COUNTY GOVERNMENT OF NYERI

AGRICULTURE AND RURAL DEVELOPMENT SECTORAL PLAN 2023-2032

Theme: "Cultivating Communities, Nurturing Growth"

AGRICULTURE AND RURAL DEVELOPMENT SECTORAL PLAN

FOR NYERI COUNTY

VISION

A food secure, healthy, economically stable, and environmentally sound county.

MISSION

To be a vibrant, inclusive, and sustainable rural economy with transformed food, water, waste management and land use systems

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ACRONYMS AND ABBREVIATIONS

ADP	Annual Development Plan
AIDS	Acquired Immune Deficiency Syndrome
AMR	Anti -Microbial Resistance
ATC	Agriculture Training Centre
CASSCOM	County Agriculture Sector Sterring Committee
CBEF	County Budget and Economic Forum
CBO	Community Based Organization
CBK	Coffee Board of Kenya
CECM	County Executive Committee Member
CEREB	Central Region Economic Block
CIDP	County Integrated Development Plan
CIMES	County Integrated Monitoring and Evaluation System
CGN	County Government of Nyeri
CRI	Coffee Research Institute
CSA	Climate Smart Agriculture
CSP	County Sectoral Plan
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
FBO	Faith Based Organization
FLLoCA	Financially Locally Led Climate Action
FOLAREP	Forest and Landscape Restoration Programme
HIV	Human Immunodeficiency Virus

IBEC	Intergovernmental Budget and Economic Council
ICT	Information and Communication Technology
IGA	Income Generating Activities
ILRI	International Livestock Research Institute
ISWM	Integrated and Sustainable Waste Management
ISO	International Standards Organization
IWUA	Irrigation Water Users' Association
KABS	Kenya Animal Bio-surveillance Systems
KALRO	Kenya Agricultural and Livestock Research Organization
KEBS	Kenya Bureau of Standards
KEFRI	Kenya Forest Research Institute
KEMFRI	Kenya Marine and Fisheries Research Institute
KEPHIS	Kenya Plant Health Inspectorate Service
KNBS	Kenya National Bureau of Statistics
KNTC	Kenya National Traders Corporation
Ksh.	Kenya Shilling
KWS	Kenya Wildlife Services
M&E	Monitoring and Evaluation
MDAs	Ministries, Departments and Agencies
MoU	Memorandum of Understanding
MTEF	Medium Term Expenditure Framework
MTP	Medium Term Plan

NCPB	National Cereals and Produce Board
NDMA	National Drought Management Authority
NG	National Government
NGO	Non-Governmental Organization
NIMES	National Integrated Monitoring and Evaluation System
NT&P	National Treasury and Planning
NWHSA	National Water Harvesting and Storage Authority
PCPB	Pest Control Product Board
PET	Polyethylene Terephthalate
PFMA	Public Finance Management Act
PLWD	People Living with Disability
PPP	Public Private Partnership
SDG	Sustainable Development Goal
SWG	Sector Working Group
SWM	Soil and Water Management
TWWDA	Tana Water Works Development Agency
WARIS	Water Resource Information System
WECC	Water, Environment and Climate Change
WEEE	Waste Electrical and Electronic Waste
WRA	Water Recourse Authority
WSP	Water Service Provider
WSTF	Water Services Trust Fund
USAID	United State Agency for International Development

CONCEPTS AND TERMINOLOGIES

Activities: Actions taken through which inputs are utilized to produce outputs.

Baseline: A value that shows the initial state of an indicator at the start of a phase/ project/ programme, against which progress can be assessed or comparisons made.

Blue Economy: The use of the sea and its resources for sustainable economic development and covers both aquatic and marine spaces including oceans, seas, coasts, lakes, rivers, and underground water.

Demographic Dividend: The accelerated economic growth that may result from a decline in a country's mortality and fertility rates and the subsequent change in the age structure of the population.

Development Issue: The key constraint/emerging concern in a sector that needs to be addressed or tapped into through various interventions and programmes.

Emerging Issues: This refers to recent occurrences/events/phenomena which might impact a sector negatively or positively. They range from environmental, policy, legal, technological, economic, political, social and cultural.

Flagship/Transformative Projects: These are projects with high impact in terms of employment creation and increasing county competitiveness and revenue generation, among others. They may be derived from the Kenya Vision 2030, the Medium Term Plans and the County Transformative Agenda/Long-term Plans.

Green Economy: An economy that aims at reducing environmental risks and ecological scarcities, and that aims at sustainable development without degrading the environment.

Inclusivity: The practice of ensuring all stakeholders are involved at all stages of the plan preparation, implementation, monitoring and evaluation processes.

Inputs: The financial, human, material and information resources used to undertake activities to produce outputs.

Mainstreaming: Integration of cross cutting actions into various stages of decision making (design, implementation, monitoring and evaluation of development policies and programmes).

Outcome Indicator: This is a specific, observable, and measurable characteristic or change that will represent achievement of the outcome. Outcome indicators include quantitative and qualitative measures. Examples: Enrolment rates, transition rates, mortality rates, customer satisfaction levels, etc.

Outcome: The intermediate results generated relative to the objective of a programme or intervention

Output: The immediate tangible or intangible result (products, services etc) achieved directly from the implementation of an activity.

Participatory: Ensuring engagement of stakeholders in decision making at various stages of the plan preparation, implementation, monitoring and evaluation processes.

Performance indicator: A measurable variable that assesses the progress of a particular project/ programme.

Programme: A grouping of related projects and/or services performed by a Ministry, Department or Agencies to achieve a common objective. The Programmes must be mapped to strategic objectives.

Project: A set of coordinated activities implemented to meet specific objectives within defined time, cost and performance parameters/deliverables.

Result: A measurable change in state expected to be achieved from implementation of an intervention. Results are at three levels: outputs, outcomes and impact.

Sectoral Plan: Refers to a framework for identification of development issues, challenges and opportunities in a given sector with the aim of setting policy initiatives and strategies towards achievement of the set goals.

Sectors: A composition of departments, agencies and organizations that are grouped together according to services and products they provide. They produce or offer similar or related products and services, and share common operating characteristics.

Sub-sector: An individual department, agency or organization that provide specific service/ product

Sustainable Development: The development that meets the needs of the present, without compromising the ability of future generations to meet their own needs

Synergy: The benefit that results when two or more sectors work together to achieve set targets they could not have achieved at individual sector level.

Target: A level of result desired to be achieved within a given time frame.

FOREWORD

The Constitution of Kenya 2010 established the devolved system of governance with the aim of bringing government services nearer to the citizens. In particular, chapter eleven of the Constitution defined the process of devolving strategic government functions to the county level. The fourth Schedule of the constitution clearly sets out the distribution of functions between the National Government and the County Governments. Article 220 (2) (a) of the constitution places the fundamental responsibility of prescribing the structure of the county development plans and budget on the National Government. The main supporting legislation in regard to planning at the county level is Section 107 of the County Government Act, 2012 that defines the types of plans to be developed and section 109 that requires that the County Government department shall develop a ten-year sectoral plan as component parts of the county integrated development plan. The sectoral plans should be programme based, the basis for budgeting and performance management. The plan should be reviewed every five years.

The Sector Plans detail specific programmes and projects for implementation during the plan period, 2023-2032.The programmes and projects outlined in these plans will be implemented in close consultation and collaboration with national governments and in line with the Fourth Schedule of the Constitution. The Public Private Partnerships (PPPs) framework will be the vehicle through which the private sector will contribute to the implementation of programmes and projects highlighted in the plans.

County Spatial Plans and CIDPs (2023-2027) will be aligned to the MTP IV and the National Spatial Plan. Implementation of these plans will also be linked to the Results-Based Management Framework through Performance Contracts and Staff Performance Appraisal System.

A robust monitoring and evaluation framework will be put in place. In this regard, National Integrated Monitoring and Evaluation System (NIMES), County Integrated Monitoring and Evaluation System (CIMES) and the electronic Project Monitoring Information System (e-ProMIS) will be fully integrated with other governmental financial systems. This will ensure effective tracking of implementation of programmes and projects and also boost Public Investment Management.

In conclusion, I would like to appreciate the CECM, Chief Officers, directors, technical staff in the departments and all those involved in the preparation of the Sector Plan for their valuable inputs. In addition, I commend staff from the departments of Agriculture, livestock and Aquaculture development, Water, Environment and Climate change and Solid Waste Management. Thank you.

H.E. Edward Mutahi Kahiga, EGH
THE GOVERNOR,
COUNTY GOVERNMENT OF NYERI

PREFACE

This Sectoral Plan places great emphasis on sector departments interventions which revolve around enactment and enforcement of supportive legislations to the county government, strengthening of governance institutions and development of policies and legislations that support inclusion, good governance, equity and efficient service delivery at departmental level.

The implementation of this plan will require continued support from all stakeholders including other government ministries and departments, private sector, development partners, civil society and the wider public. I am hopeful that with the contribution of all stakeholders, the sector will realize its main vision of "A leading sector in sustainable land management and infrastructural development for prosperity".

James Wachihi
COUNTY EXECUTIVE COMMITTEE MEMBER,
AGRICULTURE, LIVESTOCK AND AQUACULTURE DEVELOPMENT

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COUNTY EXECUTIVE COMMITTEE MEMBER,
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WATER, ENVIRONMENT & CLIMATE CHANGE.

ACKNOWLEDGEMENT

The Agriculture and Rural Development sector plan has been prepared through a collaborative and all-inclusive process where views and opinions were sought from various individuals and stakeholders. I would wish to sincerely thank and acknowledge all individuals who collectively and individually contributed towards the development and production of this plan. The process could not have been successful without the commitment, sacrifice and determination of the members of staff from the county government and specifically the sector working group from the various departments.

Allow me to start by expressing my sincere appreciation to H.E the Governor Mutahi Kahiga, EGH and H.E the Deputy Governor David Kinaniri for the visionary leadership and support in the county and in the development of this plan.

Special recognition goes to the County Executive Committee Members in the sector Departments namely; James Wachihi (Agriculture, Livestock and Aquaculture Development), Fredrick Kinyua (Water, Irrigation and climate change), Peter Macharia Ngatia (County Public Service & Solid waste management) for their guidance and insights during the process. I also wish to highly appreciate all the chief officers from the same Departments for their support (technical and logistical) and availing their staff during the development of this plan process.

My special appreciation to the economic planning department headed by the chief officer, the director for availing the technical guidance and direction at every stage of the preparation of the plan.

I am deeply indebted to all the sub sector directors for their contribution, availability and technical support throughout the plan preparation process.

Special appreciation to the core technical sector working group of staff from sector departments (Agriculture, Livestock and Aquaculture Development; Water, Irrigation and Climate change, Solid Waste Management) for their effort and dedication throughout the plan preparation process. It is through their sacrifice and commitment that this document was a success.

I may not mention everybody who participated in this important exercise, but do acknowledge all those individuals and stakeholders who contributed in one way or another to ensure the preparation of the plan was a success. Thank you

Wilson Maringa
SECCTOR CONVENER
AGRICULTURE AND RURAL DEVELOPMENT SECTOR

EXECUTIVE SUMMARY

The Sector is dedicated to fostering food security, climate-resilient development, ensuring a healthy environment, and providing safe water and sanitation facilities. It serves as a crucial steward of the natural capital within the County, contributing significantly to the sustainability and prosperity of various sectors including Agriculture, Tourism, Manufacturing, and Energy. Investment in this Sector is paramount to achieving the targeted annual GDP growth rate of 10% outlined in the Kenya Vision 2030, as it facilitates the delivery of both direct and indirect goods and services essential for economic progress.

Aligned with Kenya constitutional mandates, access to safe food is a fundamental right in article 43 and article 46, the Sector also upholds Article 42 by ensuring a clean and healthy environment for all individuals. Moreover, it adheres to Article 69, focusing on sustainable exploitation, utilization, management, and conservation of natural resources, with an emphasis on equitable distribution of benefits. This plan outlines the accomplishments from 2013 to 2024 under devolution, while delineating priority programs, initiatives, and projects for the period 2023 to 2032, with clearly defined responsibilities and resource allocations.

Despite progress, the Sector faces significant challenges, including the impacts of climate change, increased incidences of pests and diseases, frequent droughts, floods, and frosts. Other challenges include diminishing land sizes, high cost of inputs, waste management, diminishing water sources, population growth, and encroachment into fragile ecosystems. These challenges result in low production and productivity in agriculture, jeopardize biodiversity and promote unsustainable land-use practices, posing serious threats to environmental integrity. Sustainable water resource management remains pivotal for achieving the social pillar of Kenya Vision 2030, necessitating adaptive strategies to combat climate-induced pressures on the environment. Aligned with Sustainable Development Goals (SDGs) and other national, regional, and global commitments, the Sector's plan underscores its dedication to holistic development.

Chapter One provides an overview of the County and Sector background information, highlighting the composition and mandate. It also provides the rationale, linkage of the plan to other plans and the methodology.

Chapter Two analyzes the Sector's situation and provides the achievements, challenges and lessons learnt since the inception of devolution. The sector's development issues, causes and opportunities are also analyzed, in addition to the cross cutting & emerging issues and stakeholder analysis.

Chapter Three outlines the sector's objectives, strategies and interventions and the projected budget and resources required to actualize the plan.

Chapter Four provides the mechanisms through which the strategies will be implemented. The success of the Plan is attributed to the institutional arrangement, coordination framework, sources of funds and the management of risks. It is important to note that the areas listed depend on each other.

Chapter Five provides the Monitoring and Evaluation element. It outlines the reporting structures, data sources and collection method, types of reports to be produced, dissemination and feedback mechanism and how to review and update the sector Plan. The Plan will be evaluated annually, after five years and at the end of the plan period. The reports prepared will outline the achievements in comparison to targets, facilitating factors, challenges faced and lessons learnt.

1.0 CHAPTER ONE: INTRODUCTION

1.1 Overview of the County

Nyeri County has an estimated population of 828,805 persons consisting of 49 percent male and 51 percent female according to the projections by KNBS, 2022. Most of the inhabitants of the County are from the Kikuyu community who are predominantly farmers growing tea and coffee as cash crops. They also engage in subsistence farming of crops such as maize, beans, assorted vegetables, and sweet potatoes as well as small scale livestock farming. Other communities living in the county include Luo, Meru, Kamba, Embu, Borana, Somali and virtually all Kenyan communities who are mostly engaged in their own businesses or employed by the government.

Kikuyus traditionally believed in one god, called *Ngai* (the provider), living at the top of Mount Kenya. However, most of them have today abandoned their traditional beliefs for Christianity. The most dominant Christian faiths are the Presbyterian, Methodist, Catholic, Anglicans, Pentecostals and Akorino denominations. There's a small number of residents, mainly found in major urban centers, who ascribe to Islam and Hindu religions.

The County lies between two water towers i.e., Mount Kenya and the Aberdare ranges with agriculture as the main economic activity. The County is renowned for horticultural farming. Other agricultural activities which act as a source of income include dairy farming and fish keeping. There are a number of light industries, tea and coffee factories providing a market and employment to the locals. The County headquarter is located in Nyeri Town which is easily accessible from all the eight sub counties. Nyeri is also a home to re-known personalities including the late President Mwai Kibaki, Nobel Peace Prize laureate the late Prof. Wangari Maathai and renowned Olympic (Boston and Chicago) marathon medalist Catherine Ndereba.

The county is easily accessible by road from Nairobi and the neighboring counties. It takes about two hours to travel to Nyeri from Nairobi (approximately 150km), two hours from Nakuru (approximately 167km), 45 minutes from Nanyuki (approximately 60km) and one and a half hours from Nyahururu (approximately 100km). There is no regular transport by air to Nyeri although there are three airstrips namely Mweiga on the Nyeri-Nyahururu highway, Nyaribo on the Nyeri-Nanyuki road about 15km from Nyeri town and the Nanyuki air strip near Nanyuki Town.

Nyeri County forms part of the Central Region Economic Bloc (CeREB) that is made up of 10 counties. The regional block provides a means of promoting harmonized trade and economic development within the region. The other counties that make the economic block include Kiambu, Kirinyaga, Murang'a, Nyandarua, Meru, Tharaka Nithi, Embu, Nakuru and Laikipia.

1.1.2 Position and Size

Nyeri County is one of the 47 counties in Kenya and is located in the central region of the country. It covers an area of 3,325 Km^2 and is situated between longitudes 36038" east and 37020" east and between the equator and latitude 00 380 south. It borders Laikipia County to the north, Kirinyaga County to the east, Murang'a County to the south, Nyandarua County to the west and Meru County to the northeast.

Figure 1: Location of the County in Kenya

1.1.3 Physiographic and Natural Conditions

Nyeri County lies within the central highlands of Kenya and is divided into two main topographic regions which are plains and highlands. The topographic features in the county include the mountain, rivers, water bodies and hills. The highest point in the County is Mount Kenya which is 5199m above sea level while the lowest point is at Sagana river in Mukurweini Central ward which is 1192m above sea level. The County has an average slope area of 8.8%.

The main physical features of the county are Mount Kenya at the eastern side and the Aberdare ranges (3,999m above sea level) to the west side of the County. The northern part is flat (Kieni East and Kieni West Sub counties), whereas the southern part of the county has steep ridges and valleys, with a few hills such as Karima, Nyeri and Tumutumu. These hills affect the pattern of rainfall, thus influencing the mode of agricultural production and the type of agricultural produce.

The county has a forest coverage of 38% which is above the recommended minimum level of 10%. There are two gazetted forests, Mt. Kenya Forest and the Aberdare Ranges. In each of the forests, there are various forest sub stations which include Nanyuki, Gathiuru, Naromoru, Kabaru, Hombe, Ragati and Chehe in Mt. Kenya and Muringato, Kabage, Zaina, Zuti, and Kiandongoro in the Aberdares. However, the forest cover is under threat of decreasing due to increased deforestation and human encroachment.

The major rivers found in the county are Ewaso Ng'iro, Chania, Gura and Amboni from Aberdare Forest and Nairobi River from Mt Kenya. Sagana river is jointly fed by rivers from both Mt. Kenya and Aberdare rivers. Among other rivers found in the county are Ragati river. The permanent and seasonal rivers in the County are the main source of water for agricultural, domestic and industrial development across the County.

1.1.4 Ecological Conditions

The county has two forest eco-systems, namely Aberdare and Mt. Kenya. The county has twelve (12) isolated forested hills under the management of County Government. The major ones based on their sizes are Gachirichiri, Karima and Tumutumu. The forests are a valuable resource to the County as they are a source of products such as timber, fuel, fodder, herbal medicine among others. In addition, these forests play vital roles which include maintenance of water cycle, wildlife habitat and are also repositories of a wide range of biodiversity. Since soil conditions in the county are almost similar, agricultural productivity is influenced by rainfall intensity and temperature conditions.

1.1.5 Climatic Conditions

The county being located within the highland zone of Kenya, receives conventional rainfall in most of its parts. The rains are experienced in two seasons, long rains occurring from March to May while the short rains are experienced from October to December. This pattern however has been adversely affected by the recent climatic changes being experienced globally.

The annual rainfall ranges between 1,200mm-1,600mm during the long rains and 500mm-1,500mm during the short rains. In terms of altitude, the county lies between 3,076 meters and 5,199 meters above sea level. The precipitation is highest in the month of April and lowest in the months from June to September.

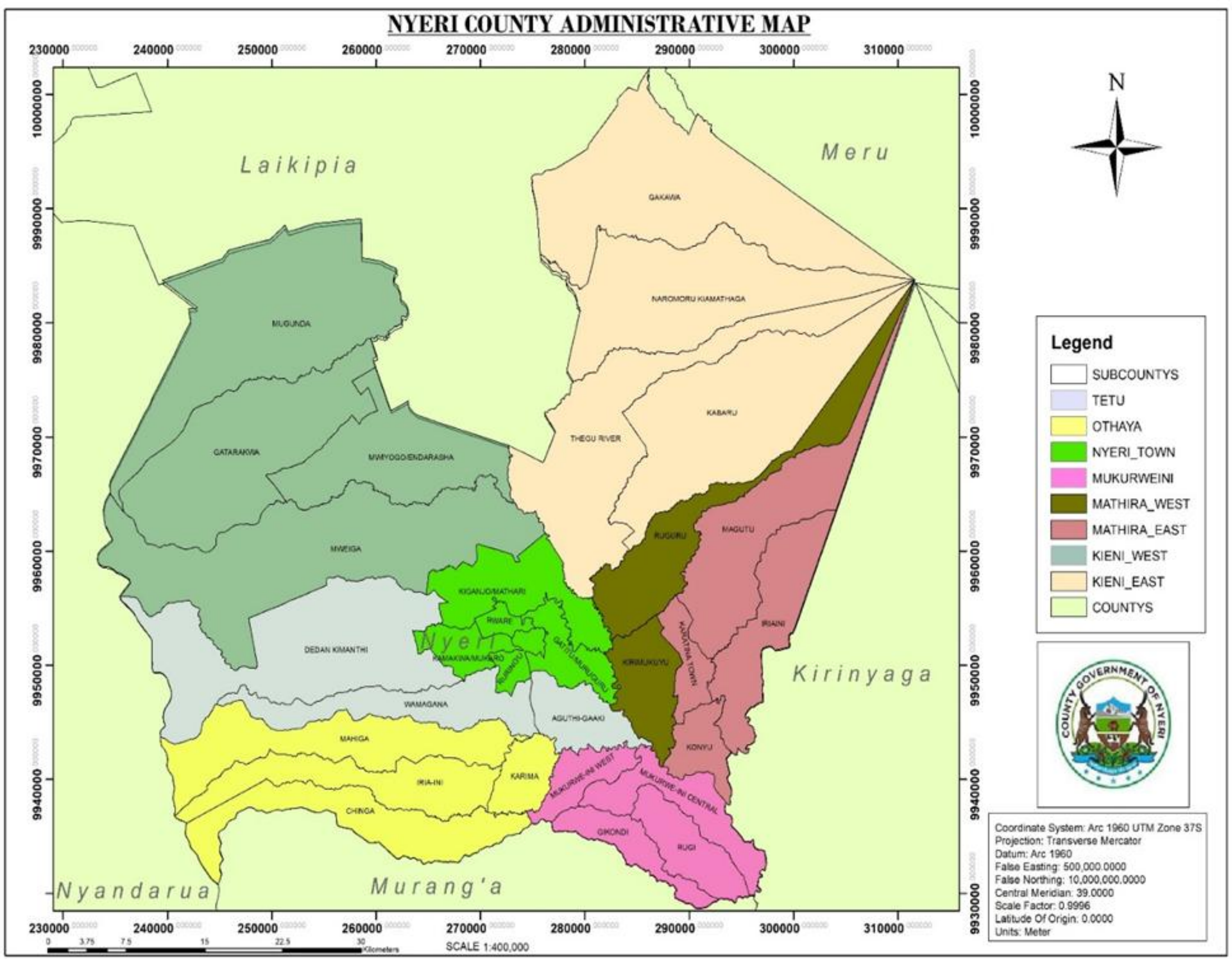
The County's monthly mean temperature ranges from 12.8 ^{0} C to 20.8 ^{0} C with February and March being the hottest months while July is the coldest month of the year. However, areas around Mount Kenya experience low temperatures throughout the year.

1.1.6 Administrative and Political Units

Nyeri County is subdivided into various administrative and political units. These administrative and political units are very fundamental for the management and service delivery to the citizenry.

These units are the sub-counties, divisions, locations, and sub-locations. This is illustrated by figure 2, Table 1 and Table 2 below.

Figure 2: County's Administrative and Political Units



Source: County Government of Nyeri, 2022

Table 1 : Area (Km2) by Sub-County

Sub County	Area (Km²)	Divisions	Locations	Sub-locations
Mathira East	130.4	4	16	44
Mathira West	162.3	3	9	31
Kieni West	517.8	2	6	26
Kieni East	448.7	2	10	33
Tetu	216.5	2	8	35
Mukurwe-ini	179.1	4	15	32
Nyeri Central	167.6	1	4	22
Othaya	169.2	4	14	29
TOTAL	*1991.6	22	82	252
The total area excludes Mt. Kenya and Aberdare Forests (1333.4 Km²)				

Source: KNBS ,2022

Table 1 shows that the county is divided into eight administrative sub counties namely, Kieni East, Kieni West, Mathira East, Mathira West, Nyeri Central, Mukurwe-ini, Tetu and Othaya. The county is further subdivided into 22 divisions, 82 locations and 252 sub-locations.

Kieni West Sub County is the largest with a land size of 517.8 Km2 while Mathira East is the smallest with an area of 130.4 Km2. Mathira East has the highest number of locations and sub locations while Nyeri Town has got the least.

1.1.7 County Government Administrative wards by constituency

Nyeri County comprises 30 wards and villages. Nyeri Central sub-county has the highest number of wards as compared to Mathira West which has the least. This is as illustrated in Table 2 below.

Table 2: County Government Administrative Wards

Sub County	No. of Wards	No. of Villages
Mathira East	4	343
Mathira West	2	258
Kieni West	4	221
Kieni East	4	294
Tetu	3	224
Mukurwe-ini	4	317
Nyeri Central	5	187
Othaya	4	291
Total	**30**	**2135**

Source: County Government of Nyeri, 2022

1.1.8 Political Units (Constituencies and Wards)

The Political units are represented by elected persons at the national and county level. Table 3 shows the distribution of electoral wards by constituency.

Table 3: County's Electoral Wards by Constituency

Constituency	Electoral wards	Ward Names
Mathira	6	Ruguru, Kirimukuyu, Iria-ini, Karatina, Magutu, Konyu
Kieni	8	Gakawa, Naromoru/ Kiamathaga, Thegu River, Kabaru, Gatarakwa, Mugunda, Endarasha/Mwiyogo, Mweiga
Tetu	3	Aguthi/Gaaki, Dedan Kimathi, Wamagana
Mukurwe-ini	4	Rugi, Gikondi, Mukurwe-ini Central, Mukurwe-ini West
Nyeri town	5	Kamakwa/Mukaro, Kiganjo/Mathari, Rware, Ruringu, Gatitu/Muruguru
Othaya	4	Chinga, Mahiga, Iria-ini, Karima
Total	**30**	

Source: IEBC, 2022

Kieni with eight wards has the highest number while Tetu with three has the lowest. This is majorly attributed to the fact that Kieni is vast compared to other constituencies in the county. Consequently, Kieni has the highest number of registered voters. Therefore, there is a need to intensify civic education, in Kieni Constituency, to ensure all the eligible voters are registered to enable them actively participate in the democratic process as well as channeling more resources towards development of the constituency.

Demographic Features

1.1.9 Population Size, Composition and Distribution

Nyeri County has a total population of 759,164 (2019 population census) people which comprises 374,288 men, 384,845 women and 31 individuals who are intersex. The County's population accounts for approximately 2% of the entire Country's population. According to the Kenya Population and Housing Census report by KNBS Nyeri's population is distributed across 248,050 households with an average household size of 3 and spread out across 8 sub counties (excluding the forest regions of Aberdare and Mt. Kenya Forest) with varying population densities. However, the County has a population density of 228 people per square kilometre.

This section provides an analytical description of the major demographic characteristics of the County's population and makes population projections that will guide the planning process for the five-year period.

As mentioned before, the County's population is distributed across 8 sub counties and two forest regions. Table 4 below provides sex disaggregated data as per the 2019 census report and projections across the 8 sub-counties for the next five years.

Table 4: Population Projections (by Sub-County and Sex

Sub- county	Census (2019)				2022 (Projection)				Projection (2025)				Projection (2027)			
	M		- sex		M		- sex		M		-sex				-sex	T
Tetu	,293	55	5	453	,343	303	5	651	3,501	562	6	069	001	134	6	2,141
Kieni East	360	12	4	376	249	83		136	,288	03		196	402	004		,411
Kieni West	843	77	5	25	131	08		44	,538	461		005	212	67		,385
Mathira East	070	92	3	65	578	53		234	,218	453		674	053	400		3,457
Mathira West	480	12	3	95	018	99		020	,637	69		309	763	330		,596
Nyeri South (Othaya)	115	64	2	81	417	15	2	334	,839	93		835	524	787		,313
Mukurwe-ini	975	56	6	37	270	12		788	,684	92		582	363	716		2,086
Nyeri Central	955	80	3	338	605	53		661	,446	17		366	18	604		,725
Mt. Kenya Forest*	23			8	29	3		8	36	2		8	1	4		15
Aberdare Forest*	4			6	8	4		2	32	5		7	5	7		21
Total	,288	345	1	164	,819	927	3	779	4,370	057	4	461	662	753	6	,450

Source: KNBS,2022

****Where M is male, F is female, and T is Total***

From Table 4 above, a significant proportion of the County's population is in the Kieni, Mathira and Nyeri Central regions respectively while Tetu and Mukurwe-ini have the least number of people. The population of women is slightly higher compared to that of men across the sub-counties apart from Kieni East. The County's population is expected to grow to 869, 450 by 2027 from the 759,164 in 2019. This is a growth rate of about 1.72% compared to the anticipated national growth rate of 1.86% within the same period. This influx in population will likely lead to an increase in demand for more land to establish settlements. Bearing in mind that Nyeri is an Agricultural County, it will therefore be important to develop, implement and enforce land use policies to protect Agricultural land. Additionally, the Government will need to put in place measures to raise more resources to cater for the growing population.

Regarding the population distribution across rural and urban centres, 80.14% of the people reside in rural areas, while 19.86% of the people live within the county's urban areas. Table 5 below provides information on the population distribution across the major urban centres in the county.

Table 5: Population Projections by Urban Area

ban Area	Census (2019)				2022 (Projection)				Projection (2025)				Projection (2027)			
			er-x				er-x				er-x				er-x	
Nyeri	,697	9,382		30,081	2,821	1,437		34,260	5,055	3,599		38,657	6,609	5,103		91,715
Karatina	2,451	1,100		23,552	3,101	1,679		24,781	3,784	2,289		26,074	4,260	2,713		26,973
Othaya	3,675	2,975		6,650	3,867	3,130		6,997	4,069	3,294		7,362	4,209	3,407		7,616
Mukurwe-	3,393	3,115		6,508	3,570	3,278		6,848	3,756	3,449		7,205	3,886	3,568		7,453
Chaka	3,098	2,872		5,970	3,260	3,022		6,282	3,430	3,180		6,609	3,548	3,289		6,837
ganjo	1,667	2,342		4,009	1,754	2,464		4,218	1,846	2,593		4,438	1,909	2,682		4,591
weiga	1,872	1,737		3,609	1,970	1,828		3,797	2,072	1,923		3,995	2,144	1,989		4,133
darasha	1,430	1,313		2,743	1,505	1,382		2,886	1,583	1,454		3,037	1,638	1,504		3,141
aromoru	4,180	3,917		8,097	4,398	4,121		8,520	4,628	4,336		8,964	4,787	4,486		9,273
hers	932	8,604		9,533	981	9,053		10,030	1,032	9,525		10,554	1,067	9,854		10,918
tal	3,395	7,357		50,752	7,225	1,394		58,619	1,255	5,641		66,896	4,057	8,595		72,652
he data provided does not include the intersex population																

Source: KNBS 2022

According to the KNBS census report on urbanization, Nyeri County has 8 urban centres/ trading centres with a population of more than 2000 people (The urban/ trading centres are as shown in Table 6 above) and a total urban population of 150,752 people.

Nyeri town is the largest urban centre with a population of 80,081people. The County's urban population is expected to grow to 172,652 people by 2027. In anticipation for this growth, the Government needs to enhance urban planning and provision of services such as water supply and waste management within the Urban areas. Furthermore, there needs to be more controlled development within the urban areas and residential areas surrounding the urban centres to avoid congestion and other negative externalities that may arise from the failure to do so.

1.1.10 Population Density and Distribution

Table 6 below provides information on Nyeri County's Population density and distribution disaggregated by sub counties.

Table 6: Population distribution and density by Sub-County

Sub- County	2019 (Census)			2022 (Projection)			2025 (Projection)			2027 (Projection)		
	ea (Km^2)	opulation	ensity	rea (Km^2)	opulation	ensity	rea (Km^2)	opulation	ensity	rea (Km^2)	opulation	Density
Tetu	217	80,453	372	217	84,651	391	217	89,069	411	217	92,141	426
Kieni East	449	110,376	246	449	116,136	259	449	122,196	272	449	126,411	282
Kieni West	518	88,525	171	518	93,144	180	518	98,005	189	518	101,385	196
Mathira East	130	99,065	760	130	104,234	799	130	109,674	841	130	113,457	870
Mathira West	162	59,895	369	162	63,020	388	162	66,309	409	162	68,596	423
Nyeri South	169	91,081	538	169	95,834	566	169	100,835	596	169	104,313	617
Mukurwe-ini	179	89,137	498	179	93,788	524	179	98,682	551	179	102,086	570
Nyeri Central	168	140,338	837	168	147,661	881	168	155,366	927	168	160,725	959
Mt. Kenya Forest*	611	188	0	611	198	0	611	208	0	611	215	0
Aberdare Forest*	722	106	0	722	112	0	722	117	0	722	121	0
	3,325	759,164	228	3,325	798,779	240	3,325	840,461	253	3,325	869,450	261

Source: KNBS 2022

Nyeri County has a population Density of 228 people per square kilometer which is significantly higher compared to the National density of 82. With an expected increase in population, the County's population density is expected to reach 261 people per square kilometer by 2027. The population density is higher in Nyeri Central Sub County considering that it is largely an urban region and lowest in the expansive rural Kieni sub-counties. The current and expected continued high concentration of people within Nyeri Central, Othaya and Mathira sub-counties requires continuous investment in both social and physical infrastructures to cater for their needs.

The low population density in the Kieni region relative to the land size implies that there is a lot of unutilized land whose potential could be tapped for Agricultural purposes. However, the climatic condition of this region makes it hard to undertake rain-fed agriculture and thus the government should invest in improving irrigation within this region as a measure to promote food security.

Population Projection by Broad Age Groups

Table 7 below provides data on the select age groups within the County as per the KNBS census report, 2019 and their projections up to 2027

Table 7: Population Projections by Broad Age Groups

Age Group	2019 (Census)			2022 (Projection)			2025 (Projection)			2027 (Projection)		
	M	F	T	M	F	T	M	F	T	M	F	T
Infant Population (<1 Year)	8	7	65									
Under 5 lation	16	82	98	76	30	06	12	02	14	98	84	81
Pre-School (3- 5 Years)	56	99	55	99	63	62	56	90	46	34	39	73
Primary School (6 – 13 Years)	00	01	901	87	45	332	98	50	848	56	93	149
Secondary ol (13 –19 s)	32	37	669									
Youth (15 – ears)	65	28	993	581	579	160	682	425	107	462	865	327
Women of oductive (15 – ears)		658	658		115	115		529	529		0,489	0,489
Economically e lation (15 – ears)	531	451	982	197	893	090	710	150	860	647	467	114
Aged (65+)	27	15	42	20	33	53	43	44	88	45	65	09

Approximately 23.97% of the county's population is within the youthful age bracket (15-29 years) while 50.23% is within the reproductive age bracket (15-49 years). The number of women who are within the reproductive age bracket account for about 49.8% of the women population. The county enjoys a huge labour force with about 62.98% of its population being within the working age bracket of between 15 and 65 years.

Further, the population of children under five years' accounts for about 10% of the population while those within the preschool age bracket of between 3 and 5 years of age make up 5.79% of the County's population. On the other hand, individuals within the primary school and secondary school age brackets (6-13 years and 13-19 years respectively) are about 29.84% of the County's population. This demographic profile calls for concerted efforts between the different levels of government towards improvement of educational and health facilities and creation of more employment opportunities.

1.1.11 Population of Persons with Disability

Table 8: Population of Persons with Disability by Type, Age and Sex

Type	0 - 14				15 – 24				25 – 34				35 - 54				55+			
	M	F	Inter-sex		M	F	Inter-sex	T	M	F	Inter-sex	T	M	F	Inter-sex	T	M	F	Intersex	Total
Hearing																				2513
Speech																				2437
Visual																				6530
Mental																				5468
Physical																				11243
Self-care																				3692
Other																				0

Source: KNBS,2022

Nyeri County has a population of 21,860 individuals with disabilities. This accounts for approximately 2.4% of the entire Country's population of PLWDs. Out of the 21,860 PLWDs, 8,588 are male while 13,270 are female. Notably, the County's disability prevalence stands at 3.2 which is higher than the National prevalence of 2.2. Some of the factors that affects disability prevalence include tendencies in health conditions, environmental factors, prevalence of occurrence of traffic accidents, natural disasters, conflicts, and substance abuse. Based on this, it is important to access the reason behind the high disability prevalence and to put in place measures towards reducing it, and to develop social protection programs aimed at helping and empowering the population of PLWDs.

1.1.12 Demographic Dividend Potential

Demographic dividend refers to the potential of accelerated economic growth that may result from a decline in a county's mortality and fertility and the subsequent change in the age structure of the population. Demographic Dividend presents to counties the opportunity to accelerate economic growth and achieve sustainable development and social change. The focus areas of demographic dividend include health and wellbeing; education and skills development; employment and entrepreneurship and rights, governance, and youth empowerment. To maximize on the county's potential to reap its demographic dividend it is, necessary to make strategic investments in the focus areas. The expected outcome from such strategic interventions would be increased incomes and better quality of life for the citizens. Table 9 below provides some indicators of the County's demographic dividend potential.

Table 9: Demographic Dividend Potential

Category	2019	2023	2024	2025	2026	2027
Population Size	759,164.00	835,408	844,012	852,615	861,008	869,397.00
Population below 15 (%)	29.60%	28.19%	28.02%	27.85%	27.56%	27.28%
Population 15 – 64 (%)	62.43%	63.20%	63.50%	63.79%	63.99%	64.20%
Population above 65 (%)	7.96%	8.61.%	8.48%	8.36%	8.44%	8.52%
Dependency Ratio	0.6	0.58	0.57	0.57	0.56	0.56
Fertility Rate	2.9	2.8	2.8	2.8	2.8	2.7

Source: KNBS, 2022

On the other hand, The Demographic Window is defined to be that period in a county's demographic evolution when the proportion of population of working age group is particularly prominent. This occurs when the demographic architecture of a population becomes younger and the percentage of people able to work reaches its height. Technically, it occurs when the proportion of children and youth under 15 years falls below 30 per cent and the proportion of people 65 years and older is still below 15 per cent, this window lasts about 30-40 years. The population structure and indicators show that County is in its demographic window and therefore has a high demographic dividend potential that ought to be harnessed.

From Table 9 above, The County's fertility rate in 2019 was 2.9 compared to the National average of 3.4. Additionally, 62.43 percent of the county's population is within the productive age bracket. To take advantage of this demographic composition, the county should invest in programmes that increase employment and harness the productivity of this age bracket. Failure to provide opportunities to the growing young population will result in rising unemployment and an increased risk of social upheavals. Nyeri County is on the right track as projections show that the dependency ratio will reduce gradually meaning the number of dependents will reduce and thereby, with lower dependency ratio there is likely to be increased productivity, growth, and overall development in the county.

1.2 Background Information

The section covers the sector composition in terms of sub-sectors and their mandates, and the contribution of the sector towards socio-economic development.

1.2.1 Sector Background Information

The Sector constitutes four sub sectors and is responsible for implementation of all programmes and projects as per the responsibilities allocated to the devolved units in schedule four of the constitution 2010. The Sector in fulfillment of its mandate has developed Strategic plans and domesticated National government policies and guidelines to guide planning, budgeting and monitoring of its activities.

The various sub sectors, whose mandates are outlined below, contribute to the socio-economic development of the citizenry of Nyeri by providing for strategies, infrastructure and policies that allow them to undertake in the main economic activity in Nyeri while allowing for sustainable development and protection of the very natural resources they rely on, despite the changing climate and technology.

1.2.1.1 Agriculture sub sector

The Agriculture sub sector is mandated to:

- Enhance agricultural production and productivity for food and nutrition security and Agri-business
- Promote value addition of agricultural produce, increase market access and reduce post-harvest losses
- Promote the County Livestock industry while improving access to appropriate veterinary services
- Promote and manage fisheries and aquaculture resources
- Increase agricultural mechanization practices for improved returns
- Strengthen institutional capacity to deliver quality services to all stakeholders through Capacity building, training and outreach programs to stakeholders
- Creating an enabling policy and legal framework that provides a conducive environment for Public Private Partnerships (PPP) and other strategic alliances in the sub sector.
- Enhance access to farm inputs at subsidized rates and affordable credit.
- Regulating and quality control of agricultural inputs, produce and products from the sub sector
- The sub sector is also responsible for formulating, implementation and monitoring of agricultural legislations, regulations and policies
- Collaborating with research institutions for development of agricultural technologies and innovations through provision of a dissemination and feedback mechanism

- Provision of agribusiness and entrepreneurial skills for market and enterprises situational analysis, risk management and research

1.2.1.2 Water and sanitation sub sector

This sub sector is mandated with;

- Coordination and implementation of national policies in regards to water development and management
- Water management and capacity strengthening of community water institutions (Water Service Providers (WSPs) and Irrigation Water Users' Associations (IWUAs)) for sustainable participatory development, operation and management of domestic and irrigation water projects
- Formulation of sectors regulations, standards, guidelines, principles, code of prac- tice, quality assurance and procedures in the water and irrigation sectors in the County
- Establishment and maintenance of the Water Resources Information System (WARIS) and management of related databases at the County level
- Development and review of Water and Irrigation Master Plans, investments and strategic plans for resource mobilization and financing to exploit the water potential and production, to secure and sustain adequate and portable water.
- Development of domestic water and irrigation projects infrastructure through planning, feasibility study, detailed surveying and design, and implementation of water and irrigation projects
- Monitoring, evaluation and assessment of water sector performance to improve the service delivery
- To oversee and ensure alignment of the domestic and irrigation development and management for both the public and private sectors in Nyeri County

1.2.4 Natural resource management sub sector

This sub-sector's mandate includes:

- Setting and updating of a data center for hydro-meteorological, hydrogeological, environment and natural resources
- County greening
- Protection and conservation of county forests, water catchment areas and other biodiversity
- Rehabilitation of degraded forests, riparian areas and other landscapes
- Planning, mapping for and valuation of existing and found natural resources
- Policy and guidelines formulation and development for county natural resources
- Enforcement and implementation of all environmental related legislation

- Environmental education and awareness creation programmes in the county

1.2.5 Waste Management Sub sector

This sub sector is mandated to:

- Formulate and develop legislation in waste management
- Mobilize finances, develop innovations, establish partnership and initiate development Projects for sustainable and integrated waste management
- Provide effective and efficient waste management through staff development, public sensitizations on good practices and improvement of infrastructure
- Identify ways to and promote circular economy strategies in all relevant sectors
- Serve as County knowledge and information management Centre for dissemination of knowledge and information on waste management.

1.3 Rationale

The Constitution of Kenya, 2010 is the basis for the process of devolution in Kenya. To implement devolution and realize its objectives, the National Assembly enacted the County Government Act, 2012 and the Public Finance Management Act, 2012. Part XI of the County Governments Act, 2012 requires county governments to prepare development plans which include County Spatial Plans, Sector Plans, County Integrated Development Plan (CIDP), and Cities and Urban Areas Plans. These plans form the basis for all budgeting and spending in the County.

The Kenya Vision 2030 is the national blueprint that forms the national development agenda that is being implemented through a series of 5-year Medium Term Plans (MTPs) at the National level. At the County level, the Kenya Vision 2030 is implemented through 10-year long-term plans (Sector Plan). The Sector Plan identifies programmes for implementation over the ten-year period which are then presented in the CIDP for a 5-year period and then an annual development plan is prepared to implement projects and programmes identified in the CIDP.

Figure 3 provides a diagrammatic presentation of the link between the Sector plan, the CIDP, the ADP, the Budget and other plans. This sector plan will be implemented through two CIDPs 2023-2027 and 2028-2032.

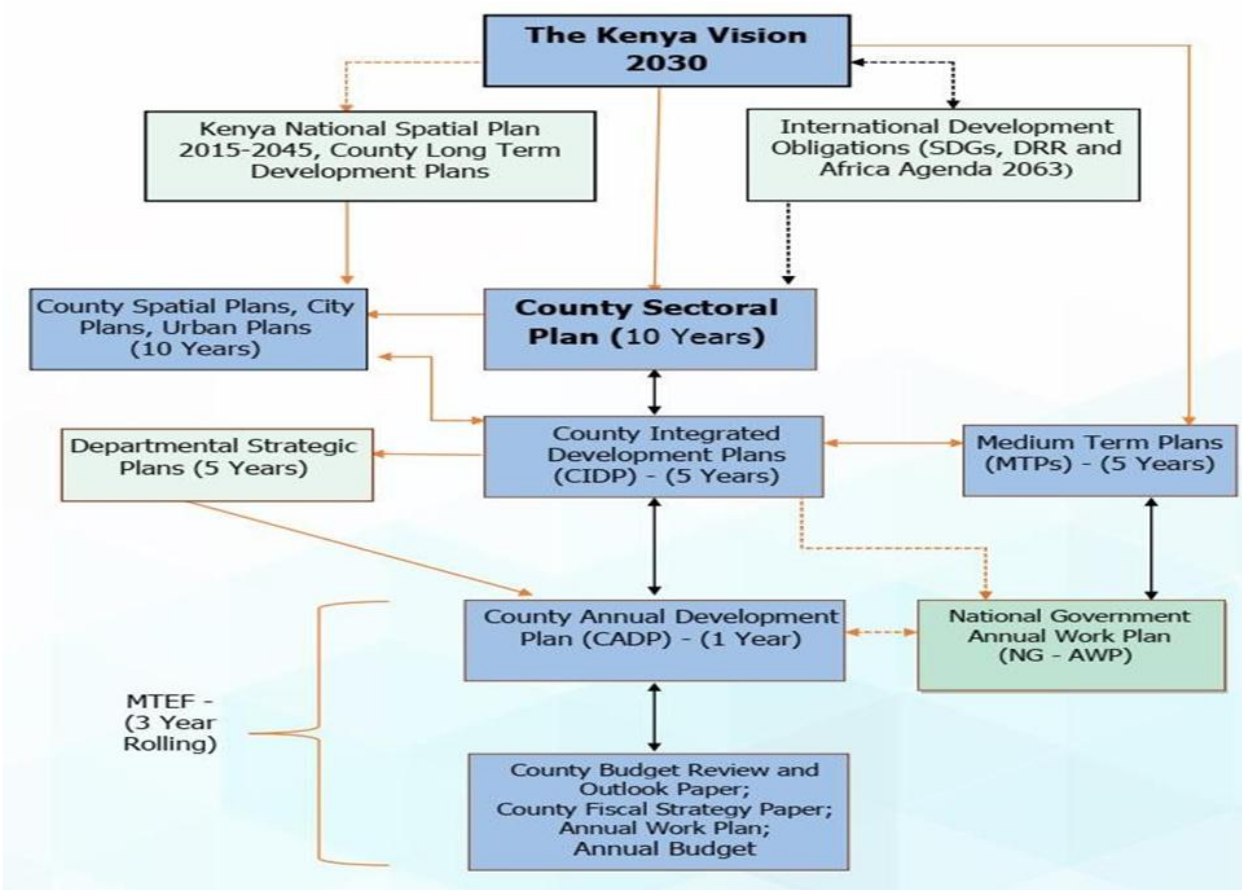


Figure 3: Linkage of the Sector Plan with other Plans

1.4 Methodology

This sector plan was developed through a consultative process as provided for in Article 201 of the Constitution of Kenya, 2010, Section 115 of the County Government Act, 2012 and in line with the Nyeri County Public Participation Act, 2015. Consultations were done with all stakeholders and their submissions were compiled, analyzed and used in developing this plan. The Constitution of Kenya (2010), SDGs, The Bottom Up and Big 4 Agenda Initiatives were used as reference documents. A Sector Working Group (SWG) was then established to provide secretariat services and direction to the whole preparation process. A workshop was held to build consensus on the contents and address any gaps. The SWG consolidated, revised and fine-tuned the information from each session to populate the document better. A validation meeting was held with all the stakeholders and thereafter, the plan was tabled to the Cabinet and forwarded to the County Assembly for approval.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2.0 CHAPTER TWO: SITUATION ANALYSIS

2.1. Sector Context Analysis

This section provides analysis of the sector's performance by policy objectives and the environment in which it operates. The Agriculture and Rural development sector has undertaken several detailed and exhaustive reviews to assess progress and provide evidence that can inform the direction and priorities within the Sector. It presents the current situation of key parameters of the sector, reviews the sector financing and performance trends. It further highlights the cross-cutting and emerging issues, challenges and lessons learnt.

2.1.1. PESTEL Analysis

PESTEL Analysis offers a useful framework for analyzing environmental influences on the operations of an organization. The external factors likely to affect the Sector are presented in the table below:

Table 10: PESTEL Analysis

Factor	Analysis
Political	• Government policies on water management • Funding for irrigation infrastructure • Environmental protection regulations • Climate change policies and funding • International agreements (e.g., Paris Agreement) • Land use policies • Interference by politicians on projects • Political good will of the current governor greatly favors the subsector • Lack of continuity of the already existing projects when other leaders come in.
Economic	• Affordability of irrigation services • Economic incentives for water conservation • Economic impact of environmental degradation • Investments in natural resource management • Costs of climate adaptation/mitigation measures • Investments in renewable energy technologies
	• Late disbursement of funds from central government • The current market prices are discouraging and agricultural venture is low • Most of the farmers do not have financial capabilities to implement the technologies • Inflation affects cost of inputs for farmers

Factor	Analysis
	• High interest rates adversely affect the cost of borrowing and availability of credit.
Social	• Community perceptions of water management • Water access and equity issues • Public awareness of environmental issues • Stakeholder engagement in conservation • Public awareness of environmental issues • Stakeholder engagement in conservation
	• Peoples' beliefs and negative attitude towards some animals e.g. pigs, rabbits etc. adversely affecting productivity. • Lifestyle changes that affect consumption • Inheritance of land resources and land subdivision into small portions reduces agricultural output. • Increase in lifestyle diseases • Most of the technologies are not tested before being introduced to the farmers hence low adoption
Technological	• Advancements in irrigation systems • Water-saving technologies • Monitoring tools and GIS technologies • Precision farming and agro ecological practices • Renewable energy innovations • Climate modeling advancements
	• Most of the farmers and some of the staff members lack skills to enable them incorporate technology in farming • Low research funding leads to lack of appropriate technologies • Low adoption of technology • New technology will increase profitability • Cost of adoption of new technologies is a great hindrance.
Environmental	• Water availability and quality • Ecological impacts of water extraction • Habitat degradation and biodiversity loss • Climate-induced environmental degradation • Changes in temperature and precipitation • Sea-level rise and its impacts • Global warming and climate change • Unreliable rainfall and erratic weather affects productivity. • Environmental degradation

Factor	Analysis
Legal	• Water rights and allocation regulations • Water pollution laws • Environmental regulations • Protected area designations • Compliance with emissions reduction targets • Implementation of climate adaptation measures • Litigations that can stall planned developments • Inadequate policy and legal framework

2.1.2 SWOT Analysis.

This section carries out an analysis of factors that impact on the Sectors performance of its duties and the realization of its strategies and objectives, from both internal and external perspectives. It evaluates the competencies within the organization with a view to establishing whether it has the requisite capability to achieve its objectives and realize its mission and vision. The analysis has focused on the management systems, technical capacity, human and financial resource capacity as well as other pertinent factors within the existing setup of the Sector.

The Sector will continue to make concerted efforts to assist the communities take advantage of existing strengths and opportunities to realize the expectations in the vision 2030. The necessary precautionary measures will be undertaken to avert possible threats.

Table 11: SWOT Analysis

Strengths	Weaknesses
• Well-structured human resource with qualified and experienced personnel • Strong public/private partnerships • Well-established institutions and societies. • Well informed/learned society • Good sectoral structure • Inter sectoral cohesiveness • Teamwork • Established infrastructure for water management • Technological advancements in irrigation, Agriculture, and waste management systems	• Inadequate staffing/ Low staffing levels • Inadequate resources- transport, airtime, stationery, Limited working resources etc. • Underfunding of the Sector • Poor working environment- sanitation, overcrowding, inadequate office space. • High retirement rate of trained and experienced officers • Long procurement procedures • Low staff morale due to poor facilitation • Aging workforce with no elaborate succession management plans. • Duplication of projects • Poor governance structures • Lack of a well-established legal framework. • Mistrust between government and stakeholders

• Growing awareness and political will to address sector challenges e.g. climate change • Existence of International agreements providing a framework for action	• Inadequate monitoring and evaluation framework leading to non-adherence to plans. • Low adoption of modern technology.
Opportunities	**Threats**
• High demand for services by the community • Hard working farming community which is ready to adopt new technology • Available and unexploited markets. • Political Goodwill. • Unexploited agricultural, water and natural resources • Unexploited resources- land and human capital • Public-private partnerships initiatives and willingness to support implementation of sector programs and activities • High potential for agricultural production within the county. • Potential Value addition of agricultural produce. • Room and capacity for expansion of relevant infrastructure for sector development	• Climatic changes and unpredictable weather patterns due to Global warming • Emergence of unpredictable disasters, pandemics and calamities like Covid-19, climate change, Pests and diseases, Locusts etc. leading to negative economic impacts. • Reliance on rain fed agriculture • Low producer prices paid to farmers. • Political interference in implementation of sector activities due to leverage for future political campaigns. • Small land holdings-uneconomical land units • Low and declining land fertility • Inadequate land management and environmental conservation policies • Poorly streamlined trade practices. • Aging farming community • Low stakeholder participation • High loan interest rates and lack of collaterals • Poor leadership in agricultural organizations • Low agricultural productivity • Low quality but high cost farm inputs • Competition for limited resources • Loss of biodiversity and ecosystem services

2.2 Review of Sector Financing

Regular financial review is an essential component of financial management aimed at identifying errors, anomalies, potential compliance issues, and significant budget variances. Financial reviews provide an important check that funds are used appropriately to achieve the sector objectives, that funds governed by external restrictions are appropriately utilized, and that amounts allocated are reasonable to expectations.

The following tables shows the analysis of finances received by the county Government for the past 10 years (Kshs. in Millions)

Table 12; Source of Sector Budget Financing

Source of Financing	**Financing (Kshs. Millions)**									
	13/14	**14/15**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**
Equitable share	4,071	3,882	4,449	4,801	4,953	5,024	5,412	5,412	6,229	6,229
Own Source Revenue	478.3	1,344	1,082	1,095	1,000	1,000	1,000	1,000	1,000	800
National Government (Conditional Grants)	0	198	723	600	653	903	915	622	0	23
Development Partners (Conditional Grants)	0	21	23	11	76	523	593	718	509	557
Total	**4,550**	**5,445**	**6,277**	**6,507**	**6,682**	**7,450**	**7,920**	**7,752**	**7,738**	**7,609**

Table 13: Analysis of sector Budget by Sub-sector

Source of Financing	**Financing (Kshs. Millions)**									
	13/14	**14/15**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**
Agriculture, Livestock and Fisheries	107	424	400		547	591	366	673	733	596
Water, Environment and Sanitation	68	252	280		385	457	339	133	219	255
Total Sector Budget Financing	**175**	**676**	**680**		**932**	**1048**	**705**	**806**	**952**	**851**
Total County Financing	**4,550**	**5,445**	**6,277**	**6,507**	**6,682**	**7,450**	**7,920**	**7,752**	**7,738**	**7,609**

2.3 Sector Performance Trends and Achievements

This section provides an analysis of the sector performance trends based on the key sector statistics (outcomes). It also highlights the key achievements, lessons learnt and challenges of the sector within the last ten-year period

In Nyeri, the crop production sector has demonstrated varied performance trends over the last plan period, characterized by notable achievements alongside persistent challenges e.g. drought. Yield and production volume have shown incremental improvements, attributed to enhanced agricultural practices and technology adoption; the county government has also distributed 77000 coffee seedlings, although yield gaps persist across different regions. The expansion of the area under cultivation has been modest by 15%, with some areas experiencing shifts towards more profitable crops e.g. avocados whose acreage has increased with over 1300 ha. However, technological adoption remains uneven, with smallholder farmers facing barriers to access and adoption. Market trends have been influenced by both domestic and global factors, with fluctuating commodity prices impacting farmers' incomes in reference the county has distributed more than 49000 bags of fertilizer to almost 12000 farmers. Despite these challenges, the sector has contributed significantly to Kenya's agricultural GDP and rural employment. However, disparities in performance between regions highlight the need for targeted interventions to ensure equitable growth and food security at the national level. Lessons learned include the importance of promoting sustainable practices, strengthening market linkages, and enhancing resilience to climate change, all of which are crucial for the sector's long-term viability and its contribution to national development goals.

Table 14: Achievements, Challenges and Lessons Learnt

SUB SECTOR	ACHIEVEMENTS	CHALLENGES	LESSONS LEARNT
Agriculture	1. Agroforestry – 2. Total of 400,000 seedlings worth KSh. 80,000,000 of grafted Hass Avocado, Macadamia, tissue culture bananas and Mango seedlings. The tree cover at 45.16%.	a. Inadequate funding for agricultural programs b. Inadequate staffing and high staff turnover due to retirement and natural attrition c. Increased cost of agricultural inputs d. Lack of organized marketing structures in most value chains. e. Inadequate ICT infrastructure for	a. Coordinated collaboration and Partnerships with other service providers is key for improved service delivery. b. Early and prompt implementation of projects has a big bearing on its success. c. Public participation in all project phases is critical for proper implementation ownership and sustainability.
	2. Food and nutrition security a) Provided 6,176 - 50Kg bags of Irish		

SUB SECTOR	ACHIEVEMENTS	CHALLENGES	LESSONS LEARNT
	seed potatoes and 377,140 Kg of certified beans b) Assisted 27,600 Households to establish kitchen gardens. c) Provided farmers with 550 drip kits and 3,857 household water tanks for water harvesting and efficient water utilization d) Provided farmer groups with 1,250 knapsack sprayers for control of pests e) Provided farmers with manual hand planters to 86 groups to promote agricultural mechanization.	data collection analysis, monitoring and reporting f. Climate change g. Aging farming community and low involvement of Youths in Agriculture h. Inadequate and unreliable data for planning i. Uncoordinated stakeholder collaboration j. Inadequate training opportunities k. Dependency Syndrome l. Uneconomical land fragmentation Inappropriate use of antimicrobials leading to AMR Fluctuating product prices	d. Communities are willing to adopt modern and climate smart technologies. e. There is a need for modernization in the sector through mechanization and automation of practices. f. Political goodwill is key to successful implementation of projects. g. Control of pests and diseases is key to increasing productivity h. Diversification and value addition can build sustainable community resilience against impacts of climate change. i. There is need to develop policies to streamline and guide on issues of land sub -division j. Aggregation of produce for better market linkage and bargaining capacity k. Formation of marketing cooperatives
	Coffee sector improvement – a) Issued 77000 coffee seedlings and 676 tonnes of manure to farmers, b) Rehabilitated coffee drying tables c) Completed coffee collection shed for coffee factories. d) Trained youth on coffee pruning and spraying to offer these services to farmers at a fee hence offering them an opportunity to generate income. e) Facilitated, coffee dealers with one commercial miller license, 8 grower millers licenses, 145		

SUB SECTOR	ACHIEVEMENTS	CHALLENGES	LESSONS LEARNT
	pulping station licenses 18 coffee nursery licenses as per coffee regulations 2019. Also capacity building farmers on good agricultural practice		
	4. Soil health improvement a) Procured and distributed 100,000 bags agricultural lime, 10,900 packets of bio-fertilizer and facilitated 46,954 - 50Kg bags of inorganic fertilizer to farmers through last mile subsidy program farmers. b) Procured 3 Soil testing scanners were procured and analyzed 3,400 soil samples to date.		
	5. Dairy improvement a) Milk volumes have also risen from 93,826,201 in 2017 to 115,338,802 liters in 2023. b) Supported dairy cooperatives and self-help groups with 29 Milk Coolers c) Supported 2 cooperatives with milk pasteurizers. d) Introduction of subsidized county Artificial Insemination services from the year 2016, with 24873 Inseminations done in the year 2023.		

SUB SECTOR	ACHIEVEMENTS	CHALLENGES	LESSONS LEARNT
	e) Milk production has been on an upward trajectory with average production per cow rising from 5.5 litres from 2017 to 8 litres currently. f) Undertaken County Wide vaccination programs against livestock notifiable diseases with 70331 livestock vaccinated in the year 2023. g) Distributed 300 dairy cows, and 85 forage choppers were given to farmers leading to increased milk production		
	6. **Promotion of Indigenous Poultry** a) Supported farmers with over 251,700 indigenous chicks as breeding stocks for meat production and enhanced food security b) Supported 30 Common Interest Groups (CIGs) with 30 incubators and brooders for production of quality chicks c) Supported 5 Community Based Organization (CBOs) with feed mixture equipment for production of affordable and quality feed.		

SUB SECTOR	ACHIEVEMENTS	CHALLENGES	LESSONS LEARNT
	d) Supported 5 CIGs with Black Soldier Fly (BSF) kit to produce a cheap source of protein for poultry.		
	7. **Promotion of dairy goat and sheep farming** Supported farmers with 4000 dairy goats and 1500 sheep for increased household income and improved food and nutrition security		
	Bee keeping – Supported youths and women groups with beekeeping starter kit (300 hives, harvesting gears and value addition equipment) to assist them in enterprise diversification.		
	Aquaculture development - Assisted farmers by: a). Rehabilitated 490 fishponds, **b)** Stocking and restocking fish ponds and public dams with over 2,000,000 fingerlings since 2014 with 479,000 having been achieved between 2021 -2023 **c)** Promotion of Cage culture technology in 3 public dams. **d)** Providing 1,840 - 25kg bags of fish feeds and **e)** Providing 538 pond liners.		

SUB SECTOR	ACHIEVEMENTS	CHALLENGES	LESSONS LEARNT
	This Interventions have allowed for diversification of income generating activities at the farm level		
	Irrigation – increased the irrigated land from 2600 hectares in 2013 to 4370 hectares currently. This is due to projects such as: - a) de-siltation and rehabilitation of 10 dams translating to about 420,000 m3 of water b) expansion of 16 water intakes c) 15 small scale irrigation schemes undertaken d) Construction of 42 water storage masonry tanks e) construction of 2,355 individual water pans especially in Kieni each with a capacity ranging from 1000-3000m^3. Add NDMA and NIA ones		
Water and sanitation services	**Household water** Households with access to clean and potable water increased from 57% in 2013 to 78% in 2023. - 415 km of pipelines were constructed benefitting 45,000 households. - Drilled and equipped 39 new boreholes	· Inadequate funding for water programs High initial capital investments · Inadequate staffing and high staff turnover due to retirement and natural attrition · Increased cost of water equipment ·Inadequate ICT infrastructure for data collection	

SUB SECTOR	ACHIEVEMENTS	CHALLENGES	LESSONS LEARNT
	- Rehabilitated 13 boreholes Constructed 4 masonry tanks for domestic water. - 303 households were each supplied with 1000 litres plastic tanks for water storage. - Provided 410 water meters to households to increase water connectivity **Water treatment** 2 water treatment plants were constructed (Naruwasco and Tewasco) to improve water quality with a total production capacity of 4000 m^3/day. **Sanitation** 3 decentralized treatment plants facilities were constructed to serve Naromoru, Othaya and Kiawara.	analysis, monitoring and reporting · Climate change Inadequate and unreliable data for planning Uncoordinated stakeholder collaboration · Inadequate training opportunities Dependency Syndrome Poor land demarcation affecting natural waterways	
Natural resource sub sector	**Increased forest cover** within 5 years from 38.6% to 40.87% in 2021 **Increased river volumes** - Conserved 83.3 kilometers of riverbanks through the provision of seedlings, training, and capacity buildings. **Reduced wood fuel usage** 80 institutional energy-saving jikos installed. **Development of legislation to guide sustainable**	Inadequate funding for rehabilitation programs · Inadequate staffing · Climate change -Inadequate and unreliable data on natural resources Unplanned county ecological systems for planning Uncoordinated stakeholder collaboration · Inadequate training opportunities Conflicting legislations guiding the sub sector Encroachment	

SUB SECTOR	ACHIEVEMENTS	CHALLENGES	LESSONS LEARNT
	management of the natural resources - forest policy and act, forest produce harvesting regulations, wetlands policy, climate change act and policy etc.		
Waste Management	85% of the waste generated was collected and disposed **Circular economy** - Constructed a sorting shed in Karindundu dumpsite to increase waste segregation. - Acquired 2 glass crushers to reduce glass waste - Recycling of electronic waste in partnership with Waste Electrical and Electronic Equipment (WEEE) - Recycling of plastics in partnership with Kenya PET Recycling Company.	· Inadequate funding for waste management programs High initial capital investments · Inadequate staffing and high staff Increased cost of waste management equipment and machinery · Inadequate ICT infrastructure for data collection analysis, monitoring and reporting · Climate change Inadequate land space for waste management Limited waste management technologies Uncoordinated stakeholder collaboration · Inadequate training opportunities	

2.4 Sector Development Issues

This section presents the development issues and their causes. The section further highlights available opportunities and the possible challenges that hinder achievement of the development objective in relation to each development issue. The information is captured in the template provided in Table 15.

Table 15: Sectoral Development Issues, Causes, Opportunities and Challenges

Sub-Sector	Development issues	Causes	Constraints	Opportunities
Agriculture sub sector	Low agricultural Production and Productivity	Inadequate extension services	Inadequate resources personnel, transport, financial) -Technology (ICT equipment, technical skills, automation)	• Availability of qualified agricultural personnel/ agri-preneurs in the market -Digitization of extension services -Public private partnership (PPP). -Existence of Development Partners' willing to support extension. Existence of an agricultural training centre
		•Increased prevalence of pests and diseases	• Emergence of new pests & diseases due to impacts of climate change. Poor agronomic and animal husbandry practices • Pest and disease resistance to pesticides and antimicrobials Transboundary livestock movements • Prevalence of trans boundary zoonotic diseases and parasites to animals Poor animal health management practices	-Use of integrated pest and disease management -Availability of research and surveillance centers -Stakeholder collaboration and partnership in disease and pest control ·Disease resistant and pest tolerant crop varieties. -Existence of elaborate disease control programs - Availability of research and surveillance institutions on emerging issues. Existence of Intergovernmental Coordination Platforms and

Sub-Sector	Development issues	Causes	Constraints	Opportunities
				enforcement on transboundary Existence of legal frameworks on animal movement.
		• Low access to quality agricultural Inputs	· High cost of agricultural inputs · Presence of low-quality inputs in the market. • Poor distribution of E-subsidy selling outlets. Existence of counterfeit and fake inputs in the market. -Limited sources of quality and quantity raw materials. Poor enforcement of quality control	• Availability of government subsidized inputs. · Existence of decentralized selling points. · Availability of community/ cooperatives farm input stores ·Availability of NCPB and Kenya National Traders Corporation (KNTC) · Existence of quality control & surveillance Bodies / Systems (KEPHIS, KEBS, KABS) · Available local materials for making organic Manure to improve soil fertility -Availability of local feed millers. -Huge potential for On farm feed formulation.
		Inadequate value addition of agricultural produce.	- Low utilization of existing value addition and market infrastructure in some value chains e.g. dairy - Inadequate value addition and market infrastructures	- Existing PPP framework for value addition. - Establishment of incubation center & industrial park.

Sub-Sector	Development issues	Causes	Constraints	Opportunities
			- Low production volumes - Seasonality of produce. - Inadequate knowledge/ skills for value addition. - High investment costs for value addition infrastructure. Low value addition of products.	- Availability of local labor (youths, women and men). - Existence of local fabricators of value addition equipment and machinery - Existence of institutions offering value addition and agro-processing services and skills - Availability of land for production
		Over dependence on rain fed Agriculture and fodder production	- High initial investment cost in putting irrigation infrastructures. - Unreliable rainfall due to effects of climate change. - Unsustainable use of available water resources for irrigation	- Existence of development partners willing to support in irrigation programmes and projects - Availability of Water harvesting and water utilization technologies. - Availability of community irrigation schemes/projects. - Availability of surface and ground water resources/ reservoirs. -Investment in drought tolerant crop and fodder varieties Establishment of strategic feed reserves
		Low soil fertility	-Poor soil management practices.	-Available soil analysis

Sub-Sector	Development issues	Causes	Constraints	Opportunities
			-Low access to soil analysis services.	technologies and services. -Existence of sustainable Land use and soil management framework for implementation. -Existence of materials for composting
		Low mechanization and automation of agricultural services.	- High cost of machinery and technologies. -Lack of local machinery maintenance and service centers. -Inadequate technological knowhow/skills. Low funding on mechanization and automation in agriculture.	-Availability of agricultural mechanization center. Available private service providers.
		-Poor linkages in research, and development.	-Poor collaborations among stakeholders and players. -Lack of research and extension Liaison desk/office.	- Existence of strengthened County Agricultural Sector Steering committee (CASSCOM. -Available PPP. -Available research and academia institutions.
		Weak policy and legal framework	-In adequate, unfavorable and low enforcement/implementation of policies and legal frameworks	- Existence of various Policies and legal frameworks for the sector.
		- Post harvest losses of	-Low investment in post-harvest Infrastructures.	- Existence of local entrepreneurs and

Sub-Sector	Development issues	Causes	Constraints	Opportunities
		agricultural produce.	Low adoption of preservation and conservation Technologies.	cooperatives ready to absorb produce. Value-addition and agro-processing technologies. - Available development partners for collaboration in post-harvest infrastructure.
		Low adoption of appropriate breeding technologies	High cost of breeding technologies	-Availability of the breeding technologies. -Available service providers. -Existence of private and development partners for collaboration Availability of subsidy in A.I
		Climate Change	-Low farm tree cover	- Planting of agro-forestry tree (woodlot, fruit tree and forest tree)
		Poor animal husbandry practices	High cost of farm structures.	Existence of technologies.
		-Inadequate fodder, pastures and forages.	-Limited land sizes. - High cost of quality seeds - Adequate water resources and dependence on rain fed practices. - Limited access to certified seed varieties.	- Available technologies for fodder production. - Existence of dairy cooperatives for fodder bulking. - Partnership in fodder production and conservation.

Sub-Sector	**Development issues**	**Causes**	**Constraints**	**Opportunities**
				Establishment of strategic feed reserves
		Poor aquaculture practices	-High cost of inputs -Low technology adoption - Fish predators. -Unavailability of fishing gears. - Poor water quality.	Provision of subsidy
		Cultural barriers to fish farming.	- Community preference for crops and livestock over fish. - Low consumption of fish.	- Availability of extension services attitude change agent. - Existence of emerging fishmongers and aquaculture business support services (locally). -Awareness on fish nutrition
		Low access to strategic fish market infrastructures.	Low production and volumes.	Existence of fish farmers' cooperatives and aquaculture groups. -Wamagana fish mini-processing factory -Availability of cold -chain facilities. -Increasing demand for fish and fish products.
Water and sanitation	*Low access to clean and safe water*	*Diminishing water sources/ degradation of upstream watersheds/water sources.*	-Over abstraction -low reinforcement of water rules. - Climate change -population increases -High cost of water structures	-Availability of permanent rivers. -Available land for dam construction. -Enacted legislations for water management

Sub-Sector	Development issues	Causes	Constraints	Opportunities
		Unsustainable abstraction of water resources		-Existing Water service providers. -Availability of ground water sources. -Willing stakeholders to support water activities.
	Low coverage of sewerage services.	*Inadequate access to sanitation services in pro poor areas*	-High cost of sewerage infrastructures. -Lack of land for construction of sewerage plants - Unplanned settlement villages. -Upcoming rural shopping centers.	-Availability of modern sewerage technologies. -Existing operational water service providers. -Willing stakeholders to support sewerage Unwilling local community to invest on sewerage technologies
Natural resource Manageme nt	Pollution and degradation of natural resources and landscapes	Unsustainable land resource practices	Resource based livelihoods/ Poverty Poor understanding of alternative practices Community perception towards natural resources being 'common good' Lack of planning mapping and gazettement of natural resource land allowing for encroachment and 'any use'	Uptake of alternative sustainable practices Existence of participatory/commun ity management structures and guidelines Community awareness creation campaigns Increase in Development Partners' in the sub-sector supporting rehabilitation and community capacity building
		Climate change	Increased frequency of climate risks occurrences - floods, droughts	Increase in community awareness on effects and

Sub-Sector	Development issues	Causes	Constraints	Opportunities
			Low community resilience towards effects of climate change Low financing towards interventions cushioning communities towards effects of climate change	mitigation/adaptation strategies Increase in Climate financing Uptake of climate smart technology in resource based management
		Inadequate extension services	-Inadequate resources, personnel, transport (financial) -Inadequate Technology (ICT equipment, technical skills, automation)	Assistance from the existing/other MDAs in the sub sector - KFS, KWTA, KEFRI Existence of participatory/community management structures and guidelines Digitization of extension service Existence of Development Partners' in the sub-sector
		Weak policy and legal framework	Low enforcement /implementation of policies and legal frameworks Varying legal directions in the sub sector as established in different legal frameworks e.g. on riparian land	Existence of various Policies and legal frameworks for the sector.
Waste Management	Unsustainable waste management	Lack of a sanitary landfill and transfer stations.	Inadequate funding Challenge of getting suitable land for a landfill due to '*not in my backyard resistance*' Political interference	Existence of development partners for financing. Civic education engagements with all stakeholders to enhance attitude and

Sub-Sector	Development issues	Causes	Constraints	Opportunities
				behavior change
		Minimal recycling and resource recovery	Inadequate funding Minimal material recovery facilities Low implementation of existing guidelines	Potential to engage the community and private sector to scale up recycling activities Enforcement of Sustainable Waste Management Act of 2022 and Nyeri County Solid Waste Management Act of 2021. Civic education engagements with all stakeholders to enhance attitude and behavior change
		Ignorance/ negative attitude and behavior towards waste handling	Inadequate sensitization of residents Inadequate enforcement of SWM related laws and by-laws.	Civic education engagements with all stakeholders to enhance attitude and behavior change Enforcement of Sustainable Waste Management Act of 2022 and Nyeri County Solid Waste Management Act of 2021.

2.5 Cross Cutting Issues

This section presents cross cutting issues. It also indicates the current situation of each issue, how it is affecting the sector, the existing gaps, measures and recommendations for addressing the gaps.

Table 16: Analysis of Sector Cross Cutting Issues

Cross- cutting Issue	Current Situation	Effects of the Issue on the sector	Gaps (policy, legal and institutional)	Measures for addressing the gaps	Recommendations
Climate change and disaster risk management	Increased occurrences of Drought, floods, frosts, mudslides, pests and diseases	Loss of livelihoods	Low implementation of the existing Climate change action plans and policies.	Mainstreaming on Climate Change.	Increase budgetary allocation on Climate Change. Capacity building of the existing Ward Climate Change Committees.
	Disposal of waste in open dumpsites resulting in spontaneous fire outbreaks	Release of hazardous gases into the environment	Limited funding for solid waste management	Establish a sanitary landfill and Increase recycling of waste	Collaborations with all stakeholders in SWM
Drug, Alcohol and Substance Abuse	High prevalence among the Youth and Agriculture work force	Adverse effects on agricultural production and productivity	Low enforcement and implementation of existing legislation and legal frameworks	Enhance the enforcement and implementation of the existing legal Frameworks.	Strict adherence to the existing regulations and Awareness Creation.
Gender Mainstreaming	Gender disparities in the Sector	Disparities in access and allocation of resources to either gender in the Sector -Un equal distribution of workload	Low adoption mainstreaming strategies.	Enhance existing National and County Policies/ Strategies/ Action Plans	Enhance Gender mainstreaming, family budgeting and group empowerment. Involvement of youths in family decision-making.

Cross- cutting Issue	Current Situation	Effects of the Issue on the sector	Gaps (policy, legal and institutional)	Measures for addressing the gaps	Recommendations
		across the genders			
HIV&AIDS	Prevalence rate is 5.1%. High prevalence among Youth and farmers	Reduced agricultural production	Lack and late identification of people living with HIV& Aids. Poor Linkage and referral systems for PLHVs. Stigma.	Group targeting and capacity building and enhance collaboration with Health Ministry.	Target Victims/patients and support with nutrition programmes.
Disability and vulnerable and Minority Groups	Prevalence at 3.2 % amongst the total population.	Adverse effects on agricultural production and productivity	Stigma people tend to hide disability.	Implement the National or County Policies/ Strategies/ Action Plans. Target/affirmative action on PWLDs.	Cascade the existing social protection programmes and safety nets.

2.6 Emerging issues

This section provides emerging issues and how they are affecting the performance of the sector. It also gives the interventions put in place to mitigate the negative effects or harness the positive effects.

Table 17: Analysis of Sector Emerging Issues

S/no	Emerging Issues	How it has affected the sector	Proposed Measures to mitigate the negative effects or harness the positive effects
1.	Increased pests/ and diseases and invasive weeds	Reduced production and productivity, mortality and morbidity in animals and crops.	Increase budgetary allocation on disease and pest control. Develop and implement

			preparedness and mitigation plans Enhance surveillance measures and early warning systems Soil rehabilitation, Research and extension
2.	Theft of agricultural produce	Conflicts, economic loss and insecurity.	Increase security surveillance, liaise with the national government, sensitize farmers and form security committees.
3.	Disasters (Fires, floods)	Destruction and loss of biodiversity, enterprises and loss of infrastructures.	Establish County Emergency Units in the Sub-Counties and the wards
4	Electronic waste resulting from increased use of electronics	Environmental pollution, degradation and exposure of ecosystem to hazardous substances.	PPP collaboration and enforcement & implementation disposal regulations.
5	Human-Wildlife conflicts	Destruction of crops and fodder, loss of biodiversity, destruction of infrastructures and loss of human and animals.	Increase security surveillance, liaise with the national government, KWS, Collaboration and partnership, sensitize farmers and form security committees.

2.7 Stakeholder analysis

This section highlights the different stakeholders relevant to the sector and their roles and possible areas of collaboration. This is presented as indicated in Table 18.

Table 18: Stakeholders Analysis

Stakeholder	Role	Possible area of collaboration
Government agencies	Enactment of legislative instruments, Regulations, Enforcement of relevant environmental laws and sensitization of the public	Implementation of extended producer responsibility (EPR) in solid waste management
Residential Associations	Coordinate residents on waste management practices	Enhance enhancement of waste management laws
WEEE Centre	Collection of e-waste	Scaling up e-waste collection
Formal and informal waste recyclers	Resource recovery through collecting and selling of recyclables	Segregation of waste at the household levels
Water service providers (WSP)	Provision of water resources	Public awareness and enforcement of waste management laws Resource mobilization

Stakeholder	Role	Possible area of collaboration
Kenya national chambers of commerce and industries	Coordinate waste management activities	Promote green economy and solicit funding for entrepreneurs in the green economy
Non-governmental organizations	Engaged in environment related activities	Public awareness and implementation of waste management laws Resource mobilization
Community based organizations	Engaged in environment related activities	Public awareness of solid waste management and promotion of resource recovery
Academia and research	Research development	Data collection, analysis and dissemination
Media	Information dissemination	Public education and awareness
Farmers	Carry out farming activities; environmental conservation; adoption of skills and new technologies	Provision of land and labor.
Development partners (NGOs, FBOs etc.)	-Financing and technical assistance to development; -Capacity building in participatory development	Provide resources for budgetary and technical support.
Value chain organizations	Resource mobilization, advocacy, improving economic welfare of the members, financing, bulking of farm produce, market linkage,	Better linkages at grassroots and commodity focus, infrastructural development
National Drought Management Authority (NDMA)	Facilitation of increased production and access to markets in Kieni constituency; Capacity building and training. Drought mitigation, provide information on early warning	Resource provision, information on early warning systems, capacity building
Other County Government Departments	Linkages, value chain infrastructure and services	Support technical and social Resources.
National Government Ministries/ Departments	Providing manpower, Extension and supervision services, Promotion of farming activities Funding of projects, Policy and legal framework review and formulation, Technology transfer Provision of water in rural areas of the County, Regulatory functions	Capacity building Policy Formulation Networking, lobbying and advocacy Research and development Control of migratory and strategic pests Collaboration in food security, disaster and response management.
Financial institutions	Provide credit facilities Training on financial management skills.	Financial resources and management skills and extensive networks

Stakeholder	Role	Possible area of collaboration
Cooperatives societies	Resource mobilization, advocacy, improving economic welfare of the members, financing, bulking of farm produce, market linkage.	Better linkages at grassroots and commodity focus, infrastructural development
Research Institutions / Universities Kenya Agriculture Livestock Research Organization (KALRO), International Livestock Research institute (ILRI), Kenya Marine Fisheries Research Institute (KEMFRI), Coffee research institute (CRI), Tea research institute, Kenya Forestry Research Institute (KEFRI)	Promote technology advances/training	Research capacity
National regulation bodies – Kenya Dairy Board, KEPHIS, Coffee Board of Kenya (CBK), Pest Control Products Board (PCPB), Horticultural crops development (HCD), Kenya Veterinary Board (KVB) and others	Regulation and enforcement	Constitutional mandate Skills
Members of County assembly	Legislation, Approve budgets and bills	Lobbying Community mobilization Constitutional mandate
Staff	Implementation of Department's policies Change agents	
County Executive Committee Member & the Chief Officer	Provide guidanceDetermine vision and mission Safeguard the Department's image Provide terms and conditions of service Source for adequate budget allocations	

3.0 CHAPTER THREE: SECTOR DEVELOPMENT STRATEGIES AND PROGRAMMES

This Chapter provides sector development priorities, strategies, programmes, flagship projects, and cross-sectoral linkages.

3.1 Development Priorities and Strategies

Sector Details: Agriculture and Rural Development

Sector composition:

a) Agriculture

b) Water and Sanitation

c) Natural resource management

d) Waste management

Vision and Mission:

Vision

A food secure, healthy, economically stable, and environmentally sound county.

Mission

To be a vibrant, inclusive, and sustainable rural economy with transformed food, water and land use systems

Sector Goals:

a) Sustainably improve the quality of life for people of Nyeri
b) Sustainable rural development and poverty reduction
c) Promote, conserve, protect, monitor, evaluate and sustainably manage the environment and natural resources for county development.

3.2 Sector Development Objectives and Strategies

This section presents the sector objectives and strategies in relation to development issues identified in the previous chapter. The information is captured in Table 18

Table 19: Sector Developmental Issues, Objectives and Strategies

Sub-sector	Development Issue	Development Objectives	Strategies
Agriculture	i. Low agricultural Production and Productivity	i. Increase agricultural Production and Productivity	i. Improve agricultural extension services ii. Promote cold chain and postharvest management iii. Promote diseases prevention and control iv. Promote Animal welfare v. Promote fodder conservation and feed preservation vi. Increase acreage with Improved pastures & fodders vii. Improve breeding stock viii. Promote feed formulation ix. Improve access to quality farm inputs x. Improvement of soil health xi. Surveillance and Control of pests and diseases xii. Expansion of irrigated agriculture xiii. Enhance mechanization xiv. Enhance aggregation, value addition and marketing of produce xv. Enhance agricultural quality assurance standards xvi. Promotion of healthy nutrition xvii. Increase water storage facilities e.g. Masonry tanks xviii. Increase uptake of sustainable and modern irrigation technologies

Sub-sector	Development Issue	Development Objectives	Strategies
			xix. Facilitation of irrigation extension services. xx. Promote community capacity building
		i. Conserve, protect and sustainably manage the environment and natural resources for county development	Increase agroforestry. i. Promote use of organic fertilizer ii. Promote soil and water conservation measures iii. Promote water harvesting and efficient water utilization iv. Enforce carrying capacity and stocking rates for sustainable pasture management
		i. Build climate resilience	i. Promote climate smart technologies, innovation and practices ii. Promote drought tolerant varieties iii. Developing climate resilient production systems iv. Support Agro-weather and market advisory services v. Promote crop insurance
		i. Strengthen policy and legal framework in the sector	i. Formulating, implementing, and enforcing policies and legal framework ii. Building stakeholder capacity on existing policies and legal framework iii. Review and domesticate existing national and international policies and legal framework

Sub-sector	Development Issue	Development Objectives	Strategies
		i. Enhance use of innovation and ICT	i. Improve collaboration with research organizations ii. Ensuring dissemination of research outcomes iii. Mapping and digitization of sector-based actors iv. Digitization of sector programs and systems v. Promote technology adoption
		i. Promote sustainable income generation activities (IGA)	i. Promoting value addition, recycling and processing ii. Establishment of incubation centers iii. Promote youth participation in the sector iv. Establishment of value chain-based fund v. Accelerate access to market information and market infrastructure vi. Creation of empowerment programs for women, PWDs and marginalized groups in our communities vii. Promote Apiculture viii. Provide value addition and market linkages for hides and skins. ix. Promote Youth, women, marginalized groups Involvement
Water and Sanitation	Low access to clean and safe water Low coverage sewerage services	i. Increase access to adequate, clean, safe water and necessary sewerage services.	i. Promote water harvesting infrastructure ii. Enhance water treatment and supply iii. Increase pipeline network. iv. Conservation of catchment areas

Sub-sector	Development Issue	Development Objectives	Strategies
			v. Extension of sewerage infrastructure vi. Exploitation of ground water sources e.g. Spring protection, borehole drilling and equipping.
Natural Resource management	Pollution and Degradation of Natural Resources	To Enhance Natural conservation and management.	i. Capacity building on sustainable natural resource management ii. Surveying and mapping of county natural resources iii. Rehabilitation and conservation of all county ecosystems iv. Reclamation of degraded areas v. Increase forest and tree cover vi. Assessment and Monitoring of pollution. e. g Noise and Air pollution vii. Environmental Risk assessment
Waste Management	Unsustainable waste management	To achieve sustainable solid waste management services	i. Development of sustainable waste management infrastructure ii. Enact Legislative frameworks to address waste management iii. Awareness creation on sustainable waste management practices iv. Enhancement of Research and development v. Resource mobilization

3.3 Sector Programmes and Interventions

This section provides the programmes, their objectives, and the key interventions for the plan period 2023 – 2032.

Table 20: Implementation Matrix

Programme	Objectives	Strategies/ Interventions	Implementing Agency(s)	Time Frame	Funding	
					Total Budget (Ksh in millions)	Source(s)
General administration, policy, and planning	Create enabling working environment	Institutional transformation and management.	Agriculture, livestock and aquaculture	*2023 – 2032*	279.6	CG – GoK;
		Policy and planning	Agriculture, livestock and aquaculture	*2023 – 2032*	120	Donor -
Crop Management	To increase crop production and productivity	Crop production and management	Agriculture, livestock and aquaculture	*2023 – 2032*	1100	CG – GoK;
		Value addition and marketing	Agriculture, livestock and aquaculture	*2023 – 2032*	800	Donor -
Livestock production	To promote Livestock Production	Livestock production and management	Agriculture, livestock and aquaculture	*2023 – 2032*	420.9	CG – GoK;
		Value Addition and marketing	Agriculture, livestock and aquaculture	*2023 – 2032*	353.8	Donor -
Fisheries Development	To promote Aquaculture and fisheries.	Fish production and management	Agriculture, livestock and aquaculture	*2023 – 2032*	559	CG – GoK;
		Value Addition and marketing	Agriculture, livestock and aquaculture	*2023 – 2032*	176.9	Donor -
Agricultural Training and Mechanization	To provide quality agricultural	Agricultural diversification and	Agriculture, livestock and aquaculture	*2023 – 2032*	395.2	CG – GoK;

Programme	Objectives	Strategies/ Interventions	Implementing Agency(s)	Time Frame	Funding	
					Total Budget (Ksh in millions)	Source(s)
	training Services and facilities	Upgrading Agricultural Training Centre				
		Agriculture mechanization	Agriculture, livestock and aquaculture	*2023 – 2032*	108.8	Donor -
Veterinary Services Development	To enhance to animal welfare, disease prevention and control	Animal diseases prevention and control	Agriculture, livestock and aquaculture	*2023 – 2032*	490.4	CG – GoK;
		Animal breeding	Agriculture, livestock and aquaculture	*2023 – 2032*	341.6	Donor -
		Veterinary public health services	Agriculture, livestock and aquaculture	*2023 – 2032*	152.12	CG – GoK;
		Animal welfare	Agriculture, livestock and aquaculture	*2023 – 2032*	91.12	Donor -
		Veterinary extension and inspection	Agriculture, livestock and aquaculture	2023 – 2032	37.2	CG – GoK;
Waste management	Improve access to clean and Safe environment	Establish sustainable solid waste management infrastructure	Department of solid waste management	2023 – 2032	2,000	CG – GoK; Donors
		Enhance Public awareness on sound solid waste management practices	Department of solid waste management	2023 – 2032	200	CG – GoK; Donors

Programme	Objectives	Strategies/ Interventions	Implementing Agency(s)	Time Frame	Funding	
					Total Budget (Ksh in millions)	Source(s)
		Research and development	Department of solid waste management	2023 – 2032	150	CG – GoK; Donors
		Resource mobilization through PPP	Department of solid waste management	2023 – 2032	500	CG – GoK; Donors
		Enact Legislative frameworks to address waste management	Department of solid waste management	2023 – 2032	150	CG – GoK; Donors, PPP, ity

Programme	*Objectives*	*Strategies/ Interventions*	*Implementing agencies*	*Time Frame*	*Funding (In millions)*	*Source*
Water and Sanitation	*Access to clean and safe water*	Increase coverage of piped water to households	Department of Water, Environment and Climate Change (WECC)	*2023 – 2032*	*100*	*National Government* *County Government* *Development Partners* *WSPs*
		Water treatment and supply	Department of Water, Environment and Climate Change (WECC)	*2023 – 2032*	500	
		Promotion of Rainwater harvesting	Department of Water, Environment and Climate	*2023 – 2032*	100	

Programme	*Objectives*	*Strategies/ Interventions*	*Implementing agencies*	*Time Frame*	*Funding (In millions)*	*Source*
			Change (WECC)			*CBO's*
		Conservation of catchment areas	Department of Water, Environment and Climate Change (WECC)	*2023 – 2032*	50	
		Borehole drilling, equipping and rehabilitation	Department of Water, Environment and Climate Change (WECC)	*2023 – 2032*	1,000	
		Increase water holding structures e.g. e.g. Mega dams	Department of Water, Environment and Climate Change (WECC)	*2023 – 2032*	2,000	
	Access to sanitation services	Extension of sewerage infrastructure	Department of Water, Environment and Climate Change (WECC)	*2023 – 2032*	1,000	
Irrigation	*Increase land under irrigation*	Increase water storage facilities	Department of Water, Environment and Climate Change (WECC)	*2023 – 2032*	*1,000*	*National Government*

Programme	***Objectives***	***Strategies/ Interventions***	***Implementing agencies***	***Time Frame***	***Funding (In millions)***	***Source***
		Increase uptake of sustainable and modern irrigation technologies	Department of Water, Environment and Climate Change (WECC)	*2023 – 2032*	*500*	*County Government* *Development Partners* *WSPs* *CBO's*
Natural resource management	*Mitigate Pollution and Degradation of Natural Resources*	*Awareness and sensitization on pollution and environmental issues*	*Department of Water, Environment and Climate Change (WECC)*	*2023 – 2032*	*50*	*National Government* *County Government* *Development Partners* *WSPs* *CBO's*
		Surveying and mapping of county forests	*Department of Water, Environment and Climate Change (WECC)*	*2023 – 2032*	*20*	
		Rehabilitation of county forests	*Department of Water, Environment and Climate*	*2023 – 2032*	*20*	

Programme	***Objectives***	***Strategies/ Interventions***	***Implementing agencies***	***Time Frame***	***Funding (In millions)***	***Source***
			Change (WECC)			
		Reclamation of degraded areas	*Department of Water, Environment and Climate Change (WECC)*	*2023 – 2032*	*100*	
		Conservation of riparian areas	*Department of Water, Environment and Climate Change (WECC)*	*2023 – 2032*	*100*	
		Increase forest cover	*Department of Water, Environment and Climate Change (WECC)*	*2023 – 2032*	*10*	
		Assessment and Monitoring tools of pollution.(E. g Noise and Air)	*Department of Water, Environment and Climate Change (WECC)*	*2023 – 2032*	*10*	

Programme	***Objectives***	***Strategies/ Interventions***	***Implementing agencies***	***Time Frame***	***Funding (In millions)***	***Source***
		Awareness and sensitization on natural resource management issues	*Department of Water, Environment and Climate Change (WECC)*	*2023 – 2032*	*20*	

3.4 Sector Flagship Projects

This section captures major projects with high socio-economic impact across the county. The projects may be implemented together with national government and development partners. The information is captured in Table 21.

Table 21: Sectoral flagship projects

Name: (Location)	**Objective**	**Outcome**	**Description of activities**	**Time Frame**	**Beneficiaries (No. Beneficiaries (No.**	**Estimated Cost (KSh. in Millions)**	**Source of Funds**	**Implementing Project Agency**
Agricultural input subsidy programme	To enhance agricultural production	Food and nutrition security and improved livelihoods	Provision of subsidized inputs and services e.g. fertilizer, artificial insemination, services, vaccinati	2023-2032	800,000	1,000	GOK / CGN Development Partners	CGN

			on, breeding stocks, certified seeds and tree seedlings to farmers Establishment of strategic feed reserve					
Agricultural value addition	To reduce post-harvest losses	Improved livelihoods and household incomes	Establishment of value addition and agro-processing infrastructure, establishment of incubation centres, capacity building and skills enhancement	2023-2032	800,000	1,000	GOK / CGN Development Partners	CGN
Agricultural training and mechanization	To provide quality agricultural training services	Enhanced agricultural development	Modernization and refurbishment of Wambugu ATC, improvement and	2023-2032	800,000	600	GOK / CGN Development Partners	CGN

	and facilities		provision of agricultural machinery and irrigation systems					
Irrigation system development	To increase area under irrigation	Food security	Construction of 4 No Mega dams	2023-2032	800,000	6,000	GOK / CGN Development Partners	CGN, National Government,
Water development and management (Last Mile Water Programme)	To improve access to clean and safe water	Safe and clean water to	Construction of	2023-2032	800,000	5,000	GOK CGN Dev. Partners	WSP'S CGN TWWDA NDMA
Sewerage Treatment plants (WSTF)	To enhance extension of sewerage infrastructure	Connection to sewerage services across the county		2023-2032	800,000	2,000	GOK CGN WSP'S Dev. Partners	WSPS'S CGN TWWDA
Forest and Landscape restoration programme	Mitigate Degradation of Natural Resources	Restored watershed areas and forests.		2023-2032	800,000	500	GOK CGN Dev. Partners	KFS KEFRI CGN

(FOLAREP)								
FLLOCA	Strengthen local climate resilience	Enhanced community resilience towards climate change		2023-2032	800,000	2,000	GOK CGN Dev. Partners	CGN
Integrated and sustainable waste management (ISWM)	To enhance sustainable and efficient solid waste management	Clean and safe environment		Procurement installation and operationalization of the material recovery plants and landfill	2023 - 2032	1 billion	Gok CGN DEV PARTENERS	CGN GoK DONOR

3.5 Cross-Sectoral Linkages

This section provides the cross-sectoral impacts of each sectoral programme and appropriate actions to harness cross-sector synergies or mitigate adverse cross-sector impacts.

Table 22: Cross sectoral sector linkages

Programme Name	Linked Sector	Cross Sector Linkages		Measures to Harness or Mitigate the effects
		Synergies	Adverse Effects	

Dams (Last Mile Water Programme)	Trade	Provides water for economic development	Displacement of existing businesses within the dams proposed area.	Resettlement action plan
	Health	Improved sanitation	Water borne diseases	Sensitization on water borne diseases and prevention.
Value addition and marketing of agricultural products	trade	Construction of Agrihub and other aggregation centers	Poor governance of aggregation centers	Capacity building of of the community leaders
Sewerage Treatment plants (WSTF)	Health	Improved sanitation	Air Pollution	Maintain ISO certified standards in maintaining the treatment plants.
	Trade	Creates economic opportunities	-	-
Landscape and watershed restoration (FOLAREP)/ Watershed	Water	Improved water quality and quantity	-	-
	Tourism	Improved scenery and beauty hence increased local tourism	-	-
FLLOCA	Energy	Use of alternative forms of clean energy	Expensive to install and maintain	Government and development partners support
	Social Services	Empowerment of communities and vulnerable groups.	-	-
Waste management	General Economic and Commerce Affairs	Establishment of waste recycling plants	Pollution	Comply with NEMA laws- EMCA

	Infrastructure, Energy, Rural and urban development	Provide easy access to disposal sites and provision of land for a sanitary landfill	Poor disposal of construction waste and environmental degradation	Comply with NCA guidelines and environmental guidelines

4.0 CHAPTER FOUR: IMPLEMENTATION MECHANISMS

4.1 Institutional and Coordination Framework

4.1.1 Institutional Arrangement

County government departments play a pivotal role in the implementation of county sectoral plans by translating overarching national policies into localized strategies and actions. These departments, covering areas like health, education, infrastructure, and agriculture, are responsible for executing programs, projects, and initiatives outlined in the sectoral plans within their respective jurisdictions. They collaborate closely with other stakeholders, including national government ministries, departments, and agencies, to ensure alignment with national development priorities and standards while tailoring interventions to meet the unique needs and challenges of their counties. Additionally, county planning units play a critical role in coordinating the development, implementation, and monitoring of sectoral plans, serving as the focal point for data collection, analysis, and strategic planning at the county level.

In addition to county government departments, various other players contribute to the successful implementation of county sectoral plans. National government ministries, departments, and agencies provide technical expertise, financial resources, and policy guidance to support county-level initiatives, ensuring coherence with national development objectives. County budget and economic forums serve as platforms for dialogue and consensus-building among stakeholders, facilitating resource allocation and prioritization based on local needs and opportunities. Regional economic blocs play a complementary role by fostering cooperation and collaboration among neighboring counties, leveraging collective strengths to address shared challenges and capitalize on regional economic opportunities. Furthermore, the Inter-Governmental Budget and Economic Council (IBEC) provides oversight and coordination of budgetary matters, ensuring that resources are allocated equitably and efficiently to support the implementation of county sectoral plans within the broader framework of national development priorities. Through these collaborative efforts, counties can effectively translate sectoral plans into tangible outcomes that improve the well-being and prosperity of their resident

Table 23: Sector Institutions and their Roles

S/No	*Name of Institution*	*Roles*
	County Assembly	*Legislation, budget allocation and oversight.*
	County Executive Committee	*Implement national and county legislations.*

S/No	Name of Institution	Roles
	County Attorney	Provision of legal services
	County Department of Finance and Economic Planning	Overseeing management of public finances and economic affairs
	Departmental Chief Officers	\accounting Officers for the Departments
	Sector Directors	In charge of technical issues and implementation of sector programmes
	Sub County Sector Heads	In charge of technical issues and implementation of sector programmes in the Sub Counties
	Ward Sector Officers	Implementation of sector programmes and activities at the Ward level
	Kenya Forest Service (KFS)	Tree seedling production Enforcement Forest Conservation and Management Act 2016; Issuance of Movement Permit for forest products
	Kenya Research Forestry Institute	Identification of tree species to be grown; Identification and management of invasive species; Identification and promotion of non-timber products; Rehabilitation of degraded forest areas and wet lands; Payment of ecosystem services policy
	National Environment Management Authority (NEMA	Provision of legal framework on environmental issues.
	Kenya wildlife KWS	Enforcement of Wildlife Act 2013. Human Wildlife Management; Promotion of Nature Based Enterprises in relation to Wildlife and issuing of permits on the same; Management of invasive species Wildlife and vegetation monitoring

S/No	Name of Institution	Roles
	Water Resources Authority (WRA)	*Enforcement of the Water Act, 2016* *Issuance of Water Permits* *Forming and training of Water Resource Users* *Associations (WRUA)* *Policy formulation*
	Water and Sanitation Trust Fund	*Increase coverage and access to water services*
	Tana Athi Water Works Development Agency (TAWWDA)	*Development of Treatment Works and Sewerage systems.* *Provision of Water Bowsers and Exhausters.* *Development of reticulation systems* *Capacity building of Water Service Providers* *Linkage between the National Government and the County Government on water development matters*
	National Harvesting and Storage Authority (NWHSA)	*Enhance Harvesting and storage Capacities* *Increasing access to clean and safe water Technical Support*
	Water Services Regulatory Board (WASREB)	*Capacity Building of Water Service Providers*
	The Water Mission	*Support Community Operated Water Projects* *Capacity Building and Capacity Building.* *Implementation of Water Projects*
	National treasury Implementation Unit	*Resource Mobilization such as Financing Locally Led Climate Actions.*
	Kenya meteorological Department	*Provision of Climate Information Service;* *Capacity Building on Climate information service* *Awareness creation on climate change response*
	World Vision-Kenya	*Support Community Operated Water Projects* *Capacity Building and Capacity Building.* *Implementation of Water Projects*
	Tupande Formerly One Acre Fund)	*Support agroforestry and afforestation*

S/No	Name of Institution	Roles
	USAID	*Increasing coverage.* *Capacity Building and Technical Support* *Support Policy Formulation and Regulations*
	GIZ	*Increasing coverage.* *Capacity Building and Technical Support* *Support Policy Formulation and Regulations*
	Davis & Shirtlifff	*Technical Support* *Capacity Building*
	Media	*Communication and publicity*

4.2 Financing Mechanism

This section indicates the total cost of funding of the sectoral plan disaggregated by funding sources. It also indicates the estimated total cost of implementing the specific programmes, as well as the potential financing sources. Further, it highlights the collaboration arrangements between the various agencies within the sector and other implementing agencies

Table 24: Financing of the Sector

S/No	Sub Sector	Budget (KES Million)	Source of Funds
1	Agriculture	4603.04	CG, Donor, GoK, PPP, Community
2	Water and sanitation		CG, Donor, GoK, PPP, Community
3	Natural resource management		
4	Solid Waste		CG, Donor, GoK,PPP, Community

The funding sources include county government budgets, national budgets, Public- Private Partnerships, development partners, private sector, among others.

4.3 Capacity Development

Capacity development is outlined in the table below which captures the capacity gap and measures needed to address the gaps.

Table 25: Capacity Gaps analysis

S/No.	Capacity Gap	Measures to address the gap
1	Inadequate human resource	Recruitment, promotion and motivation of staff

2	Low funding/ Budgetary allocation	Adequate and timely financing for implementation of sector programmes and projects
3	Inadequate knowledge on use of ICT technologies	Capacity building on ICT systems.
3	Inadequate legal framework	Development of policies and guidelines
4	Slow procurement process	Fast tracking of the procurement process

4.4 Risk Management

This section provides possible risks that may hinder implementation of the sectoral plan and discusses proposed mitigation measures, as indicated in the table below

Table 26: Risks, Levels, Owners and Mitigation Measures

Risk	Risk Level	Risk owner	Mitigation Measures
Political interference	High	Political leaders	Civic education and political tolerance
Inadequate revenue to implement the plan	High	CG, NG	Expanded revenue streams Sealing of loopholes in revenue leakage
High rate of technological trends	Low	Sector	Continually train staff in new technological trends
Changes in legal, compliance and regulations measures	Moderate	Sector	Developing a risk management policy and annual plan
Consumer preferences and demand Staff turnover	Low	Sector	Sensitization to enhance uptake of safe and clean water
	Low	Sector	Enhance staff motivation and welfare
Market shocks	High	Sector	Promote climate smart technologies
Climate change	High	Sector	Invest in climate mitigation and adaptation strategies
Health shocks	Moderate	Community	Invest in insurance and promote nutrition security
Dumpsite fires	high	CGN, community	Containment through provision of soil cover and a trench to act as a barrier between dumpsite and neighbours Decommissioning of dumpsites
Lack of political goodwill	High	Community and politicians	Engage the community and leaders comprehensively on matters concerning solid waste e.g. revenue generation

Risk	Risk Level	Risk owner	Mitigation Measures
Lack of a suitable land for a landfill	High	CGN	Provision of sufficient funds for buying land Carry waste for disposal in the landfill being constructed by National government in Muranga county.

5.0 CHAPTER FIVE: MONITORING AND EVALUATION FRAMEWORK

5.1 Monitoring, Evaluation, Reporting and Learning

Introduction

Monitoring and Evaluation framework is critical to enable tracking the implementation of the programmes identified in the sector plan. This section presents the Monitoring and Evaluation framework that will be put in place and reporting mechanisms that promotes knowledge sharing and learning.

Monitoring of the sector programmes and projects will be a continuous process based on the performance indicators set out in the implementation matrix. Evaluation mechanisms will entail measuring actual performance against set target levels and establishing size of gap or variance if any, identifying the causal factors for the variance, identifying and recommending appropriate remedial measures including a review of the objectives and/ or strategies.

5.2 Monitoring, Evaluation and Reporting Structures

Monitoring and Evaluation will take place at National and County levels. The sector will work with the private sector, NGOs and other stakeholders to ensure there is effective monitoring and evaluation of the implementation of this sector plan. The implementation of this plan will be reviewed continuously guided by progress reports.

Monitoring of the entire process from planning, designing and implementation is important as it keeps the planned activities in check, reduces duplication, allows for remedial measures to be taken and ensures the projects/programmes results delivery on time. The Sector M& E Committee comprising the sectional heads and chaired by the Chief Officer together with the Monitoring and Evaluation Unit in the Directorate of Economic Planning will monitor progress of implementation of projects and programmes. The Committee will carry out annual, mid-term and end-term review of the progress of implementation of planned projects and prepare reports for submission to relevant personnel for action. The Sector has put in place a Monitoring and Evaluation System that is in line with and will complement the County Integrated Monitoring and Evaluation System. To maximize learning and to ensure wider accountability, it will be necessary to share key information with partners, programme beneficiaries and the wider public.

5.3 Data Sources and Collection Method

The monitoring and evaluation framework will comprise technical officers from the sector, Public Works, Quality Assurance Officers and representation from the Directorate of Economic Planning. Data collection will be by physical observation of the projects and programmes being implemented, actual verification of items delivered where applicable and survey of stakeholders to ascertain the impact of the projects/programmes.

5.4 Types of Reports to be Produced, Frequency and Consumers

Reporting is important as it provides feedback to establish the challenges, successes and weaknesses in the implementation of various projects and programmes, and whether the set objectives have been met or are on course. The Plan will be evaluated annually, after five years and at the end of the plan period. The reports prepared will outline the achievements in comparison to targets, facilitating factors, challenges faced and lessons learnt. The reports will be submitted to the Governor's office for information use and dissemination to stakeholders including the County Assembly, Development partners, Beneficiaries and the Public. Issues requiring policy interventions will be submitted to the County Executive Committee for action. The reports shall be stored manually in the manual files, also electronically and will be posted on the official County website.

The following reports will be prepared and disseminated;

i) **Annual Review Report (ARR)** – The report will evaluate all the activities undertaken during the year, clearly showing the milestones, challenges and outlining plans for the following year.

ii) **Mid-term Review Report (MTER)** – The report will be undertaken midway in the implementation of the sector plan to assess the extent to which the implementation is meeting plan objectives and timelines.

iii) **End-term Review Report (ERR)** – At the end of the Plan period, there will be an external evaluation carried out by an external evaluator. The task will lead to identification of achievements against performance indicators; constraints encountered during the plan period and make recommendations towards the development of the next plan.

5.5 Dissemination, Feedback Mechanisms and Citizens Engagement

After preparation of the reports, there shall be review meetings to assess the report and map a way forward. This will keep the plans' activities and outputs on track during implementation, and enable the relevant personnel to identify and take necessary actions to address any emerging issues. The reports will be disseminated to stakeholders including the County Assembly and shared on County digital platforms where citizens will be given an opportunity to provide feedback.

5.6 Mechanism for Reviewing and Updating the Sectoral Plan

The Monitoring and Evaluation data will be analyzed and reports prepared for submission to the Governor for his information and appropriate action. These reports will outline in summary the period achievements, shortcomings, challenges faced and recommendations. Based on these reports, a decision to review or update the Sectoral plan will be made.

The monitoring and evaluation Matrix presented in table 16 will be used to effectively monitor the progress of implementation of programmes in the plan and eventually evaluate them.

Table 27: Monitoring and Evaluation Matrix

Programme	Outcome	Key Performance Indicator(s)	Baseline		Targets	
					Five Year Target(s)	Ten Year Target(s)
			Year	Value		
Waste Management	A clean and healthy environment	No of receptacles installed	2024	85	100	200
		No of specialized trucks procured	2024	10	15	20
		No of community-based waste collectors engaged	2024	15	25	25
		No of sanitary landfills commissioned	2024	0	1	1
		No of licensed disposal sites	2024	0	2	2
		No of specialized machineries acquired	2024	1	3	6
		No. of incinerators	2024	0	1	1

Programme	Outcome	Key Performance Indicator(s)	Baseline		Targets	
					Five Year Target(s)	Ten Year Target(s)
			Year	Value		
		installed and commissioned				
		Frequency of pushing and compacting of garbage at the dumpsites	2024	8	20	40
		Number of perimeter walls constructed	2024	2	3	3
		Decommissioning of dumpsites	2024	0	2	4
		No. of public awareness campaigns on solid waste management	2024	10	50	100
Crop Management	Food and nutrition security	increase in crop production Coffee production in kgs Irish potato production in tons/acre Increase in HA of avocado planted in HA	2024 2024 2024	28ml 6 1500	35ml 8 2000	40ml 10 2500

Programme	Outcome	Key Performance Indicator(s)	Baseline		Targets	
					Five Year Target(s)	Ten Year Target(s)
			Year	Value		
	Value addition of agricultural produce	No.of value addition and aggregation sites established	2024	5	10	
	Improve access to quality farm inputs	No. of farmers reached with subsidized inputs	2024	12000	24000	30000
	Institutions transformed	No. of institutions capacity build	2024	0	1	2
	Increase land under irrigation	Land area under irrigation	2024	2710 ha	4350 ha	7500 ha
Livestock Production	Improved livelihoods and household incomes	Milk production in Litres Meat production in tons Honey production in tones Egg production in crates	2024 2024 2024 2024	110M 3,000 6,100 607,900	140 3,300 8,500 720,000	170 3,600 11,000 850,000
Fisheries Development	Improved livelihoods	Number of people earning a living from fish farming	2024 2024	2319	4000	70

Programme	Outcome	Key Performance Indicator(s)	Baseline		Targets	
					Five Year Target(s)	Ten Year Target(s)
			Year	Value		
		Fisheries Fish production in tonnes		24	40	
Agricultural Training and Mechanization	Enhanced agriculture development	Area under mechanized farming	2024			
Veterinary Services Development	Improved animal health and production	Number of livestock Vaccinated	2024	70500	90,000	)00
		Number of livestock inseminated	2024	24500	31,850	)0
Water and Sanitation Development and Management	Increased adequate, affordable, safe, and clean water	Proportion (%) of the population with access to safe and clean water	2024	72	80	90
	Increased area under sewerage connectivity	Number of households connected to the sewer-line	2024	18364	25873	31035
Natural Resource Management	Enhanced natural	Percentage increase in tree cover	2024	45.17	48	51

Programme	Outcome	Key Performance Indicator(s)	Baseline		Targets	
					Five Year Target(s)	Ten Year Target(s)
			Year	Value		
	resource management	Number of Riparian zones reclaimed and rehabilitated (Km)	2024	83.3	100	125
		Percentage increase in forest cover	2024	40.89	42	