



REPUBLIC OF KENYA

**MINISTRY OF ENVIRONMENT, CLIMATE
CHANGE AND FORESTRY**

**NATIONAL FOREST
POLICY**

DECEMBER, 2023

FOREWORD

Forest and tree resources in our country are valuable natural and established resources that must be sustainably managed for present and future generations. They offer a range of benefits and opportunities for local and national economic development, improved livelihoods and provision of environmental goods and services such as watershed protection, ecosystem services and carbon sequestration. Kenya's forest sector has performed poorly in the past, and improving forest governance has been an implicit objective in forest sector reforms over the past twenty years. The Forests Act (2005) introduced participatory forest management (PFM), by engaging local communities and promoting private sector investment in gazetted forest reserves, accompanied by concomitant institutional and organizational change, notably the establishment of the Kenya Forest Service (KFS), and the formation of Community Forest Associations (CFAs).

Forest conservation and management continues to face challenges, including increasing industrial demand for wood and wood products resulting in deforestation and forest degradation, governance challenges and inadequate funding that constrain the provision of public services. These challenges have undermined sustainable forest management efforts. The need to maximize the rate of social and economic development, reverse the growing wood deficit and secure optimum welfare of all citizens cannot be overemphasized. Moreover, civil society organizations, local communities, the private sector and county governments need to be mainstreamed into the forestry sector decision-making and resource management processes.

This Policy proposes a broad range of measures and actions responding to the identified challenges. It is based on the views and expert opinion of public and private sector actors at national and county levels, communities and civil society organizations. A number of strategic initiatives have been introduced to improve and develop the forest resource base; integrate good governance, transparency, and accountability, equity and poverty reduction into the forest sector. The Forest Conservation and Management Act (FCMA) was enacted in 2016 to implement forest-related provisions of the 2010 Constitution. In line with the objectives of the Constitution and the national development agenda, the forest sector continues to explore measures to halt and reverse the pace of deforestation and forest degradation, increase forest cover and attract investment in the sector. Green and climate smart growth as well as emerging opportunities for sustainable forest financing at national and international levels also need to be considered.

This Policy is a statement of the Government intent and will provide the basis for governance, administrative and legislative reforms in the sector and balance the needs of the people of Kenya with opportunities for sustainable forest conservation, management and utilization.

I wish to thank all individuals and stakeholders who contributed to the development of this forest policy and entreat all Kenyans to seize opportunities that this policy provides.

H.E Hon. William Samoei Ruto, PhD, C.G.H.
President of the Republic Of Kenya

PREFACE

Kenya has unique biodiversity including various kinds of forests that need protection. This National Forest Policy seeks to ensure sustainable management of our biodiversity and the protection and proper management of all public, private and community forests. It is informed by the 2010 Constitution; the Environment Management and Coordination Act (EMCA); the 2009 National Land Policy; the 2012 Transition to Devolved Government Act; the 2012 Inter-governmental Relations Act; the Land Act, 2016; the 2019 Physical Planning and Land Use Act; the 2016 Climate Change Act; and the National Climate Change Action Plan; the Nationally Determined Contributions commitments; the 2017 National Land Use Plan; the National Forest Programme; the Green Economy Strategy Implementation Plan; the aspirations in the African Union's Agenda 2063 and the United Nations Agenda 2030's Sustainable Development Goals. These laws, policies and initiatives underscore the unique role of forestry development in the transition towards green growth and climate change mitigation and adaptation.

This Forest Policy provides a framework for improved forest governance, resource allocation, partnerships and collaboration between the National and County governments, the private sector and non-state actors. It also provides for monitoring and evaluation to enable the sector to contribute to the achievement of the country's growth and poverty alleviation goals within a sustainable environment. The main features of this policy include:

- (a) Mainstreaming forest conservation and management into national land use systems.
- (b) Establishment of a Forest Sector Regulatory Authority to regulate and coordinate sustainable management of forests and allied resources; develop standards and procedures for management of forests and allied resources; and monitor compliance with set standards and procedures.
- (c) A framework for national standards for forest management and utilization, and the development of codes of conduct for professional forestry associations.
- (d) Reconfiguration of forest governance and management arrangements for efficient running of the forestry sector clarifying the division of responsibilities between public sector institutions where the Ministry responsible for forestry provides an oversight role in national forest policy formulation and oversight of the sector, thereby allowing the implementing agencies to focus on the management of forests on public and community lands; and the role of the County governments in implementing national policies, County forest programmes including the delivery of forest extension services to communities, farmers and private land owners, and management of forests other than those under state agencies.
- (e) Deepened community participation in forest management through devolution of community forest conservation and management, elaborate strategies and financing, and provision for benefit-sharing and power sharing arrangements.
- (f) Establishment of national programmes to support community forest management and afforestation/reforestation on community and private land.
- (g) A national strategy to increase and maintain forest and tree cover to at least 10% of the total land area and for the rehabilitation and restoration of degraded forest ecosystems, and the establishment of a national forest resource monitoring system.
- (h) Improving the competitiveness of Kenya's commercial forestry sector with the aim of

securing increased investment in forest plantations, wood processing and value addition.

- (i) Introduction of a chain-of-custody system for timber and wood products, and legal origin and compliance certificates for exporters of timber and wood products.
- (j) Adoption of an ecosystem approach in the management of forests, and recognition of customary rights, rights of vulnerable and marginalized groups, and user rights that support sustainable forest management and conservation.
- (k) Incorporation of natural capital and green accounting in the computation of the gross domestic product (GDP) through the valuation of ecosystem services including climate change adaptation and mitigation and biodiversity conservation.
- (l) Integration of climate change mitigation and adaptation measures in forest management through Reduced Emissions from Deforestation and Forest Degradation (REDD+) to minimize the impacts of climate change and contribute towards achieving forestry related Nationally Determined Contributions (NDC) Targets.
- (m) Enactment of a revised and/or new forest legislation to implement this policy.

Formulating a policy is not sufficient to bring about the envisaged forestry reforms. There is need for commitment from all citizens to ensure that reforms are implemented and the necessary institutional changes carried through with success. The National and County governments have to play their part in providing an enabling environment, effective extension services, forestry research and allocation of funds to the sector.

Meaningful participation of stakeholders will continue to be sought through regular consultation and discussions, as we strive together to attain the most efficient, sustainable and equitable use of our forest resources. It is our hope that this Policy will inform and guide the review of forest legislation.

Hon. Soipan Tuya, CBS, MP

Cabinet Secretary, Environment, Climate Change and Forestry

PRELUDE

The forestry sector in Kenya contributes a significant share of the country's GDP besides helping the country in achieving its sustainable development goals by contributing to a reduction of greenhouse gas emissions. The sector has undergone various reforms over the years with a view to ensuring sustainable forest management which include: the formation and operationalisation of Community Forest Associations (CFAs) which enter into joint management agreements with the KFS under Participatory Forest Management (PFM) arrangements; developing and strengthening devolved governance structures of the forests sector; promotion of private sector investment in the forest sector; and embedding public participation in natural resource management; among others. This policy lays a basis for the realization of these, among other reforms, to ensure better management of forests. This policy is comprised of ten chapters which articulate the aspirations of the Kenyan people about management of our forests.

Chapter One provides a historical account of forest sector reforms, avails the rationale for the policy, discusses the international and national legal framework on forests and defines the scope of the policy.

Chapter Two reviews the status of forest management in Kenya setting out the key challenges and issues that affect the forest sector.

Chapter Three articulates the overall goal of the policy, the policy objectives and the guiding principles that underpin the policy document.

Chapter Four lays out the impetus for sustainable forest management for the various types of forests given their unique needs in ensuring their protection and prudent management.

Chapter Five deals with management of trees outside forests including agroforestry, farm forestry and urban forests.

Chapter Six contains provisions on forest ecosystem services, forest products including wood and non-timber products as well as forest related trade and industry.

Chapter Seven deals with forestry research, training and education.

Chapter Eight documents the legal and institutional framework relating to forests as well as the funding mechanisms.

Chapter Nine details linkages with other sectors and the need to mainstream forestry issues into other sectors, the regional and international obligations as well as partnerships and involvement of stakeholders.

Chapter Ten provides for monitoring and evaluation as well as sets out the implementation plan. It is our hope that this policy will inform the necessary reforms in the sector and propel the forest sector to the next level.

ACKNOWLEDGEMENTS

This policy document is a product of rigorous and extensive multi-stakeholder and participatory consultation process that sought to garner broad-based views from both state and non-state actors as well as from local and international actors in compliance with the dictates of the Constitution of Kenya 2010 on public participation. We acknowledge and greatly appreciate the wide range of stakeholders comprising of individuals and organizations drawn from national and county governments, the private sector, academia, and civil society who availed their expertise and inputs for this critical endeavour. We assure you all that your views were received and considered in the development of this policy document.

We also acknowledge with gratitude the people of Kenya and the various communities especially those living within and adjacent to forests for their engagement during the public consultations as well as their written feedback. We appreciate your robust engagement, which enriched the process and the product.

We also wish to thank and acknowledge the contributions of the technical team comprising of the Consultant and other experts for providing leadership in the process, conducting extensive literature review, public consultation process and drafting this policy document. We are also grateful to the external editors and type-setters for their input.

Gitonga Mugambi, EBS

Principal Secretary

State Department for Forestry

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ABBREVIATIONS AND ACRONYMS

CBD	United Nations Convention on Biological Diversity
CFA	Community Forest Associations
CITES	Convention on International Trade in Endangered Species of Flora and Fauna
COMESA	Common Market for Eastern and Southern Africa
FLEGT	Forest Law Enforcement, Governance and Trade
FLR	Forest Landscape Restoration
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
GHG	Greenhouse Gases
IGAD	Intergovernmental Authority on Development
IPPC	International Plant Protection Convention
ITTA	International Tropical Timber Agreement
KFS	Kenya Forest Service
KEFRI	Kenya Forestry Research Institute
KTDA	Kenya Tea Development Agency
KWS	The Kenya Wildlife Service
KWTA	Kenya Water Tower Agency
LDN	Land Degradation Neutrality
MEA	Multilateral Environmental Agreements
MRV	Monitoring Reporting and Verification
NDC	Nationally Determined Contribution
NEMA	National Environment Management Authority
NLC	National Land Commission
NTFP	Non-Timber Forest Produce
PELIS	Plantation Establishment and Livelihood Improvement Scheme
PES	Payments for Ecosystem Services

PFM	Participatory Forest Management
PLWD	Persons Living With Disabilities
REDD	Reducing Emissions from Deforestation and Forest Degradation
SCP	Sustainable Consumption and Production
SDGs	Sustainable Development Goals
SFM	Sustainable Forest Management
TIPS	Transitional Implementation Plans
TOF	Trees Outside Forests
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change

CHAPTER ONE: INTRODUCTION

1.1 Background

1.1.1. Kenya's first formal forest policy was prepared in 1957 and revised in 1968 as Sessional Paper No. 1 of 1968. This Policy focused on management and conservation of forests on public land, and did not provide for stakeholder participation and involvement in forest management.

1.1.2 Due to emerging issues and growing concerns about sustainable development and specifically the conservation and sustainable management of biodiversity, a Forest Master Plan was developed in 1994, which recommended the need for a new Forest Policy and Act. While this led to the enactment of the Forests Act No 7 of 2005 providing for management of forests outside public land and community and private sector participation in forest management, the accompanying policy was not formally adopted.

1.1.3 Implementation of the 2005 Act started 2007, but constitutional changes and a variety of challenges facing the sector necessitated review of both the policy and legislative framework. The Constitution of Kenya 2010 introduced new governance structures and requirements for natural resource management. It entrenched and required adherence to the principles of sustainable development, equitable sharing of benefits derived from natural resources and stakeholder engagement and participation . It also introduced forty-seven (47) devolved units (counties) as a new form of governance. The 2005 Act was revised in 2016, resulting in the Forest Conservation and Management Act 2016.

1.1.4 Emerging issues such as climate change, payments for ecosystem services (PES), green growth, assignment of specific functions to National and County governments, rights of forest dependent communities, the need to entrench social protection for forest dependent communities and the need to encourage partnerships with communities and the private sector for commercial forestry and conservation raise the need for a new policy.

1.1.5 The Constitution and the national economic blueprint, Vision 2030 require the country to work towards achieving a tree cover of at least 10% of the land area to ensure sustainable resource use, growth and employment creation. The attainment of subsequent development programmes such as the Big Four Agenda focusing on affordable housing, food security, manufacturing and universal healthcare also have implications on the forest sector. Forests are also at the core of the country's green growth strategy. Addressing drivers of natural resources' change; building the resilience of natural resources; and investment in environmentally friendly technologies are therefore critical issues in the forestry sector.

1.1.6 Kenya's annual population growth stands at 2.3%. Increasing population has brought immense pressure to bear on forests especially in high potential areas. This makes it difficult to realize the 10% tree cover target. The target can only be achieved with the co-option and mobilization of communities and the private sector, who should be encouraged to invest in commercial forestry.

1.1.7 Other areas of policy intervention include: promotion of dryland and coastal forestry to expand forest cover to arid, semi-arid areas and the coast; investment in industry for enhanced processing of forest products; ensuring efficiency and value addition in the forestry industry; strengthening forest governance policies and institutions; and greater consideration of forestry in National and County integrated development plans in forest related sectors such as agriculture, wildlife, energy, climate change, tourism and water programmes.

1.18 The Constitution makes ratified international environmental agreements, protocols and conventions part of the laws of Kenya. Kenya has ratified many international and regional treaties related to forests such as the Convention on Biological Diversity; the United Nations Framework Convention on Climate Change; and the Paris Agreement. The treaties require parties to take certain actions to meet their obligations. Kenya has, for instance registered its Nationally Determined Contributions (NDCs) under the Paris Agreement and is part of other initiatives and processes that have specific obligations relating to the forest sector and has put mechanisms in place to meet these requirements. These initiatives include the United Nations 2030 Agenda for Sustainable Development under which seventeen sustainable development goals (SDGs) have been defined. A number of these goals relate to the forest sector. Kenya is also part of the Bonn Challenge; Africa's Agenda 2063: The Africa We Want; and the African Forest Landscape Restoration Initiative (AFR100).

1.19 This Forest Policy provides a framework for improved forest governance, resource allocation, partnerships and collaboration with the National and County governments, and non-state actors to enable the sector to contribute to meeting the country's growth and poverty alleviation goals within a sustainable environment. The need to review and revise the Forest Policy is urgent taking into account changes that have taken place since Sessional Paper No 1 of 1968 was passed. These include the enactment of a framework environmental law, the Environmental Management and Coordination Act 1999 (revised in 2015) and the establishment of the National Environment and Management Authority (NEMA) under it, Climate Change Act 2016, National Land Use Policy 2017, National Land Policy 2009, Land Act 2016, Community Land Act 2016; institutional reforms in the 2005 Forests Act; and changes in national and forest governance, land and forest tenure in the 2010 Constitution. There is also need to define clear institutional roles and mandates; and institutionalize credible monitoring, evaluation and reporting frameworks as required by national level policies and international agreements to which Kenya has subscribed.

1.1.10 A draft National Forest Policy was developed in 2015 but was not adopted. The 2016 Forest Conservation and Management Act was enacted without an accompanying Policy. This Policy seeks to review the 2015 draft policy taking into account the provisions of the Act and other changes that have occurred since the draft was prepared. It also proposes changes needed to align the 2016 Forest Conservation and Management Act to the Policy.

1.2 Historical perspective

1.2.1 Colonial forest policy focused on extraction of forest resources leading to clearing of large areas of the country's indigenous hardwood forest. Although attempts were made to grow indigenous trees in plantations, they took too long to mature compared with exotic tree species. Consequently, the large areas of indigenous and bamboo forests cleared were replaced with plantations of exotic species. In the post-independence period, additional indigenous forest areas were allocated to farmers and communities for subsistence and cash crops such as tea and livestock grazing leading to clearing of large forest areas. Colonial forest policy also excluded native Kenyans from access to forests and resources in them using criminal law. The inequitable land and resource access and ownership patterns introduced through colonialism made communities hostile to forest authorities.

1.2.2 Illegal excisions and allocation of forest land as detailed in the 2004 Report of the Commission of Inquiry into Illegal/Irregular Allocation of Public Land (Ndung'u Report) and insecure land rights for communities living adjacent to forests pit communities against

forest authorities. Unresolved historical land injustices compounded by emerging contests over land continue to plague natural resources' management in Kenya. In the circumstances, land use changes have resulted in conflicts and contributed to deforestation, degradation and loss of forestland.

1.2.3 Timber need for internal consumption and exports was identified as early as 1968 and informed the development of paper and other industries. Farm forestry and plantations were established to provide timber ensuring that there was enough timber for domestic use and export up to 1978.

1.2.4 Sustainable management of forests and forest resources continues to be high on Kenya's agenda and is reflected in the 2010 Constitution and legislations such as the Water Act 2016; the Wildlife Conservation and Management Act 2013; the Environment Management and Coordination Act 1999 (revised in 2015); the Forest Conservation and Management Act, 2016; the Climate Change Act, 2016; and the Physical Planning and Land Use Act 2019 among others.

1.3 Justification and Rationale

1.3.1 This Policy is being reviewed by the Ministry for Environment and Forestry to align it to the 2010 Constitution and to address emerging issues in the Forest Sector. It also strengthens forest governance, public and private sector participation and mainstreams forestry in sustainable development. The Policy will incorporate elements of climate change mitigation and adaptation, green growth, ecosystem security, forest hydrology, robust monitoring and evaluation framework, participatory forest management, and establishment of mechanisms to oversee multi-stakeholder convergence in forest management that is built on Kenya's rich cultural heritage of co-existence and which is dependent on our diverse forest resources.

1.3.2 The Policy seeks to safeguard the ecological integrity of forests and the livelihood security of the present and future generations, based on sustainable management of forests and the continuous flow of ecosystem services. It will incorporate the findings and recommendations in the Report of the 2018 Taskforce on Forest Resources Management and Logging Activities in Kenya which inquired into forest resources management and illegal logging in the country.

1.3.3 This Policy will also anchor commercial forestry as central to Kenya's present and future energy needs, the realization of the country's industrialization, growth and development agendas for manufacturing, agriculture and affordable housing in line with Vision 2030. It will also incorporate measures for intense monitoring and reporting as required by national level policies and international agreements.

1.4 The Problem

1.4.1 There is an urgent need to review the current Forest Policy, which is inconsistent with the provisions of the 2010 Constitution with respect to natural resource management such as public participation, community and gender rights, equity in benefit sharing, devolution and the need to achieve 10% tree cover. Having been concluded more than five decades ago, the Policy does not capture issues that have emerged in the forest sector and natural resource management.

1.4.3 Additionally, the policy needs to provide mechanisms for management of conflicts over resource management and benefit sharing between the private sector, communities and governments at both National and County levels as well as to take into account global and local emerging issues relating to forest governance.

1.5 The Formulation process

In developing this Policy, the Ministry pursued a consultative approach that involved a series of discussions, workshops and review of earlier drafts of the policy in order to reach a consensus on a number of issues and themes which included the following:

- (a) identification of key areas and issues in the Constitution against which the Policy must be aligned;
- (b) definition of the Policy Goal and the Objectives for national forest management and conservation;
- (c) determination of synergies and areas of complementarity with other relevant sectoral policies to ensure consideration of cross-cutting issues;
- (d) identification of relevant national, regional and international policies and laws for incorporation into the policy;
- (e) identification of best practices from other countries;
- (f) development of a draft revised policy;
- (g) subjection of draft revised policy to stakeholders for review through invitation to stakeholders to provide inputs to the Ministry through an advertisement in the local dailies and responses through digital or hard copy submissions; webinars with different stakeholders; and meetings; and
- (h) incorporation of comments from stakeholders and validation meetings.

1.6 Legal Frameworks, Policies and Initiatives

1.6.1 International Legal Frameworks and Initiatives

Kenya is a party to multilateral environmental agreements and initiatives relevant to forestry development. These include:

- i) The United Nations Convention on Biological Diversity (CBD); the Cartagena, Nagoya and the Nagoya-Kuala Lumpur Protocols; and Aichi Biodiversity Targets 5 and 7 under the Convention's 2011-2020 Strategic Plan;
- ii) The United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol and the Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanisms;
- iii) The Paris Agreement 2015;
- iv) The Convention on International Trade in Endangered Species of Flora and Fauna (CITES) is important for protecting endangered species in forests;
- v) The International Convention for the Protection of New Varieties of Plants is important in incentivizing the development of new varieties of trees;
- vi) The International Plant Protection Convention (IPPC) which is critical in controlling pests and diseases of plants and plant products;
- vii) The International Tropical Timber Agreement (ITTA);
- viii) The Ramsar Convention on Wetlands;

- ix) United Nations Convention to Combat Desertification (UNCCD) and its obligations under the Land Degradation Neutrality (LDN) and the Great Green Wall Initiative;
- x) The Sustainable Development Goals under the United Nations 2030 Agenda;
- xi) Bonn Challenge provides for Forest Landscape Restoration (FLR) approach, which aims to restore ecological integrity at the same time as improving human well-being through multifunctional landscapes;
- xii) United Nations Forum on Forests' (UNFF) Global Goals; and
- xiii) United Nations Educational Scientific Cultural Organization (UNESCO) World Heritage Convention.

1.6.2 Regional Legal Frameworks

Kenya is also party to regional and sub-regional treaties and initiatives that are relevant for forests. These include:

- i) African Convention on the Conservation of Nature and Natural Resources;
- ii) East African Community Protocol on Environment and Natural Resources, which provides for basin-wide collaboration in forestry;
- iii) The Common Market for Eastern and Southern Africa (COMESA), which has a forest management strategy that outlines key investments in the forestry sector such as payments for environmental services, combating illegal trade and capturing the full value of forestry sectors in national economies;
- iv) AFR100 (the African Forest Landscape Restoration Initiative), a country-led effort to bring 100 million hectares of land in Africa into restoration by 2030;
- v) The Forest Law Enforcement, Governance and Trade (FLEGT), which enshrines sustainable forest management and the rule of law in timber trade. An East African FLEGT strategy has been developed;
- vi) International agreements on certification of sustainable forest management and products, which have various certification schemes. One is the Forest Stewardship Council (FSC) Principles and Criteria — the highest standards of forest management that is environmentally appropriate, socially beneficial and economically viable. Kenya has developed a draft strategy for FSC accreditation and standards;
- vii) Intergovernmental Authority on Development (IGAD) Policies including the Regional Forestry Policy and Strategy;
- viii) Protocol for Sustainable Development of Lake Victoria Basin, which seeks to protect and conserve the basin and its ecosystems; and
- ix) East African Communities' laws and policies such as EAC Treaty, EAC Climate Change Policy and the East Africa Forests Management and Protection Bill 2015.

1.6.3 National Policies and Legislation

Kenya has a host of laws, policies and programmes dealing with forests. These include:

- i) Constitution of Kenya, 2010;
- ii) Environment Management and Coordination Act, 1999;
- iii) The Forest Conservation and Management Act, 2016;
- iv) County Government Act, 2012 (revised 2013);
- v) The Climate Change Act, 2016;
- vi) The Wildlife Conservation and Management Act, 2013;
- vii) The Water Act, 2016;
- viii) Agriculture, Fisheries and Food Authority Act, 2013;
- ix) The Energy Act, 2019;

- x) The Mining Act, 2016;
- xi) The Land Act, 2012 (as amended in 2016);
- xii) The Community Land Act, 2016;
- xiii) The National Land Commission Act, 2012;
- xiv) Physical and Land Use Planning Act, 2019;
- xv) Seeds and Plant Varieties Act, 2012;
- xvi) National Climate Change Action Plan 2018-2022;
- xvii) Kenya National Adaptation Plan - 2015-2030;
- xviii) National Land Use Policy, 2017;
- xix) Policy on Devolved System of Government 2016 (Policy Objective 3);
- xx) Sessional Paper No. 10 of 2014 on the National Environment Policy (NEP) 2014;
- xxi) Sessional Paper No. 12 of 2014 on National Wetlands Conservation & Management Policy;
- xxii) Sessional Paper No. 1 of 1999 on National Policy on Water Resources Management and Development;
- xxiii) The National Forest Programme 2016 – 2030;
- xxiv) Forest (Charcoal) Rules, 2009; and
- xxv) Kenya Water Towers Agency Order, Legal Notice No. 27 of 2012.

1.7 The Scope of the Forest Policy

1.7.1 This Policy applies to all government ministries, independent bodies, quasi-autonomous entities, and departments and agencies dealing with issues related to the forest sector in Kenya. The principles, strategies and approaches in the policy shall also apply to the private sector and civil society.

1.7.2 This Policy aims at promoting and facilitating good governance in the securing, protection, restoration, conservation, development and management of forestry resources; and equitable, sustainable and climate smart development. The Policy will facilitate legal and regulatory reforms that promote sustainability of the environment and forest resources, facilitate transition to green growth and chart ways of mitigating and adapting to climate change. More specifically, the Policy will:

- a) enhance protection, conservation and sustainable management of the forest ecosystem for the benefit of present and future generations;
- b) promote long-term private sector engagement and investment in the forestry sector's development;
- c) promote the introduction and adoption of efficient processing technologies to maximize recovery rates of timber and minimize waste of forest products;
- d) consider new developments and emerging issues in the forestry sector including forest governance, land and forest tenure, climate change and green economy policy requirements, institutional alignment and reforms, and devolution and public participation in forest management;
- e) increase forest and tree cover to enhance social-economic benefits for the Kenyan people and a healthy environment;
- f) promote equity and economic growth for the overall goal of poverty reduction in tandem with other government policies and pronouncements;
- g) promote appropriate technology adoption for sustainable utilization of natural resources;

- h) strengthen the institutional framework for efficient management of forest resources and effective service delivery;
- i) promote research, education and innovations for enhanced environmental sustainability;
- j) enhance the role of forestry in climate change response, water aquifer recharge and low emission development pathway in all economic sectors for sustainable development and posterity;
- k) enhance the role of forestry in managing land degradation;
- l) capture the full value of forests in national accounting;
- m) strengthen the participation and engagement of local communities in the management and conservation of forests;
- n) implement innovative means of funding such as the Forest Conservation Fund through a forest greening levy;
- o) facilitate clarity on access and benefit sharing of forests and forest resources.

CHAPTER TWO:

KEY ISSUES AND CHALLENGES IN FORESTRY DEVELOPMENT

2.1 Situational Analysis

2.1.1 Kenya's forests comprise natural ecosystem endowments ranging from Afro-montane forests; Guinea-Congolain rainforests, Savannah Woodlands; Dryland Forests; and Coastal Forests, which include mangroves, Kayas and commercial forest plantations/planted forests. Coastal forests including mangroves are of critical importance to Kenya and provide a basis for economic activity for local, national and international consumption. They are also important water catchment areas; provide shoreline protection and carbon sequestration; are used for spiritual and cultural rites; and are centres of endemism of threatened fauna and flora.

2.1.2 Kenyan forests have high species' richness and endemism, which has made the country be classified as mega diverse. They rank high as Kenya's natural capital due to their environmental, life supporting functions, provision of diverse ecological, economic goods and services, social, cultural, and ethical values. Kaya forests in the coast regions are sacred religious sites and are protected for their cultural importance to the Miji Kenda community. Other forests in the country also provide venues for traditional cultural rituals and ceremonies.

2.1.3 Forests contribute directly and indirectly to the national, regional and local ecosystems and economies through climate stabilization, revenue generation and wealth creation. It is estimated that the forest sector directly contributes up to 3.6% to Kenya's GDP. Inclusion of charcoal and other direct subsistence uses such as wood fuel for energy would substantially increase the direct contribution as biomass comprises about 80% of all energy used in the country and 80% of Kenyans households and institutions depend on wood fuel for energy.

2.1.4 Forests provide a variety of goods, which support subsistence livelihoods of many communities. These include products and services that people, wild animals and birds depend on directly or indirectly such as nitrogen fixing, soil and water conservation, and provision of shade, fodder, fibre and materials for construction. Communities are integral to sustainable forest management and can play a vital role in conservation.

2.1.5 The forest products sub-sector plays an important role in national socio-economic development through 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.

2.1.6 Non-Timber Forest Products (NTFPs), bamboo and grass provide food and livelihood benefits to forest dependent communities and account for a significant share of household incomes and expenditure. Some of non-wood forest products that contribute to sustainable livelihoods include gums and resins, honey, essential oils, frankincense, myrrh, fibres, medicinal and aromatic plants, dying and tanning material. In times of food scarcity, some non-wood products are the main source of nutrition for many communities and many of these products have high potential for export.

2.1.7 Forests support most productive and service sectors in the country, particularly agriculture, fisheries, livestock, energy, wildlife, water, tourism, recreation, trade and industry. These sectors account for 33% to 39 % of the country's GDP.

2.1.8 Forests comprise the country's Water Catchments, where over 75% of the country's renewable surface water originates. They provide critical water regulation roles, which are

important for human livelihoods, irrigated agriculture, and production of hydroelectric power. The services provided by forests include local climate regulation, water storage and purification, atmospheric equilibrium, erosion control, landslides control and flood control. Forestry services such as carbon storage and sequestration have grown in value in a changing climate. Other services include atmospheric equilibrium, erosion control and natural hazard and disease regulation.

2.1.9 The contribution of the forestry sector in Kenya has been grossly undervalued, leading to inadequate allocation of resources to the sector. The valuation of the forestry sector's contribution to the GDP, separate from the broader agricultural sectors, is necessary for adequate resource allocation from public resources and attraction of other innovative funding mechanisms, commensurate with the value of the sector.

2.1.10 Deforestation, de-gazettement of forests, climate change and related extreme weather events such as floods, droughts and landslides, make the need to address environmental issues affecting forests urgent. Additionally, unsustainable management of 140,000 hectares of public forest plantations resulting in a moratorium on logging has led to drastic reduction in investments and created uncertainties in the forest sector with negative implications on the growth of the industry. Deforestation in Kenya is estimated at 5,000 hectares annually, with a consequent yearly loss to the economy of over USD 19 million.¹

2.1.11 Forest lands provide an important resource base for rural people's livelihoods. Rapidly increasing populations, poverty, demand for fuel wood and grazing have put pressure on land forcing large segments of the rural poor to resort to poor land use practices. In addition, the expansion of agriculture into marginal areas and forests, degazettement of forests and climate change have been among the major driving forces behind land and natural resource degradation, and the loss of large areas of forests, water catchments and wildlife habitat.

2.1.12 Global concerns about species and habitat loss prompted nations to institute measures for sustainable development of biological diversity and climate stabilization in the 1990s. Concerns about involvement of all stakeholders in natural resource conservation and management were raised. In response to these developments, Kenya introduced participatory forest management and user rights for local communities in the Forests Act 2005.

2.1.13 Trees are an essential part of diversified farm production, providing both subsistence products and incomes while contributing to soil fertility and soil and water conservation. Products such as fuel wood or fodder from trees, shrubs or grass contribute significantly to the economies of rural population. Given the growing population, it is not possible to meet all the demands of forest products from public forests and the main alternative source of these products is private and community lands. Planting of trees on farms if well designed and managed, 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 while also generating substantial incomes to households.

2.1.14 Urban greens including woodlands, wetlands, parks, wood in institutional areas, gardens, avenue plantations and block plantations bring many aesthetic, recreational, environmental and economic benefits to cities and their dwellers. Establishment of arboreta, roadside tree planting, botanical gardens, urban forests, recreational parks and mini-forests

¹ ibid 5.

enhances environmental, social, and economic values. Trees provide a cool and serene environment, act as natural filters and contribute to the general wellbeing of society besides improving the microclimate of cities and towns.

2.1.15 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, mark the boundaries between the road reserves and private lands to avoid encroachment. Trees along waterways (rivers, streams) and around water bodies (lakes, oceans, dams, ponds) provide banks and shores stabilization, limit landslides, purify water, and enhance quality of aquatic habitat for water-dependent biodiversity.

2.1.16 Kenya has contributed minimally to greenhouse gas emissions but is one of the countries that is most vulnerable to the effects of climate change. Most climate change models project that the dry parts of the world will become drier, while the humid areas will become wetter and with greater and more unpredictable hydrological fluctuations. As Kenya is already a water scarce country, this is a forecast with important national implications. Deforestation and forest degradation are significant causes of global warming, accounting for a minimum of 20% of global greenhouse gas emissions. Forests store most of the earth's carbon. Consequently, combating deforestation and forest degradation has been identified as one of the most cost-effective ways of lowering carbon emissions. Incentives and market-based mechanisms for reducing emissions from deforestation, degradation and other forest land-use changes are available and should be pursued.

2.1.17 Forests influence the efficacy of Kenya's climate change law, policy and strategies in addressing climate change impacts, threats, vulnerabilities. This contribution is elaborated in Kenya's interventions, plans and programmes, including the National Climate Change Action Plan 2018-2022; Kenya National Adaptation Plan 2015-2030; the Climate Change Act 2016; and Kenya's Nationally Determined Contributions (NDCs) under the Paris Agreement.

2.1.18 Forests conserve and enhance the soil's ability to sustain diverse ecosystems by conserving the productive capacity of the land through reduced soil and nutrient loss. The forest vegetation and surface litter shelter the soil surface from wind and reduce surface water evaporation while increasing water percolation. Forests play an important role in production of clean water on a sustainable basis and reduce the severity of floods.

2.1.19 Payments for ecosystem services (PES) provides incentives to land users to sustainably manage the natural environment in order to ensure the continued availability of ecosystem services. Forests are central to PES, and resources from PES can be used to protect and conserve forest ecosystems. Interest in PES in Kenya has emerged in the last decade with the main interest revolving around watershed protection, biodiversity, habitat and carbon services, mainly from forests and grassland savannahs. The primary focus under these projects has been channeling payments to smallholder farmers and pastoralists.

2.2 Key Issues

2.2.1 Sustainable Management of Diverse Forests and Tree Plantations

Sustainable management of forests encompasses environmental, economic and socio-

cultural aspects. Sustainable management of forests in Kenya faces numerous threats and challenges. These include deforestation and forest degradation occasioned by population growth and the associated huge demand for wood and wood products leading to illegal extraction of timber and charcoal, encroachment, conversion of forestland to farmland and urbanization. Illegal timber trade and overharvesting to meet demand for timber contributes to deforestation and loss of biodiversity. Kenya's forest cover is inadequate and reforestation and afforestation are needed.

The country's arid and semi-arid areas which cover about 80% of Kenya's total land surface and 45% of the country's total forest area hold 25% of the human population. They also offer the greatest potential for intensified afforestation towards achieving the national objective of 10% forest cover. However, these arid areas suffer from overgrazing owing to lack of proper grazing management.

More attention needs to be focused on dryland forests, which though affected by drought, are rich in biodiversity. They also have the potential to supply Non-Timber Forest Products (NTFP). Woody vegetation in the arid and semi-arid areas provides useful cover to the fragile and highly erodible soils, shelter for people and livestock in the harsh environment, and habitats for wildlife.

Additionally, while most coastal forests including mangroves are protected, the level of protection is weak because of the lack of capacity of the bodies tasked with their protection. Some of the forests are managed by different bodies and are under diverse regulatory regimes, which raises the possibility of conflict between institutions with overlapping mandates. Sustainable management of forests should be complemented by forest protection and security measures. These will ensure that no illegal activities are carried out in forests.

Key issues that merit attention include: Forest certification, Criteria and Indicators, Chain of custody, Sustained yield, Management Plans, Annual Allowable Cut, Integrated harvesting, Forest value chains, Competitiveness, and Inclusivity and participation.

2.2.2 Land Tenure and Land Use

Land tenure in Kenya is categorized into three: Public, Community and Private land. There are forests in all land tenure systems. Gazetted public forests under the FCMA, 2016 are categorized as public land. The potential for forestry in private and community land remains untapped as most attention is focused on gazetted forests. Management of all public land is the responsibility of the National Land Commission (NLC) which is tasked with management of the land on behalf of the National and County governments. There is need for support to private and community land owners through provision of planting material and training in sustainable forest management. For economic viability on forests under County Governments, community and some private forests, they should have secure land tenure.

Other critical issues are: Non-application of Sustainable Forest Management Principles on public land under County Governments, Community and some private lands; insecure land tenure with regard to public forests under County Governments; and forests on Community

Lands missing out on economic viability due to deforestation and land degradation.

Land use, including forestry, should be undertaken in a manner that is economically viable and efficient (benefits being commensurate with costs). This should ensure that resources are utilized and managed in a way that retains their potential to support future generations as outlined in Guiding Principle 4 of the Kenya Strategic Investment Framework on Economic Viability.

Expansion of agricultural land into forests, demand for wood and charcoal, illegal logging, overgrazing, infrastructure development, urbanization and mining within forest areas has led to deforestation. Deliberate, accidental and poorly managed fires by communities living in or adjacent to forests as well as fires caused by natural causes also destroy forests.

A rapidly increasing population with few or no livelihood options and rising poverty have led to mounting pressure on and encroachment into forest lands leading to conflicts, which occur between different actors and at multiple levels. Activities of communities living around forests impact forest regeneration.

To achieve the 10% forest cover, there is need to provide incentives to private and community land owners to establish forests on their land. The demand for timber and non-timber forest products is an incentive for people to plant trees.

2.2.3 Climate Change

More than 70% of natural disasters in Kenya are related to extreme weather events, such as prolonged droughts and floods. Climate change affects the growth, composition and regeneration capacity of forests, resulting in reduced biodiversity and capacity to deliver important forest goods and services. Sustainably managed forests can play an important role in both mitigation of and adaptation to climate change, and towards green growth. However, there is at present inadequate data and limited research on the impacts of climate change on forest resources and biodiversity.

Forest development and climate change are intimately linked. The projected rise in temperatures and long periods of drought lead to fires. The rise in temperatures also extends the range of pests and pathogens, which affects many trees' growth, survival, yield and the quality of wood and non-wood forest products. Forests serve as the ultimate climate regulators by serving as a carbon "sink". There is growing concern that deforestation is exacerbating the effects of climate change. Consequently, climate change interventions focusing on reducing deforestation and forest degradation have been framed. Increased climatic hazards like floods and droughts have led to higher mortality of plants as a result of nutrient leaching and water stress.

2.2.4 Forest Products, Trade and Industry

Reliance on wood biomass for energy by most Kenyans exerts considerable pressure on tree and forest resources. Further, unsustainable production of fuel wood, obsolete and wasteful wood conversion technologies for timber manufacturing, and charcoal production lead to overharvesting of trees to meet the demand. There is a deficit in sustainable wood supply of approximately 16 million m³, which is projected to rise, exerting high pressure on the remaining natural forests.²

It is worth noting that the exploitation and illegal harvesting of indigenous tree species continues despite the 1986 ban. This affects most forests, particularly those in the

² *ibid* 34.

mountains that serve as water catchment areas. Selective logging of important timber trees has greatly reduced the canopy cover, modified the forest composition, and undermined the regenerative capacity of forests. There is need for more stringent regulation of companies dealing in indigenous trees given that logging of these trees will continue so long as there is a market.

The ban on timber and bamboo harvesting, and other policy decisions have had long-term effects on the sector. These include declining investments in forest products' processing, which is partly the reason for low processing efficiency. Further, the harvesting ban led to the closure of industries, which in turn resulted in a mass exodus of workers to other sectors. The industry faces a shortage in skilled workforce, to facilitate increased productive efficiency and value addition. The current annual wood deficit stands at 16m m³ as at 2018 and is projected to increase to 34.4m m³ by 2030. The current and future demand for biomass fuels is driven by Kenya's development agenda targeting growth of manufacturing sector by 10.8 % by 2022.³

While the 2005 Forests Act and the 2016 Forest Conservation and Management Act provide for PFM (a model where the authority managing forest land invites local people to participate in some activities with responsibilities outlined in participatory agreements and participatory forest management plans (PFMPs)), the implementation of PFMPs through management agreements between KFS and CFAs has been limited due to inadequate funding. The PFM process should be strengthened, improved upon, and adequately financed. Participation should extend to community engagement in the management and utilization of national gazetted forests through community forestry.

Other issues that need to be addressed are: reliance of other industries on wood biomass for energy; unsustainable supply of raw materials for the wood-based industries; underdeveloped wood industry and other forest products' value chains; market failures; unstandardized timber grading and valuation; undervaluation of the contribution of the forest products, trade and industry to the GDP; and over-reliance on importation of cheap forest products.

Focus should be placed on ensuring sustainable access, user rights and benefit sharing; enhancing the livelihoods of communities; adoption and mainstreaming of innovative climate change adaptation and mitigation models in forest resource management strategies; and identification of best practices on grievance and redress mechanisms between communities and forest management institutions.

Key industries such as tea, tobacco, edible oils, soap and most cottage industries increasingly rely on wood fuel for their energy needs due to the high cost of electricity and fossil fuel. Although 30% of all wood fuel is consumed as charcoal, its production and marketing is not adequately regulated. While most industrial wood is obtained from state-owned industrial forest plantations; the share of private and farm-grown wood is increasing. There is huge potential for commercial forestry within farms in the private sector. Most wood fuel is obtained from plantations, woodlands and shrublands on community and private land. A key challenge facing the wood products sub-sector is unsustainable extraction, which exceeds production, leading to degradation of forests particularly in community and private lands. Other challenges include inefficient conversion, poor pricing, poor marketing systems, low value addition methods leading to waste thereby exacerbating the unsustainable wood supply scenario.

³ Gatsby Africa Report

Forest trade and industry sector is under-developed in Kenya. The sector has immense potential to contribute to the GDP, which remains untapped, unrecorded and occurs mainly in the subsistence and informal markets. The area under public plantation forests remains static as well as the production per unit and yet there is an increasing dependence on wood imports, which must be addressed. Kenya has the potential to expand its commercial forestry sector to address its wood supply deficit, contribute to the realization of Kenya's Green Growth Objectives, and supply international markets.

Weak market structure and organization have so far limited an open and efficient market for forest products. Inadequate access to credible wood valuation services and market information by small-scale producers has also contributed to the distorted economic valuation of timber. Timber middlemen have exploited the ill-informed and desperate small-scale wood producers through unfair pricing.

Accreditation of quality timber in the market is challenged by the lack of timber grading and valuation standards as was provided for under the repealed Timber Act Cap 386. There is an urgent need for the Cabinet Secretary to publish rules and standards for grading and valuation of timber and forest products as required by the Forest Conservation and Management Act, 2016. KFS should issue permits to persons interested in the export, import and re-export of timber and forest products in accordance with the rules published by the Cabinet Secretary in a Gazette Notice.

Forest Law Enforcement, Governance and Trade need to be clearly provided for. The Forest Conservation and Management Act, 2016 requires the publication of a chain-of-custody system for the verification of the origin of forest products from public, community and private forests and the compliance of license holders, but this is yet to be done.

2.2.5 Forest Ecosystem Services

One of the main benefits which forests bestow is their regulation of water flows, and improving the quality of water. The loss of forest cover has resulted in reduced water flows. There is therefore need to intensify the management of water catchments to enhance the conservation of water, regulation of river flows, and to reduce siltation and sedimentation of water reservoirs. Integrated Forest Management (IFM) model should be adopted to achieve sustainable management of water catchment areas. Degradation of water catchment areas has caused increased run-off, flash flooding, reduced infiltration, and erosion and siltation, which in turn degrade water resources.

Forests are important habitats for wildlife and are becoming popular destinations for ecotourism and recreational activities, including hiking, bird watching, photography, camping among others. Significant potential exists for wealth creation, job creation and diversification of revenue streams for the government, communities and the private sector.

Priority issues and challenges relating to forest ecosystem services include: disturbance of forest ecosystems that provide critical services; conflicting laws, policies and sector roles and mandates on water and forest resources; inadequate information on water quality and quantity from forested watersheds; inadequate resources for conservation of forest ecosystems; insufficient conservation support from watershed areas beneficiaries; insufficient application of soil and water conservation measures in farming, logging and infrastructure development projects; and limited use of new technologies in information management, soil conservation, assessment of water quality and quantity.

2.2.6 Governance

Governance in the forest sector has historically been inefficient, characterized by ineffective regulatory mechanisms, inadequate law enforcement, and under-regulation of forests on private and communal lands. The 2010 Constitution brought new requirements for natural resource management such as public participation, community rights, gender, equity, benefit sharing, devolution and the need to achieve 10% tree cover among others. The Policy is critical for guiding all actions in the sector, underpinning the legislative interventions aligning the sector to the Constitution and ensuring harmonious interactions between diverse stakeholders and actors. In addition, forest governance needs to take into account emerging issues and best practices at global, regional and national levels.

Weak forest governance and institutional overlaps have resulted in increased corruption, illegal logging and poor enforcement. It has also led to inadequate application of basic silvicultural and ecological principles for forest management. Inadequate regulation has provided space for overgrazing and unchecked farming activities in forest reserves. There is need to strengthen the institutional framework for sustainable forest management. KFS is the main institution charged with governance of public forests and deals with both forest protection and forest exploitation. These functions should be separate and distinct and the Enforcement and Compliance Division of KFS strengthened. More actors besides KFS need to work together to address the multiple endogenous and exogenous factors affecting forests. More specifically, inadequate integration and lack of consultations amongst stakeholders in the forest sector has resulted in lack of clarity on responsibilities and duplication of efforts over forest and weak conflict-management capacity. Lack of public awareness has also led to diverse perceptions of the importance of forests, some of them misleading. Other stakeholders in the forest sector need to be involved. Linkages between KFS and research centres, universities and other institutions carrying out research relating to forests should also be forged.

Forest areas serve as wildlife habitat and water catchment areas. The Kenya Wildlife Service (KWS) manages gazetted wildlife areas some of which are in forests. The Kenya Water Tower Agency (KWTA) is responsible for coordinating conservation activities within water towers. County Governments are responsible for unregistered community forests and provision of forest extension services in community and private forests falling within the jurisdiction of county governments. There are also other actors in forests such as the Kenya Tea Development Agency (KTDA), private sector actors and farmers under the Plantation Establishment and Livelihood Improvement Scheme (PELIS). The existence of multiple institutions whose roles are not harmonized can result in conflicts as different actors seek to exercise their mandates or to use forest resources.

With the growth of agroforestry and farm forestry, different ministries and agencies have responsibility over trees. The role of counties is critical here as they are responsible for agriculture and the implementation of specific National government policies on natural resources and environmental conservation including soil, water and forestry. This calls for coordination and synergy between National and County governments.

The presence of different institutions and actors in forests and the engagement of diverse actors in forestry leads to different valuations of the annual contribution of forests to the

national economy. There is a need to harmonize laws, policies and institutions dealing with the forestry sector. Appropriate laws, rules and regulations, need to be put in place and existing ones amended for effective implementation of this policy.

PFM model under the Forests Act 2005 introduced the engagement of local communities in the management and conservation activities through CFAs. With the passage of the Community Land Act 2016, institutions responsible for natural resource management on community land have been established. There is need to align the institutional mandates to ensure synergy. There is also need to establish a framework to regulate and coordinate activities of different actors in the forest sector.

2.2.7 Devolution

The devolved government system established by the 2010 Constitution has dispersed powers from the national government to the counties. County governments are now involved in the conservation and management of forests, particularly forests in counties. Counties are also critical actors in the quest to expand forest cover. Moreover, they are tasked by the Constitution, together with the NLC, to manage public land which was previously Trust land, which includes forests. In instances where forests host other resources such as water catchment areas and wildlife, the same should encompass the additional resources and responsible institutions. Despite the clear provisions on devolution, natural resource governance has been progressively recentralized under the national government through establishment of national agencies to manage forests and other natural resources in counties.

Efforts to build the capacity of counties and to allocate adequate resources to undertake devolved functions have been inadequate. The requirement to cooperate goes beyond the National and County governments and covers relationships between the counties. Where forests traverse counties, there is a need for cooperation to ensure sustainable management. There is however, no clear framework for cooperation and coordination between the two levels of government on the one hand and neighbouring counties on the other, in the management of natural resources including forests.

Attainment of the 10% forest cover, which requires expansion of forest outside gazetted public forest, raises the need for counties to meet the increased demand for land and allocate suitable land for forestry investments including plantations. This would be in accord with Sessional Paper No. 1 of 2017, the National Land Use Policy which states that “to address the low vegetation cover with other competing land uses, the government shall ... develop a framework for incentives to encourage achievements of a minimum 10% forest cover at county level placing forest land use where it will provide the greatest public benefit.”

2.2.8 Private sector engagement

The private sector has become increasingly important in the forest sector. Private companies and individual land owners have expressed interest in establishing commercial plantations and taking concessions in public plantations, as provided for in the Forest Conservation and Management Act, 2016. Activities of private actors in the forest sector include sawmilling, tea and bamboo plantations, conservation and tree growing. Low investment in wood processing has led to ineffective processing, raising the need for innovation throughout the forest supply chain.

Industries in the forest sector experience shortage of raw materials. Small and medium-sized enterprises are operating below capacity and the current wood deficit is about 10 million cubic meters owing partly to sub-optimal plantation management. Private companies are interested in bridging this deficit through the establishment of commercial plantations and concessions. To date, no concession arrangements have been agreed and regulations governing the same have not been finalized.

There are inadequate financial mechanisms to support forestry investment. The available financial mechanisms are not well suited for forestry investments. Forest industries accessing funding from local banks pay high interest rates charged and the repayment period provided is usually short. Most private actors in the forest sector do not have the additional collateral required to cover loan facilities. The Forest Conservation and Management Fund has also neither been structured nor operationalized.

Investments in the forest sector remain high risk and there are no protection measures for investments across the forest value chain. The government should create an enabling environment to encourage private sector investments in the forest sector including provision of information on productivity and economic gains from commercial forestry.

Strategies to encourage private investment in forestry are needed to develop forest production and to bring more land under forest production. Incentives are needed to attract, catalyze and scale-up long-term private sector investment in the forest sector and to close the gap in financing the national forest restoration program through commercialization of forests and forest resources. There is also need to eliminate barriers that limit investments in forest initiatives.

Public sector investments in forests can generate large benefits for private sector actors especially in commercial ventures by aligning the current institutional resources to serve private sector actors given the unexploited opportunities for public-private partnerships. There is no clear system of benefit sharing in the forest sector and no mechanisms for incentivizing private sector investments in forestry, including protection of intellectual property rights and indigenous knowledge. Forestry sector development will be strongly informed by private sector investments in high efficiency timber manufacturing technology, high quality germplasm and innovative solutions to forest sector challenges.

2.2.9 Forestry Education, Training and Research

There exists a research gap in the forest sector in Kenya owing to a lack of investment in research that addresses the needs of the sector. In order to close the research gap, the sector should benchmark against other countries and identify research areas, which will be addressed by both the private and public sector. Training should be provided for all stakeholders on all issues including community training on PFM and research.

The forest sector suffers from low productivity of tree crops, low conversion efficiency and weak value addition schemes. These arise from climate change, small genetic base of crops, emerging pests and diseases, delayed investments in silvicultural technology, low investments in technology development, and poor investment in forest-based industry. Research and development is needed to refocus basic forestry disciplines to pertinent issues such as productivity, low cost silvicultural technologies, health, crop diversification, processing, value addition, intellectual property rights and indigenous knowledge. Further, global needs for certification require research in suitable criteria and indicators. The forest industry has stagnated over the years and over-relied on materials supplied from gazetted forests. There is need for quality reproductive material which can

be incentivized through the registration of tree seeds.

Forestry industries face an acute shortage of qualified and experienced technicians and sawyers with the required technical skills. There are no incentives for forestry education, training and research initiatives. Curriculums need to be overhauled and forest education training and research tied to national industry needs, economic growth and development aspirations.

Forestry education, training and research in Kenya has been carried out by different institutions in Kenya. It is however affected by challenges that impinge on capacity building. These challenges include: inadequate capacity for forest research and development; lack of integration of forestry education in the curriculum; and lack of a harmonized curriculum for training in institutions and industry; absence of a fully-dedicated forestry training institute, with the only extant one being the Kenya Forestry College in Londiani, Kericho County established in 1957 that offers certificate and diploma courses in forestry. There is need to upscale and strengthen this college and develop strong forest education, training and research programmes that are responsive to market and industry needs. There is also need to promote PFM and forestry research through vocational training at local levels.

Forestry practitioners require continuous professional development to enhance their knowledge in emerging issues in forestry development. The role of professional bodies in advancing professionalism in forestry practice and standards cannot be gainsaid. Further, there is need to build the capacity of County governments and private actors to undertake quality forestry development on community and private lands.

Research is critical in informing policy decisions, management and conservation of forests so as to increase the role of forests in national accounting. In this regard, there is need to further entrench the Kenya Forestry Research Institute (KEFRI) established under the Science, Technology and Innovation Act, 2013 in the forestry sector as it is currently the only government agency mandated to undertake forestry research in Kenya.

2.2.10 Indigenous Peoples and Local Communities

Forests in Kenya provide important goods and services to indigenous people and local communities. Three of the five main water catchment areas host indigenous communities with strong dependence on forestry resources for their livelihoods. Forests are sources of food, medicine, energy, fodder, recreation, cultural and spiritual values. Relationship between these communities and forests has evolved through millennia and they host immense indigenous knowledge on flora and fauna, cultural and medicinal values and sustainable traditional and successful management practices that require to be continuously harnessed and protected.

A working partnership and collaborations with indigenous and local communities should be encouraged and promoted so as to enhance forest sector contribution to the economic and social cultural lives of the communities and to tap into their traditional knowledge and input on forest conservation and avoid potential conflicts. The rights of these communities to forests have been recognized by Global treaties and conventions, African Court on Human and Peoples Rights and the Constitution and require to be promoted.

The resource management systems of the indigenous and local communities should be supported to ensure sustainability of land and land-based resources including forests.

2.2.11 Forest Financing and Public Investment

Forest goods and services are largely public in nature and therefore depend largely on public funding. The Forestry sector is financed mainly from budgetary allocations,

income from forest revenues and support from development partners. The bulk of programmes in the sector are implemented with external support through technical cooperation arrangements.

Public investment in forests has been inadequate owing to competing demands. Investment levels in the management of forest plantations and in the forest industry has been low and has been affected by the logging ban. Incentives to the private sector for forestry development have also been low partly as a result of low valuation of forestry goods and services. Since forest ecosystems play a key role in supporting various productive sectors of the economy, their contribution to the GDP needs to be re-evaluated.

At present, PES in Kenya largely depends on external subsidies, either from the national government or from development partners and international NGOs with very little input from the private sector and direct beneficiaries of ecosystem services. PES requires a supportive policy and regulatory framework that enables making and receipt of payments, protection of rights of buyers and sellers as well as providing safeguards for monitoring and enforcement.

PES includes trade in carbon credits in response to climate change. Carbon financing mechanisms are a great opportunity for resource mobilization for sustainable forestry management. In this regard, global climate change threats have added an international dimension to forest conservation as forests provide greenhouse gas sinks. Emerging international funds for greenhouse gas reductions from forests can be a source of financing for sustainable forest management.

2.2.12 Monitoring and Evaluation

Assessment, monitoring and reporting on state forests and forest resources in Kenya needs to be strengthened. There should also be a mechanism for overall monitoring, implementation and evaluation of this Policy. The absence of a national forest ecosystems management information system impedes effective monitoring and evaluation.

Currently, there is no independent forest regulatory agency overseeing the regulation of the forest sector. Such an agency is needed to monitor and set standards for the sector.

A critical challenge in planning and managing forests in Kenya is the lack of information on changes in types and areas of forests, in demand and supply of wood products and to account to the people of Kenya on advances towards achieving National forestry targets.

To mitigate this requires a system of periodic resource inventories, which will enable frequent reporting on the state of forests to the public.”

2.2.13 Intra-and Inter-generational equity

Inter- and intra-generational equity, calls for fairness in the utilization of resources between past, present and future human generations. It calls for balance between meeting the consumptive demands of existing societies and ensuring that adequate resources are available for future generations. There is an imbalance between current consumption and future needs in the forest sector due to growing threats of resource degradation and depletion.

In both its "intra-" and "inter-"generational dimensions, the principle seeks to promote environmental justice in general and to include vulnerable and marginalized groups. Major operations in the forestry sector are dominated by men. Women, youth and persons living with disabilities (PLWDs) have limited access to land and forest resources, inputs,

training and credit facilities, including information. They are also excluded in decision

making on forests. Ensuring their participation and engagement in diverse segments of the forestry sector is important for sustainable forestry management and equitable sharing of benefits from forests.

CHAPTER THREE: POLICY GOAL, OBJECTIVES AND GUIDING PRINCIPLES

3.1 Overall Goal of the Policy

The overall goal of this Policy is to develop, manage, utilize and sustainably conserve forest resources to cover at least 10% of the total land mass, for equitable sharing of the accrued benefits including the flow of ecosystem services for present and future generations.

3.3 Policy Objectives

The objectives of this Policy are to:

- a) Conserve and manage all forest resources for current generations and posterity.
- b) Establish an enabling legislative and institutional framework for development of the forest sector.
- c) Promote investment in commercial forest development, forest industry and trade.
- d) Promote public, private and community participation and partnership in forest sector development.
- e) Increase and maintain tree cover of at least ten percent of the land area of Kenya.
- f) Support forestry research, education, training, information generation and dissemination, and technology transfer and use for sustainable development.
- g) Integrate valuation of ecosystem services and natural resource capital into forest management and national accounts.
- h) Fulfil the agreed obligations under international environmental and other forest-related Conventions and Principles.
- i) Enhance environmental sustainability through conservation of biodiversity, water, soil and environmental stability.
- j) Integrate valuation of ecosystem services, natural resource capital, green accounting and adaptation measures in forest management through mechanisms like REDD+(Reducing Emissions from Deforestation and Forest Degradation plus).
- k) Support forestry research, education, training, information generation and dissemination, and technology transfer and use for sustainable development.

3.4 Guiding Principles

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

- (a) **Public good:** Taking into consideration the multiple roles played by forests, all public forests shall be taken to serve a common good interest. This implies that any action taken in any public or communal forest shall be regulated to safeguard public interest.
- (b) **Ecosystem approach:** An integrated ecosystem approach to conserving and managing forest resources will be adopted and enhanced to ensure that all forest ecosystems are managed in an integrated manner for the benefit of the people of Kenya.
- (c) **Sustainable Forest Management (SFM):** Forest resources shall be managed sustainably to yield social, economic, ecological goods and

services for current generations without compromising rights of future generations.

- (d) **Good governance:** The rule of law, effective institutions, access to information, transparency and accountability, professional ethics, respect for human rights, equity, non-discrimination and the meaningful participation of citizens will be integrated in forest conservation and management.
- (e) **Public participation:** Participatory approaches in forest conservation and management will be enhanced to ensure that the relevant government agencies, county governments, private sector, civil society and communities are involved in planning, implementation and decision-making processes.
- (f) **Polluter and User Pays:** The polluter and user of forest resources shall be responsible for paying for the full environmental and social costs of the damage done to the natural environment as a result of their activities.
- (g) **Commercialization of forestry activities:** Forestry operations shall be undertaken in a business manner focusing on result-based management. The Government will therefore create an enabling environment for private sector investments in tree growing, wood processing and value addition.
- (h) **Conservation of degraded and fragile ecological areas:** Special consideration shall be taken to conserve degraded and fragile ecological areas in order to conserve biodiversity, soil and water.
- (i) **Sustainable Consumption and Production (SCP):** Forestry activities shall be carried out in line with sustainable consumption and production principles, including eco-innovation.
- (j) **Research, education and knowledge:** Key decisions on forest management and conservation shall be informed by forestry science founded on appropriate knowledge derived from research, professionalism and international best practice.
- (k) **Livelihood enhancement:** Livelihood improvement with a focus on fighting poverty shall be a major consideration for all strategies and programmes in forest sector development.
- (l) **Indigenous knowledge and intellectual property rights:** Indigenous knowledge and intellectual property rights embodied in forest biodiversity and genetic resources will be harnessed and protected.
- (m) **International and regional cooperation:** Multilateral Environmental Agreements (MEAs) and other regional instruments will be domesticated and implemented for SFM in accordance with the Constitution.

CHAPTER FOUR: SUSTAINABLE FOREST MANAGEMENT

4.1 General

Sustainable forest management will result in enhanced provision of environmental goods and services. Policy interventions will be tailored to improve conservation. Policy Statements will specifically address Natural Forests, Plantation Forests, Management of Dryland Forests, Coastal Forests, and Mangrove forests.

Policy Statements

The Government shall:

- (a) systematically survey and document forest biodiversity in Kenya, and conserve sites having exceptional taxonomic and ecological value;*
- (b) establish and periodically update a database of forest resources;*
- (c) conduct valuation of forest resources as well as create an inventory of forest resources;*
- (d) ensure the development of forest management plans including forest ecosystem plans;*
- (e) ensure sustainable management of all gazetted forests in accordance with approved management plans and ensure financing for community participation in forest management;*
- (f) review and zone forest areas to provide for core conservation areas and multiple use buffer areas;*
- (g) ensure that the use of forest services and products responds to basic needs, brings a better quality of life and minimizes use of natural resources, release of toxic materials, waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations;*
- (h) prevent forest fires by taking measures to safeguard ecosystems, mapping areas vulnerable to fires and developing and strengthening early warning systems and methods to control fire based on remote sensing and other technologies and community participation;*
- (i) align land tenure categories with sustainable forest management and encourage and support landowners to sustainably manage natural and riverine forests;*
- (j) develop and adopt a national forest management standard in line with global forest certification norms, ensuring stakeholder participation in forestry management as an anchor for national and county forest development programmes;*
- (k) put in place efficient and effective mechanisms that will achieve effective plantation development.*
- (l) Provide a regulatory framework based on participatory principles and institutional support for community forestry with equal rights, financing and responsibilities for all actors, benefit sharing mechanisms and good governance;*
- (m) put in place protection and security measures to control illegal activities and ensure sustainable use and management of forests;*
- (n) promote the protection, conservation and sustainable management of water catchment areas through growing of suitable tree species and application of suitable soil and water conservation measures;*
- (o) take legal and administrative measures to protect forest biodiversity against bio-piracy and control, transfer, handling and use of genetically modified organisms; and*
- (p) promote modern ex-situ and in-situ techniques for conservation of forest genetic resources and the preservation of rare, endangered and threatened species.*
- (q) In consultation with stakeholders harness, promote and protect intellectual property rights arising from research and development and indigenous knowledge*

4.2 Natural Forests

Natural forests of mixed indigenous tree species represent some of the most diverse ecosystems found in the country. They supply important economic, environmental, recreational, scientific, educational, social, cultural and spiritual benefits. However, many of these forests have been affected by land use changes such as conversion to farmlands, urban centres 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 tangible benefits for forest adjacent communities is critical. Where appropriate, forest management should include adequate provisions for wildlife conservation.

Revenues accrued through commercial forest activities, wildlife conservation, ecotourism, climate change and other innovative financing should 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.

Policy Statements

The National Government shall:

- (a) enhance the quality and productivity of natural forests by prioritizing their protection, enhancement and enrichment;*
- (b) encourage planting of suitable indigenous tree species to assist regeneration and diversification;*
- (c) promote the rehabilitation, restoration, protection and management of water catchment areas and other ecologically fragile areas;*
- (d) prepare periodic reports on the integrity of natural forests, including water catchment areas;*
- (e) strengthen the institutions with responsibility for the management of natural forests;*
- (f) enhance Participatory Forest Management (PFM) in natural forests including strengthening Community Forest Associations (CFAs) and adopting community forestry in selected forests as an alternative model for equitable and sustainable forest management while strengthening community rights and livelihoods;*
- (g) promote ex-situ and in-situ conservation of indigenous tree genetic resources; and*
- (h) Convert exotic plantations occurring within ecologically sensitive water catchment areas into natural forests of indigenous tree species and bamboo.*

4.3 Plantation forests

Forest plantations supply industrial wood and also play a crucial role in conserving biodiversity, providing habitat for wildlife, conserving soils and regulating water supplies and sequestering carbon dioxide. Apart from supplying wood products, forest plantations play an important role in reducing pressure on the indigenous forests.

All forest plantations on public land are managed with the primary objective of production of high quality wood for industrial purposes. Private forest plantations also contribute to supply of industrial wood and thus require a conducive environment for investment and business opportunities.

To improve ecological resilience, productivity and diversity of products, there is need to broaden the genetic base for forest plantation species.

Policy Statements

The National Government shall:

- a) Sustainably manage public forest plantations to maximize economic, social and ecological benefits;*
- b) Manage plantation forests on a commercial basis;*
- c) Promote public private partnerships in the management of commercial forests on public and community land;*
- d) Promote plantation species and genetic base diversification to improve ecological resilience and enhance product diversity; and*
- e) Create an enabling environment for private sector engagement and investments in tree growing*

4.4 Management of Dryland Forest Resources

The arid and semi-arid areas of Kenya occupy two-thirds of the land surface, are unique in nature and require special attention to contribute to the economic base for the local communities as well as the national economy. They also have the potential to supply marketable commodities on a sustainable basis.

Although frequently stressed by drought, they are rich in biodiversity. However, due to population pressure in the high and medium potential areas, there is migration into the dryland areas resulting in degradation of the forest resources. Woody vegetation in the arid and semi-arid areas provides useful cover to the fragile and highly erodible soils, shelter for people and livestock in the harsh environment and habitats for wildlife.

Policy Statements

The Government shall:

- a) Promote sustainable management of dryland forests;*
- b) Promote the sustainable production of wood and non-wood forest products;*
- c) Promote sustainable production of charcoal;*
- d) Promote commercial tree growing of suitable tree species in ASAL areas of the country;*
- e) Create a conducive environment for development of forest based enterprises;*
- f) Support the restoration of degraded dryland forests; and*
- g) Promote conservation of genetic resources in dryland forests.*

4.5 Coastal and Mangrove Forests

Coastal forests include natural forests with mixed indigenous species and mangroves. They provide a basis for economic activity for local, national and international consumption. Local communities use the forests for spiritual and cultural rites. They are also important water catchment areas and provide habitat for threatened and endemic species of flora and fauna. Mangrove forests store more carbon than all the other forest types and are also critical in tide suppression. Most coastal forests are protected but the level of protection is weak. Some of the forests are managed by different bodies and are under diverse regulatory regimes, raising the possibility of conflicts and ineffective management.

Policy Statements

The Government shall:

- a) Promote conservation and sustainable management of coastal forests in accordance with Forest Management Plans for social, economic, cultural and ecological goods and services;*
- b) Promote commercial tree growing of suitable tree species in coastal areas;*
- c) Promote multiple use of coastal and mangrove Forests;*
- d) Regulate the harvesting, use and sale of bryophytes and other species essential for water cycles and biodiversity.*

CHAPTER FIVE: MANAGEMENT OF TREES OUTSIDE FORESTS

Trees outside forests (TOF) include trees in cities, on farms, along roads and in many other locations, which are not a forest according to the definition provided above. All trees make a contribution to the environment and to the social and economic well-being of humankind.

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 while also generating substantial incomes to households.

To achieve the national tree cover goal of 30% of the total land area, major tree growing efforts need to be undertaken on community and private lands. Tree cover on farms has been increasing, demonstrating that farmers recognize the economic contribution of trees to their livelihood, especially in more densely populated areas, which have high agricultural potential. While challenges in tree growing are greater in low rainfall areas, a variety of species have the potential to make tree growing in these areas viable and profitable.

5.1 Urban Forests and Green Spaces

Trees planted in arboreta , botanical gardens , recreational parks, on road reserves, railways, highways, institutions and on buildings are valuable green spaces and important for aesthetic, educational, economic, social, cultural and ecological purposes. Planting trees on buildings contributes to the vertical expansion of forest estates. Green spaces also contribute to carbon sequestration and improves the general landscape scenery.

Trees planted along the boundaries of road reserves are important for aesthetic purposes and provide shades for travellers along highways and other public roads. A belt of amenity trees planted at the interface of roads and private lands improves the scenery on road reserves, contributes to carbon sequestration and marks the road reserve boundaries.

Policy Statements

The Government shall

- a) Promote the establishment and expansion of arboreta, parks and green spaces in urban and peri-urban areas as social amenities and to enhance citizen wellbeing;*
- b) Promote institutional strengthening of counties to mainstream forestry;*
- c) Ensure the green spaces in urban centres are sustainably managed to enhance their aesthetic and recreational values and; carbon sequestrations purposes;*
- d) Promote biodiversity monitoring in urban forests and green spaces for enhanced conservation;*
- e) Promote establishment of vertical forests on buildings; and*
- f) Support the integration of green spaces and urban forests in the development plans of urban areas and infrastructure.*

5.2 Agroforestry and Farm Forestry

Agroforestry is the interaction of agriculture and trees, including the agricultural use of trees. It involves growing timber trees alongside keeping animals, growing crops or other trees for purposes. Farm forestry, on the other hand is the management of trees for timber yields by farmers. It can comprise small or large scale forest plantations. Farm forestry has potential to produce quality timber products, increase farm incomes, and support community development through employment and other environmental benefits as well as be an important source of wood fuel. Farm forestry is supported by the Ministry of Agriculture Farm Forestry Rules that require that 10% of the farm area be covered by trees.

Policy Statements

The Government shall:

- a) Encourage private and community land owners to invest in farm forestry as a viable economic land use aligned to the national 30% tree cover goal ;*
- b) Ensure that 10% of all public lands, including schools and other public institutions, is put under trees;*
- c) Establish standards and a system of certifying quality planting germplasm, in accordance with global and national biosafety regulations, to enhance value and productivity of agroforestry practice;*
- d) Promote investment in farm forestry enterprises, particularly fruit trees farming through provision of economic and non-economic incentives;*
- e) Support farm forestry practices in accordance with a National Agroforestry Strategy to guide commercial forestry investment;*
- f) Promote partnerships with land owners to increase on-farm tree cover, including with fruit*

CHAPTER SIX: FORESTRY SERVICES, PRODUCTS AND INDUSTRIES

Forests serve multiple purposes and provide varied benefits for people and countries. Some of these are tangible while others are intangible. These include ecosystem services and materials derived from forests for commercial and personal consumptive and non-consumptive use. Examples of forest products include timber, paper, firewood, charcoal, medicinal plants, fungi, edible fruits and nuts and other natural products. These services and products support a variety of industries.

6.1 Ecosystem Services

Forests provide a range of ecosystem services including provisioning, regulating, cultural and supporting services. Reducing Emissions from Deforestation and forest Degradation (REDD+) is a major intervention in climate change mitigation and adaptation. Other ecosystem services provided by forests include temperature regulation, erosion control and natural hazard and disease regulation. Forests also provide habitats for wildlife, including birds that provide essential services of distributing seeds of trees and shrubs to many other parts of the ecosystem.

Policy Statements

The Government shall:

- a) Promote investments in forest-based ecotourism and recreation development;*
- b) Facilitate total economic valuation of forests for integration into the national accounting system;*
- c) Develop an institutional framework, regulations and guidelines for Payment for Ecosystem Services (PES);*
- d) Develop mechanisms for reducing greenhouse gas emissions from forest sector;*
- e) Promote market-based mechanisms for reducing emissions from deforestation, degradation and other forest land-use changes;*
- f) Integrate climate change mitigation and adaptation programmes in forest management to ensure that the Nationally Determined Contributions (NDCs) are achieved; and*
- g) Develop and operationalize a national forest ecosystems management information system.*

6.2 Wood Products and Industries

The forest products sub-sector plays an important role in national socio-economic development. It provides employment, supply of many industrial products and supports the subsistence needs of many households.

Policy Statements

The Government shall:

- a) Promote investment in the wood industry;*
- b) Promote adoption of efficient wood industry technologies and efficiency in wood conversion;*
- c) Develop globally acceptable certification standards to enhance import and export of wood and wood products;*
- d) Promote forest-based value addition and integrated utilization of forest products; and*
- e) Create supportive legal and economic frameworks for commercialization of forestry enterprises.*

6.3 Non-Timber Forest Products (NTFPs)

Non-timber forest products are important for rural communities and account for a significant share of household incomes and expenditure. They also contribute to the national economy. 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 and tanning materials. Many of these products also have high export potential.

Policy Statements

The Government shall:

- a) Promote the sustainable production, utilization of, and trade in NTFPs;*
- b) Adopt a climate-smart, market-oriented value chain approach to NTFPs;*
- c) Create an enabling environment for trade in NTFPs; and*
- d) Regulate the harvesting, use and sale of bryophytes and other species essential for water cycles and biodiversity.*

CHAPTER SEVEN: FOREST EDUCATION, TRAINING AND RESEARCH

7.1 Forest Education and Training

The forestry sector faces challenges in building capacity for sustainable utilization and management. Formal and informal training in forestry is needed to build the human resources required for commercial plantation, development, afforestation, management, utilization and protection of forests. Curricula used for forestry studies need to adequately respond to emerging issues and technologies in the sector. Vocational training and continuous professional development should also take advantage of emerging technologies.

There are weak linkages between technology and research institutions and the industry players. Enhancement of competitiveness, productivity and product quality will enable the country to benefit from opportunities availed by the growing regional and global markets. This can be done through adoption of appropriate policy and personnel certification.

Awareness creation and information availability is also important for effective participation of communities and other stakeholders in forestry conservation and management. This calls for a robust forestry extension, communication, information and awareness strategy to educate and share information with the public on forest technologies, potential, opportunities and management techniques.

Policy Statements

The Government shall:

- a) Support formal forest sector education programmes at different skill levels;*
- b) Support the development of harmonized curricula and incorporation of emerging issues at local, regional and global level;*
- c) Encourage the establishment of linkages between forestry training institutions, researchers and forestry industry to enhance practical skills of trainees;*
- d) Support and strengthen universities and technical colleges to facilitate the development of the requisite professional, technical and managerial capacity to drive the forest sector operations;*
- e) Facilitate capacity-building of stakeholders in technical and managerial aspects of forest management;*
- f) Establish a strong forest extension network to disseminate information on forestry;*
- g) Support continuous professional development of forestry practitioners to enhance their knowledge in emerging issues in forestry development; and*
- h) Develop a framework for engaging young volunteers and senior citizens in forestry management .*

7.2 Forestry Research and Development

Forestry in Kenya can be improved through research on productivity, improved conversion efficiency and value addition. Investment in research and development focusing on basic forestry disciplines such as productivity, health, crop diversification, processing, value addition, intellectual property rights and indigenous knowledge is critical for improved performance of the sector. Further, global needs for certification require research in suitable

criteria and indicators. Mechanisms are needed for engaging county governments in forestry research and development.

A vibrant and proactive forest sector requires a strong forestry research strategy for technology development and transfer. KEFRI has the national mandate to conduct research in forestry and allied natural resources, build capacity of stakeholders, disseminate research findings and create partnerships and networks with stakeholders. To achieve national forest research aspirations, KEFRI should enhance collaborative engagements with other organizations carrying out forestry research.

Appropriate tree technologies should be generated for different sites across the country and production of sufficient planting materials, efficient technologies for conversion and processing of forest products, methods of value addition and best management practices promoted. This will ensure that sectoral activities are premised on a strong scientific base. Technologies in natural resource mapping using Geographic Information Systems (GIS) are important for monitoring and modelling for ecological changes. They can also be used to link forest resources to innovations in areas such as pharmaceuticals and biopesticides.

Policy Statements

The National Government shall:

- (a) support forestry research to ensure the generation of appropriate technologies for forestry development;*
- (b) support up scaling of wood-based technologies and diversification into high value products;*
- (c) support forestry research institutes and the private sector to carry out cutting edge forest research relevant for Kenya's forest sector;*
- (d) invest in integrated and multidisciplinary research on forests and forest products for livelihood support and economic growth;*
- (e) prioritize research and development on methods of taking forest inventories including growth yield assessment of forest products; capacity of forest ecosystems to sequester carbon and provide other ecosystem services;*
- (f) prioritize intensive and need-based research for biodiversity conservation, reclamation of degraded forests for ecological security, integrated pest management, invasive alien species management, forest fires, forest hydrology and carrying capacity of ecosystems;*
- (g) support counties' capacity to disseminate forest research for use by communities and individuals engaged in agroforestry and farm forestry;*
- (h) promote research in diverse tree species including indigenous trees to meet market requirements;*
- (i) promote intensification of research, technology development, training and education in dryland forestry;*
- (j) promote research and training to improve uptake of wood processing technologies;*
- (k) promote NTFPs research and development;*
- (l) invest in tree seed multiplication and diversification and tree improvement to increase overall forest productivity;*
- (m) enhance the capacity of research institutions to disseminate innovative strategies for high productivity to meet national and international standards;*
- (n) encourage and strengthen collaboration with regional and international institutions carrying out*

multidisciplinary policy research on forests;

(o) support research in and encourage the use of traditional knowledge in forest management and development;

(p) support research in forest governance, policy analysis to ensure interface of research and practice;

(q) support the documentation of the endangered tree species and their propagation in the localities where they are found; and

(r) promote the use of technology in natural resource mapping, monitoring ecological changes and innovations in development and utilization of forest resources.

The National and County Governments shall:

(a) identify forest research needs at local, county and national levels;

(b) develop mechanisms to link forest research findings to users, encourage private sector participation, and incorporation of indigenous knowledge systems;

(c) support the adoption and up scaling of tested research technologies; and

(d) support communication platforms between researchers, communities, county and national governments and other stakeholders to discuss forestry matters.

CHAPTER EIGHT: LEGAL AND INSTITUTIONAL FRAMEWORK

8.1 Institutional Framework

The Ministry of Environment, Climate Change and Forestry is responsible for forests. Ministries responsible for Agriculture, Livestock and Cooperatives, Transport and Infrastructure and Devolution also deal with trees on private and community land. Forests in Kenya are categorized as public, community and private under the Constitution. Public forests include all forests on public land; forestland lawfully held, used or occupied by any State organ; forestland transferred to the State by way of sale, reversion or surrender and forestland in respect of which no individual or community ownership can be established by any legal process. The national and county governments are responsible for all forests on public land. KFS is the national agency responsible for conservation and management of public forests. This role coincides with that of the NLC, which is responsible for managing public land; KWS in forests that have wildlife; KWTA which coordinates the conservation of water towers; NEMA which supervises and coordinates environmental activities and implements environmental policies in all sectors; CFAs; and County governments in which the forests are located. There are also private sector actors such as those involved in the timber industry. Key government institutions that manage forests require to be strengthened to perform their functions more efficiently, effectively and equitably.

Due to the wide range of stakeholders, some of their activities are incompatible and mechanisms detailing clear roles and responsibilities are needed to minimize the potential for conflict and misunderstanding. There is therefore need to establish a Forest Regulatory Authority to oversee and coordinate all forest interventions nationally, provide the focal point in the implementation of all standards and policies relating to forests and provide a coordination framework for inter-agency cooperation and stakeholder engagement for sustainable management of forests and allied resources. The regulatory authority will oversee and develop standards for monitoring forest health by various actors to ensure national aspirations are realized. It will also establish a sustainable funding mechanism and handle Standards and certification of forestry and allied resources research and training as well as standards for data sharing mechanisms and repository.

County governments are responsible for implementing specific national government policies on natural resources and environmental conservation including soil and water conservation and forestry. There is therefore need for strengthening county governments and for development of clear mechanisms of engagement between national government agencies and county governments. County governments are also responsible for agriculture and play a significant role in agroforestry. With increased attention on climate change adaptation and mitigation, this role will extend to sustainable agricultural production and reduction of food insecurity.

Policy Statements

The Government shall:

- a) Strengthen the policy oversight, coordination and reporting function of the Ministry responsible for forestry;*
- b) Undertake reforms and restructuring of forest sector institutions responsible for forestry development, conservation and research to enhance forestry governance;*
- e) Establish a Forest Regulatory Authority for inter-agency cooperation, oversight, development of standards, certification and stakeholder engagement for sustainable forestry management in Kenya;*
- f) Clarify institutional mandates of the lead government ministries and agencies for better cross-sectoral and intersectoral coordination in the forestry sector;*
- g) Create linkages between national forest institutions, National Land Commission and County Governments to ensure sustainable management of public forests;*
- h) Enhance resource allocation and human capacities in forest governance institutions;*
- i) Strengthen institutional linkages and collaboration between forestry administration and forest users and stakeholders, including enforcement agencies, regulatory authorities, justice system and others;*
- j) Put in place a clear framework for collaboration in forestry between the National Government and County Governments;*
- k) Support county governments to develop forest programmes for delivery of forest extension services to communities, farmers and private landowners, and management of forests other than those under state agencies;*
- l) Ensure equity and inclusivity in terms of ownership, control and access to forest resources and credit for vulnerable groups to engage in sustainable forestry activities; Put*
- m) Put in place mechanisms to ensure the involvement of women, youth, marginalized communities and persons with special needs in sustainable forest management and adopt approaches that ensure all Kenyans participate in decision-making; and*
- n) In consultation with stakeholders, put in place a clear mechanism for strengthening collaboration and partnerships with local communities to enhance forest sector contribution to the social, cultural, spiritual and economic lives of the communities.*

8.2 Legal Framework

The 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 generations. This is through taking various legislative measures and working towards achieving and maintaining at least 10% tree cover of the land area of Kenya.

Over the years, the forest sector has undergone reforms leading to the enactment of the Forest Act, 2005 and the Forest Conservation and Management Act, 2016. There is a need to continuously review relevant laws.

A review of the Forest Conservation and Management Act, 2016 will ensure conformity to this Policy.

Policy Statements

The Government shall:

- (a) amend the Forest Conservation and Management Act, 2016 as well as other relevant related laws relating to the forest sector to implement this Policy;*
- (b) harmonize the forest law with other sectoral laws in order to achieve national development objectives;*
- (c) regularly review forest legislation to ensure inclusion of emerging issues and to enhance sustainable management of forests;*
- (d) create awareness on forest policy and legislation among stakeholders;*
- (e) harmonize sectoral pieces of legislation on sustainable forest management between various sectors, and the two levels of government;*
- (f) clearly define the holders of legal rights to forest ecosystems related benefits including those generated by REDD+ activities in public, communal and private forests;*
- (g) Develop a coherent and coordinated regulatory framework for sustainable forest management with rules for establishing and implementing Forest Management Agreements between KFS and other actors;*
- (h) Enhance mechanisms for resolving conflicts between different actors in the forestry sector; and*
- (i) Develop and publish clear processes and procedures for stakeholder involvement in forest conservation and management including requirements for obtaining of approvals and licenses for participation in forest activities.*

8.3 Funding Mechanisms

Sustainable forest management and conservation requires adequate financial resources. Funding of forest activities has mainly been from the national government and development partners. Forestry development is an investment involving the establishment of trees, conservation and protection of forest ecosystems over long periods of time. This requires long-term funding. There is also a need to commercialize the forestry sector and explore innovative methods of financing.

Policy Statements

The Government shall:

- (a) provide adequate funds for the development, management and conservation of forests through annual budgetary allocations;*
- (b) leverage resources for forestry development by integrating forestry issues into other sectoral development programmes;*
- (c) promote investments in the forest sector by providing appropriate fiscal and economic incentives and developing value chains for forest products;*
- (d) create a more diverse business environment and make investments in the forestry sector more competitive;*
- (e) promote commercialization of forestry products and facilitate an enabling environment for investments;*
- (f) explore, adopt and facilitate the set up of alternative innovative sources of funding, including the operationalization of the Forest Conservation and Management Trust Fund*
- (g) mobilize resources from multilateral development agencies, international environmental and carbon funds, development partners, private sector and foundations to support forestry development;*
- (h) enhance resource mobilization strategies through carbon financing, PES and other appropriate mechanisms;*
- (i) promote and facilitate access to market-based mechanisms for reducing emissions from deforestation, degradation and other forest land-use changes available through REDD+ and other initiatives;*
- (j) Facilitate access to global and national climate, biodiversity and nature financing of forestry; and*
- (k) Provide opportunities to education, training and research institutions for infrastructure and human capacity development.*

CHAPTER NINE: LINKAGES WITH OTHER SECTORS

9.1 Mainstreaming forestry into other sectors

Pressures and demands imposed on forest ecosystems and resources are often caused or influenced by factors outside the forest sector. For instance Kenya has obligations under regional and international agreements and treaties. The forest sector is also closely linked to wildlife, agriculture, housing, national security, water, tourism, industry, energy, education among others. In addition, the sector is closely intertwined with climate and is influenced by activities of the private sector, communities, individuals and civil society.

To achieve the goals of sustainable forest management and conservation, a framework of public policies and strategies is needed, which incorporates national forest objectives in order to mainstream forestry in the national accounts system and the National Climate Change Adaptation Plan.

Cross-sectoral linkages between the forest sector and other related sectors need to be continuously strengthened to create synergy in the broad environment sector for growth and development including stakeholder participation.

Policy Statements

The Government shall:

- (a) incorporate Natural Capital Accounting into the System of National Accounts with the goal of capturing the contribution of the forest sector to the GDP;*
- (b) incorporate total economic valuation into the national accounting system to enhance forest contribution to national accounting;*
- (c) mainstream forestry conservation into the National Climate Change Adaptation Plan;*
- (d) mainstream the cross-cutting forest conservation issues including climate change, wildlife conservation, water, and energy conservation into forest sector planning;*
- (e) coordinate and promote collaboration among relevant institutions in exercising their mandates; and*
- (f) Address overlaps and conflicting roles in the various sectors related to forestry development.*

9.2 Partnership and Stakeholder Involvement

The private sector, civil society, communities, government agencies and other non-state actors play a vital role in forest management and conservation. This therefore calls for a sector-wide approach that includes all these crucial players and stakeholders rather than concentrating on a single or few players. Communities are responsible for community forests, which include forestland lawfully held, managed or used by specific communities; forestland lawfully held as trust land by the county governments and ancestral forestland traditionally occupied by indigenous and local communities.

Private forests on the other hand include forestland held by any person under any freehold or leasehold tenure and any forest owned privately by an individual, institution or body corporate for commercial or non-commercial purposes. To ensure that all forests are sustainably managed and contribute to the attainment of the goal of ten per cent tree and forest cover of Kenya's land area, comprehensive institutional reforms are needed to assign and clarify the roles and responsibilities of different players in the forestry sector.

Non-state actors have the advantage of being more independent of political pressures than governmental agencies and play a leading role in agenda setting, policy development and resolution of resource conflicts at the local level. Professional societies established to advance the science, technology, education and practice of professional forestry enhance the professionalism and the formulation and implementation of forestry policies and practices.

Participatory forest management and sound conservation practice has the potential to improve forest protection, management and growth by involving relevant non-state actors and local communities in planning and implementation.

Policy Statements

The National Government shall:

(a) promote stakeholder participation at all levels in forest sector planning, implementation and decision making;

(b) provide a framework for collaboration and partnership in forestry functions between national government, national government agencies and county governments;

(c) strengthen forestry research to inform and update forest management and clarify the mandate of Kenya Forestry Research Institute;

(d) strengthen linkages between forest research, education including the Ministry of Education, industry and management institutions and promote access to research conducted by educational institutions;

(e) develop an institutional framework and mechanisms for effective participation of stakeholders in forest management;

(f) develop and implement an equitable benefit sharing mechanism in the forest sector;

(g) support the implementation of Continuous Professional Development and enhancement of Professional Forestry Practice in the sector;

(h) support non-state actors and local communities to undertake forest-related development activities and investments;

(i) develop and implement strategies for forest resource conflict resolution and management;

(j) support communities, commercial tree growers and land owners to invest in forestry as a viable land use option;

(k) promote partnerships between public, private actors and communities in afforestation and reforestation programmes on public, private and community lands; and

(l) provide incentives to communities, commercial tree growers and landowners for forest management and conservation, and encourage voluntary conservation easements.

9.3 Regional and International Obligations

The effective management of trans-boundary environmental resources including forests necessitates regional and international cooperation. Kenya is a party to a number of multilateral and regional agreements, protocols, and conventions that impact on forestry. Provisions of Multi-lateral Environmental Agreements (MEAs) and other regional instruments and protocols need to be integrated into forestry programmes, strategies and plans.

Policy Statements

The Government shall:

- (a) ensure implementation of MEAs and other regional instruments and protocols and the integration of their provisions into forestry programmes, strategies and plans;*
- (b) support the harmonization of regional forest resource policies, including trade in forest products;*
- (c) promote the establishment of trans-boundary forest resource management agreements;*
- (d) provide support to enable enhancement of participation of key stakeholders in all aspects of the implementation of relevant MEAs, including their incorporation into national delegations to international environmental agreements' negotiations*

CHAPTER TEN: IMPLEMENTATION

10.1 Monitoring and Evaluation

Monitoring and evaluation (M&E) is an essential strategy in the implementation of this Policy. A monitoring and evaluation framework will be developed to track both the changing uses and values of forests and the progress made. This will include a set of performance indicators and measures to assess progress towards the effective conservation and management of forest resources in Kenya. Social performance indicators addressing the role of different members of society will also be developed to ensure that issues affecting women, youth, persons living with disabilities and other marginalized groups are addressed in the forestry sector. Outputs, outcomes, impacts shall be developed and key actors mapped to facilitate monitoring and evaluation.

The Ministry responsible for environment and forestry shall have the overall responsibility of monitoring and evaluation of the implementation of this Policy. The Ministry should have national spatial data at its disposal, be able to deploy effective and innovative technology for effective monitoring, surveillance and tracking and be guided by clear monitoring and verification procedures to ensure compliance. Contemporary and emerging technologies and information will be deployed to ensure sustainable forest management. These include remote sensing, aerial surveillance, unmanned aerial vehicles (drones), community-based intelligence systems, forest fire alert and response systems, and technological applications (apps).

Policy Statements

The Government shall:

- (a) develop and implement a monitoring and evaluation framework for the forestry sector in line with this Policy;*
- (b) develop and institutionalize tools for effective monitoring and evaluation;*
- (c) develop tools for monitoring social performance to ensure integration of gender-related, youth and other inclusion safeguards;*
- (d) Develop national performance indicators for measuring and reporting on the implementation of this policy.*

10.2 Policy Review

This Policy will be reviewed after every ten years or any such other period as may be determined by the Ministry responsible for forests.

10.3 Implementation Plan

The ministry responsible for forest conservation and management will be responsible for the coordination of the policy implementation. It shall develop an Implementation Plan for the Policy, with the participation of forest sector stakeholders. The Implementation Plan will designate the roles and responsibilities of all parties.

Policy Statements

The Government shall:

- a) Oversee and develop standards for certification, monitoring and reporting of forest resources to ensure realization of national forestry aspirations.*

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