REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE & FORESTRY

NATIONAL LANDSCAPE AND ECOSYSTEM RESTORATION STRATEGY

2023 - 2032

(Updated Version)

MISSION 15B #JazaMiti

A member of Aberdare-Kiburu Community Forest Association (CFA) tending to grown tree in the Aberdares Forest

Mbeu Natural Forest, Meru County

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Indigenous trees in the South West Mau Forest Block

Preface

Fellow Kenyans, as we stand at a pivotal moment in our nation's history, we are called to act with urgency and resolve in the face of an unprecedented environmental crisis. Our landscapes and ecosystems — the lifeblood of Kenya's resilience, biodiversity, and economic strength — are under siege from deforestation, climate change, land degradation, and biodiversity loss. These challenges threaten not only our natural heritage but also the livelihoods, food security, and health of millions of Kenyans.

The National Landscape and Ecosystem Restoration Strategy is our comprehensive response. It is an ambitious, visionary roadmap that aims restore 10.6 million hectares of degraded landscapes and ecosystems over the next decade, increase our national tree cover to 30%, and create sustainable livelihoods for our communities. This strategy is rooted in a whole-of-government, whole-of-society approach, calling upon every Kenyan — from individuals to communities, from the private sector to our counties and national institutions — to join hands in a historic mission to restore our natural heritage.

The potential benefits of this endeavor are far-reaching. Restored landscapes will support agriculture, improve water availability, protect wildlife habitats, and mitigate the devastating impacts of climate change. The success of this strategy will not only transform our landscapes but will secure Kenya's place as a global leader in environmental stewardship and climate resilience. We are committed to upholding our international obligations, contributing to the Sustainable Development Goals, the Paris Agreement, and the United Nations Decade on Ecosystem Restoration.

Yet, this journey demands more than policy and planning; it requires a movement. I call upon every Kenyan to be a custodian of this mission. Plant a tree, engage in sustainable practices, advocate for conservation, and embrace a mindset that values and protects our environment for generations to come. Our Jaza Miti initiative provides every citizen with a platform to take action and witness the positive impact of collective efforts on our national landscape.

Let this be our legacy — a nation that, when faced with environmental crisis, chose to act with unity and determination. Let us build a Kenya that honours its natural wealth, a Kenya that values sustainability, and a Kenya that is resilient, prosperous, and green. Join us in Mission 15B #JazaMiti and take your place in this transformative journey. Together, we will secure the prosperity and future of our beloved Kenya for ourselves and for generations yet to come.

His Excellency Hon. William Samoei Ruto, PhD., C.G.H.
President of the Republic of Kenya and
Commander-in-Chief of the Defence Forces

Forward

Kenya's landscapes and ecosystems are a vital pillar of our national prosperity, heritage, and identity. They offer a foundation for resilience, shaping the livelihoods, health, and well-being of communities across the country. Yet today, we face an existential threat as these ecosystems are degraded by unsustainable practices, climate change, and biodiversity loss. The National Landscape and Ecosystem Restoration Strategy represents our response to this challenge and our commitment to preserving our nation's natural wealth.

This Strategy embodies a bold vision to increase Kenya's tree cover from 12.13% to 30% by 2032. Through strategic restoration of forests, wetlands, rangelands, and marine ecosystems, we will endeavor to restore the ecological balance necessary for sustaining biodiversity, water sources, soil health, and food security. The strategy is designed to benefit every Kenyan by fostering more sustainable, resilient communities and supporting livelihoods in harmony with our environment. Restoration will also strengthen Kenya's role on the global stage, demonstrating our commitment to international agreements, including the Paris Climate Agreement and the African Landscape Restoration Initiative.

Our approach prioritizes inclusivity, accountability, and collaboration. The Ministry is committed to ensuring that each phase of this ambitious strategy is realized through coordination across government, counties, the private sector, and local communities. We are investing in innovative technologies, such as the Jaza Miti platform, that will enable us to monitor and evaluate tree-growing efforts and reward Kenyans for their contribution to this transformative mission. We are also cultivating partnerships with development partners, the private sector, and civil society to support sustainable financing mechanisms, ensuring that these restoration activities have the resources to succeed.

The road ahead is long, but our resolve is strong. With every tree planted, every wetland rehabilitated, and every rangeland restored, we move closer to a sustainable and prosperous Kenya. We are not only restoring our environment but laying the foundation for a future of resilience, economic opportunity, and climate security. I urge all Kenyans to stand with us, to grow trees, protect our natural resources, and champion this mission for our future generations. Together, we can make Kenya a model of environmental stewardship and sustainable development. Join Mission 15B #JazaMiti and help make this vision a reality.

Hon. Aden Duale, EGH,
Cabinet Secretary, Ministry of Environment, Climate Change and Forestry

Message from the Principal Secretary, State Department for Forestry

Our landscapes and ecosystems are under increasing threat from deforestation, over-exploitation, and the impacts of climate change. These challenges not only undermine our nation's environmental sustainability but also our social and economic resilience. The National Landscape and Ecosystem Restoration Strategy is a blueprint for safeguarding Kenya's natural resources and setting the foundation for a greener, more prosperous future.

As Principal Secretary, I am proud to support and guide the implementation of this strategy, which aims to restore 10.6 million hectares and plant 15 billion trees over the next decade. This ambitious undertaking requires collective action and collaboration across all sectors of society. It calls upon every Kenyan to play a part, from small-scale farmers practicing agroforestry to corporations adopting greener operations. This whole-of-government and whole-of-society approach is critical to realizing the 30% tree cover target and ensuring that restoration efforts are both impactful and sustainable.

The State Department for Forestry is dedicated to advancing this vision through strong partnerships, scientific expertise, and community engagement. We are establishing robust systems for monitoring and evaluation, building capacity at the community level, and promoting technologies such as the Jaza Miti platform to track progress and celebrate contributions. Our commitment to restoration is also an economic strategy. Healthy forests, rangelands, and watersheds support agricultural productivity, tourism, energy generation, and much more.

But beyond the numbers, this is about creating a legacy. It is about creating a Kenya where our landscapes provide sustainable livelihoods, where our ecosystems are resilient to climate shocks, and where every Kenyan can enjoy the benefits of a healthy, thriving environment. Let us take collective responsibility for our land and resources. By participating in Mission 15B #JazaMiti, you are not just planting trees but investing in a future where Kenya's natural wealth supports prosperity, stability, and well-being for all. I invite all Kenyans to join us in this transformative journey.

Mr. Gitonga Mugambi, CBS
Principal Secretary,
State Department for Forestry

Message from the Principal Secretary, State Department for Environment and Climate Change

Today, we stand united in our commitment to reverse environmental degradation, address climate change, and build resilience across Kenya's diverse landscapes. The National Landscape and Ecosystem Restoration Strategy is not only an environmental imperative but an economic and social one. This 10-year plan aims to restore 10.6 million hectares of degraded land, plant 15 billion trees, and set Kenya on a course toward sustainable growth and climate resilience.

The State Department for Environment and Climate Change is at the forefront of this endeavor, working to ensure that our policies and programs foster resilience and sustainability. We are focusing on sustainable financing mechanisms, exploring partnerships with the private sector, and mobilizing international resources to meet the demands of restoration at scale. This strategy also emphasizes research and innovation, equipping us with the scientific insights needed to guide our actions and adapt to evolving environmental challenges.

Our commitment extends to the communities, who are the backbone of our ecosystems. We are engaging with local leaders, indigenous communities, and the public to ensure that restoration activities align with their needs and knowledge. This is a people-centered approach that values inclusivity, recognizing that every Kenyan has a stake in the health of our environment and the prosperity it brings.

Kenya's restoration efforts contribute not only to our national goals but also to global climate objectives, fulfilling our pledges under the Paris Agreement, the Bonn Challenge, and the African Resilient Landscapes Initiative. As we embark on this transformative mission, I urge every Kenyan to actively participate in protecting our environment, conserving our resources, and advancing our country's restoration goals. Let us seize this moment and build a Kenya that is resilient, prosperous, and environmentally secure for future generations. Join us in Mission 15B #JazaMiti and be a part of Kenya's path toward sustainable and inclusive growth.

Eng. Festus Ngeno, PhD, MIEK, CBS
Principal Secretary,
State Department for Environment and Climate Change

ABBREVIATIONS

AFR100	African Forest Landscape Restoration Initiative
ARLI	African Resilient Landscapes Initiative
ASALs	Arid and Semi-Arid Lands
BETA	Bottom Up Economic Transformation Agenda
CBOs	Community Based Organizations
CDEs	County Directors of Environment
CECMs	County Environment Committee Members
CECs	County Environment Committees
CEO	Chief Executive Officer
CFA	Community Forest Association
CIDPs	County Integrated Development Plans
CIF	Climate Investment Funds
CIFOR-ICRAF	The Center for International Forestry Research and World Agroforestry Centre
COG	Council of Governors
CS	Cabinet Secretary
CSOs	Civil Society Organizations
CSR	Corporate Social Responsibility
EAC	East African Community
ECC	Environmental Compliance Certificate
ELD	Economics of Land Degradation
EMCA	Environment Management and Coordination Act
FAO	Food and Agriculture Organization of the United Nations
FBOs	Faith Based Organization
FLR	Forest and Landscape Restoration
FMNR	Farmer Managed Natural Regeneration
FOLAREP	Forest and Landscape Restoration - Implementation Plan 2023-2027
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GOK	Government of Kenya
ICT	Information Communication Technology
JICA	Japanese International Development Agency
KALRO	Kenya Agricultural and Livestock Research Organization
KAM	Kenya Association of Manufacturers
KEFRI	Kenya Forestry Research Institute
KEPSA	Kenya Private Sector Association
KFS	Kenya Forest Service
KMD	Kenya Meteorological Department
KWRTI	Kenya Wildlife Research &Training Institute
KWS	Kenya Wildlife Service
KWTA	Kenya Water Towers Agency
M&E	Monitoring and Evaluation
MDAs	Ministries, Departments and Agencies
MEAs	Multilateral Environmental Agreements
MECCF	Ministry of Environment, Climate Change and Forestry
MEF	Ministry of Environment and Forestry
MSME	Micro, Small and Medium Enterprises
NACOFA	National Alliance for Community Forest Associations
NAMA	National Appropriate Mitigation Actions
NEMA	National Environment Management Authority
NETFUND	National Environment Trust Fund
NYS	National Youth Service
PPP	Public Private Partnerships
PS	Principal Secretary

RDAs	Regional Development Authorities
SAGAs	Semi-Autonomous Government Agencies
SDF	State Department for Forestry
SDGs	Sustainable Development Goals
SLM	Sustainable Land Management
ToC	Theory of Change
TVET	Technical, Vocational Education and Training
TWG	Technical Working Group
UNCBD	Nations Convention on Biological Diversity
UNCCD	United Framework Convention on Climate Change
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
USD	US Dollar
WWF	Worldwide Fund for Nature

Restoration site at Logoman Forest in Njoro, Nakuru County.

Nursery attendant watering tree seedlings at Kwale Forest Station nursery, Kwale County

CHAPTER1:BACKGROUND

1.1 Introduction

Kenya has a landmass area of 582,646 km^2 an equivalent of 58,264,600 ha that is endowed with diverse ecosystems such as forests, freshwater, agroecosystem, wetlands, rangeland and marine. These and other natural resources provide critical ecological goods and services that support the country's economic development. The Country depends on these ecological goods and services as natural capital for driving the Gross Domestic Product (GDP). The forest ecosystem, for example, is a livelihood base of over 82% of Kenya's households. It offers direct employment to over 4 million Kenyans and contributes about USD 365 million (3.5%) to the Growth Domestic Product (GDP). This ecosystem also contributes to more than USD 140 million worth of goods annually to other productive sector of the economy such as; agriculture, fisheries, livestock, energy, wildlife, water, tourism, trade and industry (KSF, 2014 and MEF, 2018). Additionally, the forest ecosystem provides a wide range of ecological services such as watershed protection and carbon sequestration that contributes to climate change adaptation and mitigation, respectively.

Plate 1: Waterfall along Mara River in Mau Forest Complex, Bomet County.

In the same vein, Water Towers ecosystem of Kenya which include Mount Kenya, Aberdares, Mau Forest, Mount Elgon and Cherangany Hills among others provide necessary recharge for rivers draining into several water basins and providing water for domestic use, agriculture, wildlife and the manufacturing industry. This ecosystem interlinks well with agroecosystem that is the largest contributor to Kenya's GDP at 33% directly and 27% indirectly through agro-based industries and service sector (GOK, 2018a). Specifically, the agriculture sector in the agroecosystem employs more than 40% of the total population and about 70% of the rural population (GOK, 2018b). This proportion is largely dominated by small-holder farmers accounting for over 75% of the total agricultural output and over 70% of the marketed agricultural produce.

Plate 2: Earth smiles in Amboseli, showcasing rangeland restoration site.

The rangeland ecosystem that comprises of woodlands, bushlands, grasslands, wetlands and bareland accounts for 89% of the Kenya's landmass (Birch, 2018) and supports over 70% of the country's livestock, 90% of the wildlife populations (Njoka et al 2016). This ecosystem also provides over 90% of the meat consumed in Kenya, employs over 10 million people and accounts for 95% of the household income in the Arid and Semi-arid Lands (ASALs). Rangelands are also rich in plant diversity that are sources of various economic products such as fuelwood, timber, medicine, honey, dye, resins, gum, fruits and vegetables. They also hold a significant natural resources such as oil, gas and renewable energy (MoALF&C, 2021; World Bank, 2018; GOK, 2010).

Rangelands are also rich in plant diversity that are sources of various economic products such as fuelwood, timber, medicine, honey, dye, resins, gum, fruits and vegetables. They also hold a significant natural resource such as oil, gas and renewable energy (MoALF&C, 2021; World Bank, 2018; GOK, 2010). *Farmlands are spread across these ecosystems with many people practicing agroforestry where they incorporate trees within the cropping and grazing lands. Agroforestry systems play a critical role in terms of carbon sequestration with an average of 24.2 ± 2.8 Mg C ha−1 in biomass and 98.8 ± 12.2 Mg C ha−1in the soil and livelihoods benefits such as fodder, food, firewood and income. (Muthuri et al 2023). These and other benefits diversify livelihoods of rural communities and act as safety nets in times of climate shocks.

The other important ecosystems in Kenya include wetlands and marine that performs crucial functions in provision of goods and services as well as mitigating and adapting to climate change. Specifically, they provide many ecological and socio-economic goods and services which include but not limited to: water supply; food production; construction materials; and products for the cottage industry, tourism and recreation. The ecological services comprise flood control, water recharge and discharge, water filtration, wildlife habitats, nutrient storage and re-cycling. Notably, the estimated monetary value of Kenya's marine ecosystems is around USD 2.5 billion per year, or 4 percent of GDP forming part of Kenya's blue economy that is worth around the US $4.8 billion a year

Plate 3: Mara River at the Source in Eastern Mau Water Tower.

However, these ecosystems face myriad of threats and challenges such as: degradation due loss of vegetation; climate change and climate variability; human settlement and encroachment; illegal logging; unsustainable charcoal production and firewood collection; uncontrolled wild and human induced fires; rapid infrastructural developments; overstocking; overgrazing; spread of invasive species such as *Prosopis juliflora*; and land-use cover changes such as encroachment of crop production into pastoral land among others. These have resulted to decline of provision of goods and services. It is in this context that the conservation and management of these ecosystems remains core as they contribute to the national economy that directly and intrinsically linked to the integrity of the environment and natural resources.

Plate 4: Restoration efforts in ASALs degraded lands in lower parts of Baringo County.

1.2 Justification and Rationale for the Strategy

Degradation of land approximated at 38.8 million ha and ecosystem-based resources has resulted in reduced functionality and productivity. This has led to immense socio-economic and ecological losses estimated at USD 1.3 billion annually. Restoration of these ecosystems is therefore essential in order to: improve vegetation composition; reclaim and protect biodiversity; restore natural processes and ecosystem functions; improve hydrological cycles; improve livelihoods, food and nutritional security; increase access to clean water and energy; enhance resilience to climate change and climate variability; mitigate against climate change; and increase employment opportunities across sectors of Kenya's economy.

Kenya has also committed to restore 5.1 million ha of forest and degraded landscapes by 2030 in line with Bonn Challenge and African Forest Landscape Restoration Initiative (AFR100) which has been doubled to 10.6 million ha. The country has equally made various commitments to specific conventions such as: United Framework Convention on Climate Change (UNFCCC); United Nations Convention to Combat Desertification (UNCCD); and United Nations Convention on Biological Diversity (UNCBD). It is in this context that this strategy was conceived in response to the Presidential directive to address the triple planetary crisis of climate change, pollution, land degradation and biodiversity loss by growing 15.8 billion trees, an equivalent of restoring 10.6 million ha by 2032.

This strategy therefore provides a framework to:

a) Support a whole government and whole society approach to realize the full rehabilitation and restoration of 10.6 million hectares of degraded landscapes and ecosystems in order to improve tree cover to 30% by 2032;
b) Promote Sustainable Land Management (SLM) practices that support the long-term health and productivity of landscapes and ecosystems.
c) Implement several national and global commitments with respect to climate change, biodiversity conservation and land degradation;
d) Coordinate institutional and multi-stakeholder participation in the realization of Article 42 of the Constitution of Kenya that guarantees the right to clean and healthy environment that requires to be protected for present and future generations;

Resource mobilization and strategic partnership towards conservation and restoration of landscapes and ecosystems as well as reduce emissions, build resilience for community livelihoods, and social economic development.

1.3 Strategy Formulation Process

The formulation of this strategy used multi-sectoral and multi-stakeholders approach under the leadership of the Ministry Environment, Climate Change and Forestry that appointed Technical Working Group (TWG) and Consultants. The latter referred to wide range of scholarly and grey literature documents that were triangulated with primary data obtained through focused group discussions and key informant engagements. Specifically, two stakeholders' workshops were held in Lake Naivasha Resort, Nakuru County that handled scoping of the strategy and formulation of key intervention areas and tree growing targets. This was followed with another workshop that was held in Trademark Hotel, Nairobi County that oriented the strategy to agreeable ecosystems. This was followed by two drafting meetings in Radisson Blue Hotel, Upper Hill, Nairobi led by the thematic leads of each ecosystem under the guidance of the Consultants. The draft strategy was handed over to 15 Billion Tree Growing and Restoration Secretariat at the MECCF, SDF to finalise taking into account issues raised by the Cabinet Secretary, MECCF, PS SDF, PS SD ECC and Senior Officers from the MECCF as well as senior leadership and management from the MECCF SAGAs.

The harmonized draft was internally reviewed by SDF through the leadership of the PS, and presented the amended version to the Cabinet Secretary, MECCF and PS SD ECC as well as CEOs/Senior Leadership Management of the SAGAs of MECCF. The Secretariat received feedback from the validation processes and finalized this strategy.

Tree growing exercise in Kapkong'ony Swamp, Nandi County.

CHAPTER 2: SITUATIONAL ANALYSIS

2.1 Introduction

The situational analysis of this strategy entailed an assessment of tree growing and SLM potential towards landscapes and ecosystems restoration. This was guided by the on-going initiatives on restoration across the country implemented by different stakeholders. The analysis also focused on review of legal frameworks and strategic underpinnings, barriers and challenges in various ecosystems, opportunities for landscape and ecosystem restoration, and key stakeholders that will spearhead implementation of this strategy.

2.2 Global Context for Landscape and Ecosystem Restoration

Kenya is a party and a signatory to many Multilateral Environmental Agreements (MEAs), treaties, strategies and commitments relevant to restoration of landscape and ecosystems. Some of these instruments that are relevant to the tree growing initiative towards landscape and ecosystem restoration in Kenya, include but not limited to the following: 2030 Agenda for Sustainable Development (SDG); UNCCD; the Bonn Challenge; UNCBD; UN Decade of Ecosystem Restoration 2021 – 2030; RAMSAR Convention on Wetlands; United Nations Strategic Plan for Forests 2017-2030; New York Declaration on Forests; Glasgow Declaration on Forests and Land use; UNFCCC; the Paris Agreement; and the Kyoto Protocol. The implementation of the identified strategic interventions in this strategy are expected to significantly contribute to the realization of Kenya's commitments to these global instruments.

2.3 Continental Initiatives on Re-Greening Landscapes and Ecosystems

Kenya is party to various initiatives in Africa aimed at re-greening degraded landscapes and ecosystems. Some of these initiatives include: AFR100 that aims to restore 100 million hectares of deforested and degraded land in Africa by 2030; and African Resilient Landscapes Initiative (ARLI) that is implemented through forest and ecosystem restoration, biodiversity conservation, climate smart agriculture, and rangeland management. ARLI has mobilized African countries and partners to leverage sectorial interventions and collectively ensure the integrity, resilience, restoration and sustainable management of landscapes across regions. This is expected to contribute to the improvement of soil fertility and food security, access to clean water, combat desertification, increase biodiversity and habitat, create green jobs, bolster economic growth and livelihood diversification, and increase the capacity for climate change resilience and adaptation. This transformative initiative connects agriculture land, forest land and rangeland under one single management concept - the landscape approach – in order to boost the resilience of both ecosystems and livelihoods.

Kenya is also enjoined on the African Union's Agenda 2063 that focuses on building climate resilient economies and communities in the continent. The country as a member to East African Community (EAC) has aligned itself to various policy and strategic instruments relevant to re-greening degraded landscapes. Some of these instruments include: Climate Change EAC Policy and Strategy (2018-2023); Lake Victoria Basin Commission's Climate Change Adaptation Strategy and Action Plan; the Protocol for Sustainable Development of Lake Victoria Basin; and the Protocol on Environment and Natural Resources for the EAC.

2.4 National Instruments Towards Landscape and Ecosystem Restoration

Kenya has enacted laws and legislation that provides enabling environment for landscape and ecosystem restoration including tree growing and other SLM practices. The Kenya Constitution 2010, for example, Article 60 on Principles of policy of land, Article 61 on classification of land (public,

community or private), and more so Article 69 on obligations in respect to the environment that outlines for the State to ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources, and work to achieve and maintain a tree cover of at least 10%of the land area of Kenya. Kenya's Vision 2030 also proposes the sustainable management of natural resources, which involves maintaining components of the natural environment over time (such as biologic diversity, water quality, preventing soil degradation), while simultaneously maintaining (or improving) human welfare (provision of food, housing, sanitation and infrastructure).

These provisions implies that the government is obligated to involve the public in Efforts to improve forest and tree cover in the country towards landscapes and ecosystems restoration in Kenya. There are other key legislation that grounds this strategy towards landscape and ecosystem restoration such as: Environmental Management and Coordination Act Cap. 387 of the Laws of Kenya; Forest Conservation and Management Act, 2016; Climate Change Act, 2016; Climate Change Amendment Bill, 2023; Agriculture (Farm Forestry) Rules, 2009; Land Act Cap 295 of the Laws of Kenya; The Physical and Land Use Planning Act, 2019; Wildlife Conservation and Management Act, 2017; and the Water Act, 2016.

The country has also developed various policies, programmes, strategies, plans and technical reports that are relevant to landscape and ecosystem restoration. These include among others: National Forest Policy 2023; Model Policy and Law on County Sustainable Forest Management and Tree Growing 2021; National Forest Programme (2016-2030); National Strategy for Increasing Tree Cover to 10% by 2022; and County Integrated Development Plans (CIDPs); Wetlands Restoration Strategy 2023-2032; National Wetlands Conservation and Management Strategy, Kenya 2015-2025; Agriculture Sector Transformation and Growth Strategy 2019-2029; Kenya Bamboo Development Strategy and Action Plan 2022-2032; Forest and Landscape Restoration Implementation Plan (FOLAREP) (2023-2027); National Climate Change Action Plan 2023-2027 (NCCAP), Kenya Strategic Investment Framework 2017-2027 (KSIF) on sustainable land management, Kenya National Agroforestry Strategy 2021-2030 (KNAS), Kenya Climate Smart Agriculture Strategy 2017-2027 (KCSAS), Agricultural Sector Development Strategy 2010–2020 (ASDS), National Environment Policy 2013 (NEP), Sessional Paper No. 3 of 2009 on Land Policy, National Policy for the Sustainable Development of Northern Kenya and other Arid Lands (2012), National Climate Change Response Strategy (2010); Technical Report on the National Assessment of Forest and Landscape Restoration Opportunities in Kenya 2016; Development Stakeholder Mapping Report; Economic Analysis of Forest Landscape Restoration Options in Kenya; Land Degradation Neutrality Target Setting Final Report 2017; and draft National Agro forestry Strategy 2024.

2.5 Challenges and Threats in Key Landscapes and Ecosystems

Forest, Water Towers, Agroecosystem, Rangelands, Marine and Settlement and Infrastructure ecosystems are currently facing myriad of challenges that are hindering them to provide required goods and services for sustainable economic developments. Some of the challenges are highlighted in the following sub sections.

2.5.1 Challenges and Threats in Forest Ecosystem

Globally, the forest sector contributes more than USD 1.52 trillion to world's gross domestic product and employs 33 million people. One-third of the global population (about 2.6 billion people) relies on wood and other traditional fuels for household cooking. It is also estimated that up to 5.76 billion people use non- timber forest products for their own use or to support their livelihoods. Forests are home to over 60,000 species of trees and provide a safe haven for 80% of amphibian species, 75% of bird species, and 68% of mammal species globally. Forests contain 662 billion tons of carbon, which is more than half the global carbon stock in soils and vegetation. The monetary value of the global forest ecological services is estimated at about 9% of global GDP (FAO, 2022a)

However, this sector faces challenges that are almost similar across the tropics. Some of the challenges that are predominantly in Kenya include the following:

a) Deforestation due to rapid population growth, urbanization, increase poverty levels, and expanding of agricultural land;
b) Forest degradation;
c) Weak or poor forest governance
d) Weak enforcement of regulatory framework in the forest sector;
e) Under-regulation of forests on private and communal lands;
f) Weak forest and land use policies;
g) Conflicting laws, policies and sector roles and mandates on water and forest resources;
h) Unsustainable forest and land management practices;
i) Impacts of climate change and climate variability;
j) Loss of forest cover that has resulted in reduced water flows;
k) Inadequate information on water quality and quantity from forested watersheds;
l) Inadequate resources for conservation of forest ecosystems;
m) Insufficient conservation support from watershed areas beneficiaries;
n) Insufficient application of soil and water conservation measures in farming, logging and infrastructure development projects;
o) Limited use of new technologies in information management, soil conservation, assessment of water quality and quantity;
p) Over-reliance on wood biomass for energy;
q) Unsustainable production of fuel wood;
r) Use of obsolete wood conversion technologies, and deficit wood supply, dependence of other industries on wood biomass;
s) Unsustainable raw material supply for wood-based industries;
t) Underdeveloped wood industry and forest products' value chains;
u) Market failures;
v) Unstandardized timber grading and valuation;
w) Undervaluation of the sector's contribution to GDP; and
x) Excessive reliance on cheap imported forest products contribute to the unsustainable management of forests.

2.5.2 Challenges and Threats in Water Towers Ecosystem

Water Towers ecosystem is a major source of rivers essential for agricultural irrigation, industrial processes, and domestic use, contributing significantly to the country's water resources and supporting food security, energy production, and overall development. They are also source of biodiversity conservation, tourism destinations and regulate climate change. This ecosystem also provides cultural significance, supports in erosion control, hydro-power generation and forms good sites for research and education.

However, Water Towers ecosystems are under severe threats due to land degradation, desertification, climate change, population growth, urbanization, and natural resource over-exploitation leading to reduced ecosystem health and productivity. They are also experiencing spread of invasive species, leading to habitat loss, reduced water availability and quality, biodiversity loss and decline, glacier retreat, increased fire frequency and intensity, and diminished carbon storage. The other notable challenges include:

a) Conflicting policy priorities on the part of the decision makers;
b) Lack of coordination among government agencies and different stakeholders;
c) Habitat loss, soil erosion and landslides;
d) Destruction of water sources and pollution;
e) Encroachment by human settlements and agriculture;

f) Illegal logging and arson fires; and
g) Unsustainable farming practices and resource over extraction

2.5.3 Challenges and Threats in Agroecosystem

Agroecosystems are inextricably linked to global food security as they harbor agro-biodiversity for food production and associated agricultural enterprises (Leakey, 2020). The Global Land Outlook estimates that 50% of agro-ecosystems are degraded. This means that for restoration targets to be reached, efforts to restore degraded agricultural lands will need to be doubled (Crossland et.al 2022). The costs of agroecosystem degradation indirectly affect everyone. For example, the global economic loss of ecosystem services due to this degradation has been estimated at US$ 6.3–10.6 trillion or US$ 870–1,450 per person per year (ELD Initiative, 2015). The following are key challenges associated with agroecosystem degradation:

a) Demographic growth;
b) Conflicts and wars with expanded refugees' settlements;
c) Inappropriate soil management;
d) Deforestation;
e) Shifting cultivation;
f) Insecurity in land tenure, variation of climatic conditions and intrinsic characteristics of fragile soils in diverse agro-ecological zones;
g) Climate based drivers of degradation such as changes in temperature, intensity of rainfall;
h) Declining soil fertility;
i) Spread of alien and invasive species;
j) Insufficient water basin management and unsustainable irrigation practices;
k) Limited support for climate smart agriculture;
l) Insufficient stewardship of fishing grounds;
m) Inadequate extension services;
n) Poor conservation and use of genetic resources;
o) Insufficient modern disaster management systems;
p) Weak institutional capacity;
q) Weak governance in farmer organizations and farmer cooperatives that is essential for development of agricultural value chains product marketing;
r) Unfavorable taxation and tax regimes that increase production costs reduce opportunities for processing due to high cost of technologies and lower product completeness in the local and international markets;
s) Inadequate resources for monitoring, control and surveillance of agricultural resources;
t) Low involvement of stakeholders in policy formulation, planning, implementation and management;
u) Poor resource use and trans-boundary conflicts are other diverse challenges that affect food production and productivity;
v) Inappropriate land-use practices and environmental policies that have encouraged land fragmentation, extension of urban development into agricultural land, retention of idle land, cultivation of river banks, deforestation and encroachment into catchment areas and wetlands (Agric Policy 2021; Izzy Birch 2018; MoALD 2014);
w) Inadequate infrastructure such as electricity, access roads, marketing channels and extension services has slowed the pace of irrigation and drainage development;
x) Lack of security of land tenure;
y) Low level of government support services; and
z) Weak farmer organizations and poor financial base of communities.

2.5.4 Challenges and Threats in Rangelands Ecosystem

Rangelands are an essential resource for maintaining environmental services and biodiversity conservation. They are a source of livelihood especially for rural communities and provide habitat for many species of wildlife. Grasslands contribute to the livelihoods of over 800 million people globally and are a source of goods and services such as wild foods, medicinal plants, water, food and forage, energy and wildlife habitat. Rangelands globally support livestock, mining and tourism sectors. They provide carbon and water storage, recreation, and watershed protection. Grasslands are further important for in situ conservation of genetic resources.

The rangelands are in 23 counties, which constitute about 88% of the country's land mass. Of the 23 counties, 9 of them are classified as arid and 14 as semiarid. Overall, Kenya Rangelands comprise of; Tsavo, Amboseli-Magadi, Laikipia-Samburu, Masai Mara, Meru- Kora, Naivasha-Nakuru, Nairobi-Athi Kapiti and the Northern Frontier Counties of Lamu, Garissa, Wajir, Mandera, Turkana and Marsabit. These rangelands experience similar challenges as highlighted below.

a) Land degradation
b) Grass fires
c) Occurrence and spread of invasive species
d) Increased resource conflicts
e) Changes in rangeland surface morphology and soil characteristics
f) Disjointed sectoral policy, legal and institutional frameworks
g) Low allocation of financial resources
h) Transformation of property rights
i) Limited spatial and land use planning
j) Lack of enforcement of existing land use and spatial plans
k) Low technical capacity and awareness
l) Poor wildlife management practices
m) Inadequate extension service
n) Inadequate research on rangeland resources
o) Impacts of climate change

Plate 5: A pastoralist grazing livestock in degraded rangelands in Narok County

2.5.5 Challenges and Threats in Marine Ecosystem

Marine or ocean ecosystems, including mangroves, seagrasses, and corals, are critical ecosystems and provide goods and services, including coastal protection, nutrient cycling, air purification, and the creation of feeding, spawning, and breeding grounds for fish and other marine organisms, while equally supporting the socio-economic livelihoods of coastal communities (Leal and Spalding 2022). However, this ecosystem has some challenges and threats. For example, the major threats on coastal and marine biodiversity includes pollution from effluent and solid waste, eutrophication, permanent alteration and destruction of habitats, invasive species as well as climate variability and adverse weather patterns. The key sources of pollution affecting coastal

and marine environments are industrial discharge and oil spills, while sewage discharge and agricultural activities lead to nutrient enrichment of water bodies resulting in loss of biodiversity. In most of the larger coastal urban centers and their suburbs, the use of septic tank soak pits, pit latrines and open drains is prevalent.

This lack of sewage disposal systems results in the contamination of surface as well as ground water. Increasing use of non-biodegradable plastics that end up in the environment as micro plastics threatening the health of wildlife and human beings has made the situation worse. Resource over-use by an increasing human population in the quest for economic development are other key causes of degradation. Large areas of land have been permanently altered by clearing of natural vegetation for agriculture, salt manufacture, mining, and extraction of construction materials without any rehabilitation efforts. The loss of natural vegetation and useful land to invasive plants pose significant risks on livelihoods and the environment. Climate variability constitutes a serious threat to the region's natural environment, biodiversity, economic and physical systems in which sustainable development and prosperity depends.

2.5.6 Challenges and Threats in Wetlands Ecosystem

Wetlands are known to perform crucial functions and provide vital products and services essential for environmental integrity and human well- being. Apart from being biodiversity hotspots, the wetland resources are equally crucial for income generation and a source of livelihood and well-being of the communities. They provide many ecological and socio-economic goods and services. These include water supply, food production, construction materials, and products for the cottage industry, tourism and recreation. The ecological services comprise flood control, water recharge and discharge, water filtration, wildlife habitats, nutrient storage and re-cycling. Wetlands are recognized as net carbon sinks providing an effective system for carbon capture and storage. The long retention of carbon in wetlands reduces the amounts of atmospheric carbon, thereby reducing global warming. Wetlands are equally important in Disaster Risk Reduction (DRR) especially in controlling extreme flooding.

While wetlands have the potential of contributing significantly to the socio- economic development of Kenya, they face diverse and severe threats. These threats include unsustainable human activities such as reclamation and conversion of wetlands for agricultural development, human settlement and infrastructure development, over-exploitation of wetland goods and services, pollution, eutrophication, salinization, invasive species and climate change. The threats have induced changes that have eroded the ecological and socio-economic values and services derived from wetlands. The underlying threat remains lack of recognition of the importance of wetlands and the roles they play in both the national economy and community livelihoods.

The other notable governance challenges of wetland ecosystem include but not limited to the following:

a) Management issues and challenges;
b) Inadequate institutional capacities in management of wetlands;
c) Inadequate awareness amongst the public and policy makers on importance of wetlands;
d) Weak enforcement and poor environmental regulatory frameworks;
e) Inadequate community participation in environmental conservation;
f) Conflicting and competition for resources;
g) Poor knowledge base and understanding of wetlands; and
h) Poor coordination of conservation efforts in the wetlands.

2.5.7 Challenges and Threats in Settlement and Infrastructure

The settled area ecosystems are becoming more prevalent and diverse as the world's population and urbanization increase. According to the United Nations, 55% of the world's population lived in urban areas in 2018, and this proportion is expected to increase to 68% by 2050. Urban areas are expanding faster than urban populations, resulting in urban sprawl and the conversion of

natural and agricultural lands into built-up areas. This has implications for biodiversity, functioning, and services of settled area ecosystems, as well as for the human well-being and environmental quality of urban dwellers. The notable challenges in settled areas include the following:

a) Inadequate infrastructure services;
b) Poor sanitation;
c) Insufficient water,
d) Pollution;
e) Unsustainable energy sources;
f) Poor drainage and the ecological footprint of cities including industrial pollution, waste management, and overpopulation; and
g) Lack sewage systems resulting in intense pollution of rivers and wetlands, especially in towns and cities.

2.6 Restoration Opportunities

The Technical Report on the National Assessment of Forest and Landscape Restoration Opportunities in Kenya 2016 identified 38.8 million ha of landscape potential for restoration. Some of the notable opportunities identified for restoration in this report include the following:

a) Afforestation or reforestation of natural forests;

b) Rehabilitation of degraded natural forests;

c) Agroforestry in cropland;

d) Commercial tree growing on potentially marginal cropland and un-stocked forest plantation forests;

e) Bamboo growing on potentially marginal cropland and un-stocked forest plantation forests;

f) Tree-based buffer zones along water bodies, wetlands, roads; and

g) Restoration of degraded rangelands.

Additionally, KSIF identified a wide selection of SLM interventions to suit specific land degradation problems, geographical zones, land use systems and agricultural enterprises. At the national levels, the SLM activities and interventions in Kenya can be divided into ten broad groups:

a) Catchment protection, afforestation, agroforestry, re-greening riparian lands
b) Preserving and enhancing the productive capabilities of agricultural lands (croplands, grazing lands)
c) Soil and water conservation (structures for erosion control, soil fertility management, agronomic measures)
d) Rainwater harvesting (supplemental irrigation, drinking water, livestock)
e) Rangeland rehabilitation (improving grazing conditions, re-vegetation, control)
f) Biodiversity conservation (protected areas, ecosystem conservation, green zones)
g) Sustainable exploitation of groundwater aquifers.
h) Flood control and management,
i) Pollution prevention and control (waste management)
j) Alternative energy (reduce use of biomass-based fuels), alternative livelihoods.

Based on the above, several landscape and ecosystem restoration interventions are being implemented in Kenya. Some of these are highlighted in the following section.

2.7 On-going Restoration Initiatives in various Ecosystems

Landscapes and ecosystems restoration is a priority for the Kenyan government. This has resulted in numerous cross-sectoral programmes being undertaken towards restoration, spearheaded by multiple stakeholders such as government ministries, community, development partners, private sector and civil society actors among others. However, many of these efforts remain fragmented and with silo approach. These programmes need to be inter-phase with this strategy implementation at the budgeting, reporting and monitoring and evaluation level. Some of these interventions are summarized in the Table 1 below;

Ecosystem	Restoration Initiative
Forest ecosystem	i. Fencing: This is mainly aimed at reducing encroachment, ii. illegal grazing, charcoal burning and forest fires iii. Afforestation iv. Reclamation of degraded forests through evictions and reforestation v. Strengthening of local forest management through CFAs and PELIS schemes vi. Invasive species management vii. Promotion of alternative energy sources other than wood fuel viii. Monitoring forest and tree cover
Agroecosystem	i. Soil erosion control ii. Agroforestry iii. Soil and water management iv. Promotion of sustainable agricultural practices v. Promotion of organic and non-tillage agriculture
Rangeland ecosystem	i. Management of invasive species e.g., *Prosopis Juliflora* ii. Fencing of wildlife parks to prevent encroachment iii. Wild fires management iv. Control of overstocking and overgrazing through awareness and training v. Monitoring of habitat cover and biodiversity loss vi. Reseeding of degraded rangelands vii. Fodder management
Wetland ecosystem	i. Management of invasive species e.g. Water hyacinth ii. Prevention of water pollution iii. Restoration of water catchment areas iv. Protection of buffer cones and riparian reserves v. Awareness creation on removal of unfriendly species such as eucalyptus vi. Cleaning of rivers e.g., the Nairobi Water Commission vii. Water quality and quantity monitoring viii. Strengthening of local water resource management through WRUAs
Marine ecosystem	i. Awareness creation and prevention of pollution solid waste and sewage ii. Cleaning of the marine ecosystems iii. Planting of the mangroves iv. Training on light fishing methods v. Oil spills treatments vi. Strengthening of beach management units vii. Awareness and prevention of soil erosion upstream which leads to siltation viii. Training on sustainable marine/ocean resource utilization and conservation ix. Construction of sea walls
Water Towers ecosystem	i. Preventing encroachment through evictions ii. Management of invasive species iii. Prevention of forest fires iv. Controlled tourism activities v. Monitoring biodiversity loss

Ecosystem	Restoration Initiative
Settled ecosystem	i. Improving sanitation ii. Storm water management iii. Greening of public spaces, road side and walk ways iv. Solid waste management- safe collection and disposal v. Installation of renewable energy - solar vi. Improved water harvesting from roof catchments

2.8 Private Sector, Civil Society Organizations and Development Partners' Engagement in Landscape and Ecosystem Restoration

Private sector, which includes enterprises, companies, businesses, or individuals are consumers of natural resources such as land and its resources, fresh and marine water resources, trees and other vegetation products. The private sector brings in strong expertise across disciplines such as technology and innovation, agile and lean methodologies, strategic communications and knowledge management. While engaging in their business, private sector such as flower farms, tourism companies, tea factories, road construction companies, energy companies among others contribute to the degradation of ecosystems mainly through over-utilization of resources, abstraction of water, introduction of invasive species e.g. *Parthenium Spp* along the roads, clearing of vegetation, poor disposal of solid waste and waste water and degradation of cultural values that are key to ecosystems management.

Private sector participates in ecosystem restoration mainly through corporate social investments such as tree planting, drilling of boreholes, building schools and health projects among others. However, some of these projects and programmes are unsustainable, while at the same time create centers of degradation by concentrating people into one area leading to more degradation. While the corporate social investments have environmental impact assessments conducted before implementation, majority do not follow through to decommissioning. For instance, most of the mining project leave open quarries with no efforts of restoration. There is therefore need to enforce implementation of environmental managements plans for every corporate social investment by private sectors. Good example is Base Titanium and Bamburi Cement that have institutionalized tree growing as restoration programme in all areas they are undertaking mining activities.

Equally, some private sectors such as KEPSA and KAM play an important role in whipping other companies on environmental management, and self-regulation in sustainable waste management and partnerships and collaboration on climate change and circular economy. Afforestation and Reforestation Research and Technology. It is therefore fundamental for the private sector to participate actively in landscape restoration. They can allocate resources for environmental protection and ecosystem restoration, Corporate Social Responsibility (CSR), partnerships, collaboration, research and education.

The development partners such as Japanese International Development Agency (JICA) is supporting restoration through social forestry, training on nursery practices and producing quality seeds for dryland species in Kenya in collaboration with KEFRI and KFS. Vi-Agroforestry with support from Sida, German Development Organization is undertaking restoration activities in Kenya by boosting milk value chains and carbon trading in Narok, Bomet, Kisumu, and Trans Nzioa Counties. Some of the restoration initiatives implemented include Kenya Agriculture Carbon Project, Shrubs for Change, The Alive Project, and Livelihoods Mount Elgon. World Resources Institute in partnership with various local Non-Governmental Organization is also implementing various restoration initiatives in degraded landscapes.

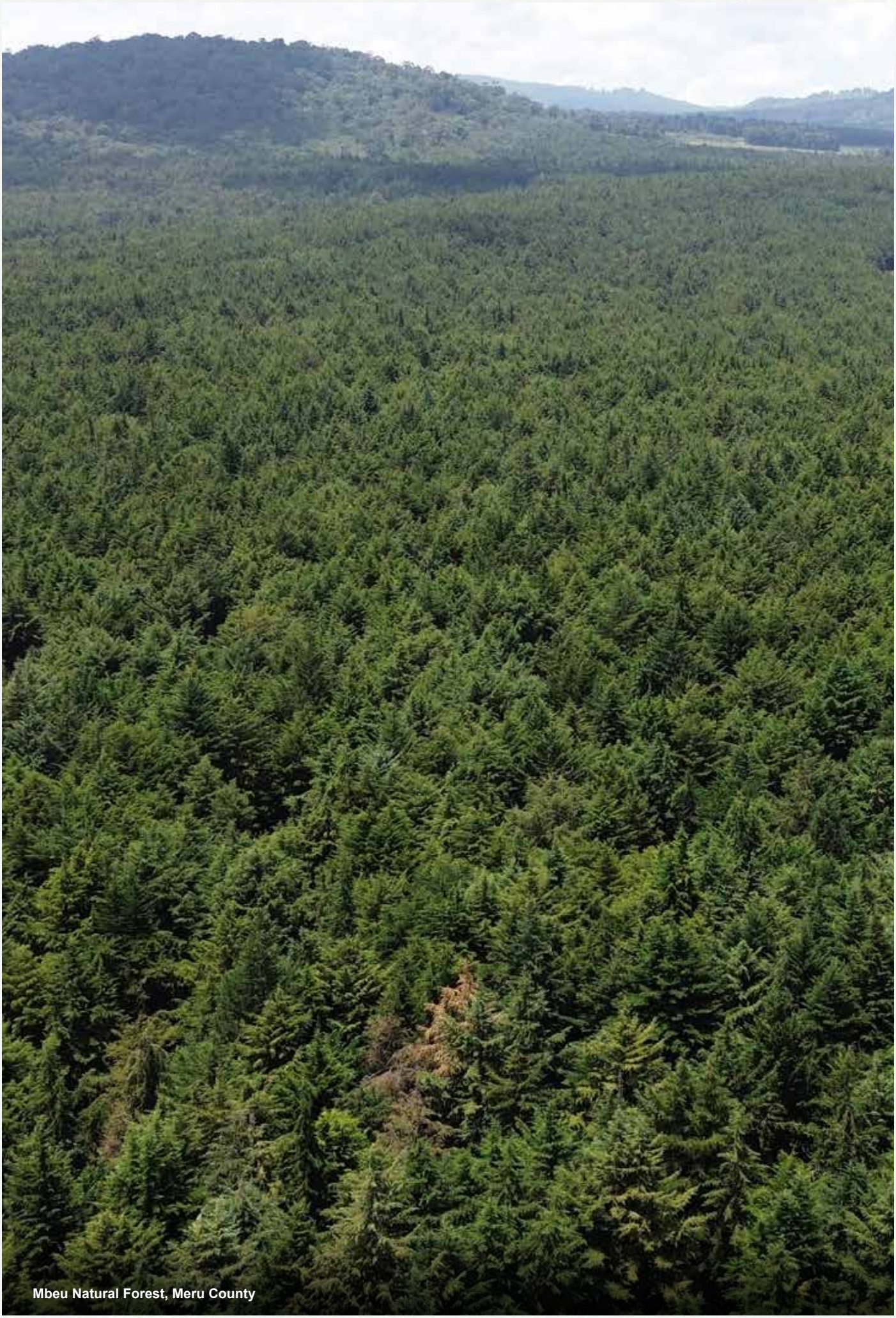
The Food and Agriculture Organization (FAO) of the United Nations- Kenya is implementing restoration projects under the Global Environment Facility (GEF) at Kirisia Forest (GEF 5 project), Mukogodo and Mt. Kulal landscapes (GEF 6), Mt. Elgon Landscape (GEF 7). Through these projects and others FAO-Kenya seeks to strengthen policy and institutional capacity while supporting community-led Forest and Landscape Restoration (FLR) and the development of alternative livelihoods. In the same breath, WWF Kenya is partnering with stakeholders including County Governments and National Alliance for Community Forest Associations (NACOFA) within the Amboseli-Loitokitok and Lake Naivasha Basin landscapes and Kaptagat Forest to carry out Forest Landscape Restoration, agroforestry and livelihoods improvement through enhancement of various value chains. The Center for International Forestry Research (CIFOR)- World Agroforestry (ICRAF), CIFOR- ICRAF are currently carrying out various FLR projects that promote on-farm forestry in Makueni, Baringo, Isiolo, Samburu, Laikipia, Homabay, Migori and Taita Taveta counties. World vision is carrying out FLR activities mainly through Farmer Managed Natural Regeneration (FMNR) and enrichment planting with ongoing projects in Elgeyo Marakwet, Baringo, Marsabit, Migori, Homabay, Tana River, West Pokot and Isiolo counties.

The Economic Recovery Strategy, the Investment Promotion Act, the Privatization Act, the Constitution of Kenya and the Vision 2030 all promote creating an enabling environment for private sector investment. Over the years, Kenya has undertaken tremendous political, structural and economic reforms to attract private sector investment. The government has also developed the Public Private Partnerships (PPP) Act in 2013, which supports private sector participation in key economic sectors, including the energy sector. The government should put in place and enforce regulations for curbing environmental degradation by the activities of the private sector.

2.9 Stakeholders' Engagement for Landscape and Ecosystem Restoration

The key stakeholders to drive implementation of landscape and ecosystem restoration include all government Ministries, Departments, Agencies (MDAs), County Governments, Private sector players, Civil Society Organizations (CSOs), Faith-based Institutions and Organizations and Development Partners among others.

Forest landscape restoration stakeholders meeting held during Miti Festival in Oloitokitok, Kajiado County



Mbeu Natural Forest, Meru County

CHAPTER 3: STRATEGIC INTERVENTIONS

3.1 Introduction

The strategic interventions of this strategy are hinged on three key approaches, namely; landscape, ecosystem and land tenure that orients the theory of change in addressing restoration through programmatic and intervention areas. These approaches are informed by the diverse nature of how degradation manifests itself in each ecological setting that are in various forms, such as soil erosion, wildfires, and flooding. This level of degradation may cut across different ecosystems, thus requiring a landscape intervention approach. For instance, soil erosion may start from a forest ecosystem, spread through a rangeland and eventually deposit the sediment load in a wetland ecosystem.

Some forms of degradation may manifest only in a given ecosystem without necessarily spreading to other ecosystems. Examples include agricultural activities encroaching on forests, invasive species in wetlands, and overgrazing in rangelands. This level of degradation requires an ecosystem intervention approach to address ecosystem-specific degradation drivers. Degradation occurring on communal and privately owned land requires the landowners' consent, consensus, participation, and contribution to restoration interventions. This calls for a land tenure intervention approach that considers land ownership and use rights.

3.2 Theory of Change

Landscapes and ecosystems degradation is a threat to national and societal livelihoods in Kenya since millions of people rely heavily on ecosystem goods and services. Degradation is a major cause of increased poverty index and decreased resilience to impacts of climate change. While several interventions are being undertaken to address the myriad threats to landscapes and ecosystems degradation, there is need for concerted effort and coordination to halt degradation and accelerate restoration. This Strategy is meant to bridge this gap and bring a coordinated effort for restoration of the seven degraded landscapes ecosystems i.e. Forests, Agro-ecosystems, Rangelands, Wetlands, Oceans/Marine, Water Towers, Settlement and Infrastructure.

Against the backdrop of increasing degradation of Kenya's landscapes and ecosystems, the Theory of Change (ToC) is grounded on the need to accelerate approaches to address the key drivers of degradation in each of the seven ecosystems. The main aim is to prevent, halt and reverse landscape and ecosystem degradation. Some of the interventions to be undertaken to achieve this goal include implementation of sustainable land management practices like growing of 15.8 billion trees, promoting sustainable agricultural practices, promoting soil and water conservation, promoting sustainable livelihood options, promoting proper land-use planning and proper solid waste disposal among others. This theory of change envisages that, with adequate capacity building, monitoring and evaluation, coordination and communication, the strategy will achieve the desired goal by 2032 and contribute to all SDGs, and Kenya's commitment to the global community on its part in this UN decade of Ecosystem Restoration (Figure 1).

Demonstration of drone technology in broadcasting tree seed balls in Kiu Wetlands, Makueni County.

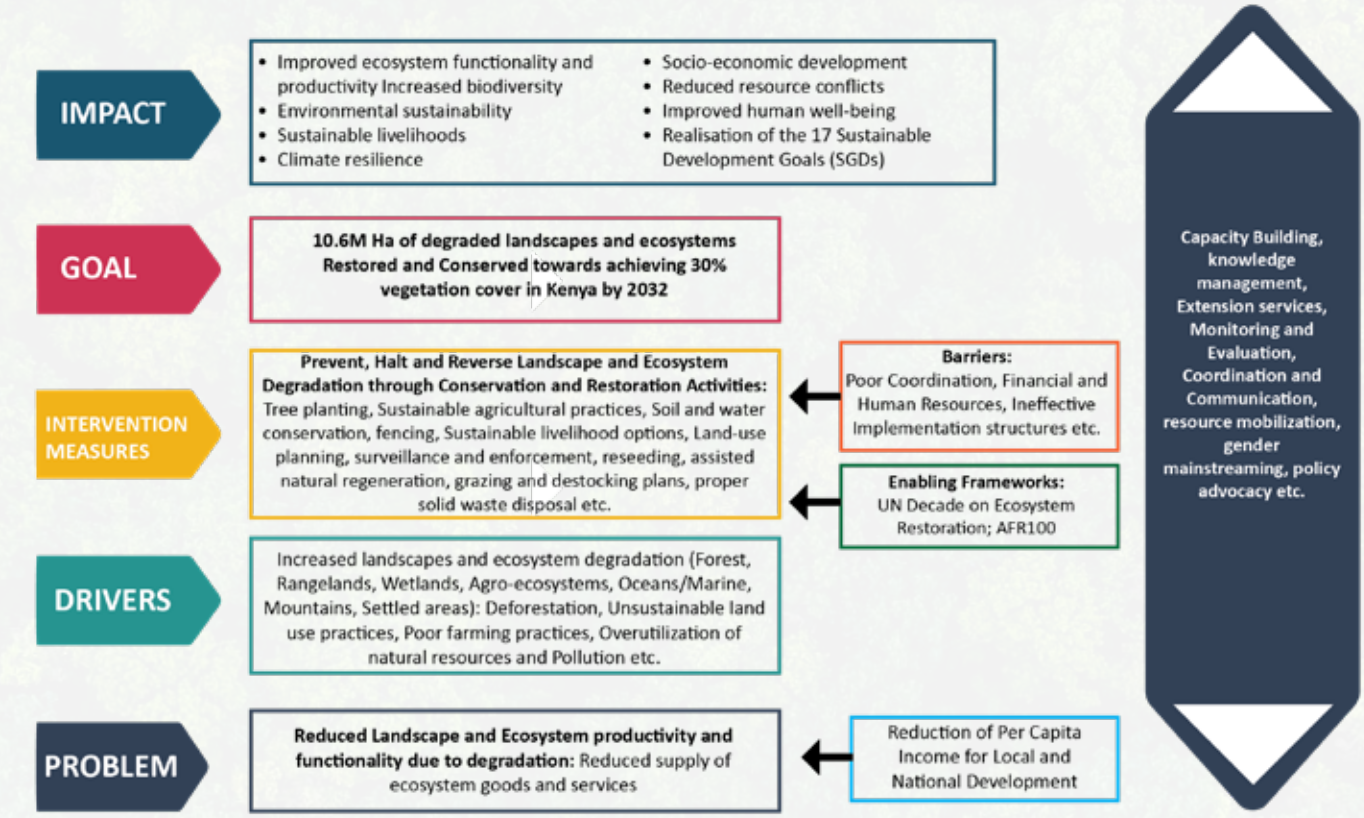


Figure 1: Theory of change for landscape and ecosystem restoration

3.3 Strategic Goal

To restore and conserve degraded landscapes and ecosystems that will contribute to; increasing tree cover to 30%, improving biodiversity conservation, environmental sustainability, better livelihoods, socio- economic development, climate resilience, and Kenya's commitments to regional and global Conventions by 2032.

3.4 Strategic Objectives

The overall objective of this strategy is to restore 10.6 million of hectares of degraded landscapes and ecosystems through tree growing and sustainable land management practices for improved ecological functionality, resilience to climate change and better livelihoods by 2032.

Specifically, the following objectives will be implemented across the seven (7) ecosystems, namely Forests, Agro-ecosystems, Rangelands, Wetlands, Oceans/Marine, Water Towers, Settlement and Infrastructure:

a) Increase national tree cover by 17.8% through targeted interventions on public, community and private lands;
b) Strengthen policy, regulatory, and institutional frameworks in selected sectors to improve landscape and ecosystem governance;
c) Promote sustainable land management practices, nature based enterprises and climate change mitigation and adaptation measures for resilient ecosystems and livelihoods;
d) Promote sustainable financing mechanisms and private sector investment for restoration of degraded landscapes and ecosystems;
e) Strengthen research, innovation, monitoring, evaluation, reporting, knowledge management and dissemination for landscape and ecosystem restoration.

3.5 Guiding Principles for Landscape and Ecosystem Restoration

Implementation of this National Landscape and Ecosystem Restoration Strategy to restore and conserve degraded landscapes and ecosystems for improved ecological functionality, resilience to climate change and better livelihoods shall be based on the following key guiding principles:

1) Increased Landscape and Ecosystem Productivity: The wise choice of landscape and ecosystem restoration interventions shall encourage putting these landscapes and ecosystems to their most

optimum productive potential as well as enhancing the productive capacity of each ecosystem and taking care of environmental concerns.

2) Poverty Reduction: Enhancing adoption of landscape and ecosystem restoration interventions shall be guided by the choice of most viable technologies, best practices and initiatives that facilitate increased productivity, poverty reduction and wealth creation for communities, while also addressing the labour burden, ergonomics, social and economic sustainability.
3) Ecosystem Sustainability: The exploitation and management of Kenya's landscapes and ecosystems shall be undertaken in a manner that upholds the maintenance and/or enhancement of essential ecosystems and ecological processes, biodiversity (natural flora and fauna as well as agro-biodiversity) and the natural resource base. Thus the technologies, practices and production processes used for sustaining and increasing crop, livestock and forestry production shall be designed to accord beneficial environmental impacts.
4) Economic Viability: The exploitation and management of Kenya's landscapes and ecosystems shall be undertaken in a manner that is economically viable and efficient (i.e. the benefits are commensurate with the costs) and which ensures that resources are utilized and managed in a way that will retain their potential to support future generations. This will include optimizing both the tangible and intangible economic benefits for the greatest possible number of people while ensuring, as far as possible, sustainability of the country's natural resource base and ensuring that 'public goods' do not reduce the incentives for private investment in SLM and other restoration interventions.
5) Improved Financing: The implementation of the Stragety shall seek and facilitate sources of sustainable funding for landscapes and ecosystems restoration interventions through innovative and viable means. This shall include (but not limited to) sourcing funding from the national and county governments, development partners, NGOs, private sector and through cost sharing by stakeholders to promote responsibility for resource management by local stakeholders.
6) Improved Livelihoods: The management and exploitation of Kenya's landscapes and ecosystems shall be undertaken in a manner that enables those, whose livelihoods are dependent on their utilization, to engage in a diverse range of livelihood activities that will meet their basic welfare needs (for cash, food, water, fuel and shelter) while ensuring that the productive potential, and ecosystem functions and services, of these landscapes and ecosystems are restored, sustained and enhanced, thereby enabling them and succeeding generations, to use natural resources for meeting future livelihood needs.
7) Social and Cultural Sustainability: The management and exploitation of Kenya's landscapes and ecosystems shall be undertaken in a manner that: (i) is compatible with the culture and values of the people affected by it; (ii) increases people's ability to control the utilization of their local resources and other factors that determine their livelihood opportunities; (iii) maintains and strengthens community identity; (iv) ensures that the costs and benefits of restoration interventions are shared equitably between and within communities and individual households; and (v) encourages public private investment partnerships for implementation of restoration interventions and other SLM practices.
8) Institutional Sustainability: The implementation of landscape and ecosystem restoration initiatives shall uphold institutional sustainability by supporting existing community-based organizations, non government organizations (NGOs), private sector and County government institutions, in the planning, implementation and monitoring of restoration activities and capacity development (skills, manpower, equipment, facilities and budget) to sustain the delivery of the services required from them.
9) Multi-Sectoral Approach: The Strategy shall be implemented through a multi sectoral coordination mechanisms that ensures all sectors that impact on or are impacted by restoration interventions are taken into consideration. These include; agriculture, land, water, forestry, health, trade, tourism, energy, mining, commerce and industry among others.
10) Participation and Inclusiveness: The implementation of the Strategy shall ensure a participatory and inclusive process and stakeholder involvement in all stages of planning, implementation and management of landscapes and ecosystem restoration interventions, pursuing a holistic approach to ensure that components, people, planners and managers and beneficiaries interact at all levels.
11) Sensitivity to Gender, Minorities and Vulnerable Groups: The implementation of the Strategy shall consider and ensure sensitivity to gender, minorities, and vulnerable groups as crucial. This principle will not only promote equity but also enhance the effectiveness and sustainability of restoration efforts. Incorporating sensitivity to gender, minorities, and vulnerable groups into the Strategy will be essential for ensuring that restoration efforts are not only effective but also just and sustainable. By prioritizing inclusive participation, equitable resource distribution, gender-sensitive approaches, protection of rights, rigorous monitoring and evaluation, and capacity building, the strategy will contribute to more resilient and harmonious ecosystems and communities.

12) Knowledge Management and Decision Support: The implementation of the Strategy shall seek to add scientific and new knowledge in its decision support systems so as to improve efficiencies, cost-effectiveness and service delivery. A knowledge depository/portal, retrieval and dissemination system will be developed. The Strategy upholds research, science, technology and innovation in guiding and improving the restoration decisions and actions.
13) International Responsiveness: Kenya has ratified several international multilateral environmental agreements (MEAs), which have a bearing on landscpaes and ecosystems restoration such as the United Nations Convention to Combat Desertification (UNCCD), Ramsar Convention on Wetlands, United Nations Framework Convention on Climate Change (UNFCCC) and the Sustainable Development Goals (SDGs). The interventions proposed in this Strategy will contribute to the fulfillment of these MEAs.

3.6 Prioritized interventions and programmatic areas for achieving 30% tree cover

The following are the prioritized intervention areas towards realization of restoring 10.6 million ha of landscape and ecosystems (Table 2).

Table 2: Prioritized intervention area for achieving 30% tree cover

Intervention areas	Estimated area (ha)	Number of tree to be grown in 10 years	Percentage
1. Rehabilitation of degraded dryland landscapes	5,190,556	7,785,834,000	49.38
2. Growing of agroforestry trees on farmlands	3,000,000	4,200,000,000	26.64
3. Establishment of commercial private forests	750,000	1,200,000,000	7.61
4. Rehabilitation of degraded water towers, wetlands and riparian areas outside forests	500,000	750,000,000	4.76
5. Greening of infrastructure (roads, railway lines, dams, and tree planting by Corporates and Ministries, Department and Agencies)	450,000	675,000,000	4.28
6. Rehabilitation of degraded natural forests in gazetted forests and water towers	350,507	525,761,175	3.33
7. Establishment of bamboo woodlots and plantations	150,000	225,000,000	1.43
8. Rehabilitation of degraded mangrove ecosystem	14,000	140,000,000	0.89
9. Growing of fruit trees and woodlots in schools, colleges, and universities and other institutions	70,000	105,000,000	0.67
10. Restocking of forest plantation in gazetted forests	54,000	86,400,000	0.55
11. Establishment of Urban forests, arboretum, green spaces, roadside planting in wards and sub counties	50,000	75,000,000	0.48
TOTAL	**10,579,063**	**15,767,995,175**	**100.00**

The implementation of the strategic objectives and these intervention areas will be undertaken and achieved through programmatic approach in line with identified ecosystems in addressing restoration of landscape and ecosystems in Kenya as illustrated in the Figure 2 below.

Figure 2: Programmatic Areas for landscape and ecosystem restoration

3.7 Strategic Actions in Prioritized Programmatic Areas for Landscape and Ecosystem Restoration

The implementation of activities in each of the strategic objective for the prioritized programmatic areas are expected to yield key outputs and outcomes that will contribute increased productivity of ecosystem for sustainable development.

3.7.1 Activities for Strategic Objective 1: Increase national tree cover by 17.8% through targeted interventions on public, community and private lands.

The key activities for implementation in this strategic objective that would result to the stated outputs and outcome is as summarized in Table 3.

Table 3: Table showing list of key activities, outputs and outcomes for implementation of Strategic Objective 1.

Description	Activities
Outcome 1: Increased forest and tree cover for better provision of ecosystem goods and services	
Programme Area 1: Forest and Freshwater Ecosystem Restoration Programme	
Output 1.1: 350,507 ha of degraded natural forests in gazetted forests and water towers rehabilitated	1.1.1. Identify and map out degraded natural forests and water towers for rehabilitation. 1.1.2. Acquire high resolution satellite images/data for degraded sites. 1.1.3. Collect and distribute 38.945 tons of seeds for propagation in tree nurseries. 1.1.4. Produce 525,761,175 seedlings for rehabilitation. 1.1.5. Develop and implement participatory ecosystem management plan for restoration. 1.1.6. Secure and protect rehabilitated gazetted forests and water towers.
Output 1.2: 54,000 ha of forest plantation in gazetted forests restocked	1.1.1. Identify and map out plantations for restocking. 1.1.2. Acquire high resolution satellite images/data for forest plantations. 1.1.3. Collect and distribute 6.40 tons of seeds for propagation in tree nurseries. 1.1.4. Produce 86,400,000 seedlings for restocking. 1.1.5. Secure and protect restocked forest plantation.
Output 1.3: 750,000 ha of commercial private forests established	1.1.1. Identify and map out areas for private forests establishment. 1.1.2. Acquire high resolution satellite images/data for suitable sites to establish commercial forests. 1.1.3. Collect and distribute 88.89 tons of seeds for propagation in tree nurseries. 1.1.4. Produce 1,200,000,000 seedlings for establishment of commercial private forests. 1.1.5. Support establishment of dryland forest plantations (Acacia senegal, Acacia seyal, Melia volkensii, Sandalwood etc) for gums and resins, wood carving among others. 1.1.6. Secure and protect established commercial private forest.
Programme area 2: Agroecosystem Restoration Programme	
Output 1.4: 3,000,000 ha of agroforestry treeson farmlands grown	1.1.1 Identify and map out cropland for agro forestry practices. 1.1.2 Acquire high resolution satellite images/data for suitable sites for agro forestry practices. 1.1.3 Collect and distribute 311.11 tons of seeds for propagation in tree nurseries. 1.1.4 Produce 4,200,000,000 seedlings for establishment of growing agro forestry on farmlands. 1.1.5 Secure and protect established agro forestry.
Output 1.5: 150,000 ha of bamboo woodlotsand plantations established	1.1.1 Identify and map out sites for establishment of bamboo woodlots and plantations. 1.1.2 Acquire high resolution satellite images/data for suitable sites for establishment of bamboo woodlots and plantations. 1.1.3 Collect and distribute 16.67 tons of seeds for propagation in tree nurseries. 1.1.4 Produce 225,000,000 seedlings for establishment of bamboo woodlots and 1.1.5 plantations in selected ecosystems. 1.1.6 Secure and protect established bamboo woodlots and plantations.

Description	Activities
Programme Area 3: Rangeland Ecosystem Restoration Programme	
Output 1.6: 5,190,556 ha of degraded drylandlandscapes rehabilitated	1.1.1 Identify and map out degraded rangelands. 1.1.2 Acquire high resolution satellite images/data for mapping rangelands. 1.1.3 Collect and distribute 576.73 tons of seeds for propagation in tree nurseries. 1.1.4 Produce 7,785,834,000 seedlings for establishment of bamboo woodlots and plantations. 1.1.5 Support removal, management and utilization of invasive species. 1.1.6 Pilot reseeding of degraded rangelands. 1.1.7 Secure and protect rehabilitated rangelands.
Programme Area 4: Marine Ecosystem Restoration Programme	
Output 1.7: 14,000 ha of degraded mangrove ecosystem rehabilitated	1.1.1 Identify and map out degraded mangrove ecosystem. 1.1.2 Acquire high resolution satellite images/data for mapping degraded mangrove ecosystem. 1.1.3 Collect and distribute 10.37 tons of seeds for propagation in tree nurseries. 1.1.4 Produce 140,000,000 seedlings for rehabilitation of mangrove ecosystem. 1.1.5 Secure and protect rehabilitated mangrove ecosystem.
Programme Area 5: Wetland Ecosystem Restoration Programme	
Output 1.8: 500,000 ha of degraded watertowers, wetlands, and riparianareas outside gazetted forests rehabilitated	1.1.1 Identify and map out degraded water towers, wetlands and riparian areas outside gazette forests. 1.1.2 Acquire high resolution satellite images/data for mapping degraded wetland ecosystem outside gazetted ones. 1.1.3 Collect and distribute 55.56 tons of seeds for propagation in tree nurseries. 1.1.4 Produce 750,000,000 seedlings for rehabilitation of wetland ecosystem outside gazette ones. 1.1.5 Secure and protect rehabilitated wetland ecosystem outside gazetted ones.
Programme Area 6: Settlement and Infrastructure Restoration Programme	
Output 1.9: 450,000 ha of infrastructure (Roads,railway lines, dams) greened by growing trees	1.1.1 Identify and map out appropriate areas for re-greening infrastructure. 1.1.2 Acquire high resolution satellite images/data for mapping infrastructure. 1.1.3 Collect and distribute 50.00 tons of seeds for propagation in tree nurseries. 1.1.4 Produce 675,000,000 seedlings for greening infrastructure. 1.1.5 Secure and protect greened infrastructure.
Output 1.10: 70,000 ha of fruit trees and woodlots in schools, colleges, universities and other institutionsgrown	1.1.1 Identify and map out appropriate areas for growing fruit trees and woodlots. 1.1.2 Acquire high resolution satellite images/data for mapping institutions to grow fruit trees and woodlots. 1.1.3 Collect and distribute 7.78 tons of seeds for propagation in tree nurseries. 1.1.4 Produce 105,000,000 seedlings for fruit trees and woodlots. 1.1.5 Secure and protect established woodlots and fruit trees.

Description	Activities
Output 1.11: 50,000 ha of urban forests, arboretum, green spaces & road-side plantings in wards &sub-counties established	1.1.1 Identify and map out appropriate areas for growing establishing urban forests,arboretum, green spaces. 1.1.2 Acquire high resolution satellite images/data for mapping targeted areas for greening. 1.1.3 Collect and distribute 5.56 tons of seeds for propagation in tree nurseries. 1.1.4 Produce 75,000,000 seedlings for greening targeted areas. 1.1.5 Secure and protect greened sites.

The realization of this objective would be achieved through the implementation of various activities in each of the ecosystems as summarized in Table 4

Table 4: Table showing list of key activities, outputs and outcomes for implementation of Strategic Objective 2.

Description	Activities
Outcome 2: Improved governance for landscape and ecosystem restoration	
Output 2.1: Ecosystem restoration and management plansdeveloped	1.1.1. Develop / Review and implement ecosystem restoration and management plans. 1.1.2. Conduct strategic environmental assessment and environmental impact assessments for ecosystem-wide projects and programmes (EMPs) 1.1.3. Gazettement of all ecosystem restoration and management plans 1.1.4. Establish governance committees to steer implementation of the restoration initiatives and management plans
Output 2.2: Ecosystem restoration and management regulations/ laws/ policy enforced	1.1.1 Identify and enforce ecosystem based restoration regulations and policies. 1.1.2 Enforce pollution control guidelines, policies, laws and regulations.

3.7.3 Activities for Strategic Objectives 3: Promote sustainable land management practices, nature based enterprises and climate change mitigation and adaptation measures for resilient ecosystems and livelihoods

The realization of this objective would be achieved through the implementation of various activities in each of the ecosystems as summarized in Table 5

Table 5: Table showing list of key activities, outputs and outcomes for implementation of Strategic Objective 3.

Description	Activities
Outcome 3: Improved community resilient livelihoods by promoting sustainable land management practices and nature-based enterprises	
Output 3.1: Sustainable nature-based enterprises identified and their value chains promoted across all ecosystems	1.1.1. Identify sustainable nature-based enterprises for communities living adjacent to selected ecosystems. 1.1.2. Develop appropriate value chain for the identified products from nature-based enterprises. 1.1.3. Support agro forestry value chain green enterprises such as fruit trees, fodder etc. 1.1.4. Support eco-tourism ventures such as establishment of nature trails, bird watching, etc in forest and fresh water ecosystems.

Description	Activities
	1.1.5. Support bee keeping activities in selected ecosystems. 1.1.6. Develop and support carbon credit schemes for restoration of selected ecosystems 1.1.7. Promote solid waste recycling enterprises
Output 3.2: Market and market access for nature-based enterprise chain products identified and promoted.	1.1.1. Undertake market analysis of the identified nature-based enterprises across all selected ecosystems. 1.1.2. Organize communities into nature-based enterprise groups and associations to link them to markets. 1.1.3. Identify barriers in nature-based enterprise value chain products and mechanisms of addressing them. 1.1.4. Identify and upscale best nature-based enterprise value chain products to promising ecosystems.
Output 3.3: SLM interventions identified, promoted and upscaled across all the ecosystems and landscapes for improved community resilience and climate change mitigation.	1.1.1. Identify and implement soil and water conservation measures including soil erosion control measures like terracing, contour plowing, construction of check dams; promote water harvesting techniques, like rainwater catchment and the creation of ponds and reservoirs; Introduce and manage cover crops and mulching to improve soil health and moisture retention, etc. 1.1.2. Promote implementation of sustainable agricultural practices such as encouraging crop rotation, inter-cropping, and the use of organic fertilizers to maintain soil fertility; promoting conservation agriculture practices such as minimum tillage and residue retention etc. 1.1.3. Integrate land use conflict management mechanisms in ecosystem based restoration programmes. 1.1.4. Rehabilitate exhausted mines and quarries. 1.1.5. Promote use of renewable energy e.g. biogas
Output 3.4: Emissions from degraded landscapesand ecosystems reduced	1.1.1. Quantify emissions reductions from rehabilitated and restored ecosystems. 1.1.2. Upscale best ecosystem based practices for climate change mitigation and adaptation 1.1.3. Link emission reduction practices to development of carbon offset projects.
Output 3.5: Ecosystem based climate change mitigation and adaptation restoration practices identified and promoted	1.1.1. Identify ecosystem based restoration practices. 1.1.2. Demonstrate successful ecosystem based mitigation and adaptation practices across landscapes. 1.1.3. Promote best ecosystem based mitigation and adaptation practices.
Output 3.6: Pollution preventedand controlled	1.1.1. Map out pollution sources from selected ecosystems. 1.1.2. Establish appropriate solid and liquid waste water management structures. 1.1.3. Create awareness on forms of pollution and control measures.

3.7.4 Activities for Strategic Objectives 4: Promote sustainable financing mechanisms and private sector investment for restoration of degraded landscapes and ecosystems

The realization of this objective would be achieved through the implementation of various activities in each of the ecosystems as summarized in Table 6

Table 6: Table showing list of key activities, outputs and outcomes for implementation of Strategic Objective 4.

Description	Activities
Outcome 4: Improved sustainable financing mechanisms and private sector investment in ecosystem restoration	
Output 4.1: Financial resource mobilization initiatives for restoration of ecosystems identified and implemented.	1.1.1. Conduct capacity needs assessment on resource mobilization at national, county and non-government actors. 1.1.2. Enhance capacity for resource mobilization and proposal development 1.1.3. Support stakeholders to develop a bankable investment projects and business plans for restoration.
	1.1.4. Promote community-based innovative financing mechanisms to support ecosystem restoration (e.g. Carbon credit schemes, payment for ecosystem services (PES) schemes.). 1.1.5. Support development of a public-private partnership (PPP) framework or platform to finance ecosystem restoration. 1.1.6. Mobilize additional budgetary allocations by national and county governments towards ecosystem restoration. 1.1.7. Promote linkages to optimize bilateral and multilateral funding opportunities for ecosystem restoration
Output 4.2: Restoration fund schemes such as Forest Conservation Fund, NETFUND etc strengthened	1.1.1. Strengthen existing governance structures for resources mobilization and disbursement. 1.1.2. Advocate and champion the use of existing funding scheme 1.1.3. Develop and strengthen fund structure and governance procedures.

3.7.5 Activities for Strategic Objectives 5: Strengthen research, innovation, monitoring, evaluation, reporting, knowledge management and dissemination for landscape and ecosystem restoration

The realization of this objective would be achieved through the implementation of various activities in each of the ecosystems as summarized in Table 7

Table 7: Table showing list of key activities, outputs and outcomes for implementation of Strategic Objective 5.

Description	Activities
Outcome 5: Improved research, innovation, monitoring, evaluation, reporting, knowledge management and dissemination for landscape and ecosystem restoration	
Output 5.1: Research, technologies and innovations strengthened	1.1.1. Identify and document 15B and Landscapes and ecosystem restoration areas. 1.1.2. Implement identifiable priority research areas such as control of invasive species. 1.1.3. Support new and emerging research and innovation for 15B and and Landscapes and ecosystem restoration. 1.1.4. Support partnerships and networks on 15B and Landscapes and ecosystem restoration. 1.1.5. Enhance north-south and south-south cooperation on 15B and and Landscapes and ecosystem restoration. 1.1.6. Strengthen research and development for tree growing, landscape and ecosystem restoration

Description	Activities
Output 5.2: Integrated monitoring, evaluation and knowledge management system developed	1.1.1. Develop a national monitoring, evaluation, reporting and learning framework for 15B and ecosystem restoration. 1.1.2. Improve efficiency and robustness of Jaza Miti App. 1.1.3. Develop a communication and digitization strategy to facilitate information and knowledge sharing across all stakeholders. 1.1.4. Integrate 15B and ecosystem restoration knowledge and information into a central repository portal. 1.1.5. Evaluate, select and implement technologies that support digitization, communication and knowledge management.
Output 5.3: Capacity building to stakeholders in the 15 Billion Tree Growing Value chain towards ecosystem restoration supported and strengthened	1.1.1. Undertake capacity needs assessment among stakeholders engaged in 15B for landscape and ecosystem restoration. 1.1.2. Develop training modules and programmes 1.1.3. Undertake trainers of trainers (ToTs) to champion 15B and ecosystem restoration. 1.1.4. Strengthen traditional institutions in management ecosystems restored.
Output 5.4: Institutional capacity for implementation of the strategy strengthened	1.1.1. Recruitment of the Green Army to support 15B Tree Growing Initiative and ecosystem restoration. 1.1.2. Construct and equip additional seed centres at KEFRI and KALRO. 1.1.3. Build capacity in seed collection, processing and testing. 1.1.4. Establish water management structures for nursery establishment. 1.1.5. Establish and support existing environmental conservation clubs. 1.1.6. Operationalise and strengthen the 15B Tree Growing Secretariat.

Innovative solar-powered model tree nursery in Loitokitok, Kajiado County.

Olympic Champion Vivian Cheruiyot participating in sub-two minutes tree growing challenge at the 7th Edition of Annual Kaptagat Tree Planting Event in Elgeyo-Marakwet County.

CHAPTER 4: COORDINATION AND IMPLEMENTATION OF THE STRATEGY

4.1 Introduction

The coordination and implementation of this strategy is based on the principle of "everyone, everywhere, every time". It has adopted a whole of government and a whole of society approach that calls for the participation and contribution of all Kenyans, from individuals to institutions, from public to private sectors, from urban to rural areas, and from young to old. This is key to ensuring effective coordination and implementation of the strategic interventions so as to realize the set targets and objectives of this strategy. It is in this regard that the coordination of this strategy is based on the following structure in line with BETA.

a) The National Governance Committee
b) 15 Billion Inter-Governmental Committee
c) 15 Billion Inter-Ministerial Committee
d) County Co-ordination Committee
e) Sub-County committees
f) Ward committees
g) 15 Billion Secretariat
h) Technical Sub Committee
i) Communication and Knowledge Management Sub-Committee
j) Information Communication Technology Sub-Committee

4.2 Composition and Terms of Reference for Committees and Secretariat

4.2.1 Inter-Governmental Committee

This Committee will consist of fifteen (15) Cabinet Secretaries drawn from the following ministries and Chair Council of Governors as well as Chair of Environment and Climate Change Committee:

a) Ministry of Environment, Climate Change and Forestry;
b) Ministry of Agriculture and Livestock Development;
c) Ministry of Education;
d) Ministry of Tourism and Wildlife;
e) Ministry of Roads and Transport;
f) Ministry of Defence;
g) Ministry of East African Community (EAC), The ASALs and Regional Development;
h) Ministry of Mining, Blue Economy and Maritime Affairs;
i) Ministry of Interior and National Administration;
j) Ministry of Information, Communication and the Digital Economy;
k) Ministry of Energy and Petroleum;
l) Ministry of Water, Sanitation and Irrigation;
m) Ministry of Cooperative and Micro, Small and Medium Enterprises (MSME) Development;
n) Ministry of Lands, Public Works, Housing and Urban Development; and
o) Ministry of Public Service, Performance and Delivery Management.

This Committee will be Chaired by the **Cabinet Secretary, Ministry of Environment, Climate Change and Forestry** and **Co-Chaired** by the Cabinet Secretary Ministry of Public Service, Performance and Delivery Management. The Committee will be at liberty to co-opt members from high level strategic partners to support in resource mobilization. **The Principal Secretary, State Department for Forestry** will be the **Secretary** to this Inter-Ministerial Committee.

The terms of reference for this Committee are as follows:

i. Report to the Cabinet on the progress and achievement of the 15 Billion Tree Growing Initiative towards landscape and ecosystem restoration;
ii. Provide policy and political leadership in regard to this strategy;
iii. Initiate and lead fundraising and resource mobilization to support implementation of 11 intervention areas and availability of seedlings;
iv. Approve and sign high level correspondences in regard to this strategy;
v. Convene high level meetings;
vi. Appraise the progress and achievements of the 15 Billion Tree Growing Initiative towards landscape and ecosystem restoration as presented by the Planning and Steering Committee;
vii. Promote public private partnership initiatives towards implementation of this strategy;
viii. Profile 15 Billion Tree Growing Initiative on landscape and ecosystem
ix. restoration at international fora;
x. Meet twice a quarter; and
xi. Any other duties assigned by the Cabinet and Presidency.

4.2.2 Inter-Ministerial Committee

This Committee will consist of Principal Secretaries from the following State Departments, Chief Executive Officer of COG and three co-opted members from the non-government actors.

i. State Department for Environment and Climate Change;
ii. State Department for Basic Education;
iii. State Department for Technical, Vocational Education and Training (TVET);
iv. State Department for Higher Education and Research;
v. State Department for Internal Security and National Administration;
vi. State Department for Correctional Services;
vii. Kenya Defence Forces;
viii. State Department for the ASALs and Regional Development;
ix. State Department for Tourism and Wildlife;
x. State Department of Public Service;
xi. State Department for Performance and Delivery Management;
xii. State Department for Crop Development;
xiii. State Department for Water and Sanitation;
xiv. State Department for Irrigation;
xv. State Department for Energy; State
xvi. Department for Economic Planning;
xvii. State Department for Roads;
xviii. State Department for Transport;
xix. State Department for Lands and Physical Planning;
xx. State Department for Housing and Urban Development;
xxi. and State Department for ICT and the Digital Economy.

This Committee will be Chaired by the **Principal Secretary, State Department for Forestry Co-Chaired** by the **Principal Secretaries** from the following State Departments:

i. State Department for Environment and Climate Change; and
ii. State Department for Performance and Delivery Management

The terms of reference for this Committee are as follows:

i. Report to the Inter-Ministerial Committee on the progress, achievement, political guidance and approval of the 15 Billion Tree Growing Initiative towards landscape and ecosystem restoration;

ii. Follow up on initiated resource mobilization and fundraising initiatives by the 15 Inter-Ministerial Committee;
iii. Map out and develop a fundraising strategy for execution;
iv. Provide resources to the 15 Billion Secretariat to undertake assignments on its behalf;
v. Give the necessary approvals, decisions and technical guidance as presented by the 15 Billion Secretariat;
vi. Identify and negotiate potential external funding from Governments, foundations and other sources;
vii. Administer the budget and prepare regular budget reports of the 15 Billion Tree Growing Initiative and present to the Inter-Ministerial Committee;
viii. Meet twice a quarter; and
ix. Undertake any other duties from time to time as directed by the Inter-Ministerial Committee.

4.2.3 Secretariat

This is the Technical and Operational arm of this strategy that is mandated to coordinate all tree growing and ecosystem restoration activities across all intervention areas. It will also ensure availability of seedlings for planting as per the set targets.

The Secretariat will be headed by the Executive Secretary/Chief Executive Officer who will be reporting to the Principal Secretary, State Department for Forestry. The membership of the Secretariat will consist of maximum of 15 staff deployed from Ministries, Departments and Agencies.

4.2.4 Technical Sub-Committee

This Committee will draw members from state and non-state actors consisting of two members from 11 intervention areas whose tasks are as follows:

i. Map out all stakeholders from state and non-state actors implementing various tree growing programmes and projects across Kenya's landscape and ecosystems and update the 15B Secretariat for action;
ii. Design and recommend mechanisms to the 15 Billion Secretariat on the implementation of tree growing and ecosystem restoration initiative;
iii. Explore and recommend pathways of engaging various stakeholders from grass root level to the national level in meeting the tree growing and ecosystem restoration targets; and
iv. Participate in the tree growing and ecosystem restoration campaigns.

This Committee will select their Chair and Secretarial services will be provided the by the Secretariat. This sub Committee will meet monthly.

4.2.5 Communication and Knowledge Management Sub-Committee

This Committee will draw members from state and non-state actors consisting of 15 members whose tasks are as follows:

i. Design and recommend to the 15 Billion Tree Growing Secretariat robust ways on promoting tree growing and ecosystem restoration campaigns;
ii. Ensure decisions on communication and knowledge management are implemented as appropriate;
iii. Engage different partners on tree growing campaigns; and

4.2.6 ICT Sub-Committee

This Committee will draw members from state and non-state actors consisting of 15 members whose tasks are as follows:

i. Design and recommend to the Secretariat robust and ICT based innovative ways on promoting tree growing and ecosystem restoration campaigns;

ii. Ensure decisions on ICT are implemented as appropriate;

iii. Engage different partners on tree growing and ecosystem restoration campaigns; and

iv. Participate in the tree growing and ecosystem restoration campaigns.

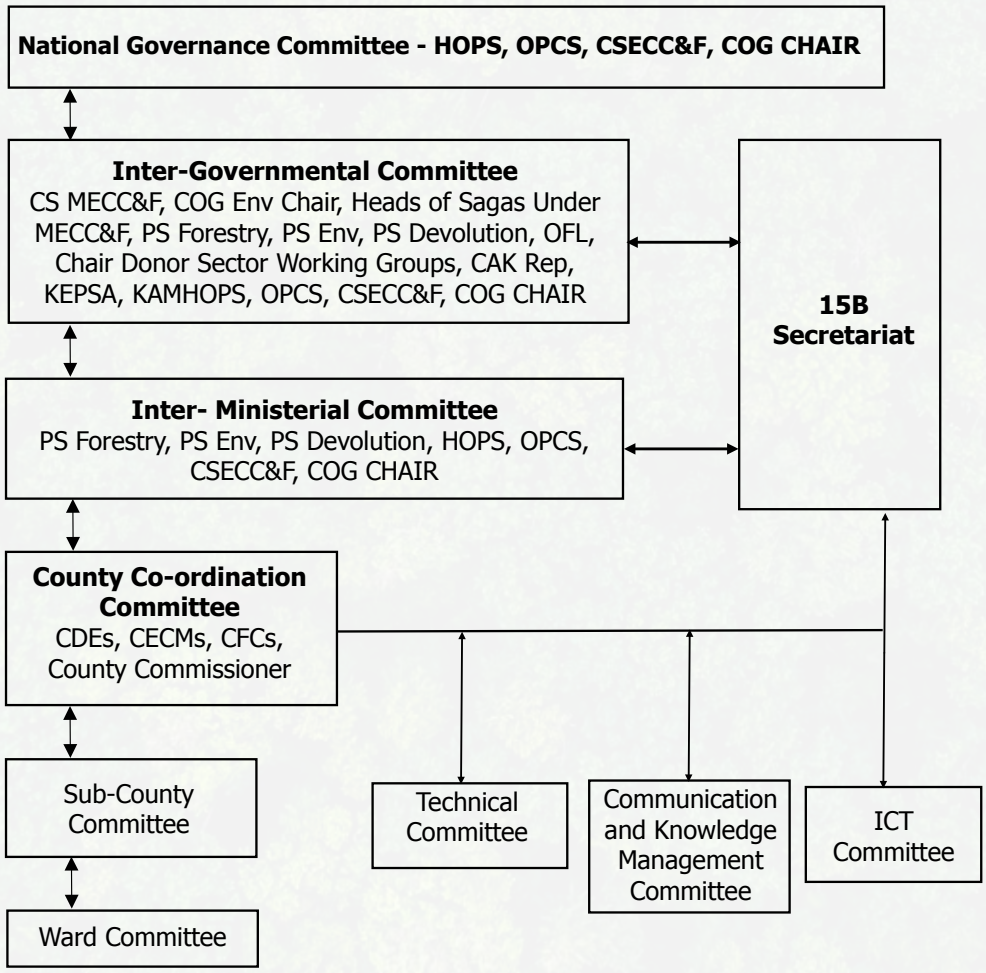
This Committee will select their Chair and Secretarial services will be provided the by the Secretariat. This Sub-Committee will meet monthly.

4.2.7 County Environment Committees

This comprises the County Environment Committees as envisaged under the Environment Management and Coordination Act, chaired by the County Commissioners and County Forest Conservators being the Secretaries. The 47 County Environment Committee Members (CECMs), County Forest Conservators and NEMA County Directors of Environment (CDEs) are the focal point at the County level. They will roll out the ecosystem restoration initiatives from time to time as scheduled by the Inter-Governmental Environment Governance and Coordination Committee. This committee will cascade its work plan to the sub- county and ward levels. Chiefs and Assistant Chiefs will assist the CECs to mobilize for community restoration interventions.

4.4 Seedling Production and Tree Growing Targets towards Landscape and Ecosystem Restoration

4.3 Coordination framework for National Landscape and Ecosystem Restoration



Abbreviations:
CDEs-County Director of Environment, **CECMs**-County Environment Committee Members, **CFCs**-County Forest Conservator, **CSECC&F**-Cabinet Secretary, Ministry of Environment, Climate Change and Forestry, **COG**-Council of Governors, **CAK**-Conservation Alliance of Kenya, **HOPS**-Head of Public Service, **ICT**-Information Communication and Technology, **KEPSA**-Kenya Private Sector Alliance, **KAM**-Kenya Association of Manufacturers, **OPCS**-Office of the Prime Cabinet Secretary, **OFL**-Office of the First Lady, **PS**-Principal Secretary

The tree growing 10-year targets are distributed to public institutions under the national government (63.4%), County governments (22.2%) and non-state actors (14.4%). The national government institutions consist of various Ministries, Departments and Agencies (MDAs) whereas the County Governments consists of all 47 devolved counties across the country. The non-state actors include private sector, Civil Society Organizations, Faith-based institutions and organizations, Foundations, Community-Based Organizations, Community Forest Associations, Trade Unions, Umbrella of Professional Bodies, individuals, media, philanthropic organizations, development, non-profit making international non-government organizations among others.

4.4.1 Seedling Production and Tree Growing Targets by National Government Institutions

The Strategy Coordination Framework will greatly guide in achieving the seedling production targets (Table 8) and tree growing targets (Table 9) by the national government institutions, followed by non-state actors and County Governments, especially in the 15 Billion Tree Growing Initiative.

Table 8: Seedling production targets by selected institutions

Institution	Yearly target of seedling production	10-year target of seedling production	Percentage based on 10 year target
Kenya Forest Service (KFS)	1,000,000,000	10,000,000,000	66.67
Kenya Prisons Services (KPS)	120,000,000	1,200,000,000	8.00
National Youth Service (NYS)	100,000,000	1,000,000,000	6.67
Ministry of Education	280,000,000	2,800,000,000	18.66
Grand Total	**1,500,000,000**	**15,000,000,000**	**100**

Table 9: Tree growing targets by national government institutions

Ministries	State Departments	Annual Target	10 Year Target
Executive Office of the President		70,000,000	700,000,000
Office of the Prime Cabinet Secretary and Ministry of Foreign and Diaspora Affairs	Office of Prime Cabinet Secretary	10,000,000	100,000,000
	State Department for Foreign Affairs	5,000,000	50,000,000
	State Department for Diaspora Services	5,000,000	50,000,000
State Law Office		5,000,000	50,000,000
Ministry of Defence		50,000,000	500,000,000
Ministry of Interior & National Administration	State Department for Internal Security and National Administration	100,000,000	1,000,000,000
	State Department for Correctional Services	20,000,000	200,000,000
	State Department for Immigration and Citizenry Services	5,000,000	50,000,000
The National Treasury and Economic Planning	The National Treasury	10,000,000	100,000,000
	State Department for Economic Planning	5,000,000	50,000,000
Ministry of Environment, Climate Change and Forestry	State Department for Environment and Climate Change	10,000,000	100,000,000
	State Department for Forestry	50,000,000	500,000,000
Ministry of Education	State Department for Basic Education	20,000,000	200,000,000
	State Department for Technical Vocational and Educational Training (TVET)	5,000,000	50,000,000
	State Department for Higher Education and Research	10,000,000	100,000,000
Ministry of Water, Sanitation and Irrigation	State Department for Irrigation	20,000,000	200,000,000
	State Department for Water and Sanitation	50,000,000	500,000,000
Ministry of East African Community (EAC), the ASALs, and the Regional Development	State Department for East African Community Affairs	5,000,000	50,000,000
	State Department for the ASALs and Regional Development	20,000,000	200,000,000
Ministry of Energy and Petroleum	State Department for Energy	100,000,000	1,000,000,000
	State Department for Petroleum	5,000,000	50,000,000
Ministry of Investments, Trade and Industry	State Department for Trade	5,000,000	50,000,000
	State Department of Industry	5,000,000	50,000,000
	State Department for Investments Promotion	5,000,000	50,000,000
Ministry of Agriculture and Livestock Development	State Department for Agriculture	50,000,000	500,000,000
	State Department for Livestock Development	50,000,000	500,000,000
Ministry of Tourism and Wildlife	State Department for Tourism	50,000,000	500,000,000
	State Department for Wildlife	10,000,000	100,000,000
Ministry of Information, Communications and The Digital Economy	State Department for ICT and the Digital Economy	5,000,000	50,000,000
	State Department for Broadcasting and Telecommunications	5,000,000	50,000,000
Ministry of Labour and Social Protection	State Department for Labour and Skills Development	5,000,000	50,000,000
	Social Protection and Senior Citizen Affairs	5,000,000	50,000,000

Ministries	State Departments	Annual Target	10 Year Target
Ministry of Mining, Blue Economy and Maritime Affairs	State Department for blue Economy and Fisheries	20,000,000	200,000,000
	State Department for Mining	20,000,000	200,000,000
	State Department for Shipping and Maritime Affairs	50,000,000	500,000,000
Ministry of Public Service and Human Capital Development	State Department for Public Service	10,000,000	100,000,000
Ministry of Roads and Transport	State Department for Roads	20,000,000	200,000,000
	State Department for Transport	10,000,000	100,000,000
Ministry of Health	State Department for Medical Services	5,000,000	50,000,000
	State Department for Public Health and Professional Standards	5,000,000	50,000,000
Ministry of Cooperative and Micro, Small and Medium Enterprise	State Department for Cooperatives	10,000,000	100,000,000
	State Department for Micro Small and Medium Enterprises [MSME]	5,000,000	50,000,000
Ministry of Youth Affairs, Creative Economy and Sports	State Department for Youth Affairs and Creative Economy	5,000,000	50,000,000
	State Department for Sports	5,000,000	50,000,000
Ministry of Lands, Housing, Public Works & Urban Development	State Department for Lands and Physical Planning	10,000,000	100,000,000
	State Department for Housing and Urban Development	20,000,000	200,000,000
	State Department for Public Works	20,000,000	200,000,000
Ministry of Gender, Culture, the Arts and Heritage	State Department for Gender and Affirmative Action	5,000,000	50,000,000
	State Department for Culture, the Arts and Heritage	5,000,000	50,000,000
County Governments		350,000,000	3,500,000,000
Non-State Actors		226,799,517	2,267,995,175
Grand Total		**1,576,799,517**	**15,767,995,175**

4.4.2 Tree Growing and Seedling Production targets by County Governments

The set tree growing targets and seedling production are distributed across counties depending on the available sites for the 15 Billion Tree Growing Initiative. The allocation is also dependent on the status of tree cover (Table 10)

Table 10: Tree Growing and Seedling Production targets by County

No.	County	Current 12.13% Tree Cover		Target to achieve 30%Tree cover 2032		Tree growing targets at the County		County government seedlings propagation targets		County government tree growing targets	
		Area (Ha)	(%)	Area (Ha)	(%)	Cumulative Trees grown in 10 Years	Annual Trees grown	County 10-year seedlings propagation target	County annual seedlings propagationtarget	County tree growing target (10 yrs)	County annual treegrowing target
1	Mombasa	5,130.93	23.75	5,000	23.14	7,452,454	745,245	1,199,537	119,954	1,654,211	165,421
2	Kwale	115,108.09	13.99	200,000	24.3	298,098,157	29,809,816	47,981,476	4,798,148	66,168,434	6,616,843
3	Kilifi	347,015.57	27.75	200,000	15.99	298,098,157	29,809,816	47,981,476	4,798,148	66,168,434	6,616,843
4	Tana River	407,195.78	10.4	467,407	11.94	696,666,469	69,666,647	112,134,389	11,213,439	154,637,946	15,463,795
5	Lamu	270,498.95	44.06	100,000	16.29	149,049,078	14,904,908	23,990,738	2,399,074	33,084,217	3,308,422
6	TaitaTaveta	117,556.69	6.87	395,791	23.12	589,923,287	58,992,329	94,953,182	9,495,318	130,944,353	13,094,435
7	Garissa	552,300.21	12.67	550,000	12.62	819,769,932	81,976,993	131,949,060	13,194,906	181,963,194	18,196,319
8	Wajir	251,845.41	4.45	945,989	16.7	1,409,987,611	140,998,761	226,949,743	22,694,974	312,973,054	31,297,305
9	Mandera	93,847.63	3.61	486,050	18.7	724,452,408	72,445,241	116,606,983	11,660,698	160,805,837	16,080,584
10	Marsabit	156,361.49	2.06	1,373,218	18.06	2,046,768,218	204,676,822	329,445,134	32,944,513	454,318,423	45,431,842
11	Isiolo	170,057.58	6.7	391,394	15.42	583,369,554	58,336,955	93,898,309	9,389,831	129,489,640	12,948,964
12	Meru	209,069.50	29.63	250,000	35.43	372,622,696	37,262,270	59,976,845	5,997,685	82,710,543	8,271,054
13	TharakaNithi	67,815.31	26.98	90,000	35.8	134,144,171	13,414,417	21,591,664	2,159,166	29,775,795	2,977,580
14	Embu	82,812.90	29.28	100,000	35.36	149,049,078	14,904,908	23,990,738	2,399,074	33,084,217	3,308,422
15	Kitui	610,503.05	20.06	302,512	9.94	450,892,061	45,089,206	72,574,862	7,257,486	100,083,727	10,008,373
16	Machakos	36,261.03	6.03	200,000	33.24	298,098,157	29,809,816	47,981,476	4,798,148	66,168,434	6,616,843
17	Makueni	101,915.00	12.47	230,000	28.14	342,812,880	34,281,288	55,178,698	5,517,870	76,093,699	7,609,370
18	Nyandarua	90,130.52	27.56	120,000	36.69	178,858,894	17,885,889	28,788,886	2,878,889	39,701,060	3,970,106
19	Nyeri	150,683.72	45.17	70,000	20.98	104,334,355	10,433,435	16,793,517	1,679,352	23,158,952	2,315,895
20	Kirinyaga	44,836.05	30.39	50,000	33.89	74,524,539	7,452,454	11,995,369	1,199,537	16,542,109	1,654,211
21	Muranga	70,237.19	27.8	90,000	35.62	134,144,171	13,414,417	21,591,664	2,159,166	29,775,795	2,977,580
22	Kiambu	50,700.03	19.74	110,000	42.82	163,953,986	16,395,399	26,389,812	2,638,981	36,392,639	3,639,264
23	Turkana	767,208.24	10.87	800,202	11.34	1,192,693,418	119,269,342	191,974,366	19,197,437	264,740,566	26,474,057
24	WestPokot	183,266.29	20.12	100,000	10.98	149,049,078	14,904,908	23,990,738	2,399,074	33,084,217	3,308,422
25	Samburu	537,576.36	25.57	170,000	8.09	253,383,433	25,338,343	40,784,255	4,078,425	56,243,169	5,624,317
26	Trans Nzoia	37,831.22	15.16	80,000	32.05	119,239,263	11,923,926	19,192,590	1,919,259	26,467,374	2,646,737
27	Uasin Gishu	27,384.11	8.04	100,000	29.35	149,049,078	14,904,908	23,990,738	2,399,074	33,084,217	3,308,422
28	Elgeyo Marakwet	90,393.01	29.95	100,000	33.13	149,049,078	14,904,908	23,990,738	2,399,074	33,084,217	3,308,422
29	Nandi	74,471.41	26.16	115,000	40.4	171,406,440	17,140,644	27,589,349	2,758,935	38,046,850	3,804,685
30	Baringo	170,721.97	15.65	230,000	21.08	342,812,880	34,281,288	55,178,698	5,517,870	76,093,699	7,609,370

No.	County	Current 12.13% Tree Cover		Target to achieve 30%Tree cover 2032		Tree growing targets at the County		County government seedlings propagation targets		County government tree growing targets	
		Area (Ha)	(%)	Area (Ha)	(%)	Cumulative Trees grown in 10 Years	Annual Trees grown	County 10-year seedlings propagation target	County annual seedlings propagationtarget	County tree growing target (10 yrs)	County annual treegrowing target
31	Laikipia	106,891.22	11.2	250,000	26.19	372,622,696	37,262,270	59,976,845	5,997,685	82,710,543	8,271,054
32	Nakuru	115,815.13	15.46	200,000	26.71	298,098,157	29,809,816	47,981,476	4,798,148	66,168,434	6,616,843
33	Narok	360,442.47	20.09	300,000	16.72	447,147,235	44,714,724	71,972,214	7,197,221	99,252,651	3,308,422
34	Kajiado	239,575.29	10.94	418,000	19.09	623,025,148	62,302,515	100,281,285	10,028,129	138,292,027	13,829,203
35	Kericho	60,796.89	23.23	110,000	42.04	163,953,986	16,395,399	26,389,812	2,638,981	36,392,639	3,639,264
36	Bomet	63,059.49	26.78	90,000	38.22	134,144,171	13,414,417	21,591,664	2,159,166	29,775,795	2,977,580
37	Kakamega	55,044.96	18.21	140,000	46.31	208,668,710	20,866,871	33,587,033	3,358,703	46,317,904	4,631,790
38	Vihiga	20,224.53	35.92	15,872	28.19	23,656,474	2,365,647	3,807,810	380,781	5,251,127	525,113
39	Bungoma	60,766.01	20.04	130,000	42.87	193,763,802	19,376,380	31,187,960	3,118,796	43,009,482	4,300,948
40	Busia	15,342.71	8.39	50,000	27.33	74,524,539	7,452,454	11,995,369	1,199,537	16,542,109	1,654,211
41	Siaya	18,676.37	5.27	100,000	28.23	149,049,078	14,904,908	23,990,738	2,399,074	33,084,217	3,308,422
42	Kisumu	23,695.24	8.85	61,628	23.02	91,855,381	9,185,538	14,785,012	1,478,501	20,389,141	2,038,914
43	Homabay	49,518.36	10.4	100,000	21.01	149,049,078	14,904,908	23,990,738	2,399,074	33,084,217	3,308,422
44	Migori	34,045.69	10.76	100,000	31.59	149,049,078	14,904,908	23,990,738	2,399,074	33,084,217	3,308,422
45	Kisii	35,142.35	26.6	50,000	37.85	74,524,539	7,452,454	11,995,369	1,199,537	16,542,109	1,654,211
46	Nyamira	20,498.30	22.75	35,000	38.85	52,167,177	5,216,718	8,396,758	839,676	11,579,476	1,157,948
47	Nairobi	9,730.40	13.77	6,000	8.49	8,942,945	894,294	1,439,444	143,944	1,985,053	198,505
Total		**7,180,000.66**	**12.13**	**10,579,062.51**	**17.87**	**15,767,995,180**	**1,576,799,518**	**2,537,995,180**	**253,799,518**	**3,500,000,000**	**350,000,000**

Tree nursery in Oloitokitok, Kajiado County

CHAPTER 5: RESOURCE MOBILIZATION FOR IMPLEMENTATION OF THE STRATEGY

5.1 Introduction

The implementation of this strategy requires significant mobilization of resources to achieve growing of 15.8 billion trees towards landscape and ecosystem restoration of 10.6 million ha. The resources will be primarily used to achieve the set objectives, planning, coordination, administration, capital investments, communication and publicity. The resources are expected to be mobilized from national government, county governments, development partners and non- government actors. This will also require stakeholders' collaboration at all levels for implementing the strategy, including decision-making. These stakeholders include policymakers, technical staff, communities, the private sector, academia, Civil Society Organization (CSOs), Community Based Organization (CBOs) and Faith Based Organization (FBOs).

5.2 Resource Mobilization

This involves sourcing financial resources for tree growing initiatives towards ecosystem restoration activities. Relevant national MDAs and counties are expected to explore global, regional, national and county financial options to meet the strategy budget. This shall be done from partners, community contributions, the private sector, government allocations, and other financial mechanisms, e.g. Public Private Partnerships (PPPs). It also entails in-kind contributions such as tools, labour and probono professional services.

5.3 Resource Mobilization at National and County Governments

National and County governments will employ different arrangements of the sectoral Departments that will guide their allocation of resources to implement this strategy. Both levels of government will also fundraise from bilateral and multilateral development partners. The national and county governments are expected to enforce legislation levying environmental taxes that will be used to restore ecosystems, especially from polluting industries, agrochemical suppliers, timber companies, water packaging companies, and mining companies.

5.4 Resource Mobilization from Development Partners

Development partners with key strategic focus on landscape and ecosystem restoration are expected to support the 15 billion growing initiative and investments across selected sites for rehabilitation. These partners include the World Bank, European Union, GIZ, UNDP, UK AID, and Dutch AID, among others. The CS Ministry of Environment, Climate Change and Forestry, in collaboration with the Prime Cabinet Secretary in charge of foreign affairs, in partnership with CS Treasury, are expected to engage development partners to seek their financial commitment to implementing this strategy.

5.5 Tapping on Global Funds

Opportunities exist within global funds such as the Land Neutrality Degradation Fund, Green Climate Fund, the Global Environment Facility (GEF), Climate Investment Funds (CIF), The National Appropriate Mitigation Actions (NAMA), AFR100 framework, and the Adaptation Fund, among others. Such funds are expected to be mobilized from global facilities to support the implementation of this strategy.

5.6 Resources from Private Sector Capital, Diaspora and Foundations

The institutional framework for implementing this strategy is expected to design mechanisms for engagement with the private sector, foundations, diaspora communities, and religious institutions to support this strategy. For instance, through KAM and KEPSA, industrial stakeholders will control point source pollution and landscape pollution to institute corporate social responsibility and environmental programs for ecosystem restoration and reduction of degradation.

5.7 Exploring Innovative Carbon Financing Mechanisms

This strategy is expected to tap into Carbon Trading, Green Bonds and Payment for Ecosystem Services. This will be done through capacity building of SAGAs and site restoration committees, which will collect the carbon data and initiate the carbon trading schemes for specific sites.

5.8 Estimated Budget

The total budget for implementation of this Strategy is KES 1.294 Trillion. This is to be implemented for a period of 10 Years. The budget anticipates a midterm review after the 5th year which could influence the budget allocations of the rest 5 years depending on the review findings.

The following will be the benefits of investing in the proposed budget;

1. Create 3.5 Million direct green jobs in tree nurseries, distribution and planting of seedlings, management and watering as well as other related sectors that will support livelihoods, through sustainable nature-based enterprises.
2. Increase the national landscape value by KES 75 trillion assuming total value of a mature tree is as low as KES 5,000.
3. Increase of tree cover to 30% will double current GDP contribution by forestry to USD 730 million (7.2%) annually.
4. Growing of 15B trees will contribute KES 40B to other productive sectors of the economy, such as; agriculture, fisheries, livestock, energy, wildlife, water, tourism, recreation, trade and industry.

A display of bamboo products

Table 11: Estimated budget for implementation of the strategy

Programme	Results	Total Budget (KES) in billions		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Forest and Freshwater Ecosystem Restoration	To grow 1.9 billion quality tree seedlings in Public, and Private Tree nurseries in the forest ecosystem.	Capital	333.34	46.67	36.67	26.67	26.67	30.00	46.67	36.67	26.67	26.67	30.00
	To increase the National Tree Cover and rehabilitate 11.4% (1,154,507 Ha) of forest ecosystems.												
	To strengthen human and institutional capacity for forest restoration and management.												
	To mobilize adequate financial resources for forest restoration.												
	Enhance planning monitoring, evaluation, and knowledge management in the forest ecosystems.												
	Policy advocacy.												
	Governance, Coordination and communication.												
	Stakeholder engagement and collaboration.	Recurrent (18% of the Capital budget)	60.02	8.41	6.60	4.79	4.79	5.42	8.41	6.60	4.79	4.79	5.42
	To plant 450 million tree seedlings in the mountain ecosystem.	Capital	33.51	4.71	3.57	2.67	2.67	3.02	4.71	3.57	2.67	2.67	3.02
	Rehabilitate 2.9% (300 thousand Ha) of degraded mountain ecosystem.												
	To mobilize financial and human restoration resources from the public and private sources.	Recurrent (18% of the Capital budget)	6.03	0.86	0.67	0.48	0.48	0.54	0.86	0.67	0.48	0.48	0.54
	To increase awareness and promote action on mountains conservation												
	Strengthen monitoring and knowledge management systems in the mountain ecosystems.												
	Policy advocacy.												
	Governance, Coordination and communication.												
	Stakeholder engagement and collaboration.												
Rangelands Ecosystem Restoration	To plant 7.8 billion tree seedlings in the rangelands ecosystems.	Capital	317.39	44.43	34.92	25.38	25.38	28.60	44.43	34.92	25.38	25.38	28.60
	To rehabilitate 49.4% (5.2 million Ha) of the degraded rangeland ecosystems.												
	To strengthen organizational capacity of different stakeholder groups to address various rangeland restoration challenges.												

Programme	Results	Total Budget (KES) in billions		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
	To establish an early warning system for prediction and forecasting in the rangelands.												
	Policy advocacy.												
	Governance, Coordination and communication.												
	Stakeholder engagement and collaboration.	Recurrent (18% of the Capital budget)	57.11	8.00	6.28	4.56	4.56	5.15	8.00	6.28	4.56	4.56	5.15
Agro-ecosystems Restoration	To plant 6.5 billion tree seedlings in the agro-ecosystems.	Capital	302.30	42.31	33.27	24.20	24.20	27.22	42.31	33.27	24.20	24.20	27.22
	Rehabilitate 28% (3.15 million Ha) of degraded agricultural land.												
	To build human and technological capacity of stakeholders on agro-ecosystems restoration and management.	Recurrent (18% of the Capital budget)	54.40	7.62	5.99	4.36	4.36	4.91	7.62	5.99	4.36	4.36	4.91
	To mobilize financial resources for restoration and management of agro-ecosystems.												
	To enhance monitoring, evaluation and knowledge management.												
	Policy advocacy.												
	Governance, Coordination and communication.												
	Stakeholder engagement and collaboration.												
Greening Settlement and Infrastructure	To plant 855 million tree seedlings in the settled areas.	Capital	87.05	12.18	9.58	6.96	6.96	7.82	12.18	9.58	6.96	6.96	7.82
	Rehabilitate 5.5% (570 thousand Ha) of degraded settled areas ecosystems.												
	To strengthen environmental awareness and governance in the settled area ecosystem.												
	To identify and develop suitable financial mechanisms to restore and sustainably manage green spaces, municipal waste and consumptive resources at County level.												
	To enhance monitoring, reporting and learning.												
	Policy advocacy.												
	Governance, Coordination and communication.												
	Stakeholder engagement and collaboration.	Recurrent (18% of the Capital budget)	15.67	2.20	1.73	1.26	1.26	1.41	2.20	1.73	1.26	1.26	1.41

Programme	Results	Total Budget (KES) in billions		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Marine Ecosystem Restoration	To plant 14 million tree seedlings in the marine ecosystem	Capital	0.69	0.11	0.08	0.05	0.05	0.06	0.11	0.08	0.05	0.05	0.06
	Rehabilitate 0.9% (14 thousand Ha) of degraded marine ecosystems (mangroves, seagrasses and corals) for sustainable contribution to the blue economy	Recurrent (18% of the Capital budget)	0.12	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01
	To strengthen organizational capacity for restoration and sustainable management of blue resources												
	Strengthenmarine/ocean monitoring and knowledge management systems												
	Policy advocacy												
	Governance, Coordination and communication												
	Stakeholder engagement and collaboration												
Wetland Ecosystem Restoration	To plant 300 million tree seedlings in the wetland ecosystems.	Capital	22.34	3.14	2.47	1.78	1.77	2.01	3.14	2.47	1.78	1.77	2.01
	To rehabilitate 1.9% (200,000 Ha) of degraded wetland ecosystems												
	To build the capacity of wetlands ecosystem stakeholders on wetlands restoration and rehabilitation.												
	To mobilize adequate financial resources for wetland ecosystem restoration												
	To develop a national information collation database for wetlands												
	Policy advocacy												
	Governance, Coordination and communication	Recurrent (18% of the Capital budget)	4.02	0.56	0.44	0.32	0.32	0.36	0.56	0.44	0.32	0.32	0.36
	Total		**1294.00**	**181.20**	**142.30**	**103.49**	**103.48**	**116.54**	**181.20**	**142.30**	**103.49**	**103.48**	**116.54**

Women handling tree seedlings in Entarara Forest in Kajiado County.

CHAPTER 6: MONITORING AND EVALUATION

6.1 Introduction

This strategy employs a robust monitoring, evaluation and reporting framework that considers various input processes, outputs and outcomes in each of the strategic objectives (Figure 6.1). This monitoring framework will aid in tracking the progress on the implementation of the various activities and performance against set targets. This will enable timely progress monitoring against plans, capturing results and learning, and taking timely corrective actions as they arise. The M & E framework in this strategy gives a list of results and indicators of each strategic objective across ecosystem that will be continuously and periodically tracked. Best practices, innovations, cases and unique experiences shall be documented for subsequent sharing.

Monitoring and tracking of the 15 Billion tree growing will be done through use of technology and innovation by JazaMiti App. The data in the App will be verified and reported on quarterly basis for decision making. Jazamiti app documentation workflows entails the following:

1. Downloading Jazamiti mobile app from the Google Play Store for Android phones. The application is also available for IOS.
2. Registration to the system by providing the required details.
3. Turning on the mobile device GPS to get correct results on S2S matching and during documentation of tree planting.
4. Click add planting activity on the home page to document tree planting activities.
5. Validation through a geoportal developed for the office team to monitor the documentation process.

Progress review of the implementation of the strategy will be conducted at midterm before scaling up for the next 5 years and end term to determine the extent to which the action plan's objectives are met. A national conference shall be held to present the mid-term review report, where best practices and lessons learned will be adopted. Regular progress reviews will be conducted annually and presented to the steering committees during annual forums.

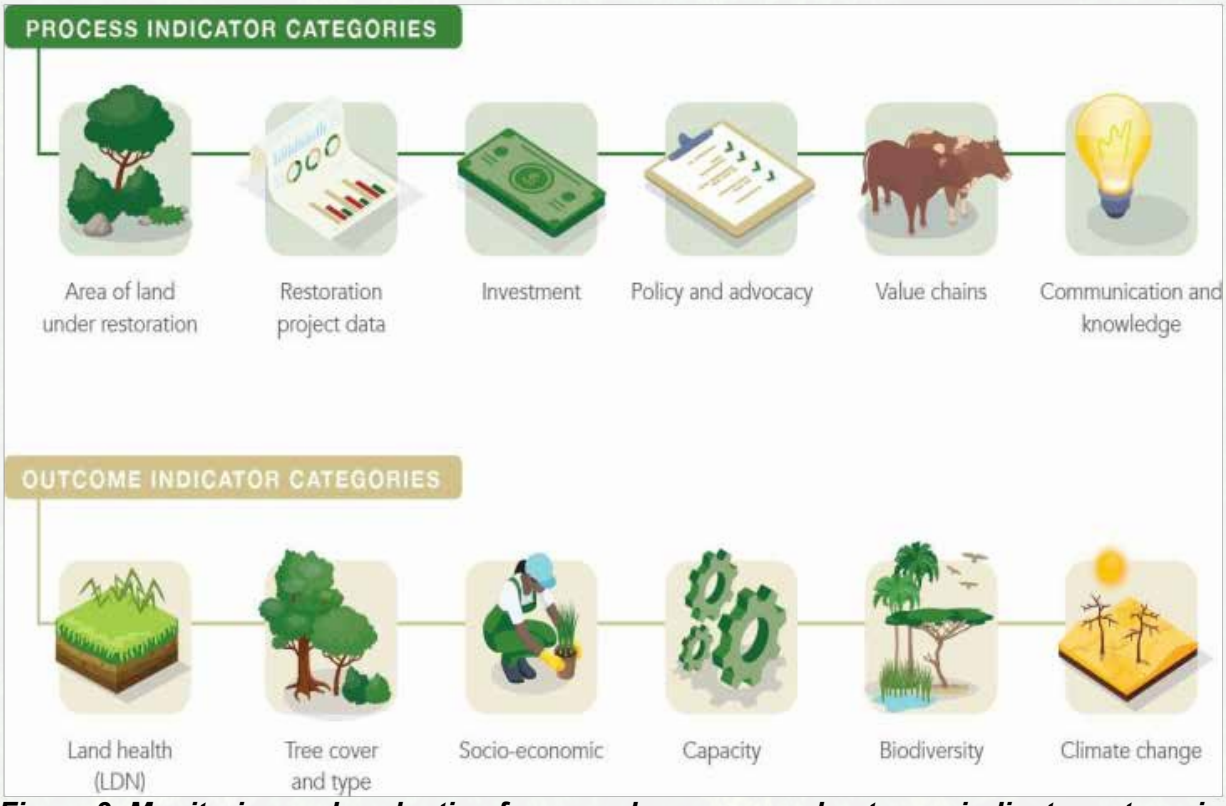


Figure 3: Monitoring and evaluation framework process and outcome indicator categories for 15 billion tree growing initiative towards landscape and ecosystem restoration

This M&E Framework will use JazaMiti App where the data captured in the App will be verified and reported on quarterly basis for decision making.

Figure 4: Jaza Miti mobile app

6.2 Monitoring and evaluation framework

Strategic Objective 1: Increase national tree cover by 17.8% through targeted interventions on public, community and private lands

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Strategic Objective 1. Increase national tree cover by 17.87% through selected interventions on public, community and private lands																
Outcome 1. Increased tree cover for better provision of ecosystem goods and services																
Increase tree cover	% increase	17.87	12.13	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	Assessment reports	After every 5yrs	MDAs, County Governments and non-government actors, Development partners
	No. of trees planted (in billions)	15.77	TBD	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	Assessment reports, Jaza Miti App.	Daily, Monthly, quarterly , Semi-annually& annually	
Programme Area 1: Forest and Water Tower Ecosystem Restoration Programme																
Output 1.1. 350,507 ha of degraded natural forests in gazetted forests and water towers rehabilitated																
Act.1.1.1. Identify and map out degraded natural forests and water towers for rehabilitation	Area mapped (in ha)	350,507	5.2 M ha	3,5050.7	3,5050.7	3,5050.7	3,5050.7	3,5050.7	3,5050.7	3,5050.7	3,5050.7	3,5050.7	3,5050.7	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
				0.7	0.7	7	0.7	0.7	7	0.7	0.7	0.7	0.7			
Act. 1.1.2. Acquire high resolution satellite images/ data for degraded sites	No. of images	No. of images	21	2016 Base-line report	7				7				7	GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
Act. 1.1.3. Collect and distribute seeds for propagation in tree nurseries	No. of tons	38.945	TBD	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89 tons	Seed collection, storage and dispatch reports	Quarterly	KEFRI Private Sector
Act. 1.1.4. Produce seedlings for rehabilitation of degraded forest and water towers	No.of seedlings (Millions)	525,761,175	TBD	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.1.5. Develop and implement participatory ecosystem management plans for restoration	No of Plans	10	TBD				3			4			3	Reports Previous ecosystem GIS Maps	Annually	MECCF, KFS, KTWA, KEFRI, CFAs, WRTI, KWS, County Governments, Development partners, Private Sector
Act. 1.1.6. Secure and protect rehabilitated gazetted forests and water towers	Area Fenced in KM	2000	TBD	200	200	200	200	200	200	200	200	200	200	Survey reports GIS Maps	Annually	MECCF, KFS, KTWA, KEFRI, CFAs, WRTI, KWS, County Governments, Development partners, Private Sector
	No. rangers recruited	5000	TBD	500	500	500	500	500	500	500	500	500	500	Recruitment reports	Every five years	MECCF, KFS, KWS, Private sector
	No. of KM demarcated	2000	TBD	200	200	200	200	200	200	200	200	200	200	Survey reports GIS Maps	Annually	MECCF, KFS, KWS, Survey of Kenya, County Governments, Private Sector, NGAO
	No. of ha reclaimed from invasive species	10,000	TBD	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Assessment report GIS Maps	Annually	MECCF, KEFRI, KFS, DRSRS, KWS,
Output 1.2. 54,000 ha of forest plantation in gazetted forests restocked																
Act. 1.2.1. Identify and map out plantations for restocking.	Area mapped (in ha)	54,000	TBD	5400	5400	5400	5400	5400	5400	5400	5400	5400	5400	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
Act. 1.2.2. Acquire high resolution satellite images/ data for forest plantations	No. of images	250	250					250					250	Assessment report	Every 5 years	KFS, DRSRS, Survey of Kenya
Act. 1.2.3. Collect and distribute of seeds for propagation in tree nurseries.	No. of tons	6.40	TBD	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	Seed collection, storage and dispatch reports	Quarterly	KEFRI Private Sector

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.2.4. Produce seedlings for restocking.	No. of seed-lings	86,400,000	TBD	8,640,000	8,640,000	8,640,000	8,640,000	8,640,000	8,640,000	8,640,000	8,640,000	8,640,000	8,640,000	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.2.5. Secure and protect restocked forest plantation	Area protected	151000	15100	15100	15100	15100	15100	15100	15100	15100	15100	15100	15100	Plantation Management Plans	Continuous	KFS, CFAs
Output 1.3. 750,000 ha of commercial private forests established																
Act. 1.3.1. Identify and map out areas for private forests establishment.	Area mapped (in ha)	750,000	TBD	75000	75000	75000	75000	75000	75000	75000	75000	75000	75000	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, Survey of Kenya, Private Sector
Act. 1.3.2. Acquire high resolution satellite images/ data for suitable sites to establish commercial forests.	No. of images	50	TBD	5	5	5	5	5	5	5	5	5	5	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, Survey of Kenya, Private Sector
Act. 1.3.3. Collect and distribute of seeds for propagation in tree nurseries.	No. of tons	88.89	TBD	8.89	8.89	8.89	8.89	8.89	8.89	8.89	8.89	8.89	8.89	Seed collection, storage and dispatch reports	Quarterly	KEFRI Private Sector

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.3.4. Produce seedlings for establishment of commercial private forests.	No. of seedlings (Billions)	1.2	TBD	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.3.6. Secure and protect established commercial private forest.	Area protected	750,000	TBD	75000	75000	75000	75000	75000	75000	75000	75000	75000	75000	Plantation Management Plans	Continuous	KFS, Private Sector
Programme Area 2: Agroecosystem Restoration Programme																
Output 1.4. 3,000,000 ha of agroforestry trees on farmlands grown																
Act. 1.4.1. Identify and map out cropland for agro forestry practices.	Area mapped (in ha)	3,000,000	TBD	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
Act. 1.4.2. Acquire high resolution satellite images/ data for suitable sites for agro forestry practices.	No. of images	100	TBD	10	10	10	10	10	10	10	10	10	10	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, Survey of Kenya, Private Sector
Act. 1.4.3. Collect and distribute of seeds for propagation in tree nurseries.	No. of tons	311.11	TBD	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	Seed collection, storage and dispatch reports	Quarterly	KEFRI Private Sector

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.4.4. Produce seedlings for establishment of growing agro forestry on farmlands.	No. of seedlings	4,200,000,000	TBD	420 million	420 million	420 million	420 million	420 million	420 million	420 million	420 million	420 million	420 million	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.4.5. Secure and protect established agro forestry	Area protected in ha	3,000,000	TBD	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	Assessment reports	Annually	MECCF, KFS, Private Sector
Output 1.5. 150,000 ha of bamboo woodlots and plantations established																
Act. 1.5.1. Identify and map out sites for establishment of bamboo woodlots and plantations.	Area mapped in ha	150,000	2.7m	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
Act. 1.5.2. Acquire high resolution satellite images/ data for suitable sites for establishment of bamboo woodlots and plantations.	No of images	50	TBD	5	5	5	5	5	5	5	5	5	5	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, Survey of Kenya, Private Sector
Act. 1.5.3. Collect and distribute of seeds for propagation in tree nurseries.	No. in tons	16.67	TBD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	Tree nursery assessment reports	Quarterly	KEFRI and Non-State Actors

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.5.4. Produce seedlings for establishment of bamboo woodlots and plantations in selected ecosystems.	No of seedlings	225,000,000	TBD	225 million	225 million	225 million	225 million	225 million	225 million	225 million	225 million	225 million	225 million	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.5.5. Secure and protect established bamboo woodlots and plantations	Area in ha protected	150,000	TBD	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	Assessment reports	Annually	MECCF, KFS, Private Sector
Programme Area 3: Rangeland Ecosystem Restoration Programme																
Output 1.6. 5,190,556 ha of degraded dryland landscapes																
Act.1.6.1. Identify and map out degraded rangelands.	Area to be mapped in ha	5,190,556	25.7m	519,055.6	519,055.6	519,055.6	519,055.6	519,055.6	519,055.6	519,055.6	519,055.6	519,055.6	519,055.6	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
Act.1.6.2. Acquire high resolution satellite images/data for mapping rangelands.	No of images	100	TBD	10	10	10	10	10	10	10	10	10	10	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, Survey of Kenya, Private Sector
Act.1.6.3. Collect and distribute of seeds for propagation in tree nurseries.	No. in tons	576.73	TBD	57.67	57.67	57.67	57.67	57.67	57.67	57.67	57.67	57.67	57.67	Tree nursery assessment reports	Quarterly	KEFRI and Non-State Actors

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act.1.6.4. Produce seedlings for establishment of bamboo woodlots and plantations.	No of seedlings	7,785,834,000	TBD	778,583,400	778,583,400	778,583,400	778,583,400	778,583,400	778,583,400	778,583,400	778,583,400	778,583,400	778,583,400	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act.1.6.5. Support removal, management and utilization of invasive species.	Area in ha controlled	1,000,000	2,000,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	Assessment reports	Quarterly	MDAs, County Governments and non-government actors, Development partners
Act.1.6.6. Pilot reseeding of degraded rangelands	Area in ha	2,000,000	TBD	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	Assessment reports	Quarterly	MDAs, County Governments and non-government actors, Development partners
Act.1.6.7. Secure and protect rehabilitated rangelands	No of enclosures	100	TBD	10	10	10	10	10	10	10	10	10	10	Assessment reports	Quarterly	MDAs, County Governments and non-government actors, Development partners
Programme Area 4: Marine Ecosystem Restoration Programme																
Output 1.7. 14,000 ha of degraded mangrove ecosystem																
Act. 1.7.1. Identify and map out degraded mangrove ecosystem.	Area in ha mapped	14,000	TBD	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.7.2. Acquire high resolution satellite images/data for mapping degraded mangrove ecosystem.	No of images	10	TBD	1	1	1	1	1	1	1	1	1	1	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, KEMFRI, Survey of Kenya, PrivateSector
Act. 1.7.3. Collect and distribute of seeds for propagation in tree nurseries.	No in tons	10.37	TBD	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	Tree nursery assessment reports	Quarterly	KEFRI and Non-State Actors
Act. 1.7.4. Produce seedlings for rehabilitation of mangrove ecosystem.	No of seedlings	140,000,000	TBD	14 Million	14 Million	14 Million	14 Million	14 Million	14 Million	14 Million	14 Million	14 Million	14 Million	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.7.5. Secure and protect rehabilitated mangrove ecosystem	Area in ha	14,000	TBD	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	Assessment reports	Quarterly	MDAs, County Governments and non-government actors, Development partners
Programme Area 5: Wetland Ecosystem Restoration Programme																
Output 1.8. 500,000 ha of degraded water towers, wetlands, and riparian areas outside gazetted forests rehabilitated																
Act. 1.8.1. Identify and map out degraded water towers, wetlands and riparian areas outside gazette forests.	Area in ha mapped	500,000	TBD	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.8.2. Acquire high resolution satellite images/data for mapping degraded wetland ecosystem outside gazetted ones.	No of images	50	TBD	5	5	5	5	5	5	5	5	5	5	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, NEMA, KWTA,KEMFRI, Survey of Kenya, PrivateSector
Act. 1.8.3. Collect and distribute of seeds for propagation in tree nurseries.	No of tons	55.56	TBD	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	Tree nursery assessment reports	Quarterly	KEFRI and Non-State Actors
Act. 1.8.4. Produce seedlings for rehabilitation of wetland ecosystem outside gazette ones.	No of seedlings	750,000,000	TBD	75 Million	75 Million	75 Million	75 Million	75 Million	75 Million	75 Million	75 Million	75 Million	75 Million	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.8.5. Secure and protect rehabilitated wetland ecosystem outside gazetted ones.	Area in KM	1765	TBD	176.5	176.5	176.5	176.5	176.5	176.5	176.5	176.5	176.5	176.5	Assessment report	Quarterly	MECCF, KFS, DRSRS, NEMA, KWTA,KEMFRI, Survey of Kenya, PrivateSector
Programme Area 6: Settlement and Infrastructure Restoration Programme																
Output 1.9. 450,000 ha of infrastructure (Roads, railway lines, dams) greened by growing trees																
Act. 1.9.1. Identify and map out appropriate areas for re-greening infrastructure	Area mapped ha	450,000	TBD	45000	45000	45000	45000	45000	45000	45000	45000	45000	45000	Assessment reports, GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
Act. 1.9.2. Acquire high resolution satellite images/data for mapping	No of images	100	TBD	10	10	10	10	10	10	10	10	10	10	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, NEMA, KWTA,KEMFRI, Survey of Kenya, PrivateSector

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.9.3. Collect and distribute of seeds for propagation in tree nurseries.	No tons	50.00	TBD	5	5	5	5	5	5	5	5	5	5	Tree nursery assessment reports	Quarterly	KEFRI and Non-State Actors
Act. 1.9.4. Produce seedlings for greening infrastructure.	No of seedlings	675,000,000	TBD	67.5 Million	67.5 Million	67.5 Million	67.5 Million	67.5 Million	67.5 Million	67.5 Million	67.5 Million	67.5 Million	67.5 Million	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.9.5. Secure and protect greened infrastructure.	Area in ha	450,000	TBD	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	Assessment report	Quarterly	MECCF, KFS, DRSRS, NEMA, KWTA,KEMFRI, Survey of Kenya, PrivateSector
Output 1.10. 70,000 ha of fruit trees and woodlots in schools, colleges, universities and other institutions grown																
Act. 1.10.1. Identify and map out appropriate for fruit growing	Area mapped ha	70,000	TBD	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
Act. 1.10.2. Acquire high resolution satellite images/data for mapping institutions to grow fruit trees and woodlots.	No of images	100	TBD	10	10	10	10	10	10	10	10	10	10	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, NEMA, KWTA,KEMFRI, Survey of Kenya, PrivateSector
Act. 1.10.2. Collect and distribute of seeds for propagation in tree nurseries.	No in ton	7.78	TBD	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	Tree nursery assessment reports	Quarterly	KEFRI and Non-State Actors

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.10.3. Produce seedlings for fruit trees and woodlots.	No of seedlings	105,000,000	TBD	10.5 Million	10.5 Million	10.5 Million	10.5 Million	10.5 Million	10.5 Million	10.5 Million	10.5 Million	10.5 Million	10.5 Million	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.10.4. Secure and protect established woodlots and fruit trees.	Area ha	70,000	TBD	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	Assessment report	Quarterly	MECCF, KFS, DRSRS, NEMA, KWTA,KEMFRI, Survey of Kenya, PrivateSector
Act. 1.11.1. Identify and map out appropriate areas for growing establishing urban forests, arboretum, green spaces.	Area in ha mapped	50,000	TBD	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	Assessment reports GIS Maps	Semi-annuallyand annually	MDAs, County Governments and non-government actors, Development partners
Act. 1.11.2. Acquire high resolution satellite images/data for mapping targeted areas for greening.	No of images	50	TBD	5	5	5	5	5	5	5	5	5	5	Assessment reports GIS Maps	Annually	MECCF, KFS, DRSRS, NEMA, KWTA,KEMFRI, Survey of Kenya, PrivateSector
Act. 1.11.3. Collect and distribute of seeds for propagation in tree nurseries.	No in tons	5.56	TBD	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	Tree nursery assessment reports	Quarterly	KEFRI and Non-State Actors

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 1.11.4. Produce seedlings for greening targeted areas.	No of seedlings	75,000,000	TBD	7,500000	7,500000	7,500000	7,500000	7,500000	7,500000	7,500000	7,500000	7,500000	7,500000	Tree nursery assessment reports	Quarterly	KFS, KDF, RDAs, NYS, KEFRI, KWS,WRTI, NPS, Correctional Services, SD Basic Education, TVET, SD Higher Education & Research, County governments, Non-State Actors
Act. 1.11.5. Secure and protect greened sites.	No of green spaces	50,000	TBD	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	Assessment reports	Annually	DRSRS, NEMA, KWTA,KEMFRI, Survey of Kenya, PrivateSector

Strategic Objective 2: Strengthen policy, regulatory, and institutional frameworks in selected sectors to improve landscape and ecosystem governance

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Outcome 2. Improved governance landscape and ecosystem restoration																
Output 2.1. Ecosystem restoration and management plans developed																
Act. 2.1.1. Develop / Review and implement ecosystem restoration and management plans	No of plans	20	TBD		2	2	2	2	2	2	2	2	1	Assessment reports	Annually	MDAs, County Governments and non-government actors, Development partners
Act. 2.1.2. Conduct strategic environmental assessment andenvironmental impact assessments for ecosystem-wideprojects and programmes (EMPs)	Report	2	TBD			1			1			1		Assessment reports	Every 3 years	MDAs, County Governments and non-government actors, Development partners
Act. 2.1.3. Gazettement ofall ecosystem restoration and management plans	Report	1	TBD											Report	Once	MECCF

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 2.1.4. Establish governance committeesto steer implementationof the restoration andmanagement plans	Report	1												Assessment report	1	MDAs, County Governments and non-government actors, Development partners
Output 2.2. Ecosystem restoration and management regulations/laws/policy enforced																
Act. 2.2.1. Identify and enforce ecosystem based restoration regulations andpolicies.	Report	10	TBD	1	1	1	1	1	1	1	1	1	1	Assessment report	Annually	MDAs
Act. 2.2.2. Enforce pollution control guidelines, policies, laws and regulations.	Report	10	TBD	1	1	1	1	1	1	1	1	1	1	Assessment report	Annually	MDAs

Strategic Objective 3: Promote sustainable land management practices, nature based enterprises and climate change mitigation and adaptation measures for resilient ecosystems and livelihoods

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Strategic objective 3: Promote sustainable land management practices, nature based enterprises and climate change mitigation and adaptation measures for resilient ecosystems and livelihoods																
Outcome 3: Improved community resilient livelihoods by promoting sustainable land management practices and nature-based enterprises																
Output 3.1: Sustainable nature-based enterprises identified and their value chains promoted across all ecosystems																
Act. 3.1.1. Identify sustainable nature-based enterprises for communities living adjacentto selected ecosystems.	No. of enterprises	20	TBD	2	2	2	2	2	2	2	2	2	2	Assessment reports	Semi-annually	MDAs, County Governments and non- government actors, Development partners
Act. 3.1.2. Develop appropriate value chain forthe identified products from nature-based enterprises.	No of valuechain	10	TBD	1	1	1	1	1	1	1	1	1	1	Assessment reports	Semi-annually	MDAs, County Governments and non- government actors, Development partners

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 3.1.3. Support agro forestry value chain green enterprises suchas fruit trees, fodder etc.	No of val-uechain	10	TBD	1	1	1	1	1	1	1	1	1	1	Assess-ment reports	Semi-annu-ally	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.1.4. Identify barriers to implementa-tionof nature-basedenterprises in the value chain.	Baseline report	3	TBD			1			1				1	Assess-ment reports	Every 3 years	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.1.5. Support eco- tourism such as nature trails,bird watching, etc in forest and fresh waterecosystems.	No of eco tourism	10	TBD	1	1	1	1	1	1	1	1	1	1	Assess-ment reports	Semi-annu-ally	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.1.6. Support bee keepingactivities in forest and water towersecosystems.	No supported	10	TBD	1	1	1	1	1	1	1	1	1	1	Assess-ment reports	Semi-annu-ally	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.1.7. Develop and support carbon credit schemesfor restoration of selected ecosystems	No of schemes	5	TBD				2			2			1	Assess-ment reports	Every 3 years	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.1.8. Promote solid waste recycling enterprises	No of en-terprises	5	TBD			2			2			1		Assess-ment reports	Every 3 years	MDAs, County Governments and non- gov-ernment actors, Development partners
Output 3.2: Market and market access for nature-based enterprise chain products identified and promoted.																
Act. 3.2.1. Undertake market analysis of the identifiednature-based enterprises across all selected ecosystems.	Baseline report	7	TBD		1		2		2		1		1	Assess-ment reports	Every 2 years	MDAs, County Governments and non- gov-ernment actors, Development partners

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 3.2.2. Organise communities into nature- based enterprisegroups and associations to link them tomarkets.	No of groups &associa-tions	200	TBD	20	20	20	20	20	20	20	20	20	20	Assess-ment reports	Annually	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.2.3. Identify barriers in nature-based enterprise value chain products and mechanismsof addressing them.	Baseline report	3	TBD			1			1			1		Assess-ment reports	Every 2 years	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.2.4. Identify and upscale best nature-based enterprise value chain products to promising ecosystems.	No of bestprac-tices	10	TBD		1		3			3		1	1	Assess-ment reports	Every 2 years	MDAs, County Governments and non- gov-ernment actors, Development partners
Output 3.3: SLM interventions identified, promoted and upscaled across all the ecosystems and landscapes																
Act. 3.3.1. Identify and imple-ment soil and water conser-vation measures and promote water harvesting techniques such as water pans, dams	No.	10	TBD		1	2	1	1	1	1	1	1		Assess-ment reports	Annually	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.3.2. Promote implementation of conservation agriculture and sustainable agricultural practices	No.	10	TBD		1	2	1	1	1	1	1	1		Assess-ment reports	Annually	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.3.3. Implement land use conflict management mechanisms in ecosystem based restoration programmes.	Reports	10	TBD		1	1	1	1	1	1	2	2		Assess-ment re-ports	Annually	MDAs, County Governments and non- gov-ernment actors, Development partners
Act. 3.3.4. Rehabilitate exhausted mines and quarries.	No	47	TBD		5	7	6	6	8	5	5	5		Assess-ment reports	Annually	MDAs, County Governments and non- gov-ernment actors, Development partners

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 3.3.5. Promote use of renewable energy e.g. biogas	No	1000	TBD	100	100	100	100	100	100	100	100	100	100	Assessment reports	Annually	MDAs, County Governments and non- government actors, Development partners
Output 3.4: Emissions from degraded landscapes and ecosystems reduced																
Act. 3.4.1. Quantify emissions reductions fromrehabilitated and restored ecosystems.	Baseline reports	4	TBD			1		1		1		1		Assessment reports	Every 2 years	MDAs, County Governments and non- government actors, Development partners
Act. 3.4.2. Upscale best ecosystem based practicesfor climate change mitigation and adaptation	No of practices	10	TBD			1	2	2	2	1	2			Assessment reports	Annually	MDAs, County Governments and non- government actors, Development partners
Act. 3.4.3. Link emission reduction practices to development ofcarbon offset projects.	No of projects	7					1	1	1	1	1	1	1	Assessment reports	Annually after 4th year	MDAs, County Governments and non- government actors, Development partners
Output 3.5: Ecosystem based climate change mitigation and adaptation restoration practices identified and promoted																
Act. 3.5.1. Identify ecosystembased restorationpractices.	Baseline report	5	TBD			1		1		1		1	1	Assessment reports	Every 2 years	MDAs, County Governments and non- government actors, Development partners
Act. 3.5.2. Demonstrate successful ecosystem based mitigationand adaptation practices across landscapes.	Area in ha	100	TBD	10	10	10	10	10	10	10	10	10	10	Assessment reports	Annually	MDAs, County Governments and non- government actors, Development partners
Act. 3.5.3 Promote best ecosystem based mitigation and adaptation practices.	No of practices	10	TBD			1	2	2	2	1	2			Assessment reports	Annually	MDAs, County Governments and non- government actors, Development partners
Output 3.6: Pollution prevented and controlled																

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 3.6.1. Map out pollution sourcesfrom selected ecosystems.	Report	7	TBD		1	1	1	1	1	1				Assessment reports	Annually	MDAs, County Governments and non- government actors, Development partners
Act. 3.6.2. Establish appropriate solid and liquidwaste water management structures.	No	20	TBD		2	2	2	2	2	2	3	3	2	Assessment reports	Annually	MDAs, County Governments and non- government actors, Development partners
Act. 3.6.3. Create awareness on forms of pollution andcontrol measures.	Report	10	TBD		1	1	1	1	1	1	2	2		Assessment reports	Annually	MDAs, County Governments and non- government actors, Development partners

Strategic Objective 4: Promote sustainable financing mechanisms and private sector investment for restoration of degraded landscapes and ecosystems

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Outcome 4. Improved sustainable financing mechanisms and private sector investment in ecosystem restoration																
Output 4.1. Financial resource mobilization initiatives for restoration of ecosystems identified and implemented.																
Act. 4.1.1. Conduct capacity needsassessment on resource mobilization at national, county and non-governmentactors.	Report	1	TBD			1								Assessment report	Once	MECCF

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 4.1.2. Enhance capacity resource mobilization and proposal development training by stakeholders and actors implementingtree growing initiatives andrestoration of ecosystems.	Report	1	TBD			1								Assess-ment report	Once	MECCF
Act. 4.1.3. Support stakeholders to develop a bankable investment projects and business plansfor restoration.	No of stakeholders	1000	TBD		50	100	100	100	200	150	100	100	100	Assess-ment reports	Annually	MDAs, CountyGov-ernments and non-government actors, De-velopment partners
Act. 4.1.4. Promote community-based innovative	financing mechanisms to support ecosystem restoration.	Report	10	TBD		1	1	1	2	2	1	2	2	Assess-ment reports	Annually	MDAs, CountyGov-ernments and non-government actors, De-velopment partners
Act. 4.1.5. Advocate for development of a public-private partnership (PPP) frameworkor platform to finance ecosystem restoration.	Report	5	TBD		1		1		1		1		1	Assess-ment reports	Every two years	MDAs, CountyGov-ernments and non-government actors, De-velopment partners

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE-LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 4.1.6. Advocate for additional budgetary allocations by national and county governmentstowards 15B for ecosystem restoration.	Report	20	TBD	2	2	2	2	2	2	2	2	2	2	Reports	Annually	MDAs
Act. 4.1.7. Promote linkages to optimize bilateral and multilateral funding opportunities for 15B towardsecosystem restoration	Report	10	TBD		1	1	1	1	1	1	1	2	1	Assess-ment reports	Annually	MDAs, CountyGov-ernments and non-government actors, De-velopment partners
Output 4.2. Restoration fund schemes such as Forest Conservation Fund, NETFUND etc strengthened																
Act. 4.2.1. Strengthen existing governance structures for 15B resources mobilization and disbursement.	Report	10	TBD		1	1	1	1	1	1	1	2	1	Assess-ment reports	Annually	MDAs, CountyGov-ernments and non-government actors, De-velopment partners
Act. 4.2.2. Advocate and champion the use of existing funding scheme	Report	10	TBD		1	1	1	1	1	1	1	2	1	Assess-ment reports	Annually	MDAs, CountyGov-ernments and non-government actors, De-velopment partners
Act. 4.2.3. Develop and strengthen fund structure and governance procedures.	Report	10	TBD		1	1	1	1	1	1	1	2	1	Assess-ment reports	Annually	MDAs, CountyGov-ernments and non-government actors, De-velopment partners

Strategic Objective 5: Strengthen research, innovation, monitoring, evaluation, reporting, knowledge management and dissemination for landscape and ecosystem restoration

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Outcome 5: Improved capacity of stakeholders, planning, monitoring and reporting on tree growing and ecosystem restoration																
Output 5.1. Capacity building to stakeholders in the 15 Billion Tree Growing Value chain towards ecosystem restoration supported and strengthened																
Act. 5.1.1. Undertake capacity needs assessment among stakeholders engaged in 15B for landscape and ecosystem restoration.	Report	1	TBD			1								Assessment report	Once	MDAs, County Governments and non-government actors, Development partners
Act. 5.1.2. Develop training modules and programmes	Report	3	TBD			1	1	1						Report	3 years	MDAs, County Governments and non-government actors, Development partners
Act. 5.1.3. Undertake trainers of trainers (ToTs) to champion 15Band ecosystem restoration.	Report	500	TBD			100	100	100	100	100				Report	5 years	MDAs, County Governments and non-government actors, Development partners
Act. 5.1.4. Strengthen traditional institutions in management ecosystems restored.	Report	10	TBD			1	1	1	2	2	1	1	1	Report	Annually	MDAs, County Governments and non-government actors, Development partners
Output 5.2. Institutional capacity for implementation of the strategy strengthened																
Act. 5.2.1. Recruitment of the Green Armyto support 15B Tree Growing Initiative and ecosystem restoration.	No	5000	TBD			4000			1000					Report		MECCF

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 5.2.2. Construct and equip additionalseed centres at KEFRI andKALRO.	No	4	18			1		1	1	1				Report		MCCF, KEFRI
Act. 5.2.3. Build capacity inseed collection, processing and testing.	Report	10	TBD		1	1	1	1	1	1	1	1	2	Report	Annually	KEFRI, KALRO
Act. 5.2.4. Establish water management structures for nursery establishment.	Report	3	TBD			1		1		1				Reports	Every 2 years	MDAs, County Governments and non-government actors, Development partners
Act. 5.2.5. Establish and support existingenvironmental conservation clubs.	Report	50	TBD		5	5	5	5	5	5	5	5	10	Reports	Annually	MDAs, County Governments and non-government actors, Development partners
Act. 5.2.6. Operationalise and strengthenthe 15B Tree Growing Secretariat.	Report	1	1		1									Report	Once	MECCF and Development Partners
Output 5.3. Integrated monitoring, evaluation and knowledge management system developed																
Act. 5.3.1. Develop a national monitoring, evaluation, reporting and learning framework for 15B and ecosystem restoration	Report	1	TBD			1								Report	Once	MDAs, County Governments and non-government actors, Development partners
Act.5.3.2. Improve efficiency androbustness of Jaza Miti App.	Report	10	TBD	1	1	1	1	1	1	1	1	1	1	Assessment report	Annually	MECCF

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 5.3.3. Develop a communicationand digitizationstrategy to facilitate information and knowledge sharing across all stakeholders.	Strategy	1	TBD			1								Reports	Once	MDAs, County Governments and non-government actors, Development partners
Act. 5.3.4. Integrate 15B and ecosystemrestoration knowledge and information into a central repository portal.	Report	1	TBD			1								Reports	Once	MDAs, County Governments and non-government actors, Development partners
Act. 5.3.5. Evaluate, select and implement technologies that support digitization, communication and knowledge management.	Report	3	TBD			1			1			1		Reports	Every 2 years	MDAs, County Governments and non-government actors, Development partners
Output 5.4. Integrated monitoring, evaluation and knowledge management system developed																
Act. 5.4.1. Develop a national monitoring, evaluation, reporting and learning framework for 15B and ecosystem restoration.	Report	1	TBD		1									Report	Once	MDAs, County Governments and non-government actors, Development partners
Act. 5.4.2. Improve efficiency androbustness of Jaza Miti App.	Report	10	TBD	1	1	1	1	1	1	1	1	1	1	Assessment report	Annually	MECCF

DESCRIPTION	VERIFIABLE INDICATORS	TARGETS	BASE- LINE	MILESTONES										DATA SOURCES	FREQUENCY	IMPLEMENTING ACTORS
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Act. 5.4.3. Develop a communicationand digitizationstrategy to facilitate information and knowledge sharing across all stakeholders.	Strategy	1	TBD			1								Reports	Once	MDAs, County Governments and non-government actors, Development partners
Act. 5.4.4. Integrate 15B and ecosystemrestoration knowledge and information into a central repository portal.	Report	1	TBD			1								Reports	Once	MDAs, County Governments and non-government actors, Development partners
Act. 5.4.5. Evaluate, select and implement technologies that support digitization, communication and knowledge management.	Report	3	TBD			1			1			1		Reports	Every 2 years	MDAs, County Governments and non-government actors, Development partners

A closer view of Mbeu Natural Forest, Meru County

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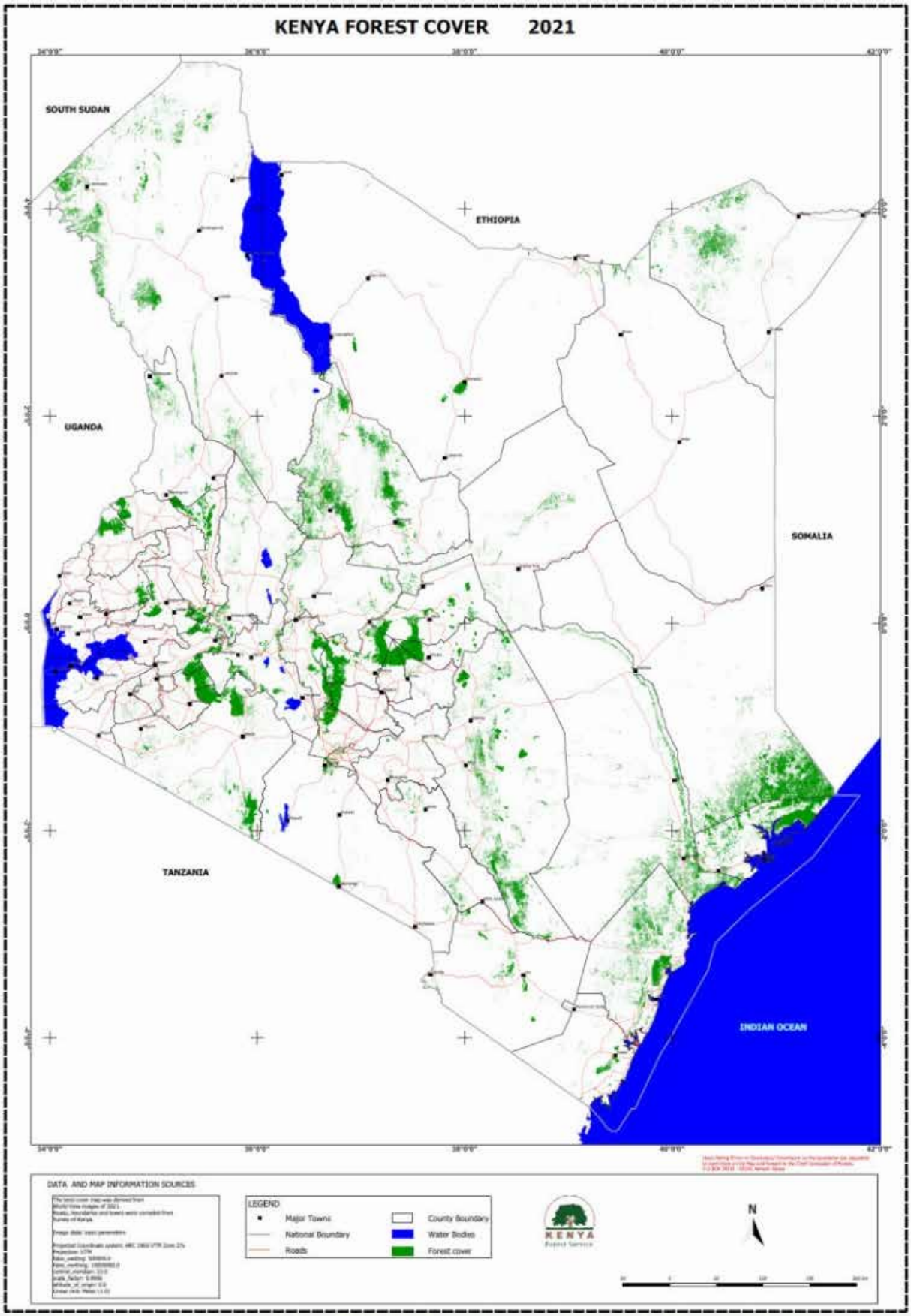
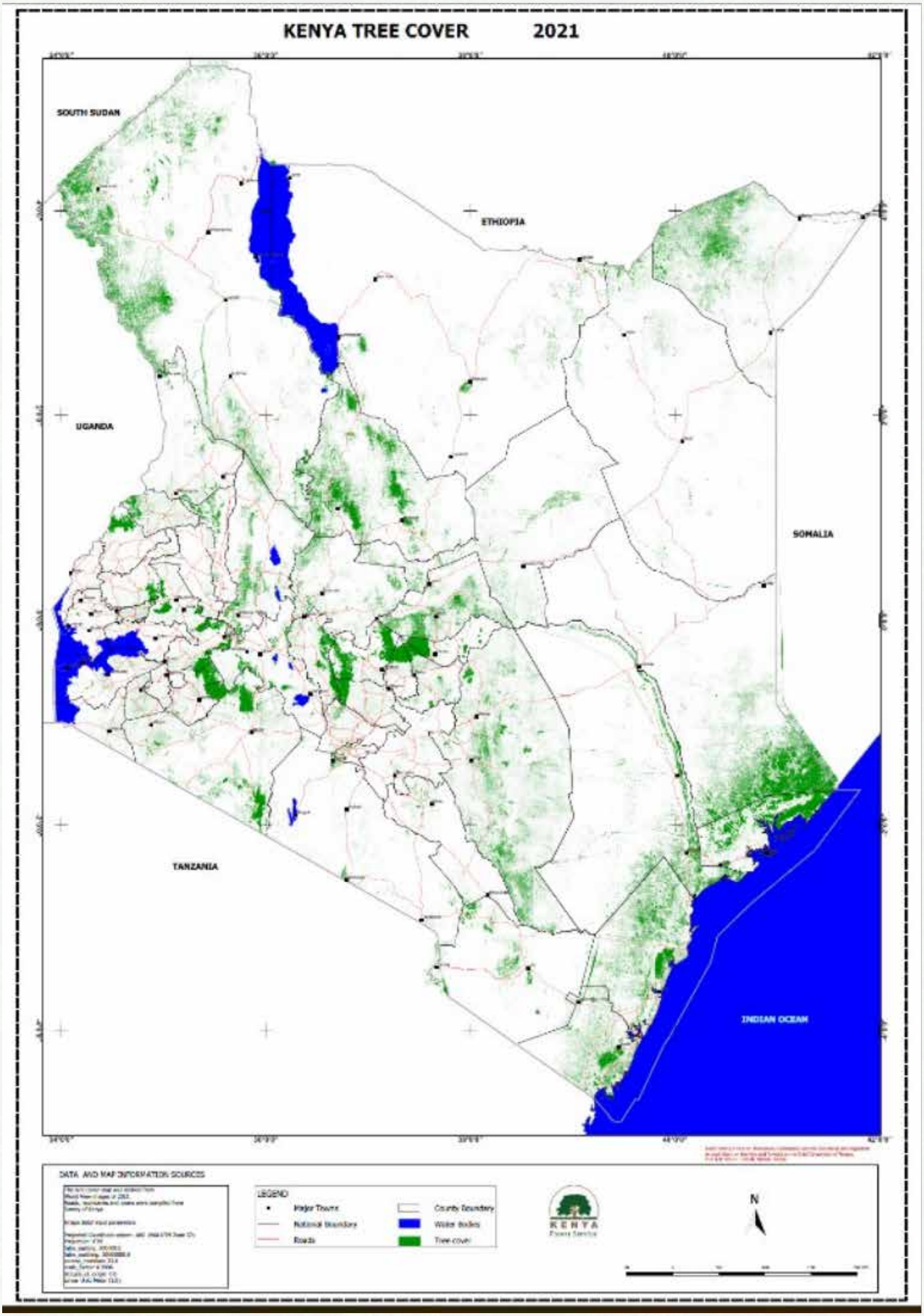
ANNEXES

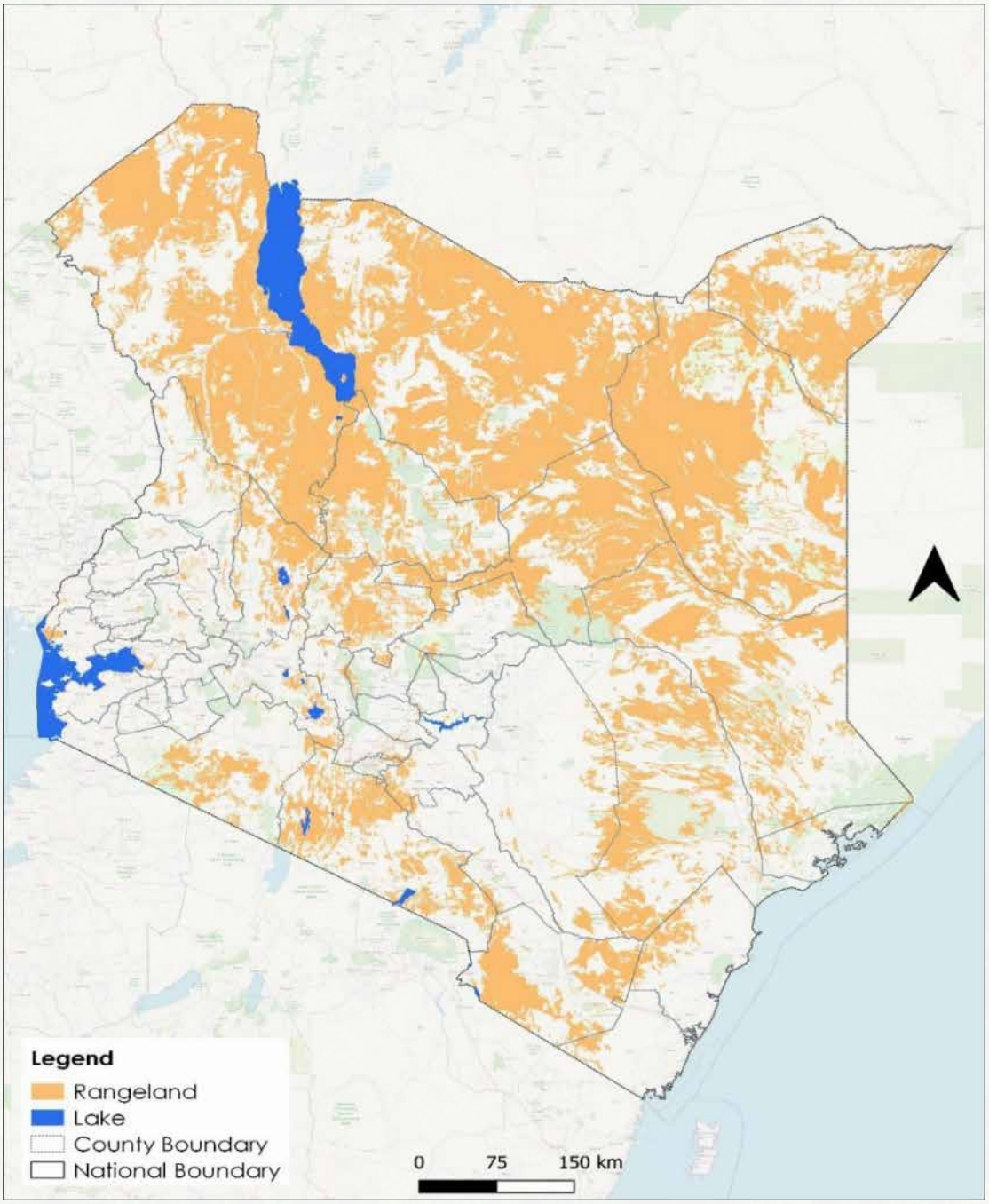
Map showing Forest Cover in Kenya



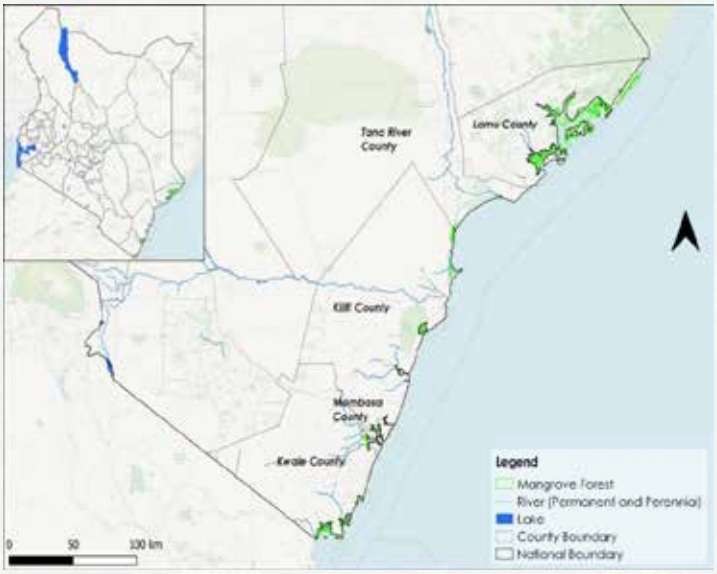
Map showing Tree Cover in Kenya



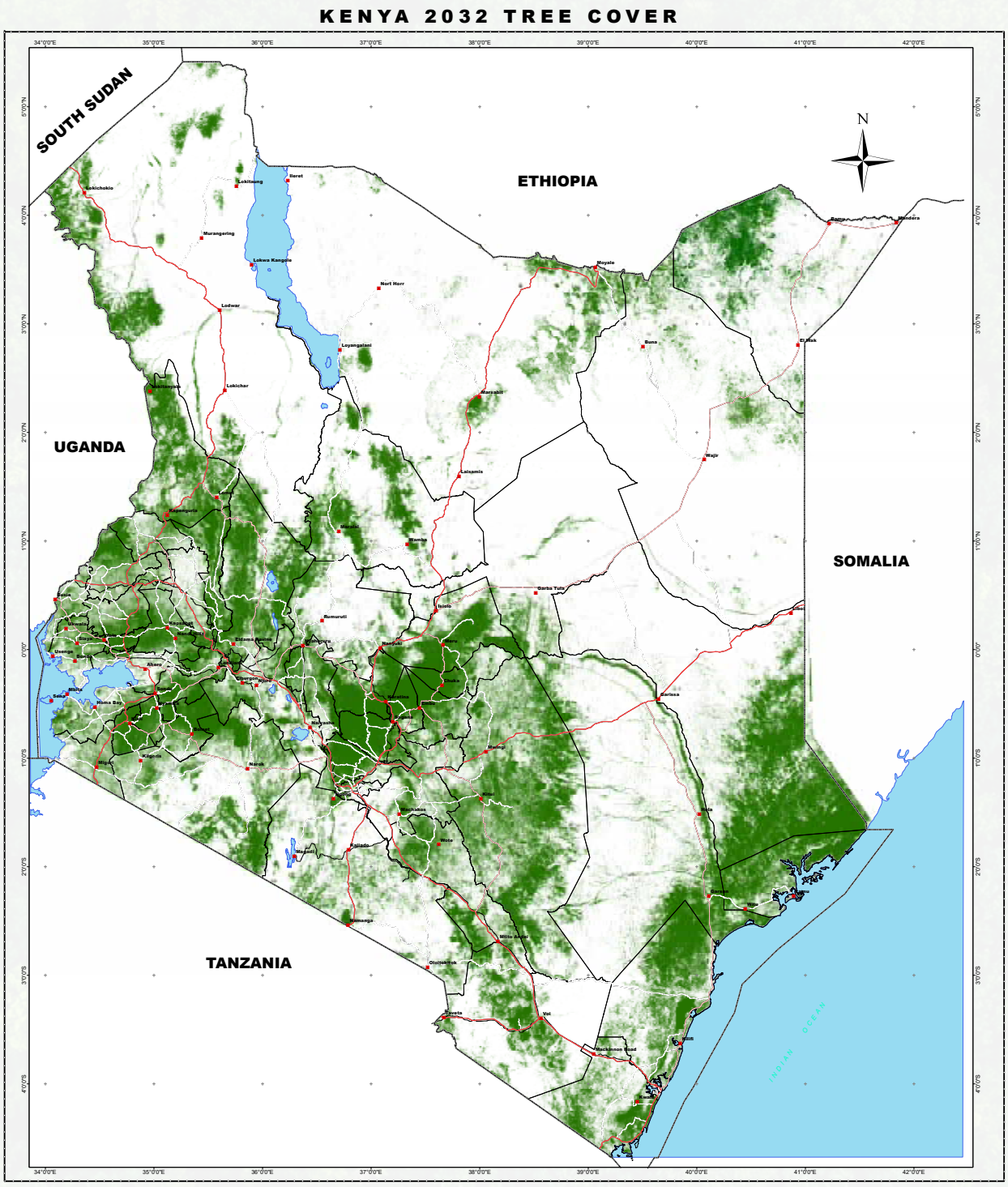
Map showing distribution of Kenya's Rangelands



Map showing Distribution of Kenya's mangrove forests



Map showing Tree Cover in Kenya in 2032



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