

REPUBLIC OF KENYA



**MINISTRY OF AGRICULTURE, LIVESTOCK, FISHERIES AND
CO-OPERATIVES**

STRATEGIC PLAN
2018 – 2022

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LIST OF ACROYNMS

ACCOSCA	African Confederation of Co-operative Savings and Credit Associations
ADC	Agricultural Development Corporation
AFA	Agriculture Food Authority
AGOA	African Growth Opportunities Act
AIRC	Agriculture Information and Resource Centre
AMR	Antimicrobial Resistance
ATDCs	Agricultural Technology Development Centres
ASTGS	Agriculture Sector Transformation and Growth Strategy
AU-IBAR	Africa Union-Inter African Bureau for Animal Resources
CAADP	Comprehensive Africa Agricultural Development Programme
CAN	Calcium Ammonium Nitrate
CBPP	Contagious Bovine Pleuropneumonia
CE	Commodity Exchange
COMESA	Common Market for Eastern and Southern Africa
CSA	Climate Smart Agriculture
DAP	Diammonium Phosphate
EAC	East African Community
ECF	East Coast Fever
ECCOS	Ethics Commission for Co-operative Societies
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ENABLE	Empowering Novel Agribusiness Lead Employment
ERA	Economic Review of Agriculture
ERS	Economic Recovery Strategy
EU	European Union
FMD	Foot and Mouth Disease
GDP	Gross Domestic Product
GHS	Global Harmonized System
HIV/AIDS	Human Immuno Deficiency Virus/Acquired Immunity Deficiency Syndrome
ICA	International Co-operative Alliance
ICT	Information Communication Technology
IFMIS	Integrated Financial Management Information System
KALRO	Kenya Agricultural and Livestock Research Organization
KCSAS	Kenya Climate Smart Agriculture Strategy
KEBS	Kenya Bureau of Standards
KePHIS	Kenya Plant Health Inspectorate Services
KIPPRA	Kenya Institute of Public Policy and Research Analysis
KLIP	Kenya Livestock Insurance Programme
KRA	Key Result Area
KSA	Kenya School of Agriculture
LAPSSET	Lamu Port South Sudan, Ethiopia Transport
MCS	Monitoring Control and Surveillance
MIS	Market Information System
MLND	Maize Lethal Necrosis Disease

MOU	Memorandum of Understanding
MT	Metric Tonne
MTP	Medium Term Plan
NAAIAP	National Accelerated Agricultural Inputs Access Programme
NAMS	National Agricultural Mechanization Strategy
NASEP	National Agricultural Sector Extension Programme
NCIPs	Northern Corridor Integration Projects
NDCs	Nationally Determined Contributions
New KCC	New Kenya Co-operative Creameries
NIMES	National Integrated Monitoring and Evaluation System
OIE	Office International des epizooties/World Organization for Animal Husbandry
ODA	Overseas Development Assistance
PCN	Potato Cyst Nematode
PCPB	Pest Control and Pesticide Board
PESTEL	Political, Economic, Social, Technological, Environmental and Legal analysis
PPP	Public Private Partnership
PPR	Peste des Petit Ruminants
RBS	Risk Based Supervision
RVF	Rift Valley Fever
SACCOs	Savings and Credit Co-operative Organizations
SADC	Southern African Development Community
SAGAs	Semi-Autonomous Government Agencies
SAPs	Structural Adjustment Programmes
SASRA	Sacco Societies Regulatory Authority
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SFRTF	Strategic Food Reserve Trust Fund
SMEs	Small and Medium Enterprises
SWOT	Strength, Weakness, Opportunities and Threats analysis
THVC	Traditional High Value Crops
TLUs	Tropical Livestock Units
UNFCCC	United Nations Framework Convention on Climate Change
VMS	Vessel Monitoring System
VPH	Veterinary Public Health
WOCCU	World Council of Credit Unions
WRS	Warehouse Receipting System

FOREWORD

The mandate of the Ministry of Agriculture, Livestock, Fisheries and Co-operatives is to create an enabling environment for sustainable development of agriculture and co-operatives for food and nutrition security and economic development. The theme of the Strategic Plan is “100 percent food and nutrition Security for all Kenyans”. The theme underpins our desire and commitment to work with others to fulfill our nation’s collective aspiration of transforming Kenya into a newly industrializing, middle income country providing a high quality of life to all its citizens in a clean and secure environment as envisaged in our development blueprint, the Kenya Vision 2030 and the Big Four Agenda.

It is notable that the agriculture and co-operative sectors are a major contributor to the economy and remains high on the national development agenda in terms of food and nutrition security, income generation, employment creation, saving and investment mobilization and export earnings. However, for the country to reap maximum benefits, the sector has to be fundamentally transformed to make it modern, commercially oriented and competitive. To realize the country’s aspirations of food and nutrition security, this calls for collective and concerted efforts to turn around the sector and the overall national economy as envisioned in the Kenya Vision 2030. Towards this end, the Government has developed and launched an Agriculture Sector Transformation and Growth Strategy (ASTGS), 2019 - 2029 to guide the sector.

In order to successfully implement the Strategic Plan, the Ministry will strengthen collaboration with all stakeholders and development partners. Deliberate efforts will be made to ensure greater private sector participation through Public Private Partnerships (PPPs) framework with an aim to foster employment creation, income generation and wealth creation for all Kenyans.

Finally, I call upon all the stakeholders for their cooperation and support for successful implementation of the Strategic Plan in order to realize the desired goal of Kenya being a food and nutrition secure country and above all result to socio- economic development and improved livelihoods of Kenyans.

**HON. PETER MUNYA, MGH
CABINET SECRETARY**

PREFACE

The Strategic Plan will guide the Ministry in the implementation of policies, programmes, projects and priorities in the next five years. The Plan has been prepared in line with Kenya Vision 2030, its third Medium-Term Plan, the Jubilee Manifesto and the Big Four Plan Government agenda.

The Plan has set out the strategic objectives, priorities and strategies that will be pursued in order to achieve tangible and measurable results. In this regard, the Ministry has identified eight strategic objectives to be pursued over the plan period. These are: Create an enabling environment for Agricultural development; increase productivity and outputs in agriculture sector; enhance food and nutrition security; enhance investment in the blue economy; improve market access and trade; strengthen institutional capacity; increase youth, women and vulnerable groups participation in agricultural value chains; and enhance leadership and integrity in the Ministry.

These objectives will transform the predominantly smallholder agricultural sector to modern, market-oriented agribusinesses, besides ensuring 100 percent food and nutrition security in Kenya. It will also enhance the role of co-operative societies in supporting agricultural production through marketing, processing and providing financial resources through SACCOs. The Strategic Plan will be the basis for formulation of the Ministry's work plans, resource bidding and performance contracts. It is our conviction that with dedication and team work we will be able to effectively implement this Strategic Plan, and in so doing, improve the livelihoods of Kenyans by ensuring food and nutrition security.

The process of preparing the Strategic Plan was highly consultative and participatory. We take this opportunity to thank the Cabinet Secretary for providing policy direction and the Chief Administrative Secretaries for their coordination role throughout the strategic planning process. We also thank the Heads of Directorates and stakeholders for their valuable inputs towards this process. In a special way, we recognize the immense work by the Strategic Planning Secretariat led by the Heads of the Planning Units for their tireless efforts that has made it possible to realize the Strategic Plan document. We call upon all Ministry employees, stakeholders and our development partners to support implementation of the Strategic Plan for the realization of intended benefits to the Kenyan people.

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EXECUTIVE SUMMARY

The Strategic Plan provides an overview of the Ministry's mandate, functions, objectives and strategies to be pursued during the five-year (2018-2022) plan period. It sets out the framework which will enable the Ministry to carry out its functions in line with its vision and mission. It further identifies and address challenges encountered in the implementation of the previous strategic plan (20013- 2017); and builds on the lessons learnt. The Plan is aligned to key policy documents such as the Constitution, the Kenya Vision 2030 and its Third Medium Term Plan (MTP III) 2018-2022, Government Agenda on the 'Big Four', other national and sector policy priorities; as well as regional and international commitments. The plan has taken cognizance of the international, regional and national challenges that impact on agriculture and food security.

The Strategic Plan is organized into five chapters; Chapter one provides the background information in the context of the Ministry's State Department mandates, global, regional and national development challenges and the development role it plays. Chapter two contains a detailed situation analysis highlighting key milestones achieved, challenges encountered and lessons learnt in the implementation of the 2013-2017 Strategic Plan. It further gives an analysis of the environment in which the Ministry operates in the context of: Strengths, Weaknesses, Opportunities and Threats (SWOT); Political, Economic, Social, Technological, Environmental and Legal (PESTEL) analysis and stakeholder analysis.

Chapter three gives the strategic model of the Ministry clearly stating its vision, mission and core values. It further outlines the key result areas; strategic issues, strategic objectives and the strategic interventions that the Ministry will pursue during 2018-2022 plan period. The key result areas are: Policy and Legal Framework; Agricultural Sector Productivity Improvement; Food and Nutrition Security; Investment in the Blue Economy; Market Access and Trade; Institutional Capacity; Youth, Women and Vulnerable Groups Involvement in Agriculture and Leadership and Integrity.

The successful implementation of the plan will require adequate human and financial resources. In this relation, chapter four of the Strategic Plan provides the implementation and coordination framework. It is worthy to note that the Ministry has an in-post of 2,202 staff against an authorized staff establishment of 4,445; it is evident that there is an acute shortage of staff attributed to the recruitment embargo, retirements and natural attrition. The Plan also indicates the financial requirement during the five years and the strategies that the Ministry will pursue to mobilize the resource. To implement this Strategic plan the Ministry will require **Kshs. 266,380.5 million** with the bulk of the resources attributed to Key Result Areas (KRA) 2 on Agricultural Sector Productivity (**Kshs. 125,515 million**) and KRA 3 on Food and Nutrition Security (**Kshs. 95,893 million**).

The funding is expected to be sourced from the Government through the Exchequer, development partners and partnerships with the private sector. The chapter closes with risk analysis and mitigation measures.

Finally, Chapter five discusses Monitoring and Evaluation framework and outlines key performance indicators to be tracked. The results from the analysis will be used to inform decision-making.

CHAPTER ONE: INTRODUCTION

1.0 Overview

The chapter provides the background of the Ministry and outlines the mandate, the challenges faced by the agricultural and co-operatives sectors at the global, regional and national levels and importance of the sector to the national development agenda.

1.1 Background

The Ministry of Agriculture, Livestock Fisheries and Co-operatives was established vide Executive Order No. 1 of 2020 dated 14th January 2020. The Executive Order transferred the State Department for Co-operatives from the Ministry of Industry, Trade and Co-operatives to the current Ministry of Agriculture, Livestock, Fisheries and Co-operatives. The Ministry has 37 Semi-Autonomous Government Agencies (SAGAs) and ten training institutions under its purview. The overall mandate of the Ministry is to create an enabling environment for sustainable development and management of crops, livestock, fisheries resources and the Blue Economy, and co-operatives to ensure the country's food and nutrition security. The Ministry plays a key role in economic and social development of the country through enhancing food and nutrition security; employment and wealth creation; and foreign exchange earnings.

1.2 Mandate of State Departments in the Ministry

1.2.1 State Department for Crop Development and Agricultural Research

The mandate of the State Department for Crop Development and Agricultural Research include: National agricultural policy management; National food policy; Strategic food reserve; Agricultural crops development, regulation and development; Phytosanitary services and international standards compliance; Agricultural farmers' training; Agricultural land resources inventory and management; Agricultural mechanization policy management; Policy on land consolidation for agricultural benefit; Agricultural insurance policy; Agricultural extension services standards; Crop research and development; Agriculture seed research and development; Livestock research and development; Crop genetic research; Tsetse Fly and Trypanosomiasis research, control and eradication; and Capacity building policy for agricultural staff.

1.2.2 State Department for Livestock

The mandate for the Livestock include: Livestock policy management; Development of livestock industry; Veterinary services and disease control; Range development and management; Livestock marketing; Livestock research and development; Promotion of quality hides and skins; Promotion of dairy industry; Livestock insurance policy; Livestock branding; and Promotion of beekeeping; and Leather sector development and promotion of value chain.

1.2.3 State Department for Fisheries, Aquaculture and the Blue Economy

The mandate for the State Department for Fisheries, Aquaculture and the Blue Economy include: Fisheries policy; Fisheries licensing; Development of fisheries; Fisheries marketing policy; Fish quality assurance; Fisheries research; Coordination of development of policy legal, regulatory and institutional framework for fisheries industry and the Blue Economy; Enhancement of technical cooperation; Coordination of the development of maritime spatial plan and integrated coastal zone management; Protection and regulation of marine ecosystems; Management and licensing of local and foreign fishing trawlers in Kenya waters; Protection of the marine resources in the Exclusive Economic Zone (EEZ); Overall policy for exploitation of agro-based marine resources; Development of policy on fishing ports and associated infrastructure; Capacity building for sustainable exploitation of agro-based marine resources; Protection of aquatic ecosystem; and promotion of Kenya as a centre for aquaculture.

1.2.3 State Department for Co-operatives

The mandate for the State Department for Co-operatives include: Co-operative policy, standards, and implementation; Promotion of co-operative ventures; Co-operative production and marketing; Supervision and oversight over co-operative societies; Co-operative savings, credit, and other financial services policy; Co-operative legislation and support services; Co-operative education and training; Co-operative audit services; and Co-operative financing policy.

1.3 Global, Regional and National Development Challenges

1.3.1 Global Constraints

Globally, the characteristics of agriculture sector vary widely, from predominantly small scale with low external inputs to highly mechanized large-scale farming with very high levels of external inputs. For developing countries like Kenya, agricultural strategies focus on moving from subsistence to commercially oriented and competitive agriculture. To address the problem of aggregation and product development, co-operative organisations comes in handy by: channeling farm inputs to improve production; post-harvest management; and provide market linkages and conducive financing environment.

The global constraints that hinder agriculture and co-operatives sectors development in Kenya include:

- i. ***Unfavorable international terms of trade:*** Kenya's exports have been constrained by unfavorable international terms of trade. Developed countries continue to impose prohibitive tariff and non-tariff barriers. These include; biased trade agreements, use of agricultural subsidies in support of farmers in developed economies and protectionist policies, which result in unfavorable market access and declining commodity prices.
- ii. ***Rising costs of inputs:*** The sector has faced rising costs of production as a result of high cost of crude oil, fertilizers, agro-chemicals, agricultural machinery and equipment, animal health and other production inputs. The high oil prices have a strong bearing on the cost of

inputs as a raw material for manufacture of fertilizer and a factor in international freighting and distribution.

- iii. ***Climate change:*** The negative effects of climate change adversely affect food production and the livelihoods of people, and have devastating consequences on the environment, society and wider economy. It is increasingly clear that developing countries including Kenya are most adversely affected by persistent droughts and floods due to their fragile environment. This is compounded by their inadequate disaster preparedness and inadequate capacities on adaptation and mitigation measures on negative climate change impacts.
- iv. ***Global economic recession:*** In the recent past, the world economy has been faced with an economic slow-down with signs of possible recession. Many countries have registered economic downturn characterized by high inflation and unemployment. The slow-down is likely to reduce the demand for agricultural commodities and reduced flow of capital into the developing countries. Overseas Development Assistance (ODA) is likely to be reduced and hence less capital for projects in developing countries.

1.3.2 Regional Constraints

- i) ***Regional Cooperation:*** The East Africa region is relatively small and contributes less than 10 percent of international trade and remains a net importer of not only industrial goods but also agricultural commodities. Although intra/inter-regional trade has been strengthened through regional integration arrangements such as Southern African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA) and East African Community (EAC), there are constraints to regional integration. For example, lack of convergence of national economic and political interests; and different policies on utilization of shared resources to the extent that some are detrimental to the development of other countries.
- ii) ***Pests and Diseases:*** The Sub-Saharan African countries have similar agro-ecological characteristics, hence face similar crop and animal pests and diseases. Crop pests such as desert and red locusts, *quelea quelea* birds, grain and stem borers cut across national borders and are endemic in the region. All crop diseases of economic importance are also found in all the countries. In the livestock sub-sector diseases such as Foot and Mouth Disease (FMD), Contagious Bovine Pleuropneumonia (CBPP), Rinderpest and East Coast fever (ECF), Tsetse Fly and Trypanosomiasis among others are found in most countries in Sub-Saharan Africa. In the fisheries sub-sector, the water hyacinth has been a menace especially in the East African region. While there are regional bodies addressing these diseases, there are inadequate regional policies and programmes to address cross border pests and diseases menace.
- iii) ***Civil Strife and Armed Conflicts:*** Occasional civil strife and armed conflicts continue to affect several parts of Africa and disrupt productive activities, destroy the environment, infrastructure and livelihoods, seriously undermining food and nutrition security and overall development efforts. In Eastern Africa, ongoing and past conflicts continue to cause food and nutrition insecurity for large population groups. This has resulted to high influx of

refugees into neighboring countries thus worsening the food and nutrition security situation. Similarly, this has resulted into the proliferation of small arms into the country leading to high insecurity levels.

1.3.3 National Constraints

The key constraints that affect agriculture and co-operative development at national level include:

- i. ***Inadequate legal and policy frameworks:*** The sector has made strides in consolidating relevant legislations. However, many policies and legislations remain outdated and inconsistent with the Constitution.
- ii. ***Land sub- division and fragmentation:*** There has been over-subdivision of land into uneconomic agricultural units, while in some parts of the country large parcels of land remain-unutilized/underutilized.
- iii. ***Low adoption of modern technology and innovation:*** Although Kenya has a well-structured agricultural research system, there is low adoption of new technologies and innovations. This is as a result of inadequate research-extension-farmer linkages and limited demand-driven research resulting to low agricultural production and productivity.
- iv. ***Land degradation and declining soil fertility:*** Poor farming methods and continuous cultivation has led to rapid depletion of soil nutrients, declining yields and environmental degradation. Degradation of agricultural lands has continued in various forms at a faster rate compared to the rate of reclamation. Degradation results from erosion, soils acidity, salty soils, deforestation, quarrying and mining, among others. This has resulted in reduction of land available for agricultural production.
- v. ***Decreasing land for agricultural production and productivity:*** Agricultural sector relies heavily on land as a key factor of production and is faced by other many land-use competing activities. Due to land scarcity, resource-use conflicts are bound to arise.
- vi. ***Rising conflicts:*** The sector has been experiencing frequent conflict between neighboring communities due to cattle rustling, livestock and wildlife encroachment to the private farms in search of pasture during dry spells.
- vii. ***Pests and diseases:*** Prevalence of diseases and pests, pre-harvest and post-harvest losses occasioned by pests, diseases and lack of proper handling and storage facilities continue to be high. This causes heavy losses through deaths, reduced productivity and loss of markets for products.
- viii. ***Climate change:*** Climate change results to reduced productivity, pests outbreaks and disease epidemics, drying of rivers and wetlands, loss of livestock and crop failures, pasture and forage depletion among others. Pastoral and marginal agricultural areas are particularly vulnerable to the negative impacts of climate change, as an extended period of droughts erodes livelihoods opportunities and community resilience.
- ix. ***Non-adherence and inadequate quality control systems:*** The export of agricultural products has faced restrictions due to poor packaging, damage during transportation, poor handling, contamination and infection due to challenges of adherence to code of conduct for exporters.

- x. ***Limited capital and access to affordable credit:*** Agricultural production is considered highly risky by the formal financing sector; thus little attention is given to smallholder value chain actors. Limited access to long term financing instruments is also disadvantageous to marketing, housing and industrial co-operatives which require huge capital investments.
- xi. ***Non-remittance of co-operative members' deductions by employers and other agencies.*** The effect of non-remittance of deductions to the SACCOs is that members default and are not able to access credit facilities as per the objectives of the society. Further, the savings of the affected co-operative societies is reduced and the societies fail to mobilize more resources among members on account of the disincentive.
- xii. ***Weak governance and accountability.*** Lack/weak enforcement of existing laws and guidelines leading to corruption and theft of members funds by society officials thus stagnating the growth and development of co-operatives.
- xiii. ***Inadequate market access and marketing information infrastructure:*** Agriculture marketing information systems are poorly organized. The domestic market lacks an effective marketing information system and infrastructure. In addition, the dependence on a few external market outlets makes agriculture exports very vulnerable to changes in the demand of agriculture products and unexpected non-trade barriers by foreign markets.
- xiv. ***High cost, adulteration, low and inappropriate application of key inputs:*** The cost of key inputs such as seeds, agro-chemicals, feeds and other animal health inputs has remained high making them unaffordable by many producers and increasing the cost of production. In addition, cases of counterfeits and adulteration of agricultural inputs have been reported. This results in low application of quality inputs leading to reduced productivity.
- xv. ***Weak surveillance on offshore fishing:*** There is weak capacity to effectively monitor and enforce compliance and regulations governing the exploitation of offshore territorial waters. This has limited Kenya's ability to fully exploit the offshore fishing potential.
- xvi. ***Poor infrastructure:*** Underdeveloped rural roads, inadequate storage facilities and low electricity connectivity have negatively affected agricultural production, productivity and marketing.
- xvii. ***Over reliance on rain fed agriculture:*** The rain fed production system is still dominant in Kenya. This is attributed to low investment in irrigated agriculture.
- xviii. ***Loss of biodiversity and vectors for pollination:*** Loss of pollinators due to excessive use of pesticides and other farming practices is leading to a loss of productivity.
- xix. ***Gender inequalities:*** There exist inequalities at household level in terms of access to and control over productive resources; and in agriculture value chains (participation at processing, marketing, trade and in agricultural service delivery). This continues to impact negatively on household food and nutrition security, sector performance and overall economic growth.
- xx. ***Aging Population:*** The agricultural and co-operative sectors are predominantly run by the old population with very few youths getting involved. There is therefore, need for interventions that target the orientation of the youth to attract them in the sector.

1.4 Ministry's Development Role Vis-a-Vis The National Development Agenda

Kenya Vision 2030 identifies agricultural sector as key to the economic pillar and it is thus expected to drive the economy to the projected 10 percent economic growth annually. The Ministry is, therefore, central to the achievement of Vision 2030 goal of “a globally competitive and prosperous country with a high quality of life by 2030”. The Ministry’s contribution to achievement of this goal will be through promotion of an innovative, commercially oriented and modern agriculture as envisaged in the Agricultural Sector Transformation and Growth Strategy (ASTGS). In addition, the co-operative movement will play a critical role in mobilizing savings and investments from the current 17% to 33% of gross national income. The Saccos sub-sector makes an important contribution to financial access reaching 13 per cent of the population. The Ministry is a major contributor to the “Big Four” agenda on achievement of 100 percent food and nutrition security and has set specific plans for this initiative. This will mainly address food availability and nutrition, food affordability and smallholders’ value addition. Under the affordable housing segment, the Ministry has a role to play in the facilitation of the delivery of 30,000 housing units through co-operatives.

During the third Medium Term Plan period (2018 – 2022) agriculture sector is expected to grow at a rate of 7 percent as a result of implementing different measures. These include: Creating of enabling environment; disease and pest control; post-harvest management and market development; increased investment in agriculture and the blue economy; building capacity in the sector; Promoting youth and women participation in agriculture; and implementation of regional and international protocols/ commitments such as Comprehensive Africa Agricultural Development Programme (CAADP), the Africa Agenda 2063 and Sustainable Development Goals (SDGs).

CHAPTER TWO: SITUATION ANALYSIS

2.0 Introduction

This chapter presents an analysis of the situation facing the Ministry with regard to the structure, functions, performance and responsibilities. The chapter presents a review of the performance of the Ministry as it implemented its Strategic Plan (2013-2017). It also provides an insight into the operating environment under which the Ministry implemented its mandate and an analysis of key stakeholders and their roles.

2.1 Achievements

In the planning period 2013-2017 the Ministry undertook a number of interventions geared towards achievement of the set targets. Some of the key achievements during the period are highlighted in this chapter.

2.1.1 Development and Review of Policies

The Ministry developed/reviewed various policies, strategies and guidelines in the period under review. Key policy, legal and institutional reforms undertaken include; enactment of Agriculture and Food Act (2013), Crops Act (2013), and Kenya Agricultural and Livestock Research Act (2013), which operationalized Agriculture Food Authority (AFA) and the Kenya Agricultural and Livestock Research Organization (KALRO).

A number of policies and strategies were initiated and are at different levels of completion. These include; the overarching Agriculture Policy, National Co-operative Policy, National Agricultural Mechanization Policy, Urban and Peri-Urban Policy, Agro Chemical Industry Policy, Organic Agriculture Policy, Sugar Industry Policy, National Agricultural Insurance Policy, Cereals Policy, National Agricultural Soils Management Policy, National Livestock Policy, Veterinary Policy, Beekeeping Policy, Poultry Policy, Dairy Industry Regulation, Camel Development Policy, Livestock Feeds Policy, Livestock Breeding Policy, National Agricultural Marketing Strategy, Climate Smart Agriculture Strategy, Oil and Nuts Crops Strategy, Tsetse and Trypanosomiasis Eradication Strategy, National rainwater harvesting strategy and water storage investment plans.

The Bills/Acts that were developed include the Fisheries Management and Development Act, No. 35 of 2016, Warehouse Receipts System Bill, Tsetse Bill, Dairy Industry Bill. In addition, disease and pest control contingency plans and strategies for management of diseases of economic importance (FMD, PPR, RVF, draft CBPP) were developed.

Further, standards and residue plans for veterinary public health and codes of inspection for conventional and non-conventional animal products were developed. The Veterinary Medicines Act 2012 was enacted during the same period and the Veterinary Medicines Directorate was established and operationalized.

Under co-operatives, the development of several guidelines, standards and manuals were initiated. These include: the investment guidelines; educational and training guidelines; SACCO

prudential standards and regulations; co-operative management guidelines; Co-operatives Code of Conduct; co-operative inspections and inquiries manuals and revitalization strategy for commodity co-operatives.

2.1.2 Vaccine and Semen Production

The Ministry developed purified oil-based Foot and Mouth Disease (FMD) vaccines which confer longer immunity of up to one year with a shelf life of up to two years. The production of oil-based FMD vaccine reduced the cost of vaccination by over 50 per cent (i.e. from Kshs.100 to Kshs.50 per dose). Within the period, a total of 135 million doses of assorted vaccines for animal disease control were produced and a new thermo-tolerant I-2 Newcastle disease vaccine developed.

The Ministry further produced and distributed 2.8 million straws of cattle semen to ensure availability of quality livestock breeding stock and genetic materials. In addition, four Liquid Nitrogen plants were installed in Meru, Nyahururu, Sotik and Kirinyaga to facilitate semen distribution. A bull station was constructed in Agricultural Development Corporation (ADC) Sabwani in Trans-Nzoia County and is awaiting operationalization.

2.1.3 Livestock and Crop Insurance

In the plan period, 90,069 Tropical Livestock Units (TLUs) were insured through the Kenya Livestock Insurance Programme (KLIP) to cushion pastoralists against feed challenges occasioned by drought in 8 out of the targeted 14 counties. The farmers were also supported with feed supplements, drugs and vaccines and livestock off-take as drought mitigation measures. During the 2016/17 financial year, 12,000 households were paid a total of Ksh. 215million as compensation for drought.

Under Crop insurance, 1,000 farmers procured insurance cover in the pilot phase which covered three counties of Bungoma, Embu and Nakuru. The sector formalized the formation of insurance pool of 7 insurance companies as an underwriter for the programme. 400 county staff were trained on crop insurance implementation and 100,000 farmers in 10 counties were sensitized. The project procured yield estimation (crop-cutting) equipment for use in the 10 counties. In addition, the Ministry developed electronic data management systems for crop and livestock insurance.

2.1.4 Fisheries Management and Development

During the plan period, the Ministry constructed fish quality control laboratories in Nairobi, Kisumu and Mombasa; procured an offshore Patrol Vessel (P.V Doria) for surveillance of deep-sea fishing and two patrol boats, one for Lake Victoria and another for Lake Turkana; established a Monitoring, Control and Surveillance (MCS) Center in Mombasa and installed a Vessel Monitoring System (VMS). The Ministry also restocked 135 dams, 11 rivers and 3 lakes with a total of 4,881,663 assorted fish fingerlings to increase productivity and developed seaweed farming in Kibuyuni, Kwale County.

2.1.5 Tsetse Control

To eradicate Tsetse and Trypanosomiasis, various interventions were carried out in five tsetse belts zones covering Lake Victoria basin, Lake Bogoria Basin, Meru/Mwea regions and Coast–Galana Kulalu. The suppression of Tsetse and Trypanosomiasis in the five tsetse belts led to the start of diversified economic activities like dairy farming and crop production in Bungoma and tourism in Ruma.

2.1.6 The Fertilizer Cost Reduction Strategy

During the period, 615,121 Metric Tonnes (MT) of various types of fertilizer were procured to support price stabilization mechanism. Under this programme market prices for Diammonium Phosphate (DAP) reduced from Kshs. 6,500 to Kshs. 3,100 while Calcium Ammonium Nitrate (CAN) market price dropped from Kshs. 3,000 to Kshs. 2,600 per 50kg bag. In addition, the Ministry identified Toyota Tsusho Corporation as a strategic partner for fertilizer blending.

2.1.7 Grain Drying and Storage Facilities

The Ministry spearheaded the development of community-based grain drying and storage facilities so as to address grain quality issues with a view to limit quality deterioration (post-harvest losses and aflatoxin contamination) and enhance grain marketing. A total of 36 mobile grain driers were procured and distributed to 36 sub-counties in the main grain growing regions. Further, a total of 13 community-based grain storage facilities were constructed in 10 counties.

2.1.8 Agriculture Mechanization

A total of 72 tractors, 16 combine harvesters, 52 reapers and 22 threshers were distributed to rice farmers' organizations to increase mechanization in rice farming at Ahero and Mwea Irrigation schemes.

2.1.9 Agriculture Research

During the period under review, 15 fodder varieties and four improved pasture grasses were developed; improved indigenous chicken breeds was produced, improved poultry feeds; introduced 421 varieties of different crops; developed crop suitability maps; produced and distributed 2,700 improved Sahiwal and Boran bulls and 1,000 heifers of Boran-Friesian crosses.

2.1.10 Co-operative Development

During the review period, the State Department for Co-operatives embarked on modernization of New Kenya Co-operative Creameries (New KCC) plant and equipment. The Department facilitated payment of debts owed to dairy farmers by the defunct KCC amounting to Kshs 442 Million and coffee debt waivers amounting to Kshs 2.4 Billion. A strategy for revitalization of cotton ginneries was developed.

Additionally, 7,405 new co-operatives including four diaspora co-operatives were registered. As a result, the total number of registered co-operative enterprises stood at 22,131 as at the end of the review period. As at 2017, co-operatives mobilized Kshs 637 billion as savings, accumulated assets worth over Ksh.1trillion and have a loan portfolio exceeding Ksh.700 billion.

The SACCO Societies Regulatory Authority (SASRA) continued implementing the Risk Based Supervision (RBS) framework which allows SACCOs to submit online returns for regulatory monitoring. This led to an increase in savings for deposit taking SACCOs from Kshs 258.2 Billion to Ksh 268Billion.

The Ethics Commission for Co-operative Societies (ECCOs) was established to enforce good governance in Co-operatives. ECCOs managed to develop Co-operative Management guidelines, enforce good governance through creation of awareness and inspections and monitored integrity status of the co-operative leadership. To enhance co-operative disputes resolution mechanisms, co-operative tribunals were decentralized to various regions i.e. (Mombasa, Kisumu Embu, Nakuru and Kakamega)

2.1.10 Implementation Challenges

The following challenges were faced during the implementation of the Strategic Plan 2013-2017:

- i Delay and inadequate exchequer releases and austerity measures;
- ii Delays in uploading of budgeted development funds in the IFMIS and occasional access failure of IFMIS system hindering timely transactions;
- iii Settling of overrun expenditure and pending bills;
- iv Occasional litigations on tender awards;
- v Prolonged electioneering period in 2017/18 delayed implementation of planned activities;
- vi Weak governance framework within the co-operative sector occasioned by delayed efforts towards the alignment of the existing policy, legal and regulatory framework with the Constitution; and
- vii Inadequate monitoring, evaluation, and reporting system.

2.3 Lessons Learnt

The implementation of the 2013-2017 Strategic Plan provided useful lessons which will be applied in the implementation of this Strategic Plan. The lessons include: -

- i Closer collaboration between the National and County governments is required on the issues of capacity building, policy development and implementation.
- ii The need to continue with the efforts to enhance linkages and build stronger collaboration with all the stakeholders in order to ensure sustainable food security and efficient service delivery.
- iii Need for sector Monitoring and Evaluation framework and a system for effective and efficient utilization of resources, timely achievement of the desired results and data and information sharing.
- iv Absence of evidence-based planning resulted to limitation of informed decision making.
- v Political goodwill in legislation is important.
- vi Performance management should be linked to strategic planning.

2.4 Environmental Scan

This involves an analysis of the institutional Strengths, Weaknesses, Opportunities and Threats (SWOT); and the Political, Economic, Social, Technological, Environmental and Legal (PESTEL) aspects.

2.4.1 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis.

Table 1: Strength, Weakness, Opportunities, Threat (SWOT) Analysis

Strengths <ul style="list-style-type: none"> a. Qualified personnel experienced in various fields b. Availability of basic infrastructure, land and equipment for affiliated institutions, facilitating expansion c. State corporations and SAGAs that deliver the State Department's mandate d. Existence of a variety of policies and legal frame works e. Good relationship with stakeholders f. Institutional arrangements in place g. Established research institutions in agriculture h. Existence of specialized regulators (SASRA, CMA, KEPHIS, Dairy Board, HCD, AFA) 	Weaknesses <ul style="list-style-type: none"> a. Ageing technical staff b. Inadequate staff c. Inadequate government funding of key programmes d. Low utilization of modern technologies e. Inadequate infrastructural capacities f. Inadequate capacity to catalyze agricultural technology dissemination; g. Inadequate policy and Legal framework h. Absence of a data bank and other real-time information on co-operatives for timely decision making i. Weak monitoring and evaluation system j. Weak inter/intra coordination mechanisms between national and county to county governments k. Limited participation of co-operatives in value addition l. Inadequate market information sharing within co-operatives m. Inadequate access to credit n. Limited social inclusivity for youth, PLWD, Women and indigenous communities
Opportunities <ul style="list-style-type: none"> a. Supportive policies and favorable political climate; b. Recognition by Vision 2030 to drive the economic pillar c. Emerging focus on value addition activities d. Accreditation and membership to various regional and international bodies such as ICA, WOCCU, ACCOSCA, ICA 	Threats <ul style="list-style-type: none"> a. Abrupt splits and mergers of ministries b. Overlaps of mandates and functions on value addition activities across state departments c. Budget austerity measures which affect implementation of planned programmes d. Emerging pests and diseases e. Low interest in agriculture by youth f. Negative impact of Climate change

<p>AFRICA,OIE,IBAR, IFAD, FAO, Desert locust organization</p> <p>e. Existence of collaborating institutions e.g. learning institutions, Research organizations, UN and other international bodies</p> <p>f. Increased opportunities under the Africa Continental Free Trade Agreement, AGOA</p> <p>g. Existence of new technologies</p> <p>h. Supportive development partners</p> <p>i. Availability of natural resources for expansion of agriculture e.g. land, water</p> <p>j. Existence of trained agriculture professionals</p> <p>k. Large livestock resources</p> <p>l. Responsive farming community;</p> <p>m. Availability of national, regional and global markets</p>	<p>g. Changing market requirements (standards) and consumer preferences</p> <p>h. Encroachment of strategic institutional land</p> <p>i. Change in agricultural land-use and loss of biodiversity</p> <p>j. Insecurity and instability in the region and organized crime especially among the youth.</p> <p>k. Weak national ethos, governance, and integrity issues</p> <p>l. Human Diseases e.g. lifestyle diseases and other communicable diseases.</p> <p>m. Human Wildlife conflict</p>
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2.4.2 Political, Economic, Social, Technological, Environmental and Legal

This Political, Economic, Social, Technological, Environmental and Legal (PESTEL) tool enables the Ministry to focus on the operating environment and the factors that are likely to impact negatively or positively in the process of implementing the Strategic Plan.

Table 2: PESTEL analysis

	Category	Issue	Strategic Implications (Effects)
1.	Political	Political goodwill	<ul style="list-style-type: none"> • Changes in ministry leadership would have an impact on the Strategic Plan implementation depending on the priorities of the new leadership
		Devolution of sector	<ul style="list-style-type: none"> • Likelihood of increased taxation at county level • Differences in levels of support by County Governments
		Political competition	<ul style="list-style-type: none"> • Disruption of normal socio-economic life during impending political cycles • Uncertainties due to change of government
		Inter-Governmental Relations	<ul style="list-style-type: none"> • Political interference on the already established consultation, coordination and cooperation mechanism (JAS-IGS, Sector Working Groups) could lead to disharmony between the working

	Category	Issue	Strategic Implications (Effects)
			relationships between the two levels of government
		Governance Structures in the Country	Strong structures leading to effective coordination and growth
2.	Economic	Taxes and levies	• Will affect the disposable income and hence growth of the sector
		Unemployment and poverty	• Negative impact on income generation, savings hence livelihoods
		Macro-Economic instability	• Negative and adverse effects on performance of enterprises across the sector
		Private Public Partnership	• Increased private sector participation and investment leading to accelerated growth in the sector
3.	Social	Population growth	• Rapid population growth will exert pressure on available resources especially land for agricultural production
		Rural urban migration	• Mass exodus of youthful population to urban areas leading to inadequate Labor/manpower resources in the rural areas to participate in agricultural production.
		Disease prevalence	• High prevalence of diseases such as HIV/AIDS and malaria, and non-communicable diseases (cancer, diabetes etc.) continue to have a toll on the productive members of society.
		social inclusion	• Inadequate social inclusion and participation and other retrogressive cultural practices that limit full participation of some segments of society (e.g. women and youth)
		Mismatch and inadequate skills	• Lack of meritocracy and effective management skills and poor deployment of staff, patronage and objectivity of management staffing. • Inadequate education and training hinders growth and development of sector
		Poverty levels and inequalities	• High poverty levels and inequalities lead to social conflict including crime and insecurity affecting growth and

	Category	Issue	Strategic Implications (Effects)
			productivity of the sector.
		Culture of social glorification of wealth	<ul style="list-style-type: none"> • Corruption and embezzlement of resources threatens growth and development especially in leadership.
		Citizens awareness	<ul style="list-style-type: none"> • There is increased public awareness on government services and citizenry entitlement leading to demand for timely and quality services.
4.	Technological	Advanced technology standards	<ul style="list-style-type: none"> • Advanced technology has led improved production and productivity.
		Information and Communications Technology(ICT) and ICT Infrastructure	<ul style="list-style-type: none"> • Improved network infrastructure in the country has improved information sharing.
		ICT literacy levels	<ul style="list-style-type: none"> • Inadequate ICT skills and personnel is a challenge on performance and service delivery.
		Visibility and interaction	<ul style="list-style-type: none"> • Existence of digital platforms has improved working conditions and interactions.
		Cyber security and threats	<ul style="list-style-type: none"> • Advancement in technology has led to cyber threats, which pose a great risk to various sector operations.
		Resistance to change and adoption to new technologies	<ul style="list-style-type: none"> • Adopting to rapid advances in technology is expensive.
5.	Legal	Multiplicity of legal instruments	<ul style="list-style-type: none"> • Expediency of business execution is hampered by multiplicity of legal instruments.
		Delays in enactment of enabling legislation	<ul style="list-style-type: none"> • Long processes in enacting legislations greatly hamper sector development.
		Outdated legal regime.	<ul style="list-style-type: none"> • Non-alignment to the Constitution brings conflict in execution of mandates at the two levels of government.
		Tariff and non-tariff barriers	<ul style="list-style-type: none"> • Reduced market penetration for commodities
		Slow, inaccessible and unaffordable legal/judicial processes	<ul style="list-style-type: none"> • Expensive and slow judicial processes cause delays in resolution of issues thus governance issues continue to impede sound management of institutions within the sector. • Dynamics of the business

	Category	Issue	Strategic Implications (Effects)
			environment requires timely adjustment of the legal instruments; hence inaction hampers compliance and often imposes implicit costs to enterprises through loss of business opportunities
6.	Environmental	Environmental pollution and degradation	<ul style="list-style-type: none"> • Poor agricultural practices affecting the ecosystem.
		Climate change and weather variability	<ul style="list-style-type: none"> • Climate change and extreme weather will lead to disruption of agricultural activities leading to dismal performance.
		Disposal and management of waste including e-waste	<ul style="list-style-type: none"> • Non-adherence to safeguards policies on waste disposal of non-degradable exacerbates pollution posing an environmental and health problems. • Continued use of electronic and electrical equipment leads to increase in stockpiles of e-waste posing an environmental and health problems
		Disasters and hazards	<ul style="list-style-type: none"> • Sustained damage to the environment and losses to the economy.

2.4.3 Stakeholder Analysis

The stakeholders in the agriculture and co-operative sectors play a complementary role which is critical for realization of the Ministry's objectives and successful implementation of this strategic plan. The table below maps key stakeholders and their roles.

Table 3: Stakeholder Analysis

S/No	Stakeholder	Stakeholder expectation from the Ministry	Ministry's expectations
1.	Research Organizations	<ul style="list-style-type: none"> • Policy guidance • Enhanced linkages and networks with other research Institutions and stakeholders at local level 	<ul style="list-style-type: none"> • Key source of agricultural technologies and innovations, genetic resources, knowledge, information and data; Involvement in research agenda setting, • Facilitating exchange programs/Mentoring
2.	Regulators	Well defined national-policies, legal and regulatory	<ul style="list-style-type: none"> • Enforcement and adherence to law for

S/No	Stakeholder	Stakeholder expectation from the Ministry	Ministry's expectations
		environment	quality assurance •Participation in policy making
3.	Learning Institutions	Opportunities for internship, data and industrial linkages for skills development and commercialization of research findings	•Supply of skilled manpower; technology development and transfer; •Facilitating exchange programs
4.	Farmers/Farmer Organizations/Community Based Organizations	Research findings, innovations and technology packages for adoption and up-scaling	•Promotion of adoption of new technologies in agricultural production •Participation in policy making
5.	Primary Cooperatives	<ul style="list-style-type: none"> • Timely information and education to the leaders, staff, members, and the general Society • Enabling policy, procedures, and legal framework • Fair enforcement of the law • Enforcement of Good governance • Capacity building for devolved units • Collection, Collation and dissemination of up-to-date industry data 	<ul style="list-style-type: none"> •Offer feedback to the Ministry on performance •Provide effective and efficient services •Compliance with policy, legal and regulatory framework •Upholding of good governance
6.	Development Partners	<ul style="list-style-type: none"> • Policy guidance and coordination • Transparency, accountability, and value for money 	<ul style="list-style-type: none"> •Technical and financial support for programmes and projects •Proactive engagement
7.	Financial Institutions	• Provide policy guidance in financial inclusion	<ul style="list-style-type: none"> •Provide credit in value chains •Provide feedback on financial inclusion programmes
8.	Private Sector	<ul style="list-style-type: none"> • Enabling business environment • Research and innovations development that 	<ul style="list-style-type: none"> •Support to sector development •Public-Private partnerships

S/No	Stakeholder	Stakeholder expectation from the Ministry	Ministry's expectations
		are commercially viable <ul style="list-style-type: none"> • Develop frameworks for partnership with private sector 	
9.	Ministries/State Departments/ Government Agencies	<ul style="list-style-type: none"> • Support and collaboration in development and implementations of policies, legal frameworks, projects and programmes 	Synergies and Capacity building
10.	Media	Data and information of the sector	Publicity and awareness creation for the sector
11.	Parliament	<ul style="list-style-type: none"> • Development and implementation of policies, legislations and budget that addresses the sector needs; • Transparency and accountability 	Approval of budgets, policies and legislations
12.	County Governments	Involvement in policy formulation, disseminations of research findings and innovations and setting of the sector's research agenda	Support in development and implementations of policies and legal frameworks and providing feedback on sector's performance

CHAPTER THREE: STRATEGIC MODEL

3.0 Overview

This chapter provides the Vision, Mission and core values of the Ministry. It also articulates the strategic issues the Ministry will address to achieve its strategic objectives for the plan period. Further, it outlines the strategic interventions that will be implemented to meet the strategic objectives.

3.1 Vision Statement, Mission Statement and Core Values;

3.1.1 Vision

A food secure and prosperous nation anchored on innovative, competitive and commercially oriented agriculture and co-operatives sector.

3.1.2 Mission

To create an enabling environment for sustainable food and nutrition security, sustainable co-operatives sector and improved livelihoods for all Kenyans

3.1.3 Core values

In implementation of this Strategic Plan, the Ministry will be guided by the following principles

- i. Professionalism;
- ii. Integrity;
- iii. Efficiency and effectiveness
- iv. Responsiveness;
- v. Partnerships;
- vi. Teamwork;
- vii. Customer focus; and
- viii. Inclusivity.

3.2 Key Result Areas

During the plan period, the Ministry's strategic interventions will focus on the following key result areas:

1. Policy and Legal Framework;
2. Agricultural Sector Productivity Improvement;
3. Food and Nutrition Security;
4. Investment in Blue Economy;
5. Market Access and Trade;
6. Institutional Capacity;

7. Youth, Women and Vulnerable groups Involvement in Agriculture, Blue Economy and Co-operatives;
8. Leadership and Integrity;

3.3 Strategic Objectives and Strategies

The strategic issues and objectives are informed by the situational analysis and the review of the previous Strategic Plan and Medium Term Plan II (2013-2017); priorities contained in the Third Medium Term Plan (MTP III 2018-2022); the Big Four Government Priorities; Jubilee Government Manifesto; Sustainable Development Goals (SDGs); the Agricultural Sector Transformation and Growth Strategy (ASTGS) and other agricultural and co-operatives sector policies and strategies. The strategic objectives will be achieved through the various specified strategies. The implementation plan (Annex 1) provides details of the activities to be undertaken, the expected outputs, performance indicators, financial implications and responsible offices.

Key Result Area 1: Policy and Legal Framework

The desire for an innovative, commercially-oriented and modern agriculture as outlined in Kenya Vision 2030 has continued to be undermined by weak policy and legal framework. There exist gaps and overlaps in the formulation of legal and policy frameworks and their implementation. To address the issues, the Ministry will formulate and review policies and legal frameworks.

3.3.1 Strategic Objective: To Create an Enabling Environment for Agricultural and Co-operatives Development

The Ministry aims at developing, reviewing and finalizing policies and legal frameworks to create an enabling environment for sustainable development of the agricultural and co-operatives sector. This takes cognizance of the fact that agriculture and co-operatives growth and transformation depends on collaborative and coordinated efforts of multi-stakeholders contributions and of the vibrant sectors in Kenya. The development/review of the policies and legal framework will be participatory, involving all key stakeholders in the sectors.

3.3.1.1 Develop/Review the Agricultural and Co-operatives Policies and Legal Framework

The Ministry will continue to create an enabling environment for agricultural and co-operatives development by developing the: National Agricultural Insurance Policy; Food Waste Management Policy; Fibre Crops Policy; Agricultural Mechanization Policy; National Agricultural Soil Management Policy; Agro Chemical Industry Policy, National Sugar Industry Policy; Coffee Policy; Integrated National Marine Policy; Fishing Ports and Associated Infrastructure Policy, Veterinary Laboratory Policy; Anti-Microbial Resistance (AMR) Policy; Hides, Skins, Leather and Leather Products Policy.

The Ministry will also review/finalize the: Agricultural Policy; National Co-operatives Policy; National Oceans and Fisheries Policy 2008; National Agricultural Research System Policy;

National Agriculture Sector Extension Policy; Dairy Industry Policy; Animal Breeding Policy; Livestock Feedstuff Policy; and Veterinary Policy.

3.3.1.2. Develop/Review Strategies and Legislation

The Ministry will coordinate the development/review of the following strategies: Agricultural Sector Transformation and Growth Strategy (ASTGS); Roots and Tubers Crops Strategy; National Urban and Peri-Urban Agriculture Strategy; National Agricultural Marketing Strategy; Oil and Nuts Crops Strategy; National Cereals Strategy; the Value Addition Strategy; Disease Control Strategies and Contingency Plans; Acaricide Resistance Management Strategy; Hides and Skins Development Strategy; Livestock Identification and Traceability Strategy; Breeding Services Provision Strategy, Guidelines and Technical Manuals; Strategy for Diagnosis, Surveillance, Epidemiology, Control and Prevention of Zoonoses; Livestock Master Plan; Blue Economy Strategy; Integrated Marine Spatial Plan; Anti-Microbial Resistance (AMR) National Action Plan; Co-operative Financial Deepening and Inclusion Strategy; Co-operatives Investments Strategy; Co-operatives Housing Strategy; and Strategy for Co-operatives to participate in Capital Market.

In addition, the Acts to be reviewed include: KALR Act, Agriculture and Food Authority (2013) Act, Animals Disease Act cap 364 (birds rules 2010, hatchery Rules 2010, control of bird diseases 2010); Hides and Skins Act Cap 359; Meat control Act Cap 356 (poultry meat inspection rules 2010); Veterinary Public Health (VPH) Act; Breeding rules; and Co-operative Societies Act No. 12 of 1997 (Amended in 2004); SACCO Societies Act No.14 of 2008. Further, the Ministry will develop the Agricultural Mechanization Bill; Flour Blending Bill, Livestock Bill; Kenya School of Animal Science Bill; Animal Welfare and Protection Bill; Bee Health Bill; and Animal Production Professionals Bill.

In addition, the Ministry will develop the following regulations during the Plan period: the Warehouse Receipt Systems Regulations; the Seeds and Plant Varieties (Plant Breeders' Rights) Regulations; the Seeds and Plant Varieties (Conservation of Genetic) Regulations; Food Crops General Regulations; Miraa Regulations; Nairobi Coffee Exchange Regulations; the Kenya Plant Health Inspectorate Service (General) Regulations and Fertilizer and Animal Feedstuffs (General) Regulations; Veterinary Laboratories Regulations; Dairy Industry Regulations; Bee Industry Regulations; Livestock Identification and Traceability System (LITS) Regulations; legislation for animal production professionals; Fish Levy Trust Fund regulations; Fisheries Management and Development Regulations; regulation for breeding of emerging livestock (bees, donkeys, ostriches); and rules and regulations on ethical issues in agricultural research; Co-operative Societies Act No. 12 of 1997 (Amended in 2004); SACCO Societies Act No.14 of 2008 rules and regulations; and Prudential regulations for SACCOS not under supervision of SASRA.

3.3.1.3 Develop guidelines and standards

During the plan period, the Ministry will develop guidelines and standards to harmonize activities in the agricultural and Co-operative sectors. The guidelines to be developed include: Agricultural information re-packing and sharing; agricultural produce and food markets infrastructure and information management; Formation and capacity building of value chain actors and institutions guidelines; Selection and capacity building of lead farmers and establishment of demonstration farms guidelines; formation and capacity building of business groups for the youth for provision of quality agribusiness services; and guidelines on movement, importation and exportation of biological materials; guidelines for diaspora funds; Guidelines for start-up SACCO societies; guidelines on pensioners participation in SACCOs; Investment guidelines; Prudential guidelines on good corporate practices in the co-operative movement; Induction guidelines on good corporate practices for newly elected co-operative leaders, staff and members; guidelines on Islamic financial products; Alternative Dispute Resolution (ADR) guidelines. The Ministry will also develop standards on Norms and values for commodity institutions; and Import of animal genetics. Further, the Ministry will develop/review the following manuals: standardize co-operatives education and training manual; co-operative audit manual; and co-operative officers handbook.

3.3.1.4 Implement Regional, Bilateral and Multilateral Agreements/Protocols

The Ministry in collaboration with other Ministries, Departments and Agencies (MDAs) will implement Malabo commitments within CAADP framework; Agenda 2063; SDGs and other regional, bilateral and multilateral commitments and agreements.

Key Result Area 2: Agricultural Sector Productivity Improvement

Kenya has a vast and varied agricultural land use capability due to diverse agro-ecological zones. However, competing land uses and the fragmentation of agricultural land in the high potential areas due to population pressure continues to reduce the overall land productivity and outputs. Land productivity is further constrained by poor farming methods due to low adoption of new agricultural technologies and innovations attributed to weak research-extension-farmer linkages and inadequate demand-driven research. Other factors constraining production include low use of quality agricultural inputs; poor breeds and breeding practices; prevalence of crop and animal diseases; negative impacts of climate change; environmental degradation; low levels of private investment in the sector; and inadequate investment in water for crop, livestock, fodder production and aquaculture.

There is limited use of farm machinery and equipment for carrying out farm operations which makes production inefficient. There is also the challenge of post-harvest management in the sector that is estimated at 20 per cent. For example, in the cereal production, 20-25% is lost during post-harvest, with the bulk of losses occurring during drying. In addition, in the last 10

years, incidences of aflatoxin contamination in human food and livestock feed have been reported particularly in Arid and Semi-Arid Lands (ASALs) mainly due to existence of *Aspergillus flavus* fungus in soils and poor drying and storage practices. Further, crop and livestock production systems are mainly rain-fed and climate change poses a great risk to sustainable productivity due to a combination of factors such as inadequate rainfall, high temperatures, and emerging pests and diseases. In the ASALs livestock productivity is limited by recurrent droughts and inadequate resilience of the ASAL communities.

3.3.2 Strategic Objective: To Increase Productivity and Outputs in the Agriculture Sector

The agriculture sector can realize increased production and productivity for food and nutrition security, employment creation and foreign exchange. This will be realized by sustaining the crops, livestock and fisheries resource base; increasing capacity for production, improving delivery of extension and advisory services through capacity building, increased farm mechanization and supporting technology development and transfer. The Ministry will endeavor to ensure that promoting agricultural productivity and production will be done in a manner that will not compromise the environment. During the plan period, the following strategies will be implemented:

3.3.2.1 Fertilizer Cost Reduction Programme

This is a Kenya Vision 2030 flagship programme and will address issues of access and affordability of fertilizer for sustainable crop productivity. The Ministry will subsidize 300,000MT of assorted fertilizer annually; coordinate soil analysis in beneficiary regions; and evaluate the impact of the subsidy programme on crop productivity.

The Ministry in collaboration with private investors will explore local manufacturing of Ammonia, Urea, DAP and NPK fertilizers and appropriate blends. Further, the Ministry will also collaborate with county governments to ensure effective and efficient distribution of fertilizer to farmers.

3.3.2.2 Agricultural Inputs Access Programme

The Programme aims to improve access to agricultural inputs (fertilizers, livestock and fish feeds, veterinary inputs, small farm machinery and equipment, high-quality seeds, fingerlings and breeding stock) in targeted crops, livestock and fisheries value chains. Eligible smallholder farmers, pastoralists and fisher folk will access inputs in addition to other services through an e-payment system managed by a financial institution.

3.3.2.3 National Farmer Registration

Kenya has not conducted a census of agriculture since independence and the current production data has inconsistencies that have not been resolved over time. To address this challenge, an agricultural module will be integrated into the “Huduma Number” registration as well as in the

Population and Housing Census conducted by the Kenya National Bureau of Statistics in 2019. Once the census result are released a detailed analysis of registered farmers will be done to allow informed decision making and proper planning in the agriculture sector.

3.3.2.4 Miraa Farmers Livelihood Improvement

Miraa crop is mainly grown in Meru, Tharaka Nithi and Embu Counties. The programme focuses on improving production and marketing of the Miraa crop while supporting farmers to venture into additional enterprises to improve their livelihoods. The crop will be promoted through international trade fairs in order to reclaim the lost market and explore new ones. Trade in the domestic market will be supported through removal of restrictions and awareness creation among the public on the status of the crop. A data base of Miraa farmers will be established through farmer registration. Other key activities that will be supported include establishment of marketing sheds; establishment of Miraa Research Institute and; capacity building of farmers and extension staff. A Directorate on Miraa will be established under Agriculture and Food Authority (AFA) and Regulations/standards/code of practice will be developed and enforced jointly by AFA and Kenya Bureau of Standards (KeBS) to support the growth and transformation of the sub-sector.

3.3.2.5: Food and Crops diversification through traditional high value crops

This will improve farmers' access to quality seeds and planting materials of drought tolerant traditional high value crops in the arid and semi-arid areas. This will be done through up-scaling seed bulking and distribution in identified institutions and farmer groups. The Ministry plans to provide 2,304 MT of high value crop seeds.

3.3.2.6 Revitalization of Industrial Crops

The Ministry will take measures to revitalize industrial crops. The crops targeted will be coffee, tea, sugarcane, cotton, nuts and oil crops, and pyrethrum. To revitalize the coffee industry, the Ministry will implement the recommendations of the Presidential Coffee Reforms Task Force Report of 2016 to address low productivity, inefficient processing and narrow markets, high cost of production, declining area under coffee, low value addition, inefficient farmers' organizations and weak regulatory frameworks.

On the tea industry, a framework for development of the industry will be developed with the aim of promoting and providing guidance to tea industry stakeholders on investment decisions for the manufacture of high value specialty teas. Measures will be taken to increase production and productivity of tea; promote product diversification by increasing the tea sector product range; promote secondary tea product processing, branding, profiling and packaging; promote establishment of cottage factories for manufacture of special tea products; and explore and develop non-traditional tea markets.

In regard to the sugar industry, the Ministry will promote cane production and supply to

factories; reduction of production costs; availability of high quality seed cane, improvement of crop husbandry practices; irrigation of cane production; strengthening of growers organizations; modernization of equipment; and improved access to financial services among cane farmers.

The Cotton industry will be revitalized through improved coordination along the cotton value chain; technical capacity building of producers; improved availability of quality inputs; and modernization of processing facilities including ginneries and development of cottage industries for value addition.

The Ministry will support improved production and efficiencies in the oil and nuts value chains. The aim will be to transform the oil and nut crops subsector into one of the major contributors to the 7 percent annual agricultural growth rate as envisaged in Vision 2030.

The pyrethrum industry will be revitalized in order to improve livelihoods of close to two million farmers who relied on the crop before near collapse of the industry. The interventions are aimed at improvement of efficiencies and reduction of production cost; empowering pyrethrum farmers; determining research priorities; and facilitating the development and propagation of high yielding planting materials.

3.3.2.7 On-farm Land and Environmental Management

The Ministry will support production and distribution of one million seedlings of fruits, nuts and oil crops annually. It will also increase crop production on small scale irrigation through construction of 5,000 water pans annually.

3.3.2.8 Crop Disease and Pest Control

Capacity will be built to enable the establishment of plant health management clinics that will offer diagnostic and control services on prevalent and emerging crop pests and diseases. The Ministry will provide plant protection services through monitoring, surveillance and control of trans-boundary pests (*Quelea quelea aethiopica*, African Armyworm, Fall Armyworm and Locusts). In collaboration with international organizations and County Governments, the Ministry will carry out *Quelea* colony surveys and control operations; install and service armyworm traps; conduct locust surveys and control 100% of locust outbreaks and train county staff. Surveillance and monitoring of emerging pests and diseases will also be undertaken by carrying out national surveys on Maize Lethal Necrosis Disease (MLND), Potato Cyst Nematode (PCN) and Tomato Leaf Miner (*Tuta absoluta*). Further, training of stakeholders will be conducted and technical materials on emerging pests developed and disseminated.

3.3.2.9 Support to Agricultural Engineering Technology Development

This will entail increased support to key areas that include farm mechanization, agro-processing, post-harvest management and sustainable land management. This will be achieved through improved technology development, upscaling appropriate technologies and innovations, and

modernization/transformation of existing Agricultural Technology Development Centers (ATDCs) into regional centers of excellence. The ATDCs will be strengthened by building their capacities, provision of appropriate machinery and infrastructure development. The Ministry will also address the issues of post-harvest losses through capacity building at all levels of food value chains.

3.3.2.10 Improved Agricultural Mechanization

Agricultural mechanization will be strengthened through supporting counties to provide affordable agricultural mechanization services to small scale farmers. This will be achieved through sourcing and distribution of 600 tractors (60/100hp) and accessory equipment for maize farmers, 250 tractors (55/60hp) and accessory equipment for potato farmers, 300 tractors and accessory equipment for rice farmers and 3,000 walking tractors to various farmers across counties at subsidized prices in partnership with Agricultural Finance Corporation (AFC). This will be done through collaboration and partnerships with the countries of origin and the end users of the technologies in the counties.

3.3.2.11 Promote rangeland management and conservation

Kenyan rangelands resource are fragile and threatened by land fragmentation, encroachment by agro-pastoral farming, invasive species, over-stocking and over-grazing, land degradation, negative impacts of climate variability and change characterized by persistent and recurrent droughts, and loss of traditional adaptive resource use strategies. To address these concerns the government will: undertake assessment and valuation of rangeland resources; build capacities on range management and conservation; undertake range conservation and reseeding; and strengthen networks and partnerships among the pastoral and agro-pastoral communities.

3.3.2.12 Promote Climate Smart Agriculture (CSA)

The Ministry will promote CSA practices which sustainably increase productivity particularly among small scale farmers, enhance resilience and improve food security while mitigating impacts of climate change. Adaptation will be achieved by climate-proofing of on-going programs and projects in the sector and undertaking specific targeted activities. The Ministry will carry out a baseline survey to establish the national status of adaptation and mitigation followed by capacity building of staff on appropriate climate proofing measures. A monitoring and evaluation framework will also be established to assess progress towards achieving climate smart objectives. The mitigation measures will include: reducing emissions of carbon dioxide emanating from agricultural activities, promoting agro-forestry and afforestation, reduction of deforestation, reducing use of methane and nitrous oxide through efficient application of nitrogen-based fertilizers and sequestering carbon or carbon sinks.

3.3.2.13 Improve livestock breeds and breeding

The Ministry seeks to increase the number of farmers with skills to undertake breeding, increase availability of quality breeds and improve regulation of breeding and service provision. This will be done through: development of breeding plans for specific breeds; capacity building on breed selection across all species; acquisition of new germplasm (semen, embryo, eggs, live animals); support of breeding, multiplication and conservation of stock; support the improvement of the breeding and multiplication infrastructure for poultry, pigs, rabbits, bees, sheep and goats; development of guidelines to match breeds to environment; development and monitoring of quality assurance system for all genetics; and awareness creation on modern breeding technologies.

3.3.2.14 Enhance availability of quality feeds and supplements

Enhancing availability of quality feeds and supplements will lead to increased productivity. This will be realized through: building capacity on production of forage seeds and feed ration formulation; undertaking feed quality control inspections; development and review of standards for animal feeds; promoting production, conservation and commercialization of pasture and fodder; establishing strategic feed reserves; creating linkages between public and private to increase mechanization and proper storage of feeds; and lobbying for tax exemptions for feed ingredients.

3.3.2.15 Enhance animal diseases control

During the plan period, the Ministry will implement measures aimed at reduced prevalence of disease and increased awareness of animal welfare. This will be through undertaking surveillance and mapping of diseases; carrying out disease risk management and disaster preparedness; mainstreaming animal welfare in animal production; developing database for management of animal health and production information; and implementing disease control strategies and contingency plans.

In addition the Ministry will complete establishment Bachuma Livestock Export Zone; boost Border Inspection Posts (BIP) capacity to prevent entry into the country of trans-boundary diseases; rehabilitate and equip 11 laboratories, refurbish and equip 4 efficacy trial centers; carry out epidemiological surveillance of animal diseases and undertake inspection of animals and approval of premises such as hatcheries, breeding centers, quarantine stations; certification of animal products; approval of processing facilities and enforcement of other disease control measures.

3.3.2.17 Promote Adoption of Improved Agricultural Technologies

To increase productivity in the sector, the Ministry will: identify research needs and collaborate with partners and research institutions; develop and disseminate materials on improved agricultural production technologies; support technology transfer; develop extension

management guidelines; and develop legislation to regulate content and delivery of extension messages

3.3.2.18 Aquaculture Technology Development and Innovations Transfer

The programme aim is to upgrade the aquaculture facilities at Sagana and Kiganjo by developing the necessary aquaculture technologies and innovations and transfer the same through trainings and demonstrations (Aquaponics) in schools and other learning institutions in the counties. This is geared towards efficient and sustainable use of land and water resource in food production (climate smart aquaculture).

3.3.2.19 Aquaculture Business Development Programme (ABDP)

This Programme aims to alleviate rural poverty and malnutrition by bringing large numbers of poor people into Kenya's growing aquaculture business as small-scale producers or as village-level providers of related services. The programme will cover fifteen counties, namely: Kisii, Migori, Homa Bay, Kakamega, Nyeri, Embu, Kirinyaga, Tharaka Nithi, Kiambu, Machakos, Kajiado, Kisumu, Busia, Siaya and Meru. The programme will support the small-scale fish production with priority for women and youth, by promoting viable enterprises and value addition. The approach will blend public and private sector investments in the inland fish value chains with whole-community initiatives to promote proper nutrition and food security.

3.3.2.20 Support Sea weeds farming

During the Plan period, the Ministry will support small holder sea weed farmers in Coastal Counties to produce sea weed and develop value added products.

3.3.2.21 Enhance Food safety

The Ministry will support measures to ensure food safety of all agricultural products along the value chain. This include safe use of drugs, chemicals and sera in control of pests, diseases and minimize residues and contaminants in agricultural products; improve traceability of crops, fisheries, livestock products; upscale food inspection services; enforcement of standards (food handling); certification of products and improve Laboratory services

The Ministry will ensure accreditation of the food safety quality laboratories; implementation of Residue Monitoring Plans; and enforcement of sanitary and phyto-sanitary standards. It will further ensure that safe and high quality food is available to all Kenyans at all times by creating public awareness on relevant issues and by setting, promoting and enforcing appropriate guidelines, code of practice, standards and regulatory framework. It will also protect vulnerable population by developing capacities for early warning and emergency management.

3.3.2.22 Support Hides, Skins and Leather Development

To meet the country's requirement for leather, the Ministry will promote the production and quality improvement of hides and skins. This will be achieved through promotion of animal husbandry (feeding, animal welfare, branding) breeding; capacity building of stakeholders in hides & skins; establishment of a Leather Institute in Ngong, promotion of cottage/rural tanneries; complete and equip the five export slaughter houses and six hides, skins and leather centers of leadership tanneries initiated under Economic Stimulus Programme. The Ministry will also promote bull schemes (sahiwal & boran) to improve on animal size.

3.3.2.23 Enhance Agricultural Research

The Kenya Vision 2030 recognizes the role of science, technology and innovation in a modern economy. It acknowledges that new knowledge plays a central role in wealth creation, social welfare and international competitiveness. Measures to enhance technology development in agricultural value chains for increased productivity will be developed. Towards this, the Ministry will: facilitate access to soil information and data; Coordinate development of agricultural research agenda; and digitize existing data, research and other performance information to support evidence-based decision on performance management.

In addition, the ministry shall support continuous research in irrigation to develop and disseminate technologies and innovations, to achieve high productivity, efficient utilization of irrigation water and achieve high quality standards. Farmers shall be encouraged to adopt the developed agricultural technologies and innovations to increase productivity and efficiency in their operations. The ministry shall also promote cooperation, collaboration and establish linkages in agricultural research, science and technology, and information sharing with all stakeholders including regional and international partners.

3.3.2.24 Promote Capacity Building

The Ministry will invest in knowledge and skills transfers to both National and County government staff and stakeholders on emerging technologies and issues such as fall army worm management, green house technology, climate smart interventions, and improved livestock fisheries and aquaculture production technologies, irrigation, co-operatives development among others. Agricultural advisory and extension services will be strengthened in the counties through continuous capacity building activities. Further, extension guidelines and standards will be developed/reviewed, disseminated and enforced to ensure sustained increase in crop, livestock, irrigation, fisheries and aquaculture production and productivity.

Key Result Area 3: Food and Nutrition Security

Kenya faces frequent food shortages as a result of persistent droughts in most parts of the country which largely affects food production as the country depends mainly on rain-fed agriculture. In addition, high food prices and low purchasing power for large proportion of the

population due to high level of poverty results in food and nutrition insecurity. The national food poverty index stood at 32 percent in 2015/16 representing 14.5 million poor individuals, 35.8 per cent of these individuals were in rural areas, 24.4% in core urban and 28.9% in peri-urban areas. The Ministry is obligated to ensure 100 percent food and nutrition security by implementing strategies that will improve availability, access and consumption of diverse nutritious foods, as envisaged in the Big Four Agenda.

3.3.3 Strategic Objective 3: Enhance Food and Nutrition Security

The Ministry will enhance food and nutrition security by implementing the following strategies

3.3.3.1: Strengthen Strategic Food Reserve (SFR)

The purpose of the SFR is to provide a strategic food reserve in physical stock and cash equivalent to stabilize food supply and prices in the country. The Ministry will strengthen the SFR to enhance the stocking of critical foodstuffs such as maize, beans, rice, fish, powdered milk and corned beef under the management of the Strategic Food Reserve Oversight Board. The aim is to maintain at least 4 million (90 Kg) bags of maize in physical stock and its cash equivalent; 40,000 (90 Kg) bags of beans; 13,000 MT of rice; 10,000 MT of powdered milk; 5,000 MT of corned beef. Further, the government will establish Food Acquisition Programme in order to stabilize market prices for products from small-scale farmers who will be encouraged to form cooperatives in maize, wheat and potatoes, milk, meat and fish. Under the programme, the Government will buy 50% of its food requirements from small holder farmers.

3.3.3.2: Prioritized Crops production

Maize: The Ministry will promote the expansion of acreage under maize in private and public institutions land through public private partnership. The target is to increase maize production from 40 to 67 million bags through enhanced procurement and distribution of subsidized high yielding maize seed varieties, subsidized fertilizer, improved disease and pest control services, subsidized mechanization operations; and crop insurance.

Potato Production: The main focus will be on increasing accessibility of certified seeds, enhancing research on potato and improving postharvest handling. In collaboration with county governments, capacity building of extension officers on new and superior varieties and certified seeds will be supported. This is targeted to increase annual potato production from 1.2 to 6 million metric tons.

Rice Production: The Ministry will support production of an additional 70,000 MT of rice annually through procurement and distribution of 140 MT of seed to farmers augmented with supporting farmers with various rice mechanization machinery and equipment. This will Increase rice production from 112,800 to 406,486 metric tons in the plan period. Extension officers in irrigation schemes will also be trained on technologies developed through rice research for up

scaling production, productivity and marketing. The Ministry will also facilitate procurement of milling machines for farmers' groups; access to market infrastructure and information; and coordination of stakeholders in the rice sub sector. In addition, rice from farmers will be purchased for the strategic food reserve.

3.3.3.3 Diversified Food varieties

The Ministry will implement the National Food and Nutrition Security Policy through enhancement of food production and capacity building on value addition and utilization of a variety of food crops, adoption of nutrition sensitive agriculture programming, action plans and tracking nutrition indicators. In addition the National Food and Nutrition Security Council will be established.

3.3.3.4: Promote National Agricultural Insurance

The aim of providing crop and livestock insurance is to manage risks and losses amongst smallholder farmers/pastoralist, increase productivity through improved access to credit and feed; and higher yielding technology such as certified seed and fertilizers. The Crop insurance currently covers 342,000 farmers in 20 counties. The Ministry will expand the crop insurance cover to 2.5 Million farmers in 31 counties during the Plan period. The livestock insurance program will be expanded to cover 500,000 households (790,000 TLUs) in 14 ASAL counties. This will enhance the capacities of pastoral communities and stakeholders on the use of insurance products for reduction of weather related risks and rebuilding of livelihood support systems in drought prone areas.

3.3.3.5: Promote fodder production, storage and conservation technologies

The Ministry will enhance availability of fodder and pasture through: promotion of fodder production, storage and conservation technologies; promotion of production of drought resistant fodder crops; rehabilitation of rangelands through reseeding programs and bush control; and promotion of research on alternative livestock feeds stuffs for range lands.

3.3.3.6: Improve resilience for ASAL communities

Climate change has resulted in increased and intensified droughts and floods in some parts of the country. Livestock production especially in pastoral areas has been hard hit with massive deaths of livestock leading to loss of livelihoods in the ASALs. The capacity of the pastoral communities needs to be enhanced in order to build their resilience.

The ministry will promote investment in water infrastructure for livestock and agricultural production through construction and rehabilitation of water facilities and building capacities on water harvesting, storage, conservation and distribution technologies. The Ministry will promote climate change adaptation technologies and practices by supporting uptake of livestock insurance, emergency livestock off-take programmes, promotion of locally adapted livestock breeds and alternative livelihoods and strengthening of early warning information systems.

3.3.3.7: Rehabilitate fish landing sites in Lake Victoria

The Ministry will rehabilitate Mulukoba, Wichlun, Lwanda Kotieno, Ogal, Nyandiwa and Sori Karungu fish landing sites in Lake Victoria to international standards to improve fish handling.

3.3.3.8: Strengthen Aquaculture and Fisheries Associations and BMUs

The Ministry will make deliberate effort to steer the growth of the fishery industry by strengthening and capacity building of the Aquaculture Association of Kenya (AAK), the Wavuvi Association of Kenya (WAK) and the National Beach Management Units (BMUs) Networks. The Ministry will also organize BMUs into viable commercially entities.

3.3.3.9: Renovate and expand the Liwatoni Fisheries Complex

The Liwatoni Fisheries Complex in Mombasa will be renovated and expanded to facilitate landing of at least 30% of fish caught by foreign vessels in Kenya's EEZ. This will entail renovation and expansion of a fisheries jetty, cold storage facilities and an auction centre.

3.3.3.10: Support Meat Production:

The Ministry will increase meat production from 700,000 to 990,000 metric tons by establishing 50 feedlots, establishing 10,000 acres of fodder and pasture production, increasing vaccination coverage, complete Livestock Identification and Traceability System (LITS), production and distribution of 42,000 piglets, 31,000 rabbits and 2,166,000 day old chicks to Small and Medium Enterprises (SMEs), support of livestock insurance of 790,000 Tropical Livestock Units and enhancing safety of foods of animal origin.

3.3.3.11: Support Milk Production and Processing:

Milk is predominantly produced from cattle, camel and goats which support approximately 1.8 million rural households and creates 700,000 jobs along the dairy value chain; Annual milk production is estimated at 5.2 billion litres (MOALF 2017). Cattle produce about 88% of this milk while camels and goats contribute the rest. It is projected that milk production will continually grow by between 4.5 and 5 % annually in the next ten years and by the year 2030, it is envisaged that the annual milk production in Kenya will increase to about 12 billion litres.

In the country, out of the total milk produced, about 55% is marketed through traders, cooperatives, hotels and milk bars. An estimated 56% of marketed milk is sold in the raw form while the rest is processed. The Ministry will increase processed milk production from 630 million to 1 billion litres by building capacity of dairy value chain stakeholders and Livestock Breeders Association; improvement of feed quality and availability, and promotion of 'Drink more processed milk' campaign.

3.3.3.12: Promote Honey Production

The Ministry will promote increase annual honey production from 25,000 to 38,000 metric tons by 2022. This will be achieved by production and distribution of bee colonies, supporting beekeeping community groups and County Associations, establishing sentinel bee colonies, and development of a national risk map for bee diseases and pests.

3.3.3.13: Support Manufacturing

The Ministry will enhance production of raw material for manufacturing by facilitating farmers/producers to increase nuts & oil production from 140,958 to 697,221 metric tons; fruit crop production from 1,207,868 to 1,645,276 metric tons; cotton production from 29,000 bales to 200,000 bales; coffee production from 40,000 to 100,000 metric tons; hides & skins production from 59.6 to 72 million square feet and pyrethrum production from 300 to 3,000 metric tons; and promote annual milk processing from 630 million to 1 billion litres.

3.3.3.14: Reduction of Post-harvest Losses

During the plan period, the Ministry will implement different interventions to reduce average post-harvest losses of specific commodities from 20 percent in 2018 to 10 percent by 2022. Post-harvest losses in fisheries will be reduced by 2.5 percent through establishment of fish value addition and market outlets, auction centres and; rolling out of an Integrated Electronic Fish Marketing Information System; rehabilitation of fish landing sites.

In the dairy industry post-harvest losses in milk production will be reduced from 6 percent to 2 percent through installation of milk coolers in counties and support dairy cooperatives with milk pasteurizers and dispensing machines. Maize and rice post-harvest losses will be reduced through procurement and distribution of subsidized Aflasafe, hermetic bags and maize driers to SMEs; acquisition of machinery, construction of storage facilities. The Ministry will promote private public partnerships on post-harvest management of agricultural products.

Key Result Area 4: Investment in Blue Economy

The Blue Economy refers to the sustainable productive use of both aquatic and marine spaces including oceans, seas, coasts, lakes, rivers, and underground water. It encompasses a range of productive sectors, including fisheries, aquaculture, tourism, transport, shipbuilding, energy, bio prospecting and underwater mining and related activities. The Blue Economy has great potential to significantly contribute to the social, cultural and economic development of the country. However, the blue economy is still under-developed due to various factors that include: inadequate policy integration and uncoordinated development leading to slow growth of the sector, weak enforcement of laws, legislative gaps, duplications, overlaps and high cost of doing business; fragmented knowledge base; low investment in the sector due to perceived risk of

investing in both fisheries and aquaculture; and inadequate awareness on the opportunities in the blue economy.

3.3.4 Strategic Objective: To enhance investment in Blue Economy

Kenya is endowed with rich coastal and maritime resources which has a huge potential for development of the Blue Economy. The Blue Economy will significantly contribute to the economic growth of the country as has been the case in other countries. This will be realized by promoting appropriate investments to stimulate growth in the Blue Economy.

During the Plan period, the Ministry will implement the following interventions to enhance investment in the Blue Economy.

3.3.4.1 Build capacity of fishers to venture into the deep sea fishing

The off-shore marine fisheries are exploited by foreign fishing companies who do not land fish in Kenya thus denying the country raw material for fish industries and food security from non-target fish by-catch. The inshore waters which are fishing grounds for artisanal fishermen are over-exploited and degraded due to demand created by the increasing population pressure and reliance on the fisheries for both food and incomes. This will be addressed by enhancing artisanal fisheries through training and provision of facilities and equipment to the coastal fisher folk.

3.3.4.2 Development of a National Marine Spatial Plan and Blue Economy Master Plan

A National Marine Spatial Plan will be developed to guide sound planning and efficient use of marine resources and spaces. The Blue Economy on the other hand is a multi-faceted sector and a new frontier for Kenya's development. The development of a blue economy Master Plan is necessary for the full exploitation of the potential in the blue economy

Key Result Area 5: Market Access and Trade

Marketing of agricultural products is affected by inadequate information and infrastructures including storage facilities for perishable produces. Insufficient marketing infrastructure like cooling facilities and road network leads to increased agricultural post harvest losses. Access to external market is limited by low quality of produce, inadequate quantity to meet export volumes and non trade barriers. In addition, the dependence on a few external market outlets makes agriculture exports very vulnerable to changes in the demand and unexpected non-trade barriers by foreign markets.

Regarding poor infrastructure, underdeveloped rural roads and other key physical infrastructure have led to high transport costs for agricultural products to the markets as well as farm inputs. In addition, electricity cost in Kenya is still high and in some areas are not connected thus

constraining investment in cold storage facilities, irrigation, and agro-processing. Low investments in micro-processing have resulted to marketing of raw or semi processed agricultural products.

3.3.5 Strategic Objective: To improve market access and trade.

Agricultural production is largely at subsistence level with little value addition and commercialization. The country exports semi processed, low-value produce, which accounts for 91 percent of total agricultural related exports. The limited ability to add value, coupled with unorganized collective marketing of agricultural products and high production costs makes Kenyan agricultural exports less competitive in global markets. This is largely occasioned by high cost of investment, stringent and dynamic sanitary requirements by trading partners, inadequate skilled manpower, limited access to financial and business development services, poor infrastructures, agricultural marketing information, inadequate transformation/manufacturing technologies and inadequate vibrant marketing co-operatives.

The following strategies have been identified to address commercialization and market access;

3.3.5.1 Promote trade in agricultural products

The Ministry will promote agribusiness, commercialization and trade along the value chains by undertaking regional and international agricultural trade promotions; participating in trade facilitation meetings; and capacity building of value chain actors. The ministry will develop safety and quality assurance procedures for agricultural products and by products, promote development of agricultural products' brands as well as undertake capacity building for quality assurance officers. In the strategic plan period, the Ministry in partnership with private sector will establish livestock feedlots in strategic sites; and promote group approach to production and marketing. It will also establish linkages between agro-industries and potential manufacturers to Business Development Services (BDS), financial and insurance services and market service providers.

To facilitate agricultural commodity exchange, the Ministry will develop structured commodity markets (WRS, Commodity Exchange and e-Soko) and provide guidelines and technical support for physical market infrastructure development. Further, it will develop programs to promote agricultural commodities to strategic and emerging markets and develop a value addition strategy.

3.3.5.2 Strengthen marketing infrastructure

To improve marketing, the Ministry will invest in strengthening the marketing infrastructure in the country. Through the Livestock Value Chain Support Programme, the Ministry will promote milk post-harvest storage and value addition infrastructure development (milk coolers, chillers, freezers, refrigerated trucks, pasteurizers among others); Rehabilitate strategic holding grounds

and decentralize management of holding grounds; support the establishment of County managed strategic sale yards; develop quarantine and livestock health certification infrastructure. In addition, the Ministry will equip and operationalize export slaughterhouses (Garissa, Wajir, Isiolo & West Pokot, Marsabit counties) and hides and skins Centers of Leadership and promote private public partnerships for post-harvest management.

The Ministry will also develop 3 fish markets and auction centers in Mombasa, Malindi and Kisumu to improve market access for fish and fish products. This will also enhance sanitary and phyto-sanitary measures for fish and fish products besides reduction of fish post harvest losses.

3.3.5.3 Sanitary and Phyto-sanitary standards Improvement

This will entail improvement of policy, legal and institutional environment to enhance compliance to standards and procedures. It will involve regulation of all matters relating to plant protection; seeds and plant varieties; pest control products; administration and enforcement of sanitary, phyto-sanitary and food safety measures.

The Ministry will ensure implementation and enforcement of national bio-safety regulations on the introduction and use of genetically modified species of plants, insects and micro-organisms, plant products and other related species. It will also undertake registration of pest control products and regulation of import and export of pest control products, plants and plant materials.

The Ministry will ensure safe, quality and efficacious pest control products are availed to users, enhance compliance of pest control products to set standards. This will be done through; enhancing analytical capacity in pesticide formulation, establishing a residue laboratory at PCPB focusing on pesticide residues for agricultural commodities and enhancing provision of information on safety to pesticide through a review of labeling regulations in line with Global Harmonized System (GHS) of Classification and labeling of chemicals.

The Ministry will also conduct post registration surveillance by sampling and analyzing for quality for at least 350 pesticide samples annually, undertake technical evaluation of new pest control products and monitor local Biological efficacy trials for new pesticides. The Ministry will also adopt the use of data extrapolation and crop grouping to ensure that there are some registered pest control products to manage pests. The Ministry will enhance and increase inspection activities through the pesticide supply chain by inspecting at least 7,150 pesticide premises annually.

3.3.5.4 Promotion of Agricultural Market Information

An automated National Agricultural Market Information System (NAMIS) that is able to process, analyze, archive, publish and disseminate real time agricultural market information will be developed by the Ministry. This will expand and improve the capacity of the existing information system in terms of number of commodities, markets covered and ability to process

large volumes of data. NAMIS will have links to the Regional e-Soko System to enable access to latest agriculture market information and services across the Northern Corridor Integration Projects (NCIP).

The Ministry will also establish an interactive e-information exchange and repository platform among the value chain actors. It will build and apply an interactive, accessible and commercialized (web business) system to share information among the value chain players using social media and mobile telephony. The platform will put “**market**” at the centre of all production, processing, product development and packaging.

The Ministry will also strengthen the livestock marketing information systems by setting up a comprehensive National Livestock Market Information System (NLMIS) and build capacity for data management. The Ministry will also facilitate the dissemination of information on available export/import market requirements. To improve market access, address traceability, address cattle rustling and other security concerns, the Ministry in partnership with counties and private sector, will establish and maintain a Livestock Identification and Traceability Systems (LITS).

3.3.5.5 Development of Small and Medium Enterprises (SMEs)

The Ministry will facilitate development of SMEs for collective action and aggregation of produce to strengthen their negotiation power and ensure better prices thus enhancing their income. To improve market access to both inputs and agricultural produce, the Ministry will drive rapid transformation by working with sector players (including equipment suppliers, farmer associations, agro-dealers, warehouses and processors) across the country.

3.3.5.6: Promote Fish Consumption

The Ministry will promote fish consumption by conducting ‘Eat More Fish Campaigns’, Fish Food fares and enhancing uptake of improved fish display boxes by ‘Mama Karanga’ with a view to increasing per capita fish consumption from 4.6 to 10 kgs/person/year.

Key Result Area 6: Institutional Capacity

The agricultural sector has many stakeholders and institutions that assist in service delivery. It is therefore, important that these stakeholders are well coordinated to avoid duplication of efforts and wastage of resources. Some of the agricultural and Co-operative sectors institutions are faced with serious issues ranging from inadequate human resource capacity, infrastructural challenges, negative organizational culture and weak accountability. Further, some of the institutions have conflicting and overlapping mandates which interferes with service delivery.

3.3.6 Strategic Objective: To Strengthen Institutional Capacity

The Ministry will restructure institutions to make them more effective and efficient in service delivery. New institutions will also be established to address the changing needs in the sector. Further, human capacity in terms of numbers, skills and knowledge will be enhanced besides capital capacity. In addition, the Ministry will enhance coordination of the stakeholders to ensure formation of strategic linkages and partnerships for improved service delivery.

The following strategies have been identified to address institutional capacity:

3.3.6.1 Institutional reforms

The Ministry will undertake reforms and restructure the National Cereals and Produce Board (NCPB); Pest Control and Products Board (PCPB); Agricultural Development Corporation (ADC); Agriculture and Food Authority (AFA); Pyrethrum Processing Company of Kenya (PPCK); Agricultural Information Resource Centre (AIRC); Agriculture Technology Development Centers (ATDC), Kenya Meat Commission (KMC); Kenya Planters Co-operatives Union (KPCU), Kenya Farmers Association (KFA); New Kenya Co-operative Creameries (KCC); Co-operatives Cotton Ginneries and Coffee Co-operatives. Further, the Ministry will transform ECCOs into a body Corporate to improve governance and accountability in co-operatives.

To enhance the capacity of training institutions, the Ministry will expand facilities at the Bukura Agricultural College, the Kenya School of Agriculture (KSA), Dairy Training Institute (DTI), Livestock Training Institute (LTI) (Wajir), Leather Institute and National Beekeeping Institute (NBI) will be transformed to be centers of excellence.

The Ministry will develop Credit Schemes and Revolving Funds (e.g. Coffee Cherry Revolving Fund and Co-operative Development Fund). The Co-operative Development Fund will be established to provide affordable finance and facilitate research and innovations in co-operatives. The Fund will be financed through contributions from co-operatives while the government will provided initial seed capital.

3.3.6.2 Information and communication management

Agriculture Information and Resource Center (AIRC) will be supported to design appropriate information products embracing the totality of value chains from the production to the market. This will involve production and distribution of print and electronic education and extension materials such as leaflets, brochures, pamphlets, booklets, documentaries, and radio programmes.

Further, the Ministry will develop and implement Co-operatives Management Information System to enhance capacity to monitor the performance of co-operatives, enforce good corporate governance, evaluate development programme and improve information flows from co-operative societies through county offices to Headquarters and vice versa.

3.3.6.3 Strengthen Data Management System

Data management is important in supporting a well-functioning feedback system. The Ministry will carry out various programmes aimed at strengthening data management in the planning unit. These include maintaining a web based data system, updating of Sector Data Compendium and producing Data Handbook, production of annual Economic Review of Agriculture (ERA); and training staff on data management both at the national and county level.

3.3.6.4 Strengthen Monitoring and Evaluation

A well-functioning Monitoring and Evaluation (M&E) system is important for successful implementation of the activities outlined in this Strategic Plan. However, the Ministry capacity to undertake M&E is weak. For successful implementation of planned activities, the draft M&E framework will be finalized and capacity building in terms of staff and equipment.

3.3.6.5 Enhance Ministry's capacity for service delivery

To improve service delivery, the Ministry will; identify capacity gaps; develop and implement plans for capacity development for the National government staff. The Ministry will undertake capacity building and technical support to the counties in areas of national importance.

In addition, the Ministry will modernize agricultural research facilities by investing in infrastructure development particularly buildings, research equipment, and other machinery. This will create a conducive environment for agricultural research and therefore enhanced research output.

3.3.6.6 Develop a coordinating mechanism for Agricultural Research and Innovation Ecosystem (ARIE)

Research in agriculture is undertaken by several, but uncoordinated, independent research organizations and the private sector. The Ministry will establish coordination and regulatory mechanisms that enhance agricultural research and innovation in the country. The collaboration and linkages between institutions carrying out agricultural research will be strengthened by creation of a research system that encourages complementary linkages and synergies, including university-university collaboration; universities–research institution collaboration; Ministry – Research Institutions collaborations, and research-industry/private sector/County collaboration.

Key Result Area 7: Youth, Women and Vulnerable groups Involvement in Agriculture, Blue Economy and Co-operatives

Ageing farmers dominate the agriculture and Co-operative sectors, posing a threat to its future growth and sustainability. Many out of school youth and vulnerable people remain unemployed despite the existing potential for their engagement in agricultural value chains. There is a negative perception towards agricultural production by youth due to the associated drudgery and

preference for white collar jobs in urban areas. In addition, women, youth and vulnerable groups involvement in the sector is hampered by limited access to modern production technologies, innovations and infrastructure; and limited availability of services such as credit, finance and insurance.

3.3.7 Strategic Objective: To increase youth, women and vulnerable groups' participation in agricultural value chains

The Ministry recognizes the potential of agriculture and related value chains to solve the problem of youth unemployment and empowerment of youth and vulnerable people. Increasing participation of youth, women and vulnerable groups in agriculture has the potential to contribute to the government agenda of achieving 100% food and nutritional security by 2022 in addition to creating employment. The Ministry therefore seeks to increase gainful employment and livelihood improvement in the sector through the following strategies.

3.3.7.1 Involve Youth in Modern Agriculture, Co-operative and Blue Economy

This strategy aims to train 25,000 pupils in 100 primary schools and 1,500 Youth out of school in recommended agricultural production technologies and innovations and subsequently engage them in modern agriculture. In addition, the Ministry will offer incentives and build capacity in terms of skills improvement, market guarantees, and distribution of equipment to youth for production (e.g. green houses, water pumps and drip kits), incubation training and equipping the incubation centres, processing and value addition. Further to this, scholarships will be offered to youth to pursue further studies in agribusiness. The Ministry will sensitize youths and women to participate in leadership of existing co-operative societies.

The Ministry will also empower youth and women in urban and peri-urban areas with appropriate urban agriculture technologies and innovations along the value chains. About 300 youth and women groups will be trained annually on urban agricultural technologies and supported with appropriate materials, tools and equipment for production and value addition. A total of 100 such groups will receive urban agriculture technology grants.

The ministry will create awareness about the blue economy among the youth through print and electronic media programmes, school visits and competitions, development of blue economy science clubs and introduction of blue economy components into the learning institutions curriculums among others.

3.3.7.2 Financial and Agribusiness Mentorship for Youth

Youths will be encouraged to engage in sustainable commercially viable agribusiness small and medium scale enterprises (SMEs). This will be achieved by supporting the development of well-structured agribusiness projects and providing financial products/services for investment targeting the youth. The Ministry will train 1,300 agri-entrepreneurs; establish 8 youth agri-

business incubation centres which will in turn train (hands-on) over 5,200 youth on agri-entrepreneurship.

Key Result Area 8: Leadership and Integrity

Transparency, accountability and integrity in the public service are critical in ensuring efficient and effective service delivery. To realize this, the Ministry will implement the Public Service Integrity Programme and adhere to the provisions of the Leadership and Integrity Act, 2012 (REV. 2015).

3.3.8 Strategic Objective: To enhance leadership and Integrity

The ministry will enhance leadership and integrity through: prevention of corruption; and promote national values and principles of governance to improve service delivery.

3.3.8.1 Prevent Corruption

The Ministry is committed to preventing corruption and unethical practices. To realize this, the Ministry will: promote ethical standards and best practices in governance; undertake anti-corruption sensitization programmes among staff at all levels; undertaking Corruption Risk Assessment (CRA), mitigation and implementing the recommendations; developing and implementing internal mechanisms that encourage and protect whistle blowers; building capacity on corruption prevention, ethics and integrity; and develop and implement MOUs with other law enforcement agencies and Departments to enforce good corporate governance and accountability in co-operatives.

3.3.8.2 Promote national values and principles of governance

The Ministry is committed to promotion of national values and principles of governance enshrined in the Constitution in all its operations and undertakings. To realize this, the Ministry will create awareness among staff on the values and principles, namely:

- a) Patriotism, national unity, sharing and devolution of power, the rule of law, democracy and participation of the people;
- b) Human dignity, equity, social justice, inclusiveness, equality, human rights, non-discrimination and protection of the marginalized;
- c) Good governance, integrity, transparency and accountability; and
- d) Sustainable development.

Table 4: Summary of KRA, Strategic Objective and Strategies

Key Result Area	Strategic Objectives	Strategies
KRA1: Policy and Legal Framework	To Create an Enabling Environment for Agricultural and Co-operatives Development	Develop/ review the agricultural and Co-operatives policies and legal framework
		Develop/review strategies and legislation
		Develop guidelines and standards
		Implement regional, bilateral and multilateral agreements / protocols
KRA 2: Agricultural Sector Productivity Improvement	To Increase Productivity and Outputs in the Agriculture Sector	Fertilizer cost reduction programme
		Agricultural inputs access programme
		National farmer registration
		Miraa farmers livelihood improvement
		Food and crops diversification through traditional high value crops
		Revitalization of industrial crops
		On-farm land and environmental management
		Crop disease and pest control
		Support to agricultural engineering technology development
		Improved agricultural mechanization
		Promote rangeland management & conservation
		Promote Climate Smart Agriculture (CSA)
		Enhance availability of quality feeds and supplements
		Improve livestock breeds and breeding
		Enhance availability of quality feeds and supplements
		Enhance animal diseases control
		Promote improved agricultural technologies
		Aquaculture technology development and innovations transfer
		Aquaculture business development programme (ABDP)
		Support sea weed farming
KRA 3: Food and Nutrition Security	Enhance food and nutrition security	Enhance food safety
		Support hides, skins and leather development
		Enhance agricultural research
		Promote capacity building in the sector
		Strategic Food Reserve Trust Fund (SFRTF)
		Prioritized crops production
		Diversified food varieties
		Promote National Agricultural Insurance Policy

Key Result Area	Strategic Objectives	Strategies
		Promote fodder production, storage and conservation technologies
		Improve resilience for ASAL communities
		Rehabilitate fish landing sites in Lake Victoria
		Strengthen aquaculture and fisheries associations and BMUs
		Renovate and expand the Liwatoni Fisheries Complex
		Support meat production
		Support milk production and processing
		Promote honey production
		Support manufacturing
		Reduction of post-harvest losses
KRA 4: Investment in Blue Economy	To enhance investment in Blue Economy	Build capacity of fishers to venture into the deep sea fishing
		Development of a national maritime spatial plan and blue economy master plan
KRA 5: Market Access and Trade	To improve market access and trade	Promote trade agricultural products
		Strengthen marketing infrastructure
		Sanitary and Phyto-sanitary standards Improvement
		Promotion of Agricultural Market Information
		Development of Small and Medium Enterprises (SMEs)
KRA 6: Institutional Capacity	To Strengthen Institutional Capacity	Promote fish consumption
		Institutional reforms
		Information and communication management
		Strengthen data management system
		Strengthen monitoring and evaluation
		Enhance Ministry's capacity for service delivery
KRA 7: Youth, Women and Vulnerable groups Involvement in Agriculture, Blue Economy and Co-operative	To increase youth, women and vulnerable groups participation in agricultural value chains	Develop a coordinating mechanism for Agricultural Research and Innovation Ecosystem (ARIE)
		Involve youth in modern agriculture, Blue economy and Co-operatives
KRA 8: Leadership and Integrity	To enhance leadership and integrity in the Ministry	Financial and agribusiness mentorship for youth
		Prevent Corruption
		Promote national values and principles of governance

CHAPTER FOUR: IMPLEMENTATION AND COORDINATION FRAMEWORK

4.0 Overview

The successful implementation of the plan will require adequate human and financial resources. It will also require the goodwill and support of top leadership of the Ministry and collaboration of other stakeholders. This chapter provides the organizational structure of the Ministry and staff establishment. It also provides the financial requirement during the five years and the strategies that the ministry will pursue to mobilize the resource. The chapter closes with risk analysis and mitigation measures.

4.1 Ministry's Organization Structure

The Ministry has three State Departments namely: State Department for Crop Development and Agricultural Research; State Department for Livestock; State Department for Fisheries, Aquaculture and the Blue Economy and State Department for Cooperatives. It also oversees the running of 37 Semi-Autonomous Government Agencies (SAGAs) and 10 training institutions. The SAGAs are summarized in table 5 and Training Institutions in Table 6. The current organization structure of the Ministry is given in Figure 1.

4.1.1 Ministry's Semi-Autonomous Government Agencies and Training Institutions

Table 5: Semi-Autonomous Government Agencies

	Category	SAGA	Mandate
1.	Research Institutions	Kenya Agricultural and Livestock Research Organization (KALRO)	To promote, streamline, coordinate and regulate research in crops and livestock.
		Kenya Marine and Fisheries Research Institute (KEMFRI)	To undertake research in marine and freshwater fisheries, aquaculture, environmental and ecological studies; marine research including chemical and physical oceanography.
2.	Commercial / Manufacturing Corporations	Kenya Seed Company (KSC)	To carry out focused research, promote and facilitate production of high yielding, better quality certified seed to farmers and stakeholders
		Nyayo Tea Zones Development Corporation	To effectively protect the gazetted forest cover, achieve high quality tea and fuel wood production.
		Miwani Sugar Company	To produce high quality sugar as part of a national strategy for achieving self-sufficiency in food production

	Category	SAGA	Mandate
		Muhoroni Sugar Company	To produce high quality sugar as part of a national strategy for achieving self-sufficiency in food production
		Nzoia Sugar Company	To produce high quality sugar as part of a national strategy for achieving self-sufficiency in food production
		Chemelil Sugar Company	To produce high quality sugar as part of a national strategy for achieving self-sufficiency in food production
		South Nyanza Sugar Company (SONY)	To produce high quality sugar as part of a national strategy for achieving self-sufficiency in food production
		Mumias Sugar Company	To produce high quality sugar as part of a national strategy for achieving self-sufficiency in food production
		Agro Chemical and Food Company	Production of high quality spirit for industrial and domestic use
		Agricultural Development Corporation (ADC)	To ensure the continued existence of the breeds and the availability of quality stock through production and supply of quality seed, technological transfers and training
		Kenya Meat Commission (KMC)	To procure livestock, operate abattoirs, process meat and by products for export or consumption in Kenya
		Kenya Veterinary Vaccines Production Institute (KEVEVAPI)	To produce high quality animal vaccines for distribution locally and abroad
		Pyrethrum Processing Company of Kenya Limited	Processing and Marketing of Pyrethrum and Pyrethrum products.
		National Cereals and Produce Board (NCPB)	Provision of commodity handling and other grain related services; and procuring and marketing high quality farm inputs.
		Kenya Fishing Industries Corporation	Exploit fishing resources in Kenya fishery waters and high seas by promoting the establishment, development and efficiency of businesses engaged in fishing and fishing related activities
		New Kenya Co-operatives Creameries (New KCC)	Procure high quality raw milk, process, package and market milk and milk products
		New Kenya Planters Co-operative union	Milling and marketing of coffee
3.	Regulatory	Agriculture and Food	To promote best practices, in and regulate, the

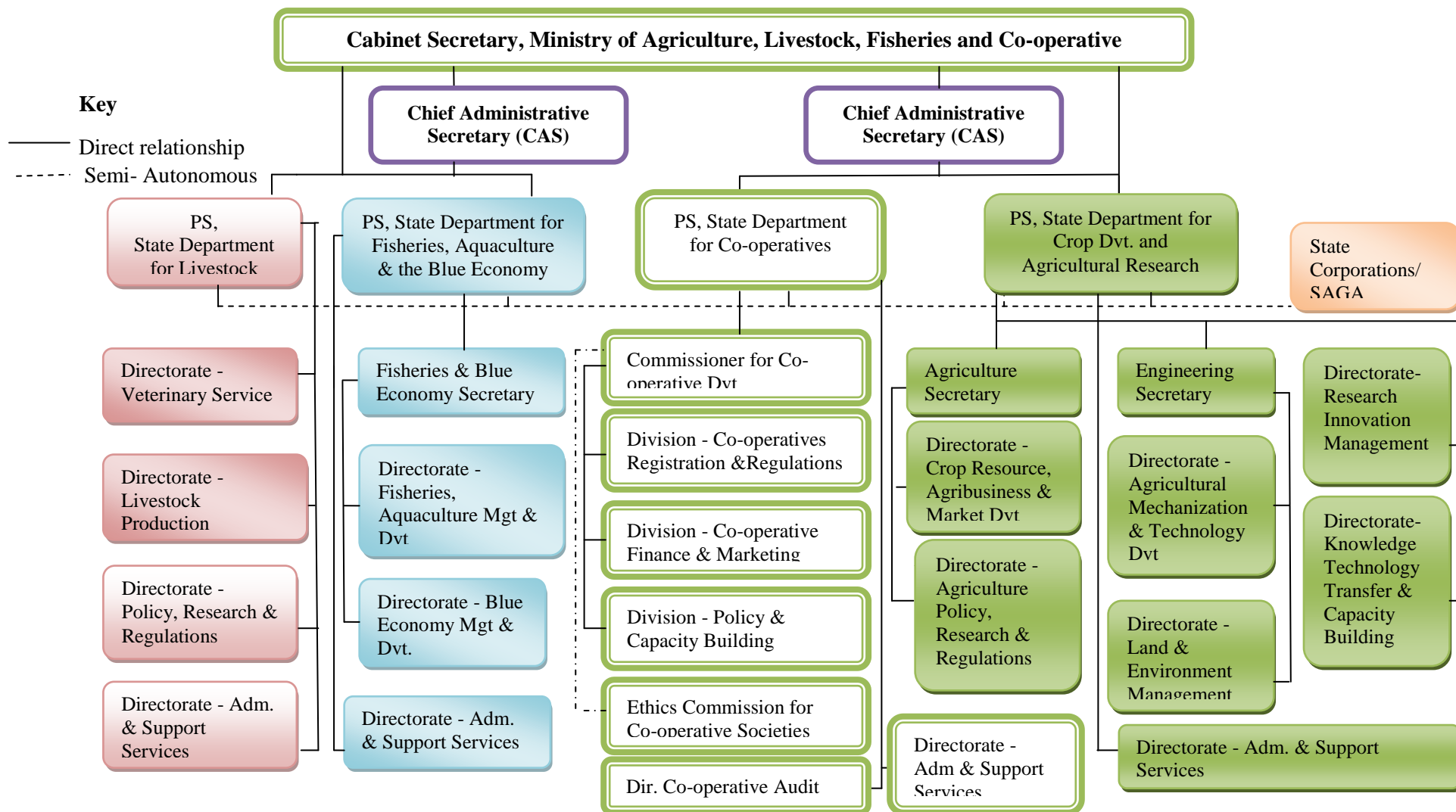
	Category	SAGA	Mandate
		Authority (AFA)	production, processing, marketing, grading, storage, collection and warehousing of agricultural products
		Kenya Fisheries Service	Conservation, management and development of fisheries resources
		Kenya Plant Health Inspectorate Service (KEPHIS)	To provide an effective and efficient science-based regulatory service for assurance on quality of agricultural inputs and produce
		Pest Control Products Board (PCPB)	To provide professional, efficient and effective regulatory service for manufacture, trade, safe use and disposal of pest control products
		Kenya Dairy Board (KDB)	To regulate, develop and promote the dairy industry in Kenya
		Kenya Veterinary Board (KVB)	To regulate, develop and promote the veterinary profession in Kenya
		Veterinary Medicines Council (VMC)	To regulate the veterinary pharmacy practices, use of veterinary medicines for the treatment of animals and formulate and enforce quality assurance standards in the manufacture and distribution and use of veterinary medicines
		Animal Technicians Council (ATC)	To regulate the business and practice of animal technicians as well as safeguard their interests in terms of training registration and licensing
		SACCOs Society Regulatory Authority (SASRA)	To regulate, enforce SACCO Societies Act of 2008 and license deposit taking SACCOs.
4.	Training	Bukura Agricultural College	To provide quality agricultural education through training, innovation and extension services
5.	Statutory Boards	Agricultural Information Resource Centre	To provide quality agricultural information to the farming community and other stakeholders using integrated platforms.
6.	Service	Kenya Tsetse and Trypanosomiasis Eradication Council (KENTTEC)	To coordinate eradication of tsetse and trypanosomiasis in the Country.
		Kenya Animal Genetic Resources Centre (KAGRC)	To promote optimum productivity of the national animal population through provision of high quality disease free animal germplasm and related breeding services
7.	Marketing	Kenya Fish Marketing Authority	Marketing of fish and fishery products

	Category	SAGA	Mandate
		National Livestock Development and Promotion Service	Development, promotion and marketing of livestock and livestock products
		Kenya National Trading Corporation	To promote and grow wholesale and retail trade
8.	Financial	Commodities Fund	To Provide easily accessible and affordable credit and financial solutions to the agriculture sector.
		Fish Levy Trust Fund	To provide supplementary funding of activities geared towards management, development and capacity building to ensure sustainability of the fisheries resource.

Table 6: Training Institutions

	Training Institution	Mandate
1.	Animal Health and Industry Training Institutions (AHITI) Kabete	To train categories of veterinary para-professionals and leather development technicians for provision of Veterinary Services.
2.	Animal Health and Industry Training Institutions (AHITI) Ndomba	To train categories of veterinary para-professionals and leather development technicians for provision of Veterinary Services.
3.	Animal Health and Industry Training Institutions (AHITI) Nyahururu	To train categories of veterinary para-professionals and leather development technicians for provision of Veterinary Services.
4.	Dairy Training Institute- Naivasha	To train both pre-service and in-service technical staff and other stakeholders along the dairy value chain.
5.	Meat Training Institute- Athi River	To train meat industry personnel for improved meat hygiene standards.
6.	National Beekeeping Institute (NBI)– Lenana	Training of stakeholders on beekeeping
7.	Livestock Training Institute - Griftu-(Wajir)	To train both pre-service and in-service technical staff and other stakeholders.
8.	Regional Pastoral Training Centre – Narok	Training pastoral, agro-pastoralist and other stakeholders
9.	Regional Pastoral Training Centre – MPT- Isiolo	Training of pastoralist and other stakeholders
10.	Kenya School of Agriculture	Train in-service technical staff and other stakeholders

Figure 1: Current Ministry Organization Structure



4.1.3 Staff Establishment and Human Resource Development Strategies

4.1.3.1 Staff Establishment

The Ministry has an in-post of 2,202 staff against an authorized staff establishment of 4,445 (Table 3) It is evident that there is an acute shortage of 1,959 staff attributed to the recruitment embargo, retirements and natural attrition. This will be addressed during the plan period.

Table 3: Staff Establishment

State Department	Authorized	In post	Variance
Crops Development and Agricultural Research (SDC&AR)	930	716	(214)
Livestock (SDL)	3,041	1,178	(1,863)
Fisheries, Aquaculture and the Blue Economy (SFA&BE)	367	152	(215)
Co-operatives (SDC)	364	165	(199)
Total	4,702	2,211	(2,491)

4.1.4 Human resource development strategies

The successful implementation of this Strategic Plan will require human resources and proper management of the same. The Ministry will implement the Human Resource Policies and ensure recruitment of adequate staff in accordance with the approved structure. Staff training and improvement of work environment will also be pursued. The Ministry will continually build the capacity of its human resources. It will review the authorized establishment for additional posts for both technical and support personnel in order to address the staff shortage and succession management gaps. This will ensure availability of adequate and motivated staff to deliver Ministry's mandate.

4.2 Financial Resources

4.2.1 Financial Resources Requirements

To implement this Strategic plan the Ministry will require **Kshs. 266,380.5 million** (Table 7) with the bulk of the resources attributed to Key Result Areas (KRA) 2 on Agricultural Sector Productivity (**Kshs. 125,515 million**) and KRA 3 on Food and Nutrition Security (**Kshs. 95,893 million**).

Table 7: Resource requirements by Key Result Areas

Key Result Area	Resource Requirements						
	Baseline estimates (Kshs. Mn)	Projected Estimates (Kshs. Millions)					
		2018/19	2019/20	2020/21	2021/22	2022/23	Total
Policy & Legal framework		177.5	337	465.5	379.5	313.5	1,673
Agricultural and Co-operative Sectors Productivity Improvement		20,633	27,524	26,616	26,231	24,511	125,515
Food & Nutrition Security		17,962	18,582	19,370	20,751	19,228	95,893
Investment in Blue Economy		694	948	684	560	150	3,036
Market Access and Trade		2,077.9	3,254.8 0	3,740.4 0	3,618	3,614.1	16,305
Institutional Capacity		1,522	6,219.5	3,346.2	3,877.3	4,485.3	19,450.3
Youth, women and vulnerable groups involvement in Agriculture, Blue Economy and Co-operatives		180	920	980	1,090	1,200	4,370
Leadership & Integrity		10	25	34	34	35	138
Total		43,256.4	57,810.3	55,236.1	56,540.8	53,536.9	266,380.5

4.2.2 Resource Mobilization Strategies

The funding to implement the Strategic Plan is expected come from the Government through the Medium Term Expenditure Framework (MTEF). However, past experience has shown that Government budget is inadequate to implement the prioritized activities. To bridge the gap, efforts will be made to mobilize funding from development partners to support some of the programmes and projects. In addition, the Ministry will continue to embrace Public Private Partnership (PPP's) and strategic partnerships in the sector to ensure the identified priorities are fully implemented. Further, the Ministry will ensure prudent utilization of resources during the Plan period.

4.3 Risk Analysis and Mitigation Measures

Risk management is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the

probability and/or impact of unfortunate events or to maximize the realization of opportunities. Risk is the potential that a chosen action or activity, including the choice of inaction, will lead to a loss or an undesirable outcome. Potential losses themselves may also be called "risks". Table 4.4 contains an analysis of types of risks, level of the risk and how the Ministry will mitigate the effects of the risks.

Table 8: Risk Analysis and Mitigation Measures

S/No.	Risk	Category	Impact on Ministry	Mitigation Measures
1	Climate change	High	Reduced production and productivity, destruction of crops and animal deaths	<ul style="list-style-type: none"> • Promotion of climate smart agriculture • Promote livelihoods diversification • Irrigation
2	Diseases and Pests	High	Deaths and reduced production	<ul style="list-style-type: none"> • Develop disease and pests contingency plans, vaccinations and outbreak response protocols • Early warning • Surveillance
3	Insecurity	Medium	Hampering implementation of Ministry's mandate	<ul style="list-style-type: none"> • Collaboration with relevant stakeholders (Ministry of Interior, County Governments, Local leaders and communities)
4	Wildlife human conflict	Medium	Destruction of crops and livestock	<ul style="list-style-type: none"> • Collaboration with KWS • Development of compensation strategies and insurance
5	Sub-standard inputs	High	Reduced yields in livestock and crops,	<ul style="list-style-type: none"> • Surveillance at border and selling points. • Strengthen inspectorate services
6	Non- Tariff barriers	Medium	Loss of marketing outlets	<ul style="list-style-type: none"> • Establish quality assurance and traceability mechanisms (e.g. Livestock Identification and Traceability System) • Negotiation with the affected country towards the removal of the non-tariffs.
7	Dumping of goods	Medium	Affect marketing of locally produced	<ul style="list-style-type: none"> • Strict surveillance of border posts
8	Environmental pollution	Medium	Affects production and quality.	<ul style="list-style-type: none"> • Surveillance • Effective and strict enforcement of Environmental laws

CHAPTER FIVE: MONITORING, EVALUATION AND REPORTING

5.0 Overview

Monitoring and Evaluation (M&E) are important aspects in the implementation of the Strategic Plan. The purpose for monitoring is to ensure that the plan is implemented as scheduled and if there are any negative deviations appropriate and timely actions are taken. Monitoring will be carried out on a continuous basis while evaluation will be carried out periodically to make an informed decision on the future implementation of projects. Monitoring will involve regular data collection and analysis on the progress of implementation of the plan. The results from the analysis will then be used to inform decision-making.

5.1 Monitoring and Evaluation Institutional Framework

The Monitoring and Evaluation (M&E) system for the Ministry over the plan period will consist of a monitoring and evaluation structure and cycle. There will be a Ministerial M&E Coordination Committee under the Cabinet Secretary and Chief Administrative Secretary. It will be supported by the State Departments M&E Committees. State Departments will establish a M&E Coordination Committee comprising heads of Directorates, Divisions, Units and Sections. The State Department's M&E Coordination Committees will be under the Chairmanship of respective Principal Secretary, while the heads of CP&PMU will be the Secretariat. Further, State Department M&E Technical Committees (SDM&ETC) will be established. Members of the SDM&ETC would be representatives of the relevant Directorates, Divisions, Units and Sections nominated by their respective heads. The representative officers will be the M&E contact or liaison officers to ensure that the necessary flows of information and reports are provided on a timely basis to the CP&PMU for compilation of the State Departments' reports.

The key targets and indicators for this strategic plan are presented in the implementation matrix and organized into annual targets. The targets will form basis for Annual Work Plans (AWPs), Performance Contracts and Staff Performance Appraisal System (SPAS).

5.2 Monitoring and Evaluation Reporting

The Directorates, Divisions, Sections and Units will prepare and submit quarterly and annual M&E reports to the head of CP&PMU for compilation and discussion by the SDM&ETC. The reports will thereafter be presented to the SDM&ECC for discussions and direction on quarterly basis. The M&E reports will be shared with Monitoring and Evaluation Directorate (MED) under the State Department for Planning and Vision 2030 Delivery Secretariat (VDS) and other relevant stakeholders.

5.3 Key Performance Indicators

The implementation of the Strategic Plan will be monitored and evaluated based on indicators as outlined in the implementation matrix. The key indicators include:

- a) Number of developed/ reviewed policies, legislations, and regulations;
- b) Value of exports of crops, livestock and fish and their products;
- c) Developed Marine Spatial Plan;
- d) Developed Blue Economy Master Plan;
- e) Quantity of various types of inputs procured and distributed to farmers;
- f) Quantity (or cash equivalent) of strategic food reserves by type of food item;
- g) Number of technologies developed, packaged, or disseminated;
- h) Number of graduates from agricultural training institutions;
- i) Number of staff and stakeholder's capacity built;
- j) Number of youth capacity build;
- k) Number of SMEs supported;
- l) Number feedlots established through strategic partner;
- m) Number of marketing infrastructure developed/rehabilitated;
- n) Number of information systems developed;
- o) Number of Counties covered by national identification and traceability system;
- p) Number of livestock breeding stock distributed to farmers;
- q) Number of livestock disease control strategies and contingency plans developed;
- r) Livestock disease control strategies and contingency plans developed;
- s) Number of county soil maps developed;
- t) Number of soil testing facilities developed;
- u) Number of institutions established/restructured/reformed.

APPENDIX I: IMPLEMENTATION MATRIX

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
KRA 1: Policy and legal framework															
Strategic Objective 1: To create an enabling environment for agricultural and Co-operatives development															
Develop and/or Review Policies	Conducive policy environment	Policies developed	No. of policies	13	1	3	4	3	2	40	120	120	120	80	PRR
		Policies reviewed	No. of policies	9	2	2	3	1	1	60	60	90	30	30	PRR
Develop and/or Review Strategies, Legislation	Enabling legal and regulatory framework	Strategies, developed/ reviewed	No. of strategies developed/ reviewed	23	1	4	6	6	6	15	60	90	90	90	PRR
		Bills/Acts developed/ reviewed	No. of bills	7	1	2	2	2	1	20	40	40	40	20	PRR
			No. of Acts reviewed	8	1	1	2	2	2	7	7	14	14	14	PRR
		Rules and Regulations Developed	No. of rules & Regulations Developed	20	2	2	6	5	5	24	24	75	60	60	PRR
Develop Guidelines, Standards and Procedures	Improved compliance on Sanitary and Phytosanitary Standards (SPS)	Guidelines and Standards	No. of guidelines, standards & norms	19	1	4	6	4	4	3	12	20	12	12	PRR
		Safety and quality assurance procedures for agricultural products and by products developed	No. of safety and quality assurance procedures developed	10	2	3	3	2	-	6	9	9	6		DVS
Implement Regional, Bilateral & Multilateral Agreements & Commitments	Improved regional and international economic integration	Trade agreements and standards implemented, Protocols ratified	No. of MoUs and agreements	12	1	2	3	3	3	2.5	5	7.5	7.5	7.5	PRR
Subtotal										177.5	337	465.5	379.5	313.5	
KRA 2: Agricultural Sector Productivity Improvement															
Strategic Objective 2: To increase productivity and out puts in the agriculture sector															
Fertilizer Cost	Increased use	Assorted	MT of fertilizer	1,500,00	300,000	300,000	300,000	300,000	300,000	13,500	13,500	13,500	13,500	13,500	CRAMD

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
Reduction	of fertilizer by smallholder farmers	fertilizer annually subsidized	distributed	0											
	Increased maize production & productivity per ha	Increased production and productivity per ha	No. of 90kg bags of Maize per ha	25	15	18	20	22	25	0	0	0	0	0	CRAMD
Accelerated Agricultural Inputs Access	Access to agricultural farm inputs	Increased access to input subsidy by smallholder farmers	No. of Smallholder farmers enrolled in e-voucher system	16,541	14,000	33,549	50,000	40,000	16,541	1,727	1,797	1,787	1,777	1,787	KCEP CRAL
		Storage facilities refurbished	No. of storage facilities	40	0	9	10	11	10	0	90	100	110	100	KCEP CRAL
National Farmer Registration	Comprehensive up to date farmers data base for proper planning and decision making	A national farmer register with list of all farmers, bio-data, enterprises engaged and farm details	Percent completion of farmer register, sampling frame and NAMIS	100	30	80	100	-	-	500	1000	50	50	50	CRAMD
Miraa Farmers Livelihood Improvement	Enterprise diversification for improved livelihoods of miraa farmers	Additional enterprises promoted	No. of enterprises promoted.	15	3	3	3	3	3	1,134	1,034	489	472	526	CRAMD/ AFA
		Market sheds constructed	No. of market sheds Constructed	12	-	3	3	3	3	0	9	9	9	9	CRAMD
		Water harvesting structures constructed	No. of water harvesting structures constructed	32		8	8	8	8	0	75	75	75	75	CRAMD
		Miraa industry regulations and standards developed and enforced	Percent completion of Miraa regulations and standards	100	10	30	80	100	-	10	30	30	50	0	CRAMD/ AFA
Food and Crop Diversification Through	Increased production of traditional high	Crop diversified through	MT of assorted seeds of traditional high	1,650	370	350	320	310	300	56	52	47	44	40	CRAMD

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
traditional high value crops	value crops	expansion of traditional and high value crops	value crops distributed												
Revitalization of industrial crops	Increased production of coffee, tea, cotton, sugar, pyrethrum, nuts and oil Subsectors for higher incomes	Coffee production increased	MT of clean coffee produced annually	60,000	46,000	48,000	53,000	56,000	60,000	210	51	46	46	46	SDCD/ AFA
		Tea Production increased	MT of tea produced annually	500,000	470,000	474,000	479,000	482,000	500,000	30	30	30	30	30	SDCD/ AFA
		Pyrethrum production increased	MT of dry pyrethrum flowers produced annually	3,000	300	600	1,000	2,000	3,000	30	30	30	30	30	SDCD/ AFA
		Increased cotton production	Bales of cotton produced (1 bale= 226.8kg) annually	200,000	52,470	75,000	100,000	150,000	200,000	20	20	20	20	20	SDCD/ AFA/ KALRO
		Increased production of macadamia	MT of macadamia produced annually	41,340	-	16,153	22,660	37,851	41,340	0	10	10	10	10	SDCD/ AFA
		Increased production of cashew nuts	MT of cashew nuts produced annually	17,443	-	13,106	14,416	15,858	17,443	0	10	10	10	10	SDCD/ AFA/ KALRO
		Increased production of coconut	MT of coconut produced annually	148,671	101,544	111,699	122,869	135,155	148,671	10	10	10	10	10	SDCD / AFA/ KALRO
On-farm Land and Environmental Management	Increased production of fruit, Nut and crop oil	1 Million Fruit, Nut and oil crop seedlings distributed annually	No. of fruit, Oil and Nut crops seedlings distributed (million.)	4	-	1	1	1	1	0	100	100	100	100	AES
	Increased production through small scale irrigation	5000 on farm water harvesting pans constructed annually	No. of water pans constructed	20,000	-	5,000	5,000	5,000	5,000	0	435	435	435	435	AES
Crop Disease and Pest Control	Reduced crops disease prevalence	Crops pests and diseases surveillance	No. of Pest and diseases surveillance	28	6	6	6	6	6	220	220	180	180	180	CRAMD/ DLP/DVS

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
		conducted	surveys conducted												
		Pest and disease control chemicals and equipment procured and distributed to counties	No. of Pest monitoring traps mounted	2100	300	300	500	500	500	30	30	50	50	50	CRAMD
			MT. of Pest and disease control chemicals distributed to counties	500	100	100	100	100	100	450	450	450	450	450	CRAMD
			Litres of Avicides procured and distributed	20,000	2500	2500	5000	5000	5000	20	20	40	40	40	CRAMD
Support to Agricultural engineering technology development	Increased value addition and reduced post harvest losses	10 ATDCs transformed and modernized to Centres of Excellence	No. of ATDCs transformed and modernized	10	2	2	2	2	2	536	577	555	535	535	AES
		2 National machinery testing centres established	% completion of national machinery testing centres	60	0	20	30	40	60	0	100	100	150	200	AES
	Increased value addition	25 agro processing, postharvest & sustainable technologies & innovations developed / incubated & promoted	No of technologies /innovations developed and promoted	10	10	10	10	10	10	30	30	30	30	30	AES
		1500 MT Aflasafe (KE-01) procured and distributed to counties	MT of Aflasafe (KE 01) procured and distributed to counties	1,225	75	250	300	300	300	34	113	135	135	135	AES
Improved Agricultural Mechanization	Increased mechanization levels for high yields	3240 tractors, 400 walking tractors, 100 rice combine	No. of tractors and equipment	3,240	40	450	700	1050	1000	100	1,456	1,344	1,240	1,480	AES
			No. of walking tractors	400	0	100	100	100	100	0	20	20	20	20	AES

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
		harvesters and associated equipment procured and distributed at subsidized prices	No. of rice combine harvesters	100	0	6	34	60	0	0	24	136	240	0	AES
	Reduced post harvest losses in potato	Ware and Seed potato infrastructure developed	No. of aggregation centres and stores	405	0	107	126	127	5	0	1,000	1,000	1,000	100	AES
Promotion of Climate Smart Agriculture	Climate Smart Agriculture	Baseline status of CSA in 47 counties established	No. of CSA County Baseline reports	47	10	10	10	10	7	500	500	500	500	450	AES
	Climate Smart Agriculture	Improved empowerment of Smallholder Agro-pastoral and Pastoral Producers	No. of Grants to CIGs successfully completed	4,802	-	1,237	1,485	1,980	0	0	500	550	600	0	KCSAP
	Climate Smart Agriculture	Increased production of climate-smart agriculture inputs by seed and breed stock producers	Tons of Early generation seed produced	30	0	5	6	9	10	0	2	3	4	4	KCSAP
			Tons of Certified seed produced	165	0	45	30	30	60	0	18	12	12	24	KCSAP
			No. of Livestock parent stocks produced	1200	0	150	300	450	300	0	9	18	27	18	KCSAP
	Proper Agro-weather infrastructure	Agro-weather monitoring infrastructure strengthened	No. of Weather monitoring infrastructure	304	-	120	20	-	-	0	700	184	0	0	KCSAP
Improve livestock breeds and breeding	Improved livestock productivity	Breeding plans available	No. of breeding plans developed	15	1	2	3	4	5	10	10	10	10	10	DLP/DVS
		Breeding services technical manual developed	Breeding services technical manual developed	1	-	1	-	-	-	-	8	-	0	0	Dir. PR&R, DVS

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
		Increased availability of quality breeds	No. of quality livestock breeds availed	26	2	4	6	7	7	20	20	20	20	20	DLP/DVS
		Breeding quality assurance system developed	Breeding quality assurance system in place	1	-	-	1	-	-	10	10	10	10	10	DLP/DVS
		Modern breeding technologies adopted	No. of stakeholders using modern breeding technologies	3000	200	400	600	800	1000	25	25	25	25	25	DLP/DVS
		Breeding Bull schemes	No of bull schemes	8	-	2	3	2	1	0	110	120	100	120	DVS
Enhance availability of quality feeds and supplements	Build capacities on feed ration formulation	Improved quality of feeds.	No of farmers adopting feed ration formulation and quality feeding	1,000	200	400	600	800	1000	25	25	25	25	25	DLP
	Undertake feed quality control inspections	Improved quality of Livestock feeds in the market	No. of quality feed varieties available in the market.	800	150	300	500	650	800	24	24	24	24	24	DVS/DLP
	Develop and review standards for animal feeds	Standards for Livestock Feeds Developed	No. of standards developed	10	1	3	5	7	10	10	10	10	10	10	DLP/DVS
Enhance animal disease control	Undertake surveillance and mapping of diseases	Reduced prevalence of diseases	No. of surveillance reports	8	2	2	2	2	2	20	20	20	20	20	DVS
	Carryout disease risk management and disaster preparedness	Disease strategies and contingency plans developed/reviewed	No. of disease strategies and contingency plans developed/reviewed	8	2	2	2	2	2	20	20	20	20	20	DVS
	Mainstream animal welfare in animal production	Increased awareness of animal welfare issues	No. of stakeholders practicing good animal welfare	4,000	800	800	800	800	800	5	5	5	5	5	DVS/DLP

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
			practices												
	Develop database for management of animal health and production information	Database for management of animal health and production information developed	Database established and operationalized and updated	-	1	1	1	1	1	5	5	5	5	5	DVS
Promote adoption of improved agricultural technologies	Increased agricultural productivity	Increased access to improved agricultural technologies	No of technologies packaged. and disseminated	8	-	2	2	2	2	0	10	10	10	10	DLP/DVS
Aquaculture Technology Development and Innovations Transfer	Increased fish production from aquaculture	Fish demonstration units constructed in schools	Number fish demonstration units constructed in schools	50	10	10	10	10	10	310	856	988	734	800	D/F&AM &D
Aquaculture Business Development programme	Improved livelihoods for fish farmers	Fish production units constructed upgraded or rehabilitated and stocked with fish in an environmentally sustainable and climate smart manner	No. of fish production units constructed upgraded or rehabilitated and stocked with fish in an environmentally sustainable and climate smart manner.	20,000	0	3,500	8,000	6,000	2,500	710	1,664	2,049	1,802	1,503	D/F&AM &D
Support sea weed farming	Improved livelihoods for sea weed farmers	Supported sea weed farming	Number of supported sea weed farmers	650	50	150	150	150	150	100	150	160	180	200	D/BEM &D
Enhance Food safety	Improved food safety	Quality laboratories accredited	Number of quality laboratories accredited	6	-	2	2	1	1	0	25	25	15	15	Dir Fisheries/ DVS/ Dir Crops
		Residues Monitoring Plans implemented	Number of residues monitoring plans implemented	3	3	3	3	3	3	30	30	30	40	40	Dir Fisheries/ DVS/ Dir Crops

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
		Sanitary and Phyto-sanitary Standards (SPS) enforced	Number of enforcement missions conducted	60	12	12	12	12	12	100	100	100	100	100	Dir Fisheries/ DVS/ Dir Crops
		Food safety awareness created	Number of Food safety awareness fora conducted	30	6	6	6	6	6	30	30	30	30	30	Dir Fisheries/ DVS/ Dir Crops
Support Hides, Skins and leather development	Enhanced performance of export slaughterhouses and tanneries	Standards for construction and operation of export slaughterhouses and tanneries developed	No. of standards developed	-	2	-	-	-	-	2	10	0	0	0	DVS
	Leather training institute in Ngong established	Establish a leather training institute in Ngong	Completion level/ and Gazette Notice	100%	10%	50%	100%	-	-	20	100	200	300	300	DVS
	Model leather centers of excellence established	Establish six Model leather centers of excellence	No. of Model centres established	6	1	1	2	2	-	0	100	200	300	300	DVS/DLP
Enhance Agricultural Research	Digitize existing data, research and other performance information	Digital platform developed	1 digital data platform	1	0	0	1	1	0	0	0	100	100	20	Knowledge mgt & capacity building directorate
	Increase access to soil information and data	County soil maps developed	47 soil maps	47	0	0	15	15	17	0	50	300	300	350	Research & innovation Directorate
	Coordinate development of agricultural research agenda	Agricultural research agenda	Research Agenda	5	1	1	1	1	1	10	10	10	10	10	Research & innovation Directorate
Promote Capacity Building	Increased agricultural production and	Capacity building Strategy	Capacity Building strategy in	1	-	1	-	-	-	0	10	-	-	-	Dir Policy, Research/ JAS -IGS

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
	productivity	developed	place												
		Staff trained	Number of staff trained	1000	-	250	250	250	250	0	25	25	25	25	JAS-IGS/DLP/Dir Crops/Dir Fisheries/Dir Irrigation
		Extension guidelines and standards developed/reviewed and disseminated	Number of extension guidelines and standards developed/reviewed and disseminated	10	-	2	2	3	3	0	10	10	20	20	Dir Policy, Research and Regulations
Sub Total KRA 2										20,633	27,524	26,616	26,231	24,511	
KRA 3: Food and Nutrition Security															
Strategic Objective 3: Enhance Food and Nutrition Security															
Strengthen Strategic Food Reserve Trust Fund	Sufficient stocks of food commodities	Adequate food reserves (Maintain at least 4 million-90 Kg bags of maize in physical stock and cash equivalent.	No. of 90 Kg bags of maize in physical stock and its cash equivalent	20,000	4,000	4,000	4,000	4,000	4,000	4,000	3,000	3,000	3,000	2,000	CRAMD
Prioritized Crops Production	Enhanced maize production	Subsidized High yielding maize seed varieties procured and distributed	No. MT of Maize seed	10,100	1,000	2,300	2,400	2,600	2,800	2,505	2,507	2,510	5,020	5,030	CRAMD
		Annual maize production increased to 67million bags in 2022 (90 Kgs)	No. of 90 Kgs bags of maize produced (million)	67	40	46	55	61	67	0	0	0	0	0	CRAMD
	Enhanced potato	Potato basic produced	MT. of potato basic produced	12,582	200	459	1162	3000	7671	1,630	1,830	1,730	1,730	1,230	CRAMD

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
	production and food sufficiency	Ware potato production increased	MT of ware potato produced (million) annually	6	1.2	1.7	2.6	4	6	0	0	0	0	0	CRAMD
		Certified potato seed distributed	MT of certified potato seed distributed	617,351	6,375	17,946	50,517	142,205	400,308	0	0	0	0	0	CRAMD
	Rice production increased from the current production levels	Annual rice production increased to 406,486 MT by 2022	MT of rice produced	406,486	112,800	124,080	193,565	270,991	406,486	5,061	5,057	5,049	5,034	5,028	CRAMD
		Rice seed distributed	MT of rice seed distributed	140	0	60	20	20	40	0	18	6	6	12	CRAMD
Diversified food varieties	Improved nutrition security	Food and Nutrition Security Council Established	National Food and Nutrition Security Council established	1	1	-	-	-	-	270	232	232	232	232	Nutrition sensitive project
	Enhance food nutrition and utilization of a variety of food crops	Blended Maize flour in the market	No. Maize flour blends in the market	12	0	3	3	3	3	0	20	20	20	20	Nutrition sensitive project
	Enhance food nutrition and utilization of a variety of food crops	Increased availability of blending materials	MT of subsidized clean planting materials distributed (sorghum -20, millet- 20)	16,000	0	40	40	40	40	0	8	8	8	8	Nutrition sensitive project
			Quantity subsidized clean cassava cuttings distributed (million)	8	0	2	2	2	2	0	10	10	10	10	Nutrition sensitive project
Promote National Agricultural Insurance Policy	Agriculture Risk management for smallholder crop farmers	Crop insurance Beneficiaries increased to 2.5 million farmers in 31 counties	No. (Million) of farmers purchasing insurance policies	2.5	0.342	1.5	2	2.5	2.5	1000	1000	500	500	500	APRR

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
		Household's livestock insured	No. of households insuring livestock	10,000	1000	2000	3000	2000	2000	150	120	100	80	80	DLP
		Tropical Livestock Unit insured	No. of livestock insurance supported	790,000	90,000	110,000	160,000	220,000	300,000	300	300	490	500	536	DLP
Promote fodder production, storage and conservation technologies	Promote fodder production, storage and conservation	4,000 Ha of irrigated fodder	Ha of irrigated fodder established	4,000	2,000	2,500	3,000	3,500	4,000	400	450	500	550	600	DLP
		250,000 bale of hay	No of Bales Conserved	250,000	20,000	40,000	50,000	65,000	75,000	50	50	50	50	60	DLP
	Promote production of drought resistant fodder crops	500 Ha of drought resistant fodder varieties promoted	Ha of drought resistant fodder varieties	500	50	100	150	100	100	100	100	150	120	140	DLP
		Irrigation in seeds for pasture and fodder established	Tons of seeds produced under irrigation	25	-	-	5	10	10	1,066	1,334	1,066	1,334	1,066	DLP
	Rehabilitation of rangelands through reseeding programs and bush control	2,000 Ha rehabilitated	Ha of rangelands rehabilitated	2,000	100	500	500	600	300	50	50	55	60	65	DLP
	Promote research on alternative livestock feeds stuffs for range lands	5 alternative livestock feedstuff for rangelands	Numbers of alternative livestock feedstuff		-	1	2	2	-	3	5	6	6.6	7	
		Feed ration and formulation promoted	No. of farmers adopting feed ration formulation	3000	200	400	600	800	1000	25	25	25	25	25	DLP
	Establish Strategic Livestock Feed Reserves	Strategic Feed Reserve established	Bales (million) of hays available during drought.	3	0.2	0.4	0.6	0.8	1	500	500	500	500	500	.DLP
	Improve resilience for ASAL	Investment in water	No. of water infrastructure	1	-	1	-	-	-	-	50	0	0	0	DLP

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
communities	water infrastructure for livestock	infrastructure for livestock promoted	development plans												
		Water pans/ boreholes constructed	No. of Water facilities rehabilitated	25	5	5	5	5	5	60	60	75	75	80	DLP
	To promote climate change adaptation technologies and practices	Locally adapted breed promoted	No of locally adapted breeds promoted	5	1	2	2	-	-	3.0	4	5	5	6	DLP
		Promote alternative livelihood enterprises	No. of Alternative livelihood promoted	4	-	1	1	1	1		9	7	7	8	DLP
		Early warning information disseminated	No. early warning information disseminated	5	1	1	1	1	1	2	2	3	3	3	DLP / DVS
Rehabilitate fish landing sites in L. Victoria	Reduced fish post-harvest losses	Rehabilitated fish landing sites in L. Victoria	No. of rehabilitated fish landing sites in L. Victoria	6	2	2	2	-	-	227	393	428	0	0	D/F&AM &D
Strengthen Aquaculture and Fisheries Associations and BMUs	Improved management of fisheries and aquaculture	Supported and strengthened Fisher organizations	No. of Fisher organizations supported and strengthened	3	3	3	3	3	3	50	70	90	110	120	D/F&AM & D
		Organized and supported Beach Management Units (BMUs) into viable commercial entities	No. of supported Beach Management Units (BMUs) into viable commercial entities	393	37	50	100	181	25	15	20	35	35	10	D/F&AM &D
Renovate and expand Liwatoni Fisheries Complex	Fish landings increased	Renovated and expanded Liwatoni Complex	% of completion of Liwatoni Complex	100	30	100	-	-	-	395	713	0	0	0	D/BEM &D
Support Meat Production	Livestock breeds multiplication	Livestock breeding stock availed	No. of breeding stock (Pigs, Rabbits)	73,000	-	7,000	220 00	220 000	220 000	0					

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/ 19	2019/ 20	2020/ 21	2021/ 22	2022/ 23	2018/ 19	2019/ 20	2020/ 21	2021/ 22	2022/ 23	
	and distribution	Day Old Chicken for multiplication produced	No. Day Old Chicken produced for multiplication	2,166, 000	-	6,000	720 000	720 000	720,000	0					
	Improved access to quality livestock feeds	Area under irrigated pasture and fodder	Acreage under pasture	30,000	-	-	10,000	10,000	10,000	0	0	2000	1500	1500	DLP
		Drought resistant fodder varieties promoted	Ha. under drought resistant fodder varieties	500	50	100	150	100	100	100	100	150	120	140	DLP
Support milk production and processing	Increased milk production and processing	Dairy value chain stakeholders capacity build	No. of Dairy Value Chain stakeholders capacity build	350	-	50	80	100	120		25	40	50	60	DLP
		Livestock breeders association capacity build	No. of Livestock breeders association capacity build	7	-	2	3	1	1	-	20	30	10	10	DLP
		Powder Milk	MT of Powder Milk							-	500	500	50	142	
Promote Honey Production	Provide support to bee keeping value chain	Increased adoption of agribusiness practices	Annual volumes (kg) of quality honey produced	40,000	10,000	20,000	30,000	40,000	40,000						DLP
	Improve honey production	Bee colony multiplication/s tocking and distribution	No. of bee colonies produced and distributed	18,600	2,600	4,000	4,000	4,000	4,000						DLP
		Set up 13 bee bulking sites for colony multiplication and distribution	No. of bulking sites sep up	13	7	3	2	1	0						DLP
SubTotal KRA 3										17,962	18,582	19,370	20,751	19,228	
KRA4:Investment in the Blue Economy															
Strategic Objective 4: To enhance investment in the Blue economy															

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
Build capacity for fishers to venture into the deep sea fishing	Investment in the Blue Economy improved	Built capacity of fishers to venture into the deep sea fishing	Number of fishers capacity built	2,600	500	500	600	200	800	25	150	150	50	50	D/BEM &D
Develop National Maritime Spatial Plan and Blue Economy Master Plan	Blue economy management and development improved	Developed Blue Economy Master Plan	% of developed Blue Economy Master Plan	100	10	30	60	90	100	469	398	434	410	100	D/BEM &D
	Blue economy management and development improved	Developed National Maritime Spatial Plan and Integrated Coastal Management Plan	% of developed Maritime Spatial Plan and Integrated Coastal Management Plan	100	30	80	90	100	-	200	400	100	100	0	D/BEM &D
Sub Total KRA 4										694	948	684	560	150	
KRA 5: Market Access and Trade															
Strategic Objective 5: To Improve Market Access and Trade															
Promote trade in agricultural products	Improved market access and reduction of milk post-harvest losses	County stakeholder's capacity built	No. of Value chain actors capacity build	332	70	70	70	70	52	0.9	1.8	2.2	2.6	3.1	DLP / DVS
	Improved market access for beef	Feedlots established	No. of feedlots established	50	10	14	10	10	6	550	550	550	550	550	DLP/DVS
		Holding grounds rehabilitated and registered	No. of holding grounds registered & rehabilitated	30	23	3	3	1	-	80	100	110	120	130	DLP
Strengthen marketing infrastructure	Access to fish markets improved	Developed fish markets and auction centres	No. of developed fish markets and auction centres	5	1	1	1	1	1	200	210	215	220	250	D/F&AM &D
	Access to international livestock markets improved	Livestock Export Zone (LEZ) facilities developed (Bachuma, Kurawa,	No. LEZ facilities developed	3	1	1	1	-	-	200	450	500	550	550	DVS

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
		Miritini)													
	Milk handling and processing improved	Milk bulking equipment /coolers installed	No. of milk coolers installed	350	-	100	110	120	10	0	935	1200	1100	1010	DLP
Sanitary and Phyto-sanitary standards Improvement	Establishing a residue laboratory at PCPB	1Residue Laboratory Established	% completion of the Residue laboratory	100	30	40	50	70	100	182	188	218	255	300	PCPB
Promotion of Agricultural Market Information	Timely and real time agricultural market information	An automated MIS disseminating real time agricultural market information developed	% completion of the MIS system	100	50	80	100	100	100	56	10	10	10	10	CRAMD
	Commodity Exchange and e-Soko Platform	Integrated web based e-Soko platform developed	% completion of e-Soko platform	100	10	20	50	70	100	100	100	100	100	100	CRAMD
	Establish new export markets	New export markets accessed	No. of new markets	5	1	1	1	1	1	20	20	20	20	20	SDCD, AFA
	Strengthen livestock market information systems	Data monitor officers trained and equipped	No. of data monitors trained	140	20	30	30	30	30	3.0	4	4.2	4.4	5	DLP / DVS
		Data management system established for disease control and NLMIS	No. of data management systems established	2	-	1	1	-	-	6	6	3	2	2	DLP / DVS
		Livestock identification & traceability system established	No. of livestock identification & traceability systems established	1	-	1	-	-	-	60	50	48	24	24	DVS
	Increased access to agricultural research	Kenya digital data for Agriculture Research	1 digital platform created	1	0	0	1	0	0	0	0	120	10	10	Knowledge Mgt & capacity building

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
	information & knowledge	Information developed													directorate
Development of Small and Medium Enterprises (SMEs) in Agribusiness	Medium enterprises (SMEs) for agribusiness	1000 SMEs in Agribusiness serving 0.5 million farmers	No. of Agribusiness based SMEs serving farmers	1,000	200	200	200	200	200	520	520	520	520	520	CRAMD
Promote fish consumption	Per Capita fish consumption increased	Promoted fish consumption and marketing	Number of promoted “Eat more fish Campaigns” and fish food fares	50	10	10	10	10	10	100	110	120	125	130	D/F&AM &D
Sub Total KRA 5										2,077.9	3,254.8	3,740.4	3,613	3,614.1	
Key Result Area 6: Institutional Capacity															
Strategic Objective 6: To Strengthen Institutional Capacity															
Institutional reforms	High performing institutions	Restructured NCPB, ADC, AFA, PPCK, AIRC, ATDCs, KSA, DTI, KMC, , MTI, AHITIs and Bukura college	No. of institutions restructured	8	2	2	2	1	1	400	800	800	900	900	SDC&AR & CCD
		Reform:- KPCU, KFA, New KCC, Co-operatives Cotton Ginneries, Coffee Co-operatives, ECCOs.	No. of institutions reformed	6	1	1	1	2	1	200	1,007.5	662	771.6	889.77	CCD
		Develop Credit Schemes and Revolving Funds	No. of Funds developed	2	-	1	-	-	1	-	3,000	-	-	500	CCD
		Curriculum for livestock training institutions	No. of curriculums developed/ reviewed	7	-	3	2	1	1	0	27	35	10	5	HRM&D/ DLP/DVS

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
		developed/ reviewed													
		Leather training institute established	Leather institute completed and operational	1	-	-	-	1	1	20	100	200	300	300	Dir PR&R, DVS, HRM&D
		Leather Centres established	No. of centers established	6		1	1	2	2	0	100	200	300	300	DVS/DLP
	Ministry's institutions modernized and secured	Developed/rehabilitated and equipped farms/station	No. of Institution's facilities developed/rehabilitated	83	1	20	23	21	18	120	200	300	250	250	DVS/DLP/DA
		Laboratories Certified and accredited (ISO 17025: 2005)	No. of laboratories certified and accredited	7	1	2	2	2	2	5	20	20	20	20	DVS, MR
		Training institutions infrastructures developed	No. of training infrastructures developed	8	-	2	2	2	2	25	100	200	200	300	HRM&D/DLP/DVS
		ICT infrastructure upgraded	Automation level (%)	100	40	50	70	90	100	2	10	30	30	30	H:ICT
		Institutional land under the Ministry secured	No. of title deeds/ Land area secured	38	-	-	10	20	8	50	70	150	250	250	DVS/DLP/DA
Information and communication management	Establish agriculture information and knowledge management system	Agriculture information and knowledge management system established	% completion Information and knowledge management system	100	50	100	100	100	100	5	10	5	5	5	AIRC
	Design information products	Value chain information products	No. of information products produced and distributed	14,931	2931	3000	3000	3000	3000	5	10	5	5	5	AIRC
	Develop Co-operative Management Information	Co-operative Management Information	% completion	100	30	50	70	80	100	70	80	34.2	115.7	30.5	CCD

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
	Information System	System developed													
Strengthen data management system	Maintain a web based data system, review of data compendium & producing annual data publication	updated web based data system, data compendium & annual data publication	No. of annual data publications	5	1	1	1	1	1	10	10	10	10	10	CPPMU
Strengthen Monitoring and Evaluation	Effective M&E system	Agriculture M&E framework finalized	% completion M&E framework	100	10	20	60	100	100	10	10	10	10	10	CPPMU
Enhance Ministry's capacity	Improved service delivery	Institutional Skills Gaps Analysis undertaken	Institutional Gap analysis report in place	1	-	1	-	-	-	0	10	5	0	0	HRM&D
	Strengthened Technical Capacity of Technical actors	Trained officers in various courses	No. of officers trained on long and short courses	6,100	1,000	1,100	1,200	1,300	1,500	30	35	40	40	40	HRM/D
		Agricultural Research capacity strengthened	Number of research facilities modernized	5	1	1	1	1	1	500	500	500	500	500	Dir Knowledge and Capacity Building
		Youth, Gender, disability, HIV/AIDS and Drugs issues mainstreamed in policies	% of policies mainstreaming youth, Gender, Disability, HIV/AIDS and Drugs issues	100	30	50	80	100	100	30	30	30	30	30	ADMIN
	Improved collaboration among the stakeholders/ County Governments	Engagement framework developed	% completion of engagement framework developed	100	-	-	5	60	100	0	0	20	50	30	Dir. PR&R
		Counties capacity needs assessed	No. of Counties capacity needs assessed	47	5	15	10	10	7	20	40	30	30	30	DLP
		Capacity build of the counties	No. of Counties capacity build	47	-	5	10	20	12	20	20	30	30	30	DLP

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
Develop Coordinating mechanism for Agricultural Research and Innovation Ecosystem	Enhanced coordination in agricultural research	Agricultural research Coordinating mechanism and System developed	% completion	100	0	40	80	90	100	0	30	30	20	20	SDCD&AR
Subtotal KRA 6										1,522	6,219.5	3,346.2	3,877.3	4,485.3	
Key Result Area 7: Youth, Women , Vulnerable Groups Involvement in Agriculture, Blue Economy and Co-operatives															
Strategic Objective 7: To Increase Youth, Women and Vulnerable Groups Participation in Agricultural Value Chains															
Involve Youth in Modern Agriculture , Blue Economy (BE) and Co-operatives	Increased Youth, Women and vulnerable groups employment in Agriculture (Urban and Peri urban agriculture)	Youth in and out of schools trained on production and agro processing and value addition equipment distributed	No. of Pupils and youth trained.	26,500	4,000	5,000	5,500	6,000	6,000	20	20	20	20	20	YMAP
			No. of processing and value addition equipment distributed	175	35	35	35	35	35	80	90	100	110	120	YMAP
	Youth knowledge on blue economy enhanced	Awareness created on the BE especially to the young population	Number of youth sensitized on the blue economy	135,000	15,000	30,000	30,000	30,000	30,000	80	150	200	300	400	D/BEM &D
Financial and Agribusiness mentorship for youth	Youth involvement in agribusiness	Agriculture promoted as viable business	No. of operational YABIC Resources Centres	20	-	2	4	6	8	0	660	660	660	660	Enable Youth Program
Sub Total KRA 7										180	920	980	1,090	1,200	
KRA8:Leadership and integrity															
Strategic Objective 8: To enhance leadership and integrity															
Corruption prevention	Efficient and Effective Service Delivery	Increased awareness	No. of stakeholders sensitized	50	0	25	25	0	0	0	0	2	2	0	PS
		Staff sensitized	No. of staff sensitizes	50	0	25	25	0	0	0	0	2	2	0	PS
	Reduced corruption incidences	100% corruption prevented	Level (%) of corruption prevented	100	100	100	100	100	100	10	15	20	20	25	PSs
Promote national Values and	Improved governance	Awareness on the National	Number of awareness	16	-	4	4	4	4	0	10	10	10	10	PSs

Strategies	Outcomes	Expected Output / Target	Performance Indicator	5 year Output target	Key Performance Targets					Estimated Budget (Kshs. Millions)					Responsibility /Actor
					2018/19	2019/20	2020/21	2021/22	2022/23	2018/19	2019/20	2020/21	2021/22	2022/23	
principles of governance		Values and Principles of Governance created	creation forums												
Sub-Total KRA 8										10	25	34	34	35	
TOTAL										43,256.4	57,810.3	55,236.1	56,540.8	53,536.9	
GRAND TOTAL										266,380.5					