THE COUNTY GOVERNMENT OF BUNGOMA



DEPARTMENT OF AGRICULTURE, LIVESTOCK, FISHERIES, IRRIGATION AND COOPERATIVES

BUNGOMA COUNTY AGRICULTURE SECTOR POLICY

OCTOBER, 2023

ABBREVIATIONS AND ACRONYMS

ADS-W Anglican Development Services, Western.

ASDS Agriculture Sector Development Strategy

ASDSP Agriculture Sector Development Support Program

ATDC Agriculture Technology Development Centre

CAADP Comprehensive African Agriculture Development Program

CECM County Executive Committee Member

CIDP County Integrated Development Plan

ECF East Coast Fever

ESP Economic Stimulus Program

GDP Gross Domestic Product

GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH

HIV Human immunodeficiency Virus

ICT Information and Communication Technology

IWUA Irrigation Water Users Association

KFW Kreditanstalt für wiederaufbau

M&E Monitoring and Evaluation

NCCAP National Climate Change Action Plan

NCD New Castle Disease

PPP Public Private Partnership

RAS Recirculating Aquaculture System

SACCOs Savings and Credit Cooperatives Organizations

SLM Sustainable Land Management

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FORWARD

The economy of Bungoma county is dependent on agriculture. About 69.1 % of the total population lives in the rural areas and are directly or indirectly engaged in the agriculture sector. The Agricultural Sector contributed 43% of the total Gross County Product in 2022. The sector contributes significantly to other economic activities in the county such as manufacturing, wholesale and retail trade, transport and storage.

Agriculture forms the basis of food production in the county and significantly contributes to growth of the county economy. There is need for the county to develop appropriate strategies that will lead to food and nutrition security and safety. The Department of Agriculture, Livestock, Fisheries, Irrigation and Cooperatives, in collaboration with relevant stakeholders, has taken the initiative to formulate the Agriculture Sector Policy which will be the basis of legislation, strategies, plans, projects and programs for the county's agricultural development. Respective agriculture sector commodities, policies and legislations are expected to conform to the Agriculture Sector Policy.

The Policy has been formulated in line with relevant provisions of the Constitution and provides a clear road map to the realization of Vision 2030 agricultural goals and targets. It identifies current challenges in the Agricultural Sector and outlines suitable guidelines to address them. It provides measures towards sustainable use of natural resources which are expected to boost agricultural production and productivity.

The Policy recognizes institutional and capacity limitations and provides for interventions that have potential impacts on agriculture sector value chains. It takes cognizance of cross-cutting issues, particularly governance, gender and inclusivity, which significantly affects agricultural development. It acknowledges the benefits and economic growth that accrue from synergies formed during stakeholder engagement and participation.

The Policy affirms the interrelationship between food security and nutrition that have a definite bearing on personal and county security. In this regard, it emphasizes the need to commit adequate resources to enable sustainable production of sufficient and diverse nutrient dense foods. Consequently, the Department of Agriculture, livestock, Fisheries, Irrigation and Cooperative in collaboration with relevant stakeholders is expected to take responsibility for implementation of this Policy.

PREFACE

Realization of food and nutrition security in the county Government calls for implementation of key policies. Presently, the agriculture sector is negatively affected by challenges and constraints that include: inadequate Agricultural Mechanization; low production and productivity; high Post-harvest Losses; high cost and adulteration of agricultural Inputs; inadequate Agricultural Extension, Research and Training Development underutilized irrigation potential. In addition, inadequate Sector Coordination; low funding and underutilization of agricultural Institutional; low resilience to Climate change impacts in Agriculture; inadequate Agricultural Financing and Investment; underdeveloped food and feed safety systems; inadequate Agribusiness, Value addition and Marketing; low utilization of Information and Data Management; weak Enabling Environment; low Gender and social inclusion in Agriculture and poor governance in producer organization have contributed to the low food security and livelihood in the counties. A logical, well-founded, solution-oriented and impactful agricultural research system is pivotal to addressing these challenges. In order to address the above constantly changing factors effectively and efficiently, agricultural research has to be dynamic too, well-coordinated and a never-ending process.

The county has been faced by increased land and soil degradation; land fragmentation; inefficient use of farm inputs; low adoption of new agriculture technologies and inadequate and inappropriate land use practices. increased instances of emerging pests and diseases, natural calamities such as floods and dry season which result into losses of crops & livestock.

The county has been subsidizing inputs to boost productivity and ensure easy access. However, the subsidy program is inadequate and also lacks a policy framework to guide identification of beneficiaries and mode of distribution

The County has irrigation potential of 13,200ha with only 300ha being irrigated due to inadequate infrastructure for water storage since its capital intensive leading to over reliance on rainfed agriculture that is variated with low overall water use efficiency due to low adoption of appropriate technologies

There is Inadequate Agricultural Extension, Research and training development with ex 88 VTCs and 6 ATVETs however the curriculums have few agriculture courses, with trainers with inadequate capacity. inadequate funding towards extension services. weak research-extension-farmer linkage. Poor Infrastructure to support extension and service delivery for Veterinary and soil laboratories with limited equipment and are underutilized, Weak partnerships and collaboration among agricultural extension service providers. The VTCs and ATVETs have an aging public extension worker of average age of 50 years old with most are nearing retirement age- with extension staff to farmer ration of Crop 1:1850, Livestock 1;1762. Although

The demand for small-scale agricultural mechanization is high with low adoption of appropriate technologies due to; high cost of investment, poor distribution, unavailability of machinery and equipment, inadequate skilled personnel and research-extension linkages.

The sector has over the last four years received about 7% per year of the County budget which is below the continental Maputo agreements of 10% With most of the budget going to conditional grants with very little remaining to fund extension services. There has also been low access to funds from financial and insurance institutions due to the need for collateral, high interest rates, low financial literacy. The revolving funds programs implemented by both the National and county governments target the vulnerable, youth and women but are not specifically for agriculture and agribusiness development.

Agricultural markets within the county are largely characterized by individual actor participation resulting in exploitation by middlemen leading to low product prices, high marketing costs and hence low incomes. There is low access to market information due to inadequate market information sharing platforms and low awareness on existing platforms. Marketing infrastructure challenges such as inadequate road network, market stalls, storage facilities, and specialized transport has resulted in produce deterioration, wastage, inaccessibility of produce by customers and difficulties in produce loading and unloading.

Food safety awareness is inadequate in the county due to an underdeveloped, underutilized and poorly coordinated system of generating, collecting, collating and rapid dissemination of food safety information. There is weak support, ineffective curricula development, inadequate training facilities, tools and equipment in training institutions. In addition, there is low capacity and weak linkages among service providers in food safety.

For vulnerable groups to benefit from Sustainable agriculture development in the county, the working culture, systems, procedures and underlying values of the institutions should focus on gender equality, equality and inclusivity. Inadequate and ineffective participation of vulnerable groups in decision making and resource acquisition has limited them from acting as change agents.

This sector Policy seeks: to streamline, rationalize and put in a system that is all inclusive, efficient and effective and considers strong public private engagement, the use of current scientific, human and physical capacities but also position the county as a hub for agricultural research and development in the region; and, to create an enabling environment for a vibrant agricultural research industry that contributes to the economic growth and wealth creation, poverty reduction, gender equity, increased productivity, improved livelihoods, environmental sustainability, and eventually sustainable development.

ACKNOWLEDGMENT

The drafting of the food safety policy is an outcome of tireless efforts and tremendous participation by various individuals and institutions.

We wish to thank the County Executive Committee Member for Agriculture, Livestock, Fisheries, Irrigation and Cooperatives for her invaluable technical and logistical contribution and guidance in the preparation of this Policy. She set the pace and motivation for all key stakeholders to work exceptionally hard in order to conclude the process of developing this policy.

We wish to thank the County Assembly on playing its legislative role and ensuring that this policy is passed. Specifically, we extend our gratitude to the Sectoral Committee on Agriculture, Livestock, Fisheries, Irrigation and Co-operatives and the Committee on Delegated Legislation for their input.

The process of preparing this policy was undertaken by a dedicated technical working group that comprised of subject matter specialists County Departments of Agriculture, Livestock, Fisheries and Cooperatives; Trade and County Attorney. The task force was key in developing primary drafts that were the basis for stakeholder consultations and public participation.

Finally, I wish to acknowledge the participants of the various workshops in the development of this policy. We are especially indebted to research institutions, universities, private sector, development partners, civil societies, NGOs, and CBOs who sent representatives to participate in the formulation and validation of this policy. Your input into this policy will go a long way in the development of the food safety sector and the County of Bungoma as a whole.

County Chief Officer,	County Chief Officer	County Chief Officer,
Agriculture and Irrigation	Livestock and Fisheries	Co-operatives
1		

EXECUTIVE SUMMARY

Agriculture sector has recorded impressive growth since independence. However, key challenges have been identified which when addressed will spur achievement not only on food and nutrition security but also create opportunities of employment among the youth, and provide raw materials for sector related industrialization initiatives.

Through the provisions of the Fourth Schedule of the Constitution of Kenya, 2010, most of the functions of the agricultural sector were devolved to counties. The national government enacts policies, laws and standards. However, the counties are the focal points for the implementation of the policies and enforcement of the sector laws and standards. It is against this background that Bungoma County has developed the County Agriculture Sector Policy through the domestication process of the National Agricultural Policy, 2021.

The goal of this policy is to achieve innovative, sustainable and commercially oriented crops, livestock and fisheries resources development and utilization. The policy addresses the agriculture sector in the broad areas of; food and nutrition security; degraded agricultural soils; low production and productivity; post-harvest losses; agricultural inputs; agricultural extension and training development; water for agriculture; agriculture mechanization; agricultural institutional reforms; climate change in agriculture; agricultural financing and investment; food and feed safety; agribusiness, value addition & marketing; information and data management; enabling environment and cross-cutting issues which include social inclusivity and governance.

The County Government will develop a participatory implementation plan for this policy which will be an important step towards ensuring actions outlined in the policy are addressed systematically and effectively. The Department of Agriculture, Livestock, Fisheries, Irrigation and Cooperatives will have the overall responsibility for the implementation of this policy. The successful implementation of this policy will depend on the partnership between the County Government of Bungoma and particularly the Department of Agriculture, Livestock, Fisheries, Irrigation and Cooperatives with the various relevant stakeholders. These partners include, other County Government departments, the national government and its institutions, development partners, non-state actors like International and local NGOs, and Private Sector among others.

For successful implementation of this policy, a MEL framework will be developed as an integral component to ensure the policy objectives are achieved in a cost effective, coordinated and harmonized approach. The MEL framework is expected to be consistent with the National Integrated Monitoring and Evaluation Systems (NIMES) There will be an Annual Review Report (ARR) on implementation of the policy. The policy will be reviewed when need arises to ensure its relevance.

CHAPTER ONE: INTRODUCTION

1.0. Introduction

This chapter presents background information on the agriculture sector from a global, national and county perspective. The chapter further gives policy background information where it explains how the national level policies and legal frameworks are domesticated at the county level. Finally, the chapter outlines a summary of the rationale for the policy and provides insights into the process of developing the policy.

1.1 Background of Agriculture Sector in Kenya

The economy of Kenya is primarily dependent on agriculture. About 69.1 % of the total Kenyan population lives in the rural areas and are directly or indirectly engaged in a wide range of agricultural activities in crops, livestock and fisheries. Agriculture contributed 21.2% to the national GDP in 2022 and is the mainstay of the Kenyan economy with great potential for growth. According to the Kenya National Bureau of Statistics, the Agricultural Sector in Bungoma contributed 43% of the total Gross County Product in 2022. The sector also contributes significantly to other economic activities in the county such as manufacturing, wholesale and retail trade, transport and storage.

The 2019 Population and Housing Census highlighted the county population as 1,670,570, (Male 812,146, Female 858,389 and intersex 35). The total number of households is 358,796 with farming households being 280,445. The overall poverty index for Bungoma County as per 2021 KNBS Poverty Report is 43.9% compared to the national rate of 38.6% while the food poverty rate is 31.0% compared to the national food poverty rate of 30.5%. The agriculture sector is key towards poverty alleviation in the county and offering employment to the growing county's youthful population.

Land is the most important resource in agricultural production. Limited availability of productive land is a major constraint to increased agricultural production. The total county area is 3,024km² of which total agricultural land area is 2,232.69km². Subsistence farming utilizes 2,024.94km² while 190.91km² is under commercial farming. The average holding size in the county for small scale farm sizes is 1.5 acres, while for large scale farms is 10 acres. This implies that agricultural land sizes are declining due to fragmentation of land into uneconomical units/parcels.

The County is divided into five agro-ecological zones namely: Tropical Alpine(TA), Upper highlands (UH), Lower Highlands (LH), Upper Midlands (UM) and Lower Midlands (LM). The County experiences two rainy seasons, the long rains- March to July and short rains-August to October. The annual rainfall in the County ranges from 400mm (lowest) to 1,800mm (highest). The annual temperature in the County varies between 0°C and 32°C due to different levels of altitude, with the highest peak of Mt. Elgon recording slightly less than 0°C. The average wind speed is 6.1 Km/hr.

The County is dominated by luvisols, ferralsols and acrisols soil types, while andosols are mostly covered in Mt Elgon region. The soils are mostly acidic across the county. Mt Elgon forest ecosystem supports life systems through the hydrological cycle and Plant production through the pollination process. The forested areas have high organic carbon content of >20 g/kg that provides soil nutrients through the decomposition of biomass, consequently supporting both soil and terrestrial species.

Farmer organizations in the County have played a key role in the development of agriculture through technology transfer, acquisition of farm inputs, bulking, value addition and marketing of agricultural produce. The agricultural marketing cooperatives are commodity based, including coffee, tea, sugarcane, horticulture, fish, dairy and poultry. Currently, agricultural cooperatives are facing various challenges including poor governance and inadequate support to enhance their scope.

Inadequate entrepreneurial skills have been found to inhibit commercialization of agriculture. Many actors in agricultural value chains continue to engage in enterprises that offer little change in their levels of income. Without adequate entrepreneurial skills, agricultural value chain actors with more than one source of income tend to unknowingly subsidize unviable agricultural enterprises while those who mainly rely on agriculture continue to be poor. There is a need to improve entrepreneurial skills of agricultural value chain actors since the future and growth of the Agriculture sector depends on intensification and substitution towards high-value products.

The agricultural sector is characterized by various production systems that vary in efficiency, productivity and resilience. Some are extensive, semi intensive, intensive and are dependent on agro-ecological zonation. The agricultural sector comprises the following broad subsectors: crops, livestock, fisheries. There are many stakeholders in the sector due to its role in the economy and its capacity to significantly impact the livelihoods of many people.

1.1.1. Crop Sub-Sector

The Crops sub sector comprises food, horticultural and industrial crops among others. Main crops produced include food crops like maize, beans, sorghum, finger millet, sweet potatoes, bananas, Irish potatoes, oil crops, assorted vegetables (tomatoes, brassicas, local vegetables etc.) and fruits (bananas, avocado, water melons, passion fruits, mangoes, citruses, plums, pears etc). Sugar cane, tea, cotton, palm oil, coffee, sunflower and pyrethrum are grown as cash crops in the County. Maize, Coffee, Pulses, Sugar cane, Irish potatoes, Bananas, onions and Tomatoes are the main contributors to the county's economy from the agricultural sector. Sugar cane is considered as one of the main cash crops and farmers are contracted by the Nzoia Sugar Company. Among the over 280,000 farming households, the majority are maize farmers covering about 87,000 Ha (CDA Bungoma, 2022).

Most of the agricultural activities are rain-fed, thus exposing families to instances of food insecurity because of unpredictable weather patterns. During periods of scarcity (April-June), there is inadequate and inconsistent access for households and individuals to food due to high prices, resulting in families having one meal per day as compared to the WHO recommended three meals per day.

Bungoma County has 300 ha of land under irrigation distributed in the whole county, which is about 10% of the potential area of irrigable land of 13,200 ha. The county has over 100 small dams spread across the county however most of the dams have been encroached. There is need for more investments to enhance the area of land under irrigation.

1.1.2. Livestock Sub-Sector

Animal husbandry is an integrated part of land use. Traditionally, wetlands and rangelands were used for grazing. The emphasis on crop production has reduced grazing land, hence reduction of animal stock. Major livestock in the County include; cattle(416365), sheep(136,124), goats(146,696), donkeys(12,399), pigs(19,917), poultry(2,999,944) and bees(14,859hives). The

average land carrying capacity is 3 livestock units per acre (LUs/acre). Whereas the County Government has made efforts to improve dairy and poultry through purchase of superior breeds for upgrading and subsidizing the cost of artificial insemination, there is need to put more effort and resources towards sustaining the dairy sector.

Livestock diseases remain a major challenge facing the livestock sub-sector in Bungoma. Common diseases include ECF, FMD, Lumpy skin disease in cattle, NCD, fowl typhoid, fowl pox and Gumboro diseases in poultry. Other diseases affecting production include mastitis and milk fever.

Most of the indigenous cattle rely on natural pastures as their main source of feed. Napier grass is the main fodder crop established for dairy cattle in Bungoma County although farmers have started to embrace new varieties of fodder. The quality and quantity of fodder varied according to rainfall pattern with very little supplementation, particularly during the dry season, thereby negatively affecting productivity. Even for farmers who do supplementation, the quality of the feeds is not guaranteed and this poses a major challenge to productivity.

1.1.3. Fisheries Sub-Sector

Fish farming production systems are mainly earthen ponds. Currently, the number of fish ponds in the county are 6,169 covering a total area of 185 ha. The main types of fish produced are tilapia and catfish. The annual production of fish is approximately 100 MT. The County government of Bungoma supported the sub-sector by providing inputs to fish farmers and training of extension officers and fish farmers. Besides, the County Directorate of Fisheries operates a hatchery at Chwele Fish Farm which supplies mono sex fingerlings to farmers and has a potential of producing about 20 million fingerlings (fish seeds) per year when it becomes fully operational.

Accessibility of quality fish farming inputs including fingerlings, quality feeds, fishing nets and other equipment is a major challenge in the County. Farmers also practice minimal value addition and should be supported to add value and commercialize by moving from extensive to semi-intensive and intensive production. Communities residing close to dams and main rivers engage in fishing activities on subsistence basis, however, this trend can be changed to commercial basis by introducing cage farming. Fish farmers in the county are organized in ward based cluster groups for ease of providing training, extension and distribution of inputs. There is need to further organize the cluster groups into well-structured and viable fish farmers' cooperative societies.

1.2 Policy and legal Framework

The Maputo Declaration (2003) of Comprehensive Africa Agriculture Development Programme (CAADP) targets that at least 10% of public expenditure be allocated to the agriculture sector, and also aims to achieve at least 6% annual growth of agricultural GDP.

The Malabo Declaration on Accelerated Agricultural Growth Transformation 2025 committed to enhancing investment finance in Agriculture and boosting Intra-African trade in agriculture commodities and services to spur agribusiness in Africa.

Comprehensive Africa Agriculture Development Programme (CAADP) Results Framework 2015 – 2025 is a framework for agriculture transformation, wealth creation, food security and nutrition, economic growth and prosperity for all.

The Constitution of Kenya, 2010 - The Constitution recognizes the importance of natural resources and their use for posterity. In Article43 (c) under the Bill of Rights, the Constitution stipulates that "every person has the right to be free from hunger and to have adequate food of acceptable quality". Article 60 (1) (c) emphasizes sustainable and productive management of land resources.

Kenya Vision 2030 - emphasizes sustainable agricultural growth as a critical element in poverty reduction and addressing inequalities.

National Climate Change Act, 2016- The Act provides for a regulatory framework for enhanced response to climate change; to provide for mechanisms and measures to achieve low carbon climate development, and for connected purposes.

Environment Management and Coordination Act (EMCA), 1999 (amended 2015) - This Act establishes the National Environmental Management Authority (NEMA) whose mandate is to coordinate all environmental activities in Kenya.

Crops Act, 2013 (Rev. 2016)- Regulates the safety of crop and crop products in the field, handling, warehouse transportation, processing and market standards of food crops and crop products.

Pest Control Products Act, Cap 346 - provides an efficient and effective regulatory service for the importation, exportation, manufacture, distribution and use of pest control products.

Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019 - 2029 TheASTGS takes an evidence-based approach, and a sharp focus on implementation and delivery with the counties at the center. This approach is the foundation for addressing the challenges that constrain agricultural output, productivity, natural resource management, and the effects of climate and environmental change.

National Agriculture Policy 2021 - The Policy provides a framework for sustainable development of the agricultural sector based on the requirements of the Constitution, the Kenya Vision 2030, Millennium Development Goals and other national, regional and international development goals in agriculture.

National Agricultural Sector Extension Policy (NASEP) 2012- spells out modalities for effective management and organization of agricultural extension in a pluralistic system where both public and private service providers are active participants.

Kenya Climate Smart Agriculture Strategy 2017 – 2026 - The broad objective of the Kenya Climate Smart Agriculture Strategy is to adapt to climate change, build resilience of agricultural systems while minimizing emissions for enhanced food and nutritional security and improved livelihoods.

National Food and Nutrition Security Policy 2012- It aims to ensure that all citizens have access to sufficient, safe and nutritious food at all times

National Agricultural Mechanization Policy 2021- aim to sustainably raise the level of mechanization in the agricultural sector for increased productivity and incomes of agricultural value chains; and create a strategic institutional and market environment that provides choice agricultural machinery, equipment and technology, within a sustainable delivery and support system.

National Irrigation Policy 2017- proposes to exploit irrigation potential by increasing the area under irrigation by 40,000 Ha per year; increase available water for irrigation through innovative technologies including water harvesting, flood control, use of waste water and sustainable exploitation of groundwater.

National Agribusiness Strategy (2012) - seeks to achieve the following: remove barriers and create incentives for the private sector to invest in agribusiness and related business opportunities; invest public resources more strategically to trigger growth in agribusiness; make agribusiness systems more competitive, easily adaptable and 'fleet-footed' in order to deal with dynamic markets and the opportunities they bring; and encourage institutional frameworks, which enable all actors to utilize market opportunities.

Agriculture Farm Forest Rule 2009- requires farmers to establish and maintain farm forestry on at least 10 % of every of their agriculture lands.

The Green Economy Strategy and Implementation Plan (GESIP) 2016 -2030 which is the country's blueprint in advancing towards a low-carbon, resource efficient, equitable and inclusive socio-economic transformation.

Bungoma County Environment Policy, 2021 - The policy is guided by specific objectives such as providing financial resources for sustainable management of the County environment and natural resources; providing a framework for an integrated approach to planning and sustainable management of environment and natural resources; promoting and enhancing partnership and public participation in the protection and conservation of the County environment and natural resources among others.

Bungoma County Climate Change Policy, 2020- The policy's objectives include; to appropriately address County climate change challenges for sustainable development; to promote conservation of natural resources for posterity; to integrate climate change into all County development projects and programmes among others.

Bungoma County Climate Change Action 2023-2027- The Plan was developed to provide a roadmap in building resilience to the impacts of climate change.

1.3 Rationale

Agriculture remains a central contributor to overall County economic growth and development. An effective and efficient agricultural extension is vital for steering and directing agricultural growth on a sustained development trajectory. The Sector has recorded impressive growth since

devolution though many challenges still persist in achieving food and nutrition security, food safety, increased attention to environmentally sustainable and good agricultural practices, transforming agriculture from subsistence to commercial production, improving access to markets, efficient use of inputs and accessing agricultural credit among others.

Furthermore, weak stakeholder engagement; low investment in extension services, irrigation and agriculture mechanization; increased urbanization and land fragmentation; low digitization of processes, information and data management; poor governance in producer groups, climate change and low social inclusivity have contributed to reduced production and productivity.

Additionally, over the past years, the County agricultural sector resource allocation has not adhered to the 2003 Maputo Declaration of Comprehensive Africa Agriculture Development Programme (CAADP) which targets that at least 10% of public expenditure be allocated to the agriculture sector, and also aims to achieve at least 6% annual growth of agricultural GDP. The Fourth Schedule of the Constitution of Kenya, 2010, the County Government Act, 2012 and the Legal Notice No.139 allow County Governments among other responsibilities, to formulate and review county specific policies and strategies. Bungoma County has no published policy on the Agricultural Sector therefore, there is a need for the County to develop a Policy to be aligned to the wider National Agricultural Policy, 2021.

Despite the aforementioned challenges, the County has not developed an Agriculture Sector Policy and has been relying on the national legislations in order to guide the sector. The national policies and legislations do not sufficiently address Bungoma County agriculture sector requirements and provide a framework for addressing county specific challenges and interventions. Further, efforts have been made by Development Partners to formulate several policies which are largely sub-sector and commodity-specific, resulting in failure in achieving sector targets. As such policy gaps have been identified that require a comprehensive sector-wide approach that is multi-sectoral and multi-stakeholder.

1.4 Policy Development Process

The development of the Bungoma County Agriculture Sector Policy was led by the Department of Agriculture, Livestock, Fisheries, Irrigation and Cooperatives in consultation with other relevant stakeholders. The Technical Working Group undertook desk top research for secondary information and drafted the policy through focused group discussions. The draft policy was subjected to internal validation and review through presentations to key stakeholders and later public participation where the input from the public was incorporated. The draft policy was then presented to the cabinet for approval and subsequent transmission to the County Assembly for input and approval

CHAPTER TWO POLICY FRAMEWORK

2.1 Introduction

This chapter covers the vision, mission, goals, objectives and guiding principles that govern the policy.

2.2 Vision

Innovative, sustainable and commercially oriented crops, livestock and fisheries resources development and utilization.

2.3 Mission

To facilitate the transformation of the agricultural sector in Bungoma County from subsistence production to viable commercial enterprises.

2.4 Policy Objectives

2.4.1 Broad Objective

To improve food and nutrition security and maximize incomes through optimal utilization of resources in the agricultural sector.

2.4.2 Specific objectives

- 1. To enhance food and nutrition security.
- 2. To promote sustainable land use practices.
- 3. To promote diversification in production and utilization of food commodities.
- 4. To reduce post-harvest losses of agricultural produce and products.
- 5. To promote efficient distribution and access to inputs along the crop, livestock and fisheries value chains.
- 6. To support capacity development of agriculture extension for enhanced service delivery.
- 7. To promote irrigation for agriculture production.
- 8. To promote development and adoption of modern, appropriate, cost effective and environmentally safe mechanization technologies.
- 9. To strengthen agriculture sector institutions for effective and efficient delivery of services.
- 10. To enhance resilience to climate change impacts for sustainable agriculture production.
- 11. To increase financing and investment in the agricultural sector.
- 12. To promote food and feed safety.
- 13. To improve access to markets, strengthen linkages and enhance investment in agribusiness.

- 14. To empower agricultural value chain actors through effective communication, storage and sharing of information in the county.
- 15. To develop and strengthen the existing policy environment and improve institutional governance.
- 16. To mainstream gender and social inclusion in the agricultural sector programmes.

2.5 Guiding Principles

The implementation of this Policy will be guided by the following principles:

- 1.) **Equity and Social inclusion:** Fair and equitable distribution of resources and benefits to all communities, including marginalized and vulnerable communities.
- 2.) **Accountability:** the mobilization and utilization of financial resources shall be undertaken with integrity and transparency, in order to achieve optimal results in the implementation of the policy interventions.
- 3.) Support and strengthen food, health and county security interrelationships.
- 4.) Stakeholder Engagement and Public Participation: consultations, negotiations and consensus building shall be key.
- 5.) Utilization of science and Indigenous Knowledge and resources.
- 6.) Market oriented and modern technology driven agricultural economy.
- 7.) Compliance with national and international standards.

CHAPTER THREE: POLICY ISSUES AND INTERVENTIONS

3.0 Introduction

This chapter highlights priority areas in the agriculture sector and incorporates interventions that will be employed by the County in order to facilitate the transformation of the agricultural sector from subsistence production to viable commercial enterprises.

3.1 Policy Issues and Interventions

Policy issue 1: Inadequate Food and Nutrition security

Food and nutrition security is said to exist when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. These require a nutritionally diverse diet which, combined with a sanitary environment, adequate health services and proper care and feeding practices, ensure a healthy life for all household members.

Available literature indicates that Bungoma County is food insecure with a poverty index of 52.9% compared to the National index of 46%, while the food poverty stands at 43% (KNBS 2019). The county's maize requirement is estimated at 1,600,000 bags (KNBS, 2019) against a population of 1,670,535 it is estimated that one mature person consumes approximately 90 kgs of maize per year thus the maize produced is not enough to sustain the population till the next harvest. There has been a gradual reduction in the levels of food stock, mainly cereals since the mid-90s.

During periods of scarcity (April-June), there is inadequate and inconsistent access for households and individuals to food due to high prices, resulting in families having one meal per day as compared to the WHO recommended three meals per day. Changes in eating habits, perception towards some foods coupled with over dependence on maize leaving out other food commodities results in over reliance on unbalanced diets leading to nutritional deficiencies. The current food crisis in the county is fuelled by new driving forces such as climate variability and high-energy prices that are rapidly redefining food affordability.

Policy interventions:

To enhance food and nutrition security the county government in collaboration with stakeholders shall:

- 1. Promote diversification in production and utilization of food commodities.
- 2. Promote development and implementation of appropriate nutrition education and food utilization programmes.
- 3. Promote use appropriate technologies for food and nutrition security.
- 4. Develop programs affecting the food and nutrition insecurity.

Policy Issue 2: Degraded agricultural soils

Most of the agricultural soils in Bungoma County are affected by key issues such as; declining fertility, soil erosion, deforestation, climate change and inappropriate land use that hinders potential productivity of agricultural produce. The first soil survey in Bungoma County was done between 2010 and 2011. Soil sampling was conducted by KARI (now KALRO) under National Accelerated Agricultural Input Program (NAAIP) whose results showed that the county soil status is acidic (pH less than 5.5) and therefore recommended use of non-acidifying fertilizer and liming. Continuous testing using county mobile testing labs confirmed that soil is chemically degraded across the county.

There has been an increased case of deforestation in the county which has reduced the County forestry cover to 14.83% of the total land mass consisting of both gazetted and non-gazetted forests which is below the county target of 18% by 2030. Poor land use practices such as cultivation along river banks, on steep slopes, riparian areas, wetland and catchment areas are some of the key factors that have resulted in increased surface runoff and soil erosion.

Additionally, land subdivision due to high population densities resulting in rapid decrease in land available for farming, intensive cultivation and soil nutrient depletion contribute to soil degradation. A drastic increase in climate-induced disasters such as droughts, landslides, mudslides, rock falls and floods, has resulted in significant socio-economic damage and environmental degradation.

Policy interventions:

To promote sustainable land use practices, the county government in collaboration with stakeholders shall:

- 1. Promote programs on Integrated soil fertility management systems.
- 2. Promote soil protection and biodiversity conservation.
- 3. Support programs on afforestation and reforestation.
- 4. Promote and enhance climate change mitigation and adaptation measures
- 5. Enhance capacities on sustainable land management.
- 6. Develop programs to rehabilitate degraded ecosystems including soils, wetlands and forests

Policy issue 3: Low production and productivity

Agriculture is the key driver of growth in the county contributing 43% of the total Gross County Product (GCP) in 2022. Major food crops in the county are; maize, beans, bananas, cassava, sweet potato, millet and sorghum; cash crops include, coffee, tea, sugarcane and cotton, while non-crop enterprises in the county include; cattle, poultry, sheep, goats, apiary and farmed fish.

Despite this critical role, the sector has been experiencing several challenges such as increasing land and soil degradation; subdivision of land into small unsustainable units; inefficient use of

farm inputs; inadequate knowledge and skills on new agriculture technologies, inadequate and inappropriate land use practices; high cost of inputs and productive resources such as artificial insemination kits, feeds fertilizer and irrigation infrastructure. There is increased instances of emerging pests and diseases, natural calamities such as floods and dry season which result into losses of crops, livestock and fish. The main agriculture practiced in the county is rainfed which is greatly affected by seasonality and climate variability.

Policy Interventions:

To enhance production and productivity of crops, livestock and fish value chains, the county government in collaboration with stakeholders shall:

- 1. Enhance knowledge and skills on good agriculture and aquaculture practices.
- 2. Promote and enhance use of innovative and appropriate technologies to increase production and productivity.
- 3. Promote PPP in agriculture sector research.
- 4. Develop early warning systems in case of emerging pests and disease outbreaks and natural calamities.
- 5. Develop regulations on use of idle and underutilized land.

Policy issue 4: High Post-harvest Losses

Post-harvest losses are losses of quantity and quality of a product from the stage of harvesting to the stage of consumption. These losses can occur due to various factors; such as inadequate harvesting time, climatic conditions, handling, storage, processing, packaging, transportation and marketing. Post-harvest handling determines the level of contamination and rate of spoilage of crops, livestock and fishery products, which has an impact on human health. Inappropriate processing, poor storage and inadequate transport facilities increase post-harvest losses and damages

Farmers in Bungoma County lose up to 27 per cent of their produce to post-harvest losses. Losses typically result from; poor infrastructure, poor handling, poor storage facilities; poor market information and lack of processing equipment. These losses reduce potential income, access to nutritious food and increased food insecurity in the county. The fear of post-harvest losses often compels farmers to sell their produce directly at harvest, rather than waiting for a time when prices are more favorable.

The county has four maize driers which are underutilized. In the County most farmers store their produce in their houses. The storage equipment are not adequate to preserve the quality and quantity of the produce for an extended period of time resulting in deterioration and wastages. Further, unreliable energy supply adversely impacts processing and storage of crops, livestock and fishery products.

Unpredictability of the markets prompts farmers to stay longer with their produce without suitable preservation and storage hence increased food deterioration. Additionally, value addition and processing infrastructures such as milling plants, milk coolers are in poor condition. The County has developed warehouse and aggregation centers for produce handling and marketing. However, utilization by farmer organizations remains low due to poor governance. Furthermore,

the structures are inadequate and limited in scope and the warehouse receipting system is only limited to NCPB.

Policy interventions:

To reduce post-harvest losses, the county government in collaboration with stakeholders shall;

- 1. Promote appropriate storage and preservation infrastructure.
- 2. Promote development and utilization of post-harvest infrastructure.
- 3. Support capacity development of crops, livestock and fisheries value chain players in post-harvest management.
- 4. Promote the adoption of appropriate technologies that reduce post-harvest losses at community and household levels.
- 5. Promote Public-Private-Partnerships for postharvest management.

Policy issue 5: Low Access and distribution of Agricultural Inputs

Agricultural inputs are diverse; they include seeds, semen, embryo, fingerlings in the case of fisheries, seedlings, breeding or brood stock, agro-chemicals, medicines and vaccines, organic and inorganic fertilizers and other soil additives, appropriate agro-machinery, plants and equipment and animal feeds.

In Bungoma County the use and adoption of modern agricultural inputs and improved technologies are constrained by their high costs. Unreliable distribution outlets and little technical knowledge on their use, application and maintenance equally affect adoption. The quality of many agricultural inputs has been found to be poor and adulterated. Producers experience difficulties in accessing quality seeds and seedlings, appropriate breeding stock, unadulterated agro-chemicals, drugs, vaccines and animal feeds. This has resulted in production and productivity challenges making agricultural produce sub-standard and uncompetitive in the local, regional and international markets.

Nationally, there exists a fertilizer subsidy Programme administered through the 4 existing NCPB stores however these stores are not adequate whereas the County has a fertilizer input scheme for vulnerable farmers which is not sustainable.

The county has been giving out subsidized maize and fertilizers, soil sampling, semen, livestock vaccines, avocado, tea and coffee seedlings, fish feeds, fishing nets and fingerlings, agriculture mechanization and insurance to help boost productivity and ensure easy access to the resources. There were efforts by the county in 2014 to introduce a fertilizer subsidy Programme but it was not sustainable. There exist county subsidy programs but they are faced by critical challenges like inadequate framework for beneficiary targeting, poor coordination, performance tracking and sustainability concerns since most inputs are issued freely to beneficiaries. Furthermore, the programs have low budgetary allocation and funding. Some subsidy programs are value chain specific limiting support to other value chains hampering diversification to other enterprises.

Policy Interventions:

To enhance input access and distribution, the county government in collaboration with stakeholders shall;

- 1. Promote efficient distribution and access to quality and affordable inputs along the agriculture sector value chains through private public partnership.
- 2. Promote supplier development programmes such as contract farming.
- 3. Advocate for inputs and equipment surveillance mechanisms to ensure compliance with set standards.
- 4. Promote subsidy programmes to sourced inputs whose costs are prohibitive and may not be available in the County.
- 5. Develop frameworks for agricultural input subsidy including implementation follow-ups.
- 6. Integrate extension and capacity building to all agricultural input subsidy or incentive programmes.

Policy Issue 6: Inadequate Agricultural Extension, Research and Training Development

Agricultural extension and advisory services can be defined broadly as a set of services and institutions that facilitate agricultural value chain actors to obtain information, skills and technologies to improve productivity, food and nutrition security and well-being.

The average age of public extension workers in the county is 50 years old (Extension Staff Rapid Assessment Report, 2021) and a significant proportion of staff is now nearing retirement age; this means that it will take some time for the newly employed staff to gain the experience. This has consequently widened the ratio of extension staff to farmers (Crop 1:1850, Livestock 1; 1762) CIDP 2023-2027.

The role of extension in agricultural development is continuously evolving; requiring new skill sets which the extension service personnel do not possess due to lack of programmes for continuous upgrading. Additionally, extension service personnel have an inadequate range of specialized technical skills and scope of knowledge on extension delivery.

Different documented methodologies such as Farmer Field schools, Lead farmer concept, and Community own resource Persons (CORPS) have been used by different partners in various value chains to bridge extension staff to farmer ratio, these methodologies have not been institutionalized, and lack a framework for supporting human resource capacity development and reward.

There exist 88 VTCs and 6 ATVETs curriculums that have few agriculture courses with few trainers who have inadequate capacity. Over the years, there has been a decline in intake in agricultural related courses and subsequent careers due to the unattractiveness of the agricultural sector and insufficient information regarding the agricultural career choices and mentorship programmes.

The existing infrastructure that support extension service delivery including ATCs, AMs, Chwele fish farm, Veterinary and soil laboratories have limited equipment and are concentrated in only two sub counties. Further, the utilization of existing infrastructure is insufficient thereby affecting delivery of extension services.

There is inadequate funding towards extension services in terms of meeting operational costs and sufficient staffing numbers that hampers extension service delivery in the county. Besides, there are no government research institutions within the county. The county is served by KALRO stations in Kitale, Alupe and Kakamega on a need basis and their location hinders them from adequately serving the county further which weakens the linkage between extension and research hence negatively affects adoption of new agriculture technologies.

There exist multiple extension service providers in the county. Weak partnerships and collaboration and the uncoordinated nature of agricultural extension service delivery by actors in the county has resulted in duplication of efforts, conflict of interest, and wastage of resources and disintegrated service delivery to the farmers.

Policy interventions

To support capacity development of agriculture extension for enhanced service delivery, the county government in collaboration with stakeholders shall;

- 1. Promote private sector engagement in upgrading of agricultural training infrastructure.
- 2. Enhance resource allocation and disbursement up to ward levels.
- 3. Promote private sector investment in agricultural extension.
- 4. Strengthen research extension liaison.
- 5. Strengthen coordination among extension service providers.
- 6. Enhance and support public extension services
- 7. Institutionalize alternative extension methodologies and provide a framework for support of human resource and reward.
- 8. Support development and implementation of training programmes for improving the capacity of ATVET/VTC institutions to adequately address skills development in different value chains.

Policy Issue 7: Underutilized irrigation potential

Water resources are an important factor in agriculture value chains and a key determinant for the growth of the sector. Bungoma County majorly depends on rain fed agriculture that is largely seasonal and interannual variated thus posing crop, fish and livestock production to dry spell. There is low overall water use efficiency in irrigated and non-irrigated agriculture mainly due to low adoption of appropriate technologies.

The County has an annual precipitation of between 800-1400mm per annum and an irrigation potential of 13,200ha based on surface water out of which only 300ha of land is currently under irrigation. Although the County has major water sources including rivers, springs, small dams and pans, irrigation has not been adequately exploited. There is inadequate infrastructure for water storage and use that hinders access and utilization of water. Most dams and water pans in the county are silted and encroached with limited emphasis on roof catchment water harvesting technologies. Agricultural water infrastructure is heavily capital intensive and there has been low investment in developing it.

In addition, there is a weak institutional capacity for the management of agricultural water due to poor governance and low capacity of actors. Increased encroachment of Mt Elgon water tower, water catchments, wetlands and riparian areas poses a threat to water availability in the county. Lack of a harmonized database and profile of irrigation infrastructure has hampered effective planning for harnessing the irrigation potential in the county.

Policy interventions

To promote irrigation for agricultural production the county government in collaboration with partners shall:

- 1. Enhance PPP in agricultural water and irrigation infrastructure development.
- 2. Strengthen institutions involved in the management of water in the agricultural sector in Bungoma County.
- 3. Promote adoption of efficient water use technologies in agriculture.
- 4. Promote the protection of the Mt Elgon water tower, catchments, wetlands and riparian areas.
- 5. Develop database on existing irrigation infrastructure including profiling of dams and rivers in the county

Policy Issue 8: Inadequate Agricultural Mechanization

Mechanization of agriculture is necessary to reduce drudgery, increase efficiency, and incomes. In the County demand for small-scale agricultural mechanization is high. However, there is low adoption of appropriate mechanization technologies due to; high cost of investment in machinery, poor distribution of available machinery, unavailability of machinery and equipment, skilled personnel and inadequate research-extension linkages that limit transfer of appropriate technologies to the end user. The County Government through the Agricultural Mechanization Services supplements the private sector by providing affordable, quality and timely services to farmers in the County though amidst operational challenges. There are few Private investors in agricultural mechanization in the county and have limited resources and capacity leading to inadequate delivery of services.

Investment in agricultural mechanization is undertaken by both public and private sectors. Public investment is mainly through infrastructure development, training and direct service provision to farmers and fisher folk. The agricultural mechanization sub-sector receives only a small and inadequate proportion of the county allocation for investment. This has led to inadequate resources to acquire, maintain and operate the machinery hire services offered by the government. Private sector investment in agricultural mechanization is low due to low returns to investment associated with heavy capital required and high maintenance cost. Financial institutions such as commercial banks offer credit facilities for acquisition of machinery and equipment though at interest rates beyond the reach of targeted farmers, fisher folks and service providers.

There are several institutions involved in fabrication of agricultural mechanization technologies and innovations in the county including private companies, Agricultural Technology

Development Centers (ATDCs), non-governmental organizations (NGOs) and the informal sector. These organizations are also involved in promotion and dissemination of mechanization technologies. However, agricultural mechanization research and development has been uncoordinated and not prioritized. In addition, information sharing among the institutions and other stakeholders has been poor.

Locally manufactured agricultural implements are made of poor-quality raw materials leading to substandard products with no clear skills requirements for operators, fabricators and artisans for agricultural machinery. There are several national institutions that test and evaluate imported and locally manufactured agricultural machinery to ensure compliance. There is a weak linkage between the county and the responsible national institutions.

Policy Interventions

To promote development and adoption of modern, appropriate, cost effective and environmentally safe mechanization technologies, the County Government in collaboration with partners shall:

- 1. Enhance adoption of sustainable agricultural mechanization technology.
- 2. Promote investment in agricultural mechanization.
- 3. Enhance agricultural mechanization research, technology development and innovation along value chains.
- 4. Promote compliance to quality agricultural mechanization standards.
- 5. Enhance knowledge and skills of agricultural machinery and equipment. Develop and enforce legal and regulatory framework for agriculture mechanization.

Policy Issue 9: Inadequate Sector Coordination and Agricultural Institutional Reforms

The key institutions in the agriculture sector value chains include the Agricultural Mechanization Center, Agriculture Training Center, Chwele fish farm, County Soil Laboratory and county departments and agencies. The major institutions in the agriculture sector experience poor governance, inadequate funding and deteriorating physical infrastructure which affects their operationalization. In addition the institutions have no safeguards against unwarranted external interference leading to deviation from their core mandate. The institutions also lack a legal framework to operationalize their activities.

County Agricultural Sector Steering Committee (CASSCOM) is one of the institutions mandated with establishment of multidisciplinary structures for coordination, operation and accountability, collaboration and linkages and support implementation or development of Policies/ strategies/ regulations/ plans/ legislations of relevance to the sector. Resource allocation for the institution is however inadequate and there is inadequate legal framework thus affecting the delivery of its mandate.

Policy interventions

To strengthen agriculture sector institutions for effective and efficient delivery of services the county government in collaboration with partners shall:

- 1. Enhance funding of the institutions for technology dissemination.
- 2. Promote good governance for effective and efficient management of institutions.
- 3. Provide safeguards to the agricultural sector institutions to enable them carry out their mandate.
- 4. Establish mechanisms for intra and inter institutional linkages, partnerships and networks toward a common Programme framework to manage and develop resources in the agriculture sector.
- 5. Strengthen mechanisms for coordination of institutions in the agriculture sector.
- 6. Develop legal framework for operationalization of the institutions.

Policy Issue 10: Low resilience to Climate change impacts in Agriculture

Agricultural production in the county has declined over time due to the impacts of climatic change. This has posed a threat to food security due to increasing vulnerable environmental conditions such as diminished biodiversity, soil degradation or growing water scarcity. The impacts of Climate Change in the County have been manifested in erratic rainfall, delayed onset of rains, increasing temperatures and prolonged dry spells. This has affected agricultural production and productivity because most farmers rely on rainfed agriculture. The sector has further witnessed delays in planting due to prolonged dry spells. In addition, increasing temperatures have increased incidences of pests and diseases affecting crops on farms resulting in crop failure, animal and aquaculture losses.

In response to the changing climate, there is low adoption of climate smart technologies by farmers due to low resource allocation. Poor agricultural, livestock and aquaculture practices such as cultivation on steep slopes and river banks, improper land preparation, overgrazing, burning of crop residues and agricultural waste management and disposal, overfishing and use of illegal and destructive gear leads to environmental degradation that aggravates climate effects.

There exists a weak early warning system on climate change that has led to poor emergency preparedness and coordination. Despite the county having developed a Climate Change Action Plan its implementation remains a challenge. It is worth noting that agriculture plays an important role in greenhouse gas emissions mitigation (GHG) and removing C02 from the atmosphere by sequestering carbon, yet it lags behind other sectors in terms of climate commitments, such as carbon credits and other climate change mitigation measures.

Policy Interventions

To enhance resilience to climate change impacts for sustainable agriculture production, the county government in collaboration with partners shall:

- 1. Promote climate smart agriculture and associated technologies.
- 2. Promote climate financing and broaden mechanisms to attract climate change investments.

- 3. Support climate early warning system to enhance preparedness in managing climate variability and weather extremes.
- 4. Prioritize the implementation of the Bungoma County Climate Change Action Plan.
- 5. Promote carbon credit programmes and other agriculture sector climate change resilient enterprises.
- 6. Enhance effective stakeholder and community participation in climate change adaptation and mitigation initiatives.

Policy Issue 11: Inadequate Agricultural Financing and Investment

Transformation of agricultural production into a viable commercial undertaking requires access to financial products and services along the value chains. Finances are required both by the extension, farmers and other value chain actors. Despite contributing over 68% of the county's GCP the agriculture sector has over the last four years received an average of 7% per year of the County budget which is below the continental Maputo agreements (Maputo and Malabo agreements) which requires African nations to increase their budgetary allocation for agriculture to a minimum of 10% of the overall National budget. In the county the majority of the agriculture budget goes towards conditional grants with very little remaining to fund extension services.

There is a high prevalence of risks and uncertainties that discourage investment in the sector. The county has invested in a number of agricultural infrastructures such as irrigation systems, agro processing plants, urban markets, agricultural machineries, however they are still inadequate and limited in scope resulting in low investment by agripreneurs and other sector actors. The private sector is one of the vehicles for requisite investments to transform agriculture towards increased productivity, agribusiness and development of support or infrastructure.

There are many commercial entities including farmers organizations and cooperatives within the County who offer financial services, however, there are limitations for its access due to high interest rates, low financial literacy and the low capacity of farmers and other sector actors to repay these credit facilities. In addition, the credit service providers require collateral which cannot be provided by farmers and other sector actors. Furthermore, farmers have limited ability to write proposals or business plans to access the credit. The agricultural sector is unable to attract loan facilities due to its vulnerability to disasters and other weather-based elements and hazards.

There are also revolving fund programs being implemented by both the National and county governments targeting the vulnerable, youth and women but are not specifically for agricultural development and agribusiness.

Sector players are exposed to a variety of risks such as price variations, unfavorable weather, pests, diseases, contamination of water masses, natural hazards such as hailstorms, droughts and floods. Political uncertainties can also make investment in the sector low. There are few agriculture-based insurance institutions whose products tend to be unaffordable to a majority of agricultural producers and other actors in the value chain.

Policy interventions:

To increase financing and investment in the agricultural sector, county government in collaboration with stakeholders shall;

- 1. Promote infrastructure development to facilitate investment in crops, livestock and fisheries.
- 2. Provide incentives to the private sector to support investment in mitigation measures.
- 3. Advocate for increased budgetary allocation towards financing investment in agriculture of not less than 10% of the overall county budget
- 4. Strengthen the capacity of sector actors on financial management and governance.
- 5. Support the development of alternative security models in agriculture financing
- 6. Promote Public Private Partnerships in agriculture financing.
- 7. Promote establishment of targeted revolving fund and commodity stabilization funds to support investment in the agricultural sector.
- 8. Promote insurance services for the agricultural sector.

Policy Issue 12: Underdeveloped food and feed safety systems

In Bungoma County, the food safety control system is multi-sectoral in approach and is embodied in various statutes implemented by various County Government departments and regulatory agencies. Inadequate coordination, overlapping roles/responsibilities envisaged in the various Acts of parliament and County assemblies result in weak enforcement.

Food safety awareness is inadequate due to an underdeveloped, underutilized and poorly coordinated system of generating, collecting, collating and rapid dissemination of food safety information. There is weak support, ineffective curricula development, inadequate training facilities, tools and equipment in training institutions. In addition, there is low capacity and weak linkages among service providers in food safety.

There are many smallholder primary producers often with fragmented production systems. The practice is that the produce by smallholder farmers are frequently aggregated at the collector/intermediary level, presenting the challenge which traceability systems face when bulking occurs. Traceability systems require documentation that small-scale food business operators often lack; further, they resist adopting due to concerns about increased regulations, costs and taxation.

In the county, food safety validation, inspection, certification and self-assessment systems are underdeveloped and under-funded. Further, there is a weak monitoring, surveillance and reporting system. The laboratories are inadequately equipped and not abreast with new technologies; there is inadequate preparedness for disease outbreaks and weak cross border surveillance as a result of the porous borders.

Resources to support the various operations in terms of funding, laboratory infrastructure, food safety research, human resource capacity and management systems to comply with national and international food safety requirements are core for success. The County budgetary allocation towards food safety is inadequate and not prioritized in line departments.

The emergence of pests and diseases, extensive use of low-level antibiotics in feeds has brought about concerns for potential harmful effects due to resistant strains of the organisms.

Policy Interventions

To ensure food and feed safety, the county government in collaboration with stakeholders shall:

- 1. Enhance coordination and enforcement of existing food laws and regulations.
- 2. Promote capacity building in feed and food safety.
- 3. Strengthen traceability systems in the food chains.
- 4. Strengthen monitoring & Surveillance Systems.
- 5. Enhance food safety financing.
- 6. Enhance mitigation measures on Emerging and Re-Emerging Food Safety issues.

Policy Issue 13: Inadequate Agribusiness, Value addition and Marketing in Agriculture sector

Agricultural markets within the county are largely characterized by individual actor participation resulting in exploitation by middlemen leading to low product prices, high marketing costs and hence low incomes. There is low access to market information in the county largely due to inadequate market information sharing platforms and low awareness on existing platforms. Additionally, there are inadequate off takers for various value chains limiting enterprise growth. Marketing infrastructure challenges such as inadequate road network, market stalls, storage facilities, and specialized transport has resulted in produce deterioration, wastage, inaccessibility of produce by customers and difficulties in produce loading and unloading.

The county lacks an agriculture information resource center where agribusiness information can be accessed. Agribusiness knowledge and skills among agriculture extension service and other value chain actors is limited and there are few mentorship and incubation hubs for agribusiness in the county. The agribusiness-engagement-culture in the County is low due to negative perceptions especially among the youths. Additionally, there are inadequate model farms to mentor agripreneurs.

There exist producer marketing organizations for some commodities especially dairy, coffee, tea, banana, avocado but they lack capacity to market agricultural commodities. Further, there are agricultural value chains where agripreneurs operate individually hindering them from enjoying economies of scale. The organizations also face challenges in governance and leadership, inadequate capacities and low modern technology adoption.

Financial facilities through financial institutions such as banks, micro financing, SACCO's and digital lending platforms are available in the County usually at competitive interest rates. The financial institutions however largely offer unaffordable terms for most agripreneurs, especially start-ups. Further, most agripreneurs act individually and therefore lack capacity for resource mobilization. Majority of agripreneurs rely on internal finances such as contribution from the owners, family and friends, which is often inadequate for them to invest and grow. Inadequate efforts to mobilize resources from development partners has hampered development of agribusiness infrastructure in the county. The County Government has developed empowerment funds for traders, youth ,women & people living with disability to support MSMEs with affordable credit and training but the schemes have not been consistent, have limited scope(excludes agripreneurs in farming) and inadequate funding. Agripreneurs lack adequate supportive regulatory and business environments to manage external competition, to ease business functions and foster growth. Marketing of agricultural produce often attracts several forms of taxation. The imposition of levies across the county at numerous produce inspection stations greatly hinders movement of agricultural products to urban markets and reduces their competitiveness.

In the county low inclusivity of vulnerable groups has derailed economic development and growth in the agriculture sector. Cultural beliefs, low participation of vulnerable groups, increased cases of gender-based violence and drug and substance abuse have immensely affected the agriculture sector.

Policy Intervention

To improve access to markets, strengthen linkages and enhance investment in agribusiness, the county government in collaboration with stakeholders shall;

- 1. Enhance access to internal and external resources for investment in agribusiness.
- 2. Develop market structures, improve access to markets and strengthen linkages through PPP models.
- 3. Support agribusiness programs aimed at equipping value chain actors with knowledge and skills.
- 4. Enhance agri-preneurship culture in Bungoma County.
- 5. To enhance value addition and agro-processing services among value chain actors.
- 6. Establish and strengthen producer organizations including formation of cooperative societies.
- 7. Institutionalize and facilitate participation in the formulation and review of legislative policies and general decision-making mechanisms.
- 8. To mainstream gender and other inequalities in agribusiness in order to increase participation of the vulnerable groups in agribusiness ventures.

Policy Issue 14: Low utilization of Information and Data Management

Accurate data, timely communication and information sharing in the sector is important in the development, exploitation and management of resources. A wide array of data and information is

required for decision-making. The Agricultural Sector's potential for reducing poverty and contributing to economic growth has remained largely untapped due to lack of accurate data necessary for planning, financing and implementing programs. The contribution of the sector to national wealth remains underestimated leading to inadequate financing. Research and development in the sector requires retrievable up to date data.

There exists an information management system at the National level, however this as well as the county systems do not adequately address county specific information management needs. There are no clear communication channels and harmonized information sharing coupled with lack of a communication strategy in the sector.

There is a lack of accurate data necessary for planning, financing and implementing programmes. The contribution of the agriculture sector to county wealth remains underestimated due to inadequate and unreliable data leading to inadequate financing. Further, research and development in the sector has been hampered due to inadequate retrievable up to date data.

Relevant data and information are required for purposes of advisories and early warning to anticipate potential food emergencies, for planning long-term development interventions, and for monitoring and evaluating progress and performance. There is low capacity among actors on data collection, analysis, storage, reporting, and maintaining information management systems.

Policy intervention

To enhance communication, storage and sharing of information among value chain actors in the county, the county government in collaboration with stakeholders shall;

- 1. Promote use of ICT in agricultural services to improve communication, data management and sharing.
- 2. Establish agriculture sector value chain profiles and databases
- 3. Promote access to timely and reliable agricultural data and information in the sector through establishment and maintenance of information management systems for planning, research and effective implementation of programmes.
- 4. Support and develop mechanisms to continuously collect, collate and share agricultural information and data.
- 5. Strengthen the capacity of actors on data collection, analysis, storage, reporting, and maintaining information management systems.
- 6. Promote development of communication strategies for the agricultural sector to improve on information sharing, public education and timely response to emergencies.

Policy Issue 15: Weak Enabling Environment

The business enabling environment encompasses policies, administrative procedures, enacted regulations and the state of public infrastructure. High costs of doing business due to multiple taxation, licensing and high input costs has negatively affected farming business in the county. In the county, a growth-oriented small agripreneurs faces a choice: comply with regulations and incur costs so high that they jeopardize the business's viability or try to survive in the informal

sector without bank credit or enforceable contracts and at constant risk of harassment from authorities.

High input costs and inadequate measures to cushion agripreneurs against the rising costs has made it difficult for actors to exploit opportunities. Agripreneurs lack adequate supportive regulatory and business environments to manage external competition, to ease business functions and foster growth. Additionally, policy formulation is a participatory process in the County where stakeholders are engaged at public participation levels to give their inputs. However, low participation by farmers during policy formulation, implementation and review hinders compliance on regulations and policies developed.

Policy Intervention

To develop and strengthen the existing policy environment and improve institutional governance, the County Government in collaboration with partners shall:

- 1) Develop, review and enforce legal and regulatory framework for agripreneurs and markets including land lease guidelines, graduate placement policies, contract farming guidelines, farm input support guidelines among others.
- 2) Strengthen institutional and coordination framework.
- 3) Support inclusive farmer participation in policy development, review and implementation process.
- 4) Support coordination mechanisms for agribusiness policy implementation.
- 5) Develop frameworks for ease of doing business.

Policy 16: Low consideration to Cross-Cutting Issues

Cross-cutting issues refer to aspects that impact crop, livestock and fisheries value chains directly or indirectly but are not limited to crops, livestock and fisheries. They include; gender, vulnerable groups, and governance.

i. Gender and social inclusion in Agriculture

Gender refers to the characteristics of women, men, girls and boys that are socially constructed. This includes norms, behaviors and roles associated with being a woman, man, girl or boy, as well as relationships with each other. As a social construct, gender varies from society to society and can change over time. In our society, overall decision making is a responsibility of men and implemented by women and children. This trend results in skewed resource allocation hence enterprises perform below their optimal levels.

Social inclusion is a process of improving the terms on which individuals and groups take part in society. It aims to ensure equal opportunities and dignity for those who are disadvantaged on the basis of their identity. It involves making all people feel valued and able to participate in civic, social, economic, and political activities, as well as decision-making processes.

In Bungoma, there are several gender friendly technologies being disseminated to agripreneurs both in livestock, agriculture and fisheries. However, the technologies are inadequate in scope and expensive hindering their use and access by women and children. Majority of financial institutions in the County require collaterals such as title deeds and Car logbooks for them to advance credit to agripreneurs. This excludes youths and women who don't have access to these documents. Employment in the agricultural sector in Bungoma County is skewed towards women and children but the decision making on enterprises is made by men.

There has been low involvement and participation of women and vulnerable groups in the agriculture sector. Marketing of produce is majorly controlled by men with women being relegated to handling agricultural produce that have low monetary value. This has led to underdevelopment of the sector in terms of investments and management. Most productive resources in Bungoma are owned by men hindering the full exploitation by women and youths.

Vulnerable groups include households headed by women and children, the elderly, marginalized and minority groups, people living with disabilities and those infected and affected by diseases. They are less productive and frequently experience food insecurity that compounds their health problems and is characterized by hunger and poverty. They are unlikely to adopt most technologies in agriculture and this perpetuates their vulnerability. Moreover, they are largely excluded from designing, planning, and implementing programmes in the agriculture -sector.

In Bungoma county, the mechanisms for identifying the vulnerable groups at grassroot level are complicated because there is no clear-cut definition of each type of vulnerability in terms of severity and effects on the productive life of the person. There are few programs and projects that target the vulnerable within the sector.

Policy Interventions

To mainstream gender and social inclusion in the agricultural sector programmes the County government in collaboration with partners shall:

- 1) Promote development and dissemination of transformative technologies and practices in the agricultural sector that are gender sensitive.
- 2) Promote gender equity and equality in the agriculture sector
- 3) Promote access to production resources, markets and marketing infrastructure.
- 4) Promote participatory approaches for women and vulnerable groups in addressing issues that affect them in the sector
- 5) Provide mechanisms for identification of vulnerable groups at lower devolved units and institute affirmative action programs.
- 6) Encourage collaboration, coordination and synergy with other departments and knowledge vendors in capacity building in agriculture for the vulnerable groups.
- 7) Promote gender affirmative policies and regulations.

ii. Governance

Agricultural governance is concerned with augmentation of growth and development of a county's agriculture sector and managing the consequences of this process through the effective functioning of its institutions, the application of technology and scientific innovations, the implementation of policies, adherence to acts and regulations, and active participation of all involved stakeholders.

Bungoma County has several common interest groups, Cooperative Societies, producer organizations, Community Based Organizations, Associations, limited companies, and SACCOs involved in the agriculture sector. Strong producer organizations form the interface between the value chain actors and their economic, social, and institutional environments. Producer organizations in the county are weak with poor governance structures thus affecting the articulation of the demands of their members for advisory services. The organizations have low capacity on organizational development, resource mobilization, service delivery and advocacy.

The organizations more often encounter conflicts in the course of their operations which calls for an elaborate conflict resolution mechanism in the sector. There exist various project-based grievance redress mechanisms in the County. The project based mechanisms however, do not adequately address the conflicts arising from the agriculture sector.

Policy interventions:

To mainstream good governance in the agricultural sector the County government in collaboration with its partners shall:

- 1. Strengthen governance structures in the agricultural sector.
- 2. Strengthen corruption prevention mechanism in the agricultural sector in line with relevant Kenyan laws.
- 3. Promote openness and comprehensive stakeholder engagement.
- 4. Strengthen grievance redress mechanisms for the sector.
- 5. Promote capacity of all actors on good governance and resource mobilization.

CHAPTER FOUR IMPLEMENTATION FRAMEWORK

4.0 Introduction

This chapter highlights the partners and stakeholders who are key to the successful implementation of the policy. The County Department of Agriculture, Livestock, Fisheries, Irrigation and Co-operatives will be an entity in which other government departments, actors and agencies will collaborate in planning and implementation of activities.

4.1 Institutional framework

The successful implementation of this policy will depend on the partnership between the County Government of Bungoma and particularly the Department of Agriculture, Livestock, Fisheries, Irrigation and Cooperatives with the various relevant stakeholders. These partners include, other County Government departments, the national government and its institutions, development partners, non-state actors like International and local NGOs, and Private Sector among others.

4.1.1 The County Department of Agriculture, Livestock, Fisheries, Irrigation and Cooperatives

The County Government through the Department of Agriculture, Livestock, Fisheries, Irrigation and Cooperatives shall be responsible for the overall coordination during the implementation of this policy. The role of the department will be:

- To enhance food and nutrition security.
- To enhance Knowledge and skills among value chain actors in agriculture sector
- To promote efficient distribution and access to inputs along the crop, livestock and fisheries value chains.
- To promote development and adoption of modern, appropriate, cost effective and environmentally safe mechanization technologies for enhanced production and productivity
- To enhance resilience to climate change impacts for sustainable agriculture production.
- To increase financing and investment in the agricultural sector.
- To promote food and feed safety.
- To improve access to markets, strengthen linkages and enhance investment in agribusiness.
- To develop and strengthen the existing policy environment and improve institutional governance for efficient delivery of services.
- To mainstream gender and social inclusion in the agricultural sector programmes.

4.1.2 Other County departments

Realization of the objectives of this policy is dependent on the roles and responsibilities of other departments including;

I.Department of Finance and Economic Planning

The department will be responsible in coordination of development of budget and planning documents such as County Integrated Development Plan, Annual Development Plan, and Annual Financial Fiscal Strategy Paper among others.

II. Department of Trade, Energy and Industrialization

The County government department should develop and support implementation of policies that will encourage investment in processing of and value addition to agricultural and fishery products. Producers need to be organized into viable groups that can sustainably satisfy the needs of various commodity industries; establishment of strong cooperatives for various categories of farmers will be a priority in this endeavor

Production, storage and value addition are among components in agriculture that require reliable and affordable energy supply. Electricity supply tends to be irregular particularly in the rural areas where farms are located and its cost is often high yet it is the most convenient source of energy for use in agriculture. The high cost of petroleum products makes end-products in agriculture expensive and reduces their competitiveness in the local and international markets. The County government therefore needs to explore ways of providing affordable and reliable energy for use in agriculture.

iii. Department of Roads, Public Works and Infrastructure

Many of the rural access roads used by farmers and fisherfolk are in poor condition and tend to be passable only in the dry season. This hinders timely transportation of agricultural and fishery products to market destinations leading to massive post-harvest losses. The County government department needs to prioritize rehabilitation and maintenance of rural access roads and collaborate with the national government to maintain trunk roads.

iv. Department of Lands, Urban/Physical Planning and Housing

Land is by far the most important primary factor of agricultural production. Private land under free-hold ownership accounts for the bulk of small-scale production in agriculture. This category of land is subject to uncontrolled subdivision that in many rain fed areas is approaching uneconomical units in terms of agriculture. Public land quite often is alienated for settlement even at the risk of grossly interfering with water sources. The County Government department in collaboration with key stakeholders has the responsibility to protect all public land particularly land that has a direct or indirect bearing on agricultural production and fisheries.

v. Department of Environment, Water, Natural Resources and Climate Change

The environment and natural resources' sector is strategic to the improvement of agricultural production, reduction of poverty and environmental degradation. Forests and water catchments are critical to the wellbeing of ecosystems since they are the main sources of rivers in the county. The rivers provide water for irrigated crops, livestock and fisheries. The County department is mandated to conserve and rehabilitate wetlands and riparian areas. The Department should protect the forests and water catchments by promoting reforestation and afforestation activities in gazetted forests and farmlands.

4.1.3 The National Government

The National government in the Agricultural Sector is mainly responsible for policy, standards and regulation of services, international obligations and countrywide programs. The National government and its agencies will thus be responsible for policy, standards, regulation of agricultural services, international obligations, programs that may impact on national economic interests and nationwide agriculture sector interventions.

4.1.4 Professional Regulatory Bodies

Professional regulatory bodies perform significant roles in setting standards of training professionals through provision of core curriculum requirements, inspection and accreditation of training institutions to offer respective professional courses. By registering and licensing professionals in respective areas, professional regulators ensure that only qualified personnel offer services. Professional associations in the agricultural sector include the Kenya Veterinary Association, Animal Production Society of Kenya, Kenya Association of Livestock Technicians and Kenya Society of Agricultural Professionals.

4.1.5 Research Institutions and Regulatory bodies

Bungoma County will work with several research organizations and regulatory bodies which include but not limited to: Kenya Plant Health Inspectorate (KEPHIS), Horticultural Crop Development (HCD), Kenya Bureau of Standards (KEBS), Pests Control Product Board (PCPB), Kenya Forestry Research Institute (KEFRI), Kenya Agricultural and Livestock Research Organization (KALRO), International Centre of Insect Physiology and Ecology (ICIPE), International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), Kenya Marine and Fisheries Research Institute (KMFRI), International Centre for Tropical Agriculture (CIAT), and Institutions of Higher Learning. Their role shall be to carry out various research aspects along various agricultural value chains and offer regulatory services.

4.1.6 Farmer organizations

Farmer organizations aid in delivery of services to farmers and fisher-folk since they act as key entry points for agriculture and rural development actors. The organizations are vital in mobilizing members around specific value chains that have common objectives. Their role in lobbying and advocacy provide a huge potential in the implementation of this policy as they afford powerful platforms for advocating for new policies that support agricultural development including budget support to the sector.

Farmer organizations have structures and dedicated membership from the villages, lowest levels, to the National level and therefore can ensure inclusivity in agriculture and rural development. Warehouse receipt systems, Agri-financing, Agri-stability and Agri-insurance can be strengthened through these organizations.

4.1.7 Non-State Actors

Non-state actors include Civil Society Organizations (CSOs), Non - Governmental Organizations (NGOs), Faith based organizations (FBOs), and Community based organizations (CBOs) among others. They will collaborate with the County government in the implementation of the policy through development and review of sub sector policies, strategies, legislations and in the implementation of agricultural programmes and projects.

4.1.8 Private Sector

The private sector includes producers, farmers, processors, marketers and all other actors in the crops, livestock and fisheries value chains. They will collaborate with the National and County government in the implementation of the policy through: development and review of sub sector policies and strategies; legislations; investment ventures; and provision of goods and services in crops, livestock and fisheries value chains.

4.1.9 Bilateral and Multilateral Organizations

Bilateral and multilateral organizations are important in financing and providing technical support for the agricultural sector. The development partners in collaboration with the National and County governments will continue to provide technical assistance and financial support to realize the objectives of the policy. This will be through policy development and reviews, legislations and guidelines, sector reforms and development and implementation of agricultural programmes and projects.

CHAPTER FIVE POLICY MONITORING, EVALUATION, REPORTING AND REVIEW

5.0 Introduction

Policy monitoring, evaluation, reporting and review are key components in the implementation process. Monitoring, Evaluation and Learning (MEL) is a tool for assessing progress of implementation. It provides decision makers, sponsors and other stakeholders with better means of learning from past experience, improving service delivery, planning, allocating of resources and demonstrating results as part of accountability to key stakeholders.

5.1 Monitoring and Evaluation

For successful implementation of this agricultural policy, a MEL framework will be developed as an integral component to ensure the policy objectives are achieved in a cost effective, coordinated and harmonized approach. The department in charge of crops, livestock, veterinary, fisheries, irrigation and cooperatives in collaboration with the relevant implementing line departments, agencies and other stakeholders will develop a MEL framework within six months of the policy implementation.

The MEL framework is expected to be consistent with the National Integrated Monitoring and Evaluation Systems (NIMES) and have clear terms of reference for relevant stakeholders in data collection, standardization, storage and sharing at all levels using standard format. The sector will establish a multi-sectoral ME&L committee, develop MEL tools and set Performance targets.

5.2 Reporting

There will be an Annual Review Report (ARR) on implementation of the policy that will be presented to the Governor by the CECM Agriculture, Livestock, Fisheries, Irrigation and Cooperatives for dissemination to the public and relevant stakeholders. The report will outline options on how to subsequently address challenges and emerging issues.

There shall be a channel and procedure for reporting and communication guided by the following principles;

- 1) **Proper Flow of Information**: The information should freely flow from the proper place to the right end user of the report.
- 2) **Proper Timing**: The purpose of preparation of report is to control unfavorable activities hence the report should be submitted at the required time at any cost.
- 3) **Accurate Information:** The report contains only accurate information since inclusion of wrong information may lead to wrong decision making.
- 4) **Relevant Information**: Proper attention should be devoted to include only relevant information in the report.

- 5) **Basis of comparison**: The information bestowed by reports will be helpful when it carries provision to compare with past figures, standards set or objectives.
- 6) **Reports should be clear and simple:** The purpose of preparing a report is helping the management in planning, coordinating and controlling.
- 7) **Cost**: The expenses incurred by the management with regard to report preparation should be commensurate with the benefits derived from the report preparation.
- 8) **Evaluation of responsibility:** The reporting system should fix standards or targets for each functional department and should be installed in such a way that managerial responsibility can be evaluated.

5.3 Operationalization and Review of Policy

Upon publication of the policy, the Department responsible for agriculture, livestock, fisheries and cooperatives shall operationalize the policy. The policy operationalization will take account of the specific objectives as well as putting due consideration on the guiding principles.

There shall be a window to review and revise/update this policy when the need arises to ensure its relevance. The review shall follow the step listed below;

- 1. Identification of the need to review the policy.
- 2. Submission of a Policy Action Form to the Department of Agriculture, Livestock, Fisheries, Irrigation and Co-operatives.
- 3. Review of the policy in consultation with the stakeholders and develop a draft update.
- 4. Submission of the reviewed Policy and Cabinet memorandum to the Cabinet.
- 5. Once the Policy has been approved, it will be submitted to the County Assembly for approval.
- 6. Policy publication, dissemination and implementation.