MURANG'A COUNTY GOVERNMENT

COUNTY CLIMATE FINANCE FRAMEWORK

AUGUST 2025

COUNTY VISION, MISSION AND MOTTO

Vision

Sustainable development for socio-economic transformation

Mission

To transform the County for sustainable development for the benefit of all.

Motto

Kamùingì Koyaga Ndìrì (Unity is Strength)

TABLE OF CONTENTS

FOREWORD

Murang'a County Government, through the Department of Environment, Climate Change, and Natural Resources, is pleased to share the Climate Finance Framework developed to guide climate action financing within the county.

This framework outlines strategic priorities, financing mechanisms, stakeholder engagement plans, and accountability measures to ensure effective mobilization, allocation, and utilization of climate-related funds.

Key objectives of the framework include: Enhancing resilience and adaptive capacity of local communities, Mainstreaming climate change into county planning and budgeting, Facilitating access to national and international climate finance and Promoting public-private partnerships for climate action

We call upon all partners, including government agencies, development partners, CSOs, and community groups, to collaborate with us in implementing this framework.

Together, let us build a climate-resilient Murang'a.

MARY MUTHONI MAGOCHI

CECM, WATER, IRRIGATION, ENVIRONMENT, CLIMATE CHANGE, AND NATURAL RESOURCES.

ACKNOWLEDGMENT

On behalf of Murang'a County Government, the Department of Environment and Climate Change, I wish to express our sincere gratitude to all institutions, partners, teams, and individuals who contributed to the development of the Murang'a County Climate Finance Framework.

We acknowledge the guidance and enabling policy environment provided by the National Government, particularly through the Climate Change Act (2016), the National Climate Finance Policy, and other relevant national frameworks, which have laid the foundation for county level climate finance mechanisms.

We also appreciate the technical and financial support from development partners, NGOs, and civil society organizations whose expertise and resources have strengthened our efforts to mobilize, manage, and deploy climate finance locally. Their collaboration in capacity building, research, consultations, and implementation has been invaluable.

We are particularly thankful to the County Executive Committee Member responsible for Water, Irrigation, Environment, Climate Change and Natural Resources, the County Planning Department, and the Climate Change Unit, for their leadership and commitment. Their oversight role in the participatory climate risk assessment, drafting, stakeholder engagements, and integrating climate finance into the County Integrated Development Plan has been critical.

We also especially commend the people of Murang'a — the farmers, community groups, ward representatives, and grassroots stakeholders for sharing their lived experiences, priorities, and knowledge. Their voice has shaped a framework that seeks to respond to real vulnerabilities, risks, and aspirations.

Finally, it is our hope that this Climate Finance Framework will serve as a compass for Murang'a County's journey towards a resilient, low-carbon, inclusive development pathway, and that future collaboration will continue to deepen as we implement it.

SAMUEL MURIGI
CHIEF OFFICER – WATER, IRRIGATION, ENVIRONMENT, CLIMATE CHANGE, AND NATURAL RESOURCES.

ABBREVIATION AND ACRONYMS

ADP	Annual Development Plan
CCCF	County Climate Change Fund
CCCU	County Climate Change Unit
CECM	County Executive Committee Member
CG	County Government
CIDP	County Integrated Development Plan
CIMES	County Integrated Monitoring and Evaluation System
FLLoCCA	Financing Locally-Led Climate Change Action
FY	Financial Year
GOK	Government of Kenya
IMF	International Monetary Fund
MDAs	Ministries, Departments and Agencies
MCCFF	Murangá County Climate Finance Framework
MTP	Medium Term Plan
NCCAP	National Climate Change Action Plan
NCCF	National Climate Change Fund
NG	National Government
NIMES	National Integrated Monitoring and Evaluation System
PFM	Public Finance Management
SDGs	Sustainable Development Goals
WCCPCs	Ward Climate Change Planning Committees

Definition of Terms

a) **Weather:** refers to the state of the atmosphere of a given place at a given time, including characteristics such as rainfall, temperature, wind and humidity

b) **Climate:** is the average weather pattern in a place over a period of at least 30 years (World Meteorological Organization). Climate of an area can be classified as wet, dry, cold, windy, hot or humid

c) **Climate change**: is a permanent shift in the state of the climate that persists for an extended period of time (30 years or more). It attribute directly or indirectly to anthropogenic (human) activity, which contributes to increased greenhouse gases (GHG) and, thus alters the composition of the global atmosphere.

d) **Global warming:** is the increase in the average surface temperature of the earth's atmosphere and oceans

e) **Adaptation:** adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

f) **Climate finance**: refers to money available for or mobilized by the national government, county government, international agencies, or non-government entities to finance climate change adaptation, mitigation and interventions.

g) **Greenhouse gases (GHGs)**: are gases that absorb and emit radiant energy within the thermal infrared range. The main GHGs measured in a GHG inventory are, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), Sulphur hexafluoride (SF6) and nitrogen tri-fluoride (NF3).

h) **Mitigation**: refers to human interventions to prevent or slow down atmospheric GHG concentrations by limiting current or future emissions, and/or enhancing potential sinks for greenhouse gases.

i) **Resilience**: refers to the capacity of social, economic and environmental systems to cope with a hazardous event, trend, or disturbance. Manifested through responding or reorganizing in ways that assert the essential function, identity, and structure of the system, while also maintaining the capacity for adaptation, learning and transformation.

j) **Hazard:** A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.

k) **Exposure:** The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.

l) **Vulnerability:** The conditions determined by physical, social, economic and environmental factors or processes that increase the susceptibility of an individual, a community, assets or

systems to the impacts of hazards.

m) Resilience: The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions. Underlying disaster risk drivers: Processes or conditions, often development-related that influence the level of disaster risk by increasing levels of exposure and vulnerability or reducing capacity.

n) Risk: The potential loss of life, injury, destroyed or damaged assets, which could occur to a system, society or a community in a specific period, determined probabilistically as a function of hazards, exposure, vulnerability and capacity.

o) Disaster: A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts which exceeds the ability of the affected community or society to cope using its own resources.

p) Disaster risk reduction: the concept of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

PART ONE

1.0. INTRODUCTION

Murang'a County is in the center of the Republic of Kenya. It borders Kiambu County to the south, Nyeri County to the north, Nyandarua County to the west, Embu, and Machakos and Kirinyaga counties to the east. Murang'a County occupies a total area of 2,559 km² (Murang'a County Government, 2018). The county's altitude ranges from 914 meters above sea level in the east to 3,353 meters above sea level in the west. The highest parts of the county border the Aberdares Mountains, which catch rain and are the source of the county's rivers (Murang'a County Government, 2018). Murang'a County's annual temperature ranges between 10 and 25°C.

The county experiences an annual average temperature of more than 20°C. The county receives between 750 and 1,700 mm of precipitation annually. The eastern part of the county receives an average of less than 750 mm of rainfall annually. The months of March, April, and May are very rainy in Murang'a County, with April historically recording the highest amount of rainfall. The short rainy season usually occurs during the months of October, November, and December.

The County has three climatic regions: the western region is characterized by upper highland humid (UHH) and upper highland per humid (UHP) agro ecological zones and covers the upper Parts of Mathioya, Kangema, Gatanga, and higher Kigumo and Kandara sub-counties. The central region is characterized by lower highland humid (LHH), upper midland sub humid and humid (UM1& UM2) agro ecological zones covering, Kahuro, Kigumo, and Gatanga and some parts of Mathioya, Kangima and Kiharu sub-counties. The eastern region is characterized by lower midland semi humid LM3, LM4), transitional and semi-arid agro ecological zones. This region covers the lower parts of Ithanga, Kandara, Kiharu and Maragua sub-counties (Murang'a County Government, 2018).

Murang'a County recognizes that climate change poses significant risks to its socio-economic development, water resources, agriculture, and infrastructure. The County Government aims to strengthen climate resilience by establishing a structured Climate Change Finance Framework to mobilize, manage, and track resources for climate actions at county and ward levels.

1.1. Objective of Framework

The County Climate Change framework aims to enhance the resilience to climate change impacts, safeguarding the livelihoods of its inhabitants and ensuring sustainable development through adequate funding in the face of an increasingly uncertain climate future. This process is crucial in enhancing inclusivity of vulnerable groups, including children, women, men, youth, persons with disabilities, the elderly, and marginalized and minority communities. The process is also crucial in bridging the gap between local knowledge and scientific expertise to develop effective climate adaptation strategies that address the specific vulnerabilities of the county's agro-ecological systems.

Specifically, the framework seeks to:

a) Reduce risks to communities and infrastructure resulting from climate-related disasters such as droughts and floods,
b) Strengthen institutional capacity for climate finance planning and coordination.
c) Enhance access to domestic and international climate finance.
d) Increase food and nutrition security through enhanced productivity and resilience of the agricultural sector in as low- carbon manner as possible,
e) Enhance resilience of the Blue Economy and water sector by ensuring access to and efficient use of water for agriculture, manufacturing, domestic, wildlife and other uses,
f) Increase forest cover to 10% of total land area
g) Integrate climate change priorities into the County Integrated Development Plan (CIDP) and annual development plan.
h) Promote transparency, accountability, and tracking of climate-related expenditures.
i) Improve energy and resource efficiency in the manufacturing sector, and Climate-proof energy and transport infrastructure; encourage electricity supply based on renewable energy and encourage the transition to clean cooking
j) Support community-driven adaptation and mitigation initiatives.

1.2. Guiding principles

The guiding principles in the implementation of the framework are:

a) **Transparency and Accountability:** Ensure open access to information and effective monitoring of funds.
b) **Equity and Inclusivity:** Prioritize vulnerable groups including women, youth, and persons with disabilities.
c) **Partnership and Collaboration:** Work with national government, private sector, NGOs, and development partners.
d) **Sustainability:** Support long-term low-carbon, climate-resilient development pathways.

1.3. Impact of Climate Change in the County

The Climate change in the County causes, among other things; increased frequency of extreme weather events and increased intensity of extreme weather events. This leads to the increased frequency and intensity of, among other events; floods, droughts, strong winds and rising temperatures. Due to different vulnerabilities, these impacts affects; different sectors of the County economy differently as well as Gender groups (men, women, boys and girls) differently.

CLIMATE CHANGE SCENARIO	**IMPACTS IN THE COUNTY**	**VULNERABLE GROUPS**
Heavy Rainfall /Flooding	Reduced Family income, Hunger and Malnutrition, Outbreak of water borne diseases-Cholera, Poor market prices of Agricultural commodities, Destruction of infrastructure-Bridges and Roads, Soil	General public, Farmers, Women, School going children, business community and Urban Community

	Erosion and Spillages of sewerages in major towns.	
Landslides/Mudslides	Decreased income due to crops and livestock loss, Decreased crop production as a result of soil degradation, Destruction of infrastructure such as power transmission lines and water supplies, causing economic and social disruptions, displacement of families and Reduced tree cover	Farmers and General community
Drought	Decreased Crops and Livestock Production, High cost of food, Reduced Fodder / dying of Pasture, Reduced Forests cover, Women walk long distance in search of Water (domestic), Drying-up of Water (livestock) sources, Water borne diseases or death of livestock and Dying up of Wetlands	Farmers, General community, Livestockist, Women
High Temperatures	Prevalence of common and new pests and diseases, High cost of Control, Reduced family income, High cost of food, post-harvest losses and hunger	Farmers and General community
Irregular seasons	Loss of income leading to multiple planting	Farmers
Strong winds	Loss of properties, crops and livestock, Death	General community

1.4. Human activities that facilitate climate change

The following are the activities that facilitate climate change in the county;

a) **Deforestation / Inadequate Tree Cover**

Cutting down trees (for fuel, timber, expanding farms or settlement) reduces forest cover. Forests act as carbon sinks; when they are lost, carbon stored in the trees is released. Even with reforestation, if deforestation continues elsewhere, or if tree planting is not matched by protection, carbon emissions remain a problem.

b) Use of Firewood and Charcoal for Energy

Many households and small industries in rural Kenya depend on firewood and charcoal for cooking, heating, or small-scale processing. Harvesting wood unsustainably leads to deforestation and the burning emits CO_2, methane, and particulates.

c) Agricultural Practices

Reliance on conventional farming with high inputs (synthetic fertilizers, pesticides) contributes to greenhouse gas emissions (e.g. nitrous oxide from fertilizers). Low adoption of conservation agriculture (e.g. zero/minimum tillage, cover crops, crop rotation) leads to soil degradation, loss of

organic carbon in soil. Murang'a is pushing for smart farming and adopting climate-smart practices to reduce this effect. In addition, dependence on rain-fed agriculture makes communities vulnerable; failure in harvests due to erratic rainfall may lead to expanding farms into marginal or forested lands.

d) Land Use Change and Expansion of Settlement / Real Estate

Land conversion for housing, infrastructure, roads, commercial development reduces vegetation, changes the albedo (reflectivity), and often increases carbon emissions due to clearing vegetation and soil disturbance. Murang'a is experiencing real estate growth in places like Kenol, Murang'a town, Thika-Greens, etc.

e) Waste Management Practices

Improper solid waste disposal – burning of waste, open dumps – leads to emissions of CO_2, methane, and other harmful gases. A study in Murang'a showed open landfills and burning waste are practiced.

f) **Dependence on Fossil Fuels / Non-renewable Energy for Transport and Industry**

Use of petrol/diesel in transport, generators, and industrial processes emits greenhouse gases.
Though Murang'a is promoting renewable energy and more efficient transport, many of these non-renewable sources are still in use.

g) Over-exploitation of Water Resources & Catchment Degradation

Degradation of water catchments (through deforestation, encroachment on riparian zones, soil erosion) reduces their capacity to regulate flows, retain soil, and maintain biodiversity. This aggravates droughts, flooding (which in turn affect carbon emissions via loss of soil etc.). There are concerns in Murang'a about reducing water levels in rivers tributary to Sagana etc., possibly due to upstream activities.

1.5. Institutional Framework

The institution framework to implement this climate finance framework entails;

Institution	Role in Climate Finance Management
County Executive Committee Member (CECM) for Environment & Climate Change	Provide overall policy guidance.
County Climate Change Unit (CCCU)	Coordinate planning, budgeting, and reporting of climate-related projects.
County Treasury	Integrate climate finance in budgeting; ensure resource allocation and financial controls.
Sector Departments (Agriculture, Water, Energy, Health, Infrastructure)	Mainstream climate change in sectoral plans and budgets.
Ward Climate Change Planning Committees (WCCPCs)	Identify, prioritize, and manage local-level climate projects.
Development Partners, Private Sector, NGOs	Provide technical and financial support.
General Public	Identify the priority projects and supervise the implementation of projects

1.6. Policy and Legal Alignment

The Murangá County Climate Finance Framework (MCCFF) aligns with the Constitution of Kenya (2010), the Climate Change Act (2016), Muranga county Climate Change Act 2021, the Public Finance Management Act (2012), the National Climate Change Action Plan (2023–2027), and the Murang'a CIDP (2023–2027).

PART TWO
2.0. Climate Finance Sources

2.1. Climate Finance Sources

2.1.1. Internal Sources

The key internal source is through the County budget allocations (minimum 2% of annual development budget).

2.1.2. External Sources

a) National Climate Change Fund (NCCF).
b) Development partners (e.g., UNDP, World Bank, GCF, Adaptation Fund).
c) Private sector investments and Public-Private Partnerships (PPPs).
d) Community contributions and social enterprises.

2.2. Climate Finance Mechanisms

a) County Climate Change Fund (CCCF): A ring-fenced account for climate investments, managed through the County Treasury and CCCU.
b) Performance-Based Grants: Linked to climate resilience outcomes and proper fund utilization.
c) Matching Grants: For co-financing with communities and local organizations.
d) Green Bonds and Climate Insurance: Innovative financing tools for long-term sustainability.

2.3. Climate Budgeting and Tracking

This will entail the:

a) Annual climate expenditure reviews; and
b) Integration of climate indicators in the County M&E framework.

2.4. Capacity Building and Knowledge Management

The capacity building and knowledge management to be implemented in line with the capacity development plan and will entails:

a) Training county staff and ward committees on climate finance management.
b) Establishing a climate finance database and knowledge-sharing platform.
c) Continuous stakeholder engagement and awareness creation.

2.5. Climate change adaptation and mitigation activities and projects

2.5.1. Adaptation Activities

These are efforts aimed at helping communities, ecosystems, and infrastructure adjust to climate change risks:

a) Agriculture & Food Security

Promotion of agro ecology: The County has enacted the Murang'a Agro ecology Policy 2022-2032 and the Agro ecology Development Act, 2022. These promote organic farming, sustainable and resilient food systems. On-farm diversification through watershed management: Projects support households to diversify income sources, integrate conservation of watersheds, restore riparian lands, and manage invasive species.

b) Water Sector / Water Management

Drought mitigation by providing water supplies: Implemented borehole drilling, water storage, and irrigation schemes to cushion communities and livestock during dry periods. Improved water connectivity, ensuring access to clean and reliable water for domestic, agricultural and industrial purposes (through the County Dept. of Environment etc.).

c) Ecosystem Restoration / Land Degradation

Increasing forest cover and rehabilitating degraded lands: The County Action Plan 2023-2027 aims to increase forest cover to ~10% of the land area, rehabilitate degraded rangelands, and improve wildlife/tourism sector resilience. Riparian land conservation and policies to manage alien invasive species.

d) Health & Settlements

Mainstreaming climate change adaptation in the health sector and improving resilience of human settlements, especially in terms of solid waste management in urban areas. Infrastructure resilience: Upgrading or designing infrastructure (roads, drainage, bridges) to withstand climate-related hazards (floods, heavy rains, etc.) via retrofitting and climate-proofing.

e) Capacity Building, Awareness & Community Participation

Training sessions, workshops for stakeholders including local communities on climate risk, adaptation practices and sustainable behaviors. Environmental clubs in schools, local decision-making forums, and including vulnerable groups in planning (women, youth, persons with disabilities etc.).

f) Early Warning Systems & Climate Risk Assessment

Conducting climate risk assessments to identify vulnerabilities (floods, droughts, temperature extremes) in specific agroecological zones. Developing early warning / monitoring (meteorological/hydrological) systems to alert communities of impending hazards.

2.5.2. Mitigation Activities

These are activities aimed at reducing greenhouse gas emissions or enhancing carbon sinks.

a) Forest Cover & Carbon Sinks

Tree planting / afforestation / reforestation initiatives to increase forest cover (goal ~10% of land area) to act as carbon sinks. Riparian restoration, removal of invasive, and conservation of indigenous species to maintain ecological balance.

b) Cleaner Energy / Renewable Energy

Promotion of solarization — use of solar energy in the county for water pumping, power supply etc. Clean cooking transition is part of the county's plan (reduce reliance on firewood / charcoal).

c) Policy & Legal Frameworks

The Agroecology Policy & Act provide legal backing for organic / low-carbon agricultural practices. Mainstreaming climate change mitigation in sectoral planning, budget allocations, and county climate finance strategies.

d) Energy & Resource Efficiency

Encouragement of efficiency in manufacturing, resource use, and energy infrastructure (e.g. moving toward less waste, more efficient use of existing energy).

e) Sustainable Transport & Infrastructure

Plans to climate-proof transport infrastructure: using designs that reduce emissions (though detailed projects not many in publicly available sources yet).

PART THREE
3.0. Monitoring, Evaluation, and Reporting (MER)

Monitoring, Evaluation and Reporting forms an integral part in the implementation of the Climate Change Finance Framework. Monitoring and Evaluation tracks and assesses whether the achievement of planned activities and targets of the framework. It also documents challenges encountered, emerging issues as well as lessons learnt to inform decision-making. The Monitoring and Evaluation of the investment will be done within the context of the County Integrated Monitoring and Evaluation Systems (CIMES) and Murang'a County M&E Policy. It is expected that the Monitoring and Evaluation team will be activated under the FLLoCCA M&E and County M&E. The team will be comprised of members from the Departments implementing the projects. The team will be expected to collect the data, analyse and produce quarterly reports on the status of implementation as well as disseminate the information to the relevant departments.

3.1. Expected Outcomes

a) Increased access to climate finance for county and community projects.
b) Enhanced resilience of communities to droughts, floods, and environmental degradation.
c) Improved coordination and accountability in use of climate funds.
d) Mainstreaming of climate change across all county sectors.

PART FOUR
4.0. CONCLUSION

Murang'a County's Climate Change Finance Framework provides a clear pathway to mobilize, manage, and monitor financial resources for climate resilience. Through institutional strengthening, community participation, and transparent mechanisms, the county will enhance its adaptive capacity and promote sustainable development. Outcomes include improved climate finance absorption, institutional strengthening, enhanced community resilience, and contribution to Kenya's NDC and SDG targets (13, 6, 7, and 15).