



REPUBLIC OF KENYA

MINISTRY OF AGRICULTURE, LIVESTOCK, FISHERIES AND COOPERATIVES

AGRICULTURAL POLICY - 2021

“FOOD: OUR HEALTH, WEALTH AND SECURITY”



**MINISTRY OF AGRICULTURE,
LIVESTOCK, FISHERIES AND
COOPERATIVES**

2021



MINISTRY OF AGRICULTURE, LIVESTOCK,
FISHERIES AND COOPERATIVES

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Ministry of Agriculture,
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and Cooperatives

FOREWORD

The Fourth Schedule of the Constitution of Kenya provides for the Agricultural Policy as a function of the National Government. It transfers key components of agriculture including crop and animal husbandry, fisheries development and control of plant and animal diseases amongst others to the County governments. The Constitution also affirms the right of every person to be free from hunger and to have food of acceptable quality and quantity.

Agriculture forms the basis of food production in the country and significantly contributes to growth of the national economy. National and County Governments need to develop appropriate strategies that will lead to food and nutrition security and safety at their respective levels. The Ministry of Agriculture, Livestock, Fisheries and Cooperatives, in collaboration with County governments and relevant stakeholders, has taken the initiative to formulate the Agricultural Policy which will be the basis of legislation, strategies, plans, projects and programmes for the country's agricultural development. Respective agriculture commodity based and county agricultural policies and legislations are expected to conform to the Agricultural Policy.

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

In addressing the challenges, the Policy recognizes institutional and capacity limitations in the Agricultural Sector and provides for functional linkages between the Sector and respective institutions whose domains have potential impacts on agricultural value chains. It takes cognizance of cross-cutting issues, particularly agriculture in a changing climate, youth and gender, which have significant effects on agricultural development.

The Policy affirms the interrelationship between food and health together with insecurity levels that have a definite bearing on personal and national security. In this regard, it emphasizes the need for National and County Governments to commit adequate resources to enable sustainable production of sufficient and diverse nutrient dense foods. Consequently, the highest leadership at both levels of government is expected to take responsibility for the development of annual implementation plans for this Policy.

Hon. Peter G. Munya, E.G.H.,
Cabinet Secretary,
Ministry of Agriculture Livestock Fisheries and
Cooperatives.





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PREFACE

The Agricultural Sector continues to be a key economic and social driver of development in Kenya's Vision 2030 and Sustainable Development Goals (SDGs). The Constitution of Kenya under the Bill of Rights provides for the "right to food of adequate quality and quantity at all times for all". This right is a clear mandate and requirement which must be given priority to ensure food safety, food security and nutrition even as we pursue other equally important objectives of reducing poverty and generating employment. This Policy highlights the challenges, opportunities and proposes interventions for sustainable development of crops, livestock and fisheries and sub-sectors.

With the current impacts of climate change and emerging pests and diseases posing a great challenge to agriculture production, the policy recognizes the need for crop diversification and irrigation to enhance food production, household income, National wealth and food & nutrition security.

Crops contribute greatly to the economy where the industrial crops contribute upto 70% of agricultural exports and these include tea, coffee, sugarcane, cotton, sunflower, pyrethrum, barley, tobacco, sisal, coconut and bixa. Tea is a leading foreign exchange earner and its export value was KES 104.1 billion in 2019, KES 134.8 billion in 2018 and KES 134.8 billion in 2017. In 2017 fresh horticultural crops contributed export earning of KES 115.3 billion growing to KES 144.6 billion in 2019, (KNBS, 2020). Food crops contribute about 32% of the AgGDP and 0.5% of exports earning.

Livestock plays an important economic and socio-cultural role among many Kenyan communities. The sub-sector employs 50% of the agricultural labor force and over 10 million Kenyans living in the Arid and Semi-Arid Lands (ASALs) derive their livelihood largely from livestock. The value of livestock and livestock products increased from KES 146.8 billion in 2018 to KES 147.9 billion in 2019 (KNBS, 2020). About 60% of Kenya's livestock herd is found in the ASALs, which constitute over 80% of the country.





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The major livestock resources include cattle, camel, poultry, sheep, goats, bees, emerging livestock and their products. These support livelihoods through provision of food and wealth for Kenyans and significantly contribute to the National economy. The livestock sub-sector has the potential to provide adequate supply of all animal products to meet domestic needs and surplus for export. For growth in the livestock sub-sector, the policy recognizes the need to improve animal genetics, control of trade sensitive diseases, value addition of livestock produce and increased access to markets that greatly increase the industry's performance.

Fisheries are a major source of income, food, employment and foreign exchange earnings in Kenya. We have both natural fisheries resources in the fresh inland water bodies and the Indian Ocean as well as farmed fish from our growing aquaculture systems. Kenya's annual fish production is valued at approximately KES. 22 billion at ex-vessel price. Inland capture fisheries (fresh water) contributed 111,814 tonnes (83%) of fish valued at KES. 18.58 billion while marine capture fisheries contributed 23,286 tonnes (17%) valued at KES. 4.38 billion (KNBS, 2018). There is need to sustainably manage the fisheries of Lake Victoria and Lake Naivasha and, invest in the development of unexploited fisheries of Lake Turkana, the Exclusive Economic Zone (EEZ) of the Indian ocean and aquaculture. The aqua- culture potential in the country is estimated at 1.4 million ha of which only 2% is exploited. Kenya's aquatic ecosystem and species are prone to diverse anthropogenic threats such as pollution, uncontrolled water abstraction, deforestation, siltation and unregulated physical developments. These have serious and significant impacts on the breeding areas of coastal and inland waters. The proliferation of alien invasive species threatens sustainability of indigenous species. Other factors affecting fishery stocks include global warming and drying up of water bodies as a result of climate change.

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EXECUTIVE SUMMARY

The Agricultural Sector contributes over 31.3% of the country's Gross Domestic Product (GDP) and a further 27% through manufacturing, distribution and service sectors and accounted for 69.7% of the total export earnings. The Sector employs over 80% of Kenya's rural work force and provides more than 15.5% of formal employment (KNBS, 2018). Overall marketed agricultural production increased from KES 413.2 billion in 2016 to KES 465.7 billion in 2019 with marketed crops accounting for 68.3%. The agricultural production comprised livestock and products at KES 147.9 billion; tea at KES 104.1 billion; other permanent crops at KES 14.6 billion; temporary industrial crops at KES 18.8 billion; horticulture at KES 144.6 billion; and cereals at KES 35.8 billion (KNBS, 2020). The Kenya Vision 2030 recognizes the significance of agriculture towards its goals that aim to achieve an average Gross Domestic Product growth rate of 10% per year up to the year 2030.

Over the years, development of the Agricultural Sector has been guided by different plans, policies and strategies. Such included, the Swynnerton Plan of 1954 discouraged traditional land tenure and introduced title deeds that created security of tenure and ability to obtain credit. The Sessional Paper No. 10 of 1965 on African Socialism and its application to planning in Kenya envisaged concentration of agricultural investment in high rainfall areas.

In 1983, the District Focus for Rural Development was introduced as a measure towards providing proximate administrative services to the people. It enhanced participation in decision making and improved identification of local priorities. The Structural Adjustment Programmes of 1990s led to restructuring of agricultural institutions, liberalization of product prices and privatization of services.

The Integrated Agricultural Development Programmes were meant for the development of smallholder agriculture by establishing wholesome farming systems through provision of agricultural inputs and strengthening of extension services and institutions. In 2000, the Poverty Reduction Strategy Paper (PRSP) was developed to address the twin objectives of driving economic growth and reducing poverty.

In 2003, the PRSP gave rise to the Economic Recovery Strategy for Wealth and Employment Creation that focused on growth and macroeconomic stability; improved governance; social equity, poverty reduction and rehabilitation of infrastructure. Later, in 2004, the Strategy for Revitalizing Agriculture was launched. It represented the National Policy for steering the revitalization and development of the Agricultural Sector over the period 2004 to 2014.

In 2010, the Agricultural Sector Development Strategy was developed and it provided a framework for progressive agricultural growth and development in the next 10 years. It mainly aimed at transforming Agri- culture into a modern and commercially viable Sector. The Strategy will be reviewed to anchor it to this Policy.

In spite of recording impressive growth as a result of the outlined plans, policies and strategies, the Agricultural Sector still faces many challenges.





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The challenges include highly erratic and unpredictable rainfall in ASAL counties (84% of the country), a steady reduction of agricultural land; low agricultural production and productivity; poor marketing, low diversification in production, market uncertainties and low value addition to agricultural products; high post-harvest losses and unfavorable taxation and tax regimes. Other key challenges are ineffective and inefficient inter-sectoral linkages for development of agriculture; high cost of credit for investment in agriculture; poor governance in farmer organizations and farmer cooperatives; fewer adherences to demand-driven research for agricultural development; ineffective research-extension-farmer linkages and inadequate insurance facilities to cushion farmers and fisher folk from production uncertainties.

This Agricultural Policy undertakes to address the identified challenges in the Agricultural Sector by providing guidelines to the National and County Governments; specifying the different roles towards ensuring household and national food and nutrition security; food safety; increasing agricultural production and productivity through the use of appropriate good quality and affordable inputs; facilitating access to premium domestic, regional and international markets and reducing post-harvest losses while promoting agribusiness, value addition and product development. Other guidelines outlined in the Policy include strengthening inter-governmental relations, agricultural institutions, developing institutional linkages and enhancing collaboration in order to create harmony and synergy in developing agricultural resources; harnessing resources for improved agricultural output in partnership with the private sector and introducing appropriate financing and insurance systems in the agricultural sector; promoting demand-driven research and timely dissemination of research findings in the agricultural sector and conserving bio-diversity of different crops, livestock and fish.

The Policy adheres to relevant provisions of the regional economic communities while recognizing and embracing international standards in crop, fisheries, animals and animal products and food and feed safety.





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ACRONYMS AND ABBREVIATIONS

ARR	Annual Review Report
AfCFTA	African Continental Free Trade Area
AIDS	Acquired Immune Deficiency Syndrome
AFSD	Agriculture and Food Security Division
AgGDP	Agricultural Gross Domestic Product
ASALs	Arid and Semi-Arid Lands
ASDS	Agricultural Sector Development Strategy
CAADP	Comprehensive African Agricultural Development Programme
CAC	Codex Alimentarius Commission
COMESA	Common Market for Eastern and Southern Africa
DAC	District Agricultural Committee
DDC	District Development Committee
DFRD	District Focus for Rural Development
EAC	East African Community
ERS	Economic Recovery Strategy for Wealth and Employment Creation
GDP	Gross Domestic Product
FAO	Food and Agriculture Organization of the United Nations
HIV	Human Immune-deficiency Virus
NARC	National Rainbow Coalition
ICT	Information Communication Technology
IGAD	The Inter-Governmental Authority on Development
IFAD	InterNational Fund for Agricultural Development
IPPC	International Plant Protection Convention
MDAs	Ministries, Departments and Agencies
M & E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MTEF	Medium Term Expenditure Framework
MTP	Medium Term Plan
NEPAD	New Partnership for Africa's Development
NGO	Non- Governmental Organization
NIMES	National Integrated Monitoring and Evaluation Systems
OIE	World Organization for Animal Health
PPP	Public-Private Partnership
PRSP	Poverty Reduction Strategy Paper
SAPs	Structural Adjustment Programmes
SPS	Sanitary and Phytosanitary Standards
SRA	Strategy for Revitalizing Agriculture
UNCCD	The UN Convention to Combat Desertification
UNEP	United Nation Environment Programme
WTO	World Trade Organizations
WFP	World Food Programme
LVFO	Lake Victoria Fisheries Organization
SWIOFC	South West Indian Ocean Fisheries Commission
WIOMSA	West Indian Ocean Marine Science Association



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GLOSSARY

Agriculture	In this document, agriculture means crop, livestock and fisheries.
Agricultural Sector	The crop, livestock and fishery subsectors”. The Agricultural Sector is functionally related to the Land, Water, Environment, Forestry and Cooperative Sectors.
Agro-ecology	An approach to farming that “centers on food production that makes the best use of nature’s goods and services while not damaging these resources.” It applies ecology to the design of farming systems; uses a whole-systems approach to farming and food systems; and links ecology, culture, economics and society to create healthy environments, food production and communities.
Agricultural value chain	Refers to the whole range of goods and services required to produce an agricultural product or produce and access the market and the final consumer with appropriate waste management.
Commercial agriculture	Agricultural production that provides more than 50% marketable surplus. Producers mainly target markets and aim to meet different needs of customers. The overall goal of commercial agriculture is profit maximization.
Capture fisheries	Refers to all kinds of harvesting of naturally occurring living fish resources in both marine and freshwater environments.
Consolidation of land for agriculture	Organization of land uses through participatory rural physical planning with a view to availing land already under other uses or preserving unsettled land for agricultural production. The guiding principle being “discouraging further subdivision of agricultural land and settlements in agricultural land while identifying and designating new settlement areas outside agricultural land where planned residential houses or homesteads will be constructed”. Consolidation in heavily populated rural areas will be a gradual process that is expected to take place in 10-20 years.
Climate Smart Agriculture	An approach to developing technical, policy and investment conditions towards achievement of sustainable agricultural development for food security under climate change.
Emerging livestock	Non-conventional animals that have recently gained use as a source of livelihood or wealth.
Emerging crops	Non-conventional crops that have recently gained use as a source of livelihood or wealth.



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Entrepreneurship	The capacity and willingness to develop organise and manage a business taking into account possible risks in order to make a profit. An entrepreneur has the ability to translate ideas, challenges, innovations or technologies into commercially viable opportunities.
Farmer	A person, who grows crops, rears livestock or produces fish.
Feed	Any single or multiple materials, whether processed, semi-processed or raw, which is intended to be fed directly to animals.
Food	Any substance, whether processed, semi-processed or raw, which is intended for human consumption.
Fisheries	Refers to the activities leading to and resulting in the harvesting of fish and involves capture of wild fish or raising of fish through aquaculture.
Fishery	Refers to the species, the fishing gear and method used or area.
Livestock	Refers to domesticated animals reared in an agricultural setting to support livelihoods and generate income.
Genetic material	Any material of plant, animal, microbial or other origin containing functional units of heredity.
Genetic resources	Genetic material of actual or potential value in crops, livestock and fisheries.
Marginalized group	A group of people who, because of certain laws or practices, were previously economically, socially or culturally disadvantaged.
Produce	Farm products in their original state.
Warehouse receipt	A document that provides proof of ownership of commodities stored in a warehouse, vault or depository by a producer, manufacturer or distributor.
Subsistence agriculture	Agricultural production intended to provide enough food for the farmer and his or her household, with less than 25% marketable surplus.

CHAPTER ONE

1. INTRODUCTION

1.1 Background

The economy of Kenya is primarily dependent on agriculture. About 80% of the total Kenyan population lives in the rural areas and are directly or indirectly engaged in a wide range of activities in crops, livestock and fisheries (ASDS, 2010). Agriculture is the mainstay of the Kenyan economy with great potential for growth.

The Agricultural Sector is characterized by various production systems that vary in efficiency, productivity and resilience. These are extensive, semi intensive, intensive and are dependent on agro-ecological zonation. The Agricultural Sector comprises of the following sub-sectors: crops, livestock and fisheries. There are many stakeholders in the Sector due to its role in the economy and its rural-based nature that touches the livelihoods of many people.

According to Kenya National Bureau of Statistics (2018) the Agricultural Sector contributed 31.3% of the country's Gross Domestic Product (GDP) and a further 27% through manufacturing, distribution and service sectors. It also accounted for 69.7% of the total export earnings. The sector employs over 80% of Kenya's rural work force and provides more than 15.5% of formal employment (KNBS, 2018).

Overall marketed Agricultural production increased by 12.7% from KES 413.2 billion in 2016 to KES 465.7 billion in 2019 with marketed crops accounting for 68.2%. This comprised Livestock and Products KES 147.9 billion; Tea KES 104.1 billion; Other permanent crops KES 14.5 billion; Temporary Industrial crops KES 18.4 billion; Horticulture KES 144.6 billion; and cereals KES 35.8 billion (KNBS, 2020). The fisheries and aquaculture production had a slide decline from 147, 678 metric tonnes in 2016 to 146, 543 metric tonnes in 2019 valued at KES 24.4 billion to 23.7 billion respectively (KNBS, 2020).

Land is the most important resource in agricultural production. Limited availability of productive land is a major constraint to increased agricultural production.

Kenya has an area of about 587,000 km² out of which 11,000 km² is water. Of the remaining 576,000 km² landmass, only about 16% is of high and medium agricultural potential with adequate and reliable rainfall. This potentially arable land is dominated by commercial agriculture with cropland occupying 31%, grazing land 30% and forests 22%. The rest of the land is used for human settlements and game parks. Capital, the other major factor of agricultural production, will be key in the transformation of fisheries, livestock and crop production into viable commercial undertaking. Credit advanced by commercial banks to various private enterprises was KES 1,915 billion in December 2017 of which only KES 83 billion was advanced to the Agriculture Sector.

Inadequate entrepreneurial skills have been found to inhibit commercialization of agriculture. Many actors in agricultural value chains lack a "business mindset" and continue to engage in enterprises that offer little change in their levels of income. Without adequate entrepreneurial skills, agricultural value chain actors with more than one source of income tend to unknowingly subsidize unviable agricultural enterprises while those who mainly rely on agriculture continue to be poor. There is need to improve entrepreneurial skills of agricultural value chain actors.

About 84% of the country is arid or semi-arid and is not suitable for rain fed crop farming due to low and erratic rainfall though there is limited cultivation of some crops. The ASALs are used for rangeland production by ranchers, agro pastoralists and pastoralists. The future of agricultural growth depends on intensification and substitution towards high value products and expansion of cultivable area, availability of forage and water resources through irrigation for crops, livestock and fisheries production.



1.1.1 The Crops Sub Sector

The Crops sub Sector comprises of food, horticultural and industrial crops among others. According to the 2018 Economic Survey report of Kenya, industrial crops contributed 72% of the Agricultural Gross Domestic Product (AgGDP) in 2018. The main industrial crops in Kenya include tea, coffee, sugarcane, cotton, sunflower, pyrethrum, barley, tobacco, sisal, coconut and bixa, all of which contribute about 69.7% of agricultural exports. Tea a leading foreign exchange earner; its export value has decreased from KES 147.3 billion in 2017 to KES 104.1 billion in 2019. Industrial crops whose production have declined but have great potential are pyrethrum, cotton, oil crops, coffee, cashew nuts and sisal. (MoAL&F, 2015; KNBS, 2020).

Horticulture is a critical Industry in the country that has recorded a remarkable export driven growth in the past decade. In 2017 fresh horticultural crops contributed KES 115.3 billion accounting for 21.4 per cent of the total value of domestic exports but increased to KES 144.6 billion in 2019.

Food crops contribute about 32% of the AgGDP and 0.5% of exports earning. Crop production declined in 2017 due to depressed performance of the long and short rains. The Sector's real gross value-added growth decelerated to 1.6 % in 2017. Production in 2017 of maize, wheat and paddy rice was 35.4 million bags, 165.2 thousand tonnes and 81.2 thousand tonnes respectively. Production in 2019 of maize, wheat and paddy rice was 39.8 million bags, 366.2 thousand tonnes and 160.2 thousand tonnes respectively While in 2017 production of beans and Irish potatoes was 9.4 million bags and 1.5 million tonnes respectively, in 2019 they production of Beans and Irish potatoes were 8.3 million bags and 2 million tonnes respectively. Sugar cane total production was 4.8 million tonnes in 2017 compared to 4.6 million tonnes in 2020(KNBS, 2020).

Despite the decline in production of most crops, the value of principal domestic export commodities rose by 4.8 per cent to KES 530.6 billion in 2017 but declined by 4.1 per cent to 520.8 billion in 2019 as

a result of declines in the value of tea, unroasted coffee and horticultural exports. To cover deficits in crop production, the country imported 1,328 thousand tonnes of maize, 1,855.0 thousand tonnes of wheat and 990 thousand tonnes of sugar (KNBS, 2018). This indicated a significant rise of crop imports into the country. However, Tea and horticulture remained key agricultural items in domestic exports in 2019 while wheat and rice were major imported items. The value of tea exports declined by 18.2 per cent from KES 138.8 billion in 2018 to KES 113.6 billion in 2019 while the value of horticultural exports declined by 1.1 per cent to KES 122.9 billion. Earnings from unroasted coffee went down by 12.1 per cent to KES 20.3 billion in 2019 albeit the increase in the quantities exported. (KNBS; 2020).

1.1.2 Livestock Sub Sector

The Livestock Sub Sector contributes about 11% of the AgGDP and about 4% of National Agricultural Gross Domestic Product (GDP). The sub Sector employs 50% of the agricultural labor force and over 10 million Kenyans living in the Arid and Semi-Arid Lands (ASALs) derive their livelihood largely from livestock. About 60% of the countries' livestock herd is found in the ASALs, (KNBS, 2020).

The Livestock Sub Sector has the potential to provide adequate supplies of all animal products to meet domestic food and nutrition needs as well as generate surplus for export. The National census of 2019 showed that Kenya's animal resource base comprised of 2.2 million dairy cattle, 559,000 dairy beef, 13 million indigenous cattle, 19.3 million sheep, 28 million goats, 4.6 million camels, 1.2 million donkeys, 443,000 pigs, 30.3 million indigenous chicken, 5.6 million layers, 2.9 million broilers, 561,000 rabbits and 1.2 million beehives.

According to the KNBS (2020) the number of animals slaughtered in abattoirs in 2019 was 3,080.8 thousand heads of cattle, 11,302.7 thousand goats and sheep, 413.5 thousand pigs. During the same period a total of 668.2 million litres were delivered to dairy processors,





marking an increase in production of 5.3%. The quantity of exported leather increased by 12.1% in 2017 to 24,271 tonnes while that of Hides and Skins declined by 60.2% to 1,105 tonnes in 2017, (KNBS, 2018).

The value of marketed livestock and livestock products increased by 8.3% KES 446.9 billion in 2017. This comprised KES 93.63 billion for Cattle products; KES 6.782 billion for Goats and Sheep products; KES 10.674 billion Chicken and eggs; and KES 20.878 billion for milk and milk products in 2017 (MoALF&I, KNBS, 2018).

Animal resources support livelihoods, contribute to nutrition as a source of food, provide wealth for Kenyans and significantly contribute to the national economy. In totality, the animal resource industry (livestock, wildlife, farmed wildlife, companion and aquatic animals) contributes 22% of the National GDP (Behnke, 2011). Improvement in early warning and response, animal genetics, control of trade sensitive diseases, value addition to livestock produce and increased access to markets can greatly increase the industry's performance.

1.1.3 The Fisheries Sub Sector

Fisheries are major sources of income, food, employment and foreign exchange earnings in Kenya. Lake Victoria is the most important source of fish in East Africa and the biggest source of freshwater fish on the African continent. The lake is also important in conservation terms because of its great biodiversity of endemic fish species.

Kenya's Fisheries Sub Sector is mainly composed of freshwater (lakes, rivers and dams) and marine (Indian Ocean) sources with the rest coming from aquaculture. Fish production is estimated at 150,000 tonnes annually, the sub Sector contributes about 0.8% of the country's National GDP and 5% of AgGDP. The sub Sector provides food, employment and incomes to a large part of the population and earned the country KES. 23.7 billion in 2019.

Kenya's annual fish production is valued at approximately KES. 24 billion at ex-vessel price. Inland capture fisheries (fresh water) contributed 120,873 tonnes (82.4%) of fish valued at KES. 18.92 billion while marine capture fisheries contributed 25,670 tonnes (17.5%) valued at KES.4.78 billion. (KNBS, 2020).

Kenya's aquatic ecosystem and species are prone to diverse anthropogenic threats. Pollution, uncontrolled water abstraction, deforestation, siltation, and unregulated physical developments have serious and significant impacts on the breeding areas of coastal and inland waters. The proliferation of alien aquatic flora and fauna invasive species threatens sustainability of indigenous species. Other factors affecting fishery stocks include global warming and drying of water bodies as a result of climate change. Fisheries have cross border challenges that need regional and inter- national solutions. The International and regional bodies that provide policy direction, legislation and coordination mechanisms for conservation, management and development in fisheries and aquaculture include; Lake Victoria Fisheries Organization (LVFO), South West Indian Ocean Fisheries Commission (SWIOFC), Indian Ocean Commission (IOC), West Indian Ocean Marine Science Association (WIOMSA) among others.

1.1.4 Agricultural Research and Development

Agricultural research is highly correlated to growth and development in agriculture to tackle challenges in agricultural value chains. Research is increasingly needed for diversification, product value addition, market access, enhancing incomes and gender mainstreaming. It is needed to improve product quality, food safety and equity in economic growth, while limiting the negative effects on the environment. Research is carried out by publicly funded institutions, private sector, regional and international research institutions but without a common vision leading to lack of cohesion, inefficient use of resources and limited impact. Inadequate agricultural technology and innovation development transfer and successful adoption is therefore leading to low productivity (NARS Policy, 2012).



1.2. Trends in Global, Regional and Local Production in Crops, Livestock and Fisheries

The world food production has increased substantially in the last century, as has the population thus the per capita calorie intake. The world has made significant progress in raising food consumption per person. In the last three and a half decades it increased from an average of 2370 kcal/person/day to 2770 kcal/person/day, (Bruinsma, 2012). However, the absolute number of undernourished people has increased the current food crisis to over 963 million (UNEP, 2014). The demand for food is projected to continue to increase as a result of population growth and growing consumption of animal products in the developing world. World food production rose substantially in the last century, primarily as a result of increasing use of irrigation and fertilizer, improved technologies and expansion of agriculture into new lands and waters.

The projected global economic growth of about 2.9% annually is expected to contribute a significant reduction or even near elimination of absolute “economic” poverty in the developing countries. This means that, the market demand for food and feeds will continue to grow. Demand for cereals, for both food and animal feed is projected to reach some 3 billion tonnes by 2050, (FAO, IFAD and WFP, 2014).

1.2.1 Global Trends

The major crops grown in the world include; maize, wheat, tea, coffee, rubber, sugarcane and cocoa. These are spread all over the world depending on their eco- logical suitability. The global production of cereals and pulses was estimated at 6.7 and 0.5 million tonnes respectively in 2013. There has been an incremental growth in production for all major crops over the years due to human population growth, changing lifestyles accentuated by resettlement of agro pastoral and pastoral communities diversifying to crop and fish farming.

The global production of dairy and dairy products was 227 million tonnes while meats were 616 million tonnes

in 2013 (FAOSTAT, 2018). The production of meats in the developing world tripled between 1980 and 2002 from 45 to 134 million tonnes. Livestock growth was concentrated in countries that experienced rapid economic growth, particularly in East Asia which involved poultry, pigs and their products. In the developed countries, production and consumption of livestock products is growing slowly and skewed towards large livestock mainly sheep, goats, beef and dairy.

According to (FAOSTAT, 2018), global fish production has grown steadily in the last five decades with food fish supply increasing at an average annual rate of 3.2% and outpacing world population growth at 1.6%. World food fish aquaculture production expanded at an average annual rate of 6.2 % in the period 2004 - 2012 from 32.4 million to 66.6 million tonnes. A significant but declining proportion of world fisheries production is processed into fishmeal and fish oil which is produced from whole fish, fish remains or other fish by products. About 35% of the world fishmeal production was obtained from fish residues in 2012. Overall, women accounted for more than 15% of all people directly engaged in the fisheries primary sector in 2012. Fish remains among the most traded food commodities worldwide. The share of total fisheries production exported in different product forms for human consumption or non-edible purposes grew from 25% in 1976 to 37% (58 million tonnes live-weight equivalent) in 2012.





1.2.2 Regional Trends

Horn of Africa comprises of; Kenya, Ethiopia, Sudan, Somalia, Djibouti, Eritrea, Uganda, Southern Sudan and Tanzania. It has a dynamic livestock sub sector. Crops are restricted to specific climatic environments in specific countries. In 2013, the production of cereals and pulses was 4.75 and 0.51 million tonnes respectively. The livestock subsector produced 2.2 and 7.9 million tonnes of dairy and meat products over the same period. Three categories of fisheries are utilized in Africa namely; marine, inland and aquaculture. In 2012, the production of these fisheries was estimated at 5.5, 2.7 and 1.65 million metric tonnes from marine, inland and aquaculture respectively that represented a 7%, 23% and 2% of the global fisheries catch (FAOSTAT, 2015).

1.2.3 Local Trends

The trend of agriculture production over the last five years has been incremental. For instance, the major crops namely cereals and pulses, horticulture, industrial crops such as tea, coffee whose total value at recorded market agricultural production at current prices was estimated at KES. 242 billion in 2013 and KES. 311 billion 2017. The production of animal and animal products increased; in 2013 the production of meats was estimated at KES 78 billion and KES 16 billion of milk, compared to KES 115 billion and 20 billion in 2017 respectively. The production of fisheries and aquaculture has shown decline from 163,389 tonnes in 2013 to 135,100 tonnes in 2017. Inland capture, marine and aquaculture fisheries in 2017 contributed 99, 458 tonnes; 23,286 tonnes and 12,356 tonnes respectively (KNBS, 2018).

1.3 History of Agricultural Policy Development in Kenya

The history of agricultural policy formulation in Kenya is linked to entrenchment of the colonial government's first legislative body constituted to apportion land and fisheries resources through a series of ordinances. This promoted settler farming and agriculture based recreational interests in the 1920s. Since then, Kenya's

Agricultural Sector has evolved through a series of socio-political dynamics and reforms. A number of policies and sessional papers have greatly influenced this growth and development.

1.3.1 Pre-independence Agricultural Policies

The development of African agriculture in Kenya from pre-independence period (1902-1960) was mainly influenced by the colonial administration policies and advocacy by the European farmers'. This period is credited for establishment of agricultural extension services, agricultural research, introduction of exotic livestock and cash crops. In 1901, the East African Agricultural and Horticultural Society, the predecessor of Agricultural Society of Kenya, was formed by John Ainsworth to promote agricultural development based on European settlement. The first show was held at the present day Jeevanjee gardens in 1902. In 1903, the Colonial Government established an Agriculture Department in the country.

Three types of government interventions in the history of agriculture in Kenya were towards; land tenure policies, marketing and pricing and agricultural research. Land tenure policy consisted primarily of reallocating property and sole land rights to settlers. The first twenty years of colonial settlement focused on the Nakuru region. Between 1905 and 1914, over four million acres of land were alienated from Africans to European settlers. In 1919, the British East African Maize Growers Association was formed by the settlers. This Association later evolved into Kenya Farmers Association. By 1920, there was already a strong settlers' push for full economic and political control of the colony.

In 1921, due to the world economic recession occasioned by World War 1, the colonial government responded to the low prices of Kenyan exports by appointing the Browning Committee to promote and protect European production of a wide range of crops. In 1923, the British government, in an effort to address





the concerns of Africans, developed the Devonshire White paper, which stated that the interests of Africans was paramount and superseded that of the settlers. This principle was ignored by the white settlers resulting in more alienation of more African land. The African population was seen as a source of labour to the settlers.

During World War II, the British government promoted Kenyan agriculture as part of the war effort. Guaranteed prices and returns per acre, continued marketing control and other policies were introduced to assist settlers and to increase food production for the troops. The Ten-Year Development Plan of 1946 gave greater consideration to African farmers and resulted to the Swynnerton Plan of 1954 whose implementation over the next eight years signaled a change with increasing attention accorded to African agriculture.

The Swynnerton Plan aimed at intensifying the development of agriculture in the Kenya colony and was geared towards expanding crop and livestock production for the natives. The plan advocated reversal of the policy of maintaining traditional or tribal systems of land tenure and issuing of title deeds that created security of tenure and ability to obtain credit. It allowed African farmers to grow cash crops among other changes.

1.3.2 Post-independence Policies and Strategies

1.3.2.1 The Sessional Paper No. 10 of 1965 on African Socialism and its Application to Planning in Kenya

Upon attainment of independence in 1963, the economic aims of the new government were set out in the Sessional Paper No. 10 of 1965 on African Socialism and its Application to Planning in Kenya.

The main thrust of this Strategy was promotion of rapid economic growth through public sector programmes, encouragement of both smallholder and large-scale farming and the pursuit of accelerated growth of

private sector investment. The policy envisaged concentration of agricultural investment in high rainfall areas. According to the policy, these areas had abundant natural resources, good land and adequate rainfall, transport and energy facilities and a people receptive to and active in development. Potential impacts could be realized easily and the marginal areas could benefit from the spill over.

1.3.2.2 District Focus for Rural Development

Kenya followed a strongly centralized development planning strategy since independence in 1963. In 1983, a new approach referred to as the District Focus for Rural Development (DFRD) was introduced. The DFRD made the district a centre of planning, implementation and management of rural development. It took administrative services closer to the people, enhanced participation in decision making and improved identification of local priorities. Prioritization of programmes and projects in agriculture were done through district structures such as District Agricultural Committees (DACs) and District Development Committees (DDCs).

1.3.2.3 Structural Adjustment Programmes

Structural Adjustment Programmes (SAPs) were a series of economic and political reforms initiated by the Bretton Woods Institutions (World Bank and International Monetary Fund) in developing countries with the aim of enhancing economic growth and development. In Kenya, SAPs were implemented in the 1990s. They were articulated in the Sessional Paper No. 4 of 1980 on Economic Prospects and Policies and later elaborated in Sessional Paper No. 1 of 1986 on Economic Management for Renewed Growth which acted as the blueprint for the implementation of SAPs.





The Sessional Papers provided ideal development targets and policy guidelines and were meant to attract support from development partners by rewarding governments that adopted the reforms. The reforms led to significant changes in agriculture including restructuring of agricultural institutions, liberalization of product prices, and privatization of services and retrenchment of public servants some of whom served in critical areas in the Sector.

1.3.2.4 Integrated Agricultural Development Programmes

The Integrated Agricultural Development Programmes were financed by the World Bank and were meant for the development of smallholder agriculture. They introduced a new approach to development planning on a pilot basis. They aimed at establishing whole farm systems through provision of inputs and strengthening of extension services and institutions. This was meant to provide support for a wide-range of crop and livestock activities in four of Kenya's then provinces. The project targeted production of maize, beans, cotton, potatoes, passion fruit, oil seeds, meat and milk by about 70,000 small-scale farmers operating some 56,000 farm holdings.

1.3.2.5 Poverty Reduction Strategy Paper

In June, 2000, Kenya adopted the interim Poverty Reduction Strategy Paper (PRSP) which coincided with the first Medium Term Expenditure Framework (MTEF) budget and formed the basis of the full PRSP. The PRSP had twin objectives of Economic growth and Poverty reduction. The Paper identified strategies to integrate sectoral objectives and ensure that priority actions were consistent with the goals of spurring growth and reducing poverty. PRSP was guided by general principles and key objectives of linking policy, planning and budgeting, identifying National development objectives and priorities, quality expenditure leading to efficiency gains and harmonization of financing frameworks.

In addressing agricultural objectives, PRSP developed a framework for implementation of key priority programmes and projects aimed at addressing core poverty in the rural areas that were, and still are, almost entirely dependent on agriculture. PRSP provided for mobilization of resources for investment in agriculture from development partners and local sources.

1.3.2.6 Economic Recovery Strategy for Wealth and Employment Creation

In 2003, the Economic Recovery Strategy for Wealth and Employment Creation (ERS) was developed. The ERS took into account proposals in the five-year Poverty Reduction Strategy Paper, the National Rainbow Coalition (NARC) party manifesto and other Government policy documents. The ERS focused on four main pillars namely growth and macroeconomic stability, improved governance, social equity, poverty reduction and rehabilitation of infrastructure.

The Strategy led to the formation of key institutions to spearhead implementation of policies and improve service delivery in the public sector. Under ERS, the economy grew by 2.9 % in 2003, 6.1 % in 2006 and 7 % in 2007.

1.3.2.7 Strategy for Revitalizing Agriculture

The Strategy for Revitalizing Agriculture (SRA) was launched by the Government of Kenya in March 2004. The Strategy entailed a unified Agricultural Sector response towards the support of the ERS. It represented the national policy for steering the revitalization and development of the country's agricultural sector over the period 2004 to 2014. The overriding goal of the SRA was to achieve progressive reduction of unemployment and poverty in Kenya.



1.3.2.8 Agricultural Sector Development Strategy

The Agricultural Sector Development Strategy (ASDS 2010 - 2020) is the overall National policy document for the Agricultural Sector. The ASDS defines the characteristics, challenges, opportunities, vision, mission, strategic thrusts and various interventions that the Sector will undertake to propel agricultural growth and development.

The ASDS has incorporated not only the successes but also the lessons learnt from the SRA. The ASDS provides a framework for stimulating, guiding and directing progressive agricultural growth and development in the next 10 years. Its main thrust is to transform agriculture into a modern and commercially viable sector. The ASDS domesticates Comprehensive Africa Agriculture Development Programme (CAADP) whose overall goal is to help African countries reach a higher path of economic growth through agriculture led development which eliminates hunger, reduced poverty and food insecurity and enables expansion of exports.

1.4. Laws Governing the Agriculture Sector

The Agricultural Policy aims at improving on the gains of the ASDS by outlining guidelines that support realization of ASDS objectives many of which are now functions of County governments. The ASDS will be reviewed to implement this Policy. The Agriculture Sector has been guided by several laws. Key among them are; The Agriculture, and Food Authority (AFA) Act, 2013; The Crops Act, 2013; The Kenya Agriculture and Livestock Research Organization Act, 2013 (KALRO Act, 2013), the Fisheries Management and Development Act, No.35 of 2016, Warehouse Receipt System Act, 2019 and Tea Act, 2020.

Other key legislation include: Food, Drug and Chemical Substance Act (Cap. 254); Maritime Zones Act (Cap. 371); Biosafety Act (2009); The Animal Diseases Act (Cap. 364); and The Meat Control Act (Cap. 356). Research in crops, livestock and fisheries is guided by the Kenya Agricultural and Livestock Research Organization (KALRO) Act, of 2013. The AFA Act and Crops Act repealed the following

Agricultural Sector Acts whose provisions that are still relevant need to be accommodated in newer laws such as: Agriculture Act, Cap. 318; Agricultural Produce (Export) Act, (Cap. 319); Agricultural Produce Marketing Act, (Cap. 320); Crop Production and Livestock Act, (Cap. 321); Canning Crops Act, (Cap. 328); Cereals and Sugar Finance Corporation (Cap. 329); Coconut Industry Act, (Cap. 331); Coconut Preservation Act, (Cap. 332); Cotton Act, (Cap. 335); Pyrethrum Act, (Cap. 340); Sisal Industry Act, (Cap. 341); Tea Act, (Cap. 343); Coffee Act, (No. 9 of 2001); Sugar Act, (No. 10 of 2001); The Irrigation Act, (Cap. 347). Relevant sections of these repealed laws need to be accommodated in new and reviewed laws. The Fisheries Management and Development Act, 2016 repealed the Fisheries Act, Cap.378. There is need for continuous review of the Sector laws.

1.5. Kenya Vision 2030 and Medium Term Plans

The Kenya Vision 2030 is the country's development blue print covering 2008 to 2030 whose primary goal is to transform the country to a newly industrializing "middle income country, providing a high quality of life for all its citizens by the year 2030". It aspires to foster achievement of the United Nation's Millennium Development Goals (MDGs)¹, which have now transformed to the Sustainable Development Goals (SDGs). The Vision is based on three pillars: economic, social and political.

The economic pillar recognizes agriculture as a critical sector in contributing to attainment of the Vision goals that aim at achieving an average GDP growth rate of 10 % per year up to the year 2030. The six key growth drivers for achievement of the economic vision are identified as tourism; increasing value in agriculture; a better and more inclusive wholesale and retail trade sector; manufacturing for the regional market; business process outsourcing and financial services.

¹ United Nation's Millennium Development Goals (MDGs) transformed into the Sustainable Development Goals by end of 2015.





The Vision will be implemented through five year rolling plans, starting with the Medium Term Plan I which covered the period 2008-2012 followed by the MTP II covering 2013-2017 , current MTP III 2017-2022 and subsequent five year plans to be adopted until the Year 2030. The Vision 2030 flagship projects during the implementation of Medium Term Plan III (MTP III) of Vision 2030 are: Fertilizer Subsidy Programme; Agricultural Mechanization Programme; Food and Nutrition Security Programme; Livestock Production Programme; Value Chain Support Programme; Youth and Women Empowerment in Modern Agriculture Programme; Agricultural Insurance Programme; Research and Capacity Building Programme; Crop Diversification Programme; Coastal Disease Free Zone Programme and ; the Strategic Food Reserve programme among others.

In the Fisheries and Blue Economy, there will be development of Blue Economy Programme; Fisheries and Maritime Infrastructure Development Programme; Exploitation of Living Resources under Blue Economy Programme; Aquaculture Business Development Programme; and Aquaculture Technology and Development and Innovation Transfer Programme. Under irrigation there will be; Irrigation and Drainage Infrastructure development; Irrigation Water Storage Programme and; Irrigation Water Management Programme.

1.6 Agriculture and the Constitution of Kenya

Kenya promulgated a new Constitution in 2010 whose key features include the creation of National and County Governments with distinct functions. The Constitution recognizes the importance of natural resources and their use for posterity. In Article 43 (c) under the Bill of Rights, the Constitution stipulates that “every person has the right to be free from hunger and

to have adequate food of acceptable quality”. Article 60 (1) (c) emphasizes sustainable and productive management of land resources while Article 69 (1) (b) stresses the achievement and maintenance of at least 10% tree cover of the land area of Kenya.

The Fourth Schedule of the Constitution provides for devolution of specific functions in agriculture to the County governments. The National government retains the executive function of policy decision making under Part 1 Section 29 of the Fourth Schedule, while the counties take up the implementation task of the policies generated by the National Government. Due to the importance of agriculture to economic development and realization of the Constitutional requirements, it is necessary to have an Agricultural Policy that guides development of the entire Agricultural Sector and unbundles National and County Government functions.

1.7 Scope of the Policy

This Policy will guide the Agricultural Sector in achieving its objectives as envisaged in the Constitution of Kenya and Vision 2030. The Policy articulates a clear vision for organization of the Sector. It provides for inter-sectoral linkages across government agencies, private sector and other public bodies for the Sector’s development. In addressing sustainability and use of natural resources for agricultural development, the Policy gives direction on how watershed development, agro-forestry, soil and water management, genetic resources, pasture development and conservation, rangeland rehabilitation and fisheries resources will be managed. The Policy unbundles the National and County Government functions and provides a clear role for the private sector.

Institutional, organizational and legal reforms are





envisaged to reflect the changes of mandate and functions owing to devolution of services. The Policy takes cognizance of various incentives such as taxes, subsidies and grants necessary for the Sector's development.

1.8 Rationale and Justification of the Policy

The Agriculture Sector has recorded impressive growth since independence though many challenges still persist in achieving food and nutrition security, transforming agriculture from subsistence to commercial production, improving access to markets, efficient use of inputs and accessing agricultural credit among others. Additionally, climatic shocks severely disrupt agricultural production. Despite these challenges there has never been an Agricultural Policy to guide growth of the Sector. The growth and development of the sector has been guided by different policies such as overall government policies which only identify agriculture as a key driver for the overall National development, development plans and strategies. To address the challenges, various sub-sector strategies; and commodity-specific strategies and policies have been developed but they have failed to achieve sector targets. As such policy gaps have been identified that require a comprehensive sector-wide approach that is multi-sectoral and multi-stakeholder.

This Policy provides a framework for sustainable development of the Agricultural Sector based on the requirements of the Constitution, the Kenya Vision 2030, Sustainable Development Goals and other National, Regional and International development goals in agriculture. It outlines effective guidelines for efficient use of opportunities and resources available in the Sector and provides for inter-linkages of agricultural support systems such as irrigation, extension, infrastructure and research. The Policy provides a basis for

mainstreaming food and nutrition security concerns in the country's development programmes and plans. Key primary factors of agricultural production include land and water, to attain continuous food and nutrition security, the Policy provides for their efficient use and management.

Due to the large number of actors across many sub-sectors in agriculture, it is necessary to provide a policy direction for guidance in addressing major development challenges facing the agricultural sector. This provision is further necessitated by the realization that currently, over 80% of Kenyans who are directly or indirectly engaged in agricultural activities are ageing while rising rural-urban migration is steadily depleting the agricultural labour force, if this trend is not adequately addressed, the potential in aggravating food insecurity is real.

Urbanization need not signify doom for agricultural growth as it presents opportunities for enhanced mechanization and commercialization. It is likely to free rural land from human settlement and increase demand for agricultural products in towns and cities. The youth who find agriculture less attractive could develop interest in mechanized and commercial agriculture and thus sustain efforts to improve food security which is the major thrust of this Policy.

Regional and global policies, protocols and treaties including the East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA), African Union (AU), United Nations (UN) and the WTO Agreement affect performance of agriculture in the country. The protocols and treaties specify international requirements for trade, market access, sanitary and phyto-sanitary standards among others. This Policy is aligned to the regional and global agricultural guidelines, goals and targets that recognize the importance of eliminating hunger and ensuring sustainable food security as a measure towards eradication of poverty and consequent development of respective nations. The Policy addresses specific institutional and legal reforms essential for the integration of agriculture in the new structure of governance as provided for in the Constitution of Kenya.





CHAPTER TWO

2. CHALLENGES, POLICY GOALS AND OBJECTIVES

2.1. Challenges in Agriculture

The crops, livestock and fisheries sub-sectors are affected by many challenges that reduce their contribution to the economy and improvement of livelihoods. The challenges include:

1. Declining agricultural land due to a combination of factors including uncontrolled subdivision, inappropriate land use and effects of climate change.
2. Low and undiversified production and productivity due to high cost of inputs, low availability of inputs in remote areas, lack of targeted subsidies, low quality inputs, declining soil fertility, inadequate use of modern technologies, pests and diseases among other factors.
3. Poor marketing, market uncertainties and low value addition that adversely affect economic returns and lead to low sustainability of enterprises in agriculture.
4. High post-harvest losses arising from inadequate technologies for product development and storage, poor infrastructure particularly rural access roads and high energy costs for cooling and processing facilities.
5. Unfavourable taxation and tax regimes that increase production costs reduce opportunities for processing due to high cost of technologies and lower product competitiveness in the local and international markets.
6. Ineffective and inefficient inter-sectoral linkages and coordination for development of agriculture and its contribution to improved food and nutrition security.
7. Limited access to agricultural finances.
8. Socio-cultural barriers to investment in agriculture.
9. Weak governance in farmer organizations and farmer cooperatives that is essential for development of agricultural value chains particularly product marketing.

10. Inadequate demand-driven research for development in agriculture, low uptake of appropriate agricultural technologies and weak research-extension-farmer linkages.
11. Inadequate insurance facilities to cushion farmers and fisher-folk from risks.
12. Unpredictable weather patterns and rainfall variability.
13. Low budgetary allocation to the agricultural sector.
14. Inadequate structured interactive farmer-government fora to address issues affecting the agricultural sector.
15. Low youth participation in agricultural development.
16. Changing consumer requirements in domestic, regional and international markets, in addition to stringent requirements by trading partners has hindered trade in agriculture, agricultural products and inputs.

2.2 Guiding Principles of the Policy

The guiding principles for this policy include:

1. Support and strengthening of the food, health and national security interrelationship.
2. Effective and sustainable agricultural development.





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3. A market oriented and modern technology-driven agricultural economy.
4. Promotion of stable Public-Private-Partnerships for development of the crops, livestock and fisheries sub-sectors.
5. Compliance with international standards in development and growth of the crops, livestock and fisheries sub-sectors.
6. Promotion of Agricultural Ecological Zone-guided production with improved capacity to predict and respond to shocks.
7. Provide for economically viable, socially equitable and environmentally sustainable use of land for crops, livestock and fisheries.
8. Promotion of fair trading practices along the crops, livestock and fisheries value chains.
9. Utilization of science and Indigenous Knowledge and resources.

2.3. Vision

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

2.4. Mission

To facilitate the transformation of agriculture in Kenya from subsistence production to viable commercial enterprises.

2.5. Goals of the Policy

The goals of this Policy are:

1. To transform crop, livestock and fisheries production into commercially oriented enterprises that ensures sustainable food and nutrition security.
2. To provide a framework for the support and intensification of cooperation and consultation between the National and County governments and among other stakeholders for enhanced development of crops, livestock and fisheries.

2.6. Objectives of the Policy

The broad objective of this Policy is to improve food and nutrition security and maximize incomes through optimal utilization of resources in the Agricultural Sector. In actualizing the broad objective, the National





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and County Governments will ensure that household and national food and nutrition security are attained through innovative and cost-effective measures linked to the country's long term development goals.

The specific objectives are to:

1. Ensure household and national food and nutrition security.
2. Pursue commercial agriculture by increasing and diversifying agricultural production and productivity using appropriate, good quality and affordable inputs.
3. Promote demand driven research and timely dissemination of research findings in the agricultural sector.
4. Strengthen agricultural institutions, develop institutional linkages and enhance collaboration to create harmony and synergy in developing agriculture.
5. Reduce post-harvest losses of agricultural produce and products.
6. Promote agribusiness, value addition and product development.
7. Promote and facilitate access to domestic, regional and international markets.
8. Harness resources for improved agricultural output in partnership with the private sector and introduce appropriate financing and insurance systems in the agricultural sector.
9. Protect and conserve bio-diversity that is supportive of sustainable agriculture.
10. Promote sustainable natural resource use and management for agriculture.
11. Guarantee safety of agricultural produce and products.



CHAPTER THREE

3. POLICY STATEMENTS

3.1 Food and Nutrition Security

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

According to the National Food and Nutrition Security Policy of 2012, about one-half of Kenya's estimated 42 million people, are resource poor with over 10 million suffering from chronic food insecurity and poor nutrition annually. The country experiences periodic food deficits particularly in the ASALs. A large proportion of the population is either malnourished or undernourished leading to serious health complications. About 30% of Kenyan children are classified as undernourished. Micro-nutrient deficiencies are widespread. Household food and nutrition insecurity exposes families to disease risks, interferes with growth and development of children and limits work performance. In recent years, it is estimated that at any one time, about 2 million people require assistance to access basic food requirements. During periods of drought, torrential rains and floods, the number of people in dire need of food substantially increases.

3.1.1 Objective

To attain household and national food and nutrition security through innovative and sustainable interventions linked to the Country's long-term development targets.

3.1.2 Policy Statements

The National and County Governments will uphold the principle of "food for health, nutrition and national security". In this regard, the two levels of government will:

1. **Develop annual implementation plans towards realization of household and National food and nutrition security.**
2. **Develop and enforce the legal and institutional frameworks for implementation of crops, livestock and fisheries related policies.**
3. **Develop, manage and sustainably use crops, livestock and fisheries resources.**
4. **Conserve water catchments and riparian zones to ensure regular supply of water for development of crops, livestock and fisheries resources.**
5. **Improve and maintain physical infrastructure for development of crops, livestock and fisheries.**
6. **Improve access to affordable inputs and services in crops, livestock and fisheries production.**
7. **Promote use of modern and appropriate technologies including biotechnology to increase and diversify food and feed production and use.**
8. **Develop and promote production and utilization of diversified food and feed resources in the crops, livestock and fisheries sub-sectors.**
9. **Strive to attain food sufficiency and at all times reserve at least 30% of their annual**





food requirements as strategic food and feed reserve.

10. Enhance production, access and use of affordable safe and quality food and feeds.

The National government will:

1. Develop an integrated food and nutrition security data and information management system for ease of access by stakeholders.
2. Ensure urban food safety and quality control by providing for regulation of food handlers including vendors.

The County Governments will:

1. Promote household or community food and feed storage at 30% of the annual domestic requirements.
2. Promote appropriate use of food and feedstuffs to mitigate wastage.
3. Establish mechanisms to address child malnutrition.
4. Promote nutrition education for health.
5. Encourage attitude change toward utilization of non-conventional foods.
6. Provide for development of urban and peri-urban agriculture.
7. Promote safe storage and handling of food to control food-related hazards.

3.2 Land Use for Crops, Livestock and Fisheries

Land is the most critical resource for crop, livestock and fisheries production. However, continuous

fragmentation of agricultural land holdings for settlement mainly due to local cultural requirements leads to farm sizes getting smaller and negatively impacts production. Economies of scale are lost and mechanization that increases efficiency on agronomic practices is rendered impractical. Many large state farms that used to produce seed and breeding stock have been subdivided and transferred to private ownership. This has severely affected seed and breed multiplication. Farm holdings near major urban areas where demand for settlements is constantly increasing are being developed into estates accelerating the urbanization.

However, urbanisation presents an opportunity for marketing of agricultural produce. In other areas large tracts of land and water bodies have been invaded by alien and invasive species rendering them unusable for traditional agricultural practices.

According to the Ministry of Lands, Water and Environment, the sizes and distribution of land vary widely as does population density which ranges from two persons per square kilometre in the ASALs to a high of over 2000 persons per square kilometre in the rain-fed areas. In the rural areas, farming is dominated by small farm holdings and insecure land-tenure systems that lead to low investment in land improvement and productivity. This contributes to inefficient and ineffective use of land-based resources particularly in the rain-fed areas where 75% of the population lives.

3.2.1 Objective

To provide for economically viable, socially equitable and environmentally sustainable use of land for crops, livestock and fisheries.



3.2.2 Policy Statements

The National and County Governments will:

1. **Prioritize consolidation of land for crops, livestock and fisheries use.**
2. **Identify, map and regulate zones for agricultural practices in terms of type of resource, systems, climatic and ecological diversities.**
3. **Provide for establishment of agricultural model centres of excellence and ensure they are efficiently utilized and maintained for the initial intended purpose.**
4. **Legislate on appropriate land sizes suitable for various agricultural enterprises including conservancies based on ecological zones and economic potential.**
5. **Develop mechanisms for control, management and use of alien and invasive species.**
6. **Provide for Sustainable Land Management (SLM) practices.**

The County Governments will:

1. **Promote establishment of common settlements to ease pressure on agricultural land.**
2. **Promote the establishment and maintenance of centres of excellence to demonstrate appropriate land use.**
3. **Provide for rural and urban land use strategies to assist communities achieve optimum productivity and make rural land use planning an integral part of land adjudication processes.**
4. **Encourage land owners growing cash crops to reserve a portion of their land for food production.**

3.3. Production and Productivity

Production of crops, livestock and fisheries has been practiced by farmers and fisher-folk in the country for many years, however, productivity has remained low. The Agricultural Sector has suffered from production and productivity challenges, among them; variable weather due to effects of climate change, over-reliance on rain-fed agriculture, declining soil fertility, poor inland transport and market infrastructure,

poor food storage, pre-and post-harvest losses and use of inappropriate varieties, breeds, species and production technologies.

Rapid degradation of land and water bodies, land sub- division and conversion of agricultural land to other uses, high cost of inputs, high incidences of pests and diseases, growth and spread of noxious and invasive weeds, inadequate extension services and frequent droughts and floods affect production and productivity. Inadequate resources for monitoring, control and surveillance of agricultural resources; low involvement of stakeholders in policy formulation, planning, implementation and management; poor resource use and trans-boundary conflicts are other diverse challenges that affect food production and productivity.





Soil is an important natural resource and maintenance of its fertility is a prerequisite for sustainable crop, livestock and fisheries production. Soil fertility depends on good agricultural practices. Extensive and intensive production of crops, poor soil and water management practices and rearing of livestock overtime has led to low soil fertility and productivity. The situation has been worsened by minimal and inappropriate use of soil-health restoration measures which has been attributed to the high cost of fertilizers and other soil amelioration products. In addition, there has been low adoption of other soil-health improvement practices such as use of farm yard manure and soil and water conservation measures.

3.3.1 Objective

1. To improve, intensify and diversify agricultural production and productivity to meet national food security and market requirements while promoting conservation, development and sustainable utilization of crop, livestock and fisheries resources.
2. To improve soil fertility for increased production and productivity based on good agricultural practices.

3.3.2 Policy statements

The National and County Governments will:

1. Promote conservation, protection, development and sustainable management of agriculturally based biodiversity.
2. Support development of joint programs and foster cooperation within governments and regional partners in crops, livestock and fisheries research.
3. Develop strategies for joint early warning systems for disasters preparedness and control of weeds, diseases and pests.
4. Develop and harmonize policies and legislation for sustainable crop, livestock and fisheries resource management.
5. Promote the development of private sector-led input supply including service provision,

production, processing, value addition and trade.

6. Promote adoption of conservation agriculture principles.
7. Promote use of efficient technologies to increase crop, livestock and fisheries production.
8. Promote sustainable soil management programmes to improve soil quality and increase productivity through appropriate integrated soil fertility management technologies.
9. Provide mechanisms for utilization of all land irrespective of the agro-ecological zone in order to exploit the potential of the land resource throughout the country.

The National Government will develop:

1. Regulatory procedures for management of pests and diseases.
2. Standards and legislation for soil health inputs.
3. Provide targeted incentives to support production and productivity

The County Governments will develop programmes to support targeted incentives to enhance production and productivity.

3.4 Biotechnology in Agriculture

Biotechnology involves the use of living systems and organisms to develop or make products, or any technological application that uses biological systems, living organisms or derivatives thereof, to make or modify products or processes for specific use.



Biotechnology products can offer a range of benefits above and beyond those that emerged from innovations in traditional agricultural research. There are concerns that inadequate effort has been made to understand the dangers in the use of biotechnology products including their potential long term impacts to human, plants, animals and environment. Further the Cartagena protocol aims to ensure the safe handling, transport and use of modern biotechnology that may have adverse effects on biological diversity.

3.4.1 Objective

To promote, commercialize and support the development of and safe application of biotechnology.

3.4.2 Policy Statements

The National and County Governments will:

1. Provide mechanisms for research and sustainable industrial development for biotechnology derived agricultural products.
2. Provide mechanisms to guarantee safety of use of biotechnology derived agricultural products.
3. Promote appropriate utilization of biotechnology derived agricultural products.

3.5 Post-harvest Losses

Post-harvest management refers to handling and storage of agricultural, fish and fishery products to limit losses and damages. Inefficient post-harvest management occasions massive losses including losses in nutritional value and damages to crops, livestock, fish and fishery products. On average, post-harvest losses in fisheries reach 25%. Post-harvest losses of crops and livestock are not well documented however; postharvest losses for major grains are estimated at 20 - 30% with maize post-harvest losses validated at 21%. Unpredictability of the markets prompts farmers to stay longer with their produce without suitable preservation and storage; deterioration occurs leading to losses and food products of low nutritional value.

Post-harvest handling determines the level of contamination and rate of spoilage of agricultural, fish and fishery products, which has an impact on human health. Inappropriate processing, poor storage and

inadequate transport facilities increase post-harvest losses and damages. Unreliable energy supply adversely impacts processing and storage of agricultural, fish and fishery products.

3.5.1 Objective

The main objective is to minimize post-harvest losses in crops, livestock and fisheries.

3.5.2 Policy Statements

The National and County Governments will:

1. Increase investments in construction of post-harvest and transport infrastructure.
2. Promote Public-Private-Partnerships for post-harvest management.
3. Develop capacity of crops, livestock and fisheries value chain players in post-harvest management.
4. Promote the adoption of appropriate technologies that reduce post-harvest losses at community and household levels.
5. Ensure reliable energy supply for post-harvest processing, handling and storage.

The National Government will:

1. Enhance surveillance mechanisms to control introduction or spread of trans-boundary pests and diseases.
2. The National Government will establish mechanisms for determining post-harvest losses along the crops, livestock and fisheries value chains.





The County Governments will:

1. **Promote appropriate on farm storage and community commodity banking.**
2. **Promote the evaluation and documentation of post- harvest losses.**

3.6 Water for Agriculture and Irrigation

Water resource is an important factor in crop, livestock and fisheries value chains and it is a key determinant for the agricultural sector's growth. Declining water availability resulting from climate change, erratic rains, destruction of water catchments, deforestation and inadequate water harvesting storage all limit crop, livestock and fisheries growth. The major water sources include: rain, rivers, springs, lakes, swamps, dams and underground water.

Over 90% of Kenya's agriculture is rain-fed. It is also noted that over 80% of Kenya is ASALs where water availability for crops, livestock and fisheries is a major limiting factor to sustainable production. For improved crop, livestock and fisheries productivity; there is need to invest in integrated water resource management for agriculture including water harvesting and irrigation. Inadequate soil moisture arising from water scarcity negatively impacts critical growing periods of crops, fish and other animal resources. Inadequate rainwater harvesting reduces groundwater recharge, increases soil erosion and reduces moisture in the soils. Large seasonal and inter-annual variations in rainfall pose

crop, fish and livestock production from dry spells and droughts. These make farmers reluctant to invest in inputs such as plant nutrients, high-yielding seeds and pest management.

Large scale irrigated agriculture depends on high capital outlays of water conveyance infrastructure. Unlike in Asia where irrigation is widely practiced and its investment costs lowest, sub-Saharan Africa has few irrigation schemes, which are relatively smaller and extremely expensive investment. Low overall water use efficiency in irrigated and non irrigated agriculture is mainly due to low adoption of appropriate technologies.

3.6.1 Objective

To promote sustainable development and use of water resources for crops, livestock and fisheries.

3.6.2 Policy statements

The National and County Governments will;

1. **Provide mechanism for investing in irrigation and irrigation infrastructure including water harvesting and conservation to increase production and productivity in the face of climate change challenges.**
2. **Promote integrated water resource management for crop, livestock and fisheries production.**
3. **Develop strategies to provide incentives for efficient water use including recycling for crops, livestock and fisheries.**



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4. Encourage and enforce protection of the water towers, catchments, wetlands and riparian areas to ensure availability of safe water for sustainable crop, livestock and fisheries production.

The National government will ensure access to, storage and efficient use of trans-boundary water resources.

The County governments will implement provisions in the National Water Policy to encourage water savings for agricultural use.

3.7. Food Safety

Food safety aims at taking all reasonable steps to ensure that food produced, distributed or marketed in the country meets the highest standards of food safety and hygiene reasonably available. Each of the agencies enforcing food safety regulations operate independently to fulfill the function for which it was established.

Food safety challenges facing the country could be attributed to the management systems inability to detect potential risks and gaps, share information, plan together and identify appropriate strategies for collaborative management of food safety in the supply chain and protect the consumer. The challenges include poor communication among food supply chain stake- holders, threats for non-compliance with food safety requirements for local and export markets, ensuring confidence and consumer trust, getting processors to understand the need to comply with food safety requirements, improving capacity for food assessments and harmonizing implementation of standards and regulations.

3.7.1 Objective

To ensure supply of safe food of either plant or animal origin from the farm to fork in order to protect human health.

3.7.2 Policy Statement

The National and County Governments will;

- 1. Provide for mechanism to ensure compliance to food safety standards.**
- 2. Develop capacities for undertaking food safety procedures.**

The national government will:

- 1. Support development of standards on food safety.**
- 2. Ensure participation in setting and domestication of international Standards in food safety.**
- 3. Provide a coordinated mechanism to address food safety issues anchored in legislations.**
- 4. Develop an institutional framework to address food safety challenges.**
- 5. Facilitate continuous research and monitoring of food safety risks across the various food value chain.**
- 6. Ensure capacity building of actors in in the food value chain on existing and emerging food safety risks.**

The County government will;

- 1. Promote dissemination of food safety information to the producers and consumers.**
- 2. Implement and enforce food safety legislations and standards.**





3.8 Feed Safety

In recent years, livestock, other animal feeds and fish feeds have received a lot of attention due to safety concerns associated with biological, chemical and physical hazards. These hazards can be transferred into livestock and fish and eventually into products meant for human consumption. Feed safety control is guided by different legal instruments that are within the mandate of various public institutions. Challenges in feed safety can be attributed to weaknesses in enforcement of legal instruments and weak management systems. There is limited knowledge on feed safety among value chain actors in the sector.

3.8.1 Objective

To ensure the safety of livestock, fish and other domestic animal feeds.

3.8.2 Policy Statement

The National and County Governments will;

1. **Provide for mechanism to ensure compliance to feed safety standards.**
2. **Develop capacities for undertaking feed safety procedures.**
3. **Enforce compliance with legislation and standards.**

The County government will;

1. **Promote dissemination of feed safety information to the producers, processors and consumers.**

2. **Implement and enforce food safety legislations and standards.**

3. **Report non-compliance of feed safety legislation and standards**

3.9 Agricultural Trade and Marketing

Trade in agricultural commodities is a major contributor to national food security. With rapid population increase, urbanization and changing eating habits, food imports have become increasingly important as a complement for domestic production. Official and informal cross border agricultural trade with the neighbouring countries is common. Imports increased significantly after the introduction of market reforms in the 1990 however, this introduced distortions in the domestic market which in turn affects domestic production. Nonetheless, the National Government has continued to intervene in food markets so as to assure food and nutrition security in the country (GoK, 2011). Agricultural based livelihoods and economic gains depend on efficient marketing. The Agricultural Sector is characterized by fragmented production systems comprising of over three million smallholder farmers. This poses a challenge in efforts to coordinate and aggregate produce into economic levels, to sustain market supply. Most of the marketable produce is unprocessed or semi processed and attracts low payments. The market infrastructure including the physical markets, warehousing, cooling warehouses and refrigerated trucks have remained underdeveloped.

Most of the agricultural produce markets are characterized by poor sanitation coupled with poor governance. The market conditions worsen especially during rainy weather as most of the markets are not paved and have no roofs. Other factors hindering access of agricultural produce to markets include poor rural access roads, inadequate electricity supply to markets and low access to clean water for processing. Inefficient and exploitative intermediary linkages



between farmers and the market reduce profitability of agricultural enterprises.

Access to markets is constrained by lack of market information, especially information on what the market demands in terms of commodities, volumes, quality and timeliness. Currently there are several governmental and non-governmental organizations charged with collection and collation of agricultural information but coordination of these institutions is minimal leading to conflicting market signals. Inconsistency in observing food safety standards coupled with trade barriers including sanitary and phytosanitary requirements affect trade regionally and internationally. Notable food safety standards include the global GAPs and Maximum Residual Limits (MRLs) imposed on horticultural produce. These standards have resulted in interception of Kenya's horticultural produce destined for the EU markets.

Marketing of agricultural produce often attracts several forms of taxation including levies, Value Added Tax, cess, export tariffs and import duties. The imposition of levies across counties at numerous produce inspection stations greatly hinders movement of agricultural products to urban markets and reduces their competitiveness locally and internationally.

3.9.1 Objective

To promote and facilitate agricultural trade and marketing of high quality agricultural products in



the domestic, regional and international markets at competitive prices.

3.9.2 Policy Statements

The National and County Governments will:

1. Develop and expand sustainable crops, livestock and fisheries market information systems that are accessible to all stakeholders.
2. Continually monitor, evaluate and regulate levies and taxes charged on crops, livestock and fisheries produce and products to ensure a favorable trading environment.
3. Promote product branding and traceability to assure consumers and access regional and international markets.
4. Promote warehousing receipt system.
5. Promote product labelling to indicate nutritional content.
6. Establish an inter County product safety and quality standards' compliance and arbitration mechanism.
7. Ensure that roadblocks are controlled and gazetted to eliminate illegal taxation of crops, livestock and fisheries produce and products.
8. Provide for mandatory inclusion of high value traditional crops in commercial food and feed products.
9. Control the dumping of subsidized agricultural products.
10. Provide for development of entrepreneurial skills of agricultural value chain actors.

The National Government will:

1. Develop, improve and maintain the trans County energy, roads and water resources to enhance marketing of crop, livestock and fishery products.
2. The National government will develop standards to conform to regional and international sanitary and phytosanitary requirements.
3. Negotiate with international trade partners to ensure removal of prohibitive tariff and non tariff trade barriers to facilitate favorable trade in crops, livestock and fishery products.



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4. Domesticate and ensure implementation of relevant international agreements on: trade sensitive diseases and pests affecting plants, animals and fish; and fish laundering.
5. Maintain and continually update inventories of agricultural innovations and technologies for uptake by agripreneurs.
6. To promote regional, continental and global trade policies and agreements

The County Governments will:

1. Develop, improve and maintain markets and rural access roads, local energy and water resources to enhance marketing of crops, livestock and fishery products.
2. Ensure compliance with product safety and quality standards.
3. Support the formation of producer marketing organizations to achieve sustainable market supplies and ease product certification.
4. Promote supplier development programmes such as contract farming to improve market access for crops, livestock and fisheries produce and products.
5. Establish entrepreneurship incubation centres for agricultural value chain actors.

3.10 Agricultural Inputs

Agricultural inputs are diverse; they include seeds, semen, embryo, fingerlings in the case of fisheries, seedlings, breeding or brood stock, agro-chemicals, medicines and vaccines, organic and inorganic fertilizers and other soil additives (amelioriments), appropriate agro-machinery, plants and equipment and animal feeds. The use and adoption of modern agricultural inputs and improved technologies are constrained by their high costs. Unreliable distribution outlets and little technical knowledge on their use, application and maintenance equally affect adoption. The quality of many agricultural inputs has been found to be poor. Producers experience difficulties in accessing quality seeds and seedlings, appropriate breeding stock, unadulterated agro-chemicals, drugs, vaccines and animal feeds. This has resulted in production and productivity challenges making agricultural produce sub-standard and uncompetitive in the local, regional and international markets. Access

to appropriate machinery and equipment for tillage, pre- and post-harvest handling of produce including processing, packaging, transportation and storage is limited especially for small-scale farmers.

3.10.1 Objective

To increase production and productivity in crops, livestock and fisheries using appropriate, high quality and affordable inputs.

3.10.2 Policy Statements

The National and County Governments will:

1. Strengthen inputs and equipment surveillance mechanisms to ensure compliance with set standards.
2. Promote manufacturing of crop, livestock and fisheries inputs locally and provide appropriate incentives to attract investors.
3. Facilitate targeted subsidies and/or incentives to promote crops, livestock and fisheries production.
4. Ensure that all subsidy and/or incentive programmes are monitored regularly for efficacy and impact.

The National Government will:

1. Facilitate access to quality agricultural inputs, and ensure their compliance with existing regional and international standards.





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2. Establish mechanisms for ensuring that farmers, pastoralist and fisherfolks will have quality plant, livestock and fish genetic which comply with existing regional and international standards.
4. Ensure that inputs that are not locally available are sourced and procured through incentives including but not limited to zero-rating, credit and subsidy provisions.
5. Ensure that any subsidy or incentive schemes put in place target diverse strategic crops, are designed to achieve clearly set objectives, are managed transparently and prudently and are time-bound and do not violate existing international trade laws.

The County Governments will:

1. In partnership with the private sector will promote efficient distribution and access to inputs along the crop, livestock and fisheries value chains.
2. Promote supplier development programmes such as contract farming to improve access to crops, livestock and fisheries inputs.
3. Facilitate access to high quality and affordable inputs for use along crops, livestock and fisheries commodity value chains.
4. Ensure that all subsidy or incentive programmes are supported by strong extension and capacity building.
5. Promote organic farming for sustainable crops, livestock and fisheries production.
6. Ensure compliance with required standards.

3.11 Agricultural Mechanization

Agricultural mechanization is a key input in the agricultural sector production value chain that is influenced by suitable land, availability of moisture, favorable climatic conditions, availability of quality farm inputs and appropriate mechanization, reliable labour and functioning markets. The main types of mechanization in the country include the use of human, animal drawn and motorized machinery, implements and equipment

The use and adoption of modern mechanization technologies are constrained by; Inadequate demand-driven research and technology in agricultural mechanization; Inadequate local manufacturing and distribution; Insufficient agricultural mechanization quality assurance, Low production due to a combination of high cost of agricultural mechanization, financial services (for investment, imports and trade) and unfavourable taxation regime, Inadequate mechanization and technology extension and adoption, Declining agricultural land productivity due to climate change, uncontrolled subdivision and improper land use, Threat of Human Immuno-deficiency Virus HIV/AIDS and other debilitating human diseases in agriculture, Gender insensitivity in agricultural mechanization, Low value addition, poor market infrastructure resulting to high post-har-vest losses and Inadequate institutional and legal framework.

3.11.1 Objective:

Agricultural mechanization need to make a contribution to agricultural development through the development



and adoption of modern, appropriate, cost effective and environmentally safe mechanization technologies for crop, livestock and fisheries production.

3.11.2 Policy Statements

The National and County Governments will:

1. **Promote agricultural mechanization research and technology development for efficiency and effective- ness under the NARS system.**
2. **Promote a conducive environment for local manufacturing and distribution of agricultural machinery and technologies.**
3. **Strengthen collaboration with the departments regulating trade on agricultural machinery and equipment.**

The National Government will;

1. **Establish an effective and efficient institutional framework for development of agricultural mechanization.**
2. **Promote and regulate agricultural mechanization quality assurance.**

The County Governments will:

1. **Stimulate mobilization of resources for investment in agricultural mechanization.**
2. **Refocus extension and technology repackaging for enhanced adoption by stakeholders in agricultural mechanization.**
3. **Promote climate smart agricultural mechanization measures to mitigate the adverse effects of climate change.**



3.12 Agribusiness and Value Addition

Agribusiness comprises all businesses in crops, livestock and fisheries production including farming and contract farming, genetic material supply, agro-chemicals, farm machinery, wholesale and distribution, processing, marketing and retail sales. Value addition is the action extended to crops, livestock and fisheries produce to improve their value with the intention of increasing returns for operators along the value chains. Many small-scale farmers possess limited knowledge on agribusiness and value addition hence sell most of their produce in raw form attracting low prices in the markets. Huge losses occur due to the short shelf life of perishable unprocessed agricultural and fisheries produce.

The cost of machinery and equipment for value addition is high, this coupled with the lengthy and expensive certification processes for value added products affect adoption of value addition by smallholder farmers. Similarly, the cost of value-added products may be too high for the local markets necessitating the need for market research to identify new marketing channels and outlets. Supply of low quality and inadequate quantities of raw materials affect profitability of processors with large installed capacities.

3.12.1 Objective

The main objective is to promote agribusiness and value addition in the crops, livestock and fisheries sub sectors.

3.12.2 Policy statements

The National and County Governments will:

1. **Support development of agro-processing industries for processing and value addition to crops, livestock and fisheries produce and products.**
2. **Develop capacity of producers and producer groups or organizations to undertake and promote agribusiness and value addition.**
3. **Develop the capacity of technical officers to promote agribusiness and value addition to crops livestock and fisheries produce.**
4. **Promote research in development and local assembly of machinery and equipment for value addition to agricultural produce.**



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5. Promote Public Private Partnerships in agribusiness and value addition.

The National government will:

1. Promote bilateral, regional and international trade in crops, livestock and fisheries products.
2. Establish a regulatory framework for contract farming to increase crop, livestock and fisheries production with a view to meeting large scale processing requirements.

The County governments will:

1. Support producers to increase crop, livestock and fisheries production as well as encourage bulking of agricultural produce.
2. Mainstream value addition to crops, livestock and fisheries produce and products.
3. Promote participation of youth in agribusiness, value addition and related activities.

3.13 Research and Development

Research is an important component of agricultural management and development. Currently, research in crops, livestock and fisheries does not necessarily address the concerns of the relevant stakeholders. Moreover, there is weak research extension linkage which affects dissemination of research findings to end users. Effective research extension linkages would address socio cultural factors, costs, accessibility and suitability of new technologies that determine the rate of adoption of research findings. Research institutions have inadequate capacity in terms of personnel, funding and equipment to undertake crop, livestock and fisheries research.

3.13.1 Objective

The main objective is to promote demand driven and adaptive research for crop, livestock, fisheries management and development and irrigation.

3.13.2 Policy statements

The National and County Governments will:

1. Prioritize setting of crops, livestock and fisheries research agenda and development of research infra- structure across counties.

2. Promote demand driven research in crops, livestock and fisheries management and development.

3. Promote research in utilization of land resources for crops, livestock and fisheries production.

4. Promote research in production and utilization of traditional food and feed resources including emerging crops, livestock and fisheries.

5. Prioritize collaboration with National, Regional and International Research Organizations in crops, livestock and fisheries.

6. Encourage public private partnership in agricultural research and development.

7. Promote research in indigenous crops and animals including the application of indigenous technologies to agriculture.

The National Government will:

1. Provide for mechanism of sharing of agricultural research findings.

2. Develop capacity of research institutions to undertake crops, livestock and fisheries research.

3. Allocate at least 30% of the National research budget to crops, livestock and fisheries research.

4. Encourage institutions of higher learning to undertake demand driven crop, livestock and fisheries research and share findings and solutions.

5. Support the development of new agritechnologies including those arising from ICT, biotechnology and indigenous knowledge to enhance production, post-harvest management, processing and access to markets and financial services.



The County Governments will:

1. **Provide for dissemination of research findings and indigenous knowledge.**
2. **Develop mechanism that strengthens research extension farmer and fisher folks linkages.**
3. **Promote the use of new and emerging agro technologies including biotechnology, information communication technology and other innovations to enhance production and access to markets and financial services. Rops, livestock and fisheries produce and products.**

3.14 Extension

Agricultural extension service is an avenue for sharing knowledge, technologies, agricultural information and links the farmer to other actors in the economy. The extension service is one of the critical change processes required in the transformation of subsistence farming to modern and commercial agriculture.

There is an increasing demand for public sector extension services due to a rapidly growing youthful population that has limited knowledge for investment in agricultural activities. Emerging opportunities for transformative agriculture that can generate increased income for rural and urban households necessitate the provision of extension services. The regulation of public and private sector extension services has been mostly ineffective. This has led to an increase in competition and dissemination of conflicting extension messages to clients, duplication of efforts and wastage of resources. Extension coverage is usually limited to a few rain fed areas. Most of the ASALs that mainly depend on their respective County governments for services lack consistent dissemination of extension information. This adversely impacts their production, processing and marketing capacities. Inadequate access to information necessary for empowering clients, creating sustainable linkages of networks of service providers and generating finance for investment in agriculture affect uptake of emerging technologies and encourage concentration of farmers on a few familiar enterprises.

3.14.1 Objective

The main objective is to promote appropriate, cost effective and accessible extension services for different ecological zones.

3.14.2 Policy Statements

The National and County Governments will;

1. **Strengthen research extension farmer liaisons to accelerate dissemination of research outputs.**

The National Government will;

1. **Provide guidelines and standards for delivery of extension services in the agricultural sector.**
2. **The National government will establish a system of regulating, quality assuring, inspecting, monitoring and evaluating extension services.**

The County Governments will;

1. **Establish a system of ensuring compliance with the relevant standards for extension services' delivery, monitoring and evaluating extension service providers.**
2. **Support the development and packaging of trans- formative agricultural technologies, information and business opportunities in the agricultural sector.**
3. **Provide for a mechanism for monitoring and tracking impacts of technologies and delivery models on overall development and improvement of household livelihoods.**





4. **Support Public Private Partnerships for development of extension services.**
5. **Ensure adequate resources are provided for the delivery of extension services in crops, livestock and fisheries.**

3.15 Agricultural Financing and Investment

Transformation of fisheries, livestock and crop production into a viable commercial undertaking requires access to financial products and services along the value chains for both short term working capital and long term development. Despite contributing over 27% of the country's GDP, the Agricultural Sector has over the last decade has received an average of 7% of the National budget (Laibuni, 2014) which is below the Maputo declaration (2003) and Malabo declaration (2014) that requires African nations to raise their budgetary allocation to agriculture to a minimum of 10%. The large number of subsistence smallholder farmers and their scattered nature coupled with lack of reliable data for credit assessment makes most commercial banks view activities in agriculture as risky and hence attach high interest to their financing. There are few agriculture-based financial and insurance institutions that are biased towards high-value enterprises in high rainfall areas. The insurance products tend to be expensive and unaffordable to a majority of agricultural producers and other actors in the value chain.

The mobile nature of fisher folk and pastoralists has hindered access to financing from commercial banks.

This is further complicated by their communal nature in exploitation of productive resources such as water and grazing land that discourages investments.

Lack of agricultural financial literacy has impacted negatively on access to funds for development of agriculture. Information on the available financial institutions, their terms and conditions of lending, the identification of feasible agricultural enterprises, prudent management of acquired funds and repayment schedules is limited. Though efforts towards improving financial literacy are being applied , their scope and coverage is limited to urban and peri urban areas. At the same time, it is also important to note that there are many farmers running productive and profitable businesses within the agricultural sector but they have remained excluded from financial services from the main stream financial sector. Generally there is lack of appropriate private sector financial products to suit the needs of the rural entrepreneurs who are mainly farmers.

3.15.1 Objective

The main objective is to increase financing and investments in the Agricultural Sector.

3.15.2 Policy Statements

The National and County Governments will;

1. **Provide for a mechanism to ensure the summative budgetary allocation towards financing investment in crops, livestock and fisheries is not less than 10% of the overall National budget based on agreed formulae.**
2. **Support infrastructure development to facilitate investment in crops, livestock and fisheries.**
3. **Provide mechanisms to improve financial literacy among agricultural value chain players in collaboration with financial sector players.**
4. **Promote establishment and restructuring of agricultural financing institutions to the lowest levels of devolved units in compliance with socio cultural values.**





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5. Provide for crops, livestock and fisheries commodity stabilization funds.
6. Provide incentives to financial institutions to avail financial products to farmers based on intrinsic value of their produce.
7. Promote innovation and research in financial services for agriculture
8. Use Private Public Partnerships to mobilize private sector finance and expertise for the delivery of public sector targets and objectives.

The National government will;

1. Restructure and transform the Agricultural Finance Corporation to widen its lending scope consistent with socio economic and cultural status at County level.

3.16 Institutional Reforms

The key institutions in crops, livestock and fisheries value chains include the government ministries, departments and agencies at both National and County levels. In the counties, institutions are expected to provide services to the lowest devolved units.

The major institutions in crops, livestock and fisheries management and development experience poor governance and deteriorating physical infrastructure which affects delivery of their mandates. The institutions possess obsolete equipment and machinery that cannot support advanced technological practices and innovations in crops, livestock and fisheries. Success in crops, livestock and fisheries value chains directly and indirectly depends on other institutions, however, intra and inter institutional linkages are currently weak.

3.16.1 Objective

The key objective is to strengthen crop, livestock and fisheries institutions and develop effective intra and inter institutional linkages in crops, livestock and fisheries management.

3.16.2 Policy Statements

The National and County Governments will;

1. Strengthen, restructure, reorganize and establish crop, livestock and fisheries institutions and centres of excellence for efficient and effective delivery of services.
2. Provide mechanisms to develop local institutional capacity and funding to upscale agricultural technologies and fabrication of appropriate technologies, machinery and equipment for crops, livestock and fisheries.
3. Provide for safeguards to the agricultural sector institutions to enable them carry out their primary roles without arbitrarily changing their use.
4. Provide for mechanisms of good governance for effective and efficient management of institutions.

The National government will:

1. Establish mechanisms for intra and inter institutional linkages, partnerships and networks toward a common programme framework to manage and develop resources in crops, livestock and fisheries.
2. Restructure institutions and merge those with related roles to avoid duplication and contradictory mandates.

The County governments will establish mechanisms for intra and inter County linkages, partnerships and networks toward a common programme framework to manage and develop resources in crops, livestock and fisheries.

3.17 Information and Data Management

Accurate timely communication and information sharing in the sector is important in the development, exploitation and management of resources. The Agricultural Sector's potential for reducing poverty and contributing to economic growth has remained largely untapped due to lack of accurate data necessary for planning, financing and implementing programmes. The contribution of the sector to national wealth remains underestimated leading to inadequate financing. Research and development in the sector requires retrievable up to date data.



During crises, transparency and quality of communication and information are issues of County, National, sub Regional, Regional and Global strategic significance. Rapid response can be delayed or curtailed by lack of information or inappropriate communication. Effective national and county agricultural services require communication strategies with a focus on stakeholders and the public.

3.17.1 Objective

The main objective is to empower agricultural value chain actors through effective communication, storage and sharing of information.

3.17.2 Policy Statements

The National and County Governments will;

1. **Ensure that agricultural census is conducted every ten years.**
2. **Promote use of ICT in crops, livestock and fisheries services to improve communication and data management and sharing.**
3. **Provide for development of communication strategies for the agricultural sector to improve information sharing, public education and response to emergencies.**

The National government will support the establishment and management of an agricultural sector data and information database for planning, research and effective implementation of programmes.

The County governments will:

1. **Support and develop mechanisms to continuously collect, collate and share agricultural information and data with the National Government and other stake- holders for management of the sector.**
2. **Support provision of timely and reliable information on crops, livestock and fisheries resources.**

3.18 Labour in Crops, Livestock and Fisheries

Constant labour supply is essential to improvement of crop, livestock and fisheries production and productivity. Whereas unskilled labour is available in crop, livestock and fisheries value chains, skilled

labour is inadequate. A larger share of the economically active population is the youth, constituting 46.3%. The relatively large share (18.5%) of economically active children (aged 5 to14) suggests that child labour could be a significant challenge (Census data, 2009). Persistent use of unskilled labour has adverse effects on production and productivity. The cost of skilled labour is high and out of the reach for many value chain players leading to engagement of unskilled labour. The high cost of labour increases the cost of production hence affecting the competitiveness of agricultural produce and products both in the local and international markets. Non-observance of occupational safety and health principles in crop, livestock and fisheries production further aggravates health risks and compromises safety of workers. There is some use child labour as a result of household poverty, traditional cultural beliefs and practices.

3.18.1 Objective

The main objective is to make crop, livestock and fisheries, value chains attract a productive labour and mainstream good labour practices.





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3.18.2 Policy Statements

Both levels of government will;

1. Provide mechanisms for appropriate compensation for agricultural labour force.
2. Ensure labour in crop, livestock and fisheries value chains adhere to National, Regional and International Labour Conventions ratified by Kenya.
3. Provide mechanisms for appropriate utilization of skilled labour in crop, livestock and fisheries value chains.
4. Promote occupational safety and health in crop, livestock and fisheries value chains.
5. Discourage the use of the worst forms of child labour in crop, livestock and fisheries, value chains.
6. Ensure availability of up to date age and sex disaggregated information on employment and labour productivity in crop, livestock and fisheries value chains.
7. The County governments will promote active engagement of youth in crop, livestock and fisheries value chains.

3.19 Agricultural Insurance

Agricultural insurance is available to farmers against loss or damage to crops, livestock and fisheries as a result of natural hazards such as hailstorms, drought, flood or uncontrollable diseases and pests. Farmers and fisher folk are exposed year round to a variety of risks such as price variations, unfavourable weather, pests, diseases and contamination of water masses. Such risks affect their income and welfare. These risks act as a disincentive for further production eventually reducing incomes and foreign exchange earnings leading to reduced long term productive investments in agriculture. Agricultural insurance is important in order to address the yield risks that are mainly

due to adverse climatic conditions and accidental contamination of water bodies.

However, as agriculture becomes more sophisticated, producers, fisher folk, marketing companies and bankers need insurance to cover a number of risks. Complying with this need and overcoming the limitations of traditional agricultural insurance, in particular high transaction and loss assessment costs, requires new insurance products to be developed.

In Kenya, agricultural Insurance is the preserve of the private sector that has been reluctant to fully embrace the sector due to attendant risks. Its uptake by farmers is still low.

3.19.1 Objective

To provide for affordable insurance for crop, livestock and fishery enterprises.

3.19.2 Policy Statements

The National and County Governments will:

1. Provide incentives to the private sector to support investment in agricultural insurance.
2. Roll out agricultural insurance programs in partner- ship with private insurance providers.

The National government will:

1. Develop policies, laws and strategies to support sustainable agricultural insurance.
2. Promote research and innovation to develop initiatives on risk management for crops, livestock and fisheries value chains.

The County Governments will develop specific insurance packages in collaboration with the private sector to mitigate risk in their jurisdictional areas.

3.20 Private Sector Participation in Agriculture

The Private Sector includes enterprises, companies, businesses, or individuals regardless of size, ownership and structure. It covers all sectors of the food, including, crops, and livestock and fisheries systems from production to consumption, including associated services: financing, investment, insurance, marketing and trade. The private sector encompasses a broad



array of entities that range from producers, producer organizations, cooperatives, financial institutions, industry and trade associations, and Micro, Small and Medium Enterprises (MSMEs) to the largest international corporations.

The private sector is the vehicle for requisite investments to transform agriculture towards increased productivity, agribusiness and development of support or infrastructure. The private sector will continue working closely with the National and County governments to ensure service delivery to producers and other players in the sector. Inadequate Public Private Partnerships affect primary production, processing, marketing, insurance and financing in the Sector

3.20.1 Objective

The key objective is to promote private sector participation in the management and development of crops, livestock and fisheries sub sectors.

3.20.2 Policy Statements

The National and County Governments will:

1. **Create a conducive environment for the private sector to profitably invest in the Agricultural Sector.**
2. **Promote and establish a forum for consultation and collaboration with the private sector at all levels in the agricultural commodity value chain.**
3. **Promote Public Private Partnerships (PPPs) in the management and development of the crops, livestock and fisheries sub sectors.**

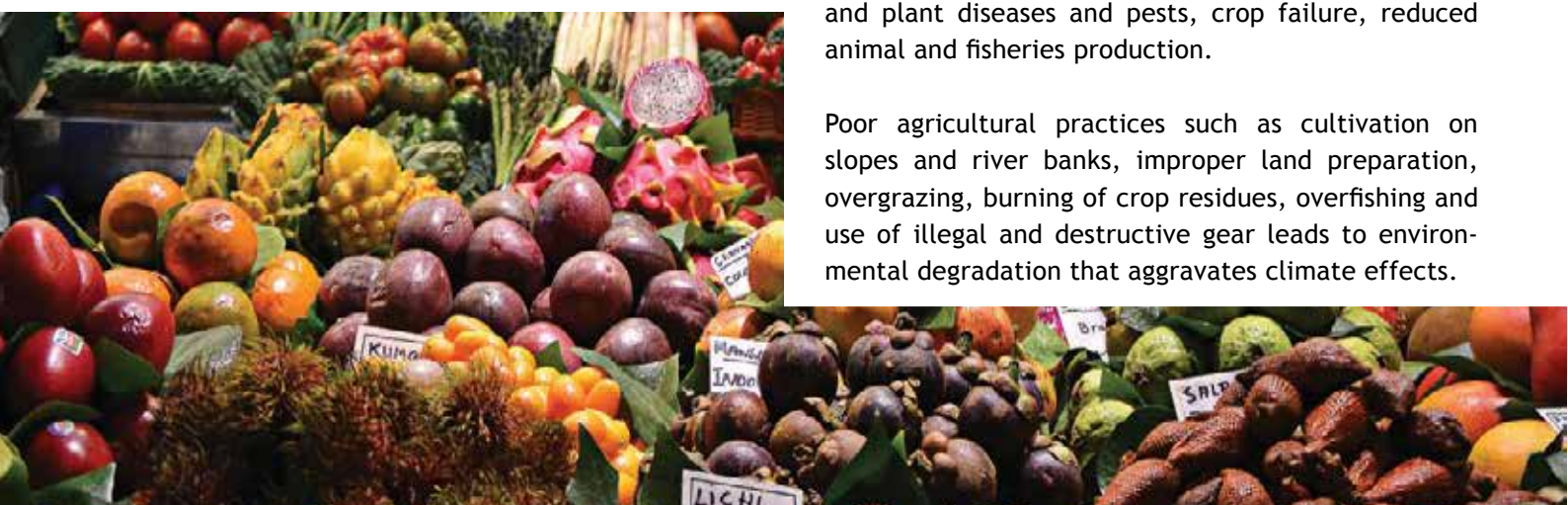
3.21 Agriculture in a Changing Climate

The continued annual burden of the extreme climatic events could cost the economy as much as KES 45 billion a year, which is equivalent to approximately 2.6 percent of the country's GDP with implications on long term growth. Some crops in Kenya are expected to experience more favorable growing conditions as a result of climate change, whereas others will find future climatic conditions intolerable. For example, maize yields are likely to increase in mixed rain fed temperate and tropical highlands; while the ASALS are projected to experience a significant decline in crop yields (NCCAP, 2013).

Livestock management systems in Kenya, especially in the ASALS, rely extensively on natural systems such as rainfed pasture. These livestock systems are very climate sensitive, being vulnerable to the impacts of changing and irregular rainfall patterns and droughts. In the fisheries sub sector, temperature changes in the aquatic environment affect the breeding and feeding behavior of fish, and have a significant effect on the species composition. There is evidence of a thinning of species and biomass abundance owing to the effects of temperature increase on the nesting and feeding grounds.

Climate change gives rise to unpredictable weather patterns characterized by erratic rainfall, frequent and intense droughts, floods, frequent storms, rising water levels, bleaching of corals, change in physical and chemical parameters of water and unfavorable temperature and seasonal variations. These events often lead to emergence and reemergence of animal and plant diseases and pests, crop failure, reduced animal and fisheries production.

Poor agricultural practices such as cultivation on slopes and river banks, improper land preparation, overgrazing, burning of crop residues, overfishing and use of illegal and destructive gear leads to environmental degradation that aggravates climate effects.



Subdivision of family land due to high population densities leading to rapid decrease in land available for farming, intensive cultivation, soil nutrient depletion are some of the major causes of soil erosion and wood fuel and timber shortages in the country. These problems, together with declining tree cover resulting from conversion of forests to settlements, are causing increasing concern about declining food security, sustainable development of agriculture and challenges related to climate change mitigation and adaptation. To remedy this situation, the Ministry of Agriculture, Livestock and Fisheries encourages farmers to practice agroforestry.

Agroecology is an approach to farming that “centers on food production that makes the best use of nature’s goods and services while not damaging these resources.” It applies ecology to the design of farming systems; uses a whole-systems approach to farming and food systems; and links ecology, culture, economics and society to create healthy environments, food production and communities.

It is important to advocate for a compulsory establishment of farm forestry where every person who owns or occupies agricultural land shall establish and maintain a minimum of 10% of the land under farm forestry in any suitable configuration. These will help to: promote the establishment and sustainable management of farm forestry to maintain a compulsory farm tree cover of at least 10% on any agricultural land holding; Carbon sequestration and related environmental benefits; conserve water, soil and biodiversity; protect riverbanks, shorelines, riparian and wetland areas; provide fruits and fodder and sustainable production of wood, charcoal and non-wood products.

3.21.1 Objective

The key objective is to uphold good agricultural

practices and enhance resilience to adverse climate change impacts.

3.21.2 Policy statements

The National and County Governments will:

1. Promote public awareness and information sharing of good environmental practices for crops, livestock and fisheries.
2. Prioritize implementation of the National Climate Change Action Plans.
3. Promote adoption of climate change research findings relevant to crops, livestock and fisheries.
4. Promote Agro-ecology farming practices for crops, livestock and fisheries.
5. Provide early warning, response and ensure preparedness for adverse climate change effects in collaboration with other agencies.
6. Develop capacity of agricultural value chain players to respond to unfavourable climate change effects.
7. Promote climate change resilience fisheries, livestock and crop enterprises.
8. Promote green growths strategies (green economy) in crops, livestock and fisheries.
9. Promote climate financing and broaden mechanisms to attract investments in climate smart agricultural practices along the commodity product value chains.
10. Develop programs to rehabilitate degraded ecosystems including soils, wetlands and forests
11. Develop programs for capacity building in soil and ecosystem conservation and restoration.



The County Governments will:

1. **Promote adoption of Climate-Smart Agricultural Approaches.**
2. **Prioritize implementation of provisions that provide for at least 10% tree cover on any agricultural land holding.**
3. **Promote soil conservation and ecosystem rehabilitation**
4. **Promote green jobs in the Agricultural Sector**

3.22 Cross-Cutting Issues

Cross-cutting issues refer to aspects that impact crop, livestock and fisheries value chains directly or indirectly but are not limited to crops, livestock and fisheries. They include; agriculture in a changing climate, gender, disaster management, corruption, HIV/AIDS, vulnerable groups, Drugs and Substance Abuse, resource-use conflicts and literacy levels.

3.22.1 Disaster Management

Disasters are both natural and manmade. Disasters affecting the agricultural sector in Kenya have been handled without an effective disaster management policy, legal and institutional framework. Disaster responses have been poorly coordinated due to lack of standard operating procedures and disaster emergency operation plans. Inadequate planning, preparedness and mitigation responses to disaster victims pose greater risks and slow recovery.

3.22.1.1 Objectives

The linkages of disaster management capacities in local communities, counties and the National Government have remained weak. Disaster occurrences have

increased resulting in heavy losses and damages.

The main objective is to establish mechanisms for management of disasters in crops, livestock and fisheries.

3.22.1.2 Policy Statements

The National and County Governments will;

1. **Develop strategies for joint early warning systems for disasters preparedness and control**
2. **Provide for development of disaster preparedness, response and mitigation strategies for crops, livestock and fisheries.**
3. **Develop mechanisms for disaster management.**
4. **Establish strategic food and feed reserves and animal health supplies as important components of disaster preparedness.**
5. **Promote linkages among agencies that are involved in disaster response and mitigation in crops, livestock and fisheries. The agencies include NGOs, Civil Society Organizations, the Private Sector, International Development Partners and UN organizations.**
6. **Encourage the insurance industry to play a significant role in mitigating the impacts of disasters on crops, livestock and fisheries.**

3.22.2 Governance

Good governance systems and practices contribute to positive growth of the Sector. However, poor governance including corruption has had serious negative effects on the management of crop, livestock and fisheries resources along the value chain institutions leading to low productivity, wastage, duplication, unhealthy competition and conflicts.



3.22.2.1 Objective

The key objective is to mainstream good governance in the Agricultural Sector and eliminate corruption in order to enhance trust and confidence among actors.

3.22.2.2 Policy Statements

The National and County Governments will;

1. **Strengthen good governance in the Agricultural Sector.**
2. **Establish an effective corruption prevention mechanism in the Agricultural Sector in line with relevant Kenyan laws as well as international treaties ratified locally.**

3.22.3 Human Resource Development and Management

Skilled and creative human resource is required in order to stimulate research, production, value addition and marketing in crops, livestock and fisheries. Currently, there exist several public and private training institutions in the country that offer agriculture based training. These include universities, middle level colleges and institutes, farmer and pastoral training centres. However, the sector has faced a myriad of challenges like inadequate and declining level of funding to training institutions. These limit capacity to train on emerging issues such as production and breeding of indigenous animals and plants, organic farming and advanced bio-technology.

The slow pace of commercialization of services offered by training institutions and failure to respond to market demands for specialized courses is another stumbling block to capacity building. Coupled with this, limited employment opportunities in both public and private sectors have contributed to poor perception of the youth towards fisheries, livestock and crop production. In addition the training curriculum does not adequately prepare the trainees for the job market possible interventions include mainstreaming internship and apprenticeship in the curriculum development.

The recent conversion of middle level agricultural institutions into higher level institutions, lack of adequate hands on practicing technical agricultural workforce, lack of training institutions for sea fisheries and fishing technologies and lack of linkages between learning institutions and the industry further complicate the situation. Staffing levels for technical departments in the Sector departments is short of the recommended international standards. For instance the state department of livestock has the highest deficiency of technical staff of about 66% and 60% for veterinary services and livestock production respectively.

3.22.3.1 Objective

To develop and manage an effective human resource for the Agricultural Sector.

3.22.3.2 Policy Statements

The National and County Governments will:

1. **Promote investment in agricultural education, research and extension capacity.**
2. **Strengthen and establish training institutions for capacity building of stakeholders and ensure that curricula are geared towards supporting evolving needs of the agricultural sector.**



3. Strengthen governance in agricultural institutions, farmer and producer organizations.
4. Prioritize in service training of public agricultural workers to upgrade their technical and practical knowledge.
5. Provide for appropriate succession management and hire required staff.
6. Provide mechanism to facilitate internships and apprenticeship.

The National government will:

1. Provide for development of standards based on international standards for agricultural training and skills development.
2. Ensure that the distribution of relevant human resource meets acceptable service ratios.
3. Develop incentives for youth to take up agriculture related courses
4. Modernize Agriculture curriculum by embracing Disruptive Technologies in Agriculture (ICT and Digitization).

3.22.4 Gender in Agriculture

Gender-based inequalities constrain agricultural growth and poverty reduction measures by affecting labour productivity in terms of access to and control of productive resources.

Both levels of government recognize that inequitable gender relations have affected the sector and that focusing on all involved in productive processes can partly address the problem. The main challenge is to overcome undesirable practices that perpetuate gender inequalities in fisheries, livestock and crop value chains.

3.22.4.1 Objective

The key objective is to mainstream gender in the agricultural sector.

3.22.4.2 Policy Statements

The National and County Governments will:

1. Promote gender-sensitive practices in the agricultural sector and increase access to

productive resources and markets.

2. Promote gender equity in agricultural financing.
3. Support development and dissemination of trans- formative agricultural technologies and interventions.

3.22.5 Youth in Agriculture

Kenyans in the age bracket of 1-35 years constitute 75% of working population forming the largest source of human resource. The youth aged between 15-30 years number about 9.1 million and account for about 32% of the population of which 52% are female. The youth form 60% of the total labor force but many of them have not been absorbed in the job market owing to the country's low economic growth rates. Many of the youth who are productive and energetic remain unemployed, underutilized and consequently engage in deviant behaviors.

According to the National Youth Policy (2006), the youths in the age 15-35 years have been largely excluded from designing, planning, and implementing programmes and policies. The youth are largely excluded from designing, planning, and implementing programmes in the agriculture -sector in spite of the aging labor force. They have limited opportunities in the agricultural value chains thus posing a challenge to succession in the sector. The youth are limited in term of access to factors of production including land, credit and insurance. Poor production technologies have also not attracted the youth to agriculture and this has affected production and productivity. The perception of the youth towards agriculture is negative and there- fore unattractive.



3.22.5.1 Objective

The key objective is to promote active engagement of the youth in agriculture value chains and associated technologies.

3.22.5.2 Policy Statements

The National and County Governments will:

1. **Support for development and dissemination of transformative agricultural technologies and interventions.**
2. **Ensure youth access to factors of production such as land, finance and appropriate skills in agriculture.**
3. **Provide for mechanisms of encouraging education in Agriculture.**
4. **Encourage collaboration, coordination and synergy with other Ministries and knowledge vendors in capacity building in agriculture for the youth.**
5. **Provide support for youth to access markets and marketing infrastructure.**

3.22.6 Human Diseases Affecting Agriculture

Some key diseases with an impact in the sector include HIV/AIDS, cancer, malaria, diabetes, hypertension and mal-nutritional diseases.

HIV/AIDS has profoundly disrupted economic and social bases of families in the agricultural sector. The Kenya Aids Strategic Framework (KASF, 2015-2019) reveals that there were 1.6 million Kenyans living with HIV at the close 2014. The hardest hit being those in the productive ages of 15 - 64 years who are agriculturally productive. Women whose role and contribution to the agricultural sector is high are almost twice as much

infected as men. Currently, the HIV/AIDS burden is higher in rural areas with an approximated prevalence rate of 6.7%.

It is estimated that 70% of people infected with HIV and other non-communicable diseases live in rural areas. The illness and subsequent death of workers have an enormous impact on agricultural productivity and earnings. Labour productivity drops, the benefits of agricultural skills and education are lost while resources that would have been used for wealth creation and poverty reduction are diverted to treatment, care and support of the sick. The sum total of these events negatively impact National GDP. The main challenge is to contain the disease and reduce its socio-economic impacts.

3.22.6.1 Objective

The main objective is to mainstream mitigation measures of the main human diseases affecting agriculture in order to minimize their negative impacts.

3.22.6.2 Policy Statements

The National and County Governments will;

1. **Promote production and use of nutritious food and nutritionally enhanced food products for the infected people in the agricultural sector.**
2. **Establish affirmative programmes in fisheries, livestock and crop production for people affected by these diseases.**
3. **Provide mechanism for linking the affected and infected with specialized agencies towards involvement in income generating enterprises.**
4. **Mainstream of HIV/AIDs policies and control measures in the agricultural sector including in plantations, factories and other related closed**





set ups.

3.22.7 Vulnerable Groups

Vulnerable groups include households headed by women and children, the elderly, the poor and people living with disabilities or affected by diseases or pests. The vulnerable households are less productive and frequently experience food insecurity that compounds their health problems. Hunger and human indignity characterize their existence. Owing to poverty, they are unlikely to adopt most technologies in agriculture, this perpetuates their vulnerabilities.

3.22.7.1 Objective

The main objective is to promote effective programmes for addressing concerns of vulnerable groups in the fisheries, livestock and crop production.

3.22.7.2 Policy Statements

The National and County Governments wil:

1. Support development and dissemination of transformative agricultural technologies and interventions.
2. Ensure youth access to factors of production such as land, finance and appropriate skills in agriculture.
3. Provide for mechanisms of encouraging education in Agriculture.
4. Provide support for youth to access markets and marketing infrastructure.

3.22.8 Drugs and Substance Abuse

Drug and substance abuse has become a major concern of all sectors of the economy. Substances and drugs that are most abused include alcohol and bhang (Cannabis sativa). However, hard drugs such as cocaine and heroin are emerging as bigger threats to the well- being of the Kenyan labour force particularly the youth. Substance and drug abuse affects service providers and other players in agricultural value





chains. In cases where public service workers are involved, the image of the government is dented. This undermines the confidence of citizens in such workers and affects delivery of services.

3.22.8.1 Objective

The main objective is to reduce incidences of drug and substance abuse among farmers, fisher-folk and service providers.

3.22.8.2 Policy Statements

The National and County Governments will;

1. **Support awareness creation and sensitization programmes to deter involvement in drug and sub- stance abuse.**
2. **Develop strategies for rehabilitation of agricultural sector workers affected by drug and substance abuse.**
3. **Support enforcement of laws that discourage drug and substance abuse among sector workers in collaboration with other agencies.**

3.22.9 Management of Shared Natural Resources

Agriculture relies heavily on finite resources which are competitively sought by actors pursuing different interests. These resources include land, water and pastures. Due to scarcities, resource-use conflicts are bound to arise. These conflicts may result in loss of human life, livestock, fisheries, wildlife and crops hence disrupting agricultural activities and affecting livelihoods and economic development.

3.22.9.1 Objective

The main objective is to minimize resource-use conflicts among farmers, fisher-folk and other stakeholders.

3.22.9.2 Policy Statement

The National and County Governments will develop effective mechanisms for conflict resolution among fisher-folk, pastoral, agro-pastoral, livestock and crop farmers and other stakeholders.

3.22.10 Literacy Levels

Kenya has made great strides in improving the literacy levels of her people. However there are pockets in the country where illiteracy incidences are as high as 80%. In these areas, populations are largely dependent on subsistence crop, livestock and fisheries production for their livelihoods. Efforts to transform practices in agri- culture through skills and knowledge transfer are severely limited.

3.22.10.1 Objective

The main objective is to minimize the effects of illiteracy on development of crops, livestock and fisheries.

3.10.22.2 Policy Statements

1. **The National and County governments will promote efforts to increase literacy levels among farmers and fisher-folk.**
2. **The National and County governments will**



encourage use of appropriate extension packages and methodologies for various target groups.

CHAPTER FOUR

4. IMPLEMENTATION FRAMEWORK

The Policy will be implemented through a legal and institutional framework that is in existence, to be restructured or yet to be established. Thematic policies and strategies will be developed to address specific sub Sector requirements and for better implementation of this Policy.

4.1 Legal Framework

Laws and regulations are integral to effective policy implementation and operationalization. The legal framework for crops, livestock, fisheries and irrigation is based on a body of laws that require review and development to conform to and implement the Constitution and further support implementation of this policy. Review will also align the existing laws with emerging issues in the international laws and provisions of treaties and conventions ratified by Kenya.

The National and County governments in consultation with stakeholders will review the Agricultural Sector laws to ensure compliance with the Constitution and support the implementation of this Policy. New legislation and regulations will be developed as appropriate to address the Sector needs.

4.2 Institutional Framework

Various institutions will be involved in implementing this Policy ranging from National and County Governments, Private Sector and other Stakeholders with support from Regional and Global Institutions.

4.2.1 The National Government responsible for Agriculture

The National government in the Agricultural Sector is mainly responsible for policy, standards and regulation of services, international obligations and countrywide programs. The National government and its agencies will thus be responsible for policy, standards,

regulation of agricultural services, international obligations, programs that may negatively impact on national economic interests and nationwide agriculture sector interventions. The Ministry in charge of crops, livestock and fisheries will implement this Policy through its respective departments and agencies by developing subsector policies, strategies, laws, regulations and plans, attending to international obligations while coordinating the implementation of nationwide agricultural programs.

4.2.2 The County Governments responsible for Agriculture

County governments will be responsible for implementation of this Policy. Individual counties will thus domesticate national policies, strategies and plans arising from this Policy to guide implementation. The Constitution provides for County Governments to be responsible for crop and animal husbandry, livestock sale yards, County abattoirs, plant and animal disease control, fisheries, animal control and welfare.

4.2.3 Intergovernmental Relation Mechanism

Article 6 (2) of the Constitution provides for two levels of governments that are distinct and inter-dependent that shall conduct their mutual relations on the basis of consultation and cooperation. Article 187 provides for transfer of functions between levels of government. Article 189 1(c) further provides that governments at each level shall liaise with government at the other level for the purpose of exchanging information, coordinating policies, administration and enhancing capacity. The 4th Schedule of the Constitution provides for County and National Governments functions in the agricultural sector and the Intergovernmental Relations Act, 2012 and other laws provide for interaction and collaboration between the two levels of governments.

In line with these provisions, a seamless Intergovernmental Relations between the two levels of government is required. Within the Agricultural Sector, an Intergovernmental Secretariat (IGS) drawing membership from both levels of government has been put in place and reports to the Intergovernmental Forum on Lands and Agriculture and the Summit. For technical operations between the two levels of governments various Intergovernmental Thematic/



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Sector Working Groups (ITWGs) such as those on Policy and Legislation, Projects and Inputs, and Food Security, Extension and Capacity Building have also been formed.

The IGS provide for both levels of government to cooperate and consult on a regular basis to ensure availability of affordable quality food and surpluses for trade at all times. In this regard, the highest leadership in the National and County governments will respectively take responsibility for development of annual implementation plans for this policy. Whenever appropriate, the National and/or County governments will individually or concurrently establish institutions to address new developments in the agricultural sector. The IGS and ITWGs will continue to provide a seamless technical operation, coordination and feedback within the sector.

4.2.4 Private Sector

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

4.2.5 Regulatory and Professional Bodies

Professional regulatory bodies perform significant roles in setting standards of training professionals through provision of core curriculum requirements, inspection and accreditation of training institutions to offer respective professional courses. By registering and licensing professionals in respective areas,

professional regulators ensure that only qualified personnel offer services. Consequently, consumers of professional services that include farmers and fisher-folk are protected from quacks whose activities can result to heavy losses.

In the public service, when professional regulators are non-existent, the tendency is to rely on the Code of Regulations and Service Charters to guide practices in delivery of services. Unlike professional regulations that apply to specific public and private professionals, the Code of Regulations and Service Charters apply to public employees generally, they are not profession-specific and their enforcement is weak.

In the Agricultural Sector, only veterinary surgeons and veterinary paraprofessionals are officially regulated by the Kenya Veterinary Board. In order to ensure that consumers of professional services in agricultural value chains constantly receive quality services, it would be essential to establish and maintain professional regulatory organizations for various specializations.

Professional associations in the agricultural sector include the Kenya Veterinary Association, Animal Production Society of Kenya, Kenya Association of Livestock Technicians, Kenya Veterinary Paraprofessionals Association and Kenya Society of Agricultural Professionals. They assist in continuous education of members but do not regulate the conduct, performance or training of their respective professionals. Their main concern is welfare of members.

4.2.6 Agriculture Sector Support Institutions

Realization of the objectives of this policy is dependent on the roles and responsibilities of other ministries, commissions and agencies that include the ministries





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responsible for: health; energy; transport and infrastructure; finance; industrialization and enterprise development; land, water and environment; internal security; labour, education science and technology, trade and devolution.

The National and respective County governments will set up mechanisms to strengthen functional linkages between each of these organizations and the ministry responsible for crops, livestock and fisheries.

4.2.7 Sector Coordinating Secretariat

The National Government through the Ministry responsible for Agriculture will establish a coordination committee with the mandate of addressing the fragmentation of responsibilities between agriculture and rural development-related ministries and non-state actors), sector wide planning approach and donor coordination forums. The establishment of the coordination unit will avoid duplicating efforts and to create synergy among National Sector Ministries and County Sector Departments through better coordination.

4.2.8 Ministry responsible for Health

Collaboration with the Ministry responsible for health is important in guaranteeing food safety. Health is a key pre-requisite to a productive workforce. Unhealthy workers perform sub-optimally particularly in the agri- cultural sector where manual labour is

required. Periods spent away from work imply that certain activities are not carried out on time. Thus, activities like planting, weeding, feeding animals or laying nets to catch fish may be delayed leading to economic losses.

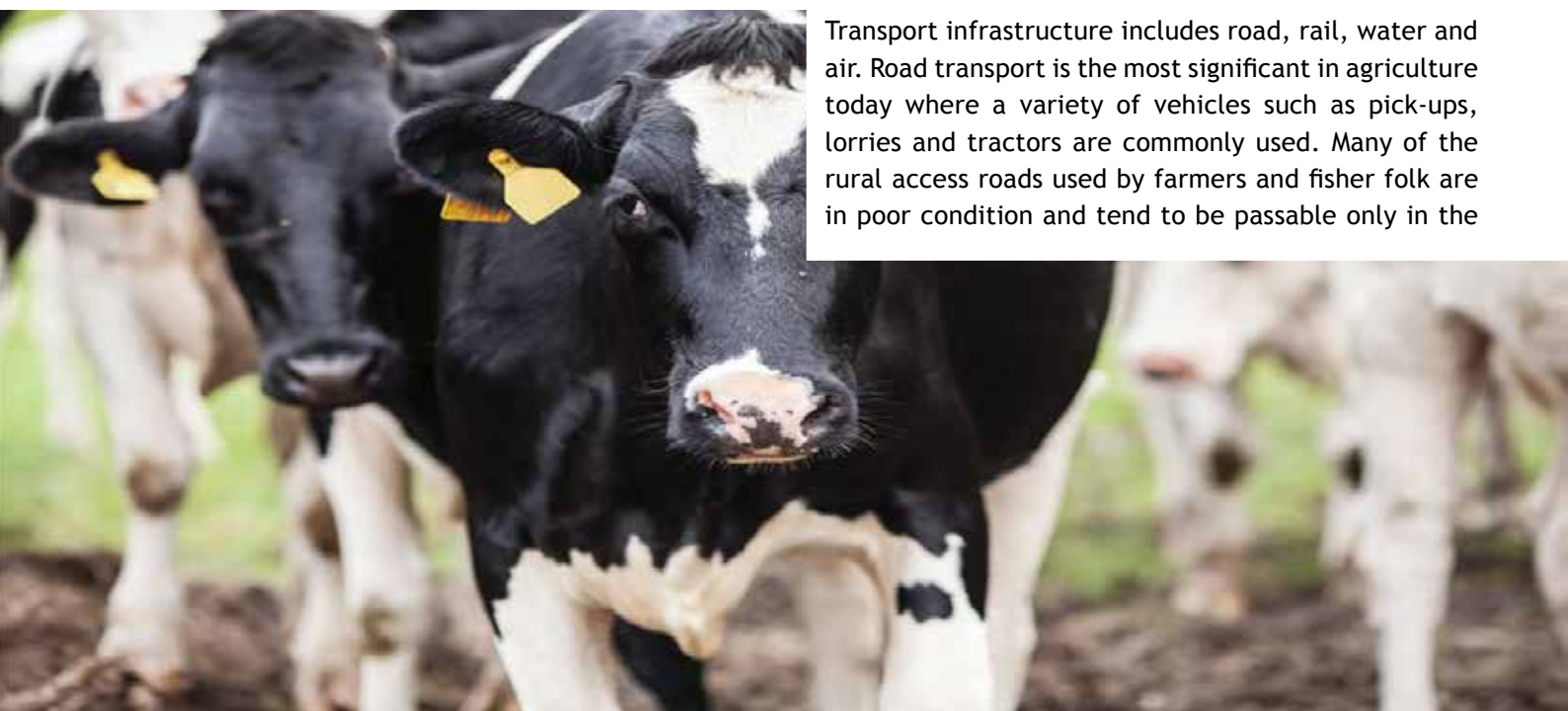
4.2.9 Ministry responsible for Energy

Production, storage and value addition are among components in agriculture that require reliable and affordable energy supply. Current energy sources include hydro, wind and geothermal power, petroleum products, solar, wood fuel and biogas. Electricity supply tends to be irregular particularly in the rural areas where farms are located and its cost is often high yet it is the most convenient source of energy for use in agriculture. Farmers may not access it leading to poor storage of products and less processing. Equally, petroleum products are expensive. They are mainly applicable in land preparation and transportation of agricultural and fishery products. The high cost of petroleum products makes end products in agriculture expensive and reduces their competitiveness in the local and international markets.

Both levels of government therefore need to explore ways of providing affordable and reliable energy for use in agriculture.

4.2.10 Ministry responsible for Transport and Infrastructure

Transport infrastructure includes road, rail, water and air. Road transport is the most significant in agriculture today where a variety of vehicles such as pick-ups, lorries and tractors are commonly used. Many of the rural access roads used by farmers and fisher folk are in poor condition and tend to be passable only in the



dry season. This hinders timely transportation of agricultural and fishery products to market destinations leading to massive post-harvest losses.

Most of the vehicles in the country are imported and farmers are not in the category of citizens eligible for duty waivers. Even though the Government lowers taxes on or zero-rates tractors from time to time, pick-ups and lorries that are useful in product marketing attract full duty and hence are out of reach of many small-scale farmers.

The County governments need to prioritize rehabilitation and maintenance of rural access roads as the National government maintains trunk roads and considers duty exemption on vehicles commonly used by farmers. Product marketing and trade require developed and well-maintained infrastructure networks.

4.2.11 The National Treasury

The economy of Kenya substantially depends on agriculture. The food, hotel, processing, and transport industries are among the major subsectors that heavily rely on the performance of agriculture. Many of the informal roadside markets that employ large segments of the population and drive rural economies thrive on agricultural and fishery products. Agriculture is therefore a fundamental stimulant to growth of both the National and County economies. Its importance to food security is already well documented, what needs constant emphasis is its contribution to Kenya's envisaged industrialized status.

The National Treasury needs to provide adequate financial incentives to actors at different stages of various agricultural Value Chains. Funding for agriculture including livestock and fisheries should not be less than 10% of the National budget. Cascaded to the counties, a similar, if not higher, allocation should go to the three subsectors. In order to lower prices of agricultural and fishery inputs and raise product competitiveness, it is necessary to institute targeted tax reliefs and subsidies while enabling special financial packages for citizens interested in taking up agriculture as a business.

4.2.12 Ministry responsible for Industrialization, Trade and

Enterprise Development

Currently, most agricultural and fishery products reach the markets as unprocessed goods. This denies the country a huge proportion of employment in industries that would emerge from and leverage on processing of primary products. Small-scale farmers who constitute a majority of producers usually operate as individuals who cannot easily meet the demands of large-scale processors.

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

4.2.13 Ministries responsible For Land, Water and Environment

Land is by far the most important primary factor of agricultural production. With reference to agriculture, land, water and environment are closely interrelated. Activities on land heavily impact water sources and the agricultural environment. In Kenya, land is classified as private, communal or public. Public land is government land. All categories of classification support agricultural production and are threatened by different aspects of citizen behavior.

Private land under free-hold ownership accounts for the bulk of small-scale production in agriculture.





This category of land is subject to uncontrolled subdivision that in many rain-fed areas is approaching uneconomical units in terms of agriculture. The main reason for subdivision is culture that requires every boy child to claim a share of the family land on attaining adulthood.

Communal land is found mainly in the arid and semi-arid counties. Its major threat is attributed to the 'Tragedy of the commons' that manifests in overgrazing by livestock and continuous cutting of thorny bushes and trees to produce charcoal and wood fuel mainly for sale in towns and cities. As populations of the cities and towns grow, so does cutting of trees on communal parcels of land to supply cooking energy accelerate.

Government or public land with a direct bearing on agriculture includes land set aside for research in agriculture, forests, water towers and other water catchments, livestock multiplication farms, livestock holding grounds and quarantine establishments. In many countries of the world, government land reserved for agriculture receives the highest form of protection because its proper use is closely related to food security.

In Kenya, public land has not been accorded the protection it deserves. Quite often, it is alienated for settlement even at the risk of grossly interfering with water sources. A case in point is the Mau Forest that is the source of many rivers which support livestock production, fisheries, crops' production, wildlife and agro-processing industries.

The major threats to the three categories of land referred to, require urgent government intervention if the country is to attain food security in the near future. Both levels of government must zealously protect all public land particularly land that has a direct or indirect bearing on agricultural production and fisheries. In the densely populated rural rain-fed counties, the two levels of government, as a matter of public policy, must prescribe the minimum units that may not be subdivided any further. This will vary from County to County but the guiding principle must be units that can economically support agricultural production including aquaculture.

Where feasible, and this applies to many rain-fed regions with private land ownership, a carefully considered policy of reconsolidating land for agricultural production should be implemented. This should take the form of setting apart a section or sections of a ward or location for settlement as the rest of the land is consolidated for agriculture. The owners will still hold their title deeds and harvest produce within the consolidated parcels. Consolidation will allow for better agronomic practices including application of machinery that ease farming and increase its attractiveness particularly to the youth. As consolidation reverses subdivision, it will equally curtail further subdivision of agricultural land.

Settling villagers in identified sections of wards will increase efficiency in provision of social amenities like electricity, water, access roads, health facilities, planned housing, disposal of sewage and better waste management. Most important, there will be minimal degradation of rural agricultural land.

Communal land, because of its fragility most of it being arid or semi-arid, will benefit from the same policy direction recommended for private land in rain-fed areas only that it will be much easier to consolidate settlements. Already, ASALs populations tend to live in common settlements usually for purposes of security and proximity to water points. The government only needs to lay more emphasis on this good practice and transform it into a policy supported by adequate supply of essential needs particularly water, housing, electricity and all-weather access roads that are severely lacking in these areas.

The environment and natural resources' sector is





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strategic to improvement of agricultural production, reduction of poverty and environmental degradation. The overall focus is to practice agricultural production in the context of sustainable development and enhance the role that it plays in food production and natural resource stewardship. Sustainable agricultural practices enhance food security, environmental protection and reduce poverty. Conservation and rehabilitation of wetlands and riparian areas provide important habitats for fish and other biodiversity while maintaining ecosystem goods like water. Wetland sequestration of carbon from the atmosphere regulates climate and optimizes crops, livestock and fisheries production.

Forests and water catchments are critical to the well-being of ecosystems. Forests and water catchment areas are the main sources of rivers in the country. The rivers provide water for irrigated crops, livestock and fisheries. The forests and water catchments need to be protected by reforestation and afforestation activities in gazetted forests, farmlands and communal lands. Promotion of dryland forestry will create resilience in the ASALs and enhance public awareness on the importance of forests. The overall goal is to have a 10% forest cover in the country.

4.2.14 Ministries Responsible For Internal Security, Labour, Trade, Devolution

Internal security is crucial to the viability and success of all agricultural enterprises. Insecurity-prone localities perennially suffer from lack of adequate food that quite often leads to famine. Malnutrition of children, the elderly and other vulnerable groups is a common feature of insecure populations that primarily depend on fisheries, livestock or crop production. In some of the ASALs, cattle-rustling is a manifestation of insecurity.

The ministry responsible for labour plays a significant role in mobilizing communities to participate in agricultural activities. It mediates disputes between the employer and employees and ensures a quick return to work. It upholds the practice of occupational

safety and health that reduces injuries to workers in agricultural value chains.

The ministry responsible for trade promotes retail and wholesale markets while ensuring fair trade practices and consumer protection that are vital to the success of agricultural enterprises. Negotiation of economic partnership Agreements improves access of agricultural products to international markets.

The ministry responsible for devolution and planning is expected to play a significant role in the provision of policy guidelines and planning at both levels of government. Equally, it will spearhead intergovernmental consultations for sustainable and inclusive growth and development between the two levels of government. These will greatly benefit agricultural value chains.

4.2.15 Farmer and Fisher Folk Organizations

Farmer and fisher-folk organizations aid in delivery of services to farmers and fisher-folk since they act as key entry points for agriculture and rural development actors. The organizations are vital in mobilizing members around specific value chains that have common objectives. Hence government support to them can accelerate achievement of the objectives of enhanced production and productivity, aggregated quality produce for niche markets and agribusiness among other objectives of the agricultural sector. Their role in lobbying and advocacy provide a huge potential in the implementation of this policy as they afford powerful platforms for advocating for new policies that support agricultural development including budget support to the sector.

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

4.2.16 Non State Actors

Non state actors include Civil Society Organizations (CSOs), Non - Governmental Organizations (NGOs), Faith based organizations (FBOs), and Community



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based organizations (CBOs), Business Member Organizations (BMO) among others. They will collaborate with National and County governments in the implementation of the policy through development and review of subsector policies strategies, legislations and in the implementation of agricultural programmes and projects.

4.2.17 International Organizations

4.2.17.1 Development Partners

Bilateral and multilateral development partners are important in financing and providing technical support for the agricultural sector. The development partners in collaboration with the National and County governments will continue to provide technical assistance and financial support to realize the objectives of the policy. This will be through policy development and reviews, legislations and guidelines, sector reforms and development and implementation of agricultural programmes and projects. In this regards, the National and County governments will provide for an agriculture sector Common Programme Framework (CPF) to guide the engagement with development partners.

4.2.17.2 UN Organizations in Agriculture

Kenya is a contracting party to many interNational and regional bodies under the United Nations (UN). Key among these include; the Food and Agriculture Organization of the United Nations (FAO), InterNational Fund for Agricultural Development (IFAD), World Food Programme (WFP), and United Nations General Assembly.

1. Food and Agriculture Organization of the United Nations (FAO)

FAO is an agency that combats global hunger and promotes rural development. FAO is the only global

intergovernmental organization with a broad mandate in governing the world's food and agricultural system, although with the involvement of numerous other players at the regional and global levels. FAO's mandate consists of four interventions: information gathering and dissemination; formulation of policy recommendations; provision of technical assistance and assistance to governments with FAO-related obligations. These functions serve the following goals: help in eliminating hunger, food insecurity and malnutrition; make agriculture more productive and sustainable; reduce rural poverty; ensure inclusive and efficient agricultural and food systems and protect livelihoods from disasters. The FAO discharges its mandate through committees and organizations; among them is the Committee on World Food Security (CFS).

The CFS is an intergovernmental body which provides a platform to facilitate review and follow up of food security policies. It coordinates a global approach to food security; promotes policy convergence, supports and advises countries and regions, coordinates at National and regional levels, promotes accountability and share best practices; and develops a global strategic framework for food security and nutrition. Inter National and regional organizations under FAO give policy directions and standards for fishing.

2. World Food Programme (WFP)

WFP delivers food assistance to disaster-stricken and impoverished communities. They also support agricultural development in the context of emergency as part of efforts to build and strengthen the level of resilience of the affected communities.

3. International Fund for Agricultural Development (IFAD)

IFAD provides funding for investments in sustainable agricultural development.

4.2.17.3 Global Standard-Setting Organizations in Crops, Livestock and Fisheries





Kenya is a member of various international standard setting bodies in agriculture. The most important ones being the International Plant Protection Convention (IPPC), the World Organization for Animal Health (OIE) and the Codex Alimentarius Commission (CAC). The World Trade Organization through the Agreement on Sanitary and Phytosanitary Standards (SPS), applies the standards in facilitating international trade in plants, plant products, animals, animal products and fish. Kenya is a member of the World Trade Organization and like other members of the Organization; is bound by the SPS Agreement.

1. International Plant Protection Convention

The International Plant Protection Convention (IPPC) is a multilateral treaty for international cooperation in plant protection. It aims to secure coordinated and effective action to prevent and control the introduction and spread of pests of plants and plant products. The convention extends beyond the protection of cultivated plants to the protection of natural flora and plant products. It takes into consideration both direct and indirect damage by pests and therefore includes weeds. The convention is recognized by the World Trade Organization's (WTO) Agreement on the application of Sanitary and Phytosanitary Measures (the SPS Agreement) as the only international standard setting body for plant health.

The IPPC's primary focus is on the movement of

plants and plant products in international trade but it also covers research materials, biological control organisms, germplasm banks, containment facilities, food aid, emergency aid and anything that can act as a vector for the spread of plant pests including containers, packaging materials, soil, vehicles, vessels and machinery.

2. World Organization for Animal Health

The World Organization for Animal Health (OIE) defines international standards for control of animal diseases, animal welfare and safe trade in animals and animal products. It aims at preserving the health of mammals, birds, fish and marine animals. Its major functions include collection and dissemination of information on the distribution and occurrence of animal diseases and ensuring that scientifically based standards govern international trade in animals and animal products. The World Trade Organization recognizes the OIE as the body for setting animal health standards. The OIE informs Member States of the occurrence and course of animal diseases throughout the world and the means of controlling the diseases; co-ordinates international research devoted to the surveillance and control of animal diseases and promotes the harmonization of health regulations for trade in animals and animal products among members.

3. Codex Alimentarius Commission

The Codex Alimentarius Commission (CAC) administers international food standards for the purposes of protecting public health and ensuring fair practices in international food trade. Harmonization of food regulations and standards world-wide reduces barriers to trade and promotes faster movement of food products among countries. This reduces hunger and poverty and benefits farmers. The WTO-SPS Agreement cites Codex standards, guidelines and recommendations as the preferred international measures for facilitating international trade in food.

4. The World Trade Organization

The World Trade Organization on the Application of Sanitary and Phytosanitary Standards is concerned with health and international trade. It recognizes the need for member states to protect themselves from risks posed by entry of pests and diseases while minimizing





negative effects of SPS measures on trade.

The WTO members protect human, animal and plant health by applying measures to manage the risks associated with imports. The SPS measures are classified as sanitary (relating to human or animal life or health) or phytosanitary (relating to plant life or health).

The SPS Agreement recognizes WTO members' rights to protect human, animal or plant life or health, provided that certain requirements are met. The key requirements are that SPS measures must be science-based; they must not be more trade-restrictive than required; they must not arbitrarily or unjustifiably discriminate and they must not constitute a disguised restriction on international trade. The overall goal being free and healthy trade.

4.2.17.4 Regional Economic Communities

Kenya is a member of regional economic communities that include the East African Community, the Inter-Governmental Authority on Development, the Common Market for Eastern and Southern Africa and the African Economic Community among others.

1. The East African Community

The East African Community (EAC) aims at realizing a fast and balanced regional development and creating an enabling environment in all the partner states in order to attract investments and allow the private sector and civil society to play a leading role in the socio-economic development activities through the development and efficient management of sound macro-economic and sectoral policies. The Community develops policies and programmes aimed at widening and deepening co-operation among the partner states in economic, social and cultural fields, research and technology among other areas.

The overall objective of the EAC in the agricultural sector is the achievement of food security and rational production in agriculture within the Community. The partner states undertake to adopt a scheme for rationalization of production in agriculture with a view to promoting complementarity, specialization and sustainability of National agricultural programmes. This is expected to ensure food sufficiency within

the Community and increase production of crops, livestock, fisheries and forest products for domestic consumption, export within and outside the Community and as inputs to agro-based industries within the Community. Post-harvest preservation and conservation alongside improved food processing will equally benefit from the scheme.

2. The Inter-Governmental Authority on Development

The Intergovernmental Authority on Development (IGAD) was established in 1986 by the then drought afflicted six Eastern African countries of Djibouti, Ethiopia, Kenya, Somalia, Sudan and Uganda. Its member- ship now includes the State of Eritrea.

The objectives of IGAD include: harmonization of policies with regard to trade, customs, transport, communications, agriculture and natural resources and promotion of free movement of people, goods and services within member states; achievement of regional food security, encouragement and assistance of member states to collectively combat drought and other natural and man-made disasters; facilitation, promotion and strengthening of cooperation in research, development and application in the fields of science and technology.

Member states agree to: develop and enhance cooperation and coordination of their macroeconomic policies in the areas of sustainable development in agriculture and food security; improve the handling and analysis of data in agro-meteorology and climatology, nutrition, social and economic indicators and establish a strong food information system. Further, they will coordinate and strengthen effective mechanisms for:





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monitoring and controlling migrant pests, managing spread of animal and plant diseases and pests; cooperation in improving their capacity in agricultural research, training and extension services.

Member states shall facilitate the movement of food and emergency supplies in the event of man-made or other natural disasters from surplus to deficit areas. In addition, they will harmonize existing National plans of action for marginal lands and dry lands management and control of land degradation in line with the resolution of Urgent Action for Africa under the UN Convention to Combat Desertification (UNCCD).

3. Common Market for Eastern and Southern Africa

The Common Market for Eastern and Southern Africa (COMESA) is a trading block comprising of 23 member states. It seeks to achieve sustainable growth and development of its member states by promoting a balanced and harmonious development of production and marketing structures. One of its objectives is to foster co-operation in the creation of an enabling environment for foreign, cross border and domestic investment including the joint promotion of research and adaptation of science and technology for development.

In the field of agriculture, the member states undertake to cooperate in: agricultural development; adoption of a common agricultural policy; enhancement of regional food sufficiency; export of agricultural commodities and co-ordination of their policies regarding the establishment of agro-industries. Cooperation will also be extended to: agricultural research and extension; enhancement of rural development; drought and desertification management and strengthening farmers' participation in agricultural development.

4. The African Union



The African Union (AU) primarily seeks to improve the quality of life of its citizens through integration, cooperation and development. In July 2003, the African Union Heads of State summit endorsed the Comprehensive Africa Agriculture Development Programme (CAADP) as a New Partnership for Africa's Development (NEPAD) programme. The overall goal of CAADP is to 'Help African countries reach a higher path of economic growth through agriculture-led development which eliminates hunger, reduces poverty and food insecurity and enables expansion of exports.'

CAADP is a growth-oriented agricultural development agenda aimed at increasing agricultural growth rates to 6% per year to create the wealth needed for rural communities and households in Africa to prosper. To achieve this goal, CAADP focuses its interventions on four key pillars: extending the area under sustainable land management and reliable water control systems; improving rural infrastructure and trade-related capacities for market access; increasing food supply, reducing hunger and improving responses to food emergency crises and improving agricultural research, technology dissemination and adoption.

Within the AU, the Agriculture and Food Security Division (AFSD) addresses the challenges within the agricultural sector through CAADP and other projects and programmes. The overall objective of AFSD is to coordinate continent-wide initiatives on agriculture, climate change and food and nutrition security. These objectives are reinforced by appropriate policy and technological options that will enhance the livelihoods and food security of Africans. To emphasize the importance of agriculture in Africa, the African Food Basket initiative and the African Food and Nutrition Security Day were launched; the latter is held annually in October since 2010.

5. The African Economic Community

The African Economic Community (AEC) is an organization of African Union states establishing grounds for mutual economic development among the majority of African states. The goals of the Community include the creation of free trade areas, customs unions and a single market. Member states cooperate in the development of agriculture, forestry, livestock



and fisheries in order to ensure food security; increase production and productivity in crops, livestock, fisheries and forestry, improve conditions of work and generate employment opportunities in rural areas. They will enhance agricultural production through processing animal and plant products locally and protecting the prices of export commodities in the international market by means of establishing an African Commodity Exchange.

In order to promote the integration of production structures, member states shall cooperate in the production of agricultural inputs, fertilizers, pesticides, selected seeds, agricultural machinery and equipment and veterinary products. Further, member states shall develop and protect river and lake basins; marine and fishery resources and plant and animal resources. They will harmonize agricultural development strategies and policies at regional and Community levels, in particular, in so far as they relate to production, trade and marketing of major agricultural products and inputs.

Food security policies will be harmonized in order to ensure reduction of losses in food production; strengthening of existing institutions for the management of natural calamities, agricultural diseases and pest control. Member states shall prioritize conclusion of agreements on food security at the regional and continental levels; provision of food aid in the event of serious food shortage and protection of regional and continental markets primarily for the benefit of African agricultural products.

6. The African Continental Free Trade Area (AfCFTA)

The African Continental Free Trade Area (AfCFTA) is the result of the African Continental Free Trade Agreement among all 55 members of the African Union. Already 44 of the 55 African countries signed the treaty. The block serves to create a single continental market for goods and services in member nations of the African Union, with free movement of businesspersons and investments using a single currency.

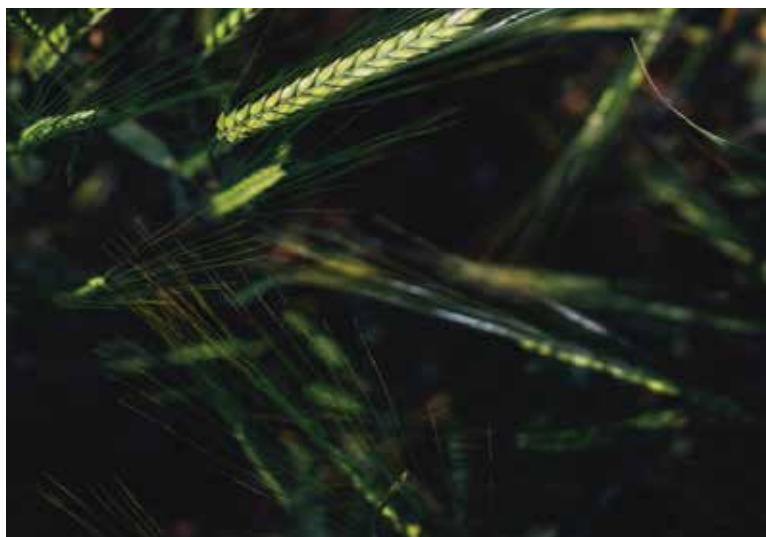
The scope of the treaty covers agreements on trade in goods, services, investment, and rules and procedures

on dispute settlement, including a range of provisions to facilitate trade, reduce transaction costs, provide exceptions, flexibilities and safeguards for vulnerable groups and countries in challenging circumstances. The treaty aims at taking advantage of 1.2 billion population of the continent with a combined Gross Domestic Product of more than \$2 trillion to create a single continental market for goods and services.

4.3 Financing and Investments in Agriculture

To implement this Agricultural Policy and other agriculture investments, the bulk of the funding will be provided to the relevant Ministries, Departments and Agencies (MDAs) by the National and County governments through the exchequer. This will be guided by the National development blue prints like the Kenya Vision 2030 and its Medium Term Plans. However, efforts will be made to mobilize technical and financial support from development partners to realize the objectives of the policy through: development and implementation of agricultural programmes and projects; policy development and reviews, legislations and guidelines. The regional economic communities including EAC, COMESA and IGAD will support policy implementation in the same areas like development partners.

Direct financing and investments by the private sector through Public Private Partnerships (PPPs) will be critical to the successful implementation of the Agricultural Policy, growth and development of the agriculture sector. To this end, the National and County governments will create conducive environments to facilitate participation of the private sector in the agriculture sector. This should include





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strengthening rural credit institutions to support farmers' investments, savings and risk management; introduction of simple procedures in providing loan facilities for agricultural activities and agro-based industries; ensuring availability of credit to farmers and other agricultural value chain actors at concessionary interest rates and introduction of appropriate agricultural insurance schemes to protect farmers from risks associated with natural calamities. The involvement of NGOs and civil society in resource mobilization, capacity development and general oversight over governance, trade issues and other policy interventions will be essential.

4.4 Monitoring and Evaluation

Monitoring and Evaluation (M&E) is a tool for assessing the success of implementation. It enables decision makers, sponsors and other stakeholders to learn from past experience, improve service delivery, plan, allocate of resources and demonstrating results as part of accountability to key stakeholders.

For successful implementation of the Agricultural Policy, an M&E framework will be developed as an integral component to ensure the policy objectives are achieved in a cost effective, coordinated and harmonized approach at both the National and County levels. The Ministry in charge of crops, livestock, fisheries, agricultural research and irrigation in collaboration with the County governments, relevant implementing Ministries, Departments and Agencies (MDAs), private sector and other stakeholders will develop an M&E framework within six months of the Policy implementation.

The M&E framework is expected to be consistent with the National Integrated Monitoring and Evaluation Systems (NIMES) and have clear terms of reference for relevant stakeholders in data collection and reporting at all levels. There will be an Annual Review Report (ARR) on implementation of the policy that will be presented to the President by the Cabinet Secretary responsible for crops, livestock, fisheries agricultural research and irrigation for dissemination to the public and relevant stakeholders. The policy will be reviewed periodically to address the sector challenges and emerging issues.

4.5 Communication Strategy

Successful implementation of the agricultural policy will depend greatly on an effective and efficient communication system. This, of necessity, will require the Ministry responsible for crops, livestock fisheries, agricultural research and irrigation to develop a communication framework for implementation of the policy within six months of the policy implementation in collaboration with relevant stakeholders. The frame- work will facilitate an effective information flow between the National and County governments, within the National government, among County governments, between both levels of government and the private sector, farmers, the public, media and other stakeholders in agriculture.

Efficient communication will provide opportunities for





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