entire county is urban and hosts Mombasa City which is the second largest city in Kenya. It also hosts one of the largest wholesale and retail fresh produce markets in the country (Kongowea) where traders from all over the country and East Africa congregate and conduct business throughout the year. Other key markets include Mwembe Tayari fresh produce market and Marikiti retail market. Additionally, several major supermarket chains and shopping malls operate within the city, providing convenient shopping to residents and guests alike (County Government of Mombasa, 2014).

### Tourism

Kenya’s services’ sector, which contributes about 63 percent of GDP, is dominated by tourism<sup>14</sup>. The tourism sector exhibited steady growth in most years since independence and by the late 1980s had become the country’s principal source of foreign exchange. In the late 1990s, tourism relinquished this position to tea exports because of a terrorism-related downturn. The downturn followed the 1998 bombing of the U.S Embassy in Nairobi and later negative travel advisories from Western governments.

Tourists, the largest number from Germany and the United Kingdom, are attracted to the coastal beaches and the game reserves, notably, the expansive Tsavo East National Park and Tsavo West National Park (20,808 km<sup>2</sup>) in the southeast of Kenya. The government and tourist industry organizations have taken steps to address security issues and to reverse negative publicity. Such steps include establishing a tourist police unit and launching marketing campaigns in key tourist origin markets. In 2006 tourism generated USD803 million, up from USD699 million the previous year.

Mombasa County is home to a diverse culture and amazing flora and fauna. Mombasa city being an ancient town hosts several tourist attractions and world heritage sites. Of



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In 2006 tourism generated **USD803 million**, up from **USD699 million** the previous year.

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significant mention is the historic Fort Jesus Museum which is also a UNESCO World Heritage site. The gigantic “Elephant Tusks” along Moi Avenue (Figure 1.4) are the city’s land mark and a major tourist attraction. Additionally, several buildings in the old town including the Old Port are a major tourist attraction. The white sandy beaches are also a significant attraction to both international and domestic tourists. The county is host to the Mombasa Marine Park, which is home to a variety of fishes and other sea creatures, and two private nature trails, Haller Park and Butterfly Pavilion, operated by Bamburi Cement factory (County Government of Mombasa, 2014).

### Agriculture, Livestock and Fisheries Development

Agriculture is the second largest contributor to Kenya’s gross domestic product (GDP), after the services sector. In 2005 agriculture, including forestry and fishing, accounted for about 24 percent of GDP, as well as for 18 percent of wage employment and 50 percent

of revenue from exports. The main subsistence crops under cultivation in Mombasa county include cassava, cucurbits family, maize, vegetables, millet and sorghum. These are most preferred due to their resistance to diseases and pests (County Government of Mombasa, 2014). The climatic conditions of the county make plants very prone to diseases and pests and therefore, highly resistant varieties are encouraged. The total acreage under food crop stands at 400 ha while the total acreage under cash crop is 500 ha. The County is generally a net importer of food and other agricultural products and this makes the cost of food high and inaccessible to most of the low income earners. There is need to invest more in value addition for agricultural products and better post-harvest management systems and facilities. Livestock keeping and fishing are also practiced in the County.

On commercial scale, the coastal belt of which Mombasa is the main city, is suited for production of Coconuts, pineapples, cashew nuts, cotton, sugarcane, sisal, and corn which grow in the country’s lower-lying areas.

Figure 1.4: Moi Avenue, Mombasa.



Source: <http://www.africatravel.us/2016/06/city-guide-mombasa-kenya-photos.html>

With respect to fishing, Kenya's total catch as reported in 2004 was 128,000 metric tons. However, output from fishing has been declining because of ecological disruption. Pollution, overfishing, and the use of unauthorized fishing equipment have led to falling catches and have endangered local fish species.

### **Industry and manufacturing**

Although Kenya is the most industrially developed country in East Africa, manufacturing still accounts for only 14 percent of gross domestic product (GDP). This level of manufacturing GDP represents only a slight increase since independence. Expansion of the sector after independence, initially rapid, stagnated in the 1980s, hampered by shortages in hydroelectric power, high energy costs, dilapidated transport infrastructure, and the dumping of cheap imports. However, due to urbanization, the industry and manufacturing sectors have become increasingly important to the Kenyan economy, and have been reflected by an increasing GDP per capita. Industrial activity, concentrated around the three largest urban centres, Nairobi, Mombasa, and Kisumu, is dominated by food-processing industries such as grain milling, beer production, and sugarcane crushing, and the fabrication of consumer goods, for example, vehicles from kits. Kenya also has an oil refinery located in Mombasa city that processes imported crude petroleum into petroleum products, mainly for the domestic market. In addition, a substantial and expanding informal sector engages in small-scale manufacturing of household goods, motor-vehicle parts, and farm implements. About half of the investment in the industrial sector is foreign, with the United Kingdom providing half. The United States is the second largest investor.

Kenya's inclusion among the beneficiaries of the US Government's African Growth and Opportunity Act (AGOA) has given a boost to manufacturing in recent years. Since AGOA took effect in 2000, Kenya's clothing sales to the United States increased from USD44

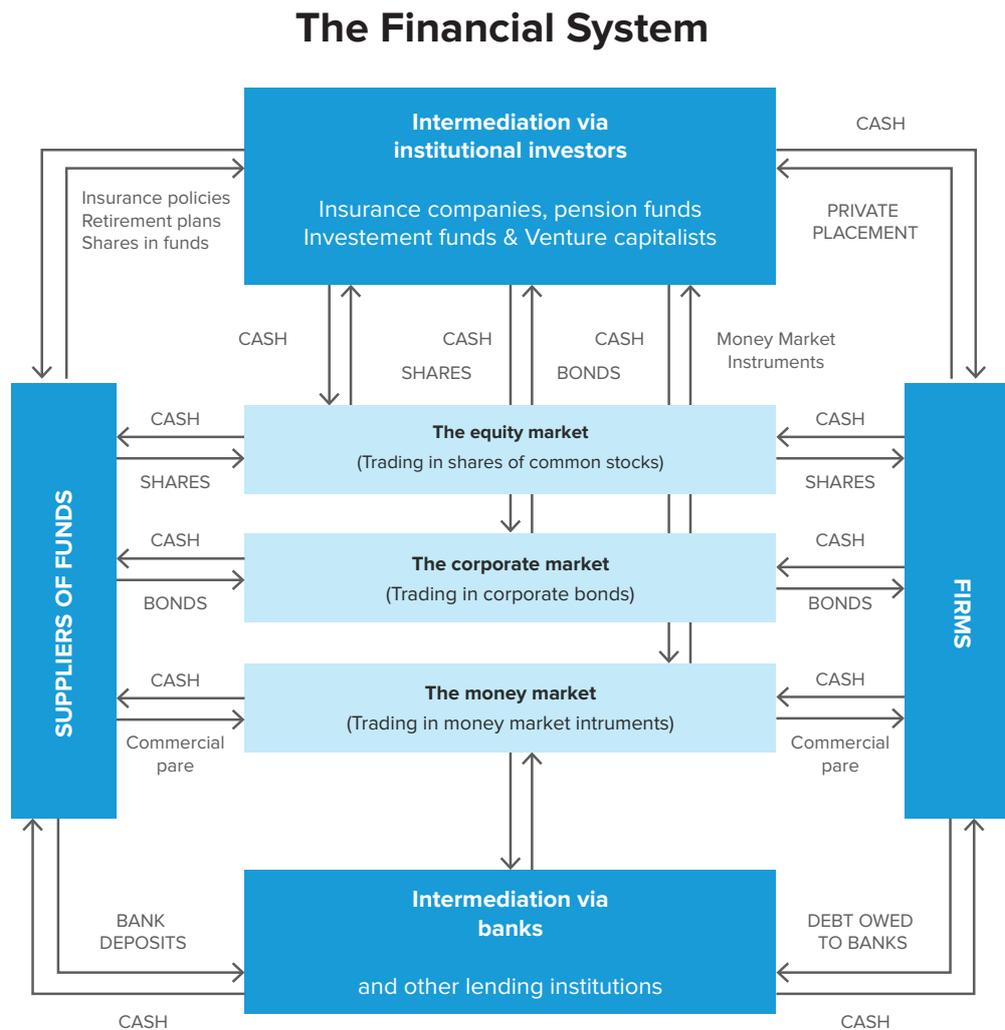
million to USD270 million (2006). Other initiatives to strengthen manufacturing have been the new government's favorable tax measures, including the removal of duty on capital equipment and other raw materials<sup>15</sup>.

### **Financial services**

A financial system is made up of the components outlined in Figure 1.516. Kenya is East and Central Africa's hub for financial services. The Nairobi Stock Exchange (NSE) is ranked 4th in Africa in terms of market capitalization. The Kenya banking system is supervised by the Central Bank of Kenya (CBK) which was founded in 1966. Commercial banks and mortgage finance institutions are licensed and regulated in accordance with the provisions of the Banking Act and the Regulations and Prudential Guidelines issued there under. As key players in the banking sector, commercial banks and mortgage finance companies are subject to regulatory requirements governing their prudential position and market conduct in order to safeguard the overall soundness and stability of the financial system. As of late July 2004, the system consisted of 43 commercial banks (down from 48 in 2001), several non-bank financial institutions, including mortgage companies, four savings and loan associations, and numerous foreign-exchange bureaus. Two of the four largest banks, the Kenya Commercial Bank (KCB) and the National Bank of Kenya (NBK), are partially government-owned, and the other two are majority foreign-owned (Barclays Bank and Standard Chartered). Most of the many smaller banks are family-owned and privately-operated<sup>17</sup>.

Publicly owned institutions have more than 50percent shareholding by Government and State Corporations. See Figure 1.6. As at the end of June 2016, of the 24 locally controlled commercial banks, 3 were not in operation – one was under statutory management and two were in receivership<sup>18</sup>. To date, there are 42 licensed commercial banks.

Figure 1.5: Components of a financial system



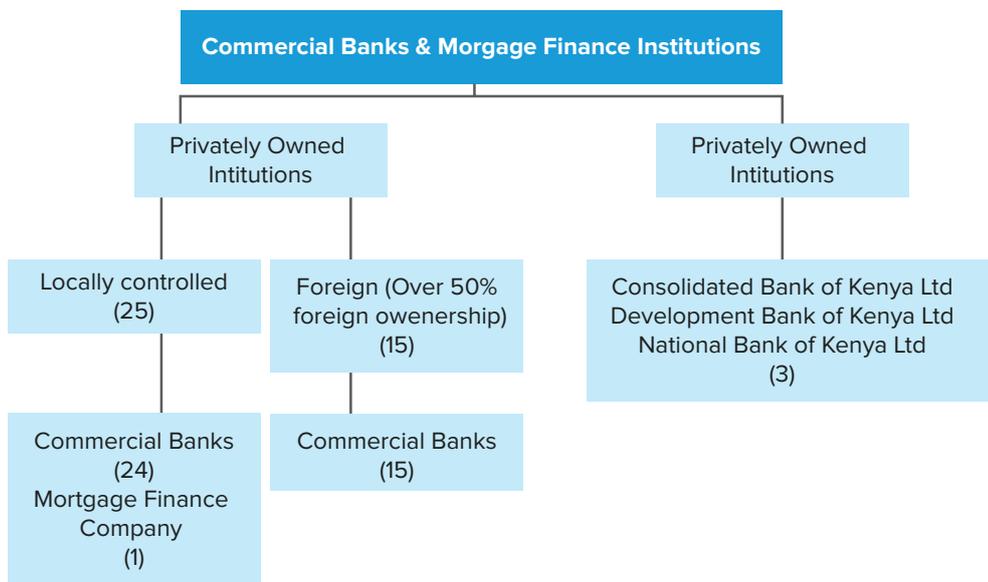
Kenya’s microfinance sector consists of four large microfinance banks (Equity Bank, Sidian (formerly K-Rep) Bank, Family Bank and Cooperative Bank) which serve the upper end of the microfinance market, and approximately 50 microfinance organizations (MasterCard Foundation.2013. Kenya Housing Market Mapping and Value Chain Analysis). Total assets for the sector were over KES 220bn (USD 2.59bn) as of December 2011. It is worth noting, however, that Equity Bank alone accounts for 80.4 percent of the sector’s total assets. The size of the sector to GDP is 7.33 percent as of December 2011. The sector reaches out to nearly 1.5 million borrowers with the value of the outstanding loan book standing

at KES 138.4 billion as of December 2011 (USD 1.6 billion). The average loan disbursed is USD 1,649 for the whole sector and USD 464 when commercial banks are excluded. The sector still relies on donations and data from the survey reveals that 73.3 percent of donations are raised from international partners while only 26.7 percent from local entities and bodies. The sector largely funds itself with deposits collected from the public, which account for 58.9 percent of total assets, while total equity accounts for 18.2 percent of total assets, followed by borrowings accounting for 16.6 percent. Compulsory deposits account for 22.5 percent of the structure.

According to a recent report by HFHI on HMF in Kenya, commercial non-deposit taking MFIs such as Select Africa have entered the HMF lending space; the MFI offers a home improvement incremental construction product as well as one for new build with amounts ranging from USD 600-USD 6,000 (MasterCard Foundation 2013. Kenya Housing Market Mapping and Value Chain Analysis). A number of pioneering SACCOs and NGOs are using the microfinance lending methodology to provide housing finance for the poor, such as Jamii Bora Bank and NACHU. NACHU has seen

considerable growth in its loan product offering incremental building loans to improve physical infrastructure of homes, installing electricity, water and sanitation facilities (41 percent), and loan product for new house construction or house extension (100 percent) with loan amounts ranging from USD 2,300-USD 58,000. However, there is limited documentation on the performance and sustainability of these HMF products. Approximately 9 percent of low-income households source credit for home construction from MFIs.

**Figure 1.6:** Organization of the banking sector in Kenya



Source : <https://www.centralbank.go.ke/bank-supervision/>

### Wage-Job Labor

According to the World Bank 2012 Kenya Economic Update, “Men are much more likely than women to hold wage jobs, and women are more likely to work on family farms. In 2009, 3.4 million men held wage jobs, while only 1.3 million women were employed in wage jobs.

Thus, twice as many men as women hold

wage jobs, and more men work principally in wage jobs than on family farms. Most Kenyans are now striving to get modern, wage jobs. “Modern wage jobs include being a “engineer, telecommunication specialist, cut flower worker, teacher, construction worker, housekeepers, professionals, any industrial and manufacturing job, and port and dock

workers.” In 1989, there were only 1.9 million Kenyans employed in wage work, but by 2009, 5.1 million Kenyans worked in modern, wage jobs. These are the types of jobs available for lower middle income residents in Mombasa city based on the opportunities offered by the government, non-government and private sector.

The 2009 population and housing census covered in brief the labor status. The main variable of interest for inequality discussed in an inequality study conducted in Mombasa County in 2013 was work for pay by level of education. The other variables, notably family business, family agricultural holdings, intern/volunteer, retired/homemaker, fulltime student, incapacitated and no work influenced employment to various extents at ward level (KNBS & SIDS. 2013. Exploring Kenya’s Inequality. Mombasa County). In Mombasa County, 28 percent of the residents with no formal education, 37 percent of those with a primary level of education and 46 percent of those with secondary level of education or above are working for pay.

#### Non-farm self-employment

Non-farm self-employment has continued to rise in Kenya. The World Bank characterizes non-farm self-employment to include jobs being a “street vendor, shop owner, dressmaker,

assistant, fishmonger, caterer, etc.” Non-farm self-employment rose from a total of 0.9 million working in 1989 to a total of 2.7 million workers in 2009. There was almost an equal amount of men and women in the non-farm self-employment category. The men made up 1.4 million workers, and the women 1.3 million. Such small businesses engaged a large number of low-income earners in the residential areas of Kenya’s main cities and Mombasa is not an exception<sup>19</sup>.

A survey conducted on development, marginalization, security and participation of people living in the Coast region of Kenya in 2013 was dominated by views of residents of Mombasa County as they constituted nearly a third of the entire sample (29 percent) (USAID/Kenya Transition Initiative (KTI) Coast Programme. 2013. Kenya Coast Survey by IPSOS). Estimated monthly household incomes as reported showed there was considerable variation across the counties in the region. Specifically, the combined proportion of those earning less than Shs. 10,000 a month was 28 percent for Mombasa. The main sources of income were identified as self employment, small business or trade, private sector wages, public sector wages, farming, gifts of money received from others and proceeds of livestock sales. The status of employment of inhabitants of the coast region and in particular, Mombasa county was as given in Table 1.3.

**Table 1.3: Employment status of inhabitants of Coast Region and in particular, Mombasa County**

Employment status	% Total for Coast Region	% Mombasa County
Self Employed	32	31
Unemployed	29	27
Part time/Casual	9	11
Employed privately	7	12
Family subsistence	6	1
Employed in Public Sector	5	6
Student	4	6
Employed in family business/firm	3	1
Retired	2	3
Other	3	2

Source: USAID/Kenya Transition Initiative (KTI) Coast Programme. 2013. Kenya Coast Survey by IPSOS

## 1.5 Jurisdictional Design/Environment

Kenya's economy expanded by 5.6 per cent in 2015 compared to 5.3 percent growth in 2014. In absolute terms, the country's Gross Domestic Product (GDP) at current market prices stood at KES 6.2 trillion in 2015<sup>20</sup>. The year under review was characterized by inflationary pressures and volatility in exchange rate. Subsequently, the monetary policy was principally aimed at achieving and maintaining stability in the general price levels in the economy with the ultimate goal of achieving an inflation target of five per cent.

As a result, Central Bank Rate (CBR) was raised from 8.5 percent to 10.0 percent in June, and further to 11.5 percent in July. There was mixed performance in interest rates during 2015 on account of the changes in the CBR.

The ratio of current account balance to GDP of the Kenyan economy improved notably from 11.0 percent in 2014 to 7.6 percent in 2015 largely due to a decline in the import bill against a substantial growth in export earnings. The decrease in the import bill was mainly due to the fall in the international oil prices. The financial sector continued to post impressive performance in 2015 owing to a considerable expansion of the financial services sub-sector. However, the growth was somehow dampened by the continued decline in the level of activity in the insurance sub-sector whose growth slowed down to 4.9 percent in 2015. The financial sector's performance was clearly manifested in the performance of other sectors especially construction, manufacturing and agriculture that recorded significant rise in credit advanced by commercial banks and cooperative societies. The growth was also driven by a significant growth in domestic credit to the National Government from KES 424.9 billion in 2014 to KES 538.0 billion in 2015 (KNBS, 2016).

## 1.6 The Municipal Financial System

A financial system supports the exchange of funds between lenders and borrowers. It is made up of complex and closely related institutions, agents, procedures, markets,

transactions, claims and liabilities within an economy (<http://universalteacher.com/1/components-of-financial-system/>). The five basic elements of a financial system are:

- Financial services which professional asset managers and liability management companies provide to assist clients to get necessary funds and utilize them efficiently
- Money, which the system accepts as the medium for payment of products and services.
- Financial instruments which are traded in a financial market cover a wide range of securities to match the needs of different clients and credit seekers. They include equities and bonds.
- Financial markets play key roles in creation and allocation of credit and liquidity, serve as intermediaries in mobilizing savings, help to achieve balanced economic growth and offer financial convenience. Primary markets handle new issues of securities while securities already in the market are handled by secondary markets. Money markets provide access to funds on a short term basis while capital markets allow business access to long term funding to aid expansion. Without financial markets it would be difficult for borrowers to find lenders. Banks are the intermediary institutions that facilitate the exchange.
- Financial institutions facilitate smooth working of the system. Banks, regulator and other institutions offer a complete array of services for the organizations that want to raise funds from the markets and take care of financial assets such as deposits, securities and loans.

The County Government of Mombasa has a well established finance sector in which all parts of the finance system are represented except in the case of a securities exchange since the only stock market in Kenya is based in Nairobi.

Chapter Eleven of the Constitution of Kenya Part 5 outlines the objects of devolution of government, one among which is to ensure the equitable sharing of national and local resources throughout Kenya. Chapter Twelve then focuses on the principles and framework of public finance. More specifically, Article 202 addresses the issue of equitable sharing of national revenue and Article 203 provides the criteria for such equitable sharing. It is guaranteed under Article 203 (2) that “for every financial year, the equitable share of the revenue raised nationally that is allocated to county governments shall be not less than fifteen per cent of all revenue collected by the national government according to the latest audited accounts approved by Parliament”.

County governments may also be given additional allocations from the national government’s share of the revenue, either conditionally or unconditionally. In terms of money, the County of Mombasa continues to receive shareable revenues from the national government according to the law. This is important to ensure that devolution achieves the objectives of better service delivery and rapid local economic development as well as job creation in line with Kenya’s Vision 2030. The arrangement requires fiscal discipline in the use of devolved resources and assumes the macroeconomic environment remains stable. There is therefore great need to lay a strong economic foundation that will generate the resources for the entire country and jobs for unemployed youth, women and the disabled. Entrenching devolution for better service delivery aims at strengthening institutions and capacity to link intergovernmental fiscal transfers with revenue raising capacity of the county government. This is expected to enhance political and financial accountability, efficiency and effectiveness in service delivery, alleviation of poverty and convergence in county development. In the 2015 BPS, Mombasa county allocation of equitable share from the National Government for FY 2015/2016 was raised to USD 57,357,912 as compared to FY 2014/2015 when USD 47,486,901 was pledged. Besides, the County received a conditional grant of USD 7,228,300 in FY 2015/16 which decreased slightly to USD 7,202,500 in FY 2016/17. Conditional grants are

inclusive of additional allocations from national government revenue and from loans and grants. This was still inadequate to actualize the county economic transformation agenda.

The fiscal strategy paper of the County of Mombasa dated February 2015 laid a firm foundation for reduction in the high costs of living, joblessness, protecting the poor and the vulnerable and preventing wastage in public expenditure (County Government of Mombasa. 2015b). The fiscal framework was guided by various principles which are in line with the medium-term expenditure framework and the Vision 2030 among them: A strong revenue effort is made to ensure that the revenue to GDP ratio remains high, budget expenditures are consistent with agreed county and sectoral priorities. A shift away from recurrent to capital expenditures is encouraged while ensuring resources for operation and maintenance of capital stock are provided for, ensuring that the overall fiscal deficit will be consistent with achieving sustainable domestic debt and should not crowd out private sector credit, while at the same time providing sufficient fiscal space for infrastructural and social programmes necessary for achieving Vision 2030 objectives. In order to supplement the national budget, more effort has been put in raising additional revenues in Mombasa County. Systems have been developed to raise more revenue and safeguard and ensure a thriving business environment supportive of the private sector.

To ensure the county delivers on its objective of better service delivery and economic transformation, however, close collaboration with the National Government has to be cultivated and fiscal discipline demonstrated in the use of public resources. The approved Mombasa County budget for the 2014/15 budget amounted to KES. 9.9 billion, comprising of KES. 6.7 billion for recurrent expenditure and KES.3.2 billion for development expenditures. These expenditures were expected to be financed by Equitable Share of KES. 4.7 billion, Conditional Grant of KES. 987 million and Local Revenue of KES. 5.1 billion.

## 1.7 Municipal Revenue and Expenditure by Category

As at end of December 2013, cumulative revenue receipts amounted to USD 29 million, against a target of USD 99 million, resulting in an underperformance. The revenue received was in respect of USD 21 million from equitable share and Conditional Grant and USD 7.2 million from local revenue sources. The County had collected revenue by 31st December 2014 from its major sources as compared to the

Budget as shown in Table 1.4 below (County Government of Mombasa, 2015c). These local revenue sources included land rates, plot rents, single business permits, markets, market stalls, vehicle parking, house rent, tourism levy, advertisement and other charges. A total of KES. 300 million was projected, for example, as the internally generated revenue the County would collect in 2013/14 financial year.

**Table 1.4. Revenue Source 2014/15**

Revenue Type	Annual Target (USD)	Actual Collection (USD)	% of Full Year Target
1. Equitable National share/Conditional Grant	47,486,901	21,376,448	45%
2. Local Sources of Revenue	51,215,280	7,194,130	14%
<b>TOTAL</b>	<b>98,702,181</b>	<b>28,570,578</b>	<b>29%</b>

Actual revenue collection and national government equitable share disbursements were below projections. The County government had inadequate capacity to generate revenue through taxation as this was outside its mandate, Partners such as World Bank nonetheless stepped in to build capacity to collect revenue from available resources County Government of Mombasa, 2014). Automating revenue collection and adopting innovative technological solutions for payment of service charges to the County will seal any misappropriation loopholes experienced during manual cash collection and lead to achievement of higher targets.

Expenditure execution lagged behind in the first six months of the 2014/2015 financial year on account of lower absorption of funds for development activities and cumbersome procurement procedures. Total expenditure (based on disbursement) amounted to USD 28 million. See Table 1.5. Expenditure was more on recurrent operations than on development. The latter, when sourced from funding partners, calls for counter funding to be committed at spending points to ensure matching donor funding is mobilized externally.

**Table 1.5: Expenditure classes 2014/15**

Class	Amount(USD)	Annual Expenditure (USD)	Percentage
1. Personnel	41,879,816	19,692,662	47%
2. Operations and maintenance	24,996,570	6,547,175	26%
3. Development	31,826,594	1,951,068	6%
<b>TOTAL</b>	<b>98,702,981</b>	<b>28,190,905</b>	<b>29%</b>

**Exchange rate: 1USD = KES 100**

## 1.8 Financing Sources and Flows for Housing, Infrastructure and Urban Services

Economic activities of Mombasa County are outlined in a County Integrated Development Plan (CIDP) of which the current one spans 2013 - 2017 (County Government of Mombasa, undated). The County Executive prepared it with participation of residents as required by the law. Following due process, the County Assembly of Mombasa approves an annual budget for its implementation. In a Finance Act that the Assembly passed in 2015, the main sources of revenue generation in the County are listed as taxes, fees and charges payable and rates applicable for conducting business with the public. The County Inspectorate enforces this law.

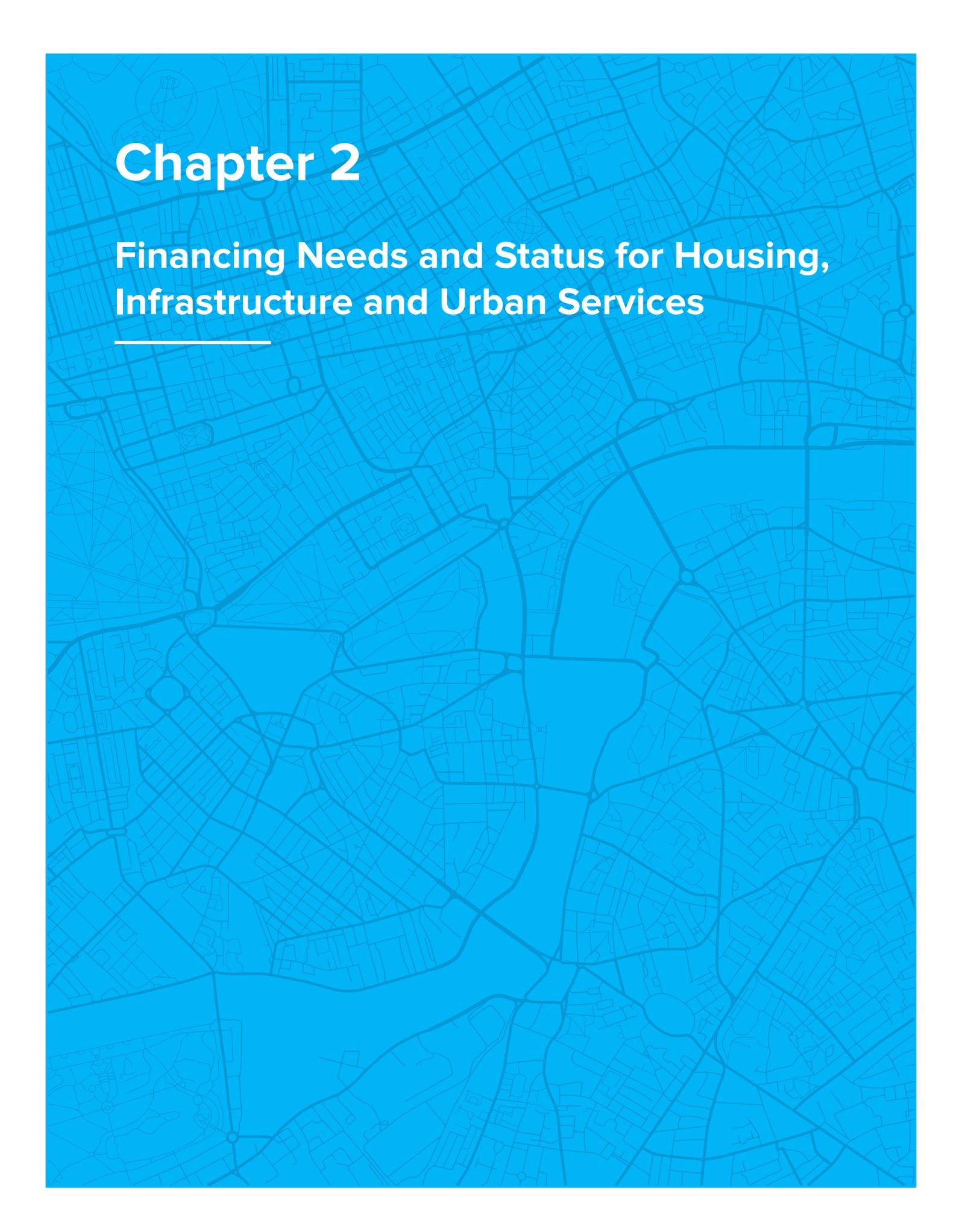
In addition, the County adopted a fiscal strategy in 2015-16 (County Government of Mombasa, 2015b) which emphasizes:

- Fiscal consolidation while ensuring that county resources are adequate to promote growth. The County Government is committed to a reduction in the recurrent expenditure so as to devote more resources to development. At least thirty percent of the total county revenue, locally generated revenue and transfers from the National Government, shall be used in the implementation of development projects.
- Looking into ways of enhancing revenue collection and achieving greater efficiency in terms of cost savings in recurrent expenditure to ensure priority is given to the development projects. A lean workforce would translate into a lower wage bill and create fiscal space for spending on infrastructure and other development programmes. This will further provide adequate room for future countercyclical fiscal policy in the event of a shock.

- Creating various investment forums to attract potential local and foreign investors and other development partners to assist in development of the county. The county has carried out an investor analysis and identified the willing potential investors it can approach.

The CIDP (County Government of Mombasa, undated) acknowledged a need to house an increasing population. It factored in its projections the construction of houses for rent or sale to public servants to the tune of USD 8,000,000. It further outlined a plan for improving infrastructure to open up new residential areas and spur housing development at a cost of USD 2,000,000. The plan also proposed to establish centers in 5 Constituencies where local building materials and low cost building would be promoted at a cost of USD 1,120,000. A plan was disclosed whereby the County would pilot construction of low cost housing to the tune of USD 2,000,000. For infrastructure development in slum areas, the County proposed spending USD 3,000,000. These developments were to be documented by the County government in a database, map and register that was allocated USD 40,000 to create. Funds were also required to secure developments by the County government by acquiring title deeds for its properties as well as routinely maintaining them.

The County pegged all these plans to the availability of funds sourced from its own budget, that of the national government, aid from development partners and public-private sector partnerships.



# Chapter 2

## Financing Needs and Status for Housing, Infrastructure and Urban Services

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## 2.1 Financing Needs for Low and Medium-Income Housing

The supply of urban housing is generally market driven, with government only limited to small scale provision of civil servants housing and slum upgrading. Local authorities too are not undertaking major housing production programmes. This is consistent with a shift in national housing policy from direct government intervention to a ‘market-enabling’ approach of infrastructure provision and land use planning, while the private sector produces housing. The Kenya Informal Settlements Improvement Programme (KISIP), for instance, aims at improving living conditions in informal settlements in selected municipalities by investing in infrastructure, improving security of land tenure as well as supporting proactive planning to dampen formation of new slums.

Through the Kenya Vision 2030 economic blueprint, there is implementation of slum upgrading in Kibera, Nairobi and construction of new housing units in Mavoko Municipality in its vicinity, as well as other indirect interventions to promote decent and adequate urban housing, such as formation of housing cooperatives (Musyoka, P. K. 2012). Mombasa County government has a department of Land, Housing and Physical Planning that deals with matters pertaining land, housing and physical planning. This department has the following general functions; Mombasa City County Architecture, county housing and settlement policies and legislations, integrated development planning, county physical planning, land survey and mapping, boundaries and fencing, land rates, rents and levies and county housing development. The department of Land, Housing and Physical Planning has recognized that the growing population in the County exerts pressure on existing units of housing, creating a huge demand for quality and affordable housing. Land ownership in most areas is not guaranteed as most of the residents do not legally own land and the land they live on is owned by absentee landlords (County Government of Mombasa, 2015).

Given this backdrop, the Mombasa County government is currently developing various plans to improve the living standards of low and medium income housing. For instance, through

the Kenya Informal Settlement Improvement Programme (KISIP), Mombasa County has been able to upgrade various informal settlements such as Jomvu Kuu, Jomvu Mikanjuni, Mkomani and Ziwa la Ng’ombe. The county has also formalized Kalahari, Kwarasi, Fuata Nyayo, Gana Hola, Likoni 203 and Majaoni. This is a major step toward provision of housing to people living in informal settlement areas. Other ongoing development plans partly focusing on housing include; The Mombasa Gate City Master Plan financed by JICA, urban renewal and Redevelopment of old estates (County Government of Mombasa, 2013).

### 2.1.1 Financing Needs for Low Income Housing

In order to estimate the financing needs for low income housing, the study used secondary data to calculate housing demand-supply gap. The demand for housing comprises of net new households, net change in vacant units and second homes, and net removals from the existing stock. This demand could be estimated using net household growth since it is not only a key driver for demand of new housing units but it is also reliable (Belsky et al., 2007). The household serves as a basic unit of housing demand since it is a unit of common dwelling. Belsky et al. (2007) argued that the net additional households is equivalent to the number of new housing units. This study of the City of Mombasa follows Belsky et al. (2007) approach in estimating demand for low income housing in Mombasa County.

Mombasa city had an increase of 59,072 households for the period between 1989 and 1999 representing an annual change of 5,907 households. In 2009, the number of household increased by 8,516 per year. The study used compound annual growth rate and the projected population to estimate the number of households in year 2020. Our estimate indicates that there will be 355,125 households in the year 2020 representing a change of 86,425 from 268,700 households in 2009. Based on this estimate, the annual change in the number of households for year

2016 is 7,857 (Table 2.1). Our estimate is similar to the annual housing demand of 8,000 for the period between 2015 and 2020 as estimated by County government of Mombasa and

JICA expert team which projects that the total housing demand in Mombasa County by 2040 will be 394,000 housing units (JICA, 2015; 2016).

**Table 2.1: Housing Demand in Mombasa City**

Year	Population (numbers)	Annual Population Growth Rate (%)	Number of Households	Household Size (mean)	Change in Number of Households	Annual Change in Number of Households
1989	461,753	-	124,468	3.71	-	-
1999	665,018	4.40	183,540	3.62	59,072	5,907
2009	939,370	4.13	268,700	3.50	85,160	8,516
2020	1,347,440	3.95	355,125	3.79	86,425	7,857

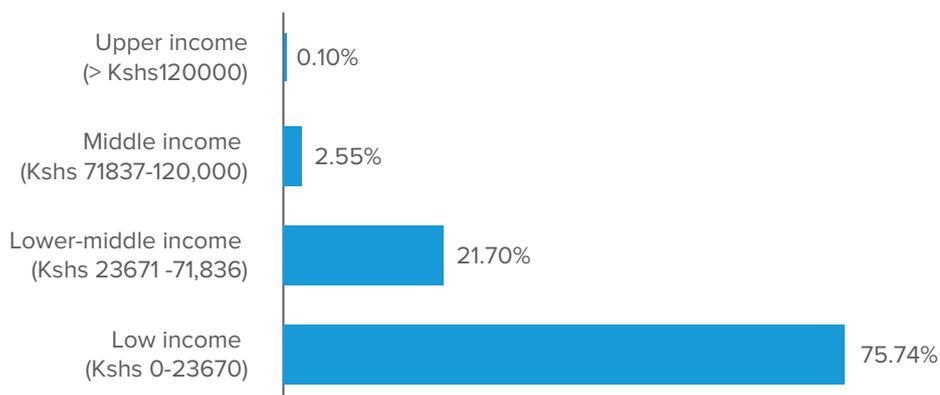
Source: KNBS (1989,1999, 2009)

According to the County’s department of housing, Mombasa has an estimated total housing deficit of 380,000 units. The annual housing supply is only 4,000<sup>21</sup>. By 2035, the housing needs will rise to 650,000 housing units<sup>22</sup>.

Housing prices are too high, compared to the household income level. The average housing price in Mombasa is KES 5.7 million (see Table E1). According to a newly-released report by Kenya Integrated Household Budget Survey (KIHBS), a fifth of Mombasa residents own 78.2 per cent of the wealth. 60 per cent of Mombasa residents control only 4.7 per cent of resources in the port city<sup>23</sup>.

According to KNBS (2010)<sup>24</sup>, low income group comprises of households that spend KES. 23,670 or less per month. This income group constitutes 72.12 percent of the total population in Kenya. Mombasa County 75.74 percent of the households are in low income group (Figure 2.1). Thus the current number of new households in the low income group in Mombasa is 5,951 per annum, translating into an annual housing demand of a similar number (5,951) of housing units by low income group in Mombasa city. The total housing demand for low income group in Mombasa city is projected to be 23,803 units by 2020.

**Figure 2.1: Household Monthly Expenditure**



Source: Household Interview Survey

Regarding supply of formal housing units targeting the low income group, the study found that there was no single registered developer who focused on this category. This could be explained by the fact that the average monthly expenditure of low income group is KES. 11,725 out of which an average of KES. 997 goes to rent expenditure. The focus group discussion with the household heads in various parts of Mombasa County revealed that low income households live in informal and Swahili houses. The household heads who participated in the focus group discussions indicated that the average monthly rent for a Swahili house is KES. 1,000. This finding corroborates KNBS (2014) which reports that 31.7 percent of households in Mombasa County spend between KES. 500 and KES. 1000 on rent per month. This finding indicates that there is zero supply of formal housing targeting the low income group in Mombasa city.

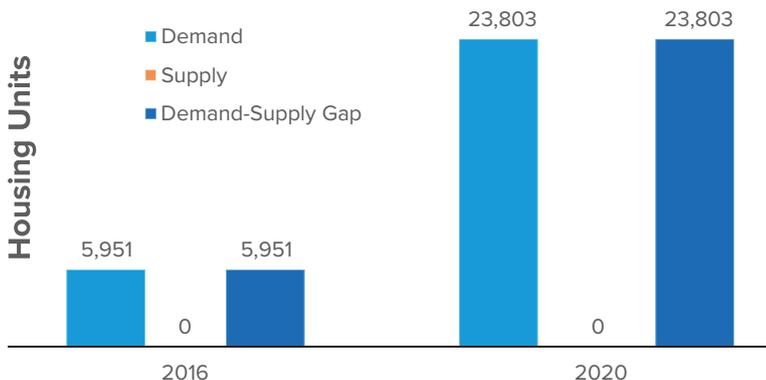
This study found that the demand-supply gap for low income housing in Mombasa city is 5,951 housing units per year. The survey results from quantity surveyors indicated the average cost of constructing a normal 1 bed room house (with basic amenities) targeting low income group would cost KES. 990,000. Given that there is a demand-supply gap of 5,951 housing units per year and that on average a normal house targeting low income group would cost KES. 990,000, it therefore implies that Mombasa city has a financing gap for low income housing of about KES. 5.8 billion per year. This would translate to financing gap of about KES. 23.5 billion by 2020 (Figure 2.2).

### 2.1.2 Financing Needs for Lower and Lower-Middle Income Housing

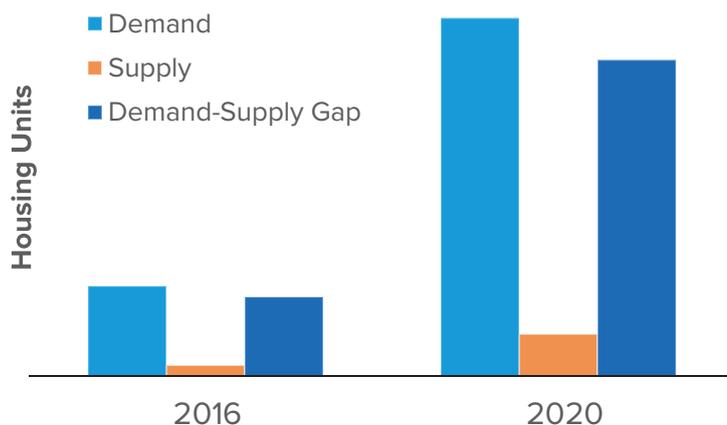
The study used demand-supply gap to estimate the financing needs for lower and lower-middle income housing. As indicated in Table 2.1, the total housing demand in Mombasa city is 7,857 units per year. However, the lower and lower-middle income group comprises of households with monthly expenditure of KES. 23,671 and KES. 71,836 (KNBS, 2010). These households constitutes 12.06 percent of the total population in Kenya. In Mombasa County, they constitute 21.7 percent (see Figure 2.1). This implies that the current number of new households in the lower and lower-middle income group in Mombasa is 1,705. These results thus indicate that the annual housing demand by lower and lower-middle income group is 1,705 housing units. The total housing demand by lower and lower-middle income group in Mombasa County will be 6,820 housing units by 2020.

The study found that registered developers supplied about 200 formal housing units targeted to lower and lower-middle income in the year 2015. The selling price of a two bedroom unit ranged between KES. 1,500,000 and KES. 5,000,000 with monthly rental price of between KES. 12,000 and KES. 35,000. According the developers and quantity surveyors based in Mombasa County, the average cost of constructing a two bedroom unit targeting lower and lower-middle income group is KES. 2,000,000. Thus the demand-supply gap for lower and lower-middle income housing in Mombasa County is 1,505 housing units per year. The total demand-supply gap for lower and lower-middle income housing in Mombasa County will be 6,020 units by 2020. This translates to a financing gap of about KES. 3 billion per year and KES. 12 billion by 2020 (Figure 2.3).

**Figure 2.2: Housing Demand-Supply Gap for Low Income**



**Figure 2.3: Housing Demand-Supply Gap for Lower & Lower-Middle Income Earners**



In its report to Habitat III, the Government of Kenya noted the potential for devolved governments to participate in making affordable housing available at the County level (Government of Kenya, 2016). The key priority areas identified are: development of social housing for the urban poor and the vulnerable, development of shelter strategies for slum prevention and informal settlements upgrading, proactive urban planning, data collection and capacity building to respond to rapid urbanization; and increase of resources for low-income housing and provision of basic infrastructure.

## 2.2 Financing Needs for Infrastructure and Urban Services

Mombasa County, in collaboration with National government, has taken various development initiatives aimed at improving its infrastructure and urban services. For instance, Kenya Municipal Programme (KMP) aimed at strengthening local governance and improve service delivery in selected municipalities, including Mombasa. The programme has four components namely; institutional strengthening, support in development of strategic urban plan, investment in infrastructure and service delivery such as solid waste facilities, motorized and non-motorized transport facilities (including bus parks, access roads, sidewalks and paved paths), street lighting, markets, storm water

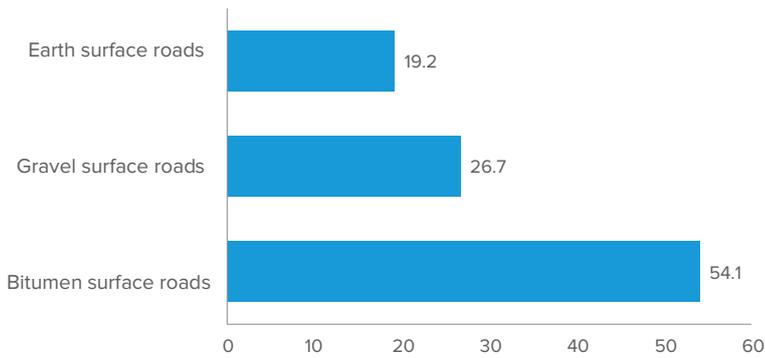
drainage, disaster management and prevention (facilities and equipment), and public parks and green spaces and finally to provide project management, monitoring and evaluation (World Bank, 2015a).

Currently the County is in the process of developing Integrated Strategic Urban Development Plan dubbed Mombasa Vision 2035-MV35. MV35 is a regional physical development plan that integrates digital topographical mapping, strategic sector plans, structure plan, development control and capital investment plans for Mombasa County. Other plans that are under development include: Comprehensive Development Master Plan in the Mombasa Gate City, Mombasa Urban Renewal and redevelopment of old estates and Master Plan on Logistics in Northern Economic Corridor.

### 2.2.1 Financing Needs for Transport

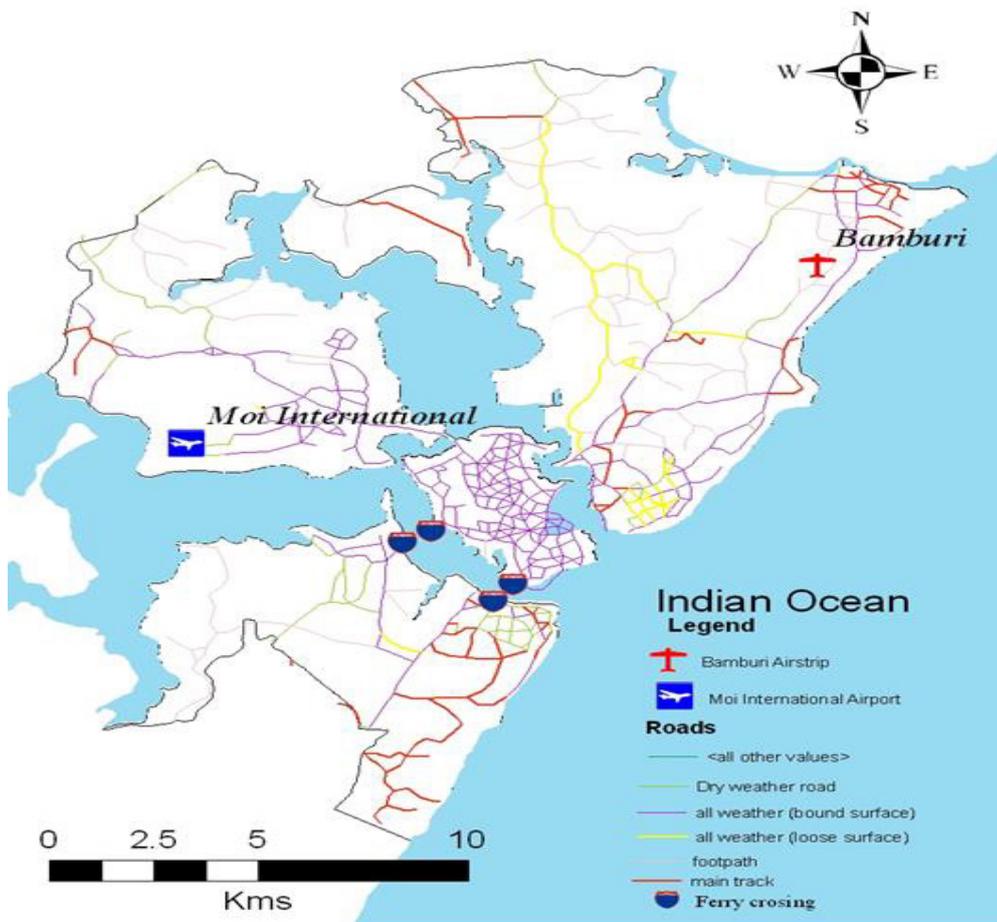
Mombasa County currently has a total of 257.17 kilometers of bitumen surface roads, 127 kilometers of gravel surface roads and 91.29 kilometers of earth surface roads (County Government of Mombasa, 2013). This indicates that approximately 218.29 kilometers of road surface in Mombasa may be impassable during the wet rainy season and thus paralyze transport. Figure 2.4 presents the road network in Mombasa by percentage.

**Figure 2.4: Road Network in Mombasa by Percentage**



The City has 10 km of railway line which is majorly not used by the residents for commuting within the city. Approximately 40 to 45 percent of the population of the city of Mombasa travel from, through and to the Island on a daily basis using public and private transport. Traffic jams during the peak hours are common since more than 1 million people enter and leave Mombasa Island on an ordinary day. The traffic congestion and malfunctions of the ferry services are due to underdeveloped transport infrastructure (see Figure 2.5). This highlights the need to raise finance so as to develop alternative transport solutions such as the proposed construction of a another bridge between Tudor area (northern part of Mombasa Island) to Mshomoroni (North Mainland) and the improvement of the ferry services at Likoni and Mtwongwe with new vessels and reconstructed approach roads.

**Figure 2.5: Mombasa County Transport Network Map**



According to JICA (2016), Mombasa County has an existing drainage length of about 60km and the drainage length currently under construction is about 30km. The total (existing and under construction) drainage length is 90 km. The existing storm water drainage covers 10percent of the total area and 25percent of total population of Mombasa. The existing total road length in Mombasa County is 1,191 km and proposed road length is 269 km thus the total requirement for drainage is 2,920 km and hence the demand of drainage is 2,830 km.

To address some of these transportation challenges, the County government of Mombasa has constructed and improved a total of 12.6 km of roads, improved and maintained 9.9 km of access roads, maintained 17 km of various roads both paved and gravel and constructed 6 km of drains at Kisauni, Nyali, and Changamwe sub counties. In addition, the county has cleaned and maintained 75 km of drains within Mombasa Island (County Government of Mombasa, 2015).

This notwithstanding, the challenges facing transport sector within Mombasa County still remain. To solve transport problems the county government has proposed several projects aimed at expanding the road network and upgrading roads within the county. Besides constructing major roads which pass through the county (to Nairobi, Malindi and Lunga Lungu), there are plans to improve accessibility and connectivity within the city by improving and maintaining access roads, rehabilitating roads in Changamwe and Mikindani as well as installation and maintenance of street lighting. Additionally, proposals have been made for refurbishment of the fire station, purchase of a fire engine and purchase of a new passenger ferry to augment the fleet that serves the city residents as they cross from the island to mainland at Likoni. The County has developed proposals for specific projects to decongest the city of traffic as outlined in the County Integrated Development Plan for 2013-2017 (County Government of Mombasa, 2013). See Figure 2.6.

**Figure 2.6:** A donor-funded road infrastructure improvement project under way in Mombasa County, 2016.



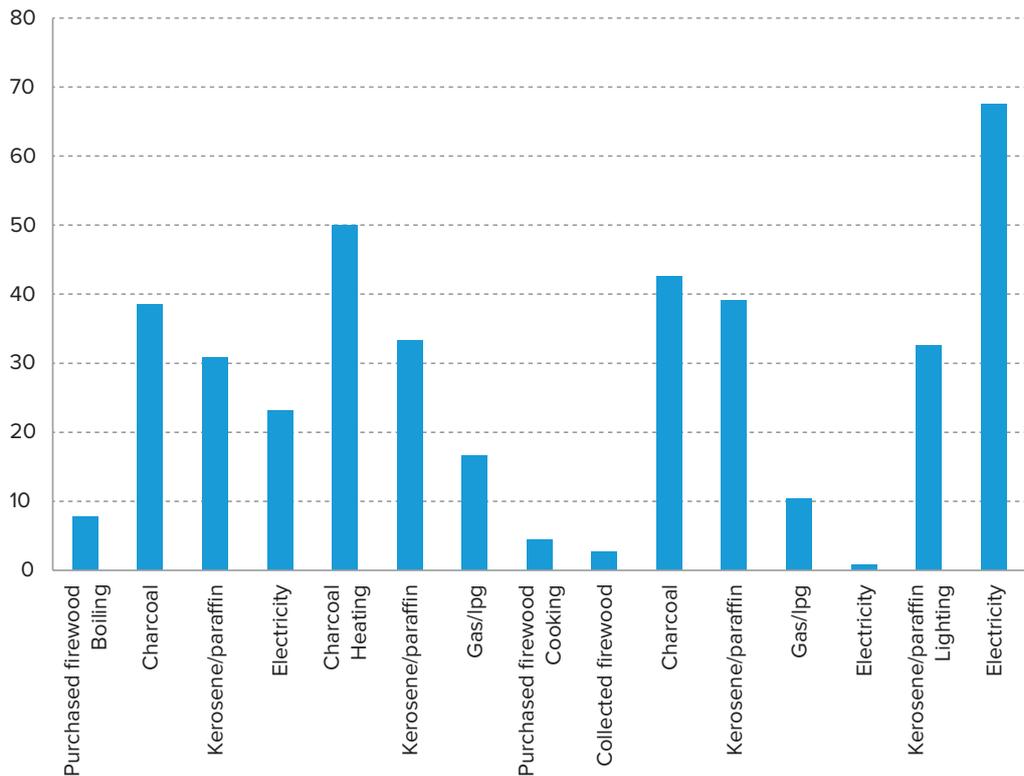
Some of the transport infrastructure projects proposed in the draft master plan by JICA (2016) include; Northern Bypass, Southern Bypass (including Kipevu Link, Bamburi Links), improvement of New Malindi road, 2nd Nyalii bridge, Gateway bridge (Likoni bridge), Mombasa Port Expansion, Standard Gauge Railway, New Miritini (New town) development, Dongo Kundu Special Economic Zone (SEZ) and Eco City (Mwakirunge).

Mombasa County, the charcoal is the main source of energy for boiling (38 percent), heating (50 percent) and cooking (43 percent) while electricity (67 percent) is the leading source of energy for lighting<sup>25</sup>. This results are consistent with our survey findings whereby we found that majority (53 percent) of the households who participated in focus group discussion used electricity and charcoal as their main source of energy for lighting and cooking respectively. Noteworthy is the fact that about 11 percent of the households in our survey used solar lighting as their source of lighting. Through the Rural Electrification Authority (REA) primary schools electrification project, 90 primary schools in Mombasa County have been connected to the national grid. Additionally, in Kenya and by extension Mombasa County, 60 percent of the population living in urban areas has access to electricity.

### 2.2.2 Financing Needs for Energy and Power

In Kenya, charcoal is the leading source of boiling (36 percent) and heating (61 percent) while collected firewood (44 percent) is the main source of energy for cooking (Figure 2.7). The main source of lighting for majority (81 percent) of Kenyans is kerosene/paraffin. In

Figure 2.7: Energy Sources in Mombasa County



In 2013, Kenya had an electricity net generation of 8.5 billion Kilowatt hours, of which 69percent was derived from renewable sources (hydro, geothermal, biomass, and wind) and 31percent from fossil-fuel sources. The demand for power is expected to be 15,000 MW with installed capacity of 19,200 MW by 2030. Out of this installed capacity, geothermal, nuclear and coal will contribute 26 percent, 19 percent, 13 percent respectively while hydro will comprise of only 5percent. Most of electricity generation installations are outside Mombasa County. However, Mombasa County hosts the only oil refinery in Kenya which has installed capacity of 35,000 barrels per day. The refinery shut down in 2013 and is currently used for storage purposes.

The county government of Mombasa has three thermal power generating stations namely; Kipevu I with installed capacity of 73.5 MW, Kipevu II with installed capacity of 74 MW and Kipevu III with installed capacity of 120 MW. Kipevu III is the largest diesel plant in East Africa and comprises of 7 diesel engines. The Kipevu power plants produces power which is fed into the national grid.

Through the national government there were plans to construct a 700MW LNG power plant in Dongo Kundu, Mombasa County but these plans have been abandoned due to fear of excess power supply in the country. Nonetheless, the county recognizes that it has a high potential for generation of solar and wind energy, but this remains unexploited. Consequently, the county is putting deliberate efforts to find alternative source of energy (green power plant generation such as recycling of waste, solar and wind) using Public Private Partnership (PPP).

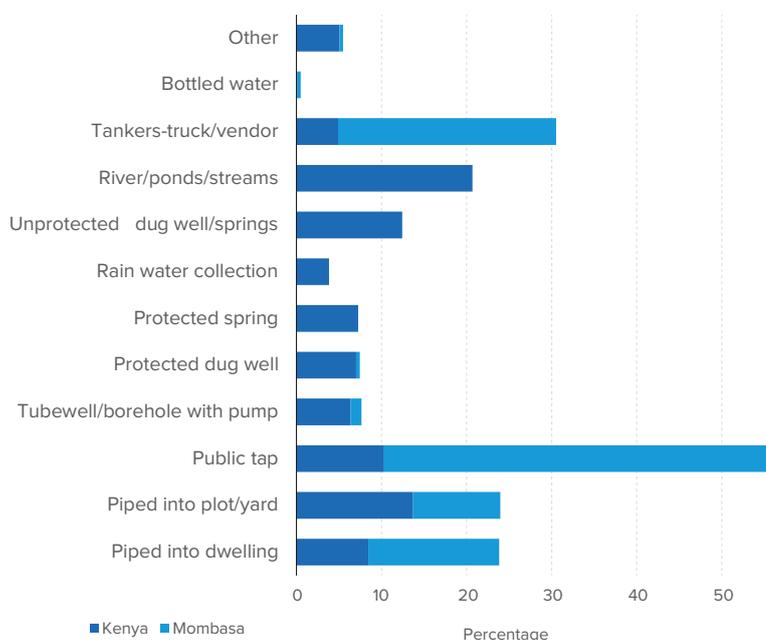
### 2.2.3 Financing Needs for Water and Waste Management

In Kenya, 57 percent of households use safe drinking water and mostly Eastern and North Eastern Provinces have the lowest rates of using safe drinking water. The survey by KIHBS (2007) showed that public tap is the main source of drinking water for households in Mombasa County followed by purchase of

water from tankers/vendors (Figure 2.8). Our survey showed that majority (69 percent) of the households in Mombasa city use common tap as their source of water for domestic use and only 6 percent of the households had tapped water within their houses. Additionally, 28 percent of the household use borehole water for domestic purpose.

In 2015, the water demand for Mombasa County was 152,302 m<sup>3</sup>/d and is expected to hit 184,372 m<sup>3</sup>/d in 2020 and by 2030 it will be 288,918 m<sup>3</sup>/d (CWSB, 2014). The reticulated water supply system supply currently meets only 65 per cent of the county water demand. The Mombasa Water Supply and Sanitation Company has a huge deficiency of reticulated domestic water supply and is only able to meet 24 per cent of its water demand, since the production is at 43000m<sup>3</sup>/day, against the demand of 182,000m<sup>3</sup>/day. The deficit is not caused by inadequate water infrastructure but also due to an old water distribution system which results in frequent breakdowns leading to water losses and disruption of water supply. To meet the water demand Mombasa County need to invest a total of 36,634,396 USD (CWSB, 2014).

Figure 2.8: Source of Drinking Water



According to KIHBS (2007), 84 per cent of the Kenyan households use adequate human waste disposal facilities while 14.8 per cent have no proper toilets. In Mombasa County, 41 percent of the households use uncovered pit latrine as their main toilet facility (Figure 2.9). Our survey revealed that 36 percent of households in Mombasa city have no sewer line or they use pit latrine while only 3 percent of the households have septic tanks. The study shows that only 14 percent of the households are connected to a sewer line. This indicates the need to invest in sewage and sanitation. Regarding waste management, the study found that 31 percent of the households use private garbage collection services while only 6 percent of the households use public garbage collection service.

Mombasa County generates approximately between 700 and 875 tons of solid waste per day with a collection rate of 80 percent. The dumping sites in Mombasa include; Kibarani that receives 645 ton/day, Shonda (10 ton/day) and Mwakerunge (20-25 ton/day). These dumping sites cause serious air and water pollution. The waste generation is expected to rise to 1,241 tons/day in 2025 and 1,877 tons/day in 2040 (JICA, 2015). This calls for the County government to develop and implement a sustainable solid waste management system.

Mombasa’s persistent waste management challenges will be addressed in the Mombasa Gate Master Plan and comprehensive solutions sought. The County Government aims to construct a waste management recycling plant and improve solid waste collection by purchasing waste management tools and equipment. Among the projects proposed to further improve living conditions and sanitation in Mombasa County include rehabilitation and improvement of the sewage system, garbage collection and management of human waste and waste water. There is a problem of waste water disposal and need to curb direct discharge by city residents and industries into the ocean. Additionally, Mombasa County proposes to utilize sea water, under the desalination project targeting installation of desalination plants at various sites within the County before the end of 2017.

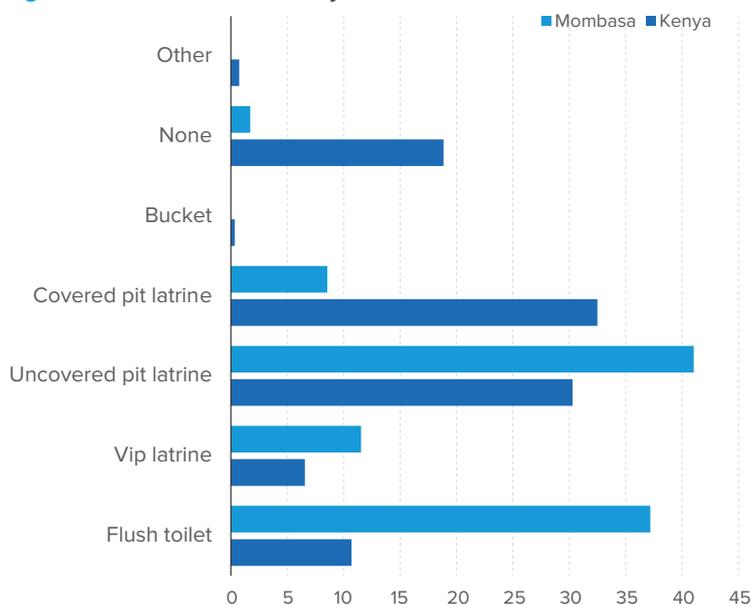
## 2.3 Sources and Status of Finance for Housing, Infrastructure and Urban Services

### 2.3.1 Sources and Status of Finance for Lower and Lower-Middle Income Housing

Just like in many developing countries, financing for housing in Kenya, and more specifically in Mombasa County, is subdivided majorly into formal lending instruments similar to those in developed countries and micro lending financing instruments that support the incremental construction and improvement of buildings for occupancy by households who may either not qualify for or cannot access formal mortgage loans. Houses that are constructed using mortgages experience prices fluctuations over time depending on the fluctuating market conditions. Majority of the potential home owners do not have the money required to purchase these homes and for them to acquire these properties they must borrow to complete the home acquisition (Wesutsa, 2014).

The average proportion of customer deposits held by commercial banks, Microfinance Institution (MFI) and SACCOs were 59.4 percent, 53.8 percent and 68.6 percent respectively.

Figure 2.9: Main Toilet Facility



The loan portfolio for commercial banks, MFIs, SACCOs and employer schemes comprised of 48.7 percent, 14 percent, 66.3 percent and 75 percent of lending to individuals respectively. Commercial banks in Mombasa County had total deposits of KES. 24,638,032,687 and offered loans to a tune of KES. 14,420,102,182. Of the total loans, KES. 408,261,216 comprised of housing loans (KNBS, 2013).

The sources of finance for financial institutions include; share capital, profits, deposits, short and long term loans, members shares (SACCOs) and bonds. The main source of financing for commercial banks is customer deposits followed by share capital while for MFIs is long terms loans followed by share capital. Customer deposits and member shares are the main sources of funds for SACCOs while long term loans is the main source of finance for employer schemes (KNBS, 2013).

The county government of Mombasa intends to redevelop all county housing estates under the project duped Urban Renewal

Programme. The county government allocated KES. 173,589,192 for development of housing targeting all income groups. Currently the county government has allocated KES. 112,010,000, KES. 47,700,000 and KES. 231,727,751 for housing development & housing estate management, land administration & spatial planning and administration, planning and support services respectively (County Government of Mombasa, 2013).

Through the national government or directly to the county government, development partners are also involved in provision financing of housing and its related infrastructure in Mombasa County. Development partners such as SIDA, IDA, AFD are involved in KISIP that aims at improving living conditions of informal settlements in selected Counties in Kenya, including Mombasa. KISIP project duration is five years (from 2011 to 2016) with an approved budget of USD 165 Million or KES 14.52 Billion. Table 2.2 presents a summary of donor commitment to KISIP project.

**Table 2.2: KISIP Donor Commitments**

Source of Funds	Donor Commitment	
	USD	KES
SIDA	10,0000	880,000,000
IDA	100,000,000	8,800,000,000
AFD	45,000,000	3,960,000,000
Government of Kenya	10,000,000	880,000,000
<b>Total</b>	<b>165,000,000</b>	<b>14,520,000,000</b>

1USD=KES 88. Source: GoK (2015)

KISIP funds were allocated to various items related to housing. Of USD 165 Million, about USD 15.8 million will be spent in Mombasa

County. Table 2.3 summarizes the allocation of funds to various works in Mombasa.

**Table 2.3: KISIP Planned and Actual Budget for Mombasa County**

Work Description	Status	Estimated Amount (USD)
Infrastructure works for settlements in Mombasa	Planned	12,000,000
	Actual	10,712,996
Planning and Surveying of selected informal settlements Mombasa	Planned	237,500
	Actual	42,648
Socio-economic surveys, settlement upgrading plans and bidding documents for infrastructure improvement in informal settlements in Mombasa	Planned	827,500
	Actual	515,211
Supervision of infrastructure improvement in informal settlements in Mombasa	Planned	1,200,000
	Actual	484,400
Consultancy on Technical Assistance to Mombasa County Government	Planned	970,000
Provision of 3 cluster TA (Municipal TA Pool) in land tenure, community development., and Engineering Mombasa for 3 years	Planned	600,000
<b>Total</b>	<b>Planned</b>	<b>15,835,000*</b>
	<b>Actual</b>	<b>11,755,255*</b>

\*It is an approximation since there was some funds allocated to multiple counties  
Source: World Bank (2016)

### 2.3.2 Sources and Status of Finance for Transport

The survey found that the development partners, national government and the Mombasa county government are the key developers of transport infrastructure in Mombasa County. For instance, the national government is developing the standard gauge railway with funding from China development bank. The national government has also proposed to develop a SEZ in Dongo Kundu sponsored by Japan (County Government of Mombasa, 2013).

Currently the county government of Mombasa has allocated KES. 370,811,617 for roads infrastructure development, KES. 32,200,000 for transport planning, management and safety and KES. 68,550,000 for safety, risk management and rescue services. The aims at providing of efficient, affordable and reliable infrastructure for sustainable economic growth and development through construction,

modernization, rehabilitation and effective management of all infrastructure facilities.

One of the key source of finance for transport in Mombasa County is Japan International Cooperation Agency (JICA). In year 2007 and 2015, Mombasa County through Kenya Ports Authority (KPA) received funding to a tune of 26,711 million yen and 32,116 million yen from JICA for development of the port of Mombasa respectively. The project aimed at constructing a container terminal and proving cargo-handling equipment at the port.

In addition, JICA through Kenya National Highways Authority (KeNHA) supported road construction around the port of Mombasa. Through Official Development Assistance (ODA) loan, JICA funded the Mombasa Port Area Road Development Project (MPARD) to a tune of 27.691 million Yen. MPARD objective

was to make the distribution of goods around the port of Mombasa smoother and to stimulate socioeconomic development in the region as a whole.

In 1990 and 1995, Mombasa City through Kenya Airports Authority (KAA) and Kenya Power Company Limited received funding from JICA amounting to 9,010 and 10,716 million yen for improvement of Mombasa airport and generating power from diesel respectively. In 1973 and 1975 JICA had funded Mombasa airport project and New Nyali bridge project to a tune of 4,086 and 4,900 million yen respectively. The summary of these projects is presented in Table 2.4.

Additionally, through the KMP, IDA, Swedish International Development Cooperation (SIDA) and national government has sponsored various transport infrastructure projects in Mombasa County. Out of 122 million USD approved by the sponsors, 3.5 million USD was planned for construction of selected Non-Motorized transport, 53, 200 USD was planned for carrying out/reviewing the existing feasibility studies, carrying out detailed designs and preparation of tender documents and operations and maintenance manuals for Non-motorized transport and 1.3 million USD was allocated for supervision of construction of Non-Motorized transport facilities within Mombasa (World Bank, 2015a).

**Table 2.4: JICA funding to Mombasa County**

Work Description	Date of Approval	Amount (million Yen)
Kipevu-Miritini Link Road	NA	NA
Mombasa Gate City Master Plan	NA	NA
Mombasa Port Area Road development project	2016	27,691
Mombasa Port Development Project (Phase 2)	2015	32,116
Mombasa Port Development Project	2007	26,711
Mombasa Airport Improvement Project	1990	9,010
New Nyali Bridge Project	1975	4,900
Mombasa Airport Project	1973	4,086

NA means Not Available. Source: JICA website

### 2.3.3 Sources and Status of Finance for Energy and Power

In Kenya, Kengen has a role of generating power while Kenya Power and Lighting Company plays the role of power distribution. Other State Owned Enterprises (SOEs) that are involved in energy and power and Energy Regulatory Commission (ERC), Rural Electrification Authority and Kenya Nuclear Electricity Board (KNEB). These SOEs are funded by national government and development partners.

The energy and power infrastructure in Mombasa County are Kipevu power plants and the Mombasa oil refinery. Kipevu power

stations were in three phases resulting to Kipevu I, Kipevu II and Kipevu III. Kipevu I was funded by JICA to a tune of 10,716 million yen in 1995. The total cost for Kipevu II was 84 million USD and was developed as IPP that comprised of four sponsors. Initially, Wartsila NSD Power Development Inc. (Wartsila) was the principal developer with 23 percent shareholding, Cinergy Global Power Ltd. and Industrial Promotion Services (Kenya) Ltd. with 47 percent shareholding and the Commonwealth Development Corporation with 30 percent shareholding. Later on, IFC

took up to a 10 percent equity interest reducing Wartsila's share to 13 percent. This comprised an investment of 17 million USD "A" Loan, a 26.7 million USD "B" Loan/DEG, a 2 million USD "C" Loan and up to 2 million USD in equity investment (IFC, 1999). Kipevu III was financed through the proceeds from the Sh25 billion Infrastructure Bond that was issued by KenGen. The total cost of this project was 77.7 million Euros.

### 2.3.4 Sources and Status of Finance for Water and Waste Management

The Coast Water Services Board (CWSB) is one of the main developers of water and waste management in Mombasa County. The board has laid 43 km pipeline within North mainland (Shanzu, Nguutatu, Mishomoroni

and Nyali near Nakumatt), Island (Tudor), West Mainland (Mikindani), South mainland (Likoni) and appurtenances. It has also extended the water and sanitation services to informal settlements (Ziwa La Ng'ombe, Matopeni, ShauriYako, Kisumu Ndogo, Maweni and V.O.K) and rehabilitated Mombasa west mainland sewerage. The board is currently replacing distribution lines and 40.23 km of trunk mains, diameters 160mm to 700mm and conducting ancillary works, water works, bulk meters, rehabilitation of storage tanks, supply of sewer maintenance equipment's in Mombasa County. The World Bank has been sponsoring several water infrastructure projects in Mombasa County through CWSB. World Bank is funded various water infrastructure projects in Mombasa to a tune of 20,599,693 USD (Table 2.5).

**Table 2.5: World Bank Funded for Water Works in Mombasa**

Project Name	Status	Total USD	Source of Funds
Rehabilitation of the Mombasa Reticulation Network- Part of Lot 2	Planned	6,000,000	World Bank
	Actual	11,490,323	
Addendum Works for Bulk Water System Improvement Project	Planned	3,600,000	World Bank
	Actual	5,961,113	
Extending Services to Informal Settlements- Mombasa Works Lot 1 (VoK and Ziwa la Ngo'mbe Informal Settlements)	Planned	1,000,000	World Bank
	Actual	1,458,602	
Extending services to informal settlements- Mombasa Works Lot 2 (Maweni, Matopeni, Kisumu Ndogo, Mnazi Mmoja and Shauri Yako Informal Settlements)	Planned	1,000,000	World Bank
	Actual	1,689,655	
<b>Total</b>	<b>Planned</b>	<b>11,600,000*</b>	
	<b>Actual</b>	<b>20,599,693*</b>	

\*This amount reflects only water works and does not include other costs. Source: CWSB (2016)

Additionally, Mombasa County has received funding from IDA, Swedish International Development Cooperation (SIDA) and national government through KMP project. KMP aimed at improving planning and delivery

of infrastructure services in urban areas in selected counties including Mombasa. Table 2.6 presents the donor commitment to KMP project.

**Table 2.6: KMP Donor Commitments to Kenya**

Source of Funds	USD
IDA	100,000,000
Swedish International Development Cooperation (SIDA)	12,070,000
Government of Kenya	10,000,000
<b>Total</b>	<b>122,070,000</b>

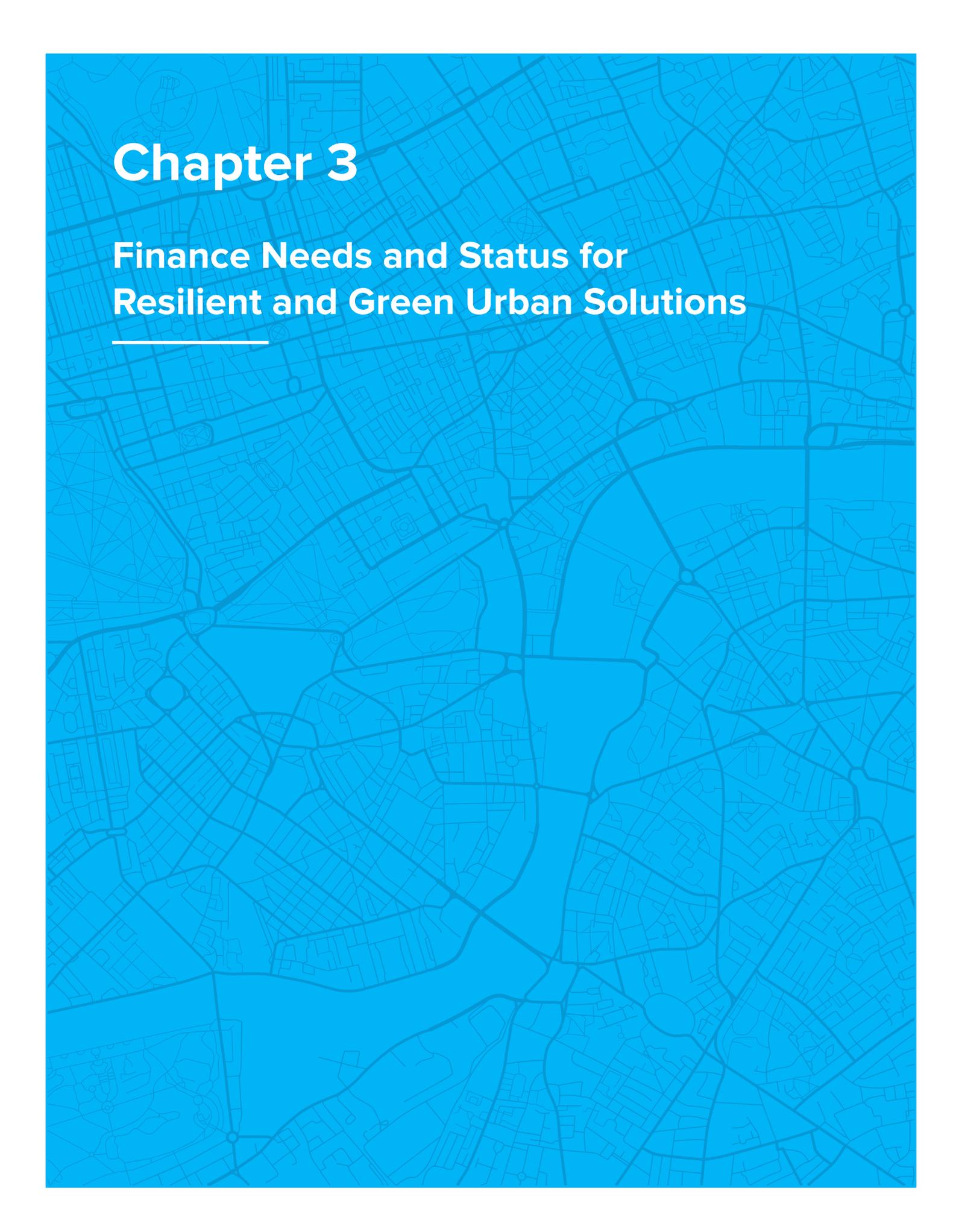
Source: World Bank (2015a)

The planned amount of funds allocated to Mombasa County from KMP is about 33.7million USD. The summary of these allocations is presented in Table 2. 7.

**Table 2.7: KMP Planned and Actual Budget for Mombasa County**

Work Description	Status	Estimated Amount (USD)
Improvement of selected Part of Mombasa Storm Water Drainage System Phase 2 - (R40)	Planned	28,134,504
	Actual	19,647,000
Mombasa Town Drain Cleaning and Minor Repairs (R28, 29 & 30)	Planned	500,000
	Actual	593,183
Supervision of construction of Mombasa Storm Water Drainage Phase 2 (R37)	Planned	1,300,000
	Actual	972,073
<b>Total</b>	<b>Planned</b>	<b>33,787,704*</b>
	<b>Actual</b>	<b>29,396,953*</b>

\*It is an approximation since there was some funds allocated to multiple counties. Source: World Bank. (2015b)



# Chapter 3

## Finance Needs and Status for Resilient and Green Urban Solutions

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### 3.1 Financing Needs for Resilient and Green Urban Solutions

According to a report of 2015 by Cities Climate Finance Leadership Alliance, the obstacles that many cities face in obtaining the financing they need include uncertainty over regulatory and tax policies, lack of expertise in project development, lack of control over infrastructure planning, high transaction costs and lack of proven funding models at the city and regional level. Cities in developing countries in particular have difficulty obtaining commercial financing. Of the 500 largest cities in emerging economies, only 4 per cent are deemed creditworthy in international markets, according to the World Bank ([http://redirect.hp.com/svs/rdr?locale=en\\_ke&c=142&bd=pavilion&tp=iefavbar&s=amazon&pf=cnnb&TYPE=4](http://redirect.hp.com/svs/rdr?locale=en_ke&c=142&bd=pavilion&tp=iefavbar&s=amazon&pf=cnnb&TYPE=4)). Mombasa County mainstreams climate change in Annual Development Plans through implementing the national Green Economy Strategy and Implementation Plan (GESIP) under the guidance of Ministry of Environment and Natural Resources, GIZ and the United Nations Environment Programme (UNEP). Various stakeholder workshops have been undertaken to sensitize and ensure departments and sectors mainstream climate change in their projects and programmes.

#### 3.1.1 Financing Needs for Resilient and Green Housing Development

For improved housing, the County of Mombasa promotes sustainable design, construction and maintenance of buildings with the aim to embrace requirements of the GESIP, which are to:

- Ensure 75 percent of new and renovated public and private large scale buildings are green by 2035;
- Build capacity of architects, engineers and contractors and other stakeholders on integrated green technologies in design and construction;
- Implement certification standards for green buildings

Finances will be sourced from banks and financial institutions including insurance

companies, savings and credit co-operative organizations (SACCO) and microfinance institutes. These institutions will be required to develop and provide innovative products and services that support a green economy. Such facilities will be critical in encouraging green economy entrepreneurs and enterprises (GoK, 2016).

#### 3.1.2 Financing Needs for Resilient and Green Infrastructure Development

Major financial investments – from both public and private sources and guided by smart and equitable policies – are required to transition the world’s economy to a low-carbon path, reduce greenhouse gas concentrations to safe levels, and build the resilience of vulnerable countries to climate change. In developing countries, climate change investment needs are significant. Direct government funding is scarce. Billions of dollars committed by industrialized countries remain inadequate to tackle the magnitude of the challenge of stabilizing a steep trajectory of greenhouse gases. Additional financial investment should be accompanied by rules, regulations, fiscal incentives and effective markets at international, national, and sub-national levels to shift current and projected “business-as-usual” investments, and mobilize resources at the scale required<sup>26</sup>.

The mandate of Kenya Urban Roads Authority as defined in the Kenya Roads Act, 2007 is the management, development, rehabilitation and maintenance of all public roads in the cities and municipalities in Kenya except where those roads are national roads. Its mission is to professionally provide quality, safe and adequate urban roads network that satisfies stakeholders needs.

For transport and infrastructure, Mombasa County aims to improve road accessibility and enhance sustainable mobility by:

- Establishing mass rapid transit in major urban areas;
- Integrating non-motorized transport in the

- design and construction of roads in county headquarters;
- Reducing vehicular emissions through legal and fiscal measures;
- Incorporating climate proofing into infrastructural design, construction and maintenance.
- Provide financial incentives to support waste energy recovery;
- Build infrastructure and technical capacity for waste prevention, segregation, recycling and industrial symbiosis;
- Develop functional markets for secondary raw materials and recycled products ;
- Develop and implement legislation on extended producer responsibility for sustainable management of emerging waste streams, including e-waste and plastics.

### 3.1.3 Financing Needs for Resilient and Green Urban Services

In a bid to increase energy efficiency in the trade, energy and industrial sectors, the national policy is to increase the share of renewable energy in the energy mix. This can be achieved by:

- Adopting minimum energy efficiency performance standards for lighting and industrial products;
- Continually reviewing county policies and legal frameworks to respond to new technology and innovation;
- Enhancing the application of voluntary management approaches to energy efficiency, clean and renewable energy.

It is also recommended that County governments promote integration of sustainable production and consumption principles in development agenda. These principles include improved water use efficiency that incorporates elements of harvesting. It is also necessary to enhance sanitation services at County level. This can be achieved by rehabilitation of sewerage systems and improving solid waste management systems.

As such, the Government of Mombasa County aims to:

- Promote voluntary resource efficient and cleaner production instruments for source reduction of waste and industrial symbiosis;
- Develop and implement a landfill policy that eliminates land-filling of all recyclable waste

## 3.2 Sources and Status of Finance for Resilient and Green Urban Solutions

Greening growth and achieving climate objectives will require a shift to a low-carbon economy and long term investors in a situation whereby approximately USD 2 trillion is currently invested annually in infrastructure (transport, energy and water). An additional USD 1.2 trillion is required annually to meet global infrastructure needs to 2030, irrespective of climate-change constraints ([https://www.oecd.org/env/cc/Investors%20in%20Green%20Infrastructure%20brochure%20\(f\)%20\[Ir\].pdf](https://www.oecd.org/env/cc/Investors%20in%20Green%20Infrastructure%20brochure%20(f)%20[Ir].pdf)).

This process will mean that key sectoral contributors to GHG emissions – including energy, transport, and buildings – will have to scale up investment in “green” infrastructure (e.g. renewable and other low- or zero-carbon electricity generation, energy efficiency, public transportation and electric vehicles). The financial resources required to meet this challenge are substantial and the private sector will need to play a major role in green infrastructure projects, including by providing long-term debt finance and up-front capital investments. Following the recent economic and financial crisis, some of the traditional sources of green infrastructure finance and investment – governments, commercial banks and utilities – face significant constraints. Alternative sources will be needed not only to compensate for these constraints, but also to ramp up green infrastructure investments.

One potential source is institutional investors. These include insurance companies, investment funds, pension funds, public pension reserve funds (social security systems), foundations, endowments and other forms of institutional investors. In OECD countries, these investors held over USD 83 trillion in assets in 2012. In emerging and developing countries, sovereign wealth funds are key sources of capital, with USD 6 trillion in assets in 2012. In many cases institutional investors have to invest for the long term in order to fund liabilities that are multi-generational in nature. These liabilities can be met in part through long-term investments, including direct investments in green infrastructure, which can provide steady, inflation-linked, income streams with low correlations to the returns of other investments. Although there is potential for institutional investors to invest in green infrastructure, and there are pockets of significant activity, in general their investments in this area are minimal to date. Standing in the way are a number of obstacles, some general to infrastructure, others more specific to green infrastructure. Many institutional investors have yet to conclude that green infrastructure investments offer a sufficiently attractive risk-adjusted financial return. This is due to misaligned policy signals such as continuing support for fossil-fuel use and production, low or no prices on GHG emissions, and unpredictable changes to support policies for renewable energy generation. In addition, many institutional investors still lack the knowledge and investment channels or means to access green infrastructure in a way that aligns with their varying sizes, operational models and investment objectives ([https://www.oecd.org/env/cc/Investors%20in%20Green%20Infrastructure%20brochure%20\(f\)%20\[ir\].pdf](https://www.oecd.org/env/cc/Investors%20in%20Green%20Infrastructure%20brochure%20(f)%20[ir].pdf)).

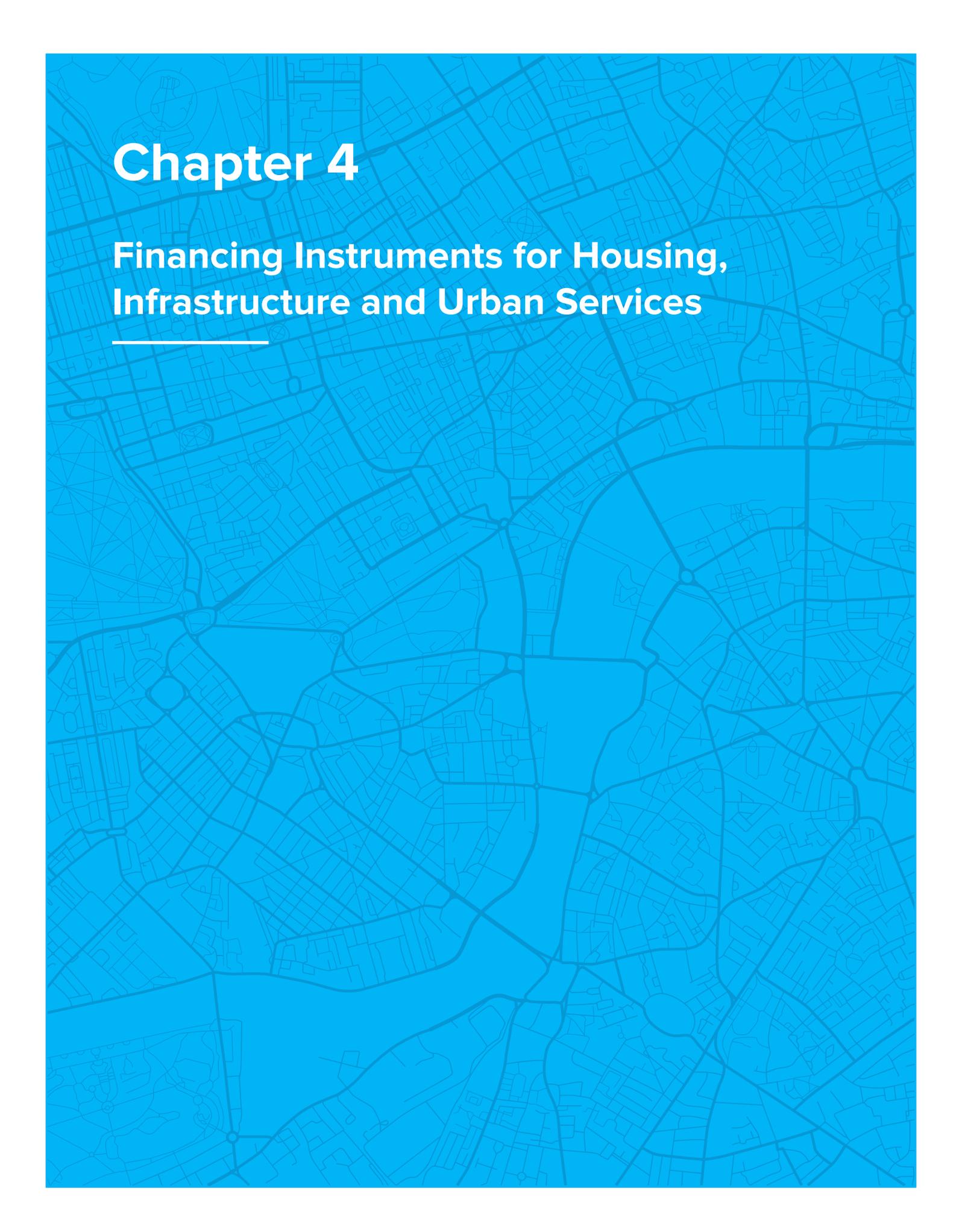
Meeting global climate goals will depend on scaling up green infrastructure investment. Policy-makers need to better understand how institutional investors view these investments. In particular, policy-makers need to understand how policies and regulations can affect the attractiveness of these investments and institutional investors' ability to participate in green infrastructure

financing and investment. Poorly integrated policies send conflicting signals, increase perceived risk, and perpetuate a bias toward investments in "brown infrastructure" such as fossil-fuel-intensive electricity generation and transportation options<sup>27</sup>.

### **3.2.1 Current Financing Sources and Flows in Resilient and Green Urban Solutions**

Under MTP II of Vision 2030, the Kenyan government has planned a complete revamp of road, rail and port transport infrastructure including expansion, development, and modernization of roads, rail, ports and other transport infrastructure. The cost of infrastructure projects under the MTP II is estimated at KES 245.63 trillion (USD 2.89 trillion). The government has also prepared associated policies for roads and transport, energy, agriculture and skills development to support the implementation of the MTP II. While both governments and the private sector have been investing heavily in the East African construction market, the focus of these investments have been mainly on development of rail and roads, power plants, retail developments such as large malls, skyscrapers and hospitals. 59 percent of the projects in the region were dominated by the government as of 2014, according to a Deloitte report on the Africa, mostly in the rail and road sectors (Ventures on site, 2015).

Mombasa county will benefit from the Government of Kenya intention to add 5 000MW to the energy grid, which has resulted in three mega projects being put out to tender in 2014. The country plans to add 9 solar power plants through PPP over the next few years. Kenya also commissioned the largest geothermal plant in the world in 2014. Road development is an intensive focus in the region, with significant projects underway to address inter-city highways and a number of PPP projects planned to come to market over the next 18 months, such as the 2nd Nyali Bridge PPP project. Kenya is also in the process of developing an annuity finance project for a 10,000 kilometers road development and maintenance programme.



# Chapter 4

## Financing Instruments for Housing, Infrastructure and Urban Services

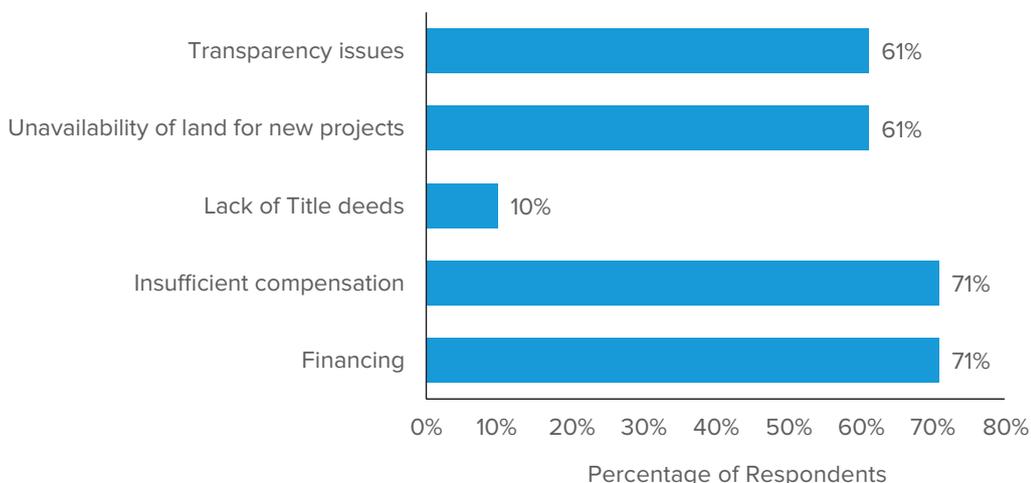
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## 4.1 Key Challenges and Constraints in Financing the Housing Sector

Several stakeholders face various challenges and constraints in financing for housing sector, for instance, the survey showed that developers in Mombasa county face high cost of borrowing imposed by financial institutions. Households in Mombasa city indicated that lack of title deeds, transparency by housing stakeholders, inadequate funds, limited land and insufficient compensation during resettlement as the key challenges. The county government indicated that it had limited personnel and technical

capacity, had inadequate resources which translate into limited availability of funds to implement housing projects and had challenges in financial flow and late disbursement of funds by the National Treasury. Housing financiers indicated that they experienced delays in getting approvals for housing projects, limited collateral by borrowers and low adoption of new technologies. Figure 4.1 presents these challenges.

**Figure 4.1: Challenges and Constraints in Financing Housing in Mombasa**



Additionally, factors such as mortgage interest rates, credit availability, demographic trends and property prices have significant effect on demand for financing of mortgage projects in Mombasa County. Financing for housing is thus mainly done through household savings and micro credit organizations. This issue is further complicated by the strict qualifying conditions set by the commercial banks and other financial institutions that provide mortgage, which lock out even a larger proportion of the population in the low and lower income group from accessing credit for financing housing. Additionally, fiscal policies on financing mortgage projects are inappropriate and this

consequently further excludes those in the low and lower income groups from accessing the finance for housing.

Currently, lending by formal financial institutions only benefits the individuals and households that belong to the high-income category. This issue has in turn led to over-concentration of the population in poorly built houses in small areas. Constrained low incomes relative to housing costs and the limited housing financing options especially with uncertain mortgage interest rates have further amplified this problem.

## 4.2 Financial Instruments for Housing

### 4.2.1 Assessment of Financing Instruments for Formal Housing

The market for formal housing finance has been consistently and rapidly growing in the past few years with an estimated compound annual growth rate of 38 percent. Growth has been mostly in urban areas and in the middle to high income groups, particularly in the salaried households. This growth was partially driven by the entry of commercial banks seeking asset growth in a lethargic business environment coupled with the tax incentives on housing loans. The commercial banks, with their lower cost of funds, extensive branch network, capability to provide a range of personal banking services and assisted by the average low default rates in housing finance, could expand the market considerably (Hoek-Smit, 2004).

The setting up of finance for formal housing has important associations with the overall financial inclusion as well as several socio-economic pointers regarded as key in the overall development indicators. Housing has numerous additional benefits like better living conditions, improved quality of life, health and education. Formal housing can also play a key part in financial inclusion by creating security for obtaining other loans (IFMIR, 2014) Studies reveal that the cost of a complete housing unit could be between 2.5 to 6 times the average annual incomes of a household.

The main providers of financing instruments for formal housing from a global perspective have been national governments, life and general insurance companies, national housing corporations (such as the National Housing Corporation of Kenya), commercial banks, microfinance institutions, provident/pension funds, housing finance companies, and home loans accounts, among others (Tiwari, 1997).

There are multiple sources of municipal finance such as national government transfers, taxes on property and businesses, user fees, improvement taxes, development levies, borrowing and income-generating enterprises which may vary from region to region and from

one county to another. The major sources of revenue for counties in Kenya currently are from national government transfers, revenues earned at county level which include taxes on property and on economic activities, fees charged by the county governments for the delivery of services, and loans borrowed to fund long-term investments (Okpala, Mutizwa-Mangiza, & Moisseev, 2006).

In Kenya, lenders, developers, borrowers, cooperatives and NGOs have developed different strategies in an effort to overcome the affordability problem. According to the CAHF (2016)<sup>28</sup>, for example, there are the home improvement loans and incremental financing which provide credit products that match cash flows of households with low income from financial institutions such as Rafiki MFI and Bank of Africa. Another innovative way of acquiring affordable formal housing involves the use of joint land purchases by groups of low-income households (known as chamas) which makes land affordable and reduces the risk to the lenders.

### 4.2.2 Financing Sources and Flows for Formal Housing

The main financing sources and flows for formal housing are as follows:

- Loans and savings. Loans involves:
  - Loan origination
  - Processing and approval
  - Monitoring and servicing of loans
  - Credit quality

### 4.2.3 Assessment of Financing Instruments for Lower and Lower-Middle Income Population

Most financial institutions have a strong interest in serving the salaried organized sector. Majority of the households in lower and lower middle income categories are usually self-employed or salaried but unorganized. However, there is little or no interest in serving the informal sector which consists of self-employed and salaried unorganized individuals, due to concerns related to credit risk and high transaction costs.

Even the financial institutions who are willing to serve the informal sector market will likely need help in developing products that reduce transaction costs and credit risks, and they may also need some risk sharing backing. This therefore leaves out majority of the households and individuals in the lower and lower middle income categories.

In Kenya, the housing deficit mostly affects the lower and lower middle income earners, mainly because the housing units are not proportionate to the demand, and the few that are available are not affordable to these households (Matindi, 2007). This group is forced to compete for the houses constructed for the lower income, who are consequently pushed out into the informal settlement areas that are crowded with limited or no infrastructures and other services. Housing sector stakeholders have made an effort to address this deficiency through various programmes, but their efforts have been disorganized thus having limited impact.

Provision of more affordable homes and housing finance in Kenya for the lower and lower middle income earners has been on the rise since there are a growing number of groups who are making steps in this direction, taking risks and testing new financing models. There are products that match cash flows of the lower and lower middle income earners such as home improvement loans, incremental construction financing, group loans and joint income loans that are being tested or have been already rolled out by financial institutions.

One of the informal groups used by the lower and lower middle households to raise financing for houses is what is referred to as Chama. This is a 'merry-go-round' type of group whereby members contribute a specified amount to a specific member over some particular period of time. These informal groups have helped households in the lower and lower middle income category raise finance for acquiring housing units.

An example of success of such self-help group is when a Kenyan NGO, Akiba Mashinani Trust (AMT), worked closely with slum dwellers across the country, organized them into 49

groups of 40 and started saving in 2007 and purchased land in 2011 at a cost of KES81 million (USD953 000). Ultimately, all the 2000 members who are slum dwellers will build homes there and an additional 1000 middle income housing units will be built to subsidize the cost. This is according to a report by CAHF (2016).

#### **4.2.4 Financing Sources and Flows for Lower and Lower-Middle income groups**

In Kenya currently, the main sources of housing finance for low and lower middle income groups are SACCOs, the informal *chamas*, Micro Finance Institutions, and development finance.

Usually, lower and lower middle income group households may not be able to afford privately built housing without assistance from the government or the non-governmental organizations (NGOs). This segment is largely ignored by banks and large housing finance institutions because of the higher costs of credit evaluation of these borrowers and the perceived higher credit risk involved with the lending to these households.

As the housing finance sector develops, some of the sources and flows for housing for lower and lower middle income earners include mobilization of target groups to register and save with micro finance institution; mobilization of the target groups to form co-operatives in order to access finance through cooperative loans; establishment of secondary mortgage market to ensure liquidity; having in place income generating programmes and activities for the lower and lower middle income earners as part of the project; and involvement of residents in planning to ensure communal maintenance of the housing units (Matindi, 2007). In this way, the quality of existing housing stock will improve and the housing quantities for low and middle income will increase, while simultaneously inhibiting formation of informal settlements.

The main drawback of the housing and subsidy policy in developing countries such as Kenya is to shift the mortgage frontier down-market and

expand its scale, while tackling the land and infrastructure problems that keep developers out of the lower and lower middle income market segment. Simultaneously, the private sector and government should collaborate to upscale the use of non-mortgage housing finance instruments for those ineligible for mortgages, both for upgrading the current low income dwellings and acquisition of new low-income housing units.

### 4.3 Financing Instruments for Infrastructure and Urban Services

Financing for urban infrastructure in Kenya and other developing countries is usually through government generated revenue (taxes and fees); loans from IMF and ADB and bonds raised both locally and internationally. For county governments of cities such as Mombasa, infrastructure is funded mainly by the national government and also with the revenue that the county government may collect from user fees and other charges. The provision of urban services and infrastructure require an amalgamation of finance, technical and planning capacities, and a close cooperation between the public sector, development partners and the private sector.

There are however a few challenges of urban infrastructure finance such as ineffective and inefficient fiscal transfer systems from the central government, insufficient county revenues from taxes and fees, and limited access to loans and other forms of debt financing.

In order to close any existing funding gaps that may exist, county governments are advised to improve the fiscal transfer system; increase county revenues and provide access to county loans and other financing instruments. Further, the county governments can enhance technical and administrative capacities of local administrations and institutions, and also create an enabling environment for increased private sector participation through sector and policy reforms. Finally, projects attractive for private investors may be prepared and structured, in addition to introducing innovative financing instruments (Hartig, 2008).

#### 4.3.1 Assessment of Financing Instruments for Transport

According to the OECD (2015), infrastructure investments have been traditionally financed with public funds where governments have been the main actor in this field due to the characteristic public good nature of infrastructure and the additional benefits that are often generated by such facilities. Increased public deficits, increased public debt to GDP ratios and the occasional inability of the public sector to deliver efficient investment spending, have however led to a reduction in the level of public funds allocated to transport infrastructure development.

The models and instruments of financing infrastructure projects such as transport are typically complex systems including different actors and financial flow patterns. The main conventional sources to financing infrastructure for transport and logistics services in Kenya include allocations from national and county budgets, domestic and foreign loans and official development aids. International funding is of a particular interest and can play an important developmental and dynamic role. In addition, the public-private partnerships (PPP) and the financial instruments of the capital markets have been playing an important role in this process.

In Mombasa, the sources for financing construction and maintenance of transport infrastructure include local revenues, and transfers from the central government which is usually the chief source for investments, and road funds based on user charges which is now growing in popularity. Contributions from the local community in cash and in-kind are suitable primarily for the community roads and paths. According to Calvo purposefully designed cost-sharing engagements for both local government roads and community roads and paths encourage resource mobilization at all levels and increase the percentage of the transport network that receives regular maintenance.

### 4.3.2 Assessment of Financing Instruments for Energy and Power

There are several financing instruments for energy and power in Kenya. In Mombasa, energy is financed either in small scale by households for local consumption or by the national government and state agencies for large scale distribution. Generally, sources of finance are debts, grants, equity, asset-backed securities, guarantees and insurance.

The first type of instrument is the ordinary shares which acts as risk capital from developer or sponsor. There are also the Preference Shares which are typically from tax investor and sometimes provide a cumulative dividend and they are sourced from Institutional Investors, Investment Funds and Tax Investors. Another instrument are the Subordinated Loans which are usually fixed rate, long-term and unsecured and may be considered as equity, used to cover construction overruns or other guaranteed payments and are from lenders specialising in mezzanine debt.

Syndicated Loans are provided by two or more lenders, governed by a single loan agreement, may have different agreements for construction and operating phase of project, provide long-term finance and are offered by commercial banks. There are also the large unsecured loans that are only available to creditworthy corporations and commercial banks tend to limit their risk to 5 - 10 years. Development loans are provided during development of project to a sponsor with insufficient resources, usually offered by the World Bank, or a lender with project experience.

Another major financing instrument available to governments for energy and power development is the Eurobond, which is issued in amounts averaging USD 100 million without prior registration or approval by any particular government. Terms usually range from 10 - 15 years and the loans may be made in any currency, have fewer contract clauses than syndicated bank loans, and are accessible through a large and liquid market. However, Green Rhino Energy (Green Rhino Energy, 2013) argues that a credit rating for the project entity is required which could be both

costly and time-consuming to obtain. Also, bond issues tend not to allow changes to the underlying project.

### 4.3.3 Assessment of Financing Instruments for Water and Waste

The financing for water and waste management has been an international public private partnership between financial institutions, Governments, NGOs and it is mainly through micro credit. The other financing instruments at the national and county levels in Kenya include local government subsidies, co-investments with other partners, corporate social responsibility (CSR), and the use of Guarantee Fund (Post & Athreye, 2015).

Some of the innovative ways of financing for water and waste combine different financing products such grants and loans or equity in one structure or group projects through pooled financing into bonds. The instruments combine the traditional grants with loans or equity instruments in order to support single projects or programs; use guarantee funding to make repayable finance available to the water sector by decreasing risks for the lenders; scale-up by pooling smaller projects into larger investment vehicles and capital market products transaction costs are decreased per project and resources from capital market investors are accessed.

At the household level, the financing instruments used in Kenya and specifically in Mombasa include micro savings and micro credit, Table Banking, Individual microfinance, and the Merry-Go-Rounds otherwise known as *chamas*.

## 4.4 Scale and Volume of Finance

### 4.4.1 Assessing the Scale and Volume of Financing involved in Each Financial Instrument in the city

Scale is an important factor in determining success as a housing microfinance institution. In this regard, banks have significant advantages

in terms of capital availability at low costs and access to a diversified income stream, with the implication that Home Mortgage Finance (HMF) providers should strategically consider obtaining banking licences once they have reached scale. Weak regulatory, legal and lending support (such as quality credit reports) infrastructure in a country leads to higher costs for financial institutions, limiting HMF. Additionally, scale is needed to succeed as the business needs to reach a certain scale of operation, in terms of the number of loans, to optimally cover its fixed costs.

## 4.5 Patterns of Financing Instruments to City Characteristics

### 4.5.1 Assessing the potential connection and patterns of financing instruments

These are examined according to the types of economic systems, economic development stage, household income, urban policies, national policies and regulation, national financial systems, and financial markets accessible to finance projects in the city. Access to the income of clients has emerged in other studies as a constraining factor in that the credit risk related to a loan is significantly higher if the financial institution cannot access the client's income for repayments as soon as it is available. This additional credit risk translates into higher costs and less HMF.

## 4.6 International Finance

### 4.6.1 Assessing the financial flows and trends of international finance and international aid in and to the city

An example of an HMF provider is HfH, which is involved in financing homes through micro-mortgages in several African countries and providing housing for vulnerable groups. It has changed its focus to catalyzing greater delivery at the affordable segment of the housing market through HMF. The MicroBuild Fund, established by HfH, is a global fund for

the delivery of debt capital and fund capacity building to microfinance institutions. New Urban Finance Facility for Africa is a USD100 million facility, currently in formation, with the intent of providing investment through local banks and microfinance institutions for affordable housing and basic services, in African cities. Rooftops Canada, the international development programme of Canada's cooperative and social housing sector, works with Canadian and international partners to improve housing conditions, develop sustainable communities and to advance a shared vision of equitable global development.

With respect to capacity building and technical support, housing support services are an integral component of HMF. Support includes construction design, budget verification, guidance on suitable purchases, permits and legal requirements, construction oversight and verification, technical inspection and supervision, client and artisans technical capacity building, and bulk land purchase negotiation. The assistance targeted at HMF business processes is offered by organizations such as PlaNet Finance, which has provided organizational guidance to the Kuyasa Fund in South Africa to help loan expansion. Assistance with the construction process such as HfH's activities in Malawi, Ghana, Uganda, and planned for Zambia and Angola is challenged by the fact that the demand for such assistance is higher than the capacity of HfH. These services work best when they reach clients before construction starts, to reduce the likelihood of subpar overall construction. Other areas mentioned in the study are the removal of threats to tenure security such as evictions, the provision of incremental tenure and step-by-step acquisition of land title, as well as housing infrastructure. Kihato mentions that efforts in South Africa to amend policy for the national housing subsidy should be focused on providing plots of land serviced with the requisite infrastructure (Key issues that warrant attention from the policy perspective include the creation of appropriate systems of land administration, management and tenure security that facilitate HMF, and policy reforms to allow for, and encourage, incremental build.

## 4.7 Assessing City Financing Challenges in Each Category

### 4.7.1 Macro level challenges (e.g. national regulatory, policy constraints)

These include financial market volatility, transparency and accountability issues. Key issues that warrant attention from the policy perspective include the creation of appropriate systems of land administration, management and tenure security that facilitate HMF, and policy reforms to allow for, and encourage, incremental build. Additionally, delays in project approvals and execution are some of the challenges that housing financiers face.

### 4.7.2 Sectoral challenges (e.g. market, demand, volume, technology, financial management);

Weak regulatory, legal and lending support infrastructure (such as the quality of credit reports) in a country leads to higher costs for financial institutions, limiting access to housing microfinance.

Capacity challenges that should be the focus areas of technical assistance encompass client affordability, market knowledge and segmentation, client retention, skills in HMF provision and client understanding of microfinance in general. Others include institutional capacity in management information systems and human resource, donor/funder understanding of HMF, microfinance institutional understanding of HMF (for instance in alternative forms of security aside from land titles, client over-indebtedness, as well as savings capacity of clients).

### 4.7.3 Project level challenges

There is limited available equity capital and effective HMF demand is limited because of the high interest rate charged as a result of higher cost of funding; higher impairments and higher operational costs. A financier performs better when the institution controls what the

loans taken can be spent on: for example, whether loans should only be used to purchase building supplies. This is also a relatively low cost control mechanism compared to other options like sending out individuals to physically inspect the homes constructed or bought by customers.

### 4.7.4 Municipal government capacity constraints

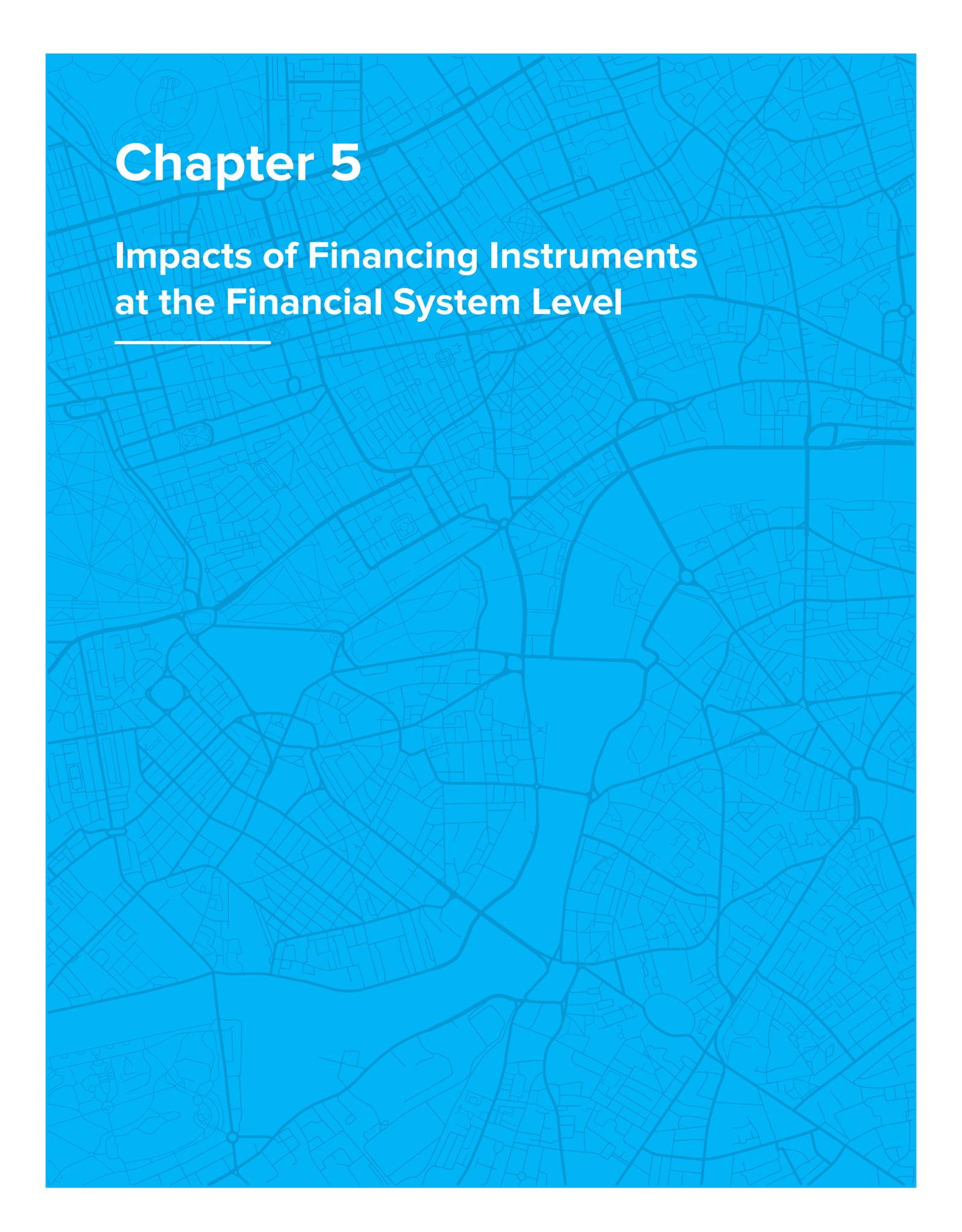
Implementation of activities and initiatives in the first county integrated development plan for Mombasa County has not been very successful. Limited progress has been made to some extent in enhancement of access to physical and social infrastructure; provision of quality primary health care services and efficient schools management.

Some of the constraints faced include political interference, corruption, lack of funds, lack of qualified staff, cost overruns, billing system failures, lack of administrative capacity, inadequate consultation, outdated tariffs and lack of maintenance/investment. These constraints are further summarized under rewards management, resources, organizational culture, leadership and administration, rules and procedures and training.

The constraints noted under rewards management included discrimination, lack of a comprehensive strategy and policy aimed at rewarding people fairly and equitably, classification of staff into two categories namely those employed and promoted by the Public Service Commission and City Government of Mombasa.

The County of Mombasa also lacks adequate resources. This is because its revenue base has not been widened, while cost overruns are not uncommon. Some of its traditional sources of income like housing can yield more revenue if additional investment is made. The city's billing system and tariffs need to be reformed so as to conform to current trends in the environment. The same applies to the city's capacity to enforce payment of revenue.

Although the County government of Mombasa has clear rules and procedures, its employees do not pay much attention to them owing to sluggish enforcement of the same by managers. Punctuality is such a case whereby the staff report to work late and leave early despite the clear policy on working hours.



# Chapter 5

## Impacts of Financing Instruments at the Financial System Level

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## 5.1 Impacts on the Financial System

### 5.1.1 Assessing the impacts of financial instruments at the financial system level

The purpose of this report was to investigate why the provision of HMF in Mombasa is not happening at the scale necessary to satisfy the demand for housing. Other studies on the sustainable delivery of HMF recommend that this demand should be met by commercial HMF institutions without subsidies (<http://www.housingfinanceafrica.org/document/case-study-6-housing-microfinance-business-models-three-case-studies>). The constraints on HMF delivery from the perspective of the financial institutions were investigated through a survey. The analysis of financial statements and semi-structured interviews with key informants informed these findings. The semi-structured interviews were organized around the business processes of the financial institutions. Constraints that emerged are many fold. Some are on the part of clientele whereby financial institutions prefer to only lend to employed individuals. Given that a significant portion of lower income earners are not formally employed this is a significant limitation on getting HMF to those in need of housing. Increasing the availability of HMF to include those individuals that are not formally employed is, at least partially, related to the availability of small business finance.

On scale, the models of lending differ with simplest model being one where a longer maturity loan is made available to the client for housing and no check is initially done to make sure that the money is actually applied to housing. This makes the credit process cheaper except where there is need to maintain a branch infrastructure to support these loans. Other institutions limit the application of their loans to, for example, the purchase of building supplies. This resource intensive process makes HMF provision more expensive (costs include training in-store credit champions, paying commissions and administrating the agreements with building supply vendors). Simple models have the advantage of having a process that is branch independent while the most complicated and expensive have the advantage of tying the customer to the

house, limiting impairments. That HfH is not making profit from the activity is an indication that this model is best implemented when it is subsidized<sup>29</sup>.

Interaction of access to capital and foreign exchange risks comes into play when debt funding is relied upon due to the underdeveloped state of local capital markets. The foreign funding is at a low interest rate but payable in hard currency. This exposes institutions to significant foreign exchange risk that, due to underdeveloped local capital markets, might not be hedged cost effectively. This leads to higher interest rates on HMF loans, limiting their supply. Regulations also create costs for the institutions and, all else equal, increase the interest rates that they charge on loans, limiting affordability and the availability of HMF. Bank regulations create costs for banks in that more capital and liquidity is required than for non-banks. Banks can overcome the disadvantage of these costs by diversifying their income to include transactional income and achieving greater scale.

## 5.2 Impacts on Sectors

### 5.2.1 Identifying issues faced by different actors and stakeholders in financing housing, infrastructure and urban services

In Mombasa, several variables significantly influence household demand for housing. A survey conducted in 2012 by KIPPR (Musyoka, P. K. 2012) revealed a price elasticity ranging from 0.318 to 0.328 for different tenure categories, and income elasticity of 0.50 to 0.52. The price inelasticity indicates limited choice for housing among urban households. The income variable, especially when disaggregated along tenure and income categories, indicates unwillingness of the poor and renting households to spend more with an increase in income. The limited effect of household characteristics on housing demand is indicative of a constrained urban housing market in which housing is demanded as an aspect for survival and not responsive to specific household preferences

or needs. The survey identified the need for mass supply of urban housing, checking of extensive commercialization of housing and related services, innovative approaches to subsidization of the cost of access to housing services, and finally legislation on minimum floor size per standard household, and quality standards to minimize over-crowding in urban housing.

Virtually all the urban poor, who make well over a third of Mombasa's total population, live in more than 55 slums across the City. The poor face stark living conditions in these settlements, paying exorbitant prices for water, over 58 percent using pit latrines and 54 percent dumping rubbish in open areas and drains. Although there is diversity of land ownership patterns in slum areas, tenure is often insecure, leaving residents with little incentives to invest in their dwellings. A study of the provision of water and sanitation as well as management of faecal sludge in Mombasa county (Bill and Melinda Gates Foundation, 2011) identified the entities responsible and their roles. They included the now defunct Municipal Council which the County Government replaced, the Water and Sanitation Utility, Non-Governmental Organizations (NGOs) and Community Based Organizations (CBOs). Aspects requiring financing included provision of water and sanitation facilities at affordable rates, provision and maintenance of infrastructure as well as management of garbage by utility company and city authorities. Community level intervention was viewed as in kind contribution through provision of labor and mobilization of participants for civic education.

### 5.3 Challenges faced by different actors

#### 5.3.1 Issues faced by different actors and stakeholders in financing housing and infrastructure to meet the resilient and green requirements

##### National Government

Kenya is faced with five key challenges in effectively implementing a green economy strategy (GESIP, 2015). Firstly, although several

laws and regulations have been developed to encourage sustainability across sectors, compliance and enforcement remains problematic. Secondly, there currently exist few standards for green technologies, goods or services. This is evidenced by an inadequacy of information about green technologies, thus stifling technology transfer and adoption and adaptation. Nevertheless, progress is underway as evidenced by current efforts to set minimum energy efficiency standards for certain appliances. What will also be needed are environmental standards for green technologies (such as solar panels), food safety, and animal and crop products. An approach that organizes and addresses opportunities to strengthen environmental standards by sector will benefit the environment as well as Kenya's ability to trade internationally. Various regulations and standards are increasingly being applied in international trade. There is thus need to create an enabling environment where small and medium sized enterprises are both able to meet them and also enhance profitability. This concern has been taken up by the civil society in so far as the housing sector is concerned. A Kenya Green Building Society (KGBS) has been registered locally as an affiliate of World Green Building Society and it aims to lead the transformation of the Kenyan Property towards environmental sustainability (Kenya Green Building Society Brochure).

Thirdly, the current economic policy framework in Kenya needs to account for the intrinsic value of its natural capital and support sustainable development. Like most countries, Kenyan prices and policy regime do not fully account for the external costs associated with technologies, products and practices that are environmentally friendly. This also tends to diminish any nascent demand for green alternatives. What Kenya requires is the incorporation of natural resources in the System of National Accounts, that is, the derivation of indicators and statistics to monitor the interaction between Kenya's economy and key, if not all natural resources and use the results thereof for decision making, for example, design of fiscal policy instruments to achieve desired outcomes on the stocks of natural resources and/or environmental quality. There is potential to use fiscal policy

instruments such as environmental taxes, subsidies, pollution charges, public expenditure on green infrastructure, public procurement, feed-in-tariffs and grants. Kenya already has a feed-in tariff to promote green energy but it excludes some resources such as wave, tidal and ocean thermal energy conversion. These tariffs help to level the playing field with fossil fuel energy sources.

Fourthly, increased funding will be needed to effect a transition to a green economy due to challenges in up front capital costs, particularly in areas like energy where up-front costs for clean technologies can be high. These funds will need to originate from both the private and public sector. At the international level, Kenya may be underutilizing international donor funds available for low-carbon development. At the domestic level, enhancing its ability to mobilize domestic funds for investment in new renewable technologies and products will require addressing current disincentives.

Fifthly, there is insufficient of knowledge regarding the costs and performance characteristics of available green technologies. Many studies have shown that the costs of turning over the current fossil-fuel based technology stock in transport and power supply to green alternatives are low relative to benefits. For example, the International Energy Agency asserts that fuel savings in transport and power supply could offset the cost of green investments (IEA, 2012). However, there are entrenched policy, market and financial barriers that prevent the transition from fossil fuel-based technology to greener options. Efforts to increase awareness of energy efficiency and renewable energy technologies can improve knowledge of best practices, promote the concept of a green economy and provide needed education and outreach.

Finally, a number of cross-sectoral barriers to transition have been identified, and need to be addressed as part of a green transition. These include:

- Inaccessibility to local/international markets;
- The growing concerns over youth employment;

- Training and skills necessary for new green opportunities;
- Insufficient of awareness about green economy best practices;
- Obsolete and slow adoption of cleaner technology;
- Devolution transitional challenges regarding capacity and policy coordination;
- Capacity to leverage private sector investment;
- Insufficient incentives, low rate of return on green investment; and
- Inadequate access to information on climate and weather data, which can impact resilience.

#### Financial sector

In implementing the GESIP, banks and financial institutions including insurance companies, savings and credit co-operative organizations (SACCO) and microfinance institutes will be required to develop and provide innovative products and services that support green economy. Such facilities will be critical in encouraging green economy entrepreneurs and enterprises. Return on equity (ROE) is the primary measure of performance used by financial institutions, even though most African financial institutions target a mix of objectives, including ROE and social impact, return to shareholders remains a very important performance metric. On the way forward, it appears that, as a launching pad, general microfinance organizations provide the best platform for HMF, represent the most likely entrants into HMF going forward, and will continue to attract the immediate attention of funders. Their familiarity with clientele, knowledge of microfinance lending methodologies and already existing network of branches creates a platform for the HMF market. The interest rate charged on HMF loans depends on the achievement of target ROEs. Thus, higher costs lead to higher interest rates charged and less HMF. In a weak legal environment that limits the availability of security and the collection of debts, financial institutions will price the interest rate of their loans at a high enough level to ensure that the target ROE will be met after all expenses, including cost of finance, impairments and

operating expenses. The implication of this is that loan interest rates charged might be so high as to exclude individuals who need HMF but cannot afford it. The result of this is a relationship between target ROE and access to HMF: an individual will only be able to access HMF if the expected ROE on his/her loan exceeds the target ROE of the financial institution approached.

For commercial lenders, the study highlights the importance for their experiences to be monitored to ascertain key factors in their success, and potential pitfalls that may cause problems for HMF lending. Support of – and investment in – NGOs is a way of reaching poorer borrowers and scaling up HMF, support for CTA providers – perhaps through partnerships – and strategies for affordable building technologies and

materials are also recommended. Another policy recommendation is to develop HMF in Africa through, among other possibilities, the leveraging of pensions for HMF, tax relief, affordable infrastructure and liquidity facilities. The financial institutions surveyed indicated that cheaper HMF loans are possible if there is better access to the income of clients. Many lend to employed individuals whom they can make payroll deductions from. They also try and manage their clients in such a way that clients receive their salaries into a current account, giving the finance institution first hand access to clients' income. The implication for HMF in Africa is that payroll access should only be given to institutions that charge lower HMF loan rates. At the same time, low quality credit reports also led to higher costs in the form of impairments in Africa.

# Chapter 6

## Alternative Financial Instruments

## 6.1 New Challenges, Approaches, Instruments

### 6.1.1 Analyzing new housing and infrastructure development challenges, issues, priorities and financing opportunities and solutions in the city

Mombasa is considered to be located at the 'gateway' of a Northern Corridor linking Kenya with Uganda, Rwanda, Burundi, Democratic Republic of Congo and Southern Sudan. The multi-modal corridor consists of road, rail, pipeline and inland water ways transport. International support has therefore been extended by JICA for formulation of a comprehensive development Master Plan with negotiations beginning in October 2014. The target year of completion of implementation is 2040 and target area is Mombasa County, covering 287.94km<sup>2</sup> (The project interim report, undated). In the report are mentioned eight areas where new housing estates are planned or old ones will be re-developed by PPP. World Bank KISIP for improved informal settlement is taken into account with its objectives for enhanced spatial order, harmony, health, safety, access, convenience and economy which are expected to improve living standards of residents.

World Bank also participates in the planning by providing digital topographic mapping and preparation of an integrated strategic urban development plan (ISUDP) with Mombasa as one of its cluster towns. It envisions Mombasa as becoming transformed into a compact, vibrant and transit oriented city with decentralized development and new employment centers. The city will become energy efficient and developers will be required to create affordable and quality homes to meet residents' needs and aspirations. The development plan has aspects of providing a good living environment with easy access to facilities and amenities, the management and improvement of the environment and infrastructure, conservation of natural and built heritage and identity, improved land efficiency by minimum greenfield development and consolidation and reservation of land for future needs.

IUSDP focuses on developing new areas with current land use in existing urban areas remaining mostly the same towards 2035. The capital investment plan aims to address issues such as budgetary limitations, prioritization of demand, capital investment plans for priority projects. The priority projects include water, finance, sewerage, transport, drainage, security lighting, housing, informal sector and the environment. Shortage of affordable and quality housing, especially for lower income households is acknowledged alongside the inadequate management of development approval system which leads to poor quality of housing and not supplying adequate housing. It is proposed to highlight two distinctive characteristics of Mombasa County, namely; 'Port/Logistics' and 'Tourism' and develop new urban centres to contain the increasing human population in future which have clear hierarchy both in existing urban and undeveloped areas to control urban sprawl and provide infrastructure.

Other issues which the Master Plan addresses include waste management. Areas where garbage is currently disposed in an open sites will be safely closed off by redeveloping and landscaping them to become green spaces. Improvements will be made towards waste collection and transportation system and construction of a new sanitary landfill site is envisaged. While the Kongowea market will be relocated and expanded somewhere else on the Island. Disposal of industrial and hazardous waste will be improved and the 3R principles widely publicized and promoted. With respect to sewerage and drainage, dumping of solid waste and soil by human activity along drainage channels causes flooding and it will be necessary to expand storm water drainage and provide drains for non-paved roads. Measures for rain water discharge control may therefore be necessary. Greater emphasis will be laid in managing disasters arising from climate change, including flooding.

Energy supply in Mombasa suffers frequent and prolonged interruptions that will be addressed by upgrading the existing power distribution network by and expanding rural electrification programmes to cover the areas

which are unreached at the moment. Plans are also in place for expanding capacity of water sources in terms of volume and quality and to rehabilitate the distribution network. A 15 per cent shortfall in water supply (approximately 60000m<sup>3</sup>/day) might persist beyond the 2035 time line by when the plan will be fully implemented.

### **6.1.2 Analyzing approaches which could reduce the costs of affordable housing and narrow the affordable housing gap in the city, including market-oriented solutions**

These include, but are not limited to, approaches lowering the cost of land, construction, operations and maintenance, and financing. Micro-lenders can exit general, non-specific lending and focus on responsible lending, “helping customers fund specific goals, such as paying for education and improving their homes, while moving away from general, non-specific lending.” They can resort to selling off of branch infrastructure as a result of the new focus. In South Africa, for example, the bulk of Real People’s lending is distributed at point of sale at the premises of building material suppliers, where customers use the loans from Real People to fund home improvement purchases. In South Africa, loans are only provided to employed customers. In Kenya, Tanzania and Uganda, Real People provides business finance to individual entrepreneurs. In 2013 the responsible lending division contributed 44percent of the “core continuing profit before tax”, 56percent of the contribution came from the portfolio recovery solutions business, which comprises the acquisition and collection of non-performing debt as well as the provision of outsourced collections services. The debt financing of Real People includes bonds issued by Real People itself and bonds issued by securitization special purpose vehicles (SPVs).

The main housing characteristics usually included in estimating the hedonic price function of urban housing are the dwelling type, location of the housing unit in relation to a central reference point (for instance Central Business District), wall, roof, floor types, tenure

type, location of kitchen, presence of toilet, size of floor and the number of habitable rooms, among others. Making housing affordable for the urban poor in Mombasa has to take into consideration that targeted households are slum dwellers and that urban slums mostly serve as entry points for rural migrants into major towns in Kenya. A study conducted by KIPPRA (Musyoka, P. K. 2012) established that there were more males than females, and disproportionately few children in Nairobi slums, supporting the notion that young men came to the city to look for jobs, leaving their families behind in rural areas. Slum houses, normally considered inhabitable according to the official Kenyan standards, are actually socially acceptable by the residents, majority of them with rural background. The rural culture of sharing facilities such as water, toilet and cooking is normally applied when in urban informal settlements.

The average income levels of the beneficiary households have often not been considered in the various low-income housing interventions, resulting into trading of ownership rights, sub-letting and generally commercialization of social housing intents. In the few cases where interventions have succeeded, it has been attributed to the consultative attitude taken by developers. Ninety (90) percent of households in Nairobi slums, for example, occupy single rooms of 9 to 14 square metres and accommodate from 3 to 5 people yet government programmes provide a standard two bed-roomed house which is unnecessary to target households who only need minimum space to get by in the city. In contrast, low income households prefer temporary housing, which grants them freedom to shift as they follow economic opportunities. Own occupying tenure may mean higher transport costs in case of income-generating sources changing, or inaccessibility of basic services such as cheap schools, cheap household grocery, meat from unwanted animal parts, and ‘slum’ economy.

The study of Mombasa exposed similar approaches to supply of affordable housing for the lower middle income group whereby room sizes were reduced to the bare minimum dimensions, making it possible to fit many more

housing units on a small piece of land than would have been possible with more spacious accommodation. Supplying adequate housing for the low and lower middle income groups in Mombasa offers commercial opportunities for speculative investors and lessons can be learnt from past experiences such as by World Bank which funded a project in Chaani settlement. Meant for upgrading housing and infrastructure facilities for the poor residents, it ended up attracting upper income households who bought off the serviced land, causing the original beneficiaries to start up a new squatter/slum settlement nearby. Since home-ownership is mostly out of reach for most urban households, middle-class income households speculate on slum upgraded housing units, which they buy from the original owners who are naturally poor, transient and easily manipulated.

Slum dwellings are provided by entrepreneurs who are more concerned about maximizing profit from rental earnings rather than the urban poor providing the housing themselves, as supported by theory of urban slum formation. Additionally, slum housing is characterized by high tenancy rates, absentee landlords and neglect of house maintenance.

### **6.1.3 Assessing opportunities for launching and developing new instruments which support low carbon and climate resilient development**

#### **Prospects for new private sector finance**

A typical infrastructure project has several distinct phases. Each phase exhibits different risk and return characteristics, and each faces different incentive problems and calls for a different role for governments, banks and capital markets. Hence, each phase requires a different mix of financial instruments to cover different risk and return profiles – and so targets different types of investors (Ehlers, 2014).

During the planning phase, infrastructure financing hinges on the techniques of project finance. These techniques entail two sets of contractual arrangements: (i) the creation of a legally and economically self-contained

entity (SPV) against which all legal contracts are written, and (ii) a set of contracts dictating the distribution of risks and returns. The creation of a project SPV is a precondition to attract private forms of finance, as it allows the contractual pledging of cash flows to creditors and the distribution of risks among the contract partners. It also helps to limit agency problems, as owners and operators cannot simply divert revenues away from the project to other entities. It replaces the role of the government in traditional public procurement and becomes the core entity. This structure is a prerequisite for using the techniques of project finance. The degree to which the private sector is involved in an infrastructure project is then determined by the contractual arrangements. These can take many forms, from simple management contracts to part or full private ownership.

Transferring too much risk to the private sector leads to wrong incentives and therefore inefficiencies. Transferring to the private sector those risks which it cannot insure against, such as political risks, will either significantly increase funding costs or even lead to a failure to attract private investment at all. Equity sponsors willing to take on high risks are usually companies which are also involved in the construction or operating process. High-risk exposure will prompt them to seek higher returns by charging higher construction or maintenance costs (Ehlers, 2014).

For public private partnerships to work better, actors have to play by some fundamental rules which can guide the establishment of PPPs and a proper distribution of risks between the government and private investors. These are:

- PPPs require complex long-term contracts, hence they make sense for larger projects where potentially large efficiency gains can be expected
- PPPs are sensible when private partners bring significant expertise and capacity for innovation
- PPPs should be seen as a method to procure infrastructure services over a long period of time and should not focus on construction of infrastructure only

- Compensation to private investor should be based on performance and quality indicators
- Responsibility and the associated risks for achieving performance and quality goals should lie with the operator
- Contract parties which take responsibilities and risk must receive an appropriate degree of control of the project in return
- Available financing options critically depend on the legal structure of the project. The decision for enabling structured loan instruments or bond refinancing at a later stage should be made before the legal structures are implemented

In terms of the distribution of risks, a general rule should be that only those risks should be transferred to the private investors which they either control or are able to insure against. Infrastructure projects often entail political risks (Ehlers, 2014). Governments have the power to renegotiate contracts, and sometimes are tempted to do so. Infrastructure projects generate positive value only over a considerable period of time, and hence private parties have to be sure that the transfer of cash flows is credible. Precedents of contract renegotiations and one-sided political interference greatly increase the perception of risks for private investors. This is also reflected in ratings of infrastructure debt, which are an important determinant of financing costs. Hence governments must take decisive measures to deter or insure against such risks.

The current priority projects for the national government of Kenya are captured in Vision 2030. This Vision is a long-term process that has received dedication and focus by the government beyond the initial five year period (GoK, 2007; 2013). During the life of the Vision, strategies and action plans are to be systematically reviewed and adjusted every 5 years in order to effectively respond to the changing global, regional and local environment. Following the expiry of the Economic Recovery Strategy for Wealth and Employment Creation (ERS) in December 2007, the first part of Vision 2030 was implemented

under the 2008-2012 plan. Thus, Vision 2030 will be delivered over many different horizons, each with defined goals and flagship projects. A flagship project only sets the pace for multiple vessels behind it. By the same token there are many on-going projects and yet others planned for the future by the Government and the private sector. All of these deserve attention and support.

Delivering this ambitious process of national transformation requires: a fundamental shift from business-as-usual to “business unusual” (from multiple and often uncoordinated levels of decision making to a centralized implementation process); a new management philosophy (from a limited sense of urgency to relentless follow up); legislation (from slow, reactive to fast, proactive legislating); special budgeting (from low and dispersed to high and “ringfenced” investments), as well as management of top talent (from shortage of skills to a war for talent). To

this end, a Semi Autonomous Government Agency (SAGA) with the requisite capacity was established to oversee the implementation of all Vision 2030 projects. In doing so, the agency will work in close collaboration with government ministries and departments as well as the private sector, civil society and other relevant stakeholder groups in realizing the

As in the afore-mentioned example of how the United Kingdom guarantees non-interference of economic programmes by political developments over the long term, Kenya has set up institutional structures to successfully realize Vision 2030 and to particularly ensure the timely implementation of the flagship projects, the Government of Kenya created a Vision Delivery Secretariat (VDS). The Secretariat is managed by a Director-General of the Vision 2030 Office, under the overall guidance of the Vision 2030 Delivery Board, which shall play a policy-making and advisory role. The VDS is organized into eight departments. The Departments correspond to the main project clusters or sectors of the Vision covering the three pillars.

Bank loans for infrastructure projects are in many cases extended by a syndicate of banks

rather than a single bank. Syndicated loans are common for the debt-financing of larger projects, as they allow the diversification of the large risks of a single project across a group of banks. It should be noted that syndicated project loans would typically only be a subset of all bank loans for infrastructure projects. In any case, syndicated project loans are likely to represent a major share of bank loan financing in terms of the overall volume, given that they are more likely for very large loans.

Strikingly, private infrastructure finance with syndicated loans has picked up considerably in emerging markets for financing the construction phase and has surpassed the levels of advanced economies. In particular, emerging Asia (excluding China) has become a major recipient of syndicated project loans for infrastructure-related sectors. But issuance volumes have also increased considerably since 2008 (in China, Latin America, Central and Eastern Europe and Africa).

In the operational phase, stable underlying cash flows in the infrastructure projects are akin to fixed income securities and therefore bond financing is a natural and economically appropriate financing instrument. Bonds often come into play when initial bank loans are being refinanced, as they represent a low-cost financing alternative. New financial instruments which allow the separation of liquidity risks and long-term credit risks would help to improve the attractiveness of long-term financing.

## 6.2 Improving Financial and Technical Support at the City Level

### 6.2.1 Present recommendations on how to improve efficiency and effectiveness of financial and technical support in the city

The County of Mombasa Fiscal Strategy for 2015-16 outlines how best to deal with the main challenges that have so far been experienced as they relate to the transition in governance from a municipality under local government to a county government. Among them are a bloated wage bill, huge debts that were inherited from the Municipal Council (some of

which are for statutory deductions and other debts that accrue huge interests) coupled with low levels of local revenue collection. The weak institutional framework is manifested by the rough transition from the national to devolved systems of governance, lack of capacity at the county level and the conflicting interests between sustaining of the old and new systems. There was also an over estimation of revenue in the past in relation to what could be collected locally which contributed to presenting an over ambitious budget (County Government of Mombasa, 2015b).

These challenges will be tackled through refining the existing institutional framework, increasing partnership between the public, private, civil and community organizations in prioritizing needs and allocation of resources, developing realistic revenue projections, strengthening planning and budgeting capacities at the county levels through provision of adequate resources, improving existing systems of accountability and promoting transparency while ensuring that all budgeting processes are grounded on a firm legal framework.

In the light of current revenue realities and some unanticipated expenditure items such as wage increases, the Government is seeking to rationalize recurrent spending, to identify and resolve revenue leakages. In addition the county has fully adopted IFMIS and G-Pay systems to enhance financial accountability and reporting. The following strategies will be employed to raise the revenue for the County to ensure that the planned revenue is surpassed or as far possible be at par:

1. **Valuation Roll.** For the last ten years the now defunct local authority has operated without an up to date valuation roll. In the 2014/2015 the County Government allocated funds towards preparation of a new valuation roll that will improve revenue and enhance service delivery.
2. **Revenue Management Master Plan.** The County Government ability to generate revenue through taxation is limited because the National Government prerogative of imposing taxes and determining tax rates.

Therefore World Bank in conjunction with other partners have developed training which will result in improvement in revenue collection from currently available revenue sources especially property rates, business licenses and service charges and additional source of revenue could be investigated.

3. **Enforcement of the Finance Acts and Regulations.** The County Government will ensure that the gazette fee and charges are collected according to the Finance Acts Regulations.
4. **New Sources of Revenue.** The County Government has started to pursue strong revenue collection and new sources of revenues from the devolved functions e.g. Betting and Gaming, Liquor Licensing, Museums, County Parks, Beaches, Recreation facilities, Ferries and Harbors and legislation on the revenue sharing from the Kenya Ports Authority.
5. **Automation of revenue collection.** The County inherited two computerized revenue collection applications from the defunct Municipal Council of Mombasa namely Local Authority Integrated Financial Operating Management System (LAIFOMS) and Seasonal Ticketing System (STS). The STS provide a public service ticketing revenue collection solution that covers tuktuks, matatus, taxis, buses and mini buses. The LAIFOMS system facilitates the collection of revenue items which is based on Kenya Gazette Notice No. 441 of 31st January 2012. The County intends to introduce Pay bill Services to improve service delivery to its consumers by automating revenue collection points.
6. **Capacity building of revenue collectors and enforcement officers.** In order to improve revenue collection refresher courses should be conducted for various revenue collectors and enforcement officers to enhance technical competences. Also automation of the collection system will ensure efficiency, effectiveness and minimize defaulters.

### 6.3 Opportunities for International Financial Institutions and Agencies

JICA has provided support for development of an integrated Mombasa on Gateway City master plan to pave way for projects spinning off the 5th Tokyo International Conference on African Development (TICAD V). This masterplan for economic and social development along the northern economic corridor was to be developed between 2015 and 2017 and focused on Mombasa as a gateway city. The plan outlines how industrial development, resources/energy development, core urban areas will be improved/ strengthened through development of Mombasa city county (JICA, 2016). The project had a technical training component for Kenyans and its working group approach ensured that information required was shared among organizations during the plan formulation period. The plan was expected to guide:

- Land use plan/urban transport development/infrastructure development/urban management
- Public and private investment for urban development (including PPP)
- Investigation of possibility of investment by Japanese firms
- Dissemination of priority programs/projects

#### German Financial Cooperation

Germany acknowledges that Kenya is the driving economic power of the Eastern Africa Region but faces considerable development challenges. Kenya therefore plays an important role as a partner country of the German Development Cooperation. During the government negotiations held in 2013, there was a commitment of a total of 138 million Euros as new funds for the period of 2014-2016. 106.5 million Euros account for the Financial Cooperation that would be channelled through the KfW Development Bank and 31.5 million Euros were ear marked for Technical Cooperation implemented through GIZ.

The priority areas of German cooperation are aligned with the goals both of Kenya's development strategy, Vision 2030, and of its five-year development strategy, Medium-Term

Plan II, for the period of 2013 to 2018. These priority areas have also been coordinated with other European donors, within the joint programming of the European Union<sup>30</sup>. That is why KfW Development Bank is supporting Kenya in establishing an improved water supply and sanitation system, assisting to bring forward a productive agricultural development and the introduction of a widespread healthcare system<sup>31</sup>. KfW Development Bank also supports the Kenyan government to secure a cost-

effective, environmentally friendly and reliable electricity supply. In doing so, the use of renewables (geothermal, solar, wind and hydro) is promoted, where possible together with the private sector. At the same time KfW supports the Kenyan government in increasing access to electricity in rural areas of the country. More details on the sectors of the Kenyan economy that currently benefit from German support are given in Box 6.1.

### Box 6.1: Current priority areas of development cooperation between Germany and Kenya

In 2013 the following priority areas of development cooperation were agreed during the government negotiations:

- Agriculture and Rural Development
- Water and Sanitation
- Health Care

**Further areas of cooperation are:**

- Good Governance
- Renewable Energy and Energy Efficiency
- Education

In addition, Germany supports projects in terms of the development-oriented emergency/ transitional aid and humanitarian aid, as well as activities of political

foundations, church organizations and civil society. Overall, the Official Development Assistance (ODA) for Kenya amounts up to 263 million USD per year (2011/2012). Among the bilateral donors in Kenya, Germany is currently ranked in the 2nd place.

Besides bilateral cooperation, the Federal Government of Germany is also engaged at multilateral/ international level with Kenya, for example in the context of the EU development cooperation and by supporting regional and international organisations such as the United Nations, the World Bank and the African Development Bank. All three levels - bilateral, European and multilateral cooperation – are important pillars of the German Development Cooperation.

Mombasa can benefit from German financial and technical support by proposing projects in line with these areas of cooperation. In particular, the City can take advantage of German government support for Kenya in its efforts to reform the water and sanitation sector<sup>32</sup>. The aim is to make sure that access in urban areas to clean water and basic sanitation is sustainable and equitable, and to conserve the country's water resources. Key areas of involvement are:

- Reform and improvement of the country-wide conditions: advice and capacity development support for the relevant institutions, from the local level up to the national Ministry of Environment, Water and Natural Resources.
- Improvements in water supply and sanitation in poor urban areas: investment in the infrastructure of medium-sized towns around Lake Victoria and in the growing urban area of Nairobi; support for the Water Service Trust, which since 2009 has given over 1.4 million people in poor urban areas improved access to water and more than 150,000 people access to basic sanitation.
- Integrated water resource management: protection of the environment and the most important watersheds from further degradation.

### 6.3.1 Support to financial sector development;

Kenya’s strategy for green growth seeks to align capital markets policy on financial infrastructure with green economy priorities. The proposed strategic actions are:

- Promote financial instruments, including debt financing (bonds), to direct capital to green economy infrastructure initiatives driven by the private sector.
- Establish a sovereign bond program targeting government infrastructure projects within the priority industries, agriculture, transportation, energy, ICT and water.
- Address policy, regulatory and legal framework bottlenecks which restrict flow of capital to green economy initiatives and public private partnership (PPP) projects, including introduction of tax incentives

The County Government of Mombasa can review its policies and regulations to attract PPP in an effort to draw from a wider base of financial resources for capital intensive development projects.

### 6.3.2 Financing opportunities in the city

Institutional investors – particularly pension funds, insurance companies and investment funds such as mutual funds – are increasingly important players in financial markets<sup>33</sup>. Most institutional investors, however, have limited experience with direct investment in green infrastructure projects, and it is expensive to build an internal team with the right skill set (investors need a minimum of USD 50 billion in assets to build such a team). No standardized vehicles have been developed that overcome these barriers, so investors tend towards traditional stock and bond investments or general infrastructure projects instead. As such, national and county governments can take a number of key actions to address these barriers and facilitate institutional investors’ investment in green infrastructure projects:

1. Ensure a stable and integrated policy environment which provides investors with clear and long-term incentives and predictability.
2. Address market failures (including a lack of carbon pricing) which result in investment profiles that favour polluting or environmentally damaging infrastructure projects over green infrastructure investments.
3. Provide a national infrastructure road map which would give investors confidence in government commitments and demonstrate that a pipeline of investable projects will be forthcoming.
4. Facilitate the development of appropriate financing vehicles or de-risking instruments by issuing financing vehicles (e.g. green bonds), or supporting the development of markets for instruments or funds with appropriate risk-return profiles.
5. Reduce the transaction costs of green investment by fostering collaborative investment vehicles between investors and helping to build scale and in-house expertise.
6. Promote public-private dialogue on green investments by creating or supporting existing platforms for dialogue between institutional investors, the financial industry and the public sector.
7. Promote market transparency and improve data on infrastructure investment by strengthening formal requirements to provide information on investments by institutional investors in infrastructure and green projects<sup>34</sup>.

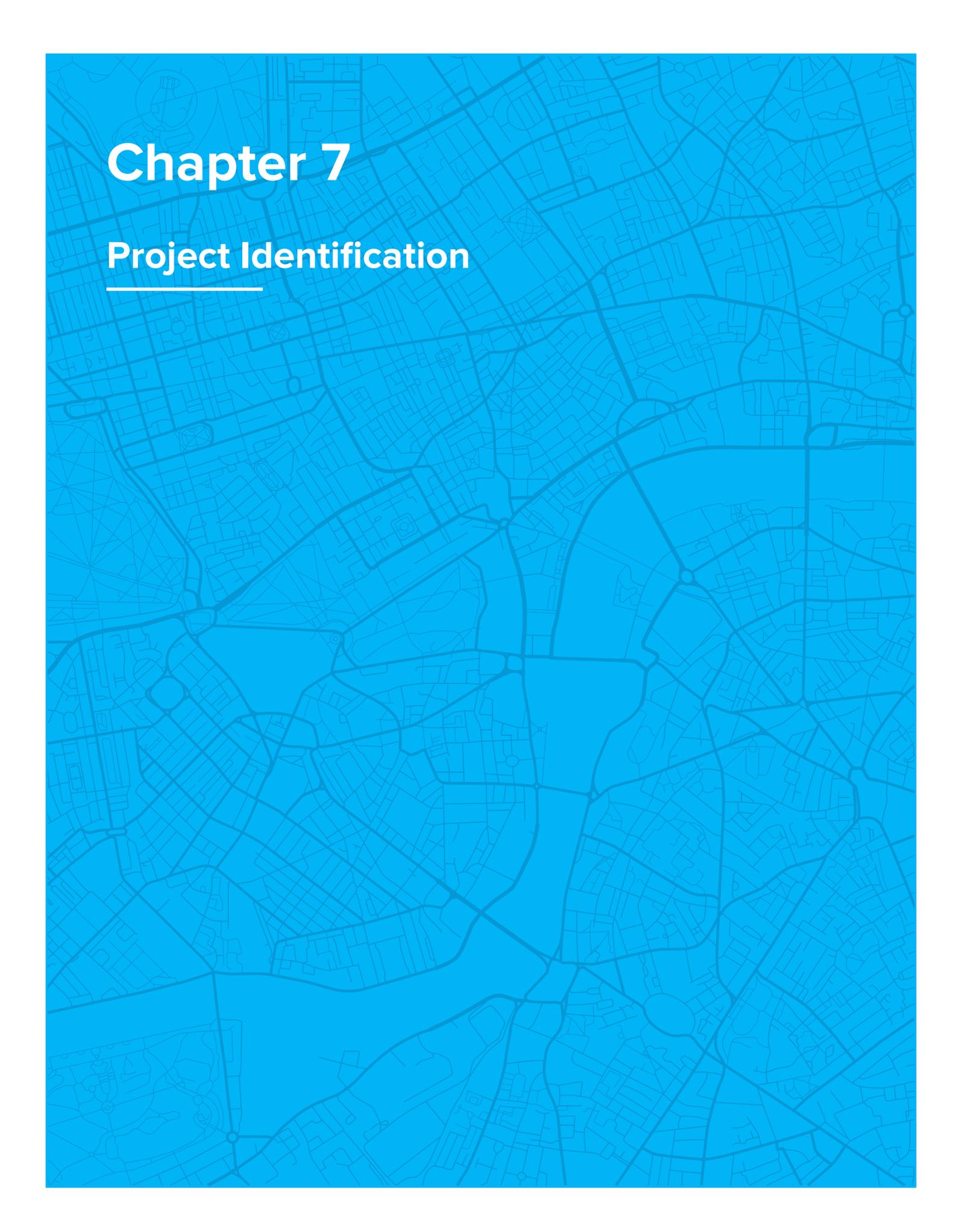
Impacts of AfDB Mombasa-Mariakani road upgrading project on social and environmental spheres are outlined in Box 6.2.

### Box 6.2: Highlights of ESIA of Mombasa Mariakani Road Upgrading Project

Improvement of the project road has been identified to have overall positive impacts on social and economic aspects and notable improvement on the environment. Other transport related interventions in the same region include the Construction of the Southern Bypass (Dongo Kundu) from Miritini to the New Port Terminal, Dualing of Magongo Road from the Airport to Kwa Jomvu, the proposed Standard Gauge Railway and other link roads in Mombasa will effectively enhance the positive impacts and exacerbate the negative impacts. The cumulative impacts could be described as follows; (i) Overall reduction in travel time in Mombasa; (ii) Improved efficiency at Mombasa Port; (iii) Efficient access to social facilities, schools, hospitals, airport; (iii) significant reduction in vehicular emission and improvement of air quality; (iv) Improved safety on the road network in Mombasa and (v) increased employment opportunities for the host community.

The potential cumulative negative impacts will include; (i) Increasing demand for road construction material – aggregate, gravel, water, sand, yet there is scarcity of road construction material in Mombasa; (ii) Increased expenses in infrastructure development due to long distance haulage of construction material; (iii) Creation of multiple construction camp sites for each project putting pressure on land and other social services in Mombasa; (iv) Development of more settlements and commercial premises along the road corridor therefore increasing demand for water, power, sanitation in Mombasa. To mitigate these impacts, Mombasa County Government is being supported by various International Financial Institutions to develop and implement various masterplans including; Drainage and Stormwater Management Masterplan by the World Bank; Transportation Masterplan by JICA, Water Transport Study. There is need for an Integrated Urban Development Plan to minimize negative impacts.

Source: African Development Bank ESIA summary, 2014.



# Chapter 7

## Project Identification

## 7.1 National Priorities for Housing, Infrastructure and Urban Services

### Housing

Kenya's current national housing policy (Government of Kenya, 2004) has four elements. Element one is on policy targets and highlights urban housing, rural housing, slum upgrading and vulnerable groups; and proposes solutions, which include poverty alleviation. Element two is on main housing inputs and addresses ways of managing the housing inputs namely land, infrastructure, building materials, building technology and finances. Element three covers estate management and maintenance necessary to ensure long lifespan for housing stock, disaster management, environmental impact assessment for major housing projects, human resource development and monitoring and evaluation. Element four deals with legislative and institutional framework and assigns specific roles to various stakeholders. Under this element the policy also proposed enactment of a Housing Act to strengthen the role of the Ministry in-charge of housing in regulating housing development.

The policy acknowledges the problem of urban housing, which is characterized by an acute shortage in the number of dwellings, overcrowding in the existing housing stock as well as the existence of sub-standard human settlements such as extensive slums and squatter settlements. The acute shortage in housing supply has led to high rents being charged by landlords. The majority of the people in urban areas do not own homes as the level of owner-occupancy has been declining. The provision of infrastructural facilities has not adequately satisfied the demands of the growing population. The Government is committed to addressing this situation through the following strategies: a) development and facilitation of urban middle-income and low-income housing; b) upgrading of slums and informal settlements; and c) encouraging construction of rental housing.

Urban low-income housing in the context of the policy is regarded as housing comprising a minimum of two habitable rooms, cooking area and sanitary facilities, covering a minimum

gross floor area of 36 square metres for each household with physical infrastructure and services of standards not lower than those stipulated in the revised adoptive by-laws in force. While considerable effort has been put to provision of housing in urban areas through increased public and private investment, the escalating housing cost has tended to push prices steadily beyond the reach of the majority of urban dwellers. Emphasis will continue to be placed on the provision of housing for low-income earners who are the majority of urban dwellers. The Government will institute machinery, which will allow for the mobilization of housing finance from the public sector, private sector, local communities and from international agencies. In this regard, the National Housing Corporation, Local Authorities and other agencies will facilitate the provision of planned, surveyed and serviced plots for new residential areas as Site and Service schemes.

National Housing Corporation (NHC) is a State Owned Corporation established in 1967 through an Act of Parliament. NHC is fully owned by the Government of Kenya. The Board of Directors is comprised of nine members five of whom are from the private sector; this includes the Chairman of the Board. The other four are Principal secretaries or their representatives from various Ministries relevant to housing<sup>35</sup>.

The Corporation has a capital base of KES 8.5 billion. Its mission is to "To efficiently provide and facilitate access to innovative housing solutions".

#### Performance of NHC

Since 1967, NHC has directly developed over 43,000 units nationally in the following categories

- Mortgage - 6%
- Rental - 20%
- Tenant Purchase - 29%
- Site & Service - 41%
- Others - 4%

Some of the past housing developments, in the Tenant Purchase category, include the following:

Town	Housing Estate
Nairobi	Ayany, Olympic, Onyonka, Kyuna, Uhuru Gardens, Kibera Highrise and Jonathan Ngeno, Langata NHC Phase 1, 2, 3, 4 & 5, Nairobi West, Madaraka Sector A, B, C, D; Kileleshwa
Mombasa	Magongo/Changamwe
Kisumu	Milimani, Kisumu USAID, Okore, Mamboleo
Nakuru	Section 58
Thika	Section 9, Kiboko
Nyeri	Pembe Tatu
Eldoret	Elgon View, Kapsoya
Kitale	Milimani
Kisii	Nyanchwa
Kakamega	Amalemba

NHC has the capacity to offer individuals housing loans ranging from KES 400,000 to KES 3,000,000 for repayment in monthly installments of KES 5973 to KES 44793 respectively.

## 7.2 City Priorities for Housing, Infrastructure and Urban Services

The Department of Transport and Infrastructure in the County Government has mandate over:

- County Public works
- Construction and maintenance of county roads
- Coordination and licensing of public road transport.
- Development and Management of Marine transport
- Management and construction of metropolitan rail infrastructure
- Policy and Implementation
- Infrastructure development levy.
- Traffic management Infrastructure:
  - Marshaling yard
  - Bus parks
  - Parking
  - Traffic lights

Priorities in the transport and infrastructure sector and other areas related to this study of Mombasa City are outlined in the County ADP 2015- 2016. There is much to learn from other

cities around the world about how best to plan and implement developments that are resilient as Mombasa city takes on the challenges of rapid urbanization that it has to tackle in the near future.

Planning and Design for Sustainable Urban Mobility Global Report on Human Settlements (UN Habitat, 2013) seeks to highlight the transportation challenges experienced in cities all over the world, and identifies examples of good practice from specific cities of how to address such challenges. The report also provides recommendations on how national, provincial and local governments and other stakeholders can develop more sustainable urban futures through improved planning and design of urban transport systems.

The report argues that the development of sustainable urban transport systems requires a conceptual leap. The purpose of ‘transportation’ and ‘mobility’ is to gain access to destinations, activities, services and goods. Thus, access is the ultimate objective of all transportation (save a small portion of recreational mobility). The construction of more roads for low-income cities and countries is paramount to create the conditions to design effective transport solutions. However, urban planning and design for these cities and others in the medium and high income brackets is crucial to reduce distances and increase accessibility to enhancing sustainable urban transport solutions. If city residents can

achieve access without having to travel at all (for instance through telecommuting), through more efficient travel (online shopping or car-sharing), or by travelling shorter distances, this will contribute to reducing some of the challenges currently posed by urban transport. Thus, urban planning and design should focus on how to bring people and places together, by creating cities that focus on accessibility, rather than simply increasing the length of urban transport infrastructure or increasing the movement of people or goods. The issue of urban form and functionality of the city is therefore a major focus of this report. Not only should urban planning focus on increased population densities; cities should also encourage the development of mixed-use areas. This implies a shift away from strict zoning regulations that have led to a physical separation of activities and functions, and thus an increased need for travel. Instead, cities should be built around the concept of ‘streets’, which can serve as the focus for building livable communities. Cities should therefore encourage mixed land-use, both in terms of functions (i.e. residential, commercial, manufacturing, service functions and recreational) and in terms of social composition (i.e. with neighborhoods containing a mixture of different income and social groups). Such developments also have the potential to make better use of existing transport infrastructure. The neighborhood of Western Harbor in the city of Malmö in Sweden is an example of one such sustainable development which concentrates higher numbers of people in one area and offers more sustainable services like public transportation and recycling. The vision to transform this area into a sustainable district was phased out. Each stage of the development has been evaluated in order to provide insights for the next stages. For example, the first stage placed relatively tough energy efficiency requirements for buildings. The requirements were lowered in the second phase, and in the third phase combined with tougher voluntary requirements. This way, the experimental construction at the start was developed into more mainstream actions that are now used in other areas of Malmö ([www.iiiee.lu.se](http://www.iiiee.lu.se)).

Most of today’s cities have been built as ‘zoned’ cities, which tends to make rather inefficient use of their infrastructure; as ‘everyone’ is travelling in the same direction at the same time. In such cities, each morning is characterized by (often severe) traffic jams on roads and congestion on public transport services leading from residential areas to places of work. At the same time, however, the roads, buses and trains going in the opposite direction are empty. In the afternoon the situation is the opposite. Thus, the infrastructure in such cities is operating at half capacity only, despite congestion. In contrast, in cities characterized by ‘mixed land-use’ (such as Stockholm, Sweden), traffic flows are multidirectional – thus making more efficient use of the infrastructure – as residential areas and places of work are more evenly distributed across the urban landscape. Furthermore, the report argues with strong empirical information that increased sustainability of urban passenger transport systems can be achieved through modal shifts – by increasing the modal share of public transport and non-motorized transport modes (walking and bicycling), and by reducing private motorized transport. Again, an enhanced focus on urban planning and design is required, to ensure that cities are built to encourage environmentally sustainable transportation modes. In order to move in a more sustainable direction, we need to think about and visualize future sustainable cities, and then identify what actions are needed in order to realize these visions. Visions and ideas about the future can show us how to change direction and move towards sustainability. They are powerful tools for mobilizing individuals and organizations towards creating greener cities. For example, many cities experience poor air

quality, toxic emissions, noise and degradation of natural resources that lead to serious environmental and health problems. Bold visions for the future can help respond to these challenges ([www.iiiee.lu.se](http://www.iiiee.lu.se)).

While encouraging a shift to non-motorized transport modes, however, the report acknowledges that such modes are best suited for local travel and that motorized transport (in particular public transport) has an important role while travelling longer distances. However,

in many (if not most) countries there is a considerable stigma against public transport. The private car is often seen as the most desirable travel option. There is thus a need to enhance the acceptability of public transport systems. More needs to be done to increase reliability and efficiency of public transport services and to make these services more secure and safe.

The report also notes that most trips involve a combination of several modes of transport. Thus, modal integration is stressed as a major component of any urban mobility strategy. For example, the construction of a high-capacity public transport system needs to be integrated with other forms of public transport, as well as with other modes. Such integration with various ‘feeder services’ is crucial to ensure that metros, light rail and bus rapid transit (BRT) systems can fully utilize their potential as a ‘high-capacity’ public transport modes. It is therefore essential that planners take into account how users (or goods) travel the ‘last (or first) mile’ of any trip. By way of an example, it is not much use to live ‘within walking distance’ of a metro (or BRT) station, if this implies crossing a busy eight-lane highway without a pedestrian crossing, or if one is unable to walk to the station (due to disability, or lack of personal security). Likewise, it is unlikely that urban residents will make use of metros (and BRTs), if the nearest station is located beyond walking distance, and there is no public transport ‘feeder’ services providing access to these stations or no secure parking options for private vehicles near the stations. Yet, it is important to note that considerable investments are still required in urban transportation infrastructure in most cities, and particularly in developing countries. City authorities should ensure that such investments are made where they are most needed. They should also make sure that they are commensurate with their financial, institutional and technical capacities.

In many cities of developing countries, large proportions of the population cannot afford to pay the fare required to use public transport, or to buy a bicycle. Others may find these modes of transport affordable, but choose not to use them as they find the safety and security of public transport to be inadequate

(due to sexual harassment or other forms of criminal behavior), and/or the roads to be unsafe for bicycle use or walking (due to lack of appropriate infrastructure). Investment in infrastructure for non-motorized transport or affordable (and acceptable) public transport systems is a more equitable (and sustainable) use of scarce funds. However, many cities and metropolitan areas, all around the world, experience considerable institutional, regulatory and governance problems when trying to address urban mobility challenges. In many cases national, regional and local institutions may be missing or their responsibilities may be overlapping, and even in conflict with each other. To address such concerns, the report notes that it is essential that all stakeholders in urban transport – including all levels of government, transport providers and operators, the private sector, and civil society (including transport users) – are engaged in the governance and development of urban mobility systems. Cities need to aim for urban transport that is socially sustainable whereby mobility benefits are equally and fairly distributed, with few if any inequalities in access to transport infrastructure and services based on income, social and physical differences. Social sustainability is rooted in the principle of accessibility, wherein equality exists among all groups in terms of access to basic goods, services and activities and to enable people to participate in civic life.

To ensure effective integration of transportation and urban development policies, it is essential that urban transportation and land-use policies are fully integrated. Such integration is required at all geographic scales. At the micro level, much is to be gained from advancing the model of ‘complete streets’; an acknowledgement that streets serve numerous purposes, not just moving cars and trucks. At the macro level, there is considerable scope for cross-subsidies between different parts of the urban mobility system, including through value-capture mechanisms which ensure that increased land and property values (generated by the development of high capacity public transport systems) benefits the city at large, and the wider metropolitan region, rather than private sector actors alone (UN Habitat, 2001).

Mombasa County has launched Mombasa Vision 2035 (MV35), an integrated strategic urban development plan. It is a regional physical development plan assimilating digital topographical mapping, strategic sector plans, structure plan, development control and capital investment plans for Mombasa County<sup>36</sup>. The plan preparation followed the requirements of the Physical Planning Act CAP 286. Taking into account past planning efforts dating back to 1926, key features of MV35 include: 1) developing a compact, vibrant and transit oriented city, 2) establishing a range of employment centers and sustaining economic growth, 3) creating affordable and quality homes to meet needs and aspirations, 4) providing a good living environment (e.g. access to facilities and amenities), 5) managing and improving the environment and infrastructure, 6) conserving natural and built heritage and identity, 7) enhancing public greens and protecting biodiversity, and 8) consolidating and reserving land for future needs.

The MV35 is phased out and proposes sector-based developments that will improve the quality of life of residents and attract investment. Progress of implementation of the plan will be monitored and assessed based on physical and socio-economic changes. Different indicators will be applied. They include:

1. Demographic.
2. Land use.
3. Housing.
4. Social Infrastructure.
5. Transport.
6. Economic Aspects.
7. Environment.
8. Natural Disasters.

A GIS database has also been created as part of the ISUD Plan. The database will be a monitoring tool and up-dated every 5 years. Financial monitoring will be delegated to an Annual Financing Plan Committee with a Coordinator appointed to monitor the implementation of the Annual Financing Plan.

### 7.3 Financing Opportunities for Project Pipelines

A major reason for the apparent mismatch between infrastructure investment demand and the supply of infrastructure finance is the lack of a pipeline of properly structured projects. Infrastructure investments entail complex legal and financial arrangements, requiring a lot of expertise. Building up the necessary expertise is costly, and investors will only be willing to incur these fixed costs if there is a sufficient and predictable pipeline of infrastructure investment opportunities. Otherwise, the costs can easily outweigh the potential benefits of investing into infrastructure over other, less complex, asset classes (Ehlers, 2014).

Creating a pipeline of suitable projects requires a coherent and trusted legal framework for infrastructure projects. In some countries, those frameworks do not exist. Political risk is among the greatest concerns of private investors (OECD, 2015). The arbitrary exercise of political power can take many forms: sudden cuts in the prices private infrastructure operators are allowed to charge; new regulations; or the unilateral renegotiation of existing contracts by new governments. But even where solid legal frameworks exist, governments can still fall short of best practices. Positive efforts are needed to correct this. In some countries, such as the United Kingdom, central government agencies have been set up as a central point for the development of large infrastructure projects. Crucially, this enables a successive building up of expertise. In countries where infrastructure projects are undertaken by provincial authorities, such as Australia, an effective dissemination of best practices and expertise can be successfully implemented. The establishment of such practices and institutions take time, but their development can help to realize enormous efficiency gains and enables governments to successfully undertake a much larger number of projects.

The Green Economy Assessment Report for Kenya uses an estimate of about 2 percent of GDP per annum to investments in green economy scenarios (GoK, 2016). The total investment cost identified was approximately KES 1.2 trillion between 2012 and 2030 or

roughly KES 70 billion annually. The results indicate that such levels of investment in green economy would generate higher growth than the case of business as usual.

The National Climate Change Response Strategy (NCCRS) produced in 2010, puts the cost of implementation of a low carbon growth path at an average annual cost of KES 235 billion for the next 20 years. According to the Master Plan for the Conservation and Sustainable Management of Water Catchment Areas in Kenya, the costs associated with various outputs that contribute to green economy are KES 942 billion over the period 2012-2032. The resource requirements for MTP 2013-2017 period are estimated at KES 353.5 billion. Some of the output areas identified in GESIP and whose costs are included in the Master Plan are:

- Water Resource Conservation and management – KES 332,190 million;
- Water storage infrastructure developed and maintained– KES 220,000 million;
- Improved management of urban and industrial waste and sanitation harmonized and enforced – KES 134,000 million; and
- Renewable energy technologies– KES 151, 420 million.

Realistic costing and development of a feasible financing framework on nationwide scale as in the case of GESIP is usually hampered by various challenges. Simplifying assumptions have to be made regarding the sources, supply and availability of funds, as well as the capacity to implement and absorb planned financial allocations. In addition, the feasibility of the underlying macroeconomic framework is usually not considered. In this regard, in-depth costing associated with prioritization needs to be considered within the MTEF budget process. The GESIP provides high level information on costing. A potential next step may be sectoral costing of specific green economy initiatives taking into account on-going activities and programmes. Another option is the development of specific strategies

such as renewable energy strategies, each with their own detailed costing exercises and financing analysis.

Combinations of various financing options have been identified for 21 sectors which will drive the green economy in Kenya (GoK, 2016). The key channel of financing green economy initiatives will, however, remain the MTEF budget process both at national and county government level. Other financing tools include concessional grants and loans; public private partnerships, and government-led investment, as well as mobilizing international sources of funding. Access to international climate financing will entail continued Kenyan engagement in international climate financing mechanisms; demonstrating transparency and sound fiscal management, as well as facilitating private sector investments through appropriate tools.

Other innovative financing options include establishing Green Funds or sovereign wealth funds; developing stronger partnerships with emerging economies (e.g. BRICs); co-financing with other funds and banks; and stronger focus on leveraging existing funds to new opportunities. The financing windows that could be open to Kenya are wide especially climate change related funds. This underscores the need for close integration of green economy and climate change plans. Given the diverse nature of funding opportunities which may have different requirements, it is important that Kenya adopts a clear strategy on resource mobilization and funding.

## 7.4 Project Identification and Pipelines for Low Income, lower and Lower-Middle Income Housing

**Objective 1:** Promoting green technologies in construction industry

**Strategic Actions:**

- Enhance enforcement of the building codes
- Integrate green technologies in design and construction

## 7.5 Project Identification and Pipelines for Infrastructure and Urban Services Roads and water

GESIP has outlined the strategic objectives Kenya should pursue in greening the economy and how counties can incorporate them in their development plans, as follows:

**Objective 1:** Integrate GE principles / technologies in transport infrastructure development

**Strategic Actions:**

- Establish rapid mass transit in 3 cities (Nairobi, Mombasa, Kisumu)
- Promote non- motorized transport

**Objective 2:** Enhance sanitation at county level

**Strategic Actions:**

- Construct and upgrade Sewerage Infrastructure in the counties
- Rehabilitate drainage systems in urban centers

**Objective 3:** Increase the share of Renewable energy in the energy mix to 75percent

**Strategic Actions:**

- Review Feed-in-Tariff (FiT) policy to include more off- grid generation and net-metering
- Establish large-scale Community Biogas /Solar PV/ wind-farm generating systems in off-grid areas

**Objective 4:** Promotion Energy efficiency and conservation

**Strategic Actions:**

- Roll out energy centers to counties
- Promote energy efficiency appliances and technologies (LPG, LED lamps, improved cook-stoves)

**Objective 5:** Promote integrated waste management in all the counties by 2020

**Strategic Actions:**

- Roll out pollution prevention programs across manufacturing and service industries
- Roll out recycling and industrial symbiosis projects through private public partnerships

**Objective 6:** To increase per-capita water availability by 200m3 by 2025

**Strategic Actions:**

- Reduce non-revenue water by half
- Promote rain water harvesting (at household and institutional) level through increased water collection and storage'

### Water

Mombasa, like many other island towns in the world receives frequent and unseasonal convectional rains, whose water can be tapped through roof catchments and gutters and channeled into underground manholes or tanks to be used in times of water shortages. Recycling of waste water after purification could be another useful option to augment the water resources in the region. To alleviate the problem of water shortages in Mombasa and the coastal region, the following steps were recommended by Musingi et al. (1999) and are still relevant today:

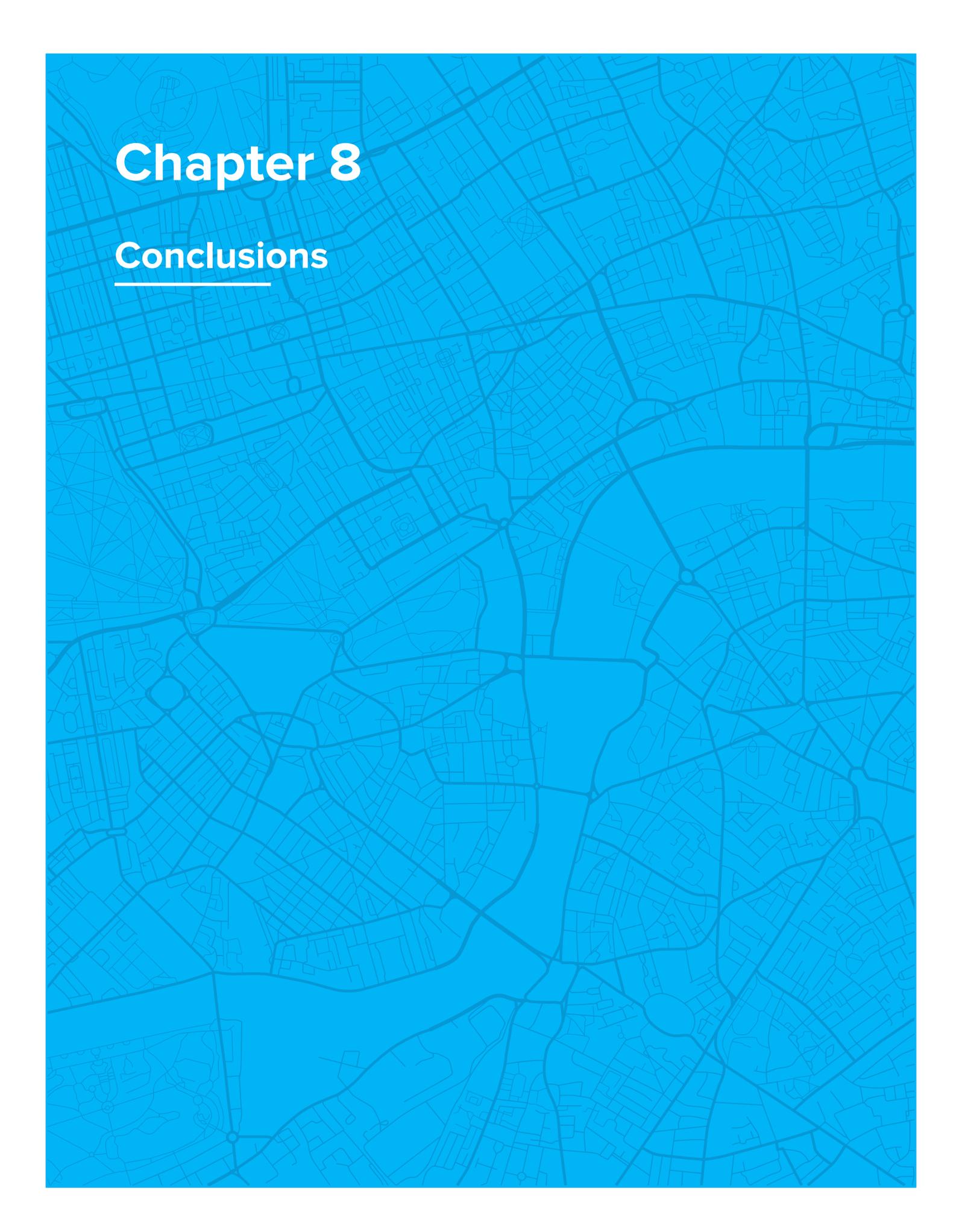
(a) Development of a second Mzima pipeline, reconstruction of the Marere pipeline and the expansion of the Tiwi and Baricho wellfields. When fully implemented these sources will supply some 260 000 m3 per day to meet demand within Mombasa and the coastal area up to the year 2020.

(b) Rehabilitation of the Baricho waterworks and the Sabaki pipeline as well as augmentation of the Tiwi wellfield by developing an additional five boreholes all adding a total of 140 000 m3 day per of water supplied to Mombasa and the coastal area.

- (c) Given the availability of funds, inter-basin water transfers can be attempted to augment the rural discharge and boost up the supply especially in the Sabaki River and Baricho waterworks.
  - (d) Desalination, though expensive could be a future option.
1. Improving the quality of life without increasing environmental degradation and without compromising the resource needs of future generations. (ENERGY SAVING JIKOS, Gas Vs Paraffin, etc.)
  2. Decoupling which refers to the ability of an economy to grow without corresponding increases in environmental pressure. The international Resource Panel distinguishes between resource decoupling- which refers to the delinking of economic growth and growth in resource use, and impact decoupling- which refers to the delinking of economic growth and negative environmental impacts. (Solar energy uses)
  3. Applying life cycle thinking, which considers the impacts from all life cycle stages of the production and consumption process. (A procurement process that considers material source and biodegradability of end product)
  4. Guarding against the re-bound effect, where efficiency gains are cancelled out by resulting increases in consumption.

## 7.6 Project Identification and Pipelines for Resilient and Green Urban Development Projects

Business As Usual (BAU) or baseline scenario assumes no fundamental changes in policy or external conditions up to 2030; The BAU2percent allocates an additional 2 per cent of GDP per annum as investments to the current BAU investment path; and the GE2percent scenario assumes an additional 2 per cent of GDP per annum as green investments to the baseline. Following the assumptions above, this study allocates 2 per cent of Kenya’s GDP per annum to investments in green economy interventions (GESIP, 2015). Advocacy for sustainable production and consumption incorporates the following principles:



# Chapter 8

## Conclusions

Kenya Vision 2030 envisages ‘an adequately and decently housed nation in a sustainable environment’ and the goal of the National Housing Policy for Kenya 2004 is to provide adequate, affordable and habitable shelter to all Kenyans. Financing housing and infrastructure developments in the City of Mombasa for low income and lower middle income households and neighborhoods will have to take into account that the larger part of the target group currently occupies slums on land that does not have secure tenure. Future developments could therefore benefit from past experiences in other urban areas where local authorities have embarked on slum upgrading projects. Challenges include availability of affordable serviced land, scalability of urban housing projects, and housing mismatch, among others.

Alternative financial instruments for housing are required for financial institutions to reach a significant scale of lending to recover their fixed costs and achieve a realistic ROE. By implication the provision of HMF by a large number of small operators without significant scale will be a constraint on the provision of HMF in Africa. Access to capital can be a constraint in other cases in the sense that institutions can only lend out HMF to the extent that they have the capital available. The availability of capital may not be an immediate constraint for the bank case. The availability of deposit funding gives banks the necessary capital and at a significantly cheaper interest rate; an important advantage that results in lower interest rates charged on HMF and more HMF loans. The implication for HMF in Africa is that, after the achievement of scale, microfinance institutions should investigate becoming deposit-taking bank even though this will bring more regulatory requirements and the need for branch infrastructure.

Banks will remain important financiers, in particular in the early stages of new infrastructure projects. But banks, which have mostly short-term liabilities, are not well-placed to hold long-term assets on their balance sheets for an extended period of time. Therefore, a much broader group of investors needs to be targeted. Bonds would be suitable instruments for large institutional investors, such as pension

funds and insurance companies with their long-term liabilities. Development banks and export credit agencies, which have a crucial role in financing infrastructure investments in both developing and developed countries, may be able to enhance the efficiency of their finite resources by the judicious use of financial instruments such as guarantees or mezzanine capital. In addition, other new forms of finance, such as infrastructure investment funds, can help to tap some of the vast resources of international capital markets. Importantly, a broader mix of financial instruments would also allow a better diversification of risks among a boarder group of investors.

For infrastructure development, moving beyond the currently dominant financing instruments of direct equity investments and bank loans has further advantages. It can make infrastructure an asset class that is more accessible to a broader group of investors. In this light, it will help to diversify the large risks of infrastructure projects across many groups of investors. In addition, the vast resources of capital market, which are currently hardly tapped by infrastructure projects, are much more accessible with a boarder mix of financial instruments. Infrastructure bonds and infrastructure funds carry a high potential; and other financial instruments, such as collateralized infrastructure loans for instance, may also attract substantial investor demand.

Finally, other financial instruments allow a better diversification of risks. This is highly desirable, as infrastructure risks are currently shouldered to a large extent by the banking sector, and the public sector through guarantees. Boosting infrastructure finance will require the broadening of the potential group of investors and the tapping of the vast financial resources of capital markets. This, in turn, necessitates a broader mix of financial instruments. Both infrastructure funds and bonds have great potential. The better and more widespread securitization of bank loans seems desirable to diversify risks. It may also assist in the development of transparent capital market instruments. For emerging markets, financial market development, trusted legal frameworks, and the development of a long-

term investor base are pertinent. Development banks and export credit agencies will play a key role in promoting infrastructure finance in markets that are still developing.

It has already been mentioned that infrastructure investments entail complex legal and financial arrangements, requiring a lot of expertise. Building up the necessary expertise is costly, and investors will only be willing to incur these fixed costs if there is a sufficient and predictable pipeline of infrastructure investment opportunities. In this regard, Kenya can learn from its development partners. In the United Kingdom, for example, central government agencies have been set up as a central point for the development of large infrastructure projects. Crucially, this enables a successive building up of expertise. Also, in countries where infrastructure projects are undertaken by provincial authorities, such as Australia, an effective dissemination of best practices and expertise can be successfully

implemented. The establishment of such practices and institutions take time, but their development can help to realize enormous efficiency gains and enables governments to successfully undertake a much larger number of projects.

Mombasa's location along the Indian Ocean shore exposes the city to great risk of rising sea levels associated with climate change. The management of associated disasters is entrenched in the different types of legislation at county and national government level. Some of the lessons learnt from implementing these policies are that green buildings promote environmental sustainability, society is empowered through sharing disaster risk information, sensitization and education in order to respond effectively to disasters, there are best practices existing in waste recycling that should be scaled up and Public Private Partnership remains key to addressing environment and urbanization issues.

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## Appendices

### Appendix 9.1: Survey Methodology

To estimate the financing needs and status for housing, infrastructure and urban services in Mombasa city, this study conducted a survey involving various stakeholders. The survey methodology involved various aspects as discussed below.

#### Study Population

The study targeted different players in the housing sector. These players included; housing developers, built environment consultants, housing financiers, regulators and households (renters and owner occupiers) located in Mombasa city. As of September 2016, Mombasa city had 6 housing developers focusing on low and medium income housing, 124 built environment consultants (architect, quantity surveyors, civil and structural engineers, mechanical engineers and electrical engineers), 48 financiers (commercial banks, microfinance institutions and Savings and Credit Cooperative Organizations), 5 regulators and 268,700 households.

#### Sampling Frame

The study used information from Mombasa County government and desktop review to create a sampling frame that comprised of 6 housing developers, 124 built environment consultants, 48 financiers and 5 regulators. The sampling frame for households comprised of 268,700 households in Mombasa city (KNBS, 2012).

#### Sample Size and Sampling Technique

The study used Yamane (1967)<sup>37</sup> sample size formula to calculate the sample size of built environment consultants, financiers and households in Mombasa County. Based on the precision error of 0.1, the study estimated the sample size for built environment consultants, financiers and households as 29, 21 and 100 respectively. For used sought to collect data from the 6 housing developers and 5 regulators.

The study used census for housing developers and regulators while proportionate stratified random sampling was used to select built environment consultants and financiers to be included in the sample. Multistage sampling method was used to select the households to be included in the sample. The multistage sampling method involved three stages, the first step involved random selecting the constituency, the second stage involved proportionate stratified random sampling and finally purposive sampling method was used to identify five low and lower-middle income estates namely; Kongowea, Mishomoroni, Bangladesh, Likoni and Kwa Mwanzia.

#### Data Collection

The study used both primary and secondary data. Secondary data was collected using structured questionnaires, in-depth interviews and focus group discussions. Structured questionnaires were administered to housing developers, built environment consultants and housing financiers. In-depth interviews were utilized to gather information from regulators while focus group discussions were used to collect data from households in Kongowea, Mishomoroni, Bangladesh, Likoni and Kwa Mwanzia. The questionnaires captured core issues such as housing affordability, housing finance and housing infrastructure, housing quality, green housing and infrastructure. Questionnaires were preferred since they allow consultants to collect data from a wide geographical area at a relatively low cost (Huck, 2009) while interviews and focus group discussions offer an in depth understanding of socio-economical phenomena (Gill, Stewart, Treasure, & Chadwick, 2008)<sup>38</sup>. Secondary data on population and various aspects of housing among others was collected from government publications and Non-Governmental Organizations (NGOs). Before administering the main survey, the study conducted a pilot study to test the reliability and validity of the research instrument as recommended by Sullivan (2011).

### Analytical Approach

The demand for housing comprises of net new households, net change in vacant units and second homes, and net removals from the existing stock. This demand could be estimated using net household growth since it is not only a key driver for demand of new housing units but it is also reliable (Belsky et al., 2007). They further argued that the net additional households is equivalent to the number of new housing units. For the case of Mombasa County, net household growth will be the difference between total households in 1999 and 2009. Thus net household growth will be equivalent to demand for housing in Mombasa County. Using the estimated annual housing demand and supply (number of housing completions), the study will compute housing demand gap (HDG) for Mombasa County. Given Kenya population projections, the study will be able to estimate housing demand for year 2020. Additionally, the study will use primary data collected from built environment consultants located in Mombasa to estimate the current average cost<sup>1</sup> ( $AC_t$ ) and future average cost ( $AC_{t+1}$ ) of a conventional single housing unit. The study proposes to estimate current and future housing finance need for lower and lower- middle income groups as shown

$$FN_t = HDG_t * AC_t \quad (1)$$

$$FN_{t+1} = HDG_{t+1} * AC_{t+1} \quad (2)$$

Where;  $FN_t$  and  $FN_{t+1}$  is the current and future housing finance need,  $HDG_t$  and  $HDG_{t+1}$  is the current and future housing demand gap,  $AC_t$  and  $AC_{t+1}$  is current and future average cost of a single housing unit respectively.

To estimate financing need for resilient and green housing development, the study will use primary data collected from built environment consultants located in Mombasa city. To estimate the current financing need for infrastructure development (water, energy, transport and waste disposal) in Mombasa County, the study will use primary data collected from built environment consultants.

### 9.1 Financing Needs for Low and Medium Income Housing

Housing sector plays a critical role in socio-economic development of Kenya due to its forward and backward linkages. Nonetheless, the sector has a huge demand-supply gap of about 200,000 housing units annually (KNBS, 2013). Due to increased urbanization, the demand-supply gap is expected to rise if housing supply constraints are not addressed. Some of the challenges that housing sector face include; limited access to land, high cost of finance, outdated and rigid building laws and regulations high urbanization (32 percent as of 2009) that leads to expansive growth of slums and informal settlements.

Mombasa city which covers a land area of 229.9 km<sup>2</sup> and 65 Km<sup>2</sup> of water mass has 268,700 households with the average household size being 3.4 translating to total population of 939,370 people (KNBS, 2012). To understand the financing needs for low and medium income housing, the study focused on a sample of 161 respondents comprising of housing developers, built environment consultants, housing financiers and households. The study had a response rate of 50percent for housing developers and 100percent for regulators. However, built environment consultants, housing financiers and households had a relatively low response rate due to incomplete responses. Table 9.1 presents this information.

1 This will be the average cost of constructing a one and two bedroom house in Mombasa

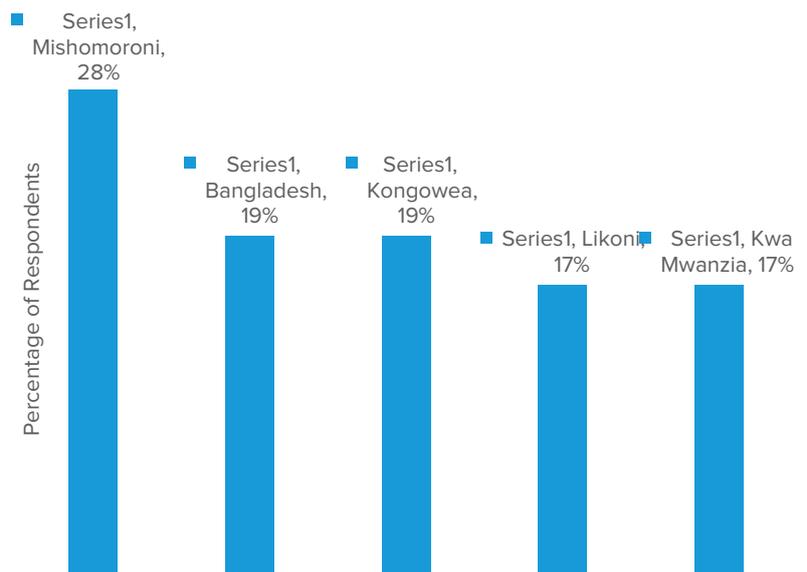
**Table 9.1: Stakeholders and Response Rate**

Stakeholders	Sample	Responded to Survey	Response Rate
Housing Developers	6	3	50%
Built Environment Consultants	29	8	28%
Housing Financiers	21	4	19%
Regulators	5	5	100%
Households	100	36	36%
<b>Total</b>	<b>161</b>	<b>56</b>	

The respondents for households’ focus group discussions were 10, 7, 7, 6 and 6 people for Mishomoroni, Bangladesh, Kongowea, Likoni and Kwa Mwanzia respectively (Figure

9.1). Some of the key challenges faced during data collection were low response rate and incomplete responses.

**Figure 9.1: Households Respondents**



## Endnotes

- 1 <http://www.mombasa.go.ke/wp-content/uploads/2018/11/MSA-FINAL-CIDP-2018-22.pdf>
- 2 Cytonn Real Estate
- 3 <https://www.standardmedia.co.ke/article/2001313353/new-housing-plan-fraught-with-pitfalls>
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