



# Green finance **assessment of** Kirinyaga County



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Kenya

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# Green finance assessment of Kirinyaga County



The National Treasury  
& Economic Planning  
The National Treasury



**April 2024**

Financial Sector Deepening Kenya (FSD Kenya) is an independent trust dedicated to the achievement of a financial system that delivers value for a green and inclusive digital economy while improving financial health and capability for women and micro and small enterprises (MSEs).

FSD Kenya works closely with the public sector, the financial services industry, and other partners to develop financial solutions that better address the real-world challenges that low-income households, micro and small enterprises, and underserved groups such as women and youth face.

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**Project lead:** Anzette Were.

**Authors:** Agusto & Co. team led by Yinka Adelekan, Isaac Babatunde, Ikechukwu (Ike) Iheagwam, Christine Wanjiru and Michael Mugala.

**Contributors:** FSD Kenya team lead by Dr. Milkah Chebii and Michael Njeru; Adaptation Consortium (ADA) team led by Kennedy Ododa, Victor Orindi, Dr Molly Ochuka, Pauline Makutsa and Jacob Agoch; Capital Market Authority led by Wycliff Shamiah, Luke Ombara and Justus Agoti; Nairobi Securities Exchange led by Geoffrey Odundo, Mbithe Muema and Justus Ogalo; The National Treasury and Economic Planning led by Peter Odhengo and Hillary Korir.

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# Table of contents

<b>1. Project background</b>	<b>1</b>
<b>2. Project objectives</b>	<b>2</b>
<b>3. Macroeconomic and fiscal assessment of Kirinyaga County</b>	<b>3</b>
3.1 Macroeconomic analysis	3
3.1.1 Population size and structure	4
3.1.2 Level of employment and economic diversification	4
3.1.3 Macroeconomic variables	5
3.1.4 Level of infrastructure	7
3.2 Fiscal assessment	7
3.2.1 Governance structure	7
3.2.2 Finances of the Kirinyaga County Government	9
3.2.3 Revenue collection mechanism	10
3.2.4 Kirinyaga County debt profile	10
3.2.5 Compliance with the Public Finance Management Act	10
<b>4. Credit risk assessment of Kirinyaga County</b>	<b>11</b>
4.1 Rating rationale	11
4.2 Financial condition review	13
4.3 Rating outlook	15
4.4 Counties financing framework	16
<b>5. Green asset and activity assessment</b>	<b>19</b>
5.1 Preliminary green priority areas	23
5.2 Green assets identified	25
5.3 Suggested green projects	26
<b>6. Risk analysis on suggested green projects</b>	<b>32</b>
<b>7. Green finance capability assessment</b>	<b>35</b>
<b>8. Recommendations</b>	<b>38</b>
<b>9. Appendices</b>	<b>40</b>
9.1 Kirinyaga County profile summary	40
9.2 Three-year financial summary – Kirinyaga County Government	41
9.3 Rating definitions	43
9.4 Other potential green projects identified during the assessment	44
9.5 List of stakeholders engaged during the workshops	44
9.6 List of key documents accessed	45

# List of figures

<b>Figure 1:</b> Map of Kenya - Kirinyaga County	3
<b>Figure 2:</b> Total population in Kirinyaga	4
<b>Figure 3:</b> Kirinyaga Gross County Product (GCP) in Current Prices	5
<b>Figure 4:</b> Gross County Product Contribution by Economic Activity	5
<b>Figure 5:</b> Kirinyaga County Assembly Composition	8
<b>Figure 6:</b> Government Revenue vs Spending of Kirinyaga County (2017/18 - 2022/23) – Ksh'millions	9
<b>Figure 7:</b> Breakdown of Kirinyaga's Government Spending (2017/18-2022/23)	9
<b>Figure 8:</b> Strengths, Weaknesses, Opportunities and Challenges	12
<b>Figure 9:</b> Breakdown of Kirinyaga County's Revenue- FY2022/23	13
<b>Figure 10:</b> Own Source Revenue Ksh'millions (FY2020/21 - FY2023/24 Budget)	14
<b>Figure 11:</b> Recurrent & Development to Total Expenditure	14
<b>Figure 12:</b> Pre-requisites for Counties Financing	17
<b>Figure 13:</b> Critical Stakeholders to support County's Financing Framework	18
<b>Figure 14:</b> Kirinyaga County Schedule of Activities	19
<b>Figure 15:</b> Workshop with Civil Society Organizations (CSOs) and Private Sector (Day 2)	20
<b>Figure 16:</b> Workshop with Civil Society Organizations (CSOs) and Private Sector (Day 2)	20
<b>Figure 17:</b> Workshop with Civil Society Organizations (CSOs) and Private Sector (Day 2)	20
<b>Figure 18:</b> Workshop with Senior County Officials (Day 1)	20
<b>Figure 19:</b> Workshop with Senior County Officials (Day1)	20
<b>Figure 20:</b> Workshop with Senior County Officials (Day 1)	20
<b>Figure 21:</b> Briefing Session with the County Executive Committee Members (Day 1)	20
<b>Figure 22:</b> Briefing session with the County Executive Committee Members (Day 1)	20
<b>Figure 23:</b> Site Visit to the Kianguruwe Mini-Hydro Power (Day 3) with Community Committee Members	21
<b>Figure 24:</b> Site Visit to the Ina-Njugu Micro-Hydro Power Project – Uncompleted Penstock (Day 3)	21
<b>Figure 25:</b> Site Visit to the Kianguruwe Mini-Hydro Project - Power House - (Day 3)	21
<b>Figure 26:</b> Site Visit to Kerugoya County Referral Hospital - New Complex (Day 3)	21

<b>Figure 27:</b> Site Visit to the Ina-Njugu Micro- Hydro Power Project in Karumandi Ward along Thiba River (Day 3)	21
<b>Figure 28:</b> Site Visit to the Kianguruwe Mini- Hydro Power Project in Baragwi Ward along Thiba River (Day 3)	21
<b>Figure 29:</b> Site Visit to Kerugoya County Referral Hospital (Day 3)	21
<b>Figure 30:</b> Site Visit to Kerugoya County Referral Hospital (New Complex) - Installed Solar Panels (Day 3)	21
<b>Figure 31:</b> Debrief Session with the County Executive Committee Members (Day 4)	22
<b>Figure 32:</b> Debrief Session with the County Executive Committee Members (Day 4)	22
<b>Figure 33:</b> Site Visit to River Ragati Water Intake - Rukanga Water Project (Day 3)	22
<b>Figure 34:</b> Site Visit to Rukanga Water Project Treatment Works (Day 3)	22
<b>Figure 35:</b> Site Visit to Rukanga Water & Sanitation Company - Management Team (Day 3)	22
<b>Figure 36:</b> Site Visit to Kabatero Dumpsite in Kutus Town (Day 3)	22
<b>Figure 37:</b> Site Visit to Kabatero Dumpsite in Kutus Town (Day 3)	22
<b>Figure 38:</b> Site Visit to the Ina-Njugu Micro-Hydro Power Project with Community Committee Members (Day 3)	22
<b>Figure 39:</b> Kirinyaga County Key Priority Sectors	23
<b>Figure 40:</b> Map of the Distribution of Green Assets in Kirinyaga County	25
<b>Figure 41:</b> Mount Kenya Peaks	26
<b>Figure 42:</b> Kirinyaga County Suggested Green Projects	27
<b>Figure 43:</b> Water Treatment Tank at Rukanga Water Treatment Works	27
<b>Figure 44:</b> Water Intake at the Ragati River for RUWASCO	27
<b>Figure 45:</b> Water Boilers at the Kerugoya County Referral Hospital (New Complex)	28
<b>Figure 46:</b> Installed Solar Panels (126 units) at the Kerugoya County Referral Hospital (New Complex)	28
<b>Figure 47:</b> Penstock at the Kianguruwe Mini-Hydro Power Project	29
<b>Figure 48:</b> Waterfall at Kianguruwe Mini- Hydro Power Project along Thiba River	29
<b>Figure 49:</b> Installed Infrastructure at Ina-Njugu Micro-Hydro Power Project	29
<b>Figure 50:</b> Incomplete Penstock at the Ina-Njugu Micro-Hydro Power Project	29
<b>Figure 51:</b> Kabatero Dumpsite in Kutus Town	30
<b>Figure 52:</b> Recommendations to the National Government	39

# List of tables

<b>Table 1:</b> Constituencies and assembly wards of Kirinyaga County	6
<b>Table 2:</b> Key county executives in Kirinyaga County	12
<b>Table 3:</b> Kirinyaga County elected Members of the County Assembly 2022	12
<b>Table 4:</b> Centrally distributed funds by National Treasury - FY2020/21 - FY2023/24 Budget (Ksh'millions)	18
<b>Table 5:</b> Green assets in Kirinyaga County	34
<b>Table 6:</b> Kirinyaga County capability assessment	46
<b>Table 7:</b> Recommendations to the Kirinyaga County Government	48

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# 1 Project background

The Financial Sector Deepening Kenya (FSD Kenya) is an independent trust dedicated to the achievement of a financial system that delivers value for a green and inclusive digital economy, while improving the financial health and capabilities of women and micro and small enterprises. FSD Kenya has a green finance programme dedicated to supporting the development of a green finance ecosystem and a greener real economy that is resilient to climatic and other environmental shocks, resource efficient and generates green investment, employment, and income generation opportunities for low-income Kenyans.

This **county green finance assessment** is related to FSD Kenya's mission to support the development of an inclusive green finance ecosystem in Kenya. The 2010 Kenyan Constitution devolved important natural resource and environment-related sectors such as agriculture, water provision and transport to the counties. Thus, counties have a pertinent role to play in Kenya's sustainable development agenda which can only be realised if counties have the requisite capacities and capabilities including financial resources. Yet, counties face a funding gap, with most, if not all, of them fully reliant on transfers from the National Treasury as their own-source revenue remains very low.

Green Finance is defined as structured financial activity created to ensure a better environmental outcome. Green finance includes climate finance but is not limited to it as it encompasses a wider range of other environmental objectives, such as industrial pollution control, water sanitation, biodiversity protection and environmental benefits.

Green finance instruments such as green county bonds, present an opportunity for counties to generate resources for the much-needed development of county infrastructure such as water piping, county roads and the development of agriculture, in a green and climate-resilient manner. While not yet tested locally, their widespread application in other markets as well as the recent approval by the National Treasury for the Laikipia County Infrastructure Bond illustrate their potential.

## Project partners

This project was initiated and completed with the

approval and partnership of The National Treasury, Climate Finance and Green Economy Unit. The Unit provides technical support to The National Treasury on all matters relating to green and climate financing, and green growth. The Capital Markets Authority was the regulatory partner on this project, providing insight and leadership on green finance instruments, processes, and structures in the capital markets applicable to county governments, including related policy and legislation requirements. The Capital Markets Authority is an independent public agency, under the National Treasury and Planning and has a twin mandate of regulating and facilitating the development of capital markets in Kenya.

FSD Kenya commissioned Agosto & Co. Limited as the lead consultant for this project. Agosto & Co. is registered as a credit rating agency by the Kenyan and Rwandan Capital Markets Authorities and the Securities Exchange Commission in Nigeria. Agosto & Co. is also Certified as an Approved Verifier by the Climate Bond Standards Board as the first company of African origin to have the capabilities to perform verification of green bonds, projects, and assets in Africa.

The Adaptation (ADA) Consortium engaged county government and stakeholders to provide on-site coordination, site visit and meeting arrangements for the project. ADA consortium is a non-profit that supports county governments to mainstream climate change into development and planning. The Nairobi Securities Exchange (NSE) was the private sector partner in the project. The NSE operates under the jurisdiction of the Capital Markets Authority of Kenya and is a full member of the World Federation of Exchange, a founder member of the African Securities Exchanges Association (ASEA) and the East African Securities Exchanges Association (EASEA), and member of the Association of Futures Market and is a partner exchange in the United Nations-led SSE initiative.

Finally, the Government of Kirinyaga County was one of the 10 county governments that provided valuable insight on the dynamics, information and opportunities in their county. Kirinyaga County Government has a vision to be the leading county in Kenya enjoying high standards of living by adding value to all our products and mission to foster sustained growth by adding value to all our agri-products, health, education, security and biodiversity.



## 2

## Project objectives

This project assessed the potential for counties to access and apply to the green finance market for the development of green activities and consisted of the following assessments:

- **Economic and fiscal assessment:** County fiscal performance (historical and projected), strengths, challenges, and ability to take on (additional) debt including the consideration of potential revenue generation sources.
- **Credit risk assessment:** Estimate the county government's relative likelihood of defaulting on its obligations from capital raising initiatives- includes a shadow credit rating.
- **Green asset and activity assessment:** Availability of green investment opportunities in the selected counties.
- **Green finance capability assessment:** County government skills and ability to manage green financial instruments and related projects.

The Green Finance Market is defined as the pool of funding constituting a range of green financial instruments that meet the objectives of green finance such as Government Grants; development grants; guarantee funds; subsidies; concessionary loans; commercial loans; results-based finance; blended finance; Green Bonds etc.

3

# Macroeconomic and fiscal assessment of Kirinyaga County

## 3.1 Macroeconomic analysis

Kirinyaga County ("the county" or "Kirinyaga") is one of the counties in the Central Region Economic Bloc (CEREB) and covers a total area of 1,478.1 km<sup>2</sup>. Kirinyaga is bordered to the northwest by Nyeri County, to the west by Murang'a County, to the east and south by Embu County, and to the south by Machakos County. The county's headquarters is Kutus, while the largest town is Wang'uru. Kirinyaga is located between 1,158 and 5,380 meters above sea level in the South and at the summit of Mount Kenya, respectively. The County is divided into three ecological zones, the highlands which lie 3,400-5,380 metres above sea level, the midlands within 2,000-

3,400 meters above sea level and the lowland areas which lie 1,158-2,000 metres above sea level.

Kirinyaga's landscape and topography are affected by the location of Mt. Kenya in the northern part as the snow that melts from the mountain forms the water tower for the rivers and other areas in the south and west. The County is endowed with thick indigenous forests with Mt. Kenya Forest covering 350.7 km<sup>2</sup> of the land area and inhabited by wild animals, while the lower portions of the forest zone serve as grazing land for livestock. Kirinyaga has six major rivers namely; Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and Ragati, all of which drain into the Tana River, and form the principal source of water in the County.



Figure 1: Map of Kenya - Kirinyaga County

Source: e-limu.org

The major tribe in Kirinyaga County is the Kikuyu, who primarily inhabit the Mt. Kenya Region. The total area devoted to agricultural activities measures 801.7 km<sup>2</sup> which represents about 54.2% of the County's total land area. The majority of agricultural activities are conducted on a small scale due to land scarcity and the rising population within the County. Kirinyaga has a tropical climate and an equatorial rainfall pattern which is influenced by the County's position along the equator

and on the windward side of Mt. Kenya. The County's rainfall varies with altitude, averaging between 1,212 mm and 2,146 mm per year. Temperature ranges from 8.1°C in the upper zones to 30.3°C in the lower zones of the County.

The County has four constituencies which are further subdivided into 20 county assembly wards as noted in table 1 below.

Table 1: Constituencies and assembly wards of Kirinyaga County

S/N	Constituencies	Assembly wards
1	Mwea	Mutithi, Kangai, Wamumu, Nyangati, Murindiko, Gathigiriri, Teberer and Thiba
2	Gichugu	Kabare, Baragwi, Njukiini, Ngariama and Karumandi
3	Ndia	Mukure, Kiine and Kariti
4	Kirinyaga Central	Mutira, Kanyekini, Kerugoya and Inoi

Source: Kirinyaga County Website

3.1.1 Population size and structure

According to the national census conducted in 2019 by the Kenya National Bureau of Statistics (KNBS), the population of Kirinyaga was 610,411 persons (and a density of 413 persons/km<sup>2</sup>), representing a 15.6% growth

from the 2009 census. The gender structure of Kirinyaga County was 49% male and 51% female as at 2019. Based on the CIDP 2023 - 2027, the population of Kirinyaga County is estimated to reach 655,906<sup>1</sup> persons, with a density of 444 persons/Km<sup>2</sup>.

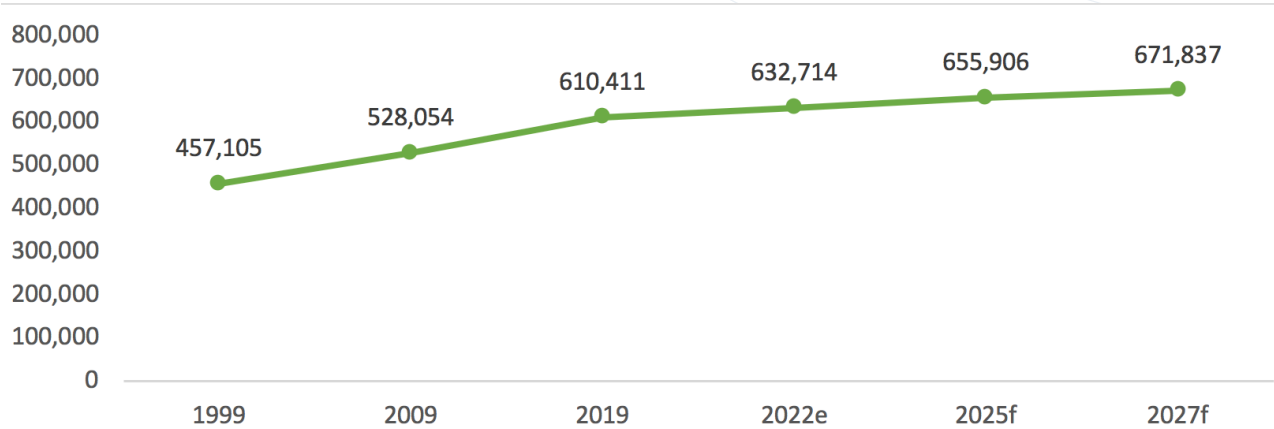


Figure 2: Total population of Kirinyaga County

Source: Kenya National Bureau of Statistics & Agosto & Co. Research

The County's settlement patterns are clustered and scattered. The clustered settlements are primarily found around rice irrigation schemes while the scattered are mostly in the lower zones with large land sizes. The growth of settlements and activities in towns such as Kerugoya, Sagana, Wang'uru and Kagio has also led to increased clustered settlement in Kirinyaga. Rural communities make up 77.7% of the population while people living in urban areas account for the remainder.

3.1.2 Level of employment and economic diversification

Agriculture is the primary economic activity in the County, with 87% of the population deriving their livelihood from the sector and accounting for 72% of household income. Rice, tea and coffee are the principal crops grown in the

County which are influenced by the various ecological zones. Other crops grown include bananas, tomatoes, beans, mangoes and maize, in addition to horticultural crops such as avocados and macadamia nuts. The total arable land area in the County is 116,980 hectares (ha), or 79% of the total land area, out of which the area under food crop production is 50,864 ha, while the area under cash crop production is 31,244 ha, indicating that 70% of arable land is utilised for food production.

Kirinyaga has several tourist attractions including Mt. Kenya National Park, White water rafting on Sagana River, "God's Bridge" (Daraja ya Ngai) and numerous waterfalls in the County's upper regions, which have led to the growth of the tourism sector. Mt. Kenya National Park, located in the upper parts of the county, has indigenous forests teeming with wildlife, as well as cottages offering domestic and international tourists a tranquil

<sup>1</sup> Kirinyaga County Integrated Development Plan 2023 -2027

environment. White water rafting on the Sagana River provides tourists with the opportunity to learn canoe rafting. The county's major tourist attractions such as the Mt. Kenya National Park, are run by state corporations, so most of the revenue generated by these activities goes to the national government. Kirinyaga also has mining activities which take place in the Sagana region and produce approximately 456,000 tonnes of ballast and 294,000 tonnes of sand annually.

The county's labour force (ages 15 to 65) represents 61.5% of the total population, and wage employment accounts for 7% of household income. The unemployment rate in the county is 19.8% (higher than the national average of 5.5% as of 2022<sup>3</sup>), with the majority of unemployed being young adults. The county's Human Poverty Index (HPI) of 25.2% is lower than the national HPI of 29.1%<sup>3</sup>. It is estimated that approximately 19% of the County's population lives in absolute poverty, with the majority residing in rural areas<sup>4</sup>.

### 3.1.3 Macroeconomic variables

According to the Gross County Product (GCP) 2023 report, Kirinyaga contributed 1.3% to Kenya's GDP with the county's GCP increasing to Kshs 160.9 billion in 2022 from Kshs 139.8 billion in the prior year. Based on the 2023 – 2027 County Integrated Development Plan (CIDP), the county's GCP is expected to grow by 8.9% in 2023 on the back of ongoing government initiatives geared towards the expansion of the agricultural sector which is the main driver of the economy. The growth initiatives include investments by the county Government through the "Wezesha Program" in the development of the agriculture value chain and consolidating investment and marketing opportunities in the agribusiness sector to ensure farmers receive fair prices through the Kirinyaga Investment Development Authority.

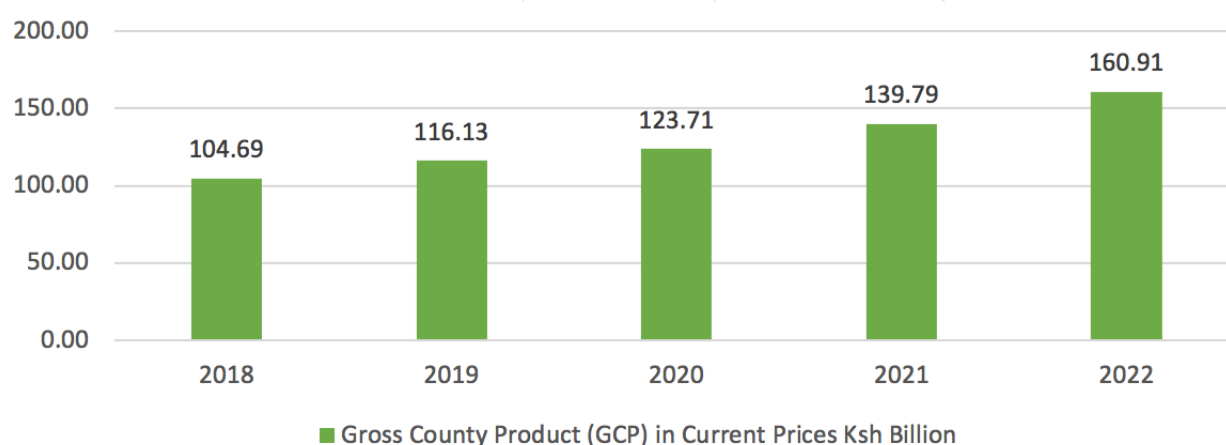


Figure 3: Kirinyaga's Gross County Product (GCP) in current prices

Source: Gross County Product 2023 Report, KNBS

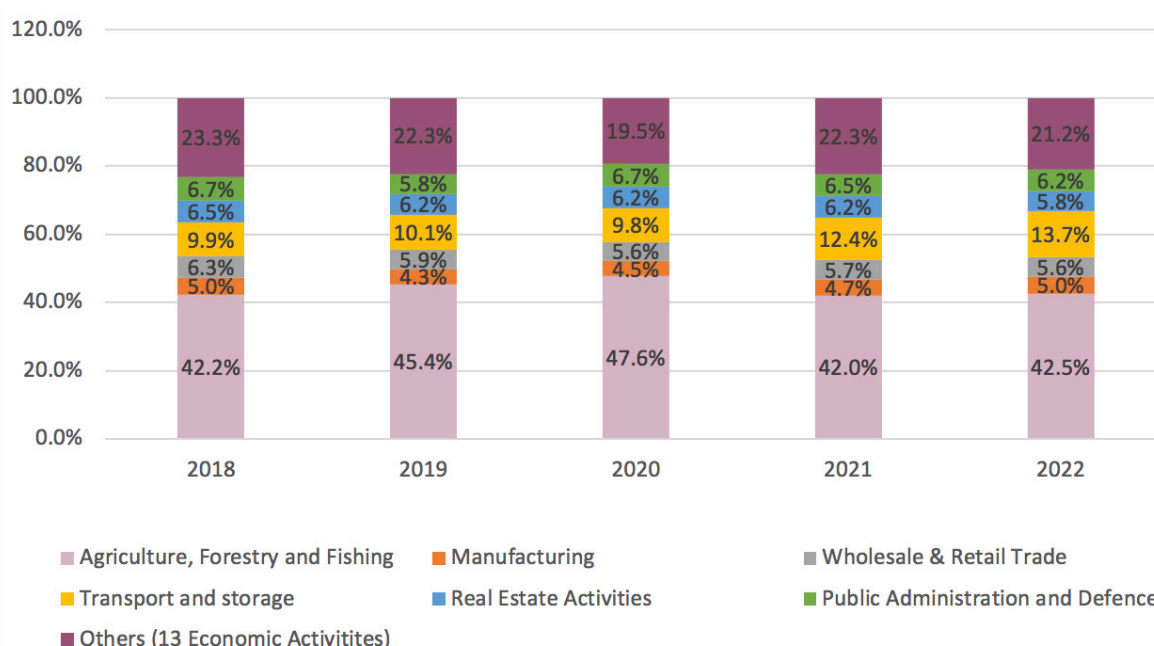


Figure 4: Gross County Product contribution by economic activity

Source: Gross County Product 2023 Report, KNBS

<sup>3</sup> Kirinyaga County Integrated Development Plan 2018 -2022

<sup>4</sup> Kenya National Bureau of Statistics

Over the last three years, the performance of Kirinyaga's six key economic sectors, as highlighted in figure 4 above, have improved, particularly agriculture, manufacturing and transport and storage. The agricultural sector growth can be attributed to programs such as the "Wezesha Kirinyaga" economic stimulus program, which focuses on empowering farmers by providing training, equipment, seedlings and support in the diversification of agricultural activities to increase household incomes.

## Key sectoral analysis

### Agriculture, livestock and fisheries

Agriculture accounts for 42.5% of Kirinyaga's gross county product (GCP), making it the economic pillar and major source of livelihood for approximately 87% of the population. The principal cash crops produced are tea, coffee and rice, with the county being the source of 84% of all the rice produced in Kenya<sup>5</sup>. Maize, beans, potatoes, sorghum and cowpeas are some of the food crops produced in the county. Dairy production is also common, with Kirinyaga's annual milk production estimated at 85 million litres with a total income of Kshs 3 billion per year<sup>6</sup>. Poultry farming is also another thriving industry with egg and meat production contributing significantly to the local economy. Fishing is popular in the Sagana sub-county along the Tana River, and more County residents are becoming interested in aquaculture.

According to the 2023-2027 CIDP, the county government plans to improve the livelihoods of its residents by promoting competitive farming businesses through an appropriate policy environment, effective support services and sustainable agricultural resource management. The proposed strategies for implementation to stimulate growth in the sector in the near term include strengthening the extension services delivery system, intensifying training and dissemination of appropriate technologies, promoting access to market information, improving access to affordable inputs and credit, promoting sustainable land use and environmental conservation as well as creating a conducive environment for private investment.

### Transport and infrastructure

The Transportation sector is the County's second largest contributor accounting for 13.7% of GCP. The County Government of Kirinyaga aims to provide and maintain a functional and reliable integrated road network and infrastructure to promote social and economic development. During the CIDP period 2018-2022, the County launched the "Nyorosha Barabara Mashinani Initiative", which led to the grading of approximately 5,000 kms of road, representing a 178.5% increase over the last five years. To improve road connectivity, the county government plans to undertake planning and design of priority road projects, securing and preserving road assets, promoting environmental and social safeguards through environmental and social impact assessment (ESIA), and improving security and business environment in line with the 2023-2027 CIDP.

## Public administration and defence

The public administration and defence sector, which contributed 6.2% of the county's GCP by the end of 2022, is an important driver and enabler of effective and efficient service delivery. In the implementation period of the 2018-2022 CIDP, the sector achieved several milestones, including increased automation of revenue collection through the ICT department, growth in digital inclusivity in service delivery and improved efficiency in information dissemination through the continuous maintenance and upgrade of the county's website. Based on the CIDP 2023-2027, Kirinyaga intends to enhance service delivery through employee capacity development, adequate resource allocation, recruitment of dedicated workers tasked with project monitoring and evaluation, and ensuring that best working practices and standards are upheld in the county's operations.

## Real estate

The Real Estate sector contributed 5.8% to the Kirinyaga County GCP<sup>7</sup>. Since devolution, there has been an increase in the demand for affordable housing, particularly in major urban areas (Kerugoya, Sagana, Wang'uru, Kagio and Kagumo). In the implementation period of the second generation 2018-2022 CIDP, the Housing and Urban Planning Department commenced the county spatial plan and Kerugoya-Kutus municipal plan, which opened up the County to service providers and development partners such as the World Bank, in implementing interventions that would lead to well-managed towns and urban centres. The 2023 -2027 CIDP aligns with the County Spatial Plan 2021 -2031 which elaborates the overall growth strategy and the broad land use patterns for efficient land use practices in the County. Kirinyaga intends to provide quality and cost-efficient homes to the residents through the construction of 1,500 low-cost housing units in Kerugoya, Wang'uru and Sagana in the short to medium term. The County has acquired a six-acre piece of land in Kerugoya to develop infrastructure per the national government's agenda of providing affordable and quality housing. The sector is expected to grow as a result of the implementation of these County-funded initiatives, which aim to improve sustainable housing for the citizens.

## Wholesale and retail trade

According to the 2023 GCP Report, the Wholesale and Retail Trade sector contributed 5.6% of the County's GCP. The County upgraded 15 open-air and clothes markets over five years to create access for trade in a structured, secured and conducive environment<sup>8</sup>. Going forward, Kirinyaga County plans to build new markets and improve existing ones as well as promote value addition and product diversification to boost the sector's growth.

## Manufacturing

The Manufacturing sector contributed 5.0% to the county's GCP as at the end of 2022. Kirinyaga plays host to various industries which specialize in agricultural product processing, such as tea factories, coffee millers,

<sup>5</sup> <https://www.theeastafrican.co.ke/tea/business/kenya-to-boost-rice-production-as-demand-rises-4065570>

<sup>6</sup> Kirinyaga County Website

<sup>7</sup> Gross County Product 2023

<sup>8</sup> Kirinyaga County Integrated Development Plan 2018-2022



maize millers and rice millers. The County also has significant industry potential in agro-processing, value addition and tinning due to the good production of tomatoes, sugarcane, mangoes, watermelons, bananas and green grams. Kirinyaga County supported small-scale manufacturers by providing coffee roasting, grinding and packaging machinery to support value addition in the coffee value chain in the 2018-2022 implementation period. The County Government intends to improve the manufacturing sector by developing an industrial master plan and resource mapping to attract more investors in the near term.

### 3.1.4 Level of infrastructure

Kirinyaga has a well-developed road network, with seven major tarmac roads passing through the county namely the Makutano-Embu Road (43.5km), the Kutus-Karatina Road (26km), the Kerugoya-Baricho Road (28km), the Kiburu Road (10.5km), the Kutus-Sagana Road (19.2km), the Kutus-Kianyaga Road (9.8km) and the Kabare-Kimunya Road (10km). However, most gravel and earth-surfaced roads (estimated at 1,697.4 kilometres) are impassable during the rainy season due to lack of maintenance, poor drainage and unstable soils. Kirinyaga has 5 kilometres of railway line and one railway station, both of which are located in Ndia Constituency but are currently inactive. Kirinyaga County has one airstrip which is located in Mwea Constituency.

The county has 21 commercial bank branches, eight microfinance institutions, 18 cooperative societies and five insurance company branches<sup>9</sup>. The mobile phone coverage in the County is 99% and the County has 5 sub-post offices<sup>10</sup>. In Kirinyaga County, there are five private courier services, the majority of which are linked to public service vehicles.

## 3.2 Fiscal assessment

### 3.2.1 Governance structure

Kirinyaga County Government comprises two arms, namely the County Assembly and the County Executive. The executive arm of the County Government is made up of the Governor, the Deputy Governor, County Executive Committee Members and the County Public Service Board (which primarily handles the County's human resource management). The Governor appoints County Executive Committee members (CECM) with the approval of the County Assembly. Under Section 5 of the County Government Act 2012, the devolved functions of the county government are county legislation in accordance with article 185 of the 2010 Kenya Constitution which confers the county's legislative authority to the County Assembly. Another devolved task is exercising executive functions per Article 183 of the Constitution which provides for the following roles:

- a) Implementation of county legislation;
- b) implementation of national legislation within the county if the legislation so requires;
- c) management and coordination of the functions of the county administration and its departments;
- d) performance of any other functions conferred by the Constitution or national legislation.

A county executive committee can also prepare proposed legislation for consideration by the county assembly. The committee provides the assembly with full and regular reports on matters relating to the county. Under the Fourth Schedule of the 2010 Constitution of Kenya, the devolved sectors and activities performed by county governments are:

1. Agriculture, including crop and animal husbandry, livestock sale yards, county abattoirs (slaughterhouses), plant and animal disease control and fisheries.
2. County health services, including, in particular – county health facilities and pharmacies, ambulance services, promotion of primary health care, licensing and control of undertakings that sell food to the public, veterinary services (excluding regulation of the profession which is a national government function), cemeteries, funeral parlours and crematoria, and refuse removal, refuse dumps and solid waste disposal.
3. Control of air pollution, noise pollution, other public nuisances and outdoor advertising.
4. Cultural activities, public entertainment and public amenities, including – betting, casinos and other forms of gambling, racing, liquor licensing, cinemas, video shows and hiring, libraries, museums, sports and cultural activities and facilities, and county parks, beaches and recreation facilities.
5. County transport, including – County roads (Class D, E and Unclassified Roads), street lighting, traffic and parking, public road transport, and ferries and harbours (excluding the regulation of international and national shipping and matters related thereto).
6. Animal control and welfare, including – licensing of dogs, and facilities for the accommodation, care and burial of animals.
7. Trade development and regulation, including – markets, trade licences (excluding regulation of professions), fair trading practices, local tourism and cooperative societies.
8. County planning and development, including – statistics, land survey and mapping, boundaries and fencing, housing, and electricity and gas reticulation and energy regulation.
9. Education – only pre-primary education (ECD), village polytechnics, home craft centres and childcare facilities.
10. Implementation of specific national government policies on natural resources and environmental conservation, including soil and water conservation and forestry.
11. County public works and services, including – stormwater management systems in built-up areas, and water and sanitation services.
12. Firefighting services and disaster management.
13. Control of drugs and pornography.
14. Ensuring and coordinating the participation of communities and locations in governance at the local level and assisting communities and locations to develop the administrative

<sup>10</sup> Kirinyaga County Integrated Development Plan 2018-2022

Source: Kirinyaga County Assembly Website

capacity for the effective exercise of the functions and powers and participation in governance at the local level.

Table 2 below shows the key personnel in Kirinyaga County's executive arm;

**Table 2: Key county executives in Kirinyaga County**

S/N	Name	Designation
1	H.E. Anne Mumbi Waiguru, EGH	Governor
2	H.E. David Githanda	Deputy Governor
3	Ms. Jackline Njogu	CECM –Finance and Economic Planning
4	Mr. George Karoki	CECM – Medical Services, Public Health and Sanitation
5	Dr. John Gachara	CECM – Agriculture, Livestock, Veterinary and Fisheries
6	Mr. Calbert Njeru	CECM – Cooperative Development, Trade, Marketing, Tourism and Enterprise Development
7	Mr. James Mutugi	CECM – Education and Public Service
8	Mr. Samuel Kanjobe	CECM - Lands, Physical Planning and Housing
9	Mr. Jared Migwi	CECM - Transport and Public Works
10	Mr. Dennis Muchiimi	CECM - Sports, Culture and Social Services
11	Ms. Millicent Ngari	CECM - Gender and Youth
12	Ms. Veronicah Waweru	CECM - Environment and Natural Resources.

Source: Kirinyaga County Website

The County Assembly is in charge of enacting county laws, overseeing the County Executive and representing the people. It is made up of Members of County Assembly (MCAs) elected from the county's various Assembly Wards, nominated MCAs representing special interests such as persons with disabilities and youth as prescribed by an Act of Parliament, and the Speaker, who serves as an ex-officio member. The Speaker, who also serves as Chairman of the County Assembly Service Board, leads the County Assembly. The Kirinyaga County Assembly is made up of the following members:

1	• Ex-officio-Speaker
20	• Elected MCAs
13	• Nominated MCAs
34	• Total

**Figure 5: Kirinyaga County Assembly composition**

Table 3 below outlines the names of the elected County Assembly members and the wards they represent:

**Table 3: Kirinyaga County elected members of the county assembly 2022**

	Elected Member of County Assembly (MCA)	Ward
1	Hon. Muteti Julius Murimi	Honourable Speaker
2	Hon. Njamumo Namu Jinaro	Mutithi Ward – Deputy Speaker
3	Hon. Wangui David Kinyua	Mutira Ward
4	Hon. Mathenge David Muni	Baragwi Ward
5	Hon. Gakuru Geoffrey Murimi	Kiine Ward
6	Hon. Muriithi Caroline Wanjiku	Karumandi Ward
7	Hon. Kariuki Jeremiah Makimi	Kariti Ward
8	Hon. Karimi Fredrick Maina	Inoi Ward
9	Hon. Karinga Peter Muthii	Tebere Ward
10	Hon. Kathuri Timothy Kariuki	Njukiini Ward
11	Hon. Mbogo Isaiah Muriithi	Kabare Ward
12	Hon. Mbungu Daniel Muriithi	Ngariama Ward
13	Hon. Muchina Eric Muriithi	Kerugoya Ward
14	Hon. Muriuki Thomas Mwangi	Mukure Ward
15	Hon. Muthura Joseph Kiragu	Thiba Ward
16	Hon. Ndambiri Kenneth Mwendia	Nyangati Ward
17	Hon. Ngahu Benson Waweru	Gathigiriri Ward
18	Hon. Njiru Peter Gitonga	Wamumu Ward
19	Hon. Nyaga Charles Nyamu	Murinduko Ward
20	Hon. Wambu James Njiru	Kangai Ward
21	Hon. Waziri Moses Migwi	Kanyekiine Ward Maina

Source: Kirinyaga County Assembly Website

### 3.2.2 Finances of the Kirinyaga county government

Based on the Office of the Controller of Budget FY2022/23 Report, the total revenue generated by Kirinyaga County at the end of the fiscal year 2022/23 was Ksh 7.07 billion, representing an 8.3% increase from the previous fiscal year. In FY2022/23, the county received Ksh 5.2 billion as an equitable share of national revenue (73.5%), Ksh 586.65 million as own-source revenue (8.3%), Ksh 292.03

million as conditional grants (4.1%) and had a cash balance of Ksh 991.5 billion from the previous year (14%). In the fiscal year ended 30 June 2023, the County's own source revenue grew by 60.7% from the previous year due to improved efficiency in OSR collection following automation of collection processes, expanding revenue bases, increasing enforcement in collection of cess on agricultural produce and carrying out valuation roll in the urban centres which has enhanced land rates collection.

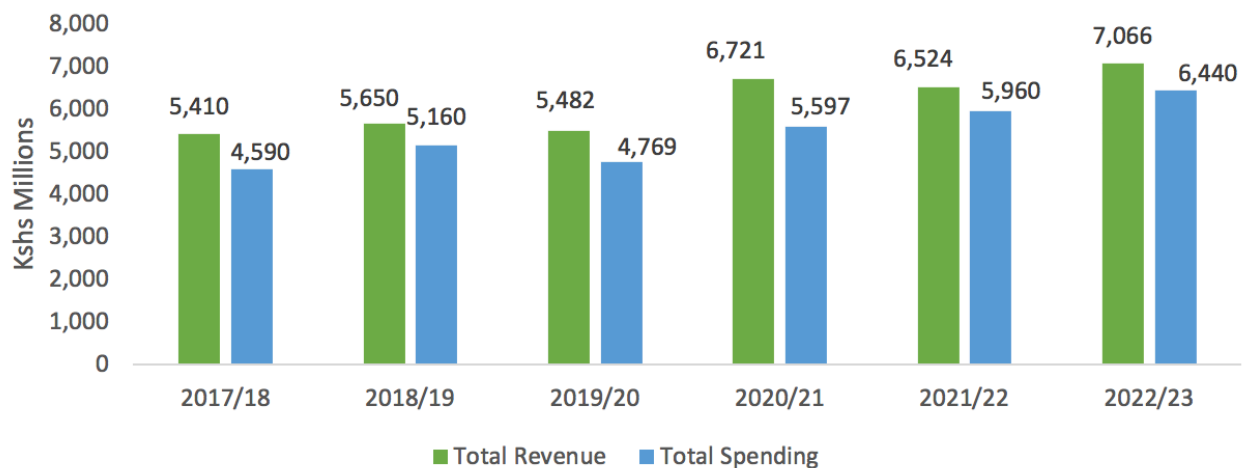


Figure 6: Government revenue vs spending of Kirinyaga County (2017/18 -2022/23) – Ksh'millions

Source: Office of the Controller of Budget

The county government spent Ksh 6.44 billion during the review period, which was 100% of the total funds released by the Controller of Budget and 8.1% higher than FY 2021/22. In the fiscal year FY 2022/23, Kirinyaga's

expenditure on development programs was Ksh 1.61 billion (25%), while expenditure on recurring programs stood at Ksh 4.83 billion (75%).

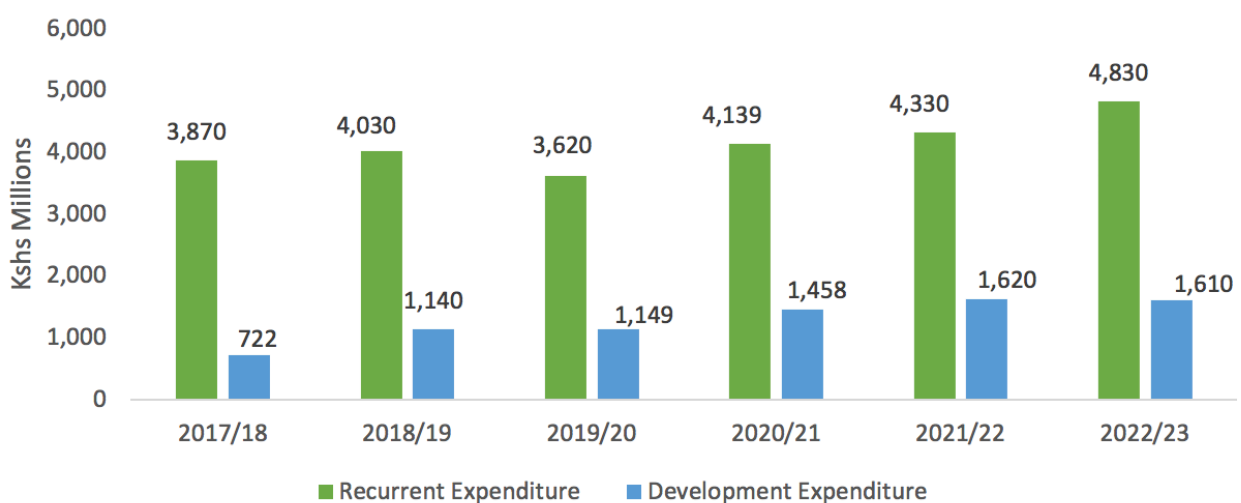


Figure 7: Breakdown of Kirinyaga's Government Spending (2017/18-2022/23)

Source: Office of the Controller of Budget



Similar to most counties, Kirinyaga spends more annually on recurring expenses such as employee salaries, operating costs and other maintenance costs. Regulation 25 (1) (b) of the Public Finance Management (County Governments) Regulations, 2015 caps the county government's wage and benefit expenditure at 35% of total revenue. However, in the fiscal year 2022/23, Kirinyaga County spent 41.1% of its annual realised revenue on employee compensation, exceeding the set limit. Personnel emoluments totalling Ksh 2.65 billion were processed through the Integrated Personnel and Payroll Database (IPPD) system, while manual payrolls totalled Ksh 249.44 million<sup>11</sup>. The manual payroll accounted for 8.6% of total personnel costs, with the county citing a lack of Unified Personnel Numbers as the reason for not processing all salaries in the integrated payroll and personnel database (IPPD) system.

### 3.2.3 Revenue collection mechanism

Kirinyaga County has 24 own source revenue streams from various sectors with the health sector (31.9%), business permits (18%) and liquor license (10%) as the key income lines. During the review period, the county implemented a new revenue management system, to ensure revenue collection effectiveness and efficiency. All revenue streams are expected to be automated in the near term to improve own source revenue collection and minimise leakages. Furthermore, the county government plans to implement additional strategies aimed at increasing own-source revenue including raising public awareness about the importance of fees and user charges, paying default rates, and strengthening enforcement and compliance mechanisms.

### 3.2.4 Kirinyaga County's debt profile

Kirinyaga County has not taken on any long-term debt before, so there were no commercial debt balances in its financial statement for the fiscal year ending 30 June 2023. Nonetheless, as at the end of FY 2022/23, the County had accrued pending bills totalling Ksh 235.04 million.

### 3.2.5 Compliance with the Public Finance Management Act

Part 4 of the Public Finance Management (PFM) Act of 2012 outlines the County Government's duties regarding the management and supervision of public finances. It establishes the guidelines for good financial management that County Treasuries must adhere to. As outlined in Chapter 12 of the Constitution, the pillar is responsible for upholding the essential values of prudent financial management, accountability and responsibility. The Office of the Controller of Budget (OCOB) identified the following challenges of the Kirinyaga County FY 2022/23 budget:

1. A high wage bill, accounting for 41.1% of annual realised revenue FY 2022/23. The COB advised the County Public Service Board to develop an optimal staffing structure to ensure compliance with Regulation 25 (1) (b) of the Public Finance Management (County Governments) Regulations, 2015 and devise strategies to address the escalating wage bill.
2. A high level of pending bills which stood at Ksh 235.04 million at the end of the fiscal year 2022/23. In this case, the COB recommends that County leadership take charge of the deteriorating pending bills situation to ensure that genuine bills are paid on time in the upcoming fiscal year.
3. Personnel emoluments totalling Ksh 249.44 million were processed manually, accounting for 8.6% of total payroll costs. Manual payroll is prone to abuse and may result in the loss of public funds in the absence of proper controls. Therefore, the COB recommends that Kirinyaga County should expedite the acquisition of Unified Personnel Numbers for all employees. Furthermore, the County Public Service Board should regulate staff engagement on contract and casual workers as provided under Section 74 of the County Governments Act 2012.

## 4

# Credit risk assessment of Kirinyaga County

## 4.1 Rating rationale

- Agusto & Co. hereby assigns a “Bb- ken” shadow credit rating to the County Government of Kirinyaga (“Kirinyaga County”, “Kirinyaga” or “the County”) which reflects the County’s satisfactory financial condition but limited capacity to meet obligations as and when they fall due relative to all other issuers in the same country. Agusto & Co. view positively Kirinyaga’s stable political environment, improving governance framework and modest financial flexibility owing to minimal leverage. However, the County’s low own source revenue (also known as internally generated revenue) which accounted for 9% of total revenue in FYE 2022/23, high personnel expenses at 43% of revenue - above the 35% limit set by Regulation 25 (1b) of the Public Finance Management (PFM) Act of 2012, over-reliance on equitable share of income distributed by the Exchequer due to low fiscal autonomy as well as the qualified audit opinions over the last five years by the Auditor General of Kenya, moderate our overall rating opinion.
- Kirinyaga is one of the counties located in the Central Region of Kenya which was created as a result of the 2010 Kenya Constitution which devolved powers to sub-national governments. The County is the fifth smallest in the country in terms of land area (1,478.1 square kilometres) but is prominent for rice farming owing to the success of the Mwea Irrigation Scheme. Based on the 2023 Gross County Product (GCP) report by the Kenya National Bureau of Statistics (KNBS), Kirinyaga County’s GCP was estimated at Ksh160.9 billion, representing circa 1.3% of Kenya’s Gross Domestic Product (GDP). The County’s favourable climatic condition coupled with the presence of six major rivers portend huge opportunities for growth in the agricultural sector which is the mainstay of the County employing more than 87% of the population.
- In the financial year ended 30 June 2023 (FY 2022/23), Kirinyaga County reported a total revenue of Ksh6.04 billion which was 3% higher than the prior year due to an increase in own source revenue. The County’s own source revenue (OSR) rose by 42% year-on-year to Ksh551.9 million (representing 9% of total revenue) mainly supported by the ongoing implementation of an automated revenue management system aimed at capturing all local incomes. Whilst Agusto & Co. recognizes the positive strategic leadership by Kirinyaga’s Governor as well as the ongoing revenue mobilization initiatives, we believe that fully digitizing all the income lines would help drive higher local receipts. Notwithstanding, Kirinyaga, like most counties, will continue to be reliant on the equitable share disbursements from the National Government through the Exchequer which accounted for 91% of total revenue in FY2022/23 as we do not anticipate a material change in the revenue profile of the County in the near term.
- In the 12 months ended 30 June 2023, Kirinyaga County reported a total expenditure of Ksh6.46 billion (FY 2021/22: Ksh7.06 billion), comprising recurrent (81%) and development expenditure (19%). The County’s personnel cost is the largest recurrent cost component and represented 43% of total revenue in FY 2022/23, which is higher than the 35% limit set by Regulation 25 (1b) of the Public Finance Management Act (County Regulations), 2015. This compares better than Laikipia County (56%) and Embu County (50%), but higher than Makueni County (42.1%) and Nairobi City County (38%). However, Kirinyaga’s overhead cost which has been negatively impacted by high inflation over the last three years represented 23% of revenue in FY2022/23 and a three-year (FY2020/21 – 2022/23) average of 20%, which are both considered to be satisfactory in our view. Going forward, we expect the County’s personnel expenses to revenue ratio to remain above the 35% threshold, while we project overhead cost to rise moderately on account of persistent inflationary pressures.

- In the fiscal year ended 30 June 2023 (FY 2022/23), the County Government of Kirinyaga spent Kshs1.21 billion on capital development activities which represented 19% of total expenditure - lower than the 30% minimum requirement as per Section 107 (2b) of the PFM Act. We note that the County plans to increase capital spending in the short term in line with the projected development expenditure of circa Kshs2.45 billion (accounting for 33.8% of the FY2023/24 Budget). However, Kirinyaga's reliance on the Exchequer distributions which are susceptible to delays as well as the paucity of funds at the National Government level are some of the constraints in achieving this target expenditure.
- As at the end of the 2022/23 financial year, Kirinyaga did not have any third-party borrowings either directly or through contingent liabilities. Nonetheless, the

County had outstanding payables (pending bills) arising from contracted goods and services of Ksh795.4 million as at 30 June 2023. Going forward, the County intends to increase own source revenue on the back of ongoing revenue mobilization initiatives aimed at digitalizing collections, especially from the large informal sector. Also, Kirinyaga County plans to access long-term financing to execute capital projects across water, sanitation, healthcare, renewable energy, public infrastructure, agro-processing, waste management and agricultural sectors which are expected to stimulate the growth of the County economy and build resilience for long-term sustainable development.

- Based on the above, we hereby attach a stable outlook to the County Government of Kirinyaga.

### Strengths

- Stable political environment
- Improving governance framework
- Modest financial flexibility on account of low leverage profile
- Good agricultural base

### Weaknesses

- Significant dependence on centrally distributed revenue by the Exchequer which are not timely
- Low fiscal autonomy
- Qualified audit opinions over the last five years
- High personnel expenses significantly above regulatory threshold
- Low own source revenue which requires improvement

### Opportunities

- Youthful population accounting for majority of the active labour workforce
- Favourable climatic condition suitable for agricultural activities especially rice, tea and coffee farming
- Deepening of own source revenue using fully automated collection systems

### Challenges

- Susceptibility of centrally distributed revenue by Exchequer due to global and macroeconomic headwinds
- Weakened agricultural productivity on account of low rainfall during the long rains season and a delay in the short rains

Figure 8: Strengths, Weaknesses, Opportunities and Challenges

## 4.2 Financial condition review

### Analysts' comments

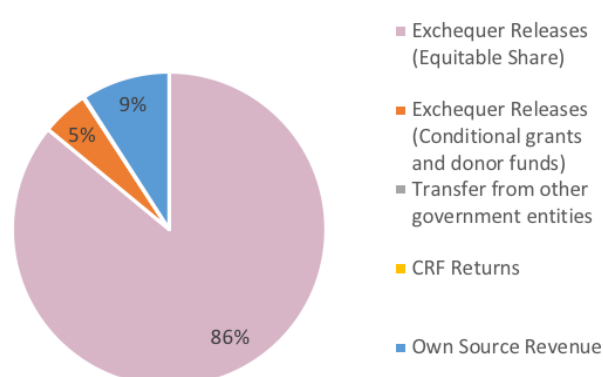
- Kirinyaga County prepares its financial statements in line with the International Public Sector Accounting Standards (IPSAS) cash basis.
- We have analyzed the financial statements of Kirinyaga County over the three years FY 2020/21 to 2022/23

### Revenue profile

Kirinyaga County is empowered by Article 209 of the 2010 Kenya Constitution to generate its own source revenue (also known as internally generated revenue) from fines, licenses, levies and user fees. Also, the County receives income from the National Government as an equitable share of revenue collected and distributed nationally per Article 202 of the 2010 Kenya Constitution. The sharing structure is determined yearly through the County Allocation of Revenue Act (CARA) based on the sharing formula developed by the Commission on Revenue Allocation (CRA) and approved by the Parliament per Article 217 of Kenya's Constitution.

To finance the county's approved FY 2022/23 budget of Ksh7.03 billion, Kirinyaga County was expected to receive Ksh5.19 billion as the equitable share of revenue raised nationally, Ksh294.8 million as conditional grants and also generate Ksh549.9 million from its own sources of revenue.

In the financial year ended 30 June 2023 (FY 2022/23), Kirinyaga County's total revenue grew marginally by 3% to Ksh6.04 billion due to an increase in own source revenue. Even though the County received Ksh5.19 billion as the equitable share of the revenue raised nationally (representing 100% of the budget), conditional grants and OSR receipts were below the budget projections.



**Figure 9: Breakdown of Kirinyaga County's revenue- FY2022/23**

Further analysis of FY 2022/23 performance shows that Kirinyaga County's equitable share of income distributed by the Exchequer remained at par with the prior year and accounted for 86% of total revenue. Furthermore, the

county received Ksh292 million as conditional grants, which was lower than the prior year and represented 5% of total revenue. In addition, miscellaneous receipts and returns to the County Revenue Fund from the prior year's unutilized balances stood at Ksh5.3 million. Overall, the cumulative amount received through the Exchequer accounted for 91% of total revenue in FY2022/23 (FY2021/22: 93%). Table 2 shows the details of centrally distributed funds received by Kirinyaga County over the last three years.

**Table 4: Centrally distributed funds by National Treasury - FY2020/21 - FY2023/24 Budget (Ksh'millions)**

Centrally generated revenue	FY2020 /21	FY2021 /22	FY2022 /23	FY2023 /24 Budget
Exchequer releases (equitable share & donor)	4,241.1	5,196.2	5,196.2	5,420.2
Exchequer releases (Conditional grants and donor funds)	581.4	303.9	292.0	612.9
Transfer from other government entities	377.4	-	-	-
CRF Returns	1,174.7	-	5.3	657.3
Total Centrally Generated Revenue	6,374.6	5,500.0	5,493.5	6,690.4

Source: Controller of Budget's County Governments Budget Implementation Review Report FY2022/22 & Kirinyaga 2023/24 Budget

In FY2022/23, Kirinyaga County's own-source revenue (OSR) rose by 42% to Ksh551.9 million representing 9% of total revenue based on the unaudited county consolidated financial statements. This growth is credited mainly to the ongoing implementation of the County Pro Automated Revenue Management System (an automated OSR collection system), which supported the capture of land-based revenue in the County.

Agusto & Co. notes that on the back of the ongoing strategic initiatives implemented by the County government in terms of automating collections, OSR has been on a positive trajectory and we expect this to be sustained in the near term. Going forward, we believe that fully automating all the OSR income lines using the electronic system would help drive higher receipts in the form of business permits, licenses, building approvals fees, land rates, hotel fees and parking fees amongst others. Consequently, Kirinyaga County projects an OSR of Kshs 550 million and Ksh600 million by the end of FY 2023/24 and FY 2024/25 respectively. Notwithstanding, Kirinyaga County similar to most counties in the Country, will remain reliant on the disbursements from the national government through the Exchequer in the near to medium term.

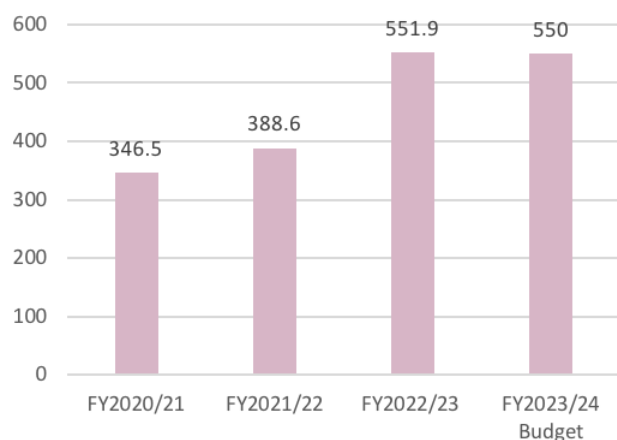


Figure 10: Own source revenue Ksh'millions (FY2020/21 - FY2023/24 Budget)

Based on the FY2023/24 Budget, Kirinyaga County intends to generate a total revenue of Ksh7.24 billion with equitable share from the National Government accounting for 74.9% of the total revenue, while conditional grants and allocation from Exchequer (8.5%), County Own Source Revenue (7.6%) and returns from the Consolidated Revenue Fund (9.1%). The County's revenue projection is based on an estimated rise in the equitable share of revenue as well as a modest rise in conditional allocations and grants. However, we do not anticipate significantly higher distributions by the Exchequer in the near term due to macroeconomic headwinds, inflationary pressures and potential fiscal shocks which could impact national government revenue projections.

In line with the 2024 County Fiscal Strategy Paper, Kirinyaga County intends to continue with its revenue mobilization through the diversification of revenue sources and enhancement of revenue collection as well as diversification beyond agriculture. Furthermore, the County intends to leverage the County Pro Automated Revenue Management System to deepen the collection of fees, levies, licences and permits to minimise income leakages and generate higher OSR in the near term. In our view, the County will need to scale up OSR collections to a sustainable level to cover some portion of recurrent expenditure and explore alternative long-term financing options to fund capital development projects.

In our opinion, Kirinyaga County's overall revenue profile is weak and requires improvement.

### Expenditure profile

The Public Finance Management Act 2012 (PFM) classifies counties' expenditures into two main broad categories (recurrent and development expenditure). Recurrent expenditure comprises expenses incurred in the services provided by the county government such as compensation of government employees, purchase of goods and services and interest payments on borrowings, amongst others. Development expenditure covers the payment for the acquisition or renewal of assets (property, plant and equipment) and Section 107 (2b) of the PFM provides that a minimum of 30% of a county's budget be allocated to this expense category.

In the financial year ended 30 June 2023, Kirinyaga County's total expenditure stood at Ksh6.46 billion (FY 2021/22: Ksh7.06 billion), comprising recurrent (81%) and development expenditure (19%). A breakdown of the County's recurrent expenditure revealed that Ksh2.63 billion was spent on employee compensation (representing 41% of total expenditure), Ksh1.26 billion on operations and maintenance (accounting for 19%) and Ksh1.07 billion as transfers to the County Assembly (covering compensation, operations and maintenance and development activities).

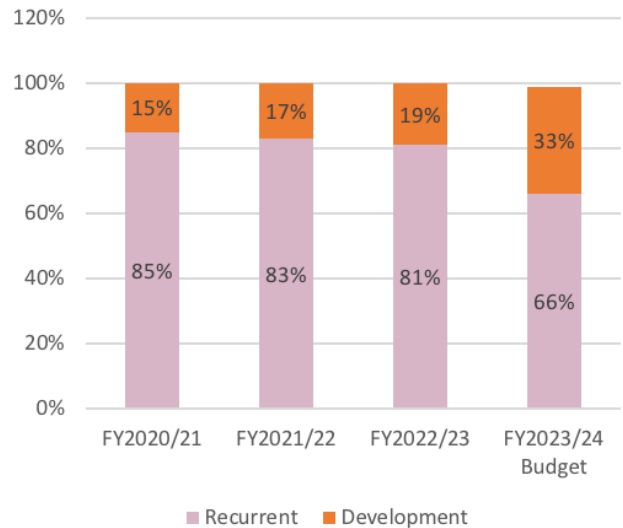


Figure 11: Recurrent and development to total expenditure

Based on our analysis, the county's total personnel cost (processed through the Integrated Personnel and Payroll Database (IPPD) system and manual payroll) including the payroll costs of the County Assembly represented 43% of total revenue in FY 2022/23 which is higher than the 35% limit set by Regulation 25 (1) (b) of the Public Finance Management (County Regulations), 2015. Similar to most counties, Augusto & Co. notes that Kirinyaga's payroll cost as a percentage of revenue has been higher than the statutory threshold over the last three years and we consider this a concern due to the impact on the County's financial flexibility. Although operations and maintenance cost (i.e. overhead cost) has also trended upwards elicited by the higher inflationary pressures, the County's overhead cost-to-revenue ratio of 23% and the three-year average (FY 2020/21 – 2022/23) of 20%, are both considered satisfactory in our view. This compares better to Nairobi City County (26%) and Laikipia County (25%). However, it is at par with Makueni County (23%) and higher than Embu County (13%).

Per section 116 of the PFM Act, 2012, county governments are allowed to establish and allocate monies from the budget to public funds with approval from the county Executive Committee and the County Assembly. Based on the Controller of Budget's Implementation Report, Kirinyaga spent Ksh297.9 million (which was higher than the budgetary allocation of Ksh247.1 million) on three county-established funds (County Bursary Fund, Executive Car Loan and Mortgage Fund, and County Assembly Car Loans and Mortgage Fund), constituting 3.5% of the County's budget.



In FY 2022/23, Kirinyaga County spent Ksh1.21 billion on all development activities representing circa 19% of total expenditure. This was lower than the 30% minimum requirement as stipulated in Section 107 (2b) of the PFM Act of 2012 and as such requires improvement.

Based on the 2023/2024 Budget, the County's recurrent expenditure is estimated at Ksh4.79 billion representing 66.2% of the Budget while development expenditure is projected at Ksh2.45 billion accounting for 33.8%.

Going forward, Augusto & Co. estimates that the County's personnel expenses to revenue ratio will continue to trend higher than the 35% threshold in the near term, while the overhead cost to revenue ratio is projected to rise on account of higher inflationary pressures. While we expect Kirinyaga County to moderately increase capital development expenditure in the short to medium term to finance ongoing infrastructure projects, we note that the lack of alternative sources of financing amid the limitations on national government revenue may negatively impact the attainment of the County's objectives.

In our view, Kirinyaga County's overall expenditure profile requires improvement, particularly in reducing payroll expenses below the 35% statutory threshold.

### Debt profile

In line with the Public Finance Management Act 2012, counties can borrow funds for short-term or medium to long-term purposes. The County Treasury is expected to include in its County Fiscal Strategy Paper the financial outlook for the county government revenues, expenditures and borrowing for the coming financial year and over the medium term. According to the PFM, short-term borrowing by a county government of not more than 5% of the most recent audited county government revenue per Section 107 (3) can only be used for cash management purposes which is repayable within twelve months. In line with Section 107 (2d) of the PFM, county governments can borrow over the medium term only for financing development expenditure and the total county public debt is not expected to exceed 20% of total revenue at any time in line with Regulation 25 (1) (d) of the Public Finance Management (County Regulations), 2015.

As at the end of the FY2022/23 fiscal year, Kirinyaga County did not have any third-party borrowings on its book either directly or through contingent liabilities. However, as at 30 June 2023, the County had outstanding pending bills of Ksh795.4 million (FY2021/22: Ksh801.7 million).

While we recognize that the County has not obtained any third-party or commercial borrowing over the last five years, we note that Kirinyaga County is keen to access third-party medium to long-term financing to execute flagship development projects across the County. Some

of the identified green projects include water harvesting from Ragati River upstream, the establishment of a decentralized treatment facility in Makutano, the upgrade and rehabilitation of abandoned mini hydro power solutions, the development of the Sagana Agro-Industrial Park, construction of an Energy Centre in Kimbimbi Forest to promote clean energy and energy-saving initiatives, and development of an integrated waste management system and material recovery facility, amongst others.

In our opinion, Kirinyaga County has a low leverage position. However, the County's financial flexibility to meet future debt obligations requires improvement given its low own source revenue.

### 4.3 Rating outlook

The County Government of Kirinyaga under the leadership of Her Excellency, Hon. Anne Mumbi Waiguru, EGH, has outlined five strategic goals in tandem with the County Integrated Development Plan 2023 - 2027 which it intends to deliberately actualise over the next five years. These goals if successfully implemented are expected to catalyse economic growth, development and prosperity for its citizens in line with the "Kirinyaga Rising" mission of improving the living standards of the people in a clean, secure and sustainable environment. The five strategic goals include:

- Job creation through the creation of new industries and product diversification
- Better well-being through accessible and affordable healthcare
- Increased income from improved and efficient productivity, market access, product marketing and competitive market prices
- Improved urban planning and infrastructure to create state-of-the-art towns and cities
- Enhance knowledge and skills development to establish a demand-driven, adaptive, diligent, talented and unique workforce.

Kirinyaga County is keen on leveraging private sector partnerships for the development of capital projects across waste management, sanitation, agro-processing, water harvesting, distribution and irrigation, electricity generation using hydropower and growth of tourism potentials given the presence of Mt Kenya Forest and Mwea National Reserve. Furthermore, we recognize positively the County's political goodwill and intent to improve the welfare of its citizens through the provision of relevant services and incentives for the predominant agrarian communities. However, we note that physical infrastructure development in Kirinyaga County still requires improvement and the low own source revenue can be improved to supplement the Exchequer distributions in the near term.

We hereby assign a stable outlook to the Kirinyaga County Government of Kenya.

## 4.4 Counties financing framework

### Background

The Government of Kenya has been under considerable financial pressure due to macroeconomic headwinds and the impact of COVID-19, which will ultimately limit the near-term funds available for developing infrastructure projects across the 47 Counties. As such, counties in Kenya have been urged to embrace the Debt Capital Markets for Infrastructure Development Financing.

### Excerpts of statutory requirements for county borrowing under the PFM Act 2012

**58.** (1) Subject to subsection (2), the Cabinet Secretary may guarantee a loan of a county government or any other borrower on behalf of the national government and that loan shall be approved by Parliament.

(2) The Cabinet Secretary shall not guarantee a loan under subsection (1) unless—

- (a) the loan is for a capital project;
- (b) the borrower is capable of repaying the loan, and paying any interest or other amount payable in respect of it;
- (c) in the case of a private borrower, there is sufficient security for the loan;
- (d) the financial position of the borrower over the medium term is likely to be satisfactory;
- (e) the terms of the guarantee comply with the fiscal responsibility principles and financial objectives of the national government;
- (f) where Parliament has passed a resolution setting a limit for the purposes of this section—
  - (i) the amount guaranteed does not exceed that limit; or
  - (ii) if it exceeds that limit, the draft guarantee document has been approved by resolution of both Houses of Parliament;
- (g) the Cabinet Secretary takes into account the equity between the national government's interests and the county government's interests so as to ensure fairness;
- (h) the borrower complies with any conditions imposed by the Cabinet Secretary in accordance with the regulations;
- (i) the Cabinet Secretary has taken into account the recommendation of the Intergovernmental Budget and Economic Council in respect of any guarantee to a county government; and
- (j) the loan is made in accordance with provisions of this Act and any regulations made thereunder.

(3) Parliament may approve a draft loan guarantee document as provided by subsection (2)(f)(ii) only if satisfied that—

- a) the guarantee is in the public interest;
- b) the borrower's financial position is strong enough to enable the borrower to repay the

loan proposed to be guaranteed and to pay interest or other amounts payable in respect of the loan; and

- c) the loan is geared towards stimulating economic growth in a county government.
- (4) To enable Parliament to decide whether or not to approve a draft loan guarantee document as provided by subsection (3), the Cabinet Secretary shall prepare and submit to each of the House of Parliament a paper that—
- a) gives details of the loan that is proposed to be guaranteed, including the amount of the loan, the terms of repayment, and the details of the interest or any other amount payable under the loan;
  - b) specifies the national government's total contingent liability under guarantees given under this section; and
  - c) specifies any other information that the Cabinet Secretary considers relevant.

**59.** Not later than fourteen days after the guarantee is entered into, the Cabinet Secretary shall submit to Parliament and publish a statement:

- a) stating that a guarantee is entered into; and
- b) containing details of:
  - i) the guarantee, including the name and other particulars of the borrower whose loan is guaranteed;
  - ii) the duration and nature of the guarantee;
  - iii) a risk assessment in respect of the guarantee; and
  - iv) any other information prescribed by regulations for the purposes of this subsection.

**140.** (1) A County Executive Committee member for finance may, on behalf of the county government, raise a loan for that Government's purposes, only if the loan and the terms and conditions for the loan are set out in writing and are in accordance with:

- (a) Article 212 of the Constitution;
- (b) sections 58 and 142 of this PFM Act;
- (c) the fiscal responsibility principles and the financial objectives of the county government set out in its most recent County Fiscal Strategy Paper; and
- (d) the debt management strategy of the county government over the medium term.

(2) A loan may be raised either within Kenya or outside Kenya.

**141.** (1) In borrowing money, a county government shall ensure that its financing needs and payment obligations are met at the lowest possible cost in the market that is consistent with a prudent degree of risk while ensuring that the overall level of public debt is sustainable.

- (4) A public debt incurred by a county government is a charge on the County Revenue Fund unless the County Executive Committee member for finance determines that all or part of the public debt that would otherwise be a charge on that Fund shall be a charge on another public fund established by that county government or any of its entities.
- (5) The County Executive Committee member for finance shall pay the proceeds of any loan raised under this Act into the County Revenue Fund or any other public fund established by the county government or as the County Executive Committee member for finance may determine.
- (6) A County Executive Committee member for finance may establish a sinking fund or funds for the redemption of loans raised under this Act for the county government or any of its entities as the County Executive Committee member for finance considers necessary.
- 142.** (1) The County Assembly may authorise short-term borrowing by county government entities for cash management purposes only.
- (2) Any borrowing under subsection (1) may not exceed five percent of the most recent audited revenues of the entity.
- (3) A county government entity that has any such borrowing shall ensure that the money borrowed is repaid within a year from the date on which it was borrowed.
- 144.** (1) The county government may issue securities, whether for money that it has borrowed or for any other purpose, only in one or more series and only in accordance with this Act and regulations.
- (2) The County Executive Committee member for finance may issue securities on behalf of the county government, for money borrowed by the county government in accordance with the criteria prescribed by regulations made for this subsection.
- (3) Subject to the provisions of section 141 of this Act, the authority of the County Executive Committee member for finance to borrow money includes the authority to borrow money by issuing county government securities in accordance with the regulations.
- (4) Any county government securities issued by the County Executive Member for finance under this section shall be within the borrowing limits set out by the County Assembly under subsection 141(2) of this Act.
- (5) A county government securities:
- may be issued in one or more series; and
  - may be issued in accordance with loan agreements entered into in accordance with regulations developed by the County Executive Committee member for finance and approved by the County Assembly.
- (6) An agreement to obtain a loan by a county government entity made under subsection (5), may be amended from time to time and where the amendment results in further indebtedness or prejudice to the entity that borrowed, the amendment shall be approved by the County Assembly.
- (7) The County Executive Committee member for finance shall ensure that every county government security issued under this section is given in the name of that County.



**Figure 12: Pre-requisites for counties financing**

Source: Agosto & Co. Research





Figure 13: Critical stakeholders to support county's financing framework

Source: Agosto & Co. Research

5

# Green asset and activity assessment

To understand the availability of green assets and investment opportunities, Kirinyaga County was subjected to a green asset identification and risk analysis. The approach employed involved field visits to the County, where general sessions were held with members of specific stakeholder groups (county officials, civil society organizations, private actors, and community representatives) who were invited to a workshop to discuss issues on the identification of green assets, projects, and capabilities of the various stakeholder groups. Furthermore, the workshop served as a medium for gathering information relevant to the County's macroeconomic, fiscal and credit assessments.

To guide the assessment process, information-gathering questionnaires/assessment tools targeting various actors in the counties were prepared and shared in advance of the visit. During the visit, Augusto & Co. engaged three types of stakeholders using the conference/workshop model, namely;

1. County officials which included Directors and County representatives of the seven priority areas related to climate change (Disaster risk management; food and nutrition security; water and the blue economy; forestry, wildlife and tourism; health, sanitation and human settlements; manufacturing; and energy and transport) and finance and budget department (Day 1)
2. Civil Society Organisations (CSOs) and private actors in the climate-finance space in Kirinyaga County (Day 2)
3. Community Representatives (Day 3)

Figure 14 below outlines the activities for the visit to Kirinyaga County:

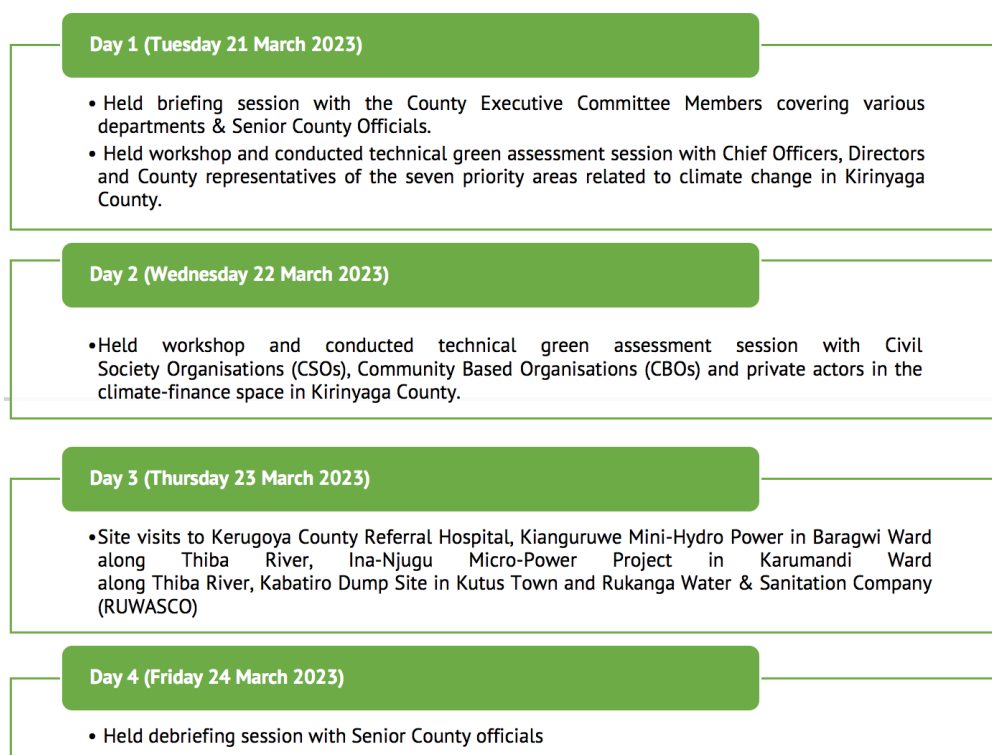


Figure 14: Kirinyaga County schedule of activities



Figure 15: Workshop with Civil Society Organisations (CSOs) and private sector (Day 2)



Figure 16: Workshop with Civil Society Organisations (CSOs) and private sector (Day 2)



Figure 17: Workshop with Civil Society Organizations (CSOs) and private sector (Day 2)



Figure 18: Workshop with senior county officials (Day 1)



Figure 19: Workshop with senior county officials (Day 1)



Figure 20: Workshop with senior county officials (Day 1)



Figure 21: Briefing Session with the County Executive Committee Members (Day 1)



Figure 22: Briefing session with the County Executive Committee Members (Day 1)





Figure 23: Site Visit to the Kianguruwe Mini-Hydro Power (Day 3) with Community Committee Members



Figure 24: Site Visit to the Ina-Njugu Micro-Hydro Power Project - Uncompleted Penstock (Day 3)



Figure 25: -Site Visit to the Kianguruwe Mini-Hydro Project - Power House - (Day 3)



Figure 26: Site Visit to Kerugoya County Referral Hospital - New complex (Day 3)



Figure 27: Site Visit to the Ina-Njugu Micro- Hydro Power Project in Karumandi Ward along Thiba River (Day 3)



Figure 28: -Site Visit to the Kianguruwe Mini- Hydro Power Project in Baragwi Ward along Thiba River (Day 3)



Figure 29: Site Visit to Kerugoya County Referral Hospital (Day 3)



Figure 30: Site Visit to Kerugoya County Referral Hospital (New Complex) - Installed Solar Panels (Day 3)





Figure 31: Debrief Session with the County Executive Committee Members (Day 4)



Figure 32: Debrief Session with the County Executive Committee Members (Day 4)



Figure 33: Site Visit to River Ragati Water intake - Rukanga Water Project (Day 3)



Figure 34: Site Visit to Rukanga Water project treatment works (Day 3)



Figure 35: Site Visit to Rukanga Water & Sanitation Company - Management Team (Day 3)



Figure 36: Site Visit to Kabatero dumpsite in Kutus Town (Day 3)



Figure 37: Site Visit to Kabatero dumpsite in Kutus Town (Day 3)



Figure 38: -Ste Visit to the Ina-Njugu Micro-Hydro Power Project with Community Committee Members (Day 3)

## 5.1 Preliminary green priority areas

The following thematic areas emerged as key priority

sectors for Kirinyaga County as a result of discussions and interactions with various stakeholders and assessments conducted during workshops and site visits:

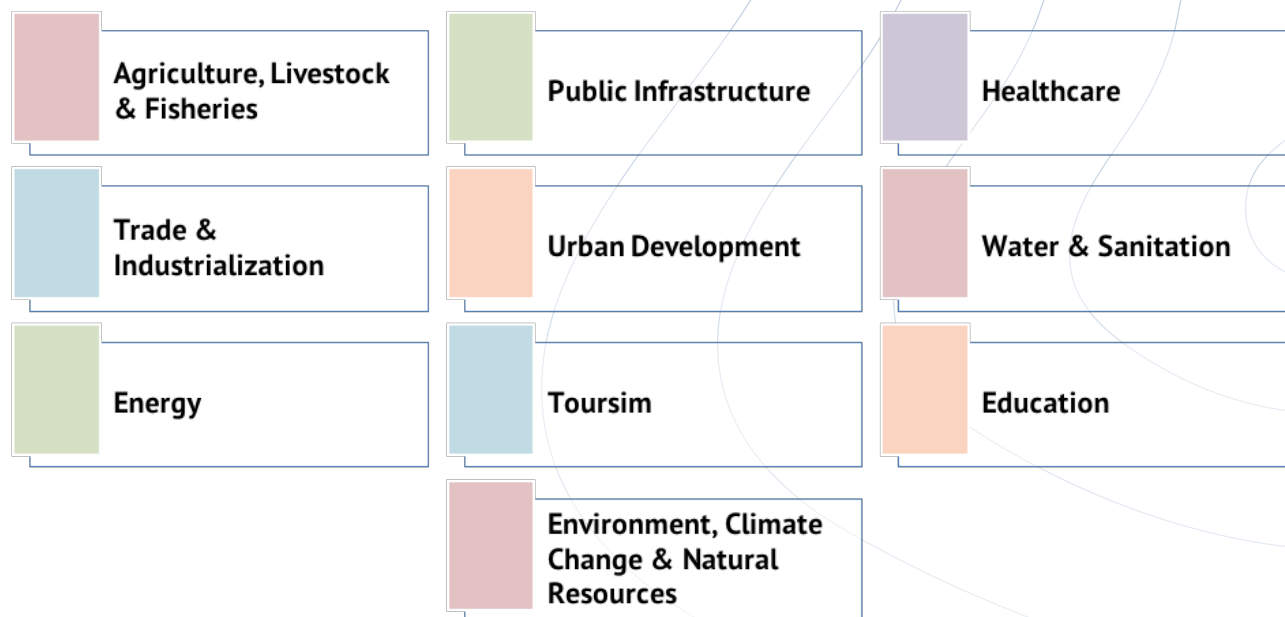


Figure 39: Kirinyaga County's key priority sectors

These sectors are also identified as priority areas in the County Integrated Development Plan (CIDP), which the County Government is keen to implement projects in the medium term.

### Agriculture, livestock and fisheries

The agriculture sector is the primary economic activity in the County employing up to 87% of the population. Nonetheless, the sector has faced several challenges that have hampered its growth, including low agricultural productivity, inadequate access to affordable credit and inputs and insufficient market access and information. Based on the 2023-2027 CIDP, Kirinyaga County plans to address these issues relating to sustainable agricultural practices (which aligns with United Nations Sustainable Development Goals (SDGs 2) – End hunger, achieve food security and improved nutrition and promote sustainable agriculture) by establishing a revolving fund for inputs, creating farmer based savings and credit entities, value addition, private sector involvement in extension, domesticating national policies and laws enabling the enactment of legislation and promoting application of climate-smart technologies in agriculture.

### Public infrastructure

Kirinyaga County's overarching goal is to provide and maintain a functional and reliable integrated road network and infrastructure to promote social and economic development. In the 2018-2022 CIDP implementation period, the County improved urban infrastructure by constructing 101,100 square metres of smooth all-weather surfaces for motorways and pedestrian

walkways, cabro parking spaces, and implemented street improvement projects in five major towns (Kianyaga, Kutus, Kagio, Kerugoya and Wang'uru). Nonetheless, the sector faces several challenges, including encroachment on existing road reserves, low-quality road construction materials, insufficient capacity by local contractors, and inadequate construction and maintenance funding, which has slowed project implementation. According to the 2023-2027 CIDP, the County government intends to improve livelihoods and quality infrastructure through public awareness and sensitization to keep off-road reserves, adoption of new technology for road construction, enhancing local contractors' capacity and timely payment as per contracts to ensure timely project completion, and enhancing collaboration with neighbouring counties and the national government in projects implementation. The County also intends to improve the roads' drainage systems, improve disaster management by operationalizing the fire station and installation of solar-powered floodlights to enhance security in different parts of the County.

### Healthcare

The overall objective of Kirinyaga County's health sector is to achieve "Health for All" by strengthening the healthcare system at all levels to ensure that essential services are provided throughout the human life cycle. The County had 256 health facilities as of 2022 (comprising 70 public health facilities, 27 mission/faith-based facilities and 160 private clinics and hospitals), with a total installed bed capacity of 2,206 across all the institutions. Furthermore, there are 4 level four public hospitals located in Kirinyaga Central, Gichugu,



Ndia and Mwea Constituencies as well as 116 level one community units located throughout the county. Over the last five years, the County government has opened five dispensaries (Umoja, Kianjiru, Kiamwathi, Kamwana and Kiumbui) and five laboratories (Joshua Mbai, Kangu, Karimaini and Riakithiga), thus greatly reducing travel time between homes and healthcare facilities. Nonetheless, various challenges continue to exist that have resulted in gaps in the quality of healthcare provided, such as limited resources that have hampered the scaling up of curative health services in public facilities, limited quality management system, lack of investment in mental health professionals, and insufficient budget allocation for administration, management and coordination of health services. Going forward, the county intends to promote universal health coverage programs, strengthen public-private partnerships, complete stalled health facilities, and implement a management information system in all public health facilities to promote the delivery of quality healthcare to Kirinyaga residents, which aligns with SDG 3 - Good Health and Well-Being.

## Trade and industrialisation

Kirinyaga County hosts 16 industries, the majority of which specialize in agricultural products<sup>12</sup>. There are five tea factories (Thumaita Tea Factory Company Limited, Kimunye Tea Factory, Kangaita Tea Factory, Mununga Tea Factory and Thima Tea Factory), one coffee miller (Kenya Planters Co-operative Union - KPCU), two maize millers (Joy Millers Limited and Century Millers) and seven major rice millers (Mwea Rice Mills, Mwea Rice Growers Multipurpose Co-operative Society (MRGM), Tai Rice Millers, Victory Rice Millers, Top Grade Rice, Nice Rice Millers Limited and Boma Rice Millers Limited). Furthermore, 22 jua kali associations exist throughout the County supporting the sector's growth. In the 2018-2022 CIDP implementation period, Kirinyaga County upgraded 15 markets located in major towns and also provided roasting, grinding and packaging machinery to support value addition in the coffee value chain. Going forward, the county plans to encourage product diversification, strengthen market links and promote fair trade practices, all of which are expected to create a conducive business environment which aligns with SDG 9 on Industry, Innovation, and Infrastructure. In addition, the establishment of an industrial park in Sagana is anticipated to attract private investors, primarily from the agro-processing sector. It is expected that the new industries will use renewable energy sources, particularly solar energy and that a circular economy model will be used to manage resources, including waste water reticulation.

## Urban development

The County's Lands, Physical Planning and Housing Department is responsible for urban development, which aims to improve the livelihoods of residents through efficient land resource management, equitable access, secure tenure and sustainable housing. In the 2018-2022 CIDP implementation period, Kirinyaga commenced the development of a County Spatial Plan and the Kerugoya-Kutus Municipal Plan, which is expected to create commercial and investable opportunities for service providers and development partners. Nonetheless,

the sector has faced several challenges as a result of increased population density and rapid urbanization, which has reduced available land for construction and resulted in high land values. Consequently, the County intends to engage partners to improve urban planning and implement affordable green housing schemes on parcels of land acquired as part of urban infrastructure development and sustainable housing plan, which aligns with SDG 11 - sustainable cities and communities.

## Water and sanitation

The primary sources of water in Kirinyaga are rivers Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and Ragati. In addition, there are 12 water pans, 3 dams, 208 shallow wells, 29 unprotected springs and various boreholes that provide water to the County residents. Thiba Dam (15.6 million cubic meters) is one of the water projects completed in 2022 to serve and support rice farming in the County, with a primary focus on the Mwea region. Furthermore, the County is developing the Kerugoya-Kutus sewerage system, which was 40% completed by the end of 2022 in line with the Urban Centres Liquid Waste Management Program. The sewerage system is expected to serve the sewerage needs of over 10,000 households in Kerugoya and Kutus. Project duplication between the County and national government stalled projects as a result of political interference and management issues, and a lack of adequate administration and operational support has hampered the development of water and sanitation projects and services in Kirinyaga. Based on the 2023-2027 CIDP, the County plans to increase budgetary allocation and solicit support from development partners in funding large-scale water and sanitation projects, and capacity building for employees to deliver quality services. Increasing the County's access to clean and safe water as well as enhancing a healthy and pollution-free environment aligns with United Nations Sustainable Development Goals (SDGs) 6 on Clean Water and Sanitation.

## Energy efficiency

The major towns and urban centres such as Kerugoya, Sagana, Wang'uru, Kianyaga, Kimunye, Kagio, Kutus and Kagumo, are connected to the national grid electricity; however, firewood is the primary source of energy used by approximately 52% of households in the rural areas. Given the slow uptake and adoption of clean energy in households and institutions, the County government of Kirinyaga intends to promote the use of renewable energy sources by developing and coordinating renewable energy projects. Furthermore, the County has set aside land in Kimbimbi Forest for the establishment of an Energy Centre to promote clean energy and conservation initiatives (which aligns with SDG 7 - Affordable and Clean Energy). The County government of Kenya is also keen to explore opportunities for the development of solar energy in South Ngariama, Mwea and hydropower at various water cataracts as well as wind energy in the near term. Furthermore, Kirinyaga County plans to promote renewable energy adoption by installing solar panels in public buildings and supporting the development of alternative renewable energy by both the public and private sectors.

<sup>12</sup> Kirinyaga County Integrated Development Plan 2018-2022

Tourism

Tourism is a strategic sector in Kirinyaga, with the potential to significantly contribute to socio-economic development due to the presence of tourist sites. The key attractions include Mt. Kenya National Park, Sagana white water rafting and Daraja ya Ngai (“God’s Bridge”), as well as multiple waterfalls located in the upper parts of the County. In the CIDP 2018-2022 implementation period, poor infrastructure, low budget allocation, and a lack of tourism professionals in the department, hampered the development of strategic tourism initiatives in the County. Going forward, the County Government of Kirinyaga intends to capitalize on the synergies it has with the national government to increase tourist attraction, resulting in sector growth that will eventually boost the local economy.

Education

Kirinyaga County has 348 Early Childhood Development Centres (ECDs), 326 primary schools, 143 secondary schools, one public university (Kirinyaga University), one private university (TESCO College), two public colleges (AHITI Ndomba and Kamweti ATC), 11 Youth polytechnics, five accredited colleges and eight private non-accredited colleges<sup>13</sup>. The County has continued to make sustained investments in the education sector, including the construction of new educational facilities, renovation of dilapidated institutions and equipment purchases, which has resulted in increased student enrollment. As part of the 2023-2027 CIDP, the County Government of Kirinyaga intends to provide adequate funding to increase the number of competent instructors and other

support staff in the education centres, as well as improve the existing infrastructure, including the provision of modern equipment. These initiatives are expected to promote inclusive and equitable quality education which aligns with SDG 4 - Quality Education.

Environment, climate change and natural resources

The leading causes of environmental degradation in Kirinyaga County are deforestation, improper solid waste disposal, community cultivation along riverbanks and pollution from industries and farmers. Residential areas and car washes located on riverbanks have also contributed significantly to water pollution. In addition, the County’s poor solid waste management system has led to widespread dumping, particularly in urban areas. Furthermore, climate variability and climate change have emerged as a major threat to the sustainable development of the County as a result of extreme weather events that have led to the drying up of some rivers and also flooding, particularly in the lower parts of Mwea. Kirinyaga is also experiencing the effects of the receding glaciers on Mount Kenya, a water tower for the County, which has an impact on sectors such as agriculture which relies on the water sources for irrigation. To address these issues, Kirinyaga County intends to plant more trees, particularly along rivers, roads, public spaces and schools to protect the environment from further degradation. To promote climate change mitigation and adaptation measures in the County, other actions to be implemented include the construction of water pans that will reduce river water withdrawals and public education on environmentally friendly technologies.

5.2 Green assets identified

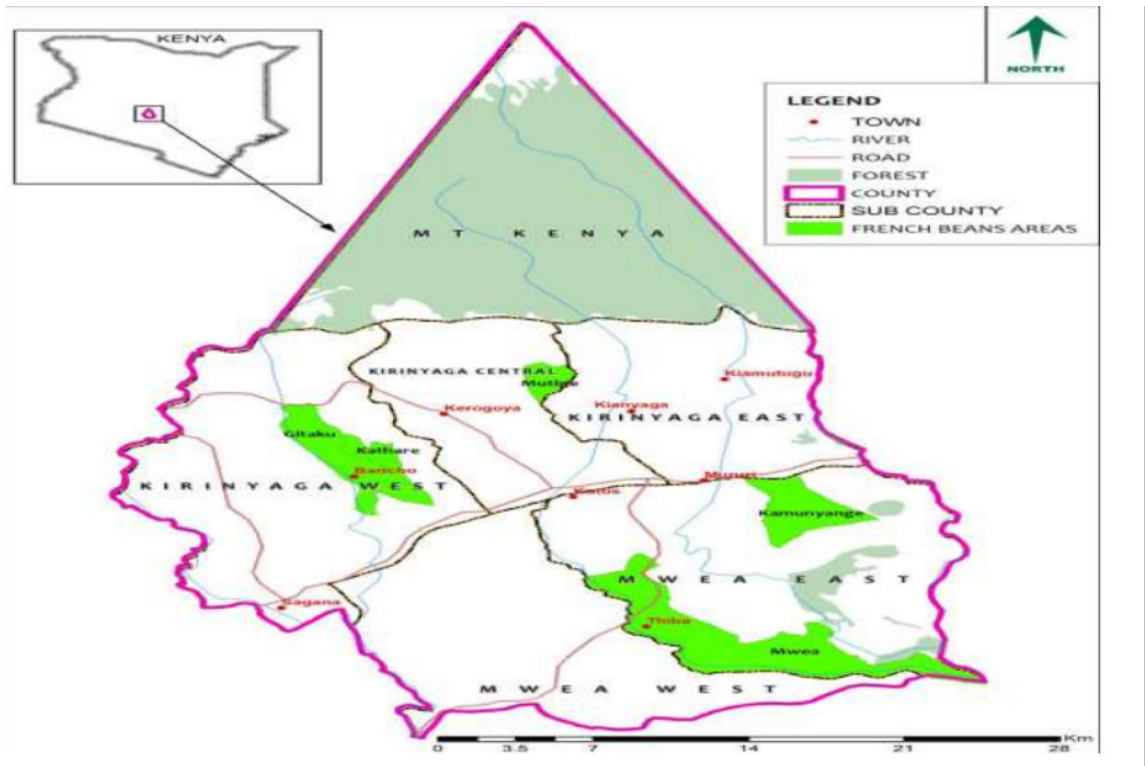


Figure 40: Map of the distribution of green assets in Kirinyaga County

Source: World Resources Institute (WRI)

<sup>13</sup> Kirinyaga County Integrated Development Plan 2018-2022



Overview of green assets in Kirinyaga County

The altitude of Kirinyaga County ranges from 1,158 meters above sea level in the south to 5,380 meters above sea level at the summit of Mount Kenya. The mountain which is located in the northern region, greatly influences the County's landscape and other topographical features. The climatic and rainfall pattern of the County is tropical and greatly influenced by its location along the equator and on the windward side of Mount Kenya. Kirinyaga has two rainy seasons: the long rains from March to May, and the short rains from October to December. The amount of rainfall declines from the high-altitude slopes of Mt. Kenya towards the semi-arid zones in the eastern part of the Mwea constituency. The following key green assets make up the County's unique landscape profile:

Table 5: Green assets in Kirinyaga County

Water bodies	Mountains and hills	Forests
Sagana River	Mount Kenya	Mt. Kenya Forest
Nyamindi River		Njukiini West Forest
Rupingazi River		Murinduku Forest
Thiba River		Kariani Forest
Rwamuthambi River		Kamuruana Forest
Ragati River		Karimandu forest
		Kerugoya Urban Forest

Source: Kirinyaga County Integrated Development Plan 2023 - 2027

Kirinyaga has six major rivers, which drain into the Tana River: Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and Ragati. These rivers are the County's primary source of water which are channelled through canals to support irrigation in the lower zones, particularly in the Mwea sub-county. The rivers are also important sources of domestic water through various water supply schemes. Kirinyaga County has seven forests, five of which are gazetted: Mt. Kenya Forest (35,043 ha), Njukiini West Forest (570.2 ha), Murinduku Forest (194.2 ha), Kariani Forest (24.28 ha) and Kamuruana Forest (23 ha) and the other two are non-gazetted forests - Karimandu forest (12 Ha) and Kerugoya urban forest (10 Ha).

Green assets shared with other counties

Mount Kenya which hosts the Mt. Kenya National Park and the Mt. Kenya Forest which are the key natural resources that Kirinyaga shares with neighboring counties. Mt.

Kenya is located approximately 90 kilometres north of the equator in the former Eastern and Central Provinces and cuts across six counties in Kenya - Meru, Embu, Laikipia, Kirinyaga, Nyeri and Tharaka Nithi. The mountain's summit elevation of 5,200 meters makes it the highest in Kenya and the second highest in Africa after Kilimanjaro. To avoid conflicts over the control and management of shared/transboundary resources such as Mount Kenya, conservation and management must be harmonized and unified.



Figure 41: Mount Kenya peaks

Source: UNESCO, World Heritage Convention

Green assets owned by the national government

The Kenya Forest Service (KFS), a state corporation, manages the five gazetted forests in Kirinyaga County (Mt. Kenya Forest, Njukiini West Forest, Murinduku Forest, Kariani Forest and Kamuruana Forest). Kenya Wildlife Service (KWS) manages Mount Kenya National Park, which was established in 1949 to protect Mount Kenya, the wildlife, and the surrounding environment, as well as serve as a habitat for wild animals and a water catchment area. The national park is 715 square kilometres in size, with the majority of it above the 3,000-meter contour line.

5.3 Suggested green projects

Based on the identified thematic areas and Augusto & Co's evaluation of the green assets, the following green projects were proposed for development and implementation:

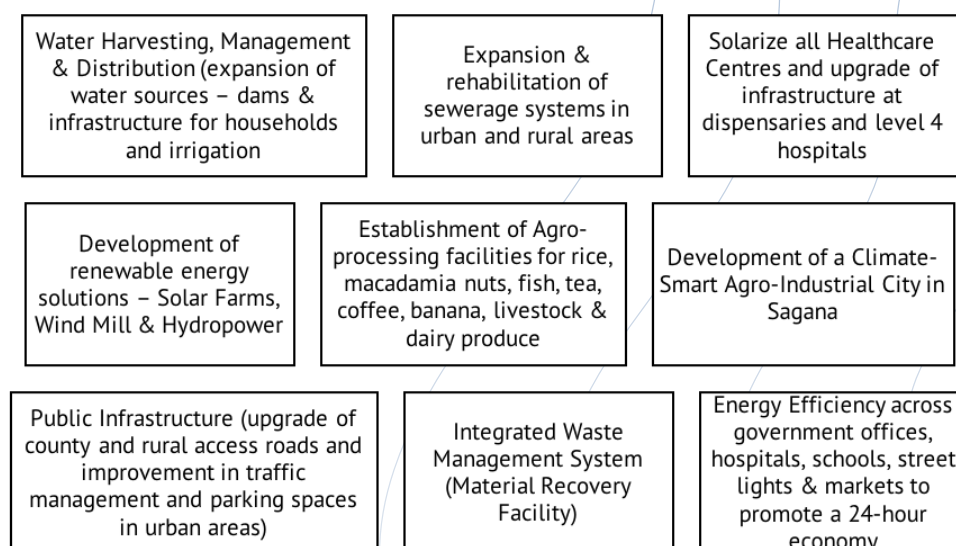


Figure 42: Kirinyaga County Suggested Green Projects

### Water harvesting, management and distribution

As at the end of 2022, about 65% of Kirinyaga County households had access to safe and potable water from 55% five years ago<sup>14</sup>. The growth was attributed to the drilling of 12 boreholes and the construction of 5 water tanks as well as the supply of residents with portable water tanks and increased piping coverage across various wards. The rivers in the County are the primary sources of water which have been harnessed through canals to provide water to the lower zones, mainly for irrigation purposes. Domestic water has also been drawn from these rivers through piped systems managed by the water service providers. The County's Water and Irrigation Services Department which is responsible for ensuring adequate water supply for domestic and irrigation use, plans to improve access to clean, safe, and potable water for all households (which aligns with SDG 6) by building additional water intakes, water towers and maintaining existing boreholes through the installation of solar pumps.

Kirinyaga County has 12 Water Resource User Associations (WRUA) and two regulated water service providers: Kirinyaga Water and Sanitation Company

Limited (KIRIWASCO) and Rukanga Water and Sanitation Company Limited (RUWASCO). KIRIWASCO was incorporated in 2006 to carry out water and sewerage services in both urban and rural areas of the County. Some of the ongoing projects that KIRIWASCO is implementing to improve water quantity, quality and reliability within Kirinyaga include the construction of a 30,000m<sup>3</sup> per day bulk water supply system for Kerugoya, Kutus, Kagio and Sagana as well as the reinstatement of water systems affected by road work improvement projects. RUWASCO started as a community-based project in 1999 and was later adopted by the County as a water service provider following the implementation of the Water Act in 2016. The company originally intended to serve 5,000 homesteads but now serves over 20,000 homes. Despite a daily demand of 1,500 cubic litres of water, RUWASCO's supply capacity is 500 cubic litres of water per day. The company uses a single water intake on the Ragati River to supply water to residents in Mwea West, which includes the Rukanga and Mutithi areas. Nonetheless, the company faces several challenges that limit its ability to expand, including high non-revenue water due to technical and human-induced activities and low water levels, which have reduced water pressure given that RUWASCO distributes water to its customers using gravity.



Figure 44: Water Intake at the Ragati River for RUWASCO

Source: Augusto & Co. Research



Figure 43: Water treatment tank at Rukanga Water Treatment Works

<sup>14</sup> Kirinyaga County Integrated Development Plan 2023-2027

RUWASCO intends to use digital metering to address the high non-revenue water, thus allowing the company to computerize the water distribution system. Furthermore, RUWASCO intends to increase its water supply services to 12,000 more homesteads by sourcing water from the upstream side of the Ragati River and other rivers in the area through the construction of new water infrastructure. In the same vein, KIRIWASCO has similar challenges and plans to scale water harvesting and distribution to meet the growing demands of the citizens.

**Expansion and rehabilitation of sewerage systems in urban and rural areas**

Before 2018, Kirinyaga County had no central sewerage system and households with flush systems had to build their septic tanks. However, the County's Environment and Natural Resources Department, in collaboration with the Kerugoya-Kutus Municipality, is building a sewerage system, facilitated by the Tana Water Works Development Agency, which will serve 10,000 households in Kutus and Kerugoya which was 40% complete as at the end of 2022. Approximately 90% of households use pit latrines, while 6.2% use ventilated improved pit (VIP) latrines in Kirinyaga County. The proportion of people who have flush toilets is 3.3%, bucket 0.2% and 0.4% do not have any form of sanitation<sup>15</sup>. The County Government of Kirinyaga intends to complete the sewerage system as well as support the implementation of new sewer lines through the Urban Centres Liquid Waste Management Program under the 2023-2027 CIDP. Furthermore, RUWASCO is developing a decentralized treatment facility (DTF) in Makutano, with a capacity of receiving 100 metres cubic of liquid waste for treatment. In addition, the County government plans to create awareness about the significance of wastewater regulation enforcement to encourage proper use and sanitation practices among residents in the County.



**Figure 46: Installed solar panels (126 units) at the Kerugoya County Referral Hospital (New Complex)**

**Solarise all healthcare centres and upgrade infrastructure at the hospitals**

The healthcare system in Kirinyaga County consists of 256 health facilities as of 2022 ranging from level 1 to level 5 public hospitals as well as private health centres<sup>16</sup>. The County's Health Department is in charge of health management, with decentralized management functions at the sub-county and health facility levels. Due to the high cost of electricity in operating the hospitals, estimated at Kshs 22 million per year, the County intends to invest in solar power systems for all healthcare facilities to ensure that services continue uninterrupted and that the high electricity bills are significantly reduced. The County upgraded the Kerugoya County Referral Hospital to a level 5 facility and refurbished the Kimbimbi and Kianyaga sub-county hospitals to a level 4 facility as part of the CIDP 2018-2022 healthcare deliverables. The Kerugoya County Referral Hospital upgrade, through the construction of a new complex, has been completed while the civil works on the other two are still ongoing. The new complex added 341 beds to the existing Kerugoya County referral, which previously had a capacity of 250 beds. The new hospital complex, which President William Ruto commissioned in June 2023, provides specialized services in paediatrics, ear, nose, and throat (ENT) clinic, oncology, dermatology, orthopaedics, medical outpatient clinic, surgical outpatient, neuro-paediatric clinic, obstetrics and gynaecology. The hospital also has a 12-bed intensive care unit (ICU) and a 12-bed high-dependency unit (HDU), with all of its beds equipped with oxygen. The new facility also has 126 solar panels installed, which support the heating of hospital water in 8 boilers, lowering the cost of electricity and running the hospital.



**Figure 45: Water boilers at the Kerugoya County Referral Hospital (New Complex)**

Source: Augusto & Co. Research

There is an opportunity to harness the use of renewable energy in the new hospital complex through the development of a solar storage facility to maximize the sunlight beyond boiling to lighting the building complex and other minor operational requirements. The hospital complex experiences water shortages which can be resolved by addressing KIRIWASCO's challenges, being the hospital's main water service provider. To ease patient referrals, the County has also operationalized

the command centre and purchased three ambulances. In addition, the County government has developed an integrated hospital information management system where all outpatient modules are operational to increase the sufficiency and effectiveness of service delivery. It is expected that these initiatives will enhance the provision of quality and affordable healthcare to County residents (which aligns with SDG 3 – Good Health and Well-Being).

<sup>15</sup> Kirinyaga County Integrated Development Plan 2018-2022

<sup>16</sup> Kirinyaga County Integrated Development Plan 2023-2027



## Development of renewable energy solutions – solar farms, wind mill & hydropower

The majority of rural homes in Kirinyaga lack electricity (estimated at 92% of rural households) and about 40 trading centres are not connected to the national grid. As a result, the County government intends to improve electricity connections by developing renewable energy solutions (solar, hydro and wind), as well as increase awareness and access to affordable and clean energy which aligns with SDG 7. There has been a slow uptake and adoption of clean energy solutions in households and institutions across the County, therefore, the County Government of Kirinyaga has set aside land in Kimbimbi for the establishment of an energy centre to promote awareness and increase widespread acceptance among the rural communities. Furthermore, potential locations for solar projects that have been identified, include the Murinduko area in Mwea, which receives a lot of sunlight compared to other parts of the County. These initiatives will improve electricity provision to households that are

not connected to the national grid.

In addition, there is potential to upgrade existing small-scale hydro mini-grids, such as the Kianguruwe Mini-Hydro Power in Baragwi Ward and rehabilitate previously abandoned hydro-power solutions such as the Ina-Njugu Micro-Power Project in Karumandi Ward, both of which are located along the Thiba River. Kianguruwe mini-hydro power, a community-run project, generates 22Kilowatts of electricity and serves 80 households over a 1.5-kilometre area. The project, however, has the potential to be harnessed to 250 kilowatts, to cover 5km and serve approximately 1,000 households. To increase its capacity generation, the project would require two additional penstocks, a three-phase high-capacity generator and turbines. The project's existing infrastructure was installed in 2015 and it is maintained by the community. The households pay Kshs 200 per month for unlimited power use, with the fees collected going toward project maintenance and security.



**Figure 47: Penstock at the Kianguruwe Mini-Hydro Power Project**

Source: Augusto & Research



**Figure 48: Waterfall at Kianguruwe Mini-Hydro Power Project along Thiba River**

The Ina-Njugu project was founded in 2005 by 1,500 community members in Karumandi Ward. The members were supposed to contribute monthly to the project's development; however, the project stalled at the point of purchasing a turbine because the members could

not raise enough funds to procure the equipment. According to the project committee, the mini-grid which was supposed to cost Ksh 38 million to complete in 2016 has the potential to generate 1 Megawatt of electricity and serve over 1,000 households.



**Figure 49: Installed Infrastructure at Ina-Njugu Micro-Hydro Power Project**

Source: Augusto & Co. Research



**Figure 50: Incomplete Penstock at the Ina-Njugu Micro-Hydro Power Project**

Kirinyaga County has a stock of abandoned hydro-power projects which could be revamped to meet the growing electricity demand for the residents. According to the Kirinyaga Hydro Power Baseline Survey Report of 2022, 81% of the 16 micro hydropower projects, most of which are community-based, were dormant or abandoned. If the projects were to be operationalised, it is estimated that they would generate a total of 5.1 megawatts. The stalled hydropower projects in the County include Thiba Mini Hydro Project, Kathamba Hydro Power Project, Gitemani Incubator Self-Help Group Hydro Power Project, Mung'etha Hydro Power Project, Kiangima Kiangibuini Hydro Power Project, Muketure Hydro Power Project, Kibai Hydro Power Project, Thiba Canal Ultra Low Head Micro Hydro Power Project, Kiburi Micro Hydro Power Project, Ndundu Micro Hydro Power Project, Kambumbu Hydro Project and Wanyiba Ruku Hydro Power Project.

### Establishment of agro-processing facilities

Kirinyaga County hosts several agro-processing facilities, particularly in the tea, coffee and rice value chains. However, given the good production of tomatoes, sugarcane, mangoes, watermelons, bananas and green grams, there is huge potential, especially in the value addition and agro-processing and tinning industries in the County. Kirinyaga intends to promote value addition and product diversification by mobilizing financial resources through Public-Private Partnerships, capacity building on value addition, market information dissemination, and the development of a policy on value addition of local produce. Going forward, the County plans to support the coffee value chain by upgrading coffee factories to use eco-pulpers and solar driers with thermal regulators. Consequently, the County government in partnership with development partners has begun supporting seven factories out of the 75 coffee processors in Kirinyaga, to extend support to the others at an estimated cost of Kshs 600 million, according to the County Agriculture Department. Furthermore, the cost of power incurred by the factories is high and can be reduced through the use of alternative energy sources such as solar and wind energy.

### Development of climate-smart agro-industrial city in Sagana

Kirinyaga County has set aside approximately 250 acres for the development of an industrial park aimed at manufacturing and agro-processing of agricultural products to promote value addition, increase farmers' income and expand the County revenue base. The earmarked land which is located close to the Sagana Railway Station, the Sagana River, and the Kenol-Sagana-Marua dual carriageway, is expected to be an additional attraction to industrial investors.

The Sagana Park will be the first climate-smart agro-industrial city in the country, aiming to maximize Kirinyaga's agricultural production potential while also supporting Kenya's industrialization strategy. The Park will include specialized facilities for agro-processing, agro-logistics and storage, farm machinery and equipment, social services and general trading,

business, and commercial services. The industrial city will play an important role in both direct and indirect job creation, as well as wealth redistribution throughout the County. Kirinyaga earmarked Kshs 275 million for the development of the Sagana Agro-Industrial Park in the FY 2023/2024 budget. However, the County government is keen to partner with private investors to implement the industrial park master plan which is expected to have significant sustainable elements geared towards making it the first climate-smart agro-industrial city in Kenya.

### Public infrastructure

Kirinyaga County intends to improve rural road connectivity to ensure easy transportation of materials, goods, and traders, resulting in economic growth. This will be accomplished through the continued implementation of the Nyorosha Barabara Mashinani initiative, which resulted in an increase in road upgrades of approximately 5,000 kilometres over the last five years (2018 - 2022). Going forward, the County Government of Kirinyaga intends to improve mobility and accessibility in different parts of the County by constructing and maintaining roads (1,500 kms) and bridges (3), upgrading cabro parking and drainage systems, improving disaster management by operationalizing the fire station and installation of fire hydrants (5) in major towns as well as installation of solar powered floodlights to enhance security in different parts of the County<sup>17</sup>.

### Integrated waste management system (material recovery facility)

Kirinyaga generates about 400 tonnes of solid waste per day and due to an inadequate solid waste management system, there is rampant dumping, especially in the urban centres. The County intends to establish a material recovery facility (MRF) under an integrated waste management system to improve waste segregation and recycling. The County government plans to encourage the adoption of best practices in waste management by designing municipal waste collection points and enacting a solid waste management bill to control waste generation and handling behaviour and conduct in the County.



Figure 51: Kabatero Dumpsite in Kutus Town

Kirinyaga County has three dumpsites (not officially recognised by NEMA), the largest of which is the Kabatero/Kutus dumpsite (15 acres). The Kabatero dumpsite, which receives municipal waste, serves the County's eastern and western parts. The dumpsite receives

<sup>17</sup> County Annual Development Plan 2023/24

circa 150 to 180 tonnes of waste per day for six days a week. Three County owned trucks collect waste from secondary receptacles that serve as garbage collection points and transfer same to the dumpsite. Two private garbage collectors and one tea factory are among the paying customers who are charged Kshs 5,000 per year for disposal of refuse at the Kabatero dumpsite. Going forward, the County plans to rehabilitate the dumpsite to include a weighbridge, garbage truck landing bay, solar-powered lighting, and an office for management personnel, which will increase revenue collection from waste management services provided by the County government.

### **Energy efficiency across government offices, hospitals, schools, street lights and markets**

As part of the initiatives to align with the Sustainable Development Goal (SDG 7) goal of access to affordable and renewable energy by 2030, Kirinyaga County plans to promote and support the installation of solar power systems in government offices, schools, healthcare centres, markets, streetlights, and at the household level to reduce forest destruction and environmental degradation. This initiative is expected to promote a 24-hour economy, particularly for trading in the markets. In addition, the County plans to establish an energy centre in Kimbimbi Forest to promote clean energy and energy-saving initiatives throughout Kirinyaga. These initiatives will improve access to electricity across the County.



6

## Risk analysis on suggested green projects

	Climate risks	Environmental risks	Legal risks	Reputational risks	Financial risks
<b>Water harvesting, management and distribution</b>	Prolonged drought may lead to drying up or a reduction in the levels of the water sources.	Pollution of the water sources due to distribution activities such as developing the infrastructure that will take water to the tanks and the residents.	Unpaid bills for metered water to residents, thus leading to high non-revenue water proportion.	<p>Diversion of funds allegations.</p> <p>Potential of water quantity and quality disruptions.</p> <p>Poor quality construction of the water infrastructure.</p>	<p>Inadequate funding.</p> <p>The inability of the water company to run the project's profitability to repay their financial obligations.</p>
<b>Expansion and rehabilitation of sewerage systems in urban and rural areas</b>	The output of the treatment plants such as methane gas and poorly treated wastewater may cause environmental pollution which would lead to climate change risks in the long term.	<p>Environmental pollution from the activities of developing the water and sewerage treatment plants.</p> <p>Possibility of polluting the water sources where the wastewater is discharged if it is not properly treated.</p>	Unpaid bills for the residents who will be connected to the sewerage treatment plants	Lack of public participation in project implementation.	<p>Inadequate funding to implement the projects.</p> <p>The inability of the project's to be run profitably to repay the financial obligations.</p>
<b>Solarise all healthcare centres and upgrade infrastructure</b>	<p>The process of installing solar systems may result in the release of greenhouse gases into the environment.</p> <p>Some of the materials and equipment used in the upgrade of the infrastructure at the existing hospitals may pollute the environment thus increasing the risk of climate change.</p>	<p>Some of the products used in the manufacturing of photovoltaic systems contain toxic materials and hazardous products which can indirectly affect the environment.</p> <p>The upgrading process which includes renovations may cause land, water and air pollution.</p> <p>Pollution from e-waste linked to solar panels during disposal.</p>	Potential conflict between the Kenya Power and Lighting Company (KPLC) and the County government, especially since the hospitals rely heavily on the national power provider for the energy, thus reducing the revenues received by KPLC.	<p>Greenwashing, if the minimum criteria required for the renewable energy sectors is not met.</p> <p>Lack of proper and timely reporting as required.</p> <p>Lack of public participation and involvement in the planned upgrades of the hospitals.</p>	<p>Inadequate funding due to the initial high cost.</p> <p>Rapid obsolescence of solar technology given innovations in the field would require the solar panels to be replaced after a while irrespective of the high installation costs.</p>

	Climate risks	Environmental risks	Legal risks	Reputational risks	Financial risks
<b>Development of renewable energy solutions – solar farms, wind mill and hydropower</b>	The process of installing windmills and solar systems may result in the release of greenhouse gases into the environment.	Some of the products used in the manufacturing of windmills, turbines and photovoltaic systems contain toxic materials and hazardous products which can indirectly affect the environment.  E-waste pollution from disposal of materials used in solar farms, windmills & hydropower projects.	Potential conflict between the Kenya Power and Lighting Company (KPLC) and the County government, given that these initiatives will reduce the revenues received by the national power provider.	Greenwashing, if the minimum criteria required for the renewable energy sectors is not met.  Lack of proper and timely reporting as required.	The inability of the project to cover operational costs once completed.  Inadequate funding due to the initial high cost.
<b>Establishment of agro-processing facilities (Which will use alternative energy sources such as solar and wind energy)</b>	Potential of environmental pollution from the agro-processing facilities which may lead to climate change and environmental risks.	Water pollution from the manufacturing processes.  Air pollution from the gases released during the manufacturing processes.  Land pollution from the waste generated by the facilities.	Probability of a poorly executed environmental impact assessment may conflict with the National Environment Management Authority (NEMA) requirements.	Greenwashing.  Allegations of corruption when engaging potential investors in the agro-processing facilities	Inadequate funding.
<b>Development of a climate-smart agro-industrial city in Sagana</b>	Potential of environmental pollution from the manufacturing companies in the industrial city may lead to climate change and environmental risks.	Water pollution, air pollution and pollution from the activities of developing the industries.	Probability of a poorly executed environmental impact assessment may be at variance with the National Environment Management Authority (NEMA) requirements.	Greenwashing.  Allegations of corruption when engaging potential investors in the Industrial Zone.	Inadequate funding.
<b>Public infrastructure (roads upgrade through the construction of proper drainage systems and installation of solar-powered floodlights to enhance security)</b>	Some of the materials and equipment used in the construction of road infrastructure pollute the environment thus increasing the risk of climate change.  Deforestation of existing land use could result in changes in rainfall patterns and the long run lead to drought.	Land pollution during the development of the infrastructure.  Air pollution during construction.  Water pollution during construction of the facilities.  Sound Pollution during construction.	Probability of engaging contractors who may not fully deliver on the projects as per the stipulated standards.	Public participation in the developments will be critical in ensuring that the projects are beneficial and meet the needs of County residents	Availability of resources for road infrastructure construction.
<b>Integrated Waste Management System (Material Recovery Facility)</b>	Improper management of the collected waste may lead to flooding on account of drainage blockages and health hazards.	Air pollution at the dumpsites in the three locations.  Land pollution at the dumpsite.  Water pollution at the waste management facility.	Lack of enforcement of the solid waste management policy which is in the process of formulation and implementation.	The pollution caused by dumpsites poses a health risk to the community living in the area which has caused conflict specifically at the Kabatero/Kutus dumpsite.	Lack of funding to set up the recycling facilities and to implement the integrated solid waste management system.



	Climate risks	Environmental risks	Legal risks	Reputational risks	Financial risks
<b>Energy efficiency across government offices, hospitals, schools, street lights &amp; markets to promote a 24-hour economy</b>	The process of installing solar systems may result in the release of greenhouse gases into the environment.	<p>Some of the products used in the manufacturing of photovoltaic systems contain toxic materials and hazardous products which can indirectly affect the environment.</p> <p>Pollution from e-waste linked to solar panels during disposal.</p>	Potential conflict between the KPLC and the County, especially because public institutions heavily rely on the national power provider for energy, thus reducing the revenues received by KPLC.	<p>Greenwashing, if the minimum criteria required for the renewable energy sectors is not met.</p> <p>Lack of proper and timely reporting as required.</p>	Inadequate funding due to the initial high cost.



# Green finance capability assessment

Agusto & Co. conducted a green finance capability assessment for Kirinyaga to evaluate the County government's skills and ability to manage green financial instruments and related projects. Despite the County's Climate Change Department's efforts to create awareness of climate change issues through various channels such as the community radio station, there still exists a considerable knowledge gap among the County government staff and residents. As the County prepares to participate in the green finance market, the Kirinyaga County government should put measures in place to provide capacity building for staff, and stakeholders (CBOs, CSOs and private sector players) on climate-related issues. Furthermore, we recognise positively that Kirinyaga County has climate-related laws and plans in place that could aid in the management of the projects and assets identified. Some of Kirinyaga County's climate-related laws, policies and plans are reviewed below.

## a) The Kirinyaga County Climate Change Act, 2023

The Act provides a regulatory framework and mechanisms for the mobilization and facilitation of the County government, communities and other stakeholders to respond effectively to climate change through appropriate adaptation and mitigation measures and actions for connected purposes. The Act is intended to enhance climate resilience through sustainable development, management, implementation, regulation and monitoring of adaptation and mitigation measures and actions. The Act shall be applied by the County government in all sectors of the economy to:

- a) Mainstream climate change responses into development planning, decision making and implementation;
- b) Implement coordinated and integrated response to climate change and its impacts by all actors and stakeholders;
- c) Facilitate effective management of climate change impacts by enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change;
- d) Promote, support and facilitate community-based and community-initiated adaptation and mitigation activities;
- e) Enforce duties and provide incentives for the private sector to contribute to the achievement of low carbon climate resilient development;
- f) Facilitate public participation in climate change

response through capacity development, awareness creation, consultation, representation and access to information;

- g) Establish frameworks and mechanisms for mobilization and transparent and accountable management of financial and other resources for climate change response;
- h) Establish and implement mechanisms to promote and facilitate climate change research and development, innovations, technology development, training and capacity building;
- i) Integrate climate change into the exercise of power and functions of all levels of the County government, including in decentralized units and enhance cooperative climate change governance between the county, neighbouring counties and the national government; and
- j) Contribute to national efforts to address the adverse impacts of climate change and biodiversity loss.

## b) The Kirinyaga County Solid Waste Management Bill, 2020

The Bill provides the legal framework for the management of solid waste in the County and for related purposes. The objective of the Bill is to:

- a) Provide a county legal framework for solid waste management function as spelt out in Part 2 of the Fourth Schedule of the Constitution of Kenya 2010;
- b) Pursuant to Article 69 (1) (d) of the Constitution provide a framework to encourage public participation in the management, protection and conservation of the environment;
- c) Provide for and regulate the participation of the various actors in solid waste management in the county.

The County's Environment and Natural Resources Department intends to have a well-structured environmental regulatory framework to steer a better environmental management system. The framework's tools include a Solid Waste Management Act, a Climate Change Act and a Climate Change Unit. The department is in the final stages of enacting bills on County Solid Waste Management and Climate Change. The passage of these bills, particularly the climate change bill, will help to shape the process of establishing the Climate Change Unit.

**c) The Kutus Municipality Local Physical and Land Use Development Plan, 2020-2030 (Situation Analysis Report)**

As the Kutus municipality's population grows, proper planning for the establishment of necessary services and infrastructure is required. The Kutus municipality faces challenges such as improper waste management, an unreliable rural road network, insufficient infrastructure (water and sewerage), environmental pollution, and a

lack of social amenities. The development of a municipal plan includes programs and policies to address the municipality's current challenges. This document describes the municipality's area physiographic characteristics as well as the current development situation, including population and demographic characteristics, land and land use, housing and human settlement, infrastructure development, transportation, local economy, environment, urban governance, and institutional capacity.

**Table 6: Kirinyaga County capability assessment**

S/n	County capabilities assessment	Status	Justification
<b>CCCF governance, stability, and performance</b>			
1	Presence of a legal and regulatory framework for green/climate finance	Yes	There exists the Kirinyaga County Climate Change Act, 2023 which will guide the County on green/climate finance.
2	Political commitment to green growth and support for use of green finance	Yes	Existence of a County Department that has the mandate covering Environment, Water & Natural Resources. In addition, the County has the County Climate Change Regulations in place, which guide the County in matters of green finance.
3	County government familiarity with the Green Bond Framework and requirements	No	Capacity building in the areas of Green Bond Framework is still required.
4	County capability in managing green funds (preferably for financial return)	Yes	The County has previously implemented a green project by installing solar panels at the new complex of Kerugoya County Referral Hospital which was funded through the annual budget provision.
5	County's ability to apply county-level financial tools	Yes	The County has Finance Bills and policies in place which have been applied previously.
6	County's understanding of frameworks for green finance instruments	No	There is still a need for capacity building in this area
7	County's understanding of stakeholder engagements in the origination, design, implementation, and monitoring and evaluation (M&E) of projects.	Yes	The County has previously implemented projects where various stakeholders were involved. Public Participation is very critical for the County before the implementation of any projects.
<b>Green project and finance experience</b>			
1	County staff dedicated to green finance issues	Yes	Staff in the Environment & Natural Resources Department are knowledgeable on green finance issues.
2	County staff trained in environmental management, climate/ green finance, or related areas	Yes	County staff in the Environment & Natural Resources Department.
3	County staff with project management experience particularly with bonds and green projects	Yes	County staff in the Environment & Natural Resources Department as well as in the Department of Medical Services, Public Health and Sanitation following implementation of the solar panel installation project at the Kerugoya County Referral Hospital.
4	County staff with experience with accessing and prudentially utilising other green financial resources (e.g., donor funds)	Yes	County staff in the Finance and Economic Planning department as the County has previously received grants from development partners to implement various projects in the County.

S/n	County Capabilities Assessment	Status	Justification
<b>Access to appropriate green finance and project experts</b>			
1	Ability of County government to identify and procure experts to support green finance projects	Yes	The County government has previously implemented green projects successfully, hence can procure the support services of experts.
2	Ability of County government to mobilise financing to secure and pay for services rendered	Yes	The County has been able to mobilize funding and pay for services rendered such as in the preparation of the Kutus Municipality Local Physical and Land Use Development Plan, 2020-2030 where consultants were engaged to prepare the document.
3	Existence of coordination mechanisms and experience working with national government ministries and agencies such as the National Treasury that can provide the necessary support.	Yes	Kirinyaga County has various policies in place which guide the process of coordinating with the national government or agencies. Further, every department at the County level is linked to the line Ministry at the National government and they work in close consultation with each other.
4	County's qualification for Financing Locally Led Climate Action (FLLoCA) funds	Yes	The County qualifies for FLLoCA funds because it has climate finance legislation in place through the Kirinyaga County Climate Change Act, 2023 which guides the County on green/climate finance.
5	Has the County successfully received and dispersed FLLoCA funds	Yes	So far, the County has received funds for institutional strengthening including for the participatory climate risk assessment (PCRA) process. The PCRA process will enable counties to identify investment areas/projects after which counties can receive investment grants to apply to these areas/projects.

## 8

# Recommendations

Based on the sessions and workshops with the various stakeholders as well as assessments of existing green assets, Augusto & Co. hereby posits that Kirinyaga County consider the following recommendations in the near term:

**Table 7: Recommendations to Kirinyaga County Government**

Section	Recommendations
<b>County credit risk assessment</b>	<ul style="list-style-type: none"> <li>Kirinyaga County's overall revenue profile requires improvement mainly in fully digitizing all the income lines for business permits, licenses, building approval fees, land rates, hotel fees and parking fees, among other levies. This will also help to address challenges associated with revenue leakages.</li> <li>Kirinyaga County's overall expenditure profile requires improvement, particularly in reducing payroll expenses, which have consistently exceeded the 35% statutory threshold.</li> <li>Kirinyaga County should explore alternative financing options such as the debt capital markets to fund capital development projects as macroeconomic headwinds have placed significant pressure on the National Government's finances.</li> <li>Kirinyaga should develop an Asset Registry</li> </ul>
<b>Green asset and activity assessment</b>	<ul style="list-style-type: none"> <li>The County Government of Kirinyaga needs to increase public sensitization on reforestation and afforestation.</li> <li>Provision of green infrastructure and incentives to attract investments in manufacturing and value addition to products, especially with the plans to set up a climate-smart industrial city in Sagana.</li> <li>Continued investment in County infrastructure to promote the tourism sector.</li> <li>Create awareness of climate change impact and related policies to ensure the protection of the natural ecosystem</li> <li>A deliberate policy of energy efficiency at government offices, schools, hospitals, markets and street lighting.</li> </ul>
<b>County green assets and climate related legislations</b>	<ul style="list-style-type: none"> <li>To avoid conflicts over the control and management of shared/transboundary resources, conservation and management must be harmonized and unified. Further, Counties need to develop asset registers to guide assets and project ownership.</li> <li>There is a need to create awareness in the communities on climate change related policies and impacts by leveraging various stakeholders.</li> <li>Enforce compliance with established County laws and policies such as climate change policies.</li> </ul>
<b>Green finance capability assessment</b>	<ul style="list-style-type: none"> <li>Capacity building of County Staff in all departments on climate change and green finance</li> <li>Capacity building and awareness for key stakeholders such as Members of County Assembly (MCAs), civil society organisations (CSOs), community based organisations (CBOs) and private actors in the County.</li> <li>General County-wide awareness and sensitization on the impact of climate change and how the citizens can support government efforts in restoring the natural ecosystem.</li> </ul>

In our opinion, Kirinyaga County will be properly positioned to implement the suggested green projects if the following steps are pursued in the near to medium term;

- Development of concept notes for the various suggested projects by relevant County Stakeholders
- Undertake feasibility and viability studies on proposed projects as well as cost-benefit analysis
- Obtain requisite approvals (County Executive and Assembly) for the selected projects
- Design and develop approved projects in tandem with sustainability standards
- Obtain relevant County and National Government approval to raise finance to fund projects
- Subject proposed projects to green verification for compliance with the Climate Bonds Standards

- Issue County Bonds to raise funds to execute projects
- Monitor utilization of proceeds and report on use and impact on the environment and the welfare of the citizens.
- Alternatively, Kirinyaga County can utilise a special purpose vehicle (SPV) to ring-fence the green assets to raise funds from the green finance market to execute priority infrastructure projects or partner/support private enterprises in Kirinyaga (with the provision of land, infrastructure and incentives) to access the green finance market to finance identified green projects, especially in the agro-processing and value additions to agricultural produce.

To support the growth of the green finance market, we believe that the national government has a key role to play through:

Provide green finance legislation that are relevant to counties and are applicable to the green finance market

Provide fiscal incentives for entities that issue green bonds to encourage sustainable investments in the country, especially at the county level.

Build capacity around the green economy particularly for key internal stakeholders in the national government.

Figure 52: Recommendations to the national government





# Appendices

## 9.1 Kirinyaga County profile summary

No	Indicator	County 2022	National 2022
	Estimated County Population	610,411 (KNBS, 2019)	1.3% of the total country's population
1.	Males	302,011	49.0%
	Females	308,369	51.0%
	Intersex	31	0.0%
2.	Estimated Population Density (persons/km2)	413	82
3.	Persons with disability (%)	4.6	2.2
4.	Population living in rural areas (%)	77.7	68.8
5.	Children (0-14 years) (%)	28.8	41.1
6.	School going age (4-18 years) (%)	28.9	35.7
7.	Youth 15-29 years (%)	24.1	25.6
8.	Labour force (15-64 years) (%)	64.7	51.2
9.	Elderly population (over 65-year-old)	6.5	3.5
10.	Human Poverty Index (%)	25.2	29.1
11.	Food Poverty (%)	18.8	31.9
12.	Multi-dimensional Poverty (%)	-	56.1
13.	Stunted children %	17.2	19
14.	Gross County Product (Kshs Million)	130,263 (2020)	1.3% share of total GDP (2020)
15.	Average growth of Nominal GCP/GDP (%)	10.4 (2013-2020)	15.30%
16.	GCP per capita (Kshs)	213,402.12	179,021.60
	Percentage of children under 1 year of age fully immunized	98%	84%
17.	Child Mortality Rate (CMR)	24/1000	31.7/1000
	Under Five Mortality Rate (U5MR)	39/1000	52/1000
	Maternal Mortality Rate	248/100,000	355/100,000
18.	Percentage of deliveries conducted by skilled attendants in health facilities	96%	60%
	Percentage of pregnant women attending at least 4 ANC visits	59.6%	42%
19.	Latrine coverage	96.2%	85%
	Open Defecation Free (ODF) rate	-	10%
20.	Doctor Population Ratio	1:30000	1:16000
	Nurse Population Ratio	-	1:1034
21.	Health Insurance Coverage	28.3%	6%

No	Indicator	County 2022	National 2022
22.	The proportion of HHs accessing piped water (%)	65	24.0
23.	The proportion of HHs accessing improved sanitation services (%)	87	82.5
24.	Tree cover	30.39%	12.13%
25.	Forest Cover	23.62%	8.83%
26.	Average farm size (Small scale) (ha)	1.0	0.04
27.	Average farm size (Large scale) (ha)	5.2	8.9
28.	Share of Agriculture sector contribution to GCP (Gross County Product)	47.6% (2020)	22.4%
29.	Amount of milk produced annually in litres	85,000,000	4,000,000,000

Source: KNBS and County Integrated Development Plans

## 9.2 Three year financial summary – Kirinyaga County Government

REVENUE & EXPENDITURE					UNAUDITED	
	2020/2021		2021/2022		2022/2023	
REVENUE	KES'mns	%	KES'mns	%	KES'mns	%
<b>Centrally Distributed Revenue</b>						
Share of Exchequer releases (Equitable Share)	4,241.1	63%	5,196.2	88%	5,196.2	86%
Share of Exchequer releases (Donor & Grant Funds)	581.4	9%	303.9	5%	292.0	5%
Other Capital Receipts (other government entities)	377.4	6%			-	
CRF Returns/Reallocation budget	1,174.7	17%	-		5.3	0%
<b>Centrally Generated Revenue (CGR)</b>	<b>6,374.6</b>	<b>95%</b>	<b>5,500.0</b>	<b>93%</b>	<b>5,493.5</b>	<b>91%</b>
<b>County-Owned Source Revenue</b>						
Asset sales	-		-		-	
Investment Income	-		-		-	
Others - licenses, permits, fines & fees	346.5	5%	388.6	7%	551.9	9%
<b>County Own Source Revenue (OSR)</b>	<b>346.5</b>	<b>5%</b>	<b>388.6</b>	<b>7%</b>	<b>551.9</b>	<b>9%</b>
<b>TOTAL REVENUE</b>	<b>6,721.1</b>	<b>100%</b>	<b>5,888.6</b>	<b>100%</b>	<b>6,045.3</b>	<b>100%</b>
Direct Donations and Grants Receipts	-		-		-	
<b>TOTAL REVENUE &amp; GRANTS</b>	<b>6,721.1</b>		<b>5,888.6</b>		<b>6,045.3</b>	
<b>EXPENDITURE</b>						
Transfers (County Assembly, others)	1,137.5	21%	1,261.0	18%	1,071.6	17%
Interest Payments	-		7.4	0%	-	
Departments Expenditure	4,365.2	79%	5,800.0	82%	5,391.5	83%
<b>TOTAL EXPENDITURE</b>	<b>5,502.7</b>	<b>100%</b>	<b>7,068.4</b>	<b>100%</b>	<b>6,463.1</b>	<b>100%</b>
<b>Department's expenditure comprises</b>						
Personnel costs	2,245.2	41%	2,682.5	38%	2,626.2	41%
Purchase of goods & services	1,057.8	19%	1,380.6	20%	1,256.9	19%
Capital expenditure	825.0	15%	1,221.3	17%	1,206.8	19%
Other Payments (contingency, scholarship, subsidies, etc)	237.2	4%	515.6	7%	301.6	5%
<b>Total Departments Expenditure</b>	<b>4,365.2</b>	<b>79%</b>	<b>5,800.0</b>	<b>82%</b>	<b>5,391.5</b>	<b>83%</b>
<b>Foreign loan balance</b>	<b>-</b>		<b>-</b>		<b>-</b>	
<b>Domestic loan balance</b>	<b>-</b>		<b>-</b>		<b>-</b>	
<b>Total Pending Bills</b>	<b>402.1</b>		<b>801.7</b>		<b>795.4</b>	
<b>AUDITORS OPINION</b>	<b>Qualified</b>		<b>Qualified</b>		<b>Unaudited</b>	

KEY RATIOS	2020/2021	2021/2022	2022/2023
<b>Revenue</b>			
OSR as % of GCP	0%	0%	0%
Centrally Generated Revenue as % of GCP	5%	3%	3%
Total revenue as % of GCP	5%	4%	4%
OSR as % of total revenue & grants	5%	7%	9%
Centrally Generated Revenue as % of total revenue & grants	95%	93%	91%
Growth in Centrally generated revenue	30%	-14%	0%
<b>Spending</b>			
Total Expenditure as % of GCP	4%	4%	4%
Non-discretionary expenditure* as % of Centrally generated revenue	53%	72%	67%
Capital expenditure as % of total expenditure	15%	17%	19%
Payroll as % of revenue	33%	46%	43%
Overheads as a % of revenue	16%	23%	21%
Budget balance/revenue	18%	-20%	-7%
<b>Leverage</b>			
Budget balance (Ksh'mns)	1,218.38	(1,179.76)	(417.76)
Debt as % of nominal GCP			
Interest payments as % of total revenue			
Principal due as % of Revenue			
<b>Financial flexibility</b>			
Discretionary revenue** as % of total revenue	50%	33%	39%
Net Debt as % of Free Cash Flow ***	-23%	-50%	-22%
Non-discretionary expenditure as % of total expenditure	61%	56%	57%
Outstanding Debt/Revenue			
* Non-discretionary spending is made up of statutory transfers, interest payments and personnel costs			
** Discretionary revenue is total revenue minus non-discretionary spending			
*** Free cash flow is defined as revenue minus non-discretionary spending			

### 9.3 Rating definitions

<b>Aaa</b>	A county with the best financial condition and the strongest capacity to meet obligations as and when they fall due relative to all other issuers in the same country.
<b>Aa</b>	A county with a very strong financial condition and a very strong capacity to meet obligations as and when they fall due relative to all other issuers in the same country.
<b>A</b>	A county with a good financial condition and a strong capacity to meet obligations as and when they fall due relative to all other issuers in the same country.
<b>Bbb</b>	A county with a satisfactory financial condition and adequate capacity to meet obligations as and when they fall due relative to all other issuers in the same country.
<b>Bb</b>	A county with a satisfactory financial condition but limited capacity to meet obligations as and when they fall due relative to all other issuers in the same country.
<b>B</b>	A county with a weak financial condition and weak capacity to meet obligations as and when they fall due relative to all other issuers in the same country.
<b>C</b>	A county with a very weak financial condition and very weak capacity to meet obligations as and when they fall due relative to all other issuers in the same country.
<b>D</b>	County in default.

#### Rating Category Modifiers

A “+” (plus) or “-” (minus) sign may be assigned to ratings from ‘Aa’ to ‘C’ to reflect a comparative position within the rating category. Therefore, a rating with a + (plus) attached to it is a notch higher than a rating without the + (plus) sign and two notches higher than a rating with the - (minus) sign.

### 9.4 Other potential green projects identified during the assessment

Water	Agriculture, Livestock and Fisheries	Industrialization, Trade & Tourism	Energy Efficiency
<ul style="list-style-type: none"> <li>• Construction of water pans especially in Murinduko area.</li> <li>• Expansion of Rukanga Water &amp; Sanitation Company water capacity (water intake, treatment and distribution)</li> <li>• Implementation of community water projects to enhance water storage capacities</li> </ul>	<ul style="list-style-type: none"> <li>• Development of irrigation schemes to support smallholder farming at Mwea. This can be done through micro-irrigation projects.</li> <li>• Improvement of small scale farming technology through use of affordable greenhouses.</li> <li>• Construction of milk cooling facilities &amp; greenhouses for conservation of fodder</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of value addition factories in Ndia.</li> <li>• Establish Kirinyaga International Golf and County Resort along the Sagana Makutano Road running along the Tana River.</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of Energy Centre at Kimbimbi Forest to promote clean energy and energy saving initiatives</li> </ul>



## 9.5 List of stakeholders engaged during the workshops

### Day 1

Institution Name	Designation of Attendees
<b>Briefing Session</b>	
Kirinyaga County Government	<ul style="list-style-type: none"> <li>• CECM, Environment &amp; Natural Resources</li> <li>• CECM, Cooperative Development, Trade, Marketing</li> <li>• Tourism and Enterprise Development,</li> <li>• CECM, Sports, Culture and Social Services</li> <li>• CECM, Transport and Public Works</li> <li>• CECM, Medical Services, Public Health and Sanitation</li> </ul>
<b>Workshop</b>	
Kirinyaga County Government	<ul style="list-style-type: none"> <li>• Chief Officer, Water, Environment &amp; Natural Resources Department</li> <li>• Chief Officer, Gender and Youth Department</li> <li>• Chief Officer, Cooperative Development, Trade, Marketing, Tourism and Enterprise Development Department.</li> <li>• Director and representatives, Environment &amp; Natural Resources Department</li> <li>• Director and representatives, Health Department</li> <li>• Director and representatives, Livestock &amp; Fisheries Department</li> <li>• Environment Officers</li> <li>• Agriculture Officer</li> </ul>
<b>Disability Organization</b>	Chairperson
Maendeleo Ya Wanawake Organisation (MYWO)	County Chairperson
<b>Vijana Tubonge Organization</b>	Chief Director

### Day 2

Institution Name	Designation of Attendees
Nufaika Sacco Society Ltd	Chairman
Kenya County Meteorological Office	County Director
KCB Bank Kerugoya Branch	Branch Manager
Rukanga Water and Sanitation Company (RUWASCO)	Managing Director
Kutus Riders Sacco	Chairman
Kenya National Chamber of Commerce and Industry (KNCCI) Kirinyaga Chapter	Director
Fortune Sacco Ltd	Staff
Bingwa Sacco Society Ltd	Staff
Green Spaces Community Based Organization	Treasurer
Absa Bank Kerugoya Branch	Branch Manager
Kirinyaga County Government	Chief Officer, Director and Representatives from the Environment & Natural Resources Department

**Day 3**

Institution Name	Designation of Attendees
Kirinyaga County Government	Chief Officer from the Environment & Natural Resources Department
Kerugoya County Referral Hospital	Staff members
Kianguruwe Mini-Hydro Power Project	Committee Members
Ina-Njugu Micro-Power Project	Committee Members
Rukanga Water and Sanitation Company (RUWASCO)	General Manager and Staff Members
Kirinyaga County Government	Representatives from the Environment & Natural Resources Department

**Day 4**

Institution Name	Designation of Attendees
<b>Kirinyaga County Government</b>	<ul style="list-style-type: none"> <li>• CECM, Environment &amp; Natural Resources</li> <li>• CECM, Cooperative Development, Trade, Marketing, Tourism and Enterprise Development</li> <li>• CECM, Sports, Culture and Social Services</li> <li>• CECM, Transport and Public Works</li> <li>• CECM Agriculture, Livestock, Veterinary and Fisheries</li> </ul>

**9.6 List of key documents accessed**

List of Documents Accessed
Kirinyaga County Integrated Development Plan (CIDP) 2018-2022
Kirinyaga County Integrated Development Plan (CIDP) 2023-2027
Kirinyaga County Annual Development Plan 2023/24 and 2024/25
Controller of Budget Performance Report over five years 2017/18 to 2022/23
County Government's Budget Implementation Review Report from 2016/17 to 2022/23 by the Office of the Controller of Budget
Kirinyaga County Fiscal Strategy Paper 2022, 2023 & 2024
2019, Kenya Population and Housing Census
Kenya Integrated Household Budget Survey 2015/2016
Gross County Product 2021 & 2023 Report
Kirinyaga County Bills, Plans and Policies
Public Finance Management Act 2012
Audited financial statements of Kirinyaga County from 2016/17 to 2021/22 by the Auditor General of Kenya
The Public Finance Management (County Governments) Regulations, 2015
KNBS ECONOMIC SURVEY 2022
Kirinyaga County Programme Based Budget (PBB) 2021/22 – 2023/24
Kirinyaga County Finance Bill 2022
County Budget Review and Outlook Paper (CBROP) 2021
Kirinyaga County Annual Development Plan FY 2022/2023
Kirinyaga Proposed Budget FY2023/2024
Unaudited County Consolidated Financial Statements of Kirinyaga County 2022/23











📍 Riverside Green Suites  
(Palm Suite), Riverside Drive  
Nairobi, Kenya

✉️ P.O Box 11353, 00100,  
Nairobi, Kenya

📞 +254 20 513 7300

✉️ [info@fsdkenya.org](mailto:info@fsdkenya.org)

**in** @FSDKe

✂️ @FSDKe

🌐 [www.fsdkenya.org](http://www.fsdkenya.org)

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