



## BUNGOMA COUNTY NATURAL RESOURCES POLICY



2020

## Abbreviations and Acronyms

ASAL - Arid and Semi-Arid Lands

AIDS - Acquired Immunodeficiency Syndrome

CBSAP- County Biodiversity Strategy and Action Plan

CEAP - County Environment Action Plan

CEIMS- County Environmental Information Management System

CIDP - County Integrated Development Plan

COK - Constitution of Kenya

COPD - Chronic Obstructive Pulmonary Disease

CSER - County State of Environment Reports

CSO - Civil Society Organizations

EA - Environmental Audit

EHIA - Environmental Health Impact Analysis

EIA - Environmental Impact Assessment

EMCA - Environmental Management and Coordination Act

ESD - Education for Sustainable Development

ESIA - Environmental and Social Impact Assessment

GDP - Gross Domestic Product

GHG - Green House Gases

GIS - Geographical Information System

HDI - Human Development Index

HIV - Human Immunodeficiency Virus

KFS - Kenya Forest Service

KPHC - Kenya Population and Housing Census

KWS - Kenya Wildlife Service

MEA - Multilateral Environmental Agreements

NBI - Nile Basin Initiative

NEMA - National Environmental Management Authority

PES - Payment for Environmental Services

SAICM - Strategic Approach to International Chemicals Management

SDG - Sustainable Development Goals

SEA - Strategic Environmental Assessment

SME - Small and Medium Enterprise

WRA - Water Resources Authority

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## Executive Summary

The advent of devolved units in Kenya should be viewed as engines that drive economic growth in the country. To achieve this, counties need to build strong governance structures that will effectively provide efficient services towards wealth creation by sustainably exploiting natural resources in their backyards. Counties should develop and implement natural resources frameworks that seek to improve the quality of life for every citizen. Further, counties should strive to tame natural resources conflicts in the country borne out of and made worse by continuing socio-economic inequalities; by create equitable and consequently equality in each of the devolved units.

Time is now for our county to harness the potential of the diverse natural resources in order to create ecological, environmental and sustainable economic solutions. The concept and spirit of devolution is to distribute wealth and resources to each and every citizen, whilst imparting a sense of belonging and ownership. To achieve this a sustainably managed natural resource base is to be built in every county. Yet, many counties are yet to give much credence to the natural resources' management agenda in their development plans. This agenda is not conceptualized or mapped out in their development priorities, neither is it clearly articulated in their sectoral plans. It is no wonder that the annual budgets for development allocated to natural resources management by county governments is next to nil.

Counties need to review their development agendas and expenditures with the natural resource's conservation agenda in mind. In so doing they need to pay attention to areas that need investment and will attract investors to partner not just in the counties but expand the same across the country.

Counties need to leverage their natural resources to foster healthy competition among themselves as they seek to attract and retain both local and global investments in environmental conservation. Each county should anchor this on their uniqueness and ability to position themselves as 'a hub for sustainable natural resources management.' Land is one key natural resource in this agenda. Counties need to start setting aside land specifically for natural resources – for such purposes as green zones, arboreta, nature reserves, county forests and wetlands. Development of policies that create a conducive environment for stakeholder participation and investors is a basic requirement. The natural resources policy propels the county into a higher level of natural resources management for the benefit of all.

## Table of Contents

<b>Abbreviations and Acronyms</b>	<b>2</b>
<b>Executive Summary</b>	<b>4</b>
<b>Chapter One</b>	<b>7</b>
<b>Context and Rationale of the Bungoma County Natural Resources Policy</b>	<b>7</b>
1.0. Introduction	7
1.1. Background	7
1.2. Context Rationale of the Policy	7
1.3. Drivers of this policy	8
1.4. Policy development process.	10
<b>Chapter Two</b>	<b>11</b>
<b>Policy Goal, Objectives and Guiding Principles</b>	<b>11</b>
2.0 Introduction	11
2.1 Goal of the Policy:	11
2.3 Guiding Principles	11
<b>Chapter Three:</b>	<b>13</b>
<b>Natural Resources Management Opportunities and Strategic Policy Interventions.</b>	<b>13</b>
3.0. Introduction	13
3.1. Opportunities in natural resources conservation	13
a) Natural Forests	13
<b>Strategic Policy Interventions</b>	13
b) Urban forests and Roadside tree planting	14
<b>Strategic Policy interventions:</b>	14
c) Farm forestry	14
<b>Strategic Policy interventions:</b>	15
d) Wetlands	15
<b>Strategic Policy interventions:</b>	16
e) Hill Ecosystems	16
<b>Strategic Policy interventions:</b>	16
e) soil	16
<b>Strategic Policy Interventions</b>	17
f) Wildlife Resources	17

<b>Strategic Policy Interventions</b>	17
g) Minerals.	18
<b>Strategic Policy Interventions</b>	18
3.2. Natural Resources Stewardship	18
a) Wood Products and Industries	18
<b>Strategic Policy Interventions:</b>	19
b) Non wood forest products	19
<b>Strategic Policy Interventions:</b>	19
c) Natural Resources Research and Education	20
<b>Strategic Policy Interventions:</b>	20
d) Natural Resources Research and Development	20
<b>Strategic Policy Interventions:</b>	21
3.3. Forest Sector Legal Reforms	21
<b>Strategic policy interventions:</b>	21
3.4. Funding Mechanisms	21
<b>Strategic Policy Interventions:</b>	22
<b>CHAPTER FOUR</b>	<b>23</b>
<b>Policy Implementation Framework</b>	<b>23</b>
4.0. Introduction.	23
4.1. Institutional Framework	23
Regional Actors	23
Key National Level Actors	24
None State Actors	24
Key informal sector player	24
<b>Chapter Five:</b>	<b>25</b>
<b>Policy Monitoring, Evaluation, Reporting and Review</b>	<b>25</b>
5.0. Introduction	25
5.1. Monitoring and Evaluation	25
5.2. Reporting	25
5.3. Operationalization and Policy Review	25

# Chapter One

## Context and Rationale of the Bungoma County Natural Resources Policy

### 1.0. Introduction

The chapter outlines the context within which the county's natural resources policy is developed. It presents the scenarios at both County and National level. It also presents a summary of the rationale for the policy and the drivers of natural resources management in Bungoma County. Finally, it provides insights on the process of policy development.

### 1.1. Background

Natural resources is a terminology representing a wide range of attributes from the physical environment that are beneficial to humans such as forests, wildlife, soil quality, water quality, land, fossil fuel, minerals, solar, hydro-power, wind among others. Kenyan natural resources are diverse ranging from mountains, forests, Arid and Semi-Arid Lands (ASALs), freshwater, wetlands and marine.

The benefits of natural resources of supporting, provisioning, cultural and regulation services may be compromised in the county due to high population growth rate, increased urbanization, increased land fragmentation, water scarcity and reduced soil fertility. A combination of these factors has resulted into food insecurity, natural resources overexploitation and increased poverty levels in the County.

One of the responsibilities of the County government is to formulate relevant county policies to meet the aspirations of the Constitution and for sustainable development.

The 2010 Kenya Constitution has an entire chapter (chapter V) dedicated to land and environment. It captures important natural resources in the environment and its interaction with all stakeholders to deliver a safe and clean environmental resources for human consumption and sustainable development.

### 1.2. Context Rationale of the Policy

The current constitution has necessitated formulation of a county natural resources Policy, which is cognizant of the new dispensation. The Constitution is based upon a set of national values, such as good governance, sustainable development, and social justice, and the bill of rights for all citizens. The 2010 Kenya Constitution also introduced a two-tier system of government and the decentralization of services. The Bungoma county natural resources policy will be aligned with the Constitution. It is harmonized with Kenya Vision 2030, the framework land and environmental policies and law and other

natural resource policies. Consequently, the development of this policy does not occur in a vacuum. It is informed by the following legal and policy frameworks:

- COK 2010 emphasizes on rights Art. 42 clean and healthy environment is a basic right;
- County Government act 2012
- The forest management and conservation ACT 2016 and subsequent Regulations
- The wildlife management and conservation Act 2013
- EMCA wetlands regulation 2006
- Physical planning act 1996
- Kenya national climate change Act 2016
- Kenya Vision 2030
- UN SDGs 7,13, 15

The policy is developed to:

- Provide a regulatory mechanism for implementing County natural resources matters
- Provide a pathway for adoption of sustainable natural resources management Systems
- Facilitate compliance with relevant international and national standards
- Contribute to the realization of Kenya Vision 2030 and Big 4 Agenda
- Strengthen Public/Community and Stakeholders participation in the management of Natural resources
- Enhance capacity development for staff particularly in the technical areas of natural resources management

### 1.3. Drivers of this policy

Bungoma County is endowed with wetlands, Mt Elgon water tower, forests on private farms, hill tops, rivers and wildlife. The current tree cover is 7.9% below the international levels. The forests have high biodiversity. They provide ecological, life supporting functions and they provide a variety of goods and services. The county natural resources are experiencing the following key issues and challenges which requires urgent attention:

**Governance:** The promulgation of the COK 2010 brought new requirements for natural resource management such as public participation, community and gender rights, equity in benefit sharing, and the need to achieve 10% tree cover dwindling public land meaning that forestry development has to expand into private and community land, which need incentives and clear methods of engagement to encourage investments in commercial forestry on private and community land. Furthermore, wildlife resources are managed on county managed reserve and in the national park and forest managed by two national government agencies.

**Resource mobilization:** Natural resources goods and services are largely public in nature and therefore depend to a large extent on public funding. However, prioritization of public investment and incentives to the private sector for forestry and wildlife development has been low partly as a result of low valuation of natural resources. goods and services leading to very slow growth of the sector. Various natural resources ecosystems for instance play a key role in supporting various productive sectors of the economy, their contribution to the GDP needs to be re-evaluated. To leverage resources for forestry and wildlife development, there is need for greater integration of forestry and wildlife issues into other sectoral development programs.

**Environmental functions of forest and wetlands:** Over 80% of Kenyans rely on wood biomass for their energy requirements, which exerts considerable pressure on the tree and forest resources. In addition, the wood conversion technologies for timber manufacturing and charcoal production are obsolete and wasteful leading to overharvesting of trees to meet the demand.

The key factors to accelerated loss of biodiversity are forest fires, deforestation and forest degradation, conversion of forests to other uses and game damage.

**Water resources:** Kenya is considered as a water scarce country. One of the main benefits which forests is regulation of water flows, and in improving the quality of water. There is therefore great need to intensify management of water catchments to enhance the conservation of water, regulation of river flows, and to reduce siltation and sedimentation of water reservoirs.

**High levels of erosion, siltation and land degradation:** Soil erosion with consequent degradation of the soil fertility is a major challenge in the county. Furthermore, siltation reduces water quality and the capacity of reservoirs particularly for hydroelectric power production and irrigation. Forests/trees/grass control soil erosion, arrest it where it has started, and assists in creating conditions for restoring fertility to the soil where erosion has already caused a deterioration of fertility.

**Climate change:** Globally and nationally the climate is changing, and this is having a direct impact on ecosystems and on people and their livelihoods – through frequent flooding, landslides, forest fires, invasive species and drought. Conservation of forests, nature reserves and farm forestry is important both in mitigation and adaptation to climate change, and towards green growth. However, there is at present inadequate data and research on the climate change impacts on forestry, farm forestry and biodiversity, and there is a need to strengthen the institutional linkages between research centers, universities and the public agencies.

**Rapid population growth:** High population growth rate in the county is driving rapid urbanization and increasing the demand for agricultural land for food production, wood fuel and settlements. Consequently, encroachment on forest land, deforestation and pollution of the water resources.

#### 1.4. Policy development process.

When developing this Policy, the department pursued a consultative approach involving Kenya Forest Service, Kenya Wildlife Service, National Environment Authority, County Environment Committee, Water Resources Authority, Office of the County Attorney, The County Cabinet and The County Assembly that involved a series of discussions and workshops in order to reach a consensus on issues and thematic areas.

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## Chapter Two

### Policy Goal, Objectives and Guiding Principles

#### 2.0 Introduction

This chapter provide the strategic direction of the sector in Bungoma County by outlining the goal and the objectives. It also spells out the principles that will guide the implementation of the same.

#### 2.1 Goal of the Policy:

The overall goal of this Policy is sustainable development, management, utilization and conservation of natural resources and equitable sharing of accrued benefits for the present and future generations of the people of Bungoma.

#### 2.2. Objectives of the Policy:

The main objectives of Bungoma County Natural Resource Policy are:

- (a) Increase and maintain tree cover of at least 10% of the county land by 2030.
- (b) Establish an enabling legislative and institutional framework for development of the sector.
- (c) Support natural resources research, education, training, information generation and dissemination, and technology transfer for sustainable development.
- (d) Promote public, private and community participation and partnership in natural resources sector development.
- (e) Promote investment in commercial tree farming, game farming forest industry and trade.
- (f) Enhance management of forest resources for conservation of soil, water, biodiversity and environmental stability.

#### 2.3 Guiding Principles

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

**Good governance:** The rule of law, effective institutions, access to information, transparency and accountability, professional ethics, respect for human rights, non-discrimination and the meaningful participation of citizens will be integrated in natural resources conservation and management.

**Regeneration:** Renewable natural resources have abilities to regenerate hence are inexhaustible in the physical sense – misuse and overexploitation is what leads to depletion and extinction.

**Biological Resources as Ecosystems:** They exist in and constitute an ecosystem of flora and fauna – sustainable use of components of natural ecosystems is a vehicle/tool for a more holistic approach to managing natural habitats in order to conserve natural ecosystems -Ecosystem Based Management Approach

**Multiplicity of species interaction and dependence:** Diversity and complexity of species are important properties of biological resources – makes management difficult due to variations in in quality and use of different species.

**Naturally determined growth rate:** The rate of growth and accretion of stock of biological resources are naturally predetermined biological processes. - time a key factor in this; man's influence through research.

**Possibility of manmade improvement:** vide technological advancements consequent upon research – leading to genetic improvement/achieved through de-emphasizing complexity of species in favor of few selected species.

**Common property effect:** The principle requires that the title to all environmental resources should rest with collectivity – “the commons” and private use should be on the basis of usufructuary rights only – rights of ownership of commons leads to overexploitation/maintenance everybody's property so nobody takes responsibility.

**Indigenous knowledge and intellectual property rights:** Indigenous knowledge and intellectual property rights embodied in biodiversity and genetic resources will be harnessed and protected.

## Chapter Three: Natural Resources Management Opportunities and Strategic Policy Interventions.

### 3.0. Introduction

This Chapter highlights the opportunities and strategic policy interventions that should guide Bungoma County to achieve sustainable natural resources management. Opportunities in related sectors are also outlined with the specific policy interventions.

### 3.1. Opportunities in natural resources conservation

#### a) Natural Forests

Indigenous trees and forests represent some of the most diverse ecosystems found in the county. They supply important economic, environmental, recreational, scientific, social, cultural and spiritual benefits. However, many of these forests have been subjected to land use changes such as conversion to farmlands, urbanization and settlements, reducing their ability to supply forest products and serve as water catchments, biodiversity conservation reservoirs, wildlife habitats and carbon sinks. The sustainable multiple use management and utilization of forests including biodiversity conservation, water-catchment functions together with ecotourism development and production of benefits for forest adjacent communities is critical. Where appropriate, forest management should include adequate provisions for conservation of wildlife habitats. Revenues accrued through commercial forest activities, wildlife conservation, ecotourism, climate change and other innovative financing should be channeled to support the management and conservation of indigenous forests. The Government will manage all indigenous forests for water and soil conservation, provision of forest goods, and services and for biodiversity conservation.

#### **Strategic Policy Interventions**

*The county Government in collaboration with KFS will: -*

- *Sustainably conserve and manage all county forests for multiple uses in accordance to approved management plans.*
- *Promote the rehabilitation and management of water catchment areas.*
- *Promote participatory management of indigenous forests with communities and other stakeholders.*
- *Monitor, assess and prepare periodic report on the integrity of forests including the water tower.*
- *Encourage and support land owners to sustainably manage natural and riparian forests.*

- *Formulate strategies to increase forest cover to over 18% and the tree cover to a minimum of 10% by 2030.*
- *Develop and implement a County strategy for rehabilitation and restoration of degraded forest ecosystems and water catchment areas with active community involvement/participation.*
- *Support effective implementation of the forestry and other related policies and laws, regulations and guidelines.*
- *Map and identify fragile and high biodiversity areas for gazettelement as county forests*
- *develop and implement county charcoal regulation.*

#### b) Urban forests and Roadside tree planting

Establishment of arboreta, roadside tree planting, botanical gardens, urban forests, recreational parks and mini-forests enhances environmental, social, economic values and climate change mitigation and adaptation interventions. Trees provide a cool and serene environment, acting as natural filters and contribute to the general wellbeing of society besides improving the microclimate of cities and towns. Trees planted along the boundaries of road reserves are important for aesthetic and shade effects to travelers along the highways and other public roads. A belt of amenity trees planted at the interface of road and private lands will improve the scenery on road reserves contribute to carbon sequestration and mark boundaries between the road reserves and private lands.

#### **Strategic Policy interventions:**

*The county government in collaboration with KFS will: -*

- Promote the establishment and management of amenity belts of appropriate tree species along road reserves.*
- Establish and maintain arboreta, green zones, botanical gardens, recreational parks and urban forests for aesthetic and recreational values*
- Collaborate with relevant agencies to establish and manage amenity forests and trees*
- Promote the planting of suitable tree species during development of private plots in urban areas.*

#### c) Farm forestry

Trees are an essential part of diversified farm production, providing both subsistence products and incomes while contributing to soil fertility, soil and water conservation and building resilience against climate change. Products such as fuel wood, fodder trees, shrubs or grass contribute significantly to the economies of the rural population in the county. Given the growing population, it is not possible to meet all the demands of forest products from government forests and the main alternative source of these products is private lands. Planting of trees on the farms has several positive environmental effects, which include watershed protection, enhancement of the microclimate and carbon sequestration. Forests under private ownership play a significant role in the provision of forest goods and services to supplement supply from state forests while also generating substantial incomes to the

households. To achieve the county tree cover of 10% the major afforestation effort will have to be in community and private lands.

**Strategic Policy interventions:**

*The county government with relevant stakeholders will:*

- (a) Promote partnerships with land owners and other agro forestry agencies to increase on-farm tree cover and to reduce pressure on county and reserved forests.*
- (b) Promote investment in farm forestry through provision of economic and non- economic incentives.*
- (c) Promote on-farm species diversification.*
- (d) Enhance development of forest-based enterprises.*
- (e) Promote processing and marketing of farm forestry products.*
- (g) Promote forestry extension and technical services.*
- h) support appropriate agro forestry techniques and appropriate tree species.*

**d) Wetlands**

Wetlands form an important part of the county's natural resources with considerable provisioning, regulatory and supporting services. Their provisioning services include the storage and retention of water for domestic, agricultural and industrial use. Their regulating services include modifying water flows, recharging and discharging groundwater resources and diluting or removing pollutants (from coffee and sugar factories). Their supporting services are important for soil formation and retention as well as nutrient cycling. These ecosystems also provide habitats for a great number of plant and animal species.

Wetland habitats are among the most heavily impacted and degraded of all ecological systems, in the whole world. The degradation is attributed to human interference and mismanagement of what is, essentially, one of the most important elements for life on Earth.

Wetlands are shrinking in the county. Conversion of swamps, floodplains for agriculture, housing, industrial schemes and alien invasive species (Eucalyptus, dodder plant) has led to adverse alterations of landscapes and ecosystem functioning. These misuse of wetlands (unwise use) reduces their ability to perform useful functions such as water retention and flood control, to supply services, pollution sink capacity and, in many cases, valuable products. Replacing these goods and services require heavy financial and environmental costs.

### Strategic Policy interventions:

*The County Government in collaboration with NEMA, KWS and other relevant stakeholders will:*

- a) Develop and implement integrated freshwater and wetland resources management strategies and action plans.*
- b) Promote and institutionalize payment for environmental services schemes to support catchment protection and conservation.*
- c) With support from partners develop and implement management plans for sustainable use of freshwater and wetland resources and the conservation of riparian ecosystems.*
- d) Develop and implement a County wetlands regulation.*
- e) Promote nature-based enterprises in the freshwater and wetland resources*
- f) promote rehabilitation and restoration of degraded wetlands and riparian zones within the ecosystem*
- g) Work and collaborate with the various regulatory agencies charged with the management of freshwater and wetland ecosystems.*
- h) Take integrated approaches to prevent pollution of wetlands.*
- i) Control alien invasive species in the wetlands and riparian areas.*
- j) Sensitize and empower communities in the management freshwater and wetland ecosystems.*

### e) Hill Ecosystems

Hill ecosystems are fragile and highly susceptible to soil erosion and landslides. They are especially important for biodiversity conservation. The main drivers of Hills ecosystems degradation in the county are deforestation, housing developments, uncontrolled mining, overgrazing, encroachment and loose agricultural practices.

### Strategic Policy interventions:

*The County Government in collaboration with relevant stakeholders will;*

- a) Undertake mapping and identification of degraded hills in the county*
- b) strengthen ecological and sustainable management of hill ecosystems.*
- c) Develop and implement strategies and action plans for sustainable management of hills ecosystems.*
- d) Adopt ecosystem management approach for hill ecosystems.*
- e) Adopt appropriate land use planning for sustainable development of hills ecosystems.*
- f) Enhance community participation in the management of hills ecosystems.*
- g) Implement the Bungoma county soil management policy*

### e) soil

Agriculture contributes about one third annually of the GDP and more than two thirds of national export earnings and creates employment for eighty percent of the rural population. Soil is the most important resource in agricultural production and so, plays a role in food security and in the economy.

Soil is the backbone of agriculture, with this in mind, Kenya, and Bungoma County in particular, must bring the issue of soil management to the fore. Despite the importance of soils and agriculture, research has shown that farmers in Kenya are getting barely 25% of the potential yields. The challenges facing soil management in Bungoma are numerous. The five main challenges are: Declining soil fertility as a result of high acidity, inadequate and inappropriate use of inorganic and organic fertilizers, and loss of soil cover, human activities on the land, overstocking and overgrazing and poor agricultural practices. Land use factors such as urbanization, land sub-divisions, and waste disposal were the third set of challenges identified. Deforestation is the fourth main challenge affecting soils in Bungoma, with factors as human settlement, excision of natural forests for farming, timber logging and charcoal burning, and expansion of physical infrastructure being the pertinent issues. The fifth challenge identified is climate change impacts, which comprises changing weather patterns.

#### Strategic Policy Interventions:

*The County Government will:*

1. *Implement the County Soil Management Policy.*
2. *Promote farm forestry.*
3. *Promote the use of soil and water conservation structures.*
4. *Promotion of renewable sources of energy and energy saving devices.*
5. *Promote re-forestation.*
6. *Promote rehabilitation of degraded land with suitable tree species.*
7. *Promote sustainable agricultural land management practices.*
8. *Involve and empower communities in soil conservation.*

#### f) Wildlife Resources

Wildlife is among major natural resources in the county that contribute to the county and national economy through employment and revenue generation. Due to increasing human population and search for more agricultural land, humans have encroached on wildlife habitats resulting in conflict with wildlife. Other human induced factors that have destroyed the quality of wildlife habitats and threatened their very existence are widespread pollution, climate change and urbanization.

#### Strategic Policy Interventions

*The County Government in collaboration with KWS will:*

- a) *Protect, conserve and improve the habitats, corridors and dispersal areas of wildlife.*
- b) *Provide incentives for investment in sustainable wildlife conservation initiatives.*
- c) *Promote the establishment of trans-boundary wildlife conservation areas as a basis for enhancing the conservation of shared wildlife resources and their ecosystems through relevant regional instruments.*
- d) *Encourage and support the establishment of public, private and community-based conservation areas.*

- e) *Establish coordinating mechanisms for proper wildlife management*
- f) *Maintain all gazetted protected areas and reclaim and restore the encroached areas to enhance wildlife conservation.*
- g) *Strengthen and support wildlife research and monitoring to generate adequate information for decision making.*
- h) *Protect endangered wildlife species.*
- i) *Enhance community participation in conservation activities.*

### g) Minerals.

They are naturally occurring inorganic substances, with a specific chemical composition and with an orderly repeating atomic structure defining a crystal structure. Sand and ballast are common minerals in the county. Sand harvesting in our rivers and ballast extraction in the county is on small scale and uncontrolled. Mineral potential in the country is not yet to be fully exploited due to inadequate geological information on deposits occurrence. There is need for geological surveys and mineral exploration, to fully exploit the mineral potential in the county. Increased mining activity may result in environmental degradation. There is need therefore to guide and control operations in the mining sub sector.

#### Strategic Policy Interventions

*The County Government in collaboration with relevant stakeholders will:*

- a) *Assess and document the mineral potential of the county*
- b) *Formulate and implement mineral resources development and exploitation regulations including sand, gravel and ballast.*
- c) *Promote and implement mechanisms/or sustainable harvesting of sand and mining activities.*
- d) *promote rehabilitation and restoration of all mining sites including quarries and burrow pits.*
- e) *Encourage equitable exploitation and sound management of mineral resources while ensuring local participation and involvement of indigenous enterprises or investment in mining sector.*

## 3.2. Natural Resources Stewardship

### a) Wood Products and Industries

The forest products sub-sector is important for provision of employment; supply of many industrial products, and also supports the subsistence needs of many households. The wood industry includes pulp and paper, sawn timber, transmission poles, composite wood products, furniture and joinery, building and construction and many others. Fuel wood is used by over 75% of Bungoma county households and institutions. Key industries such a tobacco and most cottage industries increasingly rely on fuel wood for their energy needs due to the high cost of electricity and fossil fuel. Most of the wood fuel is obtained from plantations, woodlands and shrub lands on community and private land. The

challenge in the sector is unsustainable extraction, leading to degradation of forests particularly in public, community and private lands. Therefore, there is need to invest in improving wood-based technologies and capacity to diversify into high value products. In order to address illegal trade in wood and wood products, a forest certification and a chain-of-custody system will be developed to ensure legal compliance and sustainability of the source of material.

### **Strategic Policy Interventions:**

*The Government in collaboration with relevant KFS will:*

*(a) Promote the sustainable supply of timber and wood for subsistence and industrial needs from all forests.*

*(b) Promote investment in wood industry to enhance efficiency in wood conversion and value-addition.*

*(c) Establish a chain-of-custody and certification system for trade in wood and wood products*

*(d) Promote efficient production and utilization of wood fuel, and adoption of alternative forms of renewable energy.*

*(e) Promote forest-based value additions and integrated utilization of forest products.*

*(f) Support efficient forest-based enterprises for production and marketing of forest products for the local and export markets.*

*(g) Develop and implement a national chain of custody system to track the movement of forest products for local and export markets.*

*(h) Promote small, medium and large-scale investments in diverse forest-based industries and enterprises.*

### **b) Non wood forest products**

Non-wood forest products are important to the livelihoods of the rural communities and account for a significant share of household incomes and expenditures. Some of the non-wood forest products that contribute to sustainable livelihoods include gums and resins, honey, essential oils, frankincense, myrrh, fibres, medicinal and aromatic plants, dying mushroom and tanning materials. In addition, many of these products have high potential for export. Some non-wood products are sources of nutrition for many communities.

### **Strategic Policy Interventions:**

*The County Government will:*

*(a) Promote the sustainable production and utilization of non-wood forest products.*

*(b) Support and build capacity in establishment and processing of non-wood forest product enterprises.*

### c) Natural Resources Research and Education

The County government require capacity building to undertake natural resources development on community and private lands. Highly trained manpower is a basic requirement for achievement of sector goals. The natural resources manpower is required at different levels including afforestation, management, utilization, protection, research and training. The effective participation of communities and other stakeholders in natural resources conservation and management also requires awareness and information. Natural resources conservation extension, communication, information and awareness strategy to educate and share information with the communities and the public on technologies, potentials, opportunities and management techniques is also critical for the sector.

#### Strategic Policy Interventions:

*The county government will:*

- (a) Support formal forest sector education programs at different skill levels which are regularly reviewed to encompass emerging issues and challenges.*
- (b) Promote establishment and recognition of continuing training programs for natural resources professionals to enhance sector standards.*
- (c) Establish linkages between natural resources education and training institutions and natural resources industries to enhance practical skills of natural resources graduates.*
- (d) Establish a strong natural resources extension network to disseminate information on natural resources conservation in the county*
- (e) Design appropriate capacity development plans through continuous assessment of professional and technical capacity needs for achievement of the objectives of this plan.*

### d) Natural Resources Research and Development

Forestry in Kenya is suffering from low productivity of crops, low conversion efficiency and poor value addition. These is as a result of climate change, small genetic base of crops, low investments in technology development, and low investment in industry. This calls for research and development to refocus on basic forestry disciplines such as productivity, health, crop diversification, processing, value addition, intellectual property rights and indigenous knowledge. Further, global needs for certification require research in suitable criteria and indicators. Mechanisms for engaging national government agencies in forestry research and development should also be developed. A vibrant and proactive forest sector requires a strong forestry research strategy for technology development and transfer. Appropriate tree technologies will be generated for different sites and ecosystems across the county and production of sufficient planting materials, efficient technologies for conversion and processing of forest products, methods of value addition and best management practices among others. Research should also be undertaken in climate change related invasive species, appropriate species for

rehabilitation of degraded sites and appropriate game farming practices in high potential areas like Bungoma. Furthermore, trends and status of natural resources can be monitored using latest technologies like remote sensing and Geographic Information Systems.

**Strategic Policy Interventions:**

*The county government will:*

- a) Support natural resources research in critical areas to ensure generation of appropriate technologies for economic development and biodiversity.*
- (b) Develop staff capacity and promote application of geographic information system and remote sensing in assessment and monitoring status and trends of natural resources*
- (c) Develop mechanisms to link forest research findings to users, and encourage private sector participation, and the incorporation of indigenous knowledge systems.*
- (d) Promote research in alternative species including indigenous trees to meet market requirements.*
- (e) Promote research and training to improve uptake of wood processing technologies.*
- (f) Promote research and training in non-wood products.*

### 3.3. Forest Sector Legal Reforms

The Kenya 2010 Constitution provides for the conservation and protection of ecologically sensitive areas, utilization of the environment and natural resources for the benefit of the people of Kenya, the right to a clean and a healthy environment including the right to have the environment protected for the benefit of the present and future generation through legislative and working towards achieving and maintaining at least 10% tree cover and its maintenance.

**Strategic policy interventions:**

*The County Government will:*

- (a) Enact county legislation to implement this policy*
- (b) Regularly review natural resources legislation to ensure conformance with the Constitution of Kenya and to enhance sustainable management of natural resources.*
- (c) Reserve and/or acquire land for county forests.*
- (d) Create awareness on natural resources policy and legislation amongst stakeholders.*

### 3.4. Funding Mechanisms

Sustainable natural resources management and conservation requires adequate financial resources. Funding of natural resources activities has mainly been from the government and development partners. Natural resources development is an investment involving the establishment of trees, conservation and protection of forests and wildlife habitats in the county, community and private land over relatively long periods of time. It requires long-term funding to realize the benefits.

**Strategic Policy Interventions:**

*The county government in collaboration with relevant stakeholders will:*

- (a) Provide adequate funds for the development, management and conservation of natural resources through annual budgetary allocations.*
- (b) Explore and adopt alternative innovative sources of funding to complement public funding*
- (c) Mobilize resources from multilateral development agencies, development partners, private sector, and foundations to support natural resources development.*
- (d) Promote investments in the natural resources sector by providing appropriate fiscal and economic incentives.*
- (e) Enhance resource mobilization strategies through carbon financing, payment for environmental services and other legally appropriate mechanisms.*

## CHAPTER FOUR

### Policy Implementation Framework

#### 4.0. Introduction.

This chapter outlines the approach to the policy implementation. It also lists the key stakeholders and requisite institution framework for effective implementation of this policy.

#### 4.1. Institutional Framework

The natural resources are multi-sectoral and is needful to integrate their considerations in all development planning and activities by responsible government agencies and stakeholders at all levels. In cognizant of diverse existing institutional mechanisms ways and means through which coordination and cooperation can be enhanced among the many institutions whose mandates relate to natural resources management is considered.

##### Key County Level Actors:

- i. County Department responsible for Environment, Natural Resources, Water and Tourism: A key mandate for this department is environmental management: conservation and protection of natural resources in the Bungoma County.
- ii. County Department responsible for Agriculture: Climate Smart agricultural practices will enable sustainable use of land including agroforestry
- iii. County Department responsible for Energy: The departments' key mandate is promotion of alternative energy sources-renewable energy within County residents reducing pressure of indigenous forests
- iv. County department responsible for social services: The department registers and trains farmer groups on group dynamics
- v. County Environment Committee: Key mandate is planning and oversight of all county environment matters

##### Regional Actors

- a) *Lake Region Economic Bloc*: It also promotes ecosystem-based management which improve the quality shared resources among member counties including Mt. Elgon Water Tower
- b) *Lake Basin Development Authority*: The authority is mandated to spur socio-economic development through sustainable utilization and conservation of natural resources in a coordinated approach within the region.
- c) *Lake Victoria North Water Works Development Agency*: LVNWSB a key player in water and sewerage service provision through infrastructure development and protection of water resource.

## Key National Level Actors

As Bungoma county manages her natural resources she will seek to collaborate with National Level Agencies with a mandate bearing on natural resources management as follows:

- a. National Environment Management Authority (NEMA) is the national regulatory agency coordinating with the decentralized entities.
- b. Kenya Forestry Research Institute: KEFRI is mandated to carry out research on all forestry aspects and disseminate the same to the country and counties on best practices in forest management
- c. Kenya Forest Services: Key mandate is conservation of the country's forest cover
- d. Kenya Wildlife Services: KWS has a key mandate to conserve and protect the wildlife in national reserves and national parks.
- e. Ministry of Environment and Forestry: The Ministry's key mandate is policy formulation and coordination of all agencies in the Environment sector
- f. Ministry of Water and Irrigation: The Ministry is mandated to coordinate all water sector agencies and formulate national policies
- g. Kenya Vision 2030: The Social Pillar: that enables equitable social development in a clean environment
- h. Universities and Research Institutions: Responsible for research and information dissemination
- i. Water resources authority: Has mandate of regulatory om matters of water
- j. Kenya Water towers agency: Coordination of conservation agencies in the water towers

## None State Actors

CFA, WRUA CBOs, NGOs in the environment and natural resources and forestry space.

## Key informal sector player

Youth groups, Women groups and PLWD groups

## Chapter Five: Policy Monitoring, Evaluation, Reporting and Review

### 5.0. Introduction

This brief chapter outlines the Policy Monitoring, Evaluation Reporting and Review Framework.

### 5.1. Monitoring and Evaluation

The implementation of the policy will require planning with annual budgets. It will be implemented through Natural Resources Strategy that will be formulated every five years. Tracking of this policy shall be undertaken by the county government. A comprehensive monitoring, evaluation and reporting system aligned with the county M and E the MER information generated will inform on the status of natural resources in terms of quality and quantity in the county. The department responsible for Natural Resources shall in collaboration with national and county stakeholders design the core outcome indicators to be adopted in measuring the results. The said department shall be responsible for monitoring and evaluation (M&E). The M&E process shall be undertaken in a manner that ensures the Goal, Objectives, Guiding Principles and Strategies of this policy are appropriately implemented.

This policy shall be evaluated in accordance with overall county monitoring and evaluation framework, standards and system.

### 5.2. Reporting

The County department in charge of natural Resources shall report to the County Assembly annually.

### 5.3. Operationalization and Policy Review

Due to the dynamic nature of natural resources the policy review will be done every 3 years or as need arises to integrate emerging best practices in the sector.