



COUNTY GOVERNMENT OF LAIKIPIA

THE LAIKIPIA COUNTY CLIMATE CHANGE POLICY

DRAFT

(November 2025)

FOREWORD

For Laikipia County, building resilience to the impacts of climate change is of highest priority. Climate change is a major threat to the county overall development as our key economic sector such as water, tourism, agriculture and livestock are highly dependent on natural resources which are often climate sensitive. We are already feeling the impacts of climate change on these sectors. Without great measures in place climate change will continue to impact on the quality and available quantity of Laikipia County natural resources thereby adversely affecting not only the environment but also the livelihoods of the people of Laikipia.

It is important that we adopt all necessary actions and policies to ensure that both mitigation and adaptation strategies are mainstreamed into fiscal and economic management, development of county's fiscal infrastructure, land use, natural resource management putting in mind some of the impacts are irreversible.

The Laikipia County Climate Change Policy outlines the strategies that the county will adopt in order to ensure challenges and impacts of climate change are effectively responded to. Given the cross-cutting nature of climate change, the policy has adopted a more integrated approach in order to build resilience across the different sectors and levels. The relevant sectors will be expected to develop or update plans to incorporate climate change adaptation and/or mitigation. Within the policy framework there are also special initiatives based on new and existing programmes and activities which will be prioritised for early implementation.

The County Government of Laikipia will continue to collaborate with other stakeholders to negotiate for urgent collective action to address the impacts of climate change. Given the county vulnerability to climate change and the urge to increase our resilience capacity, the issues of loss and damage link to climate change will be imperative for the county government.

Strategies highlighted need to be implemented in all sectors so as to increase the adaptive capacity of the county to cope with the impacts of climate change in a more coordinated, effective and sustainable manner. All stakeholders are therefore encouraged to utilize available information provided by the department in charge of climate change to enhance their knowledge on impacts of climate change in their lives. The available information will enhance people adaptation and mitigation actions at all levels.

I encourage you all to use this Climate Change Policy to make a difference and spearhead action to build our county's resilience to climate change.

Joshua Irungu, EGH
Governor
Laikipia County

ACKNOWLEDGEMENT

The County Government of Laikipia wishes to express its sincere gratitude to all the people and organizations that have contributed to the development of this Policy. This Policy was developed through a consultative process that involved relevant county and national and government departments, private sector, development partners and community representatives.

This Climate Change Policy was drafted by a joint technical team of representatives from various County Departments Water, Environment and Natural Resources, Agriculture and Livestock, Public Health, Health, Infrastructure, tourism, Economic planning, climate change as well as representatives from the National Government including WRA, NEMA, NDMA, KMD and KFS. John Letai (Director- Climate Change) and Edson Monda are unforgettable for their technical and operational support to the process. The technical team was also supported by representatives of various development partners working in Laikipia County.

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We express our gratitude to each and every one that contributed to the successful production and adoption of this Policy but, for one reason or another, has not been acknowledged.

The Department of Water, Environment and Natural Resources is committed to supporting the implementation of this Policy and hereby invite all stakeholders to support the county in this worthy cause.

Leah Njeri

County Executive Committee Member,
Water, Environment and Natural Resources
County Government of Laikipia

ABBREVIATIONS AND ACRONYMS

AU	African Union
CBNRM	Community-Based Natural Resource Management
CECM	County Executive Committee Member
CFA	Community Forest Association
CIDP	County Integrated Development Plan
CIMES	County Integrated Monitoring and Evaluation System
CSG	County Steering Group
CIS	Climate Information Service
CLMC	Community Land Management Committee
CoG	Council of Governors
DRR	Disaster Risk Reduction
EAC	East African Community
ECDE	Early Childhood Development and Education
EDE	Ending Drought Emergencies
EPR	Extended Producer Responsibility
ESIA	Environmental and Social Impact Assessment
FPIC	Free and Prior Informed Consent
GBV	Gender-Based Violence
GHG	Greenhouse gas
IBEC	Intergovernmental Budget and Economic Council
IGAD	Intergovernmental Authority on Development
IGRTC	Intergovernmental Relations Technical Committee
KMD	Kenya Meteorological Department
LED	Light-Emitting Diode
LH	Lower Highlands

LM	Lower Midlands
LPG	Liquified Petroleum Gas
MAM	March April May
MSME	Micro and Small Medium Enterprises
MTP	Medium-Term Plan
M&E	Monitoring and Evaluation
NDC	Nationally Determined Contributions
NEMA	National Environmental Management Authority
NIMES	National Integrated Monitoring and Evaluation System
NMT	Non-Motorized Transport
OND	October November December
PWD	Persons With Disability
PEM	Public Expenditure Management
PPP	Public-Private Partnerships
RVF	Rift Valley Fever
SDG	Sustainable Development Goals
UH	Upper Highlands
UM	Upper Midlands
UNFCCC	United Nations Framework Convention on Climate Change
VTC	Vocational Training Centre
WCCPC	Ward Climate Change Planning Committee
WRA	Water Resource Authority
WRUA	Water Resource User Association

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1 CHAPTER ONE: LAIKIPIA COUNTY

1.1 Geographic Conditions

Laikipia County borders the counties of Samburu to the North; Isiolo to the North East; Meru to the East; Nyeri to the South East; Nyandarua to the South; Nakuru to the South West and Baringo to the West. It covers an area of 9,462 km².

Altitude varies between 1,500 m above sea level at Ewaso Ng'iro basin in the North to a maximum of 2,611m above sea level around Marmanet forest. The other areas of high altitude include Mukogodo and Ol Daiga Forests in the eastern part of the county at 2,200 m above sea level. The County consists mainly of a plateau bordered by the Great Rift Valley to the West, the Aberdares mountain ridge to the South and Mt. Kenya to the South East.

The main drainage feature is Ewaso Ng'iro North basin with its tributaries having their sources in Aberdares and Mt. Kenya. These tributaries include Nanyuki, Likii, Sirimon, Ontulili, Ngushishi, Suguroi, Teleswani, Timau, Rongai, Burguret, Segera, Naromoru, Engare Ng'iro, Moyok, Ewaso Narok, Pesi and Ngobit rivers. The flow of these rivers matches the County's topography, which slopes gently from the highlands in the South to the lowlands in the North. In addition, there are two major swamps in the county namely; Marura Swamp which runs along the Moyok valley in Ol-Pajeta Ranch and the Ewaso Narok Swamp around Rumuruti town.

The Laikipia Plateau sustains a rich diversity of wildlife outside protected areas. The County forest cover stands at 9.89% with a tree cover of 12.13%. There are 7 gazetted forests in the county, namely, South Marmanet (4,527.2Ha), North Marmanet (3,688.3Ha), Shamanek (2,145.7Ha), Lariak (7,504.3Ha), Rumuruti (6,217.8Ha), Mukogodo (30,189.0 Ha) and Lusoi Hill (257.7Ha)

1.2 Ecological Conditions

The county is characterized with pastureland, rangeland, forests, wildlife, undulating landscapes and rivers among others. The high and medium potential land constitutes 20.5 per cent of the total county's land area making it suitable for crop farming. The remaining 79.5 per cent is low potential and suitable for livestock and wildlife.

Laikipia County has four (4) agro-ecological zones, namely:

Upper Highland Sub-Humid (UH 2-3) in Igwamiti and Githiga wards with well drained and fertile with plenty of humus and rainfall over 1000mm/year. Altitude is over 2100m, with temperatures ranging from 19 to 25°C. This is suitable for dairy, crop and fish farming.

Lower Highlands (LH 1-5) in areas such as Ngobit, Umande, Nanyuki, Thingithu, Igwamiti, Marmanet and Githiga where soils are moderately well drained with less

humus. Temperature ranges from 15 to 25°C with an altitude of between 1500 to 2100m. Rainfall ranges from 700 to 1000mm/year and is erratic but suitable for dairy, crop and fish farming.

Upper Midlands (UM5 - UM6) with poorly drained soils, and rainfall from 500 to 700mm/year in parts of Segera, Nanyuki, Tigithi, Rumuruti, Salama, Mukogodo East. Temperature ranges from 15 to 28°C. High evaporation. The area is suitable for beef rearing and crops such as sorghum, hay and millet.

Lower Midlands (LM3 - LM5) has shallow and less fertile soils and high evaporation. Rainfall ranges from 400mm to 500mm /year. Temperature ranges from 15°C to over 28°C. With an altitude of around 1500m, these form parts of Mukogodo East and West, Segera, Sosian wards suitable for ranching, beef and sisal farming.

However, in recent years, climate variability has shifted these agro-ecological zones with notable changes across the county.

1.3 Demography and Economy

Laikipia is a cosmopolitan and largely rural in settlement with over 32 main communities settled in the county. According to the 2019 Kenya Population and Housing Census (KPHC), Laikipia County had a total population of 518,560 persons comprising of 259,440 males, 259,102 females and 18 intersex. This population is projected to be 561,223 persons in 2023 and is expected to rise to 583,033 and 605,600 in 2025 and 2027 respectively.

The settlement patterns in the County are uneven and are influenced by land potential, livelihood zones, infrastructure access, land use systems and availability of social amenities. The main economic activities are crop farming, livestock rearing, ranching, tourism, accommodation, retail and wholesale trade, mining and quarrying, transportation, real estate, finance and insurance services. Manufacturing activities includes, among others, agro-processing, textile, automotive assembly, plastics, paper, chemicals, pharmaceuticals, steel mills and engineering products.

1.4 Administration and Urbanization

Laikipia County comprises of six administrative sub-counties namely Laikipia East, Laikipia North, Laikipia West, Laikipia Central, Nyahururu, and Kirima. The sub-county headquarters are at Nanyuki, Doldol, Rumuruti, Lamuria, Nyahururu and Ol Moran respectively. The County is further sub-divided into 16 divisions, 57 locations and 115 sub-locations.

There are six major urban centers in the county, namely, Nanyuki, Nyahururu, Rumuruti, Kinamba, Wiyumiririe and Karuga. The urban population projected to grow to 147,839 in 2023 and 155,778 and 164,142 persons in 2025 and 2027 respectively.

1.5 Public Infrastructure

The county has an elaborate transport system that facilitates connectivity between places and communities. These comprise road, railway and air transport networks. The roads within the rural areas are of gravel, murram, and earth status. Most rural roads remain impassable during extreme weather events such as floods thus hindering the movement of people, goods and services.

Other physical networks comprise energy, telecommunication, water reticulation, drainage and waste management systems whose provision collectively determines the level of development of an area. On the other hand, social infrastructure include Early Childhood Development and Education (ECDE), Vocational Training Centre (VTC), stadiums, social halls, cultural centers, childcare facilities, health facilities, markets, recreational sites and open spaces among others.

1.6 Human Development

Human Poverty Index (HPI): The county HPI stands at 57.3%, higher than the national average of 29.1%. The high poverty level is attributed to, among others, climate change, food insecurity, insecure land tenure, resource conflicts, inadequate social infrastructure and low literacy levels.

Education: Almost one in every four persons (25%) in Laikipia County has no formal education while 53% of the population has attained primary-level education. Only 23% of the population has secondary education and tertiary education (7.3%). In Laikipia North, the nearest primary school may be over 5km away from a settlement. Transition rates from pre-school to the next level is equally low. Other barriers include poverty, nomadic lifestyle and early marriage. It is projected that climate change will worsen these challenges.

Health: The average distance travelled to access the nearest health centers is 2-3km in the urban centers and 3-5 km in the rural areas. Laikipia North Sub is underserved with most health centers located above 5km away, which is below the recommended distance by the World Health Organization (WHO). It is projected that climate extremes and the resultant emergencies will exert pressure on existing health facilities.

Water: Majority of households (20.8%) in the county source their drinking water from rivers and streams. These are mainly households located in rural areas. Other sources include boreholes (10.3%), piped water into dwelling unit (12.5%), piped water into plot (19.7%), protected well (8.7%), public tap (6.5%), rainwater harvesting (5.8%) and dams (5.7%). Surface water often requires treatment due to pollution.

Energy: At 57.2%, firewood accounts for the main type of cooking energy among the rural population followed by Liquified Petroleum Gas (LPG) at 25%. Majority (85.8%) of households in Laikipia North rely on firewood for cooking, increasing the impacts of climate change in the county. Nonetheless, electricity is the main type of energy used for lighting followed by solar power. Biogas usage remains low even though the county has the potential to harness it owing to the prevalence of livestock keeping.

2 CHAPTER TWO: CLIMATE CHANGE IN LAIKIPIA COUNTY

2.1 Evidence of Climate Change in Laikipia County

Observed records for 1981–2024 show significant warming across Laikipia County, with notable peaks after 2000 and several extreme warm years surpassing the historical mean by more than +0.8 °C to +1.2 °C. The March April May (MAM) long rains and October November December (OND) short rain both exhibit upward temperature departures, though the warming rate is steeper during MAM, implying greater heat stress for crops and rangelands during the traditional planting season. Concurrently, hot days and hot nights have become more frequent, and frost events have declined, consistent with an overall shift toward warmer extremes.

Rainfall changes are seasonally asymmetric. During MAM, the long-rains mean has changed little overall (county average), although Laikipia East shows a modest upward trend (decadal means rising from ~214 mm (1976–85), ~224 mm (1986–95), to ~232 mm (1996–2005)) even as the number of rain days decreased (from ~29 to ~26 days per season and further decline in the number of light rainfall days (<5 mm/day)), implying higher event intensity. By contrast, OND has become wetter, with the seasonal total increasing by ~242 mm and a higher frequency of heavy-rainfall days (e.g., >20–50 mm/day), which has elevated the risk of flooding. Overall, the long rains are shorter, while short rains contribute a larger fraction of annual rainfall than in earlier decades. These hydro-climatic shifts heighten heat-stress risks for livestock and crops during MAM and flood risks during OND.

2.2 Projected climate trends in Laikipia County

Multi-model projections for 2025–2050 indicate continued warming under SSP2-4.5 and SSP5-8.5, with county annual maximum temperature increasing by approximately 2.0 °C under SSP5-8.5 relative to 1981–2010. The magnitude and spatial extent of warm extremes are notably larger under SSP5-8.5, particularly during MAM, when soil moisture deficits and clear-sky conditions amplify land-surface heating. Hot days (TX90p/TXx) and hot nights (TN90p/TNn) are projected to increase in frequency and duration, expanding heat-stress exposure windows for people, livestock, and crops.

Projected rainfall changes show a more complex pattern. Annual rainfall totals remain relatively stable, but seasonal redistributions and rainfall intensity changes are prominent. The OND rains are projected to become wetter and more intense, with ensemble medians indicating increases of +5–15% under SSP2-4.5 and up to +20% under SSP5-8.5, alongside more frequent heavy-rainfall days (≥ 20 mm and ≥ 30 mm). Conversely, the MAM rains exhibit slightly declining trends under both scenarios, reinforcing the observed shift toward shorter, more variable long rains. The combined projections portray a future where extremes become more defining. Such shifts will amplify flash floods, soil erosion and drought risks while also disrupting agricultural cycles, water services, biodiversity conservation and tourism.

3 CHAPTER THREE: CLIMATE GOVERNANCE

3.1 International and Regional Frameworks

International Frameworks: The international response to climate change is anchored on the United Nations Framework Convention on Climate Change (UNFCCC) of 1994. Kenya is a party to this convention, which means it has ratified and is bound by its provisions and participates in its meetings and negotiations. Kenya ratified the Paris Agreement on 28 December 2016. The Agreement aims to achieve net-zero emissions in the second half of the 21st century. It primarily focuses on mitigating climate change by limiting global warming to well below 2°C above pre-industrial levels, with efforts to limit it to 1.5 degrees Celsius. Under the Agreement, developed nations will support developing countries in responding to climate change.

International carbon markets are provided for under Article 6 of the Paris Agreement. This also allows for implementation of Nationally Determined Contributions (NDCs). Article 6 also establishes an international carbon market with multilateral governance under the UNFCCC, complete with common global standards. The United Nations (UN) Carbon Offset Platform provides an e-commerce platform where a company, an organization or a regular citizen can purchase carbon credits or simply support climate action. Kenya's carbon policy and institutional landscape is still evolving.

The Kyoto Protocol is an international agreement standing on its own, and requiring separate ratification by governments, but linked to the UNFCCC. The Kyoto Protocol, among other things, sets binding targets for the reduction of GHG emissions by industrialized countries.

The 2030 Sustainable Development Goals (SDGs) Agenda was adopted in 2015 by all United Nations Member States, outlines a broader set of goals and targets aimed at achieving sustainable development across economic, social, and environmental dimensions. It consists of 17 SDGs and 169 associated targets covering wide range of areas, among others, climate change, clean water, poverty eradication, health, education, gender equality, peaceful and inclusive societies for sustainable development, access to justice and accountable institutions.

Kenya has ratified other international frameworks such as the United Nations Convention to Combat Desertification (1994) and the Sendai Framework for Disaster Risk Reduction (2015–2030). However, implementation has been uneven. While desertification control programs have progressed in arid counties, disaster risk reduction remains underfunded and reactive rather than preventive.

Regional Frameworks: The East African Community (EAC) Climate Change Policy (2010) guides partner states on the preparation and implementation of collective measures to address climate change in the region. The African Union's (AU) Agenda 2063 commits to climate change actions that prioritize adaptation and climate-resilient economies. The Intergovernmental Authority on Development (IGAD) has also prepared the IGAD Drought Disaster Resilience and Sustainability Strategy. IGAD

member states (Kenya included) have developed Country Programming Papers for the Ending Drought Emergencies (EDE) at both levels of government.

3.2 National Frameworks

Constitution of Kenya (2010): The overall governance of climate change in Kenya is structured by the Constitution of Kenya which makes sustainable development a mandatory value and principle of governance and places a duty on all persons to pursue realization of ecologically sustainable development when using natural resources. Article 10 sets out the national values such as sustainable development. Article 42 provides the right to a clean and healthy environment for every Kenyan. The constitution creates 47 devolved County Governments which have key delivery roles in climate response. For instance, the Constitution mandates counties to intervene on climate-sensitive sectors such as water and sanitation, soil and water conservation, physical planning agriculture, forestry, public works, health, and tourism.

Kenya Vision 2030: The Vision integrates climate action into the Public Expenditure Management (PEM) cycle, aiming for a low-carbon and climate-resilient development. Climate change is a cross-cutting issue and, therefore, mainstreamed into the Medium-Term Plans (MTPs), which are the rolling five-year plans that implement the Vision. This ensures all sectors of both levels of government consider climate impacts in their planning, budgeting, and implementation.

National Climate Change Framework Policy (2016): In 2016, Kenya adopted Sessional Paper No.5 of 2016 on National Climate Change Framework Policy whose objectives is to enhance adaptive capacity and resilience to climate change and promote low carbon development for the sustainable development of Kenya. The Policy has identified the mainstreaming approach, as the principal mechanisms through which climate change actions will be implemented throughout Kenya.

National Climate Finance Policy (2017): Kenya's initial step towards a coordinated effort to identify, attract and use climate finance to further sustainable development goals. It sets out a guiding framework to enhance Kenya's financial systems and institutional capacity to effectively access, disburse, absorb, manage, monitor and report on climate finance in a transparent and accountable manner.

Climate Change Act (2016): To support implementation of the Policy, in the same year Kenya enacted the Climate Change Act (No.11 of 2016) that established the overall legal framework governing climate change actions in Kenya. The Act provides the regulatory mechanisms to implement climate change resilience and low-carbon actions in Kenya as enshrined the National Climate Change Action Plan (2023-2027)—to be developed in 5-year cycles and aligned with the Medium-Term Expenditure Plans (MTPs)—as its principal implementation instrument. County governments are required to domesticate the Act. The National Adaptation Plan (2015-2030) aims to integrate climate change into national and county level development planning while enhancing resilience of vulnerable populations to climate shocks.

National Climate Change Action Plan (2023-2027): The National Climate Change Action Plan (2023-2027) provides an implementation mechanism for the Climate Change Act (2016). The Climate Change Act (2016) anticipates that the Plan will *“guide the country toward the achievement of low-carbon climate-resilient sustainable development.”*

National Adaptation Plan (2015-2030): Kenya places significant priority on adapting to the effects of climate change. Priority adaptation actions for Kenya are set out in the 2015-2030 Adaptation Plan. The implementation of this plan, just like the NDC, is to be undertaken by both the National and county governments in Kenya, including the County Government of Laikipia.

Nationally Determined Contributions (2020-2030): Kenya is a minimal contributor to global GHG emissions. In 2013, Kenya ranked 94 out of 162 nations for CO₂ emissions. Nonetheless, Kenya submitted its first Nationally Determined Contributions (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat in July 2015. Kenya submitted its revised NDC in 2020 which commits to a 32% reduction in emissions by 2030 compared to the business-as-usual scenario. The updated NDC has priority measures for disaster risk reduction, energy, land use, ecosystems and nature-based solutions, agriculture, infrastructure, transport, waste management, blue economy, water and sanitation, health, urbanization and housing, tourism, whole of society engagement, and private sector engagement. However, successful implementation of the NDC is in doubt as the estimated cost is USD 62 billion (13% unconditional and 87% conditional financing) from 2020 to 2030.

Climate Smart Agriculture Strategy (2017-2026): Aims to build resilience, boost food security and reduce greenhouse gas emissions in the agricultural sector. The strategy integrates climate-smart approaches into national agricultural policies to meet food security goals while also reducing the impacts of climate change.

Climate Change (Amendment) Act of 2023 is Kenya’s first attempt at regulating carbon markets. As a signatory to the Paris Agreement, Kenya has committed to developing domestic legislation and institutional frameworks to govern her engagement in the carbon market and non-market mechanisms. It is against this backdrop that the government adopted these amendments.

Water Act (2016): The Act promotes climate resilience in Kenya through decentralized water management, the establishment of new water management institutions, and the integration of water conservation and protection measures into the legal framework. It decentralizes water service provision to county governments while ensuring national oversight, and requires the mainstreaming of climate change into development plans. The Act also mandates regulations for water permits, promotes water conservation, and strengthens the protection of water catchment areas to ensure sustainable water supply despite climate-related challenges

Forest Conservation and Management Act (2016): The Act promotes sustainable forest management to increase carbon sequestration, protect biodiversity and build climate resilience. The Act also promotes Public-Private Partnerships (PPP) for forest

management, with a goal to increase forest cover to 30% by 2032. The Act is designed to meet national, regional and international climate goals by establishing a legal framework for the participatory use forest resources, which are crucial for mitigating climate change and adapting to its impacts.

Wildlife Conservation and Management Act (2014): The Act promotes ecosystem-based management, community and private wildlife conservancies. By maintaining connected habitats and migration corridors the Act allows wildlife to respond to a changing climate and reduce human-wildlife conflict arising from scarce resources during droughts. These elements collectively enhance the resilience of natural systems and local communities to the impacts of climate change.

Community Land Act (2016): The Act promotes climate resilience in Kenya primarily by legally securing community land rights, which empowers local communities to manage their resources sustainably and make informed decisions about land use and conservation. The Act specifically requires communities to establish measures for the sustainable conservation of natural resources on community land. This is crucial in maintaining ecosystem services that support climate resilience.

National Migratory and Invasive Pest and Weed Management Strategy (2022 -2027) calls on both levels of government to identify and map out all areas affecting by invasive species of plants in order to plan an appropriate response. The Strategy's target focuses on eliminating, minimizing, reducing and mitigating the impacts of invasive species by 50% by the year 2030.

The Public Finance Management (Climate Change Fund) Regulations were enacted in 2016. Among other objectives, the Fund will support activities that help counties adapt to climate change. There is established a Fund Management Committee. The Committee shall manage the Fund in accordance with Section 116 of the Public Finance Management Act (2012). Specific activities funded included, among others, climate resilience assessments, climate change response projects, climate change research, public education on climate change, capacity building for climate change response, monitoring and reporting on climate change response.

3.3 County Frameworks

Laikipia County Climate Change Act (2021): This is the main legislation guiding climate change response in the county. Among others, the Act provides for the establishment of the County Climate Change Fund which is 2% of the County development budget in addition to other sources of climate finance. It sets up an elaborate institutional framework tasked with coordinating climate response in the county including Steering Committee, County Climate Change Planning Committee and Ward Climate Change Planning Committee (WCCPC).

Laikipia County Disaster Policy (2018): Provides guidance towards the mainstreaming of disaster risk reduction across various sectoral functions. Disaster risk reduction ensures hazards, such as extreme weather events (floods, droughts, winds) do not combine with vulnerabilities to result in disasters. The Policy creates a Disaster Coordination Unit

located at the Governor's office to take lead in coordinating county efforts and collaborate with stakeholders and partners in Disaster Risk Reduction.

Laikipia County Integrated Development Plan (2023-2027): The County Integrated Development Plan (CIDP) guides the County on the project and programs for implementation in the five years span. In the CIDP, the projects aimed at addressing the issues related to climate change are domiciled in the climate change directorate. However, since

Laikipia County Climate Change Action Plan (2023-2027): The Action Plan provides for the specific measures and actions to respond to climate change within the County. Among other objectives, the Action Plan will to enable Laikipia County to take significant steps to combat the negative impacts of climate change and enhance the resilience of county residents. The Action Plan runs for a period of 5 years and is aligned with the National Climate Change Action Plan and CIDP.

Laikipia County Environment Action Plan (2025 – 2029): Aims to promote sustainable environmental practices, conservation education and responsible land-use practices so as to attain the vision of *“A healthy, resilient and sustainably managed environment that supports biodiversity, enhances livelihoods, and drives economic prosperity in Laikipia County”*.

Laikipia County Spatial Plan (2022 – 2032): Provides an overview of land use planning, natural resources and climate change across the county. It also provides land use planning interventions needed to mitigate and adapt to the effects of climate change.

Laikipia County Forest Conservation Strategy (2013-2030): Proposes various actions for medium and long-term management of forests in the County, among others, undertaking assessments of all gazetted and on-farm forests, incentivize tree growing and collaboration with the national government towards achieving 10% forest cover.

4 CHAPTER FOUR: POLICY GOALS, OBJECTIVES AND GUIDING PRINCIPLES

4.1 Mission and Vision

Mission: To protect our community and environment through locally-led actions to reduce emissions, build climate resilience and promote sustainable practices for a healthier and equitable Laikipia.

Vision: A climate resilient Laikipia County where communities thrive in harmony with nature, driven by sustainable development and guided by environmental stewardship.

4.2 Goal

To enhance the resilience of Laikipia communities by implementing local policies, strategies and actions that reduce climate risks, support sustainable livelihoods, and restore the natural environment.

4.3 Objectives

Objective One: To put in place strategies, actions and interventions that build adaptive capacity, enhance climate resilience and strengthen capacity for disaster risk reduction while supporting the public, private sector actors' and communities involved in low carbon development.

Objective Two: To promote low carbon and climate smart development by scaling up clean energy, restoring ecosystems for carbon sequestration, biodiversity conservation, strengthening sustainable water management, and advancing nature finance, green transport, and equitable benefit-sharing mechanisms

Objective Three: To mainstream equity, inclusion and intergenerational learning across all aspects of County climate change response, including Alternative dispute resolution.

Objective Four: To establish an effective and transparent framework for resource mobilization and utilization for climate and ecosystem resilience and low-carbon development.

Objective Five: To establish and strengthen partnerships and multisectoral institutional structures for coordination and systematic integration of climate change adaptation and mitigation across county policies, plans, programmes, projects, budgets, and processes.

Objective Six: To strengthen Laikipia County climate information systems to enhance evidence-based decision making through transformative research, timely dissemination of early warning advisories and regular monitoring, evaluation, reporting and learning.

4.4 Guiding principles

Right to a clean and healthy environment: under the 2010 Constitution every person in Kenya has a right to a clean and healthy environment and a duty to safeguard and enhance the environment.

Sustainable development: The Constitution of Kenya provides that every person has a responsibility to cooperate with the State, and with other persons to protect and conserve the environment and ensure ecologically sustainable utilization of natural resources.

Mainstream climate change actions into decision making and implementation by all actors in Laikipia County

Affirmative action, equity, inclusivity and equality: Decision making concerning climate change should internalize the need for equality, while taking into the account constitutional requirements for affirmative actions in favour of vulnerable and marginalized groups, and the obligation for gender mainstreaming.

Decentralization of climate change engagement and activities to the lowest levels of county government administration.

Implementation of meaningful public consultation and public awareness in all elements of climate change decision by the county government and provision of feedback to the public.

Transparency, accountability and good governance in the selection and climate change adaptation and mitigation options for the County.

Effective public administration structures for implementation of climate change actions and interventions by the County.

Value For money to ensure the mainstreaming of climate change adaptation and mitigation actions focuses on areas that enable the County to maximum benefit in building resilience, enhancing adaptive capacity, and mitigation actions implemented with meaningful public consultation.

5 CHAPTER FIVE: CLIMATE CHANGE ADAPTATION

5.1 Agriculture, Livestock and Food Security

5.1.1 Agriculture, livestock and food security

Climate variability affects agriculture through increased frequency of extreme weather events like droughts and floods. These impacts are compounded in arid and semi-arid regions of the county due to the heavy reliance on rain-fed agriculture. Even though irrigation is widely practiced along major rivers in the county, adoption by smallholder farmers remains low due to the costs involved. Floods and prolonged droughts often lead to widespread crop failure. Climate variability is also linked to increased incidences of crop pests and diseases, post-harvest losses difficulty in planning farmer's agricultural calendar. Taken together, these impacts lead to lower yields, food insecurity, higher food prices, loss of income and increased incidences of poverty.

Pastoralism, ranching and wildlife conservation are widespread in the county, but reliable availability of pasture and water for livestock remains a challenge due to climate change. There is an increase in incidences of new livestock diseases (Rift Valley Fever, Trypanosomiasis and Q-fever) as a result of climate variability. Recurrent droughts have increased livestock losses, food insecurity and the financial cost of restocking. Drought has also been partly blamed for increased incidences of insecurity due to cattle rustling, which causes loss of lives, property and displacement. The pastoral areas have historically experienced low investments thus depressing other economic activities complementary to pastoralism. This results in households maintain large herds to mitigate losses in the event of extreme weather events such as drought. The resulting degradation of land makes it difficult for the ecosystem to regenerate.

The county is also experiencing invasive plant species, among others, *Opuntia stricta*, *Opuntia ficus-indica*, *Opuntia engelmannii*, *Acacia reficiens*, *Acacia mearnsii*, *Acacia melanoxylon*, *Caesalpinia decapetala*, *Cestrum aurantiacum*, *Parthenium hysterophorus*, *Prosopis juliflora* and *Austrocyindropuntia subulate*. These invasive species might have been intentionally introduced for ornamental purposes or invaded the region through natural dispersal from surrounding areas. These plants have become aggressive, covering hundreds of acres in Il Polei, Makurian, and Morupusi Group Ranches in Laikipia North, as well as Dol-Dol town. The invasion has adversely affected conservation, rangelands and cultivation areas. Some species outcompete native vegetation, negatively impacting pasture and browse for both wildlife and livestock. Other species can injure animals and block humans from accessing vital resources.

5.1.2 Policy Statement:

The County Government will continuously plan, design and implement actions to protect soil fertility, crop productivity, rangeland health and household food security through mainstreaming of climate smart agriculture and livestock production.

5.1.3 Policy Directions:

The County Government will:

1. Map out land suitable for agriculture and pastoralist activities across the County and implement plans to ensure compatibility of farming and livestock activities, including through appropriate investments.
2. Invest in modifications to pastoralism practices, including stocking levels, and changes to transhumance practices due to diminishing availability of pasture, water and land for livestock movement.
3. Identify and support investments in supplementary nutritional options for livestock (both zero-grazed and pastoralist) to ensure planned intervention in building herd resilience in recurring drought periods in order to lower financial and security costs of restocking.
4. Develop and implement a programme for intensive research on new, emerging and evolving incidences of livestock diseases resulting from climate change.
5. Put in place an irrigation programme for smallholder farmers, taking into account reliability of water sources, and the costs of developing and operating irrigation infrastructure.
6. Invest in enhanced agro-forestry at farm level and dryland farm forestry in the rangeland, with clear plans to incentivize households to actively participate in the tree growing process, such as through preference to fruit trees.
7. Design and invest in soil protection activities at farm and household level to protect soil from degeneration and permanent damage that results in low resilience to climate change.
8. Negotiate agreements with neighbouring counties, and the national government, to regulate the movement of pastoralists from neighbouring counties into Laikipia during periods of drought.
9. Expand social protection programmes for food security for vulnerable households, including school feeding programmes.
10. Conduct an inventory of land degradation in the county and initiate corresponding measures that improve rangeland health including eliminating, minimizing, reducing and mitigating the impacts of invasive species.
11. Promote the use of conservation agriculture.

5.2 Water, Sanitation and Hygiene

Climate variability has increased the negative impacts on the environment. Environmental decline is contributing to the loss of critical services, including provision of clean water. Increased deforestation has affected the upstream catchment areas, resulting in reduced river flow volumes. Together with increased abstraction for irrigated farming, the result is diminished water downstream users. Water scarcity is particularly worse for downstream pastoralist communities who have to travel long distances to the nearest source, sometimes exposing women and girls to Gender-Based Violence (GBV) or resulting in human-human or human-wildlife conflicts.

Droughts are projected to be more frequent and severe in future. This will result in reduced water volumes and the complete drying up of seasonal rivers and springs. This will affect water supply, with cascading impacts on other sectors such as agriculture, health and manufacturing. The sustainability of wetlands in the county is also threatened by land use change. This has significantly reduced their ecological and life support functions. Unregulated sand harvesting also limits groundwater recharge and causes riverbank breakage especially in Laikipia North. Consequently, this expands the damage area during floods. Moreover, floods and the resulting siltation will worsen pollution of surface water sources and damage associated infrastructure, thereby limiting availability of clean water while increasing the cost of water treatment. Displacement of households is also common in flood-prone areas of the county.

The highest number of households (20.8%) source their drinking water from rivers/streams. These are mainly households located within rural areas. Other sources include boreholes (10.3%), piped water into dwelling unit (12.5%) and piped water into plot (19.7%), protected well (8.7%), public tap (6.5%), rainwater harvesting (5.8%) and dams (5.7%). Due to pollution, however, the quality of water from these rivers requires treatment before human consumption. Other challenges facing rivers include, among others, unregulated abstraction for irrigation, drying of perennial streams due to climate change, siltation and encroachment on riparian reserves.

5.2.1 Policy Statement:

The County Government will implement climate actions that safeguard the environment, water resources, supplies and sanitation through protection from environmental degradation, water catchment management, and resilient water services.

5.2.2 Policy Directions:

The County Government will:

1. Implement actions that halt and reverse environmental degradation, including through integration of these actions by the relevant sectors in the county.
2. Put in place suitable programmes for reforestation and afforestation, in both uplands and lowlands and provide appropriate household and community incentives to increase participation in tree growing.
3. Develop and implement river-based sand harvesting guidelines.
4. Support the Water Resource Authority (WRA) in regulate water abstraction by upstream and downstream communities to ensure equitable allocation.
5. Promote appropriate water recycling to reduce pressure on freshwater resources.
6. Require that design and construction of roads in the county integrates roadside ponds for harvesting water for groundwater recharge.
7. Require all commercial farms to develop and maintain capacity dams to ensure a 90-day storage capacity during droughts without additional abstraction.
8. Take actions to ensure there is a high standard of protection for riparian areas and riverbank protection.

9. Collaborate with WRA to map ground water aquifers in the county in order to develop a baseline for development of groundwater sources.
10. Provide incentives and support to urban and rural households to harvest, store and treat rainwater for domestic use to relieve pressure on freshwater resources
11. Modify the requirements for development control and permitting to require, progressively, that all new development projects include provision for rainwater harvesting and storage that is proportional to their area and usage.

5.3 Health

Health is a core function of the County government and one sector that is impacted by climate change. Climate variability limits crop and livestock production, thereby accelerating food insecurity and malnutrition. Frequent droughts have led to the drying up of rivers thus compromising water quality. Consequently, the health effects are seen in the rising number of people suffering from waterborne diseases and mental health problems occasioned by loss of livelihoods. Heat stress-related mortality is also projected to increase among people aged 65 years and above.

Climate change significantly threatens maternal health by intensifying existing vulnerabilities in healthcare systems and living conditions. Rising temperatures, droughts, and floods reduce access to clean water, nutrition, and essential health services, which are critical for safe pregnancies and childbirth. Malnutrition is a concern, with stunting at 18% and wasting at 5% among children under five in the county. Conversely, floods increase disease prevalence due to poor sanitation. The common practice of open defecation worsens the risk of contamination of water sources. Consequently, there is an increase in the frequency and geographical spread of disease vectors and infectious diseases like diarrhea, typhoid fever and malaria. Indeed, the malaria transmission rate in Laikipia County is higher (1%-5%) compared to other counties in the region.

Increased temperatures and rainfall also create more breeding sites and extend the breeding seasons for insects like mosquitoes and tsetse flies, leading to increased incidences of zoonotic diseases in new or previously less-affected areas. Some of these diseases are to humans from livestock or wildlife, among others, Rift Valley Fever (RVF), trypanosomiasis, brucellosis, anthrax and q-fever. Zoonotic diseases also impact household incomes through livestock losses and increased cost of production. Moreover, the entry of lifestyle diseases is causing additional strain on the medical system. When primary health care services are stretched, it is difficult to respond to the health emergencies from climate extremes. Therefore, understanding of livestock-human-wildlife interfaces are crucial in addressing climate impacts in the county.

5.3.1 Policy Statement:

The County Government will continuously map out climate risks and vulnerability of human health, and to the health system and implement actions to enhance resilience

5.3.2 Policy Directions:

The County Government will:

1. Invest in food security including ECDE feeding programme to address the problem of malnutrition across the county.
2. Identify all health and public health challenges arising from climate change and develop a sectoral plan to address them, including financing.
3. Address the health-related impacts of climate change by ensuring that access to a primary healthcare is within a standardized distance for all residents.
4. Leverage on the Kenya Community Health Strategy to implement climate change adaptation and mitigation actions in the county.
5. Improve disease surveillance, prevention and control through coordinated measures among state and non-state actors by leveraging on the One Health Strategy for the Prevention and Control of Zoonotic Diseases in Kenya.

5.4 Education

Climate extremes such as floods affect education directly through damage to school infrastructure and learning materials, unsafe travel routes, poor sanitation and heightened health risks. Floods and storms also make it difficult for students to get to school. Floods can increase vector-borne diseases among students such as malaria and cholera while heat waves reduce student concentration in class. Taken together, these challenges disrupt schooling, increase absenteeism and lead to lower academic performance and enhance inequality in access to education.

The indirect impacts of climate change on education is as a result of the sector's linkages with agriculture, food security, livelihoods and household incomes in agriculturally dependent communities such as Laikipia County. Droughts may alter wildlife migration patterns thus posing a danger to school-going children through human-wildlife conflicts. Droughts also trigger resource conflicts (human-human), leading to absenteeism in schools.

Reduced agricultural productivity implies that many rural households cannot afford fees for their school-going children. Food insecure (hungry) children often miss school, as they (and their families) resort to seeking opportunities to get food, firewood and water. Moreover, malnutrition during critical windows, especially the first 1,000 days of life, can cause permanent structural damage to the developing brain, leading to impaired cognitive function and poor academic achievement. Other barriers to education in the county include, among others, poverty, nomadic lifestyle, teen pregnancies and under-sourced schools. It is projected that climate change will worsen these challenges.

5.4.1 Policy Statement:

The County Government will integrate climate change into the pre-primary and vocational education system to equip learners with the knowledge and skills to drive a low-emission and climate-resilient economy.

5.4.2 Policy Directions:

The County Government will:

1. Work with mandated institutions to reorient education and equip learners with age-appropriate knowledge, skills, attitudes, and values necessary for climate change mitigation and adaptation
2. Expand feeding programmes in ECDE schools to increase enrolment, retention and transition of vulnerable learners in collaboration with relevant state and non-state actors
3. Establish and revitalize Climate Change Clubs in pre-primary and vocational institutions
4. Enhance investments of public funds into research and development of innovative solutions that contribute towards mitigation and the building of resilience and enhancing adaptive capacity.
5. Empower communities to participate in climate response by utilizing schools as knowledge hubs

5.5 Trade

Counties have a role in trade development and regulation. Laikipia County's business environment comprises numerous large, Micro and Small Medium Enterprises (MSMEs). Trade and manufacturing sectors are often indirectly affected by climate change, as they depend on climate sensitive sectors such as agriculture, transportation and energy. Most tradable goods in the county come from the agriculture sector. The county's overreliance on rain-fed agriculture makes it vulnerable to disruptions caused by climate variability such as drought, frost bite and floods. These affect crop yields and livestock productivity. Reduced agricultural productivity occasioned by climate change may lead to reduced supply of raw materials for agro-processing or even green grocery markets.

The County's potential for industrialization is yet to be fully exploited as most of the industries are agriculture-based. Other threats include reduced manufacturing and trade activities due to power outages occasioned by either low power production or power rationing (for climate-sensitive sources such as hydro, wind and solar) or even damage to power distribution infrastructure by floods. Conversely, destruction of transport infrastructure by floods often limits movement of people, goods and services, thus hindering trade and manufacturing.

5.5.1 Policy Statement:

The County Government will encourage "green growth" to ensure its economic transformation is environmentally sustainable, with a strong focus on scaling up low-carbon and climate-resilient investments in trade and related sectors

5.5.2 Policy Directions:

The County Government will:

1. Support low-carbon, climate-resilient growth and a diversified trade sector to meet national and international development goals

2. Support bankable green-growth actions by MSMEs including women-owned and youth-owned enterprises for job creation, poverty alleviation and climate resilience
3. Establish and strengthen producer groups to increase agricultural production, agro-processing and marketing opportunities for increased incomes and climate resilience
4. Support a robust and diversified trade sector by minimizing climate change-related disruptions and promoting adaptation in the trade sector.
5. Promote the development and transfer of technologies to support climate change adaptation and mitigation while also enhancing competitiveness of Laikipia County's traded goods and services.

5.6 Public Infrastructure

The country has already witnessed damages and disruptions to its social infrastructure mostly due to floods. Conversely, high temperatures may lead to softening and expansion of tarmac roads and, in turn, create rutting and potholes or even weaken bridge joints. Rising temperatures also put a strain on outdoor infrastructure and reduce outdoor labor productivity. This can affect the lifespan and performance of various infrastructure components in the county. Taken together, these impacts have significant economic costs, increase maintenance budgets and vulnerability to climate change.

The national Climate Change Act (2016) requires county governments to mainstream climate change actions, interventions and duties into various sectors. Therefore, counties are required to integrate climate risks into all forms of public infrastructure development. However, specific national legal frameworks on spatial and urban planning do not explicitly consider climate change or even address energy efficiency in buildings. These include Physical and Land Use Planning Act and Regulations (2019), Urban Areas and Cities Act (2011) and National Building Codes (2022). Consequently, the appraisal of most county infrastructure projects not require climate response. The National Environmental Management Authority (NEMA) has also updated its Environmental and Social Impact Assessment (ESIA) regulations but without specifics on climate change. Other government agencies have developed guidelines to integrate climate change, but these are mostly applied to development partner funded projects.

5.6.1 Policy Statement:

The County Government will climate risk assessments for infrastructure projects, promoting green infrastructure, and ensuring that climate considerations are mainstreamed into all planning and implementation processes to protect against climate shocks and meet development goals

5.6.2 Policy Directions:

The County Government will:

1. Support retrofitting of existing social infrastructure to become more resilient to the adverse impacts of climate change.
2. Build the capacity of county technical officers on the concept and practical application of climate-proofed infrastructure

3. Ensure that climate-related risks are identified adequately assessed before project implementation to enhance infrastructure is resilience
4. Prioritize a development pathway that combines adaptation and mitigation, focusing on infrastructure that contributes to low-carbon development and reduces GHG emissions
5. Initiate infrastructure projects that support the achievement of Kenya's Vision 2030 goals, including sustainable development and economic prosperity
6. Integrate mandatory requirements for screening of all development permit applications for climate-proofing and compliance with SEIA requirements.
7. Expand green spaces in built-up areas as part of green infrastructure, reduce the heat island effect and improve air quality.

5.8 Wildlife Conservation and Tourism

Laikipia County is richly endowed with wildlife, extending to Aberdare, Samburu, Meru and Mt. Kenya wildlife corridors. Wildlife is mainly found in the private conservancies, private ranches, group ranches of Laikipia North, forests and pockets of small-scale holdings. As a result, Laikipia County has the greatest number of wildlife outside the protected areas in the country. This explains why tourism is one of the county's main economic activities. The tourism industry has also spurred other economic activities.

The connection of tourism to the natural environment makes the sector highly vulnerable to climate change. The critical natural resources that support wildlife conservation and the different tourism activities continue to face pressure from human activities and climate change. Rumuruti, Lariak and Marmanet forests have faced pressure on extraction of forestry products from nearby communities leading to loss of biodiversity. Recurrent droughts also contribute to degradation of community owned ranches, leading to increased pressure on forests and other wildlife habitats by pastoralists in search of pasture. This is evident, for instance, in Mukogodo forest. Land degradation on community owned land also diminishes the number of wildlife, thus reducing tourism opportunities. Moreover, the county continues to rely on foreign visitors whose arrival is subject to various global shocks.

Evidence suggests that severe droughts are causing shifts in wildlife distribution patterns and loss of biodiversity including extinction of endemic species. Frequent droughts also impact tourism as wildlife competes for water and other resources with humans or even livestock. Wild animals often stray into inhabited areas where they destroy crops or come into conflict with humans or livestock.

5.8.1 Policy Statement:

The County Government will develop and implement plans to enhance the resilience of wildlife conservation and the contribution of tourism to the local economy.

5.8.2 Policy Directions:

The County Government will:

1. Implement measures for the protection and rehabilitation of landscapes that serve as habitats for wildlife.
2. Support the sustainable use of community ranches to accommodate mix use of settlement, pastoralism, conservation and wildlife management.
3. Undertake a study on development of tourism for community ranches as a measure to build resilience of communities.
4. Develop a plan and incentives for enhancing domestic tourism to Laikipia county.
5. Continuously identify hotspots for human-wildlife conflict and implement preventive actions in collaboration with mandated agencies.
6. Put in place disaster management plans to provide water for wildlife in situations of extreme drought in collaboration with mandated agencies.
7. Develop a county-wide wildlife and tourism strategy that systematically integrates climate change adaptation actions.
8. Screen tourism activities to ensure compliance with climate change mainstreaming considerations in collaboration with mandated agencies.
9. Promote green tourism by supporting the development of environmentally responsible and climate-friendly niche products.

6 CHAPTER SIX: CLIMATE CHANGE MITIGATION

6.1 Energy, Forestry conservation and management

While the County, just like Kenya is a low-level emitter of GHGs, it is important for the county to transition to a low carbon economy. Clean energy usage for cooking in the county remains low, with only 25% of households using LPG, while a significant majority rely on firewood (57.2%). Challenges include affordability, unreliable electricity supply and low levels of awareness on clean energy. Still, while Non-Motorized Transport (NMT) provides a green alternative, the county lacks infrastructure for NMT such as dedicated paths for cyclists and pedestrians in urban areas. Energy efficiency varies, with LED bulbs widely adopted. However, low efficiency in cooking technologies and water distribution systems remains prevalent.

The forests in Laikipia provide habitat for wildlife and are rich in biodiversity, which also provides pasture for livestock. Forest functions, for example, regulation of environmental services, have the impact of sequestering carbon with the adaptation co-benefits of increased agricultural productivity. However, climate change has negatively impacted the forest ecosystem in Laikipia County through increased drought causing, among others, reduced tree growth, increased mortality, lower regeneration and shift in species composition towards more drought tolerant species. Frequent forest fires are also linked to climate change, leading to the loss of forest area, damage to seed bank, soil degradation and loss of carbon stocks among other negative impacts.

Indigenous forests like Mukogodo are facing significant risk of degradation due to recurrent droughts, overgrazing and charcoal burning. This is enhancing the fragility of the rangelands and removing the ecosystem connectivity that is required for optimal function, especially in the face of climate change. One emerging practice that is highly destructive is the cutting of entire trees or substantive parts in order to feed livestock, instead of careful harvesting. The endemic dryland tree, Leleshwa (*Tarconanthus camphoratus*) is particularly under threat. Leleshwa is a drought and fire-resistant tree that is traditionally value for its medicinal value, and due to its extensive root system, which can be used for dune fixation and prevention of soil erosion.

In the highlands section of the County, intensified small holder and large-scale farming has resulted in reduction in the overall area of tree cover as more land is cleared for farming. This negatively impacts the ability of these highlands to serve as water catchments. Average levels of farm-level tree cover remain low due to competition for arable farming land, settlement, and expanding aridity. Destruction to soil, and the resulting low levels of soil resilience have diminished biodiversity cover.

6.1.1 Policy Statement:

The County Government will implement actions towards the achievement of the national tree cover of 32% by 2030, expand carbon sinks and enhance tree growing by communities across the county.

6.1.2 Policy Directions:

The County Government will:

1. Set a county-wide target of attaining an overall thirty percent (30%) forest tree cover by the year 2035.
2. Support the introduction of alternative forms of household energy sources to replace firewood and charcoal.
3. Implement programmes for development of community woodlots to provide ready sources of fuelwood and prevent unlawful and haphazard cutting down of trees.
4. In collaboration with the National Governments Climate Change Directorate, develop and implement a plan on the overall contribution of the County's forest and tree cover to the national GHG inventory.
5. Develop a collaborative framework with the Kenya Forest Service to support the County in implementing forestry activities, and to harmonize land use activities in areas adjacent to public forests.
6. Require that approvals for urban development integrate green spaces and public recreational parks.
7. Support private and community landowners to set aside, establish and maintain forests and register with Kenya Forest Service (KFS) to access incentives.
8. Develop guidelines to ensure that tree planting and growing in the county prioritizes indigenous trees and high value trees such as fruit trees and fodder.
9. Domesticate the National Migratory and Invasive Pest and Weed Management Strategy (2022 -2027) and implement a programme for responding to invasive alien species of plants in the county
10. Support sustainable utilization and revenue generation through self-regulation by registered Charcoal Producers Associations in the county
11. Support Alternative Income Generating Activities (IGAs) to ease pressure on the county's forest resources.
12. Collaborate with the national government to optimize the existing grid network through densification and intensification to improve reliability and meet increasing demand.
13. Support the retrofitting of public buildings and streetlights with energy-efficient LEDs and automatic controls and install solar PV systems in county institutions and water supply systems to cut energy costs
14. Encourage private sector investments in Electric Vehicles (EVs), transition county motor vehicles and motorbikes to electric models for sustainability.
15. Invest in NMT in collaboration with the national government
16. Introduce incentives and reward green champions at various levels: community, county government, private sector and development partners

6.2 Carbon Markets

Carbon trading is designed to limit carbon emissions resulting from industrial activities. The Climate Change (Amendment) Act of 2023 is Kenya's first attempt at regulating carbon markets. County Governments now have a role in supervising carbon development agreements between investors and local communities. The legislative legal and institutional landscape for carbon markets is still evolving. This is happening in a context of inadequate knowledge on how carbon markets work.

Widely adopted around the world, carbon credits still divide opinion. Those opposed to carbon offsets call the trade "a scammer's dream scheme" and the next big thing in "greenwashing." Observers have also raised concerns on pricing that seldom reflects the accurate value of Africa carbon credits and their co-benefits. Other challenges include limited home-grown project developers, high cost and long lead times for certification, validation and verification as well as low economic viability for many projects due to insufficient carbon credit revenues. There is also a high degree of local community buy-in to ensure project success. Indeed, lack of Free and Prior Informed Consent (FPIC) has been provided as a ground for invalidating carbon projects in Kenya.

6.2.1 Policy Statement:

The County Government will encourage "green growth" to ensure its economic transformation is environmentally sustainable, with a strong focus on scaling up low-carbon and climate-resilient investments in trade and related sectors

6.2.2 Policy Directions:

The County Government will:

1. Publish the County GHG inventory in accordance with the Paris Agreement, national legislation, rules and regulations. The report will document the county government's effort in meeting emission reduction targets in Kenya's NDC.
2. Support local capacity building for project design, development, implementation, monitoring and verification.
3. Support carbon trading through appropriate incentives to project proponents and local communities
4. Ensuring compliance with national and international carbon standards and methodologies
5. Safeguarding community rights and establish transparent benefit-sharing arrangements
6. Oversee the drafting, execution, implementation and review of Community Development Agreements (CDA) in accordance with existing legislation
7. Ensure project proponents have a Social and Environmental Impact Assessment (SEIA) Report approved by the mandated agency
8. Demand evidence of community consultations, Free and Prior Informed Consent (FPIC) and related resolutions from affected communities.
9. Promote Alternative Dispute Resolution (ADR) in the resolving grievances that may arise between project proponents and affected communities.

6.3 Sustainable Waste Management

Sustainable waste management contributes to climate change mitigation by reducing GHG emissions through waste reduction, reuse, recycling, and energy recovery. The rate of waste generation is relatively high for both households and businesses in the county's urban areas. The main methods of disposal for solid wastes include burning in the open (33.5%), burning in a pit (25.1%) and collection by the County Government (15.4%). Open dumping of solid wastes in vacant plots, drains, and waterways remains a persistent challenge. This ultimately results in environmental pollution, heightened risk of contracting diseases and clogging of drainage lines. With a growing population, the Laikipia County needs a sustainable waste management system for both rural and urban areas.

Solid waste emissions from landfills and dumps represent the majority of methane emissions from the sector. Plastics also break down into harmful chemicals that damage the ecosystems, killing wildlife and disrupting natural lifecycles. While not directly linked to climate change, this is still an important factor regarding wider themes of sustainability. As waste generation is tightly tied to population growth, the largest increases are projected to occur in Sub-Saharan Africa (including Kenya). However, waste management systems are either poor or non-existent in Laikipia County. This will lead to increased emissions of GHGs, thereby accelerating climate change.

6.3.1 Policy Statement:

The County Government will implement actions that promote sustainable waste management, circular economy and emissions reduction from landfills and dumps.

6.3.2 Policy Directions:

The County Government will:

1. Domesticate the national Sustainable Waste Management Act (2022) and implement a comprehensive county waste management strategy that reinforces climate change mitigation
2. Enforce regulations on Extended Producer Responsibility (EPR) in collaboration with mandated agencies.
3. Ensure domestic energy sufficiency by promoting the production and use of biogas from the livestock sector and through the capture methane-rich biogas from landfills.
4. Reconfigure landfills and dumpsites to support composting initiatives that create manure for subsequent use in the agriculture and greening initiatives
5. Support a circular economy model where products are designed to be reused, repaired and recycled as a way of minimizing waste production and associated climate impact.
6. Support job-creation through Public Private Partnership (PPP) in the waste-to-energy projects, recycling, production of manure and other initiatives that turn waste into a valuable resource.

7 CHAPTER SEVEN: VULNERABLE GROUPS

The impacts of climate change increase existing vulnerabilities owing to age, gender, disability, illness and lack of agency. In Laikipia County, women who rely heavily on natural resources for their livelihoods, are particularly vulnerable to their depletion. In Laikipia North, women often walk long distances in search of water and firewood which makes them vulnerable to GBV, early onset of arthritis and poisonous smoke while cooking. Recurrent droughts also increase food and nutrition insecurity. Again, women bear the brunt as they tend to prioritise feeding their families over themselves.

Gender-based norms also relegate women and girls to subordinate positions in the society. This disempowerment makes them more susceptible to the negative impacts of climate change. For example, girls may be pulled out of school to help with household chores or to support families facing economic hardship due to climate-related disasters. Young girls are also married off to older men in exchange for bride wealth as a coping strategy. This results in the loss of childhood, early exposure to responsibilities and limited opportunities for economic growth. In Laikipia County, women also face unequal access to resources such as land, which hampers their adaptive capacity. Their limited involvement in the management of land-based resources also means their unique perspectives are often overlooked, resulting in misaligned priorities.

Children and the youth represent an important bridge between present and future generations. Their futures are likely to be significantly affected by climate variability in the context of low adaptive capacity in Laikipia county. The impact of recurrent droughts on children is severe because the resultant food and nutrition insecurity. The elderly and PWD may also lack essential support services to sufficiently cope with a changing climate. Nonetheless, the impacts of climate-induced disasters bear heavily on women because they mostly take care of other members of their family.

7.1 Policy Statement:

The County Government will continuously map out, identify and mainstream gender considerations in climate change adaptation and mitigation actions

7.2 Policy Directions:

The County Government will:

1. Map persons having different social needs and conduct a systematic analysis to establish their climate vulnerability
2. Develop evidence-based response measures to mainstream the unique needs of vulnerable groups in building climate resilience and low carbon development.
3. Mainstream unique needs of vulnerable groups into sector policies, plans, budgets and programs in accordance with the Constitution of Kenya (2010).
4. Continuously evaluate and strengthen the integration of the climate change needs of vulnerable groups into sector policies, plans, budgets and programs.

8 CHAPTER EIGHT: CLIMATE INFORMATION

Increasing public awareness on climate change impacts can facilitate the role of communities as a positive agent in climate change response. Interventions, such as building resilience are closely related to how people understand the impacts of climate change. However, the provision of climate information services in Laikipia County is constrained by numerous challenges. Key challenges include, among others, inadequate weather station network (6 automated; 1 manual) in the county, poor dissemination of climate information to community-level groups, inadequate coordination of climate information service providers and the disconnect between climate information and decision-making at various levels.

Among the factors that contribute to low adoption is that the information is usually provided as 'blanket' recommendations, while different producer groups (pastoralists and agro-pastoralists) need highly contextualized (individually adapted) data. There is also a challenge regarding the collation and refinement of climate information in readiness for dissemination. The current situation is such that data is with people or agencies. Therefore, access is time consuming or even at risk of data getting lost if an agency ceases its operation. The absence of a Climate Information Service (CIS) Plan for the county only makes a bad situation worse. Majority of government agencies also issue climatic information either in English or formats that communities struggle to comprehend. This is particularly a true for Laikipia North with low literacy levels.

8.1 Policy Statement:

The County Government will continuously map out, identify and mainstream climate change actions into the cross-cutting areas that enable climate change governance

8.2 Policy Directions:

The County Government will:

1. Collaborate with the Kenya Meteorological Department (KMD) to expand the meteorological observational network within the county
2. Publish downscaled national weather forecasts and county climate outlooks in formats that allow dissemination to a wider group of users
3. Collaborate with the KMD to track and issue public warnings on extreme weather events
4. Develop a CIS Plan to help in generating essential weather and climate information to support climate-sensitive sectors in the county.
5. Integrate scientific and local knowledge to build the resilience of communities in dealing with climate change extremes in the county
6. Mainstreaming the unique needs of vulnerable groups in information dispersal through art and other appropriate channels of communication.
7. Put in place guidelines for sharing raw and processed data between both levels of government.

9 CHAPTER NINE: CLIMATE FINANCE

Funding required for financing climate change responses under this policy will be mobilized from both internal and external sources. These include, among others, climate change funds established at both levels of government, development partner support and private sector funds (to finance public activities or private interventions that are compatible with the low carbon climate resilient development).

The total cost of implementing Laikipia County Climate Change Action Plan (2023-2027) is estimated at KShs. 1,971,050,000. The Action Plan forms part of priorities provided in the County Integrated Development Plan (CIDP; 2023-2027). Implementation of programmes contained in the 5-year CIDP is estimated to cost a total of KShs. 125,700,100,000 which will be financed from the various county revenue sources. However, revenue projections are estimated at KShs. 46,006,958,414, leaving a resource gap of KShs. 86,419.87.

Laikipia County's funding constraints are not unique. They emanate from limited national resources against unlimited competing needs at both the national. Moreover, a huge chunk of counties' budgets is funded by the exchequer. The consequence is that no county department is adequately funded, disbursements are often delayed and development activities suffer. There are also gaps in tracking of climate-related expenditures. Lack of harmonization of budgets across county departments, national government agencies and development partners' projects also compound the problem further, as resources are not efficiently utilized.

9.1 Policy Statement:

The County Government will continuously map out, identify and mainstream climate change actions into the cross-cutting areas that enable climate change governance

9.2 Policy Directions:

The County Government will:

1. Put in place a mechanism for attracting and monitoring the flows, utilization and impact of climate finance.
2. Establish a County Climate Change Fund to finance locally-led actions
3. Ensure harmonization of budgets across different departments and development partners' funded projects to reduce duplication and increase impact.
4. Mobilize adequate climate finance to fund implementation of this Policy and associated Climate Change Action Plans.
5. Put in place mechanisms to attract and leverage Public Private Partnerships (PPPs) as a vehicle to mobilize resources and enhance private sector participation in low carbon climate resilient development activities.

10 CHAPTER TEN: GOVERNANCE AND SECTOR COORDINATION

10.1 Mainstreaming Climate Change in county policies, plans and actions

10.1.1 County Context

The national Climate Change Act (2016) requires all sectors of the national and county governments to mainstream climate change responses into development planning, decision making and implementation. In response, Laikipia County has developed a suite of frameworks to mainstream climate change, among others, the Laikipia Climate Change Act (2018), Disaster Policy (2018), CIDP (2023–2027), Climate Change Action Plan (2023–2027), Spatial Plan (2022–2032), and County Environment Action Plan (2025–2029). However, challenges remain in ensuring cross-sectoral integration, avoiding duplication, and aligning local plans with national climate policies. Moreover, Laikipia County Climate Change Act (2021) earmarks at least 2% of the development budget for climate action. While this demonstrates political commitment, the allocation is modest compared to the county’s climate adaptation needs. Moreover, disbursement has been slow, and ward-level participation mechanisms remain underdeveloped.

Even though mechanisms to mainstream climate change exist at both levels of government, gaps exist in project appraisal and selection as climate considerations are not consistently assessed, and clear selection criteria is lacking. There are also challenges in tracking and consolidation of climate-related expenditures. Some areas do not also appear to be fully mainstreaming climate change into their decision-making. For instance, the Public Private Partnerships Act (2022) does not explicitly requires the mainstreaming of climate change in the development of PPP projects.

10.1.2 Policy Statement:

The County Government will institutionalize the mainstreaming of climate change actions including through integration of the National Climate Change Action Plan into the County Integrated Development Plan and the systematic identification of climate change risks, vulnerabilities and appropriate responses and actions across different sectors and at all levels of county administration.

10.1.3 Policy Directions:

The County Government will:

1. Mainstream climate change into county planning processes, including County Integrated Development Plans, regular county, and sectoral planning process.
2. Integrate climate change analysis, consideration and screening of all county budgeting and expenditure process and decision process to ensure effective mainstreaming.

3. Develop a mechanism to implement and monitor the mainstreaming of climate change action by county officials through human resource management systems such as performance contracts.
4. Put in place and implement mechanisms for continuously identifying capacity needs for mainstreaming climate change and investing in programmes to build staff capacity.
5. Coordinate with the National Treasury for amendment of procurement laws to permit procurement plans and technical specifications to include climate resilient and low carbon goods and services.
6. Collaborate with the National Treasury to develop standard guidelines for climate-sensitive project appraisal and selection.
7. Provide sufficient budgetary support for the coordination costs of the County Department responsible for climate change.
8. Develop a county legislation on climate change to implement this policy, including relevant institutional coordination mechanisms

10.2 Sector Coordination

10.2.1 Community-Level Coordination

Public participation is a mandatory requirement by the Constitution, including as a specific responsibility, the function of the County government to ensure and coordinate the participation of communities in governance (generally) and locally-led climate action (specifically). The County government has actively implemented public participation in the development of policies, plans and budgets. However, this is largely achieved with the support development partners, which is not a sustainable approach.

The other challenge speaks to the lack of coordination among various Community-Based Natural Resource Management (CBNRM) groups established by statutes at both levels of government. These include, among others, Ward Climate Change Planning Committees (WCCPCs), Water Resource User Associations (WRUAs), Community Forest Associations (CFAs), Disaster Risk Reduction (DRR) Committees, Conservancy Committees and Community Land Management Committees (CLMCs). Moreover, their silo approach parcels interventions on a single landscape that hosts multiple land-based resources.

10.2.2 County-Level Coordination

There are considerable challenges in the practical coordination of climate actions by various departments of the county government. Climate-sensitive mandates span water, environment, agriculture, health, public infrastructure, trade, education, administration and gender. Yet each county department implements their respective mandates without necessarily referring to each other. Apart from the department responsible for climate change, there is limited information on how other climate-sensitive sectors contribute to climate response in addition to their respective core mandates. Moreover, coordination is sometimes perceived to encroach into each other's jurisdiction and, in turn, budgets.

Further, the Climate Change Directorate Financing is inadequately resourced, which significantly constrains its coordination function. There are also many development partners and national government entities domiciled at the county level with interests in climate change. Their potentially overlapping functions notwithstanding, efforts to coordinate their functions through the County Steering Group (CSG) and other intergovernmental platforms remain ad-hoc and under resourced. Taken together, this presents a missed opportunity in consolidating actions, budget efficiency and quality of implementation.

10.2.3 Inter-County Coordination

Specific climate impacts, among others, shared water catchment areas and pastoralist migration routes, necessitate horizontal coordination between neighboring counties. Collaboration helps manage shared natural resources and reduces the potential for climate-related conflicts within and between communities. However, there are missed chances in cross-county coordination. Apart from joint programs facilitated by the national government, inter-county collaboration on climate response is limited by the requirement to apply budgets within the county's geographical borders. Therefore, joint project implementation through regional blocs remain just statements of intent.

10.2.4 Policy Statement

The County Government will set up and operationalize institutional structures to coordinate the mainstreaming of climate change actions across key sectors.

10.2.5 Policy Directions:

The County Government will:

1. Put in a place an institutional mechanism, with sufficient financial and human capacity, to support mainstreaming of climate change actions by county departments and agencies.
2. Establish a Climate Change Coordination Unit within the Office of the CECM responsible for coordinating climate change affairs, in order to ensure that all county departments and agencies are mainstreaming this policy, and the CIDP into their plans, budgets and actions.
3. Coordinate with and report annually to the County Assembly Departmental Committee responsible for climate change for oversight on the status of implementation of climate change obligations
4. Put in place mechanisms for consultation on state and non-state plans and actions on climate change at the community, ward and county levels.
5. Strengthen intergovernmental mechanisms for joint planning and implementation of climate actions with neighbouring counties and national government agencies.
6. Coordinate with the National Treasury to develop guidelines for tracking and reporting on climate-related expenditures across county sectors, including a differentiation between climate adaptation and mitigation initiatives and any climate co-benefits.

10.3 Institutional Arrangements

10.3.1 Introduction

This Policy will be implemented through a process of integration, whereby climate response actions will be mainstreamed into sectoral priorities at all stages of decision making and implementation. This is responsive to the national approach adopted by the Climate Change Act (2016). For this reason, there is need for greater coordination from the planning, budgeting and implementation stages in order to avoid overlaps and deleterious outcomes that undermine adaptation and mitigation actions.

10.3.2 County Government Level

As the holder of Executive Authority within the County, the Governor is responsible for ensuring the county implements this policy, and that sufficient adaptation and mitigation measures are put in place. The Climate Change Act requires that Governor to designate a member of the County Executive Committee to coordinate climate change affairs. This is consistent with the approach that all departments and agencies will mainstream climate change actions and only require coordination. This County Executive Committee Member (CECM) responsible for coordinating climate change affairs, is also responsible for coordinating the implementation of this Policy.

10.3.3 Intergovernmental Level

A robust legal framework provides for coordination between the national and county government. These include, among others, National and County Government Coordinating Summit, the Council of Governors (CoG), and the Intergovernmental Relations Technical Committee (IGRTC)—all prescribed by the Intergovernmental Relations Act (2012). Moreover, Article 189 of the Constitution as read with Section 187 of the Public Finance Management Act (2012) establishes the Intergovernmental Budget and Economic Council (IBEC). The council provides a forum for consultation between both levels of government and is the main forum for coordinating investments in climate resilience and low carbon development at both levels of government.

10.3.4 Non-state actors

Non-state actors play a vital role in Kenya's climate response by filling resource gaps, building local capacity, implementing grassroots projects and influencing policy. They also act as crucial intermediaries between international climate frameworks and local communities.

11 CHAPTER ELEVEN: MONITORING, EVALUATION, RESEARCH AND LEARNING

11.1 Monitoring, Evaluation Research and Learning Framework

11.1.1 County Context

In order to implement this policy, the County government will develop a detailed implementation matrix that will identify all key actions required for each policy direction, the timelines, the public officers responsible, the outputs, budget, the manner of reporting and other relevant details. The County Integrated Monitoring and Evaluation System (CIMES) is the platform for tracking implementation progress for programs. CIMES is linked to the National Integrated Monitoring and Evaluation System (NIMES). However, there is poor integration of both systems at the county level. Moreover, county governments are only beginning to set up departments responsible for developing systems needed for Monitoring and Evaluation (M&E), performance management, data collection and analysis.

Research and knowledge management are important elements for public policy decision making, particularly evidence-based climate response. While these are vibrant at the national level, county investments in research and knowledge management remains low. This explains why a great proportion of knowledge products are generated by development partners operating in Laikipia County. Additionally, there are inadequate guidelines for sharing raw and processed data among county departments and between both levels of government. County's bias towards visible infrastructure projects also means meagre public funds are channeled into innovative solutions that contribute towards adaptation and mitigation.

11.1.2 Policy Statement:

The County government will put in place a framework for effective and efficient deliver, monitoring, evaluation, and reporting on progress on the implementation of this policy

11.1.3 Policy Directions:

The County Government will:

1. Implement appropriate system for the coordinated data and information collection, monitoring reporting on this policy.
2. Integrate the implementation of this policy into performance contracting process and indicators for all state and public officers in the county.
3. Incorporate climate change indicators into the CIMES.
4. Strengthen the M&E capacity of the county Climate Change Directorate to effectively discharge its mandate
5. Conduct a participatory review of this Policy every 5 years. Recommendations from the review will feed into the revision process for the policy.

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ANNEX 2: DEFINITIONS

Adaptation refers to actions that help reduce vulnerability to the current or expected impacts of climate change.

Adaptive capacity: Ability of systems, institutions, humans and other organisms to adjust to potential damage, take advantage of opportunities, or respond to consequences.

Capacity building: In the context of climate change, the process of developing the technical skills and institutional capability in developing countries to enable them to address effectively the causes and results of climate change.

Carbon market: A trading system through which countries or other entities may buy or sell units of greenhouse gas emissions in an effort to meet their national limits on emissions, either under the Kyoto Protocol or under other agreements. The term comes from the fact that carbon dioxide is the predominant greenhouse gas.

Carbon sequestration: The process of removing carbon from the atmosphere and depositing it in a reservoir or “Sink”, such as soil or trees.

Carbon trading: Buying and selling of permits of carbon credits that allow the holder to emit a certain amount of carbon dioxide and other greenhouse gases (GHGs).

Carbon credit: The equivalent of one ton of carbon dioxide or any other GHGs that an organization can emit into the atmosphere. Essentially, companies are awarded credits to allow them to continue to pollute up to a certain limit, often on a reducing basis.

Climate is the average of weather patterns in a specific area over a longer period of time, usually 30 or more years, which represents the overall state of the climate system.

Climate change refers to the long-term changes in the Earth’s climate that are warming the atmosphere, ocean and land.

Climate finance refers to financial resources and instruments that are used to support action on climate change. Climate finance is critical to addressing climate change because of the large-scale investments that are needed to transition to a low-carbon global economy and to help societies build resilience and adapt to the impacts of climate change.

Climate justice means putting equity and human rights at the core of decision-making and action on climate change.

Climate variability refers to the climatic parameter of a region varying from its long-term mean. Every year in a specific time period, the climate of a location is different. Some years have below average rainfall, some have average or above average rainfall

Conference of the Parties: The supreme governing body of the UNFCCC, which meets once a year to review the Convention’s progress.

Deforestation: The long-term or permanent loss of forest cover. The term implies transformation of forest into another land use, which is caused and maintained by a continued human-induced or natural perturbation.

Disaster Risk Reduction: systematic approach to identifying, assessing and reducing the risks of disaster. Aims to reduce socio-economic vulnerabilities to disaster and the environmental and other hazards that trigger them

Disaster: the serious disruption of the functioning of society causing widespread human, material or environmental losses, which exceed the ability of the affected communities to cope using their own resources. Disasters occur when the negative effects of the hazards are not well managed.

Disaster risk reduction: is a framework and a tool that determines the degree of risk and describes measures to increase capacities and reduce hazard impact on the elements at risk so that disaster will be avoided.

Global warming is an increase in the Earth's average surface temperature that occurs when the concentration of GHGs in the atmosphere increases. These gases absorb more solar radiation and trap more heat, thus causing the planet to get hotter.

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere, causing global warming and climate change. The main greenhouse gases released by human activity are carbon dioxide, methane, and nitrous oxide, as well as fluorinated gases used for cooling and refrigeration.

Hazard: is a potential source of harm. Substances, events, or circumstances can constitute hazards when their nature would allow them, even just theoretically, to cause damage to health, life, property, or any other interest of value

Intergovernmental Panel on Climate Change (IPCC): Established in 1988 by the World Meteorological Organization and the UN Environment Programme, the IPCC surveys worldwide scientific and technical literature and publishes assessment reports that are widely recognized as the most credible existing sources of information on climate change. The IPCC also works on methodologies and responds to specific requests from the UNFCCC and its subsidiary bodies.

Low Carbon Development Pathway: A national development plan or strategy that encompasses low-emission economic growth. Transitioning to this pathway means taking actions, where possible, to encourage GHG emissions that are lower than business-as-usual practice; and reducing the human causes of emissions by moving toward a resource efficient economy that is as low-carbon as possible and enhancing carbon sinks.

Loss and damage: refer to “political debate under the UNFCCC following the establishment of the Warsaw Mechanism on Loss and Damage in 2013”. The term ‘losses and damages’ refer to “harm from (observed) impacts and (projected) risks and can be economic or noneconomic.”

Measurement, Reporting and Verification Plus (MRV+): An integrated framework proposed for Kenya to measure, monitor, verify and report results and impacts of mitigation, adaptation and climate finance actions, and the synergies between them.

Mitigation refers to any action taken by governments, businesses, and people to reduce, sequester, or prevent greenhouse gas emissions. Examples of mitigation include transitioning to renewable energy like wind and solar.

Nature-based solutions support climate change adaptation and mitigation by using natural systems and processes to restore ecosystems, conserve biodiversity, and enable sustainable livelihoods.

Non-Motorized Transport (NMT) refers to green non-engine means such as walking, cycling, wheelchair, scooter, and handcart use.

Public Private Partnerships (PPPs): Public-Private Partnerships are an association between government and private sector through which private financing is utilized to perform a public function, at a profit to the private sector

Resilience is the capacity of a community or environment to anticipate and manage dangerous climatic events and recover and transform after the ensuing shock, with minimal damage to societal wellbeing, economic activity, and the environment. Examples of increasing resilience in a community include long-term planning, early warning systems, training for new skills, diversifying the sources of household income, strengthening nature-based solutions, and building robust communal response and recovery capacities.

Risk: is the potential for negative consequences to something that is valued when the occurrence and degree of a future outcome is uncertain. Risks from climate change impacts arise from the interaction between a hazard (triggered by an event or trend related to climate change), vulnerability (susceptibility to harm) and exposure (people, assets or ecosystems at risk).

Risk assessment: qualitative and/or quantitative scientific estimation of risks.

Risk management: plans, actions, strategies or policies to reduce the likelihood and/or consequences of risks or to respond to consequences.

Sustainable development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Vulnerability: Propensity or predisposition to be adversely affected. It encompasses sensitivity or susceptibility to harm, and lack of capacity to cope and adapt.

Weather refers to atmospheric conditions at a particular time in a particular location, including temperature, humidity, precipitation, cloudiness, wind, and visibility. Weather conditions do not happen in isolation, they have a ripple effect. The weather in one region can affect the weather hundreds or thousands of kilometers away.