COUNTY GOVERNMENT
OF UASIN GISHU

CLIMATE CHANGE

ACTION PLAN 2023-2027

REPUBLIC OF KENYA

WORLD BANK GROUP

Kingdom of the Netherlands

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DEUTSCHE ZUSAMMENARBEIT

FOREWORD

County Climate Change Action Plan (CCCAP) provides a framework for Building resilience of communities and ecosystem to the effects of climate change and further sustainable development by providing mechanisms and measures to achieve low carbon climate resilient development in a manner that prioritizes adaptation.

It is a five-year plan (2023-2027), implemented through a rolling one-year plans, Plan will facilitate a coordinated development in the county while harnessing synergies presented by the various players in the county's development realm.

The county has prepared the CCCAP pursuant to the requirements of the constitution of Kenya which is the foundation of the institutional and legal framework for climate change action. The County Government of Uasin Gishu recognizes the important role played by the citizenry in the development process of the county. As a result, the CCCAP has been developed through a rigorous participatory climate risk assessment process and therefore embodies aspirations of residents of Uasin Gishu County, Governor's Manifesto and other stakeholders. Policies, programmes and projects in the CCCAP have thus been developed with a view to addressing the issues and needs related to climate risks and hazards raised during the PCRA stakeholder engagements.

During the Plan period (2023-2027), the government will prioritize and implement policies, programmes and projects geared towards realization of improved access to water, climate smart agriculture, drought and flood management, health and sanitation, Environmental conservation and sustainable energy sources. To achieve this, the government will institute measures to enhance its resource mobilization and management endeavors.

This will be achieved through the FLLoCA (financing locally led climate change action) program which is being funded, by the World Bank and the support of the national treasury through the Project Implementation Unit (PIU).

The CCAP is aligned to the CIDP 2023-2027 and national objectives as captured in the Kenya Vision 2030 and its fourth Medium-Term Plan (MTP). It is also linked with international plans and commitments including Sustainable Development Goals (SDGs), Paris Agreement on Climate Change 2015, East Africa Community (EAC) Vision 2050, Framework for Disaster Risk Reduction (2015 - 2030).The County Government of Uasin Gishu commits to full implementation of the CCCAP through its transformative leadership that will create room for effective planning, budgeting, resource mobilization, management, monitoring and evaluation.

H.E. Hon. Jonathan Kimeli Bii Chelilim
GOVERNOR OF UASIN GISHU COUNTY

ACKNOWLEDGEMENT

The county climate change act, of 2021 requires County Governments to prepare climate change action plans in line with the county-integrated action plan and other county strategies and actions. The County Climate Change Action Plan(CCCAP) is a five-year development plan that details goals, programmes and projects that will guide the planning and budgeting process of the County's climate change actions in the periods 2023-2027.

The Department of Environment and climate change through the PCRA taskforce coordinated and managed the overall preparation of this Plan. I take this opportunity to thank all chief officers, Directors, and the PCRA taskforce.Special appreciation goes to the World Bank for funding this process through the FLLoCA (financing locally led climate actions) program, the national treasury through the project implementation unit (PIU) for the financial and technical support and the entire technical team composed of: Mary Kerich (CO Climate change). Dr.Charles Nyabayo, Abraham Kiptanui, Philip Lagat, Abigael Kibet, Mercy Kemboi, Christopher Mbevi, Geoffrey Rono, Rafael Ruto, Sila Lagat, Boaz Korellach, Rose Sitienei, Caroline Ngerechi, Violet Mutai, Bethwel Kipletting, Meshack Amai, Gideon Kirwa, Nancy Korir, Roseline Sugut, Lizza Koech, Anne Chepkoech,Susan Kisorio and Charity Jebet who put in significant time and sacrifice in preparing this Plan. My thanks also go to the Subcounty and ward climate change planning committee led by the ward administrators for their role in the preparation of the Plan.

I also take this opportunity to appreciate the County Secretary and all the County Executive Committee Members together with their staff for providing information that went into the preparation of this plan.

I do also extend my gratitude and appreciation to all Members of the County Assembly Environment Committee, County Assembly members and the House leadership for their valuable advice during this process; and to the residents for showing keen interest when called upon to provide their views on how to help our county build resilience to the effect of climate change.

Special thanks also goes to all the stakeholders, development partners and the general public for providing their views and the national treasury Project Implementation Unit for their commitment in supporting the development of this document.

Finally, as a department, we register our special appreciation and gratitude to His Excellency the Governor and His Excellency the Deputy Governor for their general leadership in the development discourse of the county

Hon. Abraham Serem

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ACRONYMS

ASAL	**Arid And Semi-Arid Land**
CCCF	**County Climate Change Fund**
CCD	**Climate Change Directorate**
CCU	**Climate Change Unit**
CDM	**Clean Development Mechanism**
CECM	**County Executive Committee**
CFAs	**Community Forestry Associations**
CHVs	**Community Health Volunteers**
CIDP	**County Integrated Development Plan**
CIS	**Climate Information Services**
CO_2	**Carbon (Iv) Oxide**
COG	**Council Of Governors**
COP	**Conference Of The Parties**
CSA	**Climate Smart Agriculture**
CCCAP	**County Climate Change Action Plan**
ELDOWAS	**Eldoret Water And Sanitation Company**
ERC	**Energy Regulatory Commission**
FLLoCA	**Financing Locally Led Climate Action**
GCF	**Green Climate Fund**
GDC	**Geothermal Development Corporation**
GDP	**Gross Domestic Product**
GEF	**Global Environment Facility**
GESIP	**Green Economy Strategy And Implementation Plan**
GHG	**Greenhouse Gas**
HCW	**Health Care Workers**
ICT	**Information And Communication Technology**
ILRI	**International Livestock Research Institute**
IMO	**International Maritime Organisation**
IPCC	**Inter-Governmental Panel On Climate Change**
KALRO	**Kenya Agriculture And Livestock Research Organization**
KAM	**Kenya Association Of Manufacturers**
KCCWG	**Kenya Climate Change Working Group**
KCIC	**Kenya Climate Innovation Centre**

KEBS	**Kenya Bureau Of Standards**
KEFRI	**Kenya Forest Research Institute**
KENHA	**Kenya National Highways Authority**
KES	**Kenya Shilling**
KeRRA	**Kenya Rural Roads Authority**
KFS	**Kenya Forest Service**
KIRDI	**Kenya Industrial Research And Development Institute**
KMD	**Kenya Meteorological Department**
KNBS	**Kenya National Bureau Of Statistics**
KPI	**Key Performance Indicator**
M&E	**Monitoring And Evaluation**
MRV	**Measurement, Reporting And Verification**
MSME	**Micro, Small And Medium Enterprise**
MTP	**Medium Term Plan**
NEMA	**National Environment Management Authority**
NAP	**National Adaptation Plan**
NCA	**National Construction Authority**
NCCAP	**National Climate Change Action Plan**
NMT	**Non-Motorised Transport**
PCRA	**Participatory Climate Risk Assesment**
PELIS	**Plantation Establishment And Livelihood Improvement Scheme**
PPP	**Public Private Partnership**
REREC	**Rural Electrification Authority**
SDG	**Sustainable Development Goal**
UN	**United Nations**
UNDP	**United Nations Development Programme**
UNFCCC	**United Nations Framework Convention On Climate Change**
WASH	**Water Sanitation And Hygiene**
WRA	**Water Resources Authority**
WRUA	**Water Resource Users Association**

Definition of terms

Adaptation means adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects which moderates harm or exploits beneficial opportunities.

Adaptive capacity refers to the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of YH opportunities, or to respond to consequences (*IPCC, 2014, Fifth Assessment Report (AR5) Glossary).*

The **carbon market** is a market that is created from the trading of units of GHG emissions. A carbon credit or offset is a financial unit of measurement that represents the removal of one tonne of carbon dioxide equivalent from the atmosphere. Carbon credits are generated by projects that deliver measurable reductions in GHG emissions.

Climate change means a change in the climate system which is caused by significant changes in the concentration of greenhouse gases as a consequence of human activities and which is in addition to natural climate change that has been observed during a considerable period.

Global warming refers to the gradual increase, observed or projected, in global surface temperature, as one of the consequences of climate change.The main greenhouse gases that are measured in a GHG inventory are: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3).

Mitigation means human interventions that seek to prevent or slow down the increase of atmospheric greenhouse gas concentrations by limiting current or future emissions and enhancing potential sinks for greenhouse gases.

MtCO2eq or MtCO2e is an abbreviation for million tonnes of carbon dioxide equivalent, or the amount of GHG emissions expressed as an equivalent amount or concentration of carbon dioxide.

REDD+ is the acronym for reducing emissions form deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. It is a mitigation mechanism that creates a financial value for the carbon stored in forests by avoiding deforestation and increasing the carbon stock in existing forests.

Resilience refers to the capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation (*IPCC, 2014, AR5 Glossary).*

Vulnerability refers to the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt. (*IPCC, 2014, AR5 Glossary).*

Climate Hazard Refers to a physical process, or phenomena that can harm human health livelihood or natural resources

EXECUTIVE SUMMARY

Climate change has increased the frequency and magnitude of extreme weather events in Uasin Gishu County that have led to loss of lives, diminished livelihoods, reduced crop and livestock production, and damaged infrastructure, among other adverse impacts. An example is the prolonged drought season experienced between January to May 2018 that devastated Farmers that were already struggling to recover post-harvest Losses experienced from unexpected Rains experienced in the harvesting season between October and December 2017

Climate change is likely to negatively impact future development and livelihoods of the populations in Uasin Gishu whose 80% of the population depend on agriculture for their livelihoods. This has a long term effect on food, nutrition and health.

Uasin Gishu County takes climate change seriously, as demonstrated by the enactment of the County Climate Change Act,2021 and the county climate change policy, that provides a regulatory framework for an enhanced response to climate change. It provides mechanisms and measures to transition to a low carbon climate resilient development.

Analysis of climatic trends

The Climate in Kenya is already changing. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) presents strong evidence that surface temperatures across Africa have increased by 0.5-2°C over the past 100 years, and from 1950 onward climate change has changed the magnitude and frequency of extreme weather events.

In Uasin Gishu County the frequency of hot days and hot nights has increased. The long rainy season has become shorter and drier, and the short rainy season has become longer and wetter, while overall annual rainfall remains low. The long rains have been declining continuously in recent decades, and droughts have become longer and more intense and tend to continue across rainy seasons.

Priority Climate Change Actions

Climate change has had serious impacts on the economic sector of Uasin Gishu. The CCCAP 2023-2027 takes cognizance of this fact and it identifies strategic areas where climate action is linked to the CIDP and the Nguzo Kumi Manifesto, recognizing that climate change is likely to limit the achievement of the development plans and these pillars. For example, food security is threatened through climate change-driven declines in agricultural productivity, health is impacted by an increase in vector-borne diseases, including malaria and cholera; housing and manufacturing are impacted by damage to infrastructure (including homes, businesses, schools and hospitals) caused by flooding and storm events.

Uasin Gishu County Action Plan 2023-2027 aims to build resilience of communities and ecosystems to the effects of climate change and further sustainable development by providing mechanisms and measures to achieve low carbon climate resilient development in a manner that prioritizes adaptation and has prioritized water sector,food and nutrition security,disaster management,forestry,health and sanitation,Energy and infrastructure.

Actions to Support the Delivery of Priority Climate Actions

The CCCAP 2023-2027 will consider seventeen crosscutting enabling actions that are required to implement the priority adaptation and mitigation actions. These enabling actions equip the county government and stakeholders with the knowledge, skills, technologies and financing needed to deliver and report on climate actions. The cross-cutting enabling actions are listed in table 1.

Enabling policy and regulatory framework	
1.	Develop regulations for county climate change act of 2021
2	Operationalize the county climate change policy
Capacity development, research and knowledge management	
3	Capacity building the relevant departments in the county
4	Training and capacity building the various climate change institutions in the county
5	Cooperation with the National Environment Management Authority to deliver county plans
6	Capacity build stakeholders, private sector, civil society and vulnerable groups like women,youth and people living with disability
7	Develop a public participation strategy
8	Develop a climate information centre in every subcounty
Technology and innovation	
9	Provide climate information and early warning systems to farmers
10	Promote climate technologies and innovation in public and private sector
11	Identify incentives to promote climate friendly technologies
Climate finance	
12	Develop operation guidelines for the county climate change fund
13	Build the capacity of the ward climate change planning committees to develop bankable projects
14	Resource mobilization
15	Funding climate change related research and innovations
Measurement reporting and verification MVR plus	
16	Enhance the capacity of the climate change institution to carry out monitoring and evaluation of climate change projects
17	Establish a tracking system

Table 1; Actions to Support the Delivery of Priority Climate Actions

Delivering and implementing the CCCAP

The County Climate Change Act, 2021 sets out institutional structures and responsibilities that guide the implementation, oversight and management of CCCAP 2023-2027 Climate Change Steering Committee, chaired by H.E Deputy Governor, is responsible for the overall coordination of climate change affairs, including guiding the implementation of CCCAP 2023-2027.

The County Executive Committee Member responsible for climate change affairs in the county submits the action plan to the Cabinet for approval and reports to County Assembly on the status of the implementation of this CCCAP. The Climate Change Directorate and the CCU, established in the Department of Energy, Environment, Climate Change and Natural Resources, coordinates the implementation of CCCAP 2023-2027, including related monitoring and reporting,integrate CCCAP 2023-2027 into strategies and implementation plans, and to report to the County assembly through

the CECM in charge of climate change affairs on an Annual basis on performance and implementation.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

1.1.1 County Context

Uasin Gishu County is one of the 47 counties in Kenya situated in the Rift Valley region it lies western of the Country at 0.5528°N and 35.3027°E. The county has its headquarters in Eldoret town and is one of the eight counties in the North Rift Economic Regional Bloc (NOREB). The county is cosmopolitan, with the Kalenjin community majorly inhabiting it, with other tribes forming less than 10 percent of the population.

The county boasts a vibrant economy driven by agriculture, agro-driven processing and manufacturing industrial activity, trade and commerce, tourism, and the services sub-sector. According to the GCP report of 2021, the county's economy contributed 2.3 percent of the national GDP, of which the services sub-sector accounted for 50 percent, agriculture accounted for 39 percent, while manufacturing and other industries accounted for 6.3 percent and 4.9 percent, respectively, showing the county`s heavy reliance on the agriculture and services sub-sector.

The county has a mild and temperate climate favorable for large-scale production of maize and wheat, which along with neighboring Trans-Nzoia, is often referred to as the country's breadbasket. It also produces sizable quantities of milk, horticultural produce, and a wide variety of other crops and animals in smaller amounts. The National Cereals Board has one of the largest cereal storage depots in the country located at Moi's Bridge town, which consists of eight large silos with a capacity of approximately 5 million tonnes of grain, showing the significant role the county plays in Kenya`s food security.

Despite significant progress to date, sustainable development in the county is threatened by climate change and its resultant impacts. The county has in the recent past seen increased evidence of climate change such as prolonged dry season, rising temperatures and changing rainfall patterns, heavy rains/floods, storms and invasive species, pests and diseases and has experienced extensive climate related impacts through the increased frequency and intensity of extreme weather events such as droughts and flooding. These manifestations of climate change constitute a serious threat to Uasin Gishu County's natural systems on which the county's sustainable development and future prosperity depends.

1.1.2 CCCAP Context

Climate change has increased the frequency and magnitude of extreme weather events in Uasin Gishu County that have led to loss of lives, diminished livelihoods, reduced crop and livestock production, and damaged infrastructure, among other adverse impacts. An example is the prolonged drought season experienced between January to May 2018 that devastated Farmers that were already struggling to recover post-harvest Losses experienced from unexpected Rains experienced in the harvesting season between October and December 2017

County Climate Change Action Plan (CCCAP) provides a framework for Building resilience of communities and ecosystem to the effects of climate change and further sustainable development by providing mechanisms and measures to achieve low carbon climate resilient development in a manner that prioritizes adaptation.

It is a five-year plan (2023-2027), implemented through a rolling one-year plans, Plan will facilitate a coordinated development in the county while harnessing synergies presented by the various players in the county's development realm.

Section 33 of the County Climate Change Act, 2021 provides for the development of County Climate Change Action Plans (CCCAP) in consultation with the steering committee and other relevant sectors through a participatory that involves stakeholders and the community.to prescribe measures and mechanisms to mainstream adaptation and mitigation actions into sector functions of National and County Governments.

The Act requires that the County Executive Committee Member in charge of environment and climate change to develop, review and update the CCCAP in every five-year period through the same participatory process and shall run concurrently with the NCCAP and the CIDP.

The CCCAP 2023-2027 is the County's first action plan on climate change and is developed on the participatory climate risk assessment which identified risks and the community prioritized the resilience investment.

The CCCAP 2023-2027 will be funded by the county allocation,the financing locally led climate actions grant and other resource mobilizations that will be undertaken by the CCU.

1.2 Purpose and Process of the CCCAP

The Uasin Gishu County Climate Change Action Plan is a five-year plan that helps The County adapt to climate change and reduce greenhouse gas emissions. CCCAP 2023-2027 aims to enhance the County's development goals by providing mechanisms and measures to achieve low carbon climate resilient development in a manner that prioritises adaptation.

This climate change Action Plan helps to enhance the county's development aspirations and seeks to:

- Align climate change actions with the Governor's development agenda, including the Nguzo Kumi Manifesto
- Encourage participation of the private sector, civil society, and vulnerable groups within society, including women, older members of society, persons with disabilities, children, youth, and members of minority or marginalized communities.
- Provide the framework to deliver Kenya's Nationally Determined Contribution (NDC) for the five-year period 2023-2027.
- Provide a framework for mainstreaming climate change into sector functions at the county level

In order to achieve climate change action that simultaneously advances economic and sustainable development objectives, the CCCAP is guided by the following principles:

▪ Responsiveness – responds to actual adaptation and mitigation needs in Uasin Gishu by taking measures to reduce the adverse effects of climate change and prevent or minimise the causes of climate change.

▪ Equity and social inclusion – addresses the needs of vulnerable groups within society, including women, older members of society, persons with disabilities, children, youth, and members of minority or marginalised communities through an inclusive approach to climate change action.

▪ Consultation and cooperation – implements actions through consultation and cooperation between County Governments and other government institutions within the county, as well as consultation and cooperation with civil society and the private sector.

▪ Fairness – ensures that climate actions do not create competitive disadvantage for the private sector within the county to its trading partners.

1.3 Underlying Climate Resilience Context

Uasin Gishu County is highly vulnerable to climate change due to its dependence on rain-fed agriculture, limited access to water resources, and high exposure to extreme weather events such as prolonged drought, extreme temperatures increased flooding, emergence of aggressive invasive insects and pests. These factors contribute to food insecurity and poverty, particularly in rural areas.

The County has recognized the importance of climate resilience and has integrated it into its County development plans and policies. The County Climate Change Action Plan (CCCAP) outlines strategies and actions to enhance climate resilience across sectors. The Adoption of the county climate change Act of 2021 and the county climate change policy also reflects the government's commitment to address climate change impacts.

Uasin Gishu County has implemented several initiatives to enhance climate resilience. These include investing in climate-smart agriculture and green growth practices, promoting renewable energy sources, and environmental conservation for sustainable development. The government has also mainstreamed climate change actions into the County Integrated Development Plan allocated 2% of the annual development budget finance to support adaptation and mitigation efforts.

Recognizing the importance of local communities in building climate resilience, the County has prioritized community-based adaptation approaches. This involves community sensitization and empowering local communities to identify and prioritize climate resilient actions through PCRA process and implement climate resilience measures based on their specific needs and knowledge as identified and prioritized in the CCCAP.

Despite progress, the County still faces challenges in implementing climate resilience measures. These include limited access to finance, inadequate technology transfer, and institutional capacity constraints. Additionally, climate change impacts disproportionately affect vulnerable groups, such as women, children and PWDs, highlighting the need for targeted interventions.

1.3.1 Climate Change Impacts in Uasin Gishu

Climate change is causing an increase in average global temperatures and rising sea levels, causing significant environmental and economic disruption. Heat, drought and floods are impacting the communities in Uasin Gishu, and human health is increasingly at risk. The county's economy is very dependent on climate-sensitive sectors such as agriculture, water, energy and health, which increases vulnerability.

The increasing intensity and magnitude of weather-related disasters in Uasin Gishu aggravate conflicts, mostly over natural resources.

Historically, extreme climatic events have caused significant loss of life and adversely affected the national economy. In the 1997-2016 period, the country experienced an average of 57.95 deaths per year and GDP losses of 0.362% per year due to extreme weather events.

a) Social Impacts

Floods have led to the greatest loss of human lives in Uasin Gishu and have led to cholera outbreaks in the County, and people experienced an upsurge of mosquito-borne diseases such as malaria.

Droughts in Kenya affect about 4.8 million people on average. In Uasin Gishu county Droughts have destroyed livelihoods by triggering crop and livestock losses and eroded the ability of communities to cope with the hard economic times.

Vulnerable groups including women and children are affected by climate change because of environmental degradation and have to long distances to fetch water. Persons with disabilities, children and the elderly are vulnerable because of potential impacts on health and their more limited mobility.

Women are vulnerable to climate change. Their role as primary caregivers and providers of food and fuel makes them more vulnerable when flooding and drought occur. Drought compromises hygiene for girls and women as the little water available is used for drinking and cooking, and has a negative effect on women's time management in the household. When nearby wells and waters sources run dry, women have to travel long distances to search for water. Longer dry seasons mean that women work harder to feed and care for their families. In both urban and rural areas, women have multiple demands in the home, workplace and community that leave less time for political involvement and active participation in decision-making processes.

b) Environmental Impacts

Droughts and prolonged dry seasons in Uasin Gishu county is a climate risk. The rains begin late across most of the sub-counties, resulting in a shortened rainy season, and most areas received 50-90% of normal rainfall

The maps below show the variations in rainfall and temperature patterns in the county for the last 20 years.

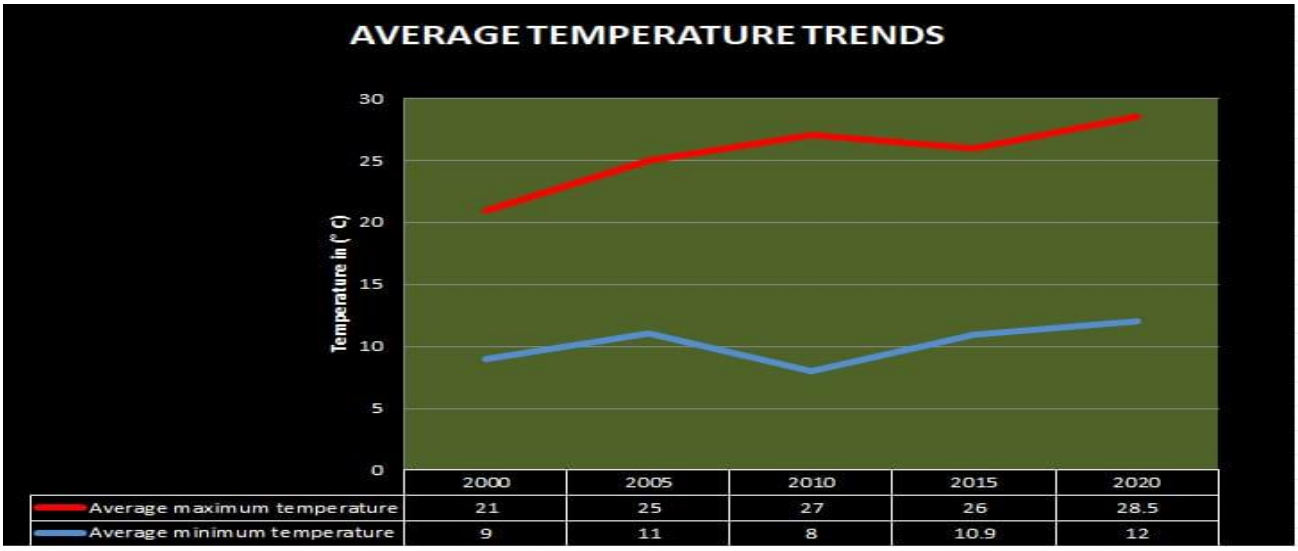


Figure 1: Average temperature trends in the county

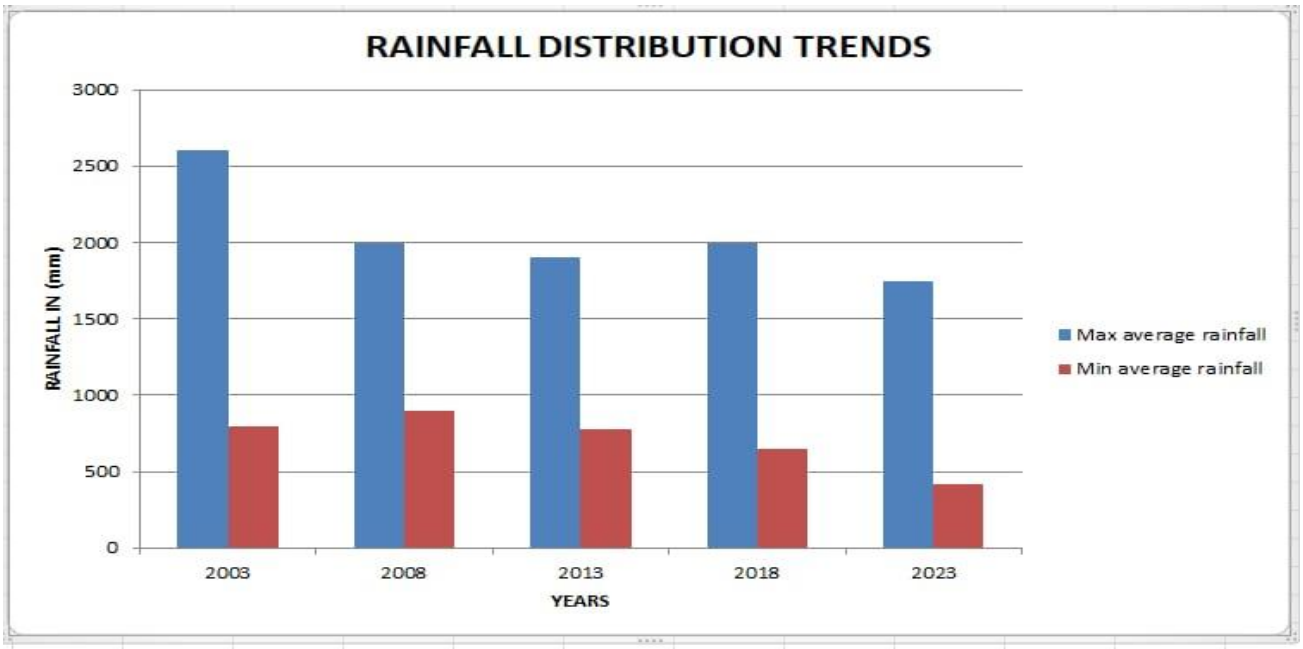


Figure 2: Average rainfall distribution trends in the county

Climate change is also a major factor contributing to land degradation, which encompasses changes in the chemical, physical and biological properties of the soil. However, human activities pose the greatest threat through unsustainable land management practices such as Excessive use of agrochemicals, destruction of natural vegetation, over-cultivation, overgrazing and deforestation. Restoration of degraded land aims to achieve land degradation neutrality that maintains or enhances the land resource base – or the stocks of natural capital associated with the land resources and the ecosystem services that flow from them. Restoration of degraded land has important climate benefits, including the sequestration of carbon dioxide and improved climate resilience by recovering lost ecosystems. The president has launched an ambitious tree planting Programme in 2023 that targets to plant over 15 billion trees over a period of 5 years and the His Excellency the Governor of Uasin Gishu County has committed to plant over 50 million every year in the county.

Deforestation and forest degradation in Uasin Gishu is largely a result of human activities, although climate change is likely to affect the growth, composition and regeneration capacity of forests resulting in reduced biodiversity and capacity to deliver important forest goods and services. Rising temperatures and long periods of drought will lead to stunted growth and loss tree seedlings. rising temperatures will extend the ecosystem range of pests and pathogens with consequences on tree growth, survival, yield and quality of wood and non-wood products.

c) Economic impacts

The economic impacts of floods and drought are severe in Uasin Gishu County. The rains and flooding wipe out resources, Roads and infrastructure are destroyed, seasonal crops across are destroyed.

The County Government allocates over KES 800 Million annually to fix roads destroyed by the rains every year. The drought depressed generation of hydroelectricity leading to an increase in generation of electricity from thermal sources and causes losses to numerous industries and factories in the county.

1.3.2 Summary of climate change impacts in Uasin Gishu

The major sectors affected by climate change in Uasin Gishu County include crops, farming, Livestock, Drought and Flood Management, Energy, Environment, Forestry & wetlands Health, Manufacturing and processing, Transport and Water sector.

Table 2; Summary of climate change impacts

Sector	Likely impacts of climate change
Crops farming	▪ Food insecurity ▪ Decline in crop yields due to insufficient availability of water, more pests, diseases and weeds ▪ Uncertainty regarding the production of specific crops, but likely reduction on yields of maize and beans ▪ Higher temperatures in highland areas may have a positive impact on agricultural production ▪ Reliance on irrigation due to reduced rains ▪ Post-harvest losses
Livestock	▪ Livestock deaths caused by lack of pasture ▪ Decline in production due to lack of pasture, reduced access to water, and heat stress ▪ Expected changes in disease patterns
Drought and Flood Management	▪ Increased frequency and intensity of prolonged dry seasons, decrease ability to cope ▪ Increased frequency and intensity of flooding decrease ability to cope ▪ Increased number of food insecure and malnourished people ▪ Increased number of people with limited access to water
Energy	▪ Deforestation has reduced availability of wood fuel ▪ Increased indoor pollution due to use of low quality fuel wood ▪ Damage to infrastructure

Environment	▪ Increased likelihood of contestation and conflict over diminishing natural resources ▪ Increases in invasive species, new pests, and diseases
Forestry & wetlands	▪ Increased exposure to fire, pathogens and invasive species ▪ Reduced provision of environmental resources and economic activity
Health	▪ Malaria and other diseases prevalence ▪ Increase in water-borne diseases such as cholera and typhoid ▪ Malnutrition
Manufacturing/ processing	▪ Greater resource scarcity (such as water and raw materials) for inputs to manufacturing and processes especially agro based industries ▪ Greater risk of plant, product and infrastructure damage and supply chain disruptions from extreme weather events
Transport	▪ Damage to infrastructure including roads and bridges during storms ▪ Disruption of access to work, markets, education and healthcare facilities, due to damaged infrastructure and transport services.
Water	▪ Reduced availability of surface water for activities such as irrigation, livestock production, household use and industry ▪ Increased water loss from reservoirs due to evaporation ▪ Drying of dams, rivers and streams due to siltation ▪ Pollution of water from soil erosion, agrochemicals, toilets and solid waste

1.3.4 County Resource map

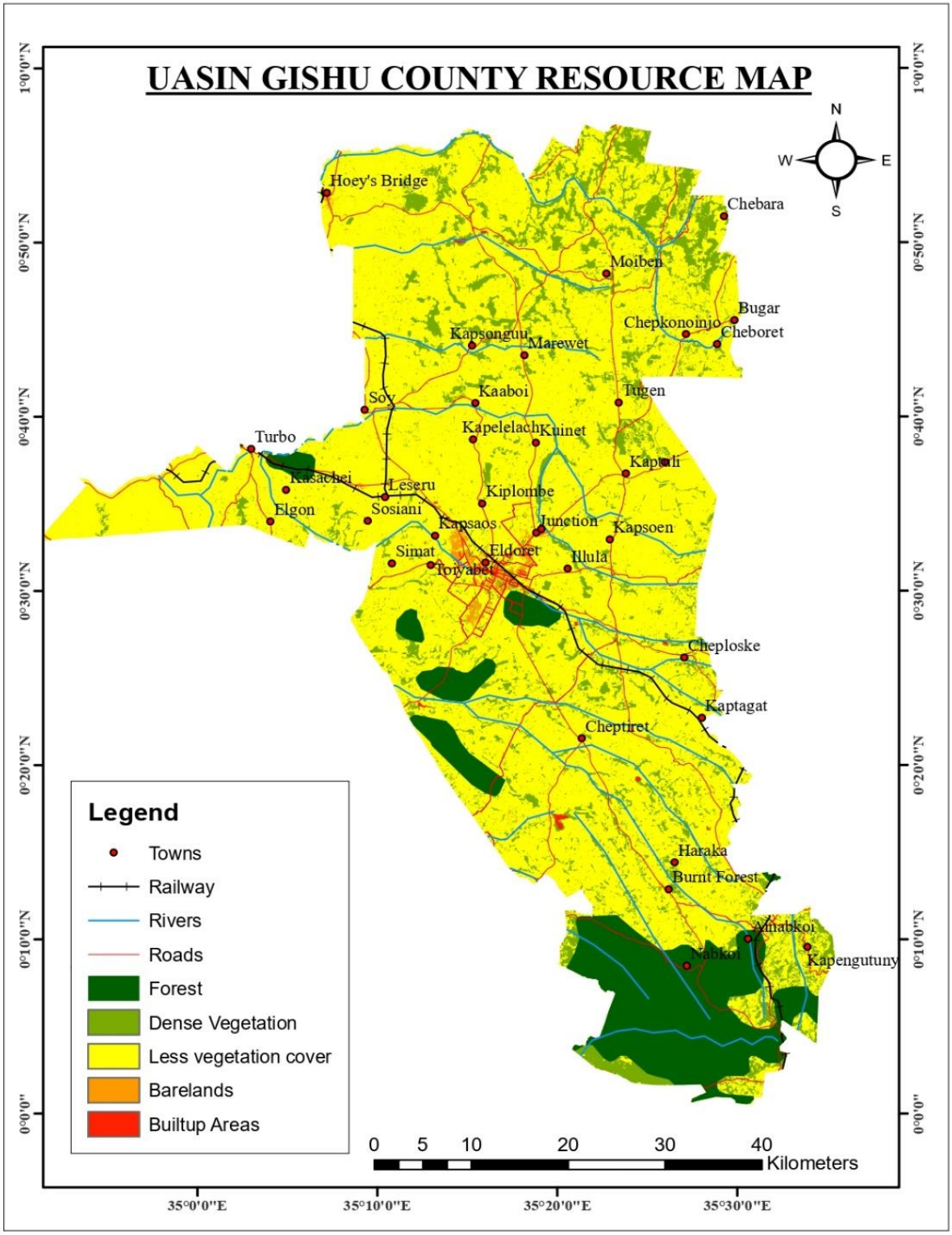


Figure 3: County Resource Map

1.3.5 County hazard map

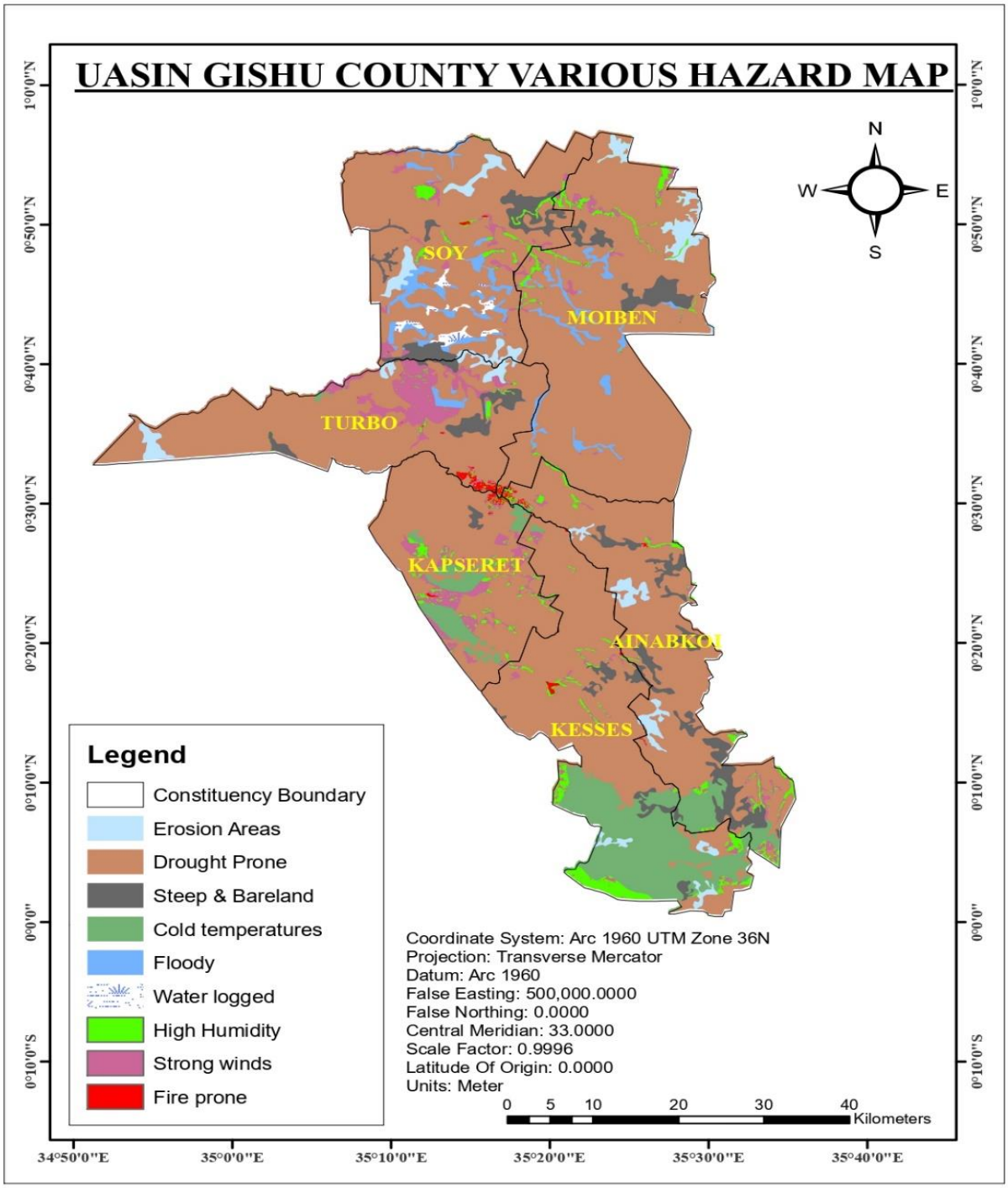


Figure 4: County Hazard Map

1.3.6 Summary of Differentiated Climate Exposure and Vulnerability of key groups and Livelihoods in the County

This section describes the differentiated impacts of the past and current climate trends and risks on the different key interest groups in the county, with a particular focus on women, youth, ethnic minorities, people living with disabilities and other marginalized and vulnerable groups.

Table 3: Differentiated impacts of climate trends and risks

Interest Group	Duration	Drought	Floods/Heavy Rainfall	Extreme temperature	Invasive species/Pests/Diseases
Women	20 years (Past)	Difficulty in finding water in the months of January, February and March	No impacts on surface water run-off Pollution of water due to floods thus some boil drinking water while others drink raw water harvested from their roofs	No challenge	No challenge
	10 years to present	Prolonged drought has made them travel longer distances in search of water. Women also find it difficult to get vegetables for their families.	Runoff negatively affects houses, which are the sole responsibility of women in terms of cleanliness. It also affects farming of vegetables and poultry by causing diseases. This affects domestic water supply Floods fill the wells and flow to the rivers therefore causing	Women have to boil water often for drinking due to high temperatures. This in turn demands more fuelwood, which is a responsibility of women to fetch.	Has reduced agricultural yields hence resulting to food shortage Diseases such as Newcastle, coccidiosis has impacted women since women are poultry farmers

Interest Group	Duration	Drought	Floods/Heavy Rainfall	Extreme temperature	Invasive species/Pests/Diseases
			water pollution There's increased intensity of rainfall over a short period of time hence loss and destruction of property -Has led to waterlogging leading to waterborne diseases -Impassable roads leading to difficulty in accessing markets and hospitals		
Children	20 years (Past)	Girls and boys had to travel longer for water in the months of January and February. The boys had to take livestock to far distances for pasture and water during the short dry spell.	The problem only affected school going boys and girls for a short time as the runoff was not a pronounced risk.	Was not a problem	There was no impact
	10 years to present	There has been prolonged drought, which has made girls travel longer distances over a longer period to look for water. The boys have to travel longer distances with the	Impassable roads and flooding streams negatively affect school going boys and girls. Runoff also makes playgrounds of schools unfit for games and sports. Impassable roads leading to	Reduced physical activity of the boys and girls.	Has resulted to malnutrition due to reduced yields and productivity.

Interest Group	Duration	Drought	Floods/Heavy Rainfall	Extreme temperature	Invasive species/Pests/Diseases
		livestock during weekends in search of water and pasture than in the past.	difficulty in accessing schools -Has led to waterlogging leading to waterborne diseases		
People Living with Disability	20 years (Past)	They were not affected because they were less involved in the daily activities. There was less runoff since there was plenty of vegetation in rural side There was better management of run off in urban areas od.	They were not much affected by runoff as they had caretakers and were less active.	Was not a problem	There was no main challenge
	10 years to present	They suffer a lot especially in cases where they live alone or are providers of their families. They find it difficult to meet the needs of water and food in their families.	Those who are able to move suffer the problems of impassable roads when there is runoff. Impassable roads leading to difficulty in accessing essential services and markets -Has led to waterlogging leading to waterborne diseases	High temperatures and scorching sun negatively affect those with albinism.	Reduced livelihoods due to the poor production and reduced yields in farming and livestock production.
Youths	20 years (Past)	Did not negatively affect the youth.	There was less runoff since there was plenty of vegetation in rural side.	Was not a problem	

Interest Group	Duration	Drought	Floods/Heavy Rainfall	Extreme temperature	Invasive species/Pests/Diseases
			Better drainage especially in urban side hence easy access to markets		
	10 years to present	Drought affects horticulture farming and tree farming, which are practiced by the youth.	The youth have to dig trenches for drainage in their homes. Runoff also negatively affects the youth's horticulture and tree nurseries. Impassable roads leading to difficulty in accessing markets for their agricultural produce Lower farm productivity as a result of soil erosion-Has led to waterlogging leading to waterborne diseases	High temperatures coupled with drought causes high evapotranspiration rates therefore demanding a lot of water for horticulture and tree nurseries.	

1.4 Brief Overview of Climate Change Actions in the County

1.4.1 Mainstreaming of NCCAP in County Actions

The National Climate Change Action Plan (NCCAP), 2018-2022, is a five-year plan that helps Kenya adapt to climate change and reduce greenhouse gas emissions. It aims to further Kenya's development goals by providing mechanisms and measures that achieve low carbon climate resilient development. A low carbon climate resilient development pathway emphasizes sustainable development and prioritizes adaptation,

recognizing the importance of increasing the climate resilience of vulnerable groups, including women, youth, persons with disabilities, and marginalized and minority communities.

In mainstreaming NCCAP, the county has undertaken the following actions,

1. Adopt disaster and Risk Management Act, 2021
2. County Climate Change Act, 2021
3. Climate Change policy, 2021
4. Promotion and adoption of Climate Smart Agriculture and Green Growth Technologies, Innovations and Management Practices aimed at increasing food and nutritional security.
5. Enhance resilience of water sector by ensuring access to and efficient use of water for agriculture, livestock, domestic and other uses
6. Increase county forest cover from 6.7% in 2019 to 7.2% in 2022.
7. Supported establishment of material recovery facilities especially for plastics and e-waste

In implementation of the County Climate Change Act of 2021, the county has developed County Climate Change Action Plan that has incorporated the water sector, climate smart agriculture, agroforestry and environmental conservation as a priority in the the implementation matrix and this is in line with the CIDP and the nguzo kumi manifesto that guides the development plans in the county for the next five years.

1.4.2 Climate Change in CIDP

Uasin Gishu County, also referred to as the breadbasket of Kenya has been known to have high and reliable rainfall for a long time. The county Government has been leading in the process of Climate change response through awareness programs to local farmers and offering free advice on farm inputs. At the same time the local government has gazetted all the water catchment areas in a bid to conserve and restore them. There are numerous projects around the county on water conservation in addition to the promotion of the use of green energy particularly solar. The county has also been promoting afforestation through the planning of indigenous trees by establishing tree nurseries in strategic places across the county. The County is keen in ensuring that response to Climate is done promptly and that residents recognize of the effects of Climate Change.

1.4.3 Current climate actions/strategies in the County

This section provides an overview of existing climate resilience strategies, differentiated by livelihood and producer systems, stakeholder groups, economic and social sectors etc. with a particular focus on women, youth, ethnic minorities, persons with disabilities and other marginalized and vulnerable groups. It analyses the effectiveness of these strategies to current climate risks and the resources or actions that could make these strategies more effective.

Table 4: Existing adaptation/resilience strategies and their effectiveness to current climate risks

Risk/Hazard	Livelihood/Economic System	Current Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information	Effectiveness
Drought/prolonged dry season	**Livestock farming** Scarcity of animal feeds Reduced yield Loss of livestock Scarcity of drinking water	Feeding livestock with maize stovers, wheat straws and use of sugarcane tops A few farmers plant fodder and conserve for dry season e.g. hay while others make silage Reducing number of animals and moving to other areas in search pasture Taking livestock to long distances in search of water, buying water from water suppliers, some use water in their reservoirs	Farmers	Men Women Youth PWDs	Low
	Crop production Reduced crop yield Food shortage	Planting of drought resistant and short-term crops A few construct greenhouses Irrigation of horticultural crops for	Farmers	Men Women Youth,PWDs children	Low

Risk/Hazard	Livelihood/Economic System	Current Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information	Effectiveness
		those close to reliable water bodies e.g. rivers, dams and wetlands Some use modern kitchen gardens Resort to one meal a day			
	Trade Scarcity of trading commodities (farm produce) Reduced buying capacity	Increase prices of the limited commodities Travel long distances in search of the produce Reduce the weights of the produce Some businesses close up while others reduce stocks	Traders	Men Women Youth PWDs	Low
	Water scarcity Reduced water levels Reduced water supply	Water harvesting and storage Purchase of water Sinking of shallow wells and boreholes Desilting of dams for water supply Travelling long distances to fetch water from streams and rivers Taking animals to water sources to drink water Planting of food crops along riparian and wetlands Some farmers do irrigation	Households County Government	Youth,Women and Children PWDs	Low

Risk/Hazard	Livelihood/Economic System	Current Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information	Effectiveness
	Forests/deforestation /reforestation	Planting of trees Few use green energy for lighting and biogas for cooking Some use energy-saving jikos	Farmers Government	Men Women Youth PWDs	Low
Unpredictable/ short rainfall	Arable land/crop farming	Some farmers plant short season crops varieties Crop diversification	Farmers	Women Youth Men PWDs	Low
	Livestock farming	Planting of quality pasture Improve livestock breeds Livestock diversification	Farmers	Women,Youth Men,PWDs	Low
	Water scarcity	Water storage	Farmers Households	Women,Youth Men,PWDs	Low
Heavy rainfall/ floods/storms/hailstones	Crop/livestock farming Reduced crop and livestock production Soil erosion leading to soil infertility Damage of crops	Making of terraces Some do not respond therefore leading to high losses Grading and murraming of roads Construction of drainage system	Farmers County	Men Women Youth Children	Low

Risk/Hazard	Livelihood/Economic System	Current Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information	Effectiveness
	Crop and livestock diseases Siltation of rivers and dams Pollution of water sources Impassable roads limiting accessibility to markets Loss of property(Flooding of houses and collapse of toilets) Blockage of drainages Power cuts leading to business losses and blackouts Siltation and pollution of Water bodies **Health** Water logging leading to malaria and waterborne diseases Loss of lives	Desilting of dams Boiling of drinking water Building of terraces Planting of trees and cover crops Using of fungicides Use of mosquito nets Medication and treatment	Government	PWDs	

Risk/Hazard	Livelihood/Economic System	Current Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information	Effectiveness
Extreme temperatures Low Temperature High Temperature	Crop farming Causes crop diseases Loss of crops Low crop production Health Respiratory diseases Crop farming Increase pest invasion in crops Low yields Health High breading of mosquitoes	Spray with fungicides Seek medical attention Keep warm Spray with fungicides Seek medical attention Use of mosquito nets	Farmers households	Men, Women, Youth, PWDs children	Low
Invasive species/ pests and diseases	Crop farming Loss of crops Low production Increase cost of production Forests /trees Trees drying and dying by the parasitic species	Spray with pesticides and local remedies Tried pesticides but not working Cutting and burning of the trees	Farmers County government	Women Men Youth PDWs	Low

CHAPTER TWO:

2.0 POLICY ENVIRONMENT

2.1 National Policy Context

2.1.1 The National Enabling, regulatory and Policy Framework

A robust framework of policies, plans and institutions is being progressively established at the National. The foundation of the institutional and legal framework for climate change action is the Constitution of Kenya (2010). Article 10 sets out national values and principles of governance, such as sustainable development, devolution of government, and public participation, that are mandatory when making or implementing any law or public policy decisions, including climate change. Article 42 provides for the right to a clean and healthy environment for every Kenyan, which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures.

Table 5: The main policies, plans and frameworks that influence and guide climate change actions in Kenya

National Framework	Description
Kenya Vision 2030 (2008) and its Medium Term Plans	*Kenya Vision 2030* – the country's development blueprint – recognised climate change as a risk that could slow the country's development. Climate change actions were identified in the Second Medium Term Plan (MTP) (2013-2017). The Third Medium Term Plan (2018-2022) recognised climate change as a crosscutting thematic area and mainstreamed climate change actions in sector plans.
National Climate Change Response Strategy (2010)	Kenya's *National Climate Change Response Strategy* was the first national policy document on climate change. It aimed to advance the integration of climate change adaptation and mitigation into all government planning, budgeting and development objectives.
National Climate Change Action Plan (2013-2017) 2018-2022	Kenya's *National Climate Change Action Plan, 2013-2017* was a five-year plan that aimed to further Kenya's development goals in a low carbon climate resilient manner. The plan set out adaptation, mitigation and enabling actions.
National Adaptation Plan (2015-2030)	Kenya's *National Adaptation Plan 2015-2030* was submitted to the UNFCCC in 2017. The NAP provides a climate hazard and vulnerability assessment and sets out priority adaptation actions in the 21 planning sectors in MTP II.

Kenya's Nationally Determined Contribution (NDC) (2016)	Kenya's NDC under the Paris Agreement of the UNFCCC includes mitigation and adaptation contributions. In regard to adaptation, "Kenya will ensure enhanced resilience to climate change towards the attainment of Vision 2030 by mainstreaming climate change into the Medium Term Plans (MTPs) and implementing adaptation actions." The mitigation contribution "seeks to abate its GHG emissions by 30% by 2030 relative to the BAU scenario of 143 MtCO2eq." Achievement of the NDC is subject to international support in the form of finance, investment, technology development and transfer and capacity development.
Climate Change Act (No. 11 of 2016)	The *Climate Change Act (No. 11 of 2016)* is the first comprehensive legal framework for climate change governance for Kenya. The objective of the Act is to "Enhance climate change resilience and low carbon development for sustainable development of Kenya." The Act establishes the National Climate Change Council (Section 5), Climate Change Directorate (Section 9), and Climate Change Fund (Section 25).
Kenya Climate Smart Agriculture Strategy (2017-2026)	The objectives of the Kenya Climate Smart Agriculture Strategy (KCSAS) are to adapt to climate change and build resilience of agricultural systems while minimising greenhouse gas emissions. The actions will lead to enhanced food and nutritional security and improved livelihoods.
Climate Risk Management Framework (2017)	The *Climate Risk Management Framework for Kenya* integrates disaster risk reduction, climate change adaptation, and sustainable development so that they are pursued as mutually supportive rather than stand-alone goals. It

2.2 County Enabling Legal & Policy Framework

The County Government of Uasin Gishu has developed a robust regulatory framework for climate change and all the legal and policy frameworks are mainstreamed into the county CIDP.

Table 6: The main policies, plans and frameworks that influence and guide climate change actions in Uasin Gishu County

County Framework	Description
County Integrated Development Plans (2023-2027)	The County Government has mainstreamed climate change in the third-generation CIDP (2023-2027). The CIDP has mentioned the impacts of climate change and has identified actions to address these impacts. Adaptation actions is a priority in the County Government of Uasin Gishu.
Uasin Gishu County Climate	The Uasin Gishu County Climate Change Act,2021 establishes

Change Act,2021	the climate change institutions from the ward to the county level and mandates the County Government to set aside 2% of its annual developmentbudget for climate change.
Uasin Gishu County climate change policy	The Policy was developed in cognizance of the multidisciplinary and cross-cutting nature of climate change in terms of disciplines and sectors. It also recognizes that most aspects of this strategy will only be realized through a coordinated, coherent and effective response to the local, national and global challenges and opportunities that climate change presents by focusing on the adoption of a mainstreaming approach that ensures integration of climate change considerations into the development planning process, budgeting, and implementation in all sectors of the County Government of Uasin Gishu.
Uasin Gishu County climate financing Act,2021	The act has put in place frameworks and mechanisms for mobilization and facilitation of county Government, communities and other stakeholders to respond effectively to Climate change through appropriate adaptation and mitigation measures and actions.
Disaster and risk management Act,2021	Provides for more effective organization of disaster risk reduction and mitigation of,Preparedness for,Response to and recovering from emergencies and disasters
Uasin Gishu County Spatial plan	The plan supports the implementation of strategic development of a given geographic area in the county

CHAPTER THREE

3.0 PRIORITY CLIMATE CHANGE ACTIONS

3.1 Identification of strategic climate action priorities in the PCRA

County Climate Change Action Plan (CCCAP 2023-2027) takes cognizance of the impacts of climate change on the Socioeconomic sector. It identifies strategic areas where climate action over the next five years is linked to the data collected at both the ward and county levels. Analysis of the climate risks of all the 30 wards is attached as Annex….

The SDGs and the Nguzo Kumi recognise that climate change is likely to limit the achievement of these pillars.

The Nguzo Kumi manifesto

1. Agriculture and food security 2. Health 3. ICT and E-government 4. Trade, industrialization, cooperatives 5. Education, youth, sports, culture and social services	6. Infrastructure development 7. Water environment and natural resources 8. Lands housing and physical planning 9. Public service management 10. Municipality of Eldoret

Food security is threatened by climate change-driven declines in agricultural productivity. The destruction of tens of thousands of hectares of crops and the loss of livestock.

Other negative climate impacts include an increase in vector-borne diseases, including malaria and cholera; damage to infrastructure, including homes, schools and hospitals; and high prices for electricity due to a reliance on thermal generators when dam levels are too low to sustain hydropower production.

Adaptation actions are prioritised in CCCAP 2023-2027 because of the devastating impacts of droughts, pests and diseases, floods, and the negative effects of climate change on vulnerable groups, including women, older members of society, persons with disabilities, children, youth, and members of minority and marginalized communities. These actions will be undertaken, where possible, in a way to limit GHG emissions to ensure that the county contributes to the achievement of the NDC under the Paris Agreement to reduce GHG emissions by 30% by 2030 relative to the business-as-usual scenario of 143 MtCO2e.

The priority climate change actions in this Action Plan reflect input received from all the 30 wards through a participatory climate risk assessment process and a multi-stakeholder engagement at the county level; vulnerable groups including women, youth, persons with disabilities, and members of marginalized and minority communities; private sector; civil society; and sector experts. These climate change actions are mainstreamed in the Third Generation County Integrated Development Plan to ensure that strategic climate change actions are taken up across the county and in all relevant sectors.

3.2 Priority County Climate Change Actions

CCCAP 2023-2027 outlines the programs and strategies for adaptation and mitigation for 1st July 2023 to 30th June 2027. It is a comprehensive plan that:

- Enables all sectors to take action to achieve climate change adaptation and mitigation objectives;
- Supports achievement of the Nguzo Kumi Manifesto and sustainable development goals;
- Enhances the adaptive capacity and resilience of communities, with an emphasis on vulnerable groups within society;
- Undertakes actions, where possible, in a way that limits GHG emissions to ensure that the county contributes to the achievement of the NDC under the Paris Agreement.
- Enables actions to be undertaken in an integrated manner that addresses several priorities. For example, actions to Desilt Dams also contribute to disaster risk management, water and food security objectives.

The priority climate change actions are summarised in Table 7 below and described in this chapter explains further details on the priority actions and all other climate change actions identified by stakeholders are included in the Annexes of the ward PCRA data analysis reports.

Table 7: Priority Climate Change Actions

Priorities	Objectives
1. Water	Enhance the resilience of the water sector by ensuring access to and efficient use of water for agriculture, domestic, and other uses through desilting of Dams, spring protection and protection of riparian areas.
2. Climate Smart Agriculture	Increase food and nutrition security through the introduction of short-season crops, sustainable farming practices, agroforestry and drought-resilient crops and livestock.
3. Floods and Drought Management	Reduce risks to communities and infrastructure resulting from climate-related disasters such as droughts and floods.
4. Health, Sanitation and Human Settlements	Reduce the incidence of malaria and other diseases expected to increase because of climate change; promote climate-resilient buildings and settlements, including urban centres, and encourage climate-resilient solid waste management.
5. Energy and climate-smart transport systems	promote renewable energy development; increase uptake of clean cooking solutions and sustainable non-motorized transport mechanisms

3.2.1 Uasin Gishu County Climate Change Priorities

i. Climate Change Priority 1: Water

CCCAP 2023-2027 addresses one of County's largest challenges, water scarcity. The decline in access to quality water for domestic and agricultural use. This exacerbated by climate change especially prolonged dry seasons and has the potential to undermine achievement of the county development plans and the Nguzo Kumi manifesto.

Many of the actions will be implemented under existing initiatives such as African Initiative for Combatting Desertification; Kenya Integrated Water, Sanitation and Hygiene Project; and Water Sector Trust Fund.

The climate actions are expected to result in:

- Adaptation – increased water availability through water harvest and storage, improved water efficiency, and improved water availability.
- Resilience- to increase the storage of water during the rainy season to make it available for use during the dry season.
- Nguzo Kumi – increase the water distribution and aid in the progress toward the achievement of food and nutrition security.
- Sustainable Development – reduction in water scarcity through improved water harvesting and greater water use efficiency.

Table 8: Priority 1-Water

Strategic Objective 1: Enhance resilience of water sector by ensuring adequate access to and efficient use of water for agriculture, domestic, and other uses.		
problem: Access to and quality of water is expected to decline because of drought caused by climate change		
***Nguzo Kumi* : linked to water and natural resources**		
SDG 6: Clean water and sanitation; 14 – Life below water; 1 – No poverty; 2 – Food security and nutrition;3 – Good health; 9 – Sustainable Infrastructure; 10 – Inequality reduction; 12 – Sustainable consumption and production		
Action	**Expected Results by 30th June 2027**	**Adaptation/ Mitigation**
1. Increase water availability through the development of water infrastructure	▪ Increase annual per capita water availability through the construction of new dams, desilting of existing dams and water pans ▪ Drilling and equipping of boreholes and wells ▪ Springs protection ▪ Abstraction of rivers and streams	Adaptation strategy- Addresses climate risk of high temperatures and changing precipitation patterns causing water shortages
2. water harvesting and water storage infrastructure andimprove flood control	▪ The annual number of climate-proofed water harvesting, flood control and water storage infrastructure increased from 700 to 2,000, through: - Integrated catchment approach and ecosystem-based adaptation structural/ mechanical design - Development of flood early warning systems in the wards and county level	Adaptation strategy- Addresses climate risk of high temperatures and changing precipitation patterns causing water shortages

3. promote the conservation of water catchment areas	▪ Mapping out the water catchment areas ▪ Identify suitable conservation measures and promote the need for catchment and riparian conservation	Adaptation strategy- Addresses climate risk environmental degradation causing water shortages
4. improve the water distribution system	▪ Establishment of water distribution networks to increase the coverage and number of households with access to water	Adaptation strategy- Addresses climate risk environmental degradation causing water shortages

ii. Climate Change Priority 2: Food and Nutrition Security

Climate shocks significantly affected the annual growth rate of the agriculture sector and this growth (or decline) has a large impact on the economy. The agriculture sector is highly susceptible to the vagaries of weather, including temperature increases, precipitation changes, and extreme climate events.the table below explains the historical timelines of major agricultural shocks in

Table 9: Area Under Major Food Crops, Production and Value By Sub County, 2018-2022

Food Crops	2018			2019			2020			2021			2022		
	Area (Ha)	Production (Tons)	Value (KSh)	Area (Ha)	Production (Tons)	Value (KSh)	Area (Ha)	Production (Tons)	Value (KSh)	Area (Ha)	Production (Tons)	Value (KSh)	Area (Ha)	Production (Tons)	Value (Millions of KShs)
SOY															
Maize	20,870	103,118	2,692,500,000.00	23,550	**84,032**	2,147,480,000.00	26,000	115,600	332,000,000	27,241	122,585	332,000,000	24500	98000	5,512,500,000
wheat	5500	14040	477360000	3510	9161.1	320638500	4080	13770	495,720,000	4200	12600	459,000,000	3255	11392.5	602175000
Sorghum	1.8	1.8	108000	2	2.5	135000	1.3	1.2	84,000	15	23	480,000	16	43.2	2880000
Finger millet	4.6	4.14	496920	3.5	3.14	378000	3.5	3.5	420,000	95	114	432,000	80	96	7680000
Irish potatoes	47	564	10,152,000	33	396	6336000	41	492	9,840,000	45	780	11880000	40	480	12000000
Beans	2150	1935	154,800,000	1682	1514	128,673,000	2079	1975	167,879,250	4150	4980	224,460,000	5640	5076	456840000
TURBO															
Maize	15900	63600	2,295,000,000	17200	68800	2,281,586,666	16,910	64220	1,926,600,000	17,000	71910	1944650000	16600	66400	3735000000
wheat	1700	5100	153,000,000	1538	5229.2	183,022,000	1850	5920	207,200,000.00	1890	56850	165000000	2325	8137.5	430125000
Sorghum	15	16	800000	14	15	825000	16	18	900000	13	156	1008000	12	32.4	2160000
Finger Millet	15	12	1440000	12	11	1365000	12	12	1350000	12	15	1350000	11	13.2	1056000
irish potatoes	15	300	5400000	12	144	2880000	13	155	3410000	10	150	3875000	10	120	3000000
Beans	1950	894	53665200	1444	1459	72,950,000	3600	4184	251040000	3300	2970	1123200000	3536	3182.4	286416000
MOIBEN															
Maize	22980	80430	2,010,750,000	25800	116100	3,225,000,000	25500	114750	3,125,000,000	28000	126000	3125000000	27440	109760	6174000000
Wheat	5050	14140	494,900,000	7000	21000	672,000,000	4550	13650	477,750,000	5200	15600	369690000	6045	21157.5	1118325000

Sorghum	21	20	1134000	17	22	1326000	15	22	1350000	20	30	2400000	25	67.5	4500000
F/millet	144	172	17280000	152	182	18240000	181	217	26064000	150	180	16800000	130	156	12480000
I/potato	155	2325	46500000	195	2925	58500000	177	2655	58410000	146	1712	69030000	150	1800	45000000
Beans	3800	4560	361000000	4200	5460	504000000	4500	5400	540000000	4890	5868	540000000	4493	4043.7	363933000
AINABKOI															
Maize	13880	48580	1,068,760,000	15270	59727	1493185000	16840	71712	1593600000	16000	67680	1593600000	16170	64680	3638250000
Wheat	6100	17080	512,400,000	5595	15666	501,312,000	5225	14108	493,762,500	2500	7500	108522000	2790	9765	516150000
Sorghum	19	17	1020000	26	32	1872000	35	42	2,520,000	45	67	6380000	35	94.5	6300000
Finger millet	33	30	2079000	51	40	3264000	63	56	4536000	65	78	9880000	120	144	11520000
Irish potatoes	3332	66640	1332800000	3700	74000	1480000000	5272	105440	2108800000	2300	58500	1154807272	2000	24000	600000000
Beans	4238	3814	305136000	3090	3090	247200000	3452	3452	276160000	3800	4560	163019500	3780	3402	306180000
KAPSERET															
Maize	7924	28994.4	579888000	8206	24349	676361111	8244	27823	680130000	7840	33164	680130000	9310	37240	2094750000
wheat	603	1809	54270000	520	1508	48256000	536	1608	48240000	255	688	1274000	420	1470	77700000
Soghum	16	20	2020000	15	21	2020000	15	25	2200000	5	5.4	2200000	12	32.4	2160000
Finger millet	13	17	1454060	7.5	7	810000	12	9	1098000	15	120	457500	45	54	4320000
Irish potatoes	42.7	640.5	10248000	43	688	12384000	40	720	14400000	40	744	3600000	50	600	15000000
Beans	353	450	12100000	249	300	17928000	298	350	22648000	830	570	122004000	918	826.2	74358000
KESSES															
Maize	10301	46354	1158862500	10305	46370	1288000000	10515	47317	1182937500	8500	35955	1135620000	10290	41160	2315250000
wheat	2300	5750	178000000	2100	5670	176400000	1540	2772	207900000	2300	6210	207900000	2140	7490	395900000
Soghum	16	24	2020000	15	22	2020000	18	27	2200000	20	22	2200000	15	40.5	2700000
Finger Millet	23	25	3200000	20	24	3150000	20	25	3150000	20	15	3150000	35	42	3360000
Irish potatoes	3332	66640	999600000	3700	66600	1198800000	3272	65440	1308800000	5272	79393	1154807272	1250	15000	375000000
Beans	1700	782	78000000	1750	787	78700000	1750	787	78700000	1982	1416	78700000	1687	1518.3	136647000

TOTAL FOR THE COUNTY															
Maize	91,855	371,077	9,805,760,500	100,331	399,378	11,111,612,777	104,009	441,422	8,840,267,500	104,581	457,294	8,811,000,000	104310	380,000.0	21,375,000,000.0
wheat	21253	57919	1869930000	20263	58234.3	1901628500	17781	51828	1930572500	16345	40862	1311386000	31250	57,942.5	3,062,675,000.0
Soghum	88.8	98.8	7102000	89	114.5	8198000	100.3	135.2	9254000	118	180	14668000	115	278.1	18,540,000.0
Finger Millet	232.6	260.14	25949980	246	267.14	27207000	291.5	322.5	36618000	357	522	32069500	386	451.2	36,096,000.0
Irish potatoes	6923.7	137109.5	2404700000	7683	144753	2758900000	8815	174902	3503660000	7813	141279	2397999544	2240	41,400.0	1,035,000,000.0
Beans	14,191	12,435	964,701,200	12,415	12,610	1,049,451,000	15,679	16,148	1,336,427,250	18,952	20,364	2,251,383,500	*20,054*	17,222.4	1,550,016,000.0

Climate change is expected to negatively impact crop yields in Uasin Gishu which is the bread basket of the country, with up to 45% yield reductions expected for maize and wheat. Livestock numbers are expected to decline as water and pasture resources become increasingly scarce.

Changes in climatic condition as resulted to an exponential increase in food prices. At the household level, drought caused high food prices. The price of one packet of maize flour has increased from an average of KES 95 in 2019 to KES 230 in 2023.These high prices particularly impacted the Urban areas of the County where households spent more than 60% of their income on food in 2013, compared to 49% in rural areas.

Some climate actions to increase food and nutrition security will be supported through on- going programmes, including the Kenya Climate Smart Agriculture Project, Inua mama na kuku, Kijana na acre, Youth in agribusiness, Agriculture Sector Development Support Programme among other programmes in the department of Agriculture, Livestock, and Fisheries. The climate change actions to improve food and nutritional security result in:

- Adaptation – maintained or increased production and enhanced resilience of the agricultural sector through livelihood and crop and livestock diversification, increased water harvesting and storage, increased irrigation, sustainable land management, reductions in post-harvest losses and uptake of insurance.
- Mitigation – carbon sequestration through agroforestry, minimum tillage systems, manure management, and efficiency in livestock management.
- Sustainable Development – improved agricultural, livestock and fish productivity; increased food and water security; improved incomes and livelihoods of small-holder farmers; improved health with healthier food available; and better management of ecosystems and their biodiversity.

Table 10: Priority 2-food and nutrition security

Strategic Objective 2:Increase food and nutrition security by adopting climate-smart agriculture technologies, innovations and management practices		
Problem: Climate change is negatively affecting agricultural productivity and the resilience of value chain actors, including households. An increase in the severity and frequency of climate change-related disasters such as droughts and floods poses threats to food security and negatively impacts small-scale and large-scale farmers		
Nguzo kumi: 1 – Agriculture and Food Security		
SDGs: 2 – Zero hunger; 1 – No poverty; 5 – Gender equality; 10 – Inequality reduction; 12 – Sustainable consumption and production; 13 – Climate action; 15 – Life on land		
Action	**Results by 30th June 2027**	**Adaptation / Mitigation**
1. Improve crop Productivity through the Implementation of CSA interventions	▪ Capacity building of farmers on CSA technologies and innovations ▪ The number of institutions/value chain actors and households harvesting water for agricultural use/production increased to 200,000	Adaptation strategy- Addresses climate risk: Increased temperatures and changes in precipitation lead to declines in crop

	▪ Agricultural pre- and post-harvest losses reduced from 40% to 15%. ▪ Value addition and marketing ▪ Urban peri urban agriculrture ▪ Number of farmers accessing appropriate agricultural inputs subsidies increased ▪ Enhance crop diversification and increase from 1400ha to 1700ha and growing of drought tolerant crops. ▪ Promotion of short term high value crops especially horticultural crops increase by 50%	production and yields
	▪ The number of households and acreage under sustainable land management (SLM)increased for agricultural production: - The area under integrated soil nutrient management increased by 250,000 acres - Farm area under conservation agriculture increased to 250,000 acres, incorporating minimum/no-tillage - The total area under agroforestry at the farm level increased by 200,000 acres	Adaptation Addresses climate risk: land degradation Mitigation-reduction of GHG emission through conservation tillage and agroforestry
2. Increase crop Productivity through improved Irrigation	• Acreage under irrigation increased from 202,000 ha to 486,000 ha • Promote drip irrigation for the value chain actors • Improve rain water harvesting technologies both for domestic and irrigation purposes by 70% through having, Water pans, dams,retention ditches, rain water tanks, use of green energy for water pumping and supply e.g. solar pumps, wind mills pumps, hydrams.	Adaptation strategy- Addresses climate risk: changes in precipitation negatively impact rain-fed crop Production
3. Improve productivity in the livestock sector	▪ Capacity building of farmers on CSA livestock technologies and innovations ▪ Improve milk production from the current average of 5Liters to an average of 10 litres per cow per day ▪ Livestock diversification ▪ Livestock insurance ▪ Bee keeping ▪ Poultry farming	Adaptation strategy- Addresses climate risk of drought; high temperatures and lack of rain leading to loss of crops and animals (livelihoods) due to water and pasture scarcity,

Table 11: Priority 3-risk management

Strategic Objective 3: Reduce risks to communities and infrastructure resulting from climate-related disasters such as droughts and floods.		
	▪ Promote integrated fish farming for marketing ▪ At least 50% of households to have a fishpond ▪ Promote fish consumption for good health, tilapia, cut fish and crout for high altitude areas. ▪ Have a hatchery for fingerlings in each sub-county ▪ Protecting existing fish ponds in the county by using dam liners to reduce water loss through seepage and screen nets for predators	

iii. Climate Change Priority 3: Disaster (Drought and Flood) Risk Management

Climate-related disasters, such as drought and floods, could prevent the achievement of the county development agenda..

Impacts of Drought and Floods to Communities and the Economy in Uasin Gishu County The impacts of climate-related disasters are felt at the household level through food insecurity, damage to property, and increased prices of food and fuel;

Prolonged dry seasons in the county have been caused by climate change prolonged droughts lead to crop failure, shrinking of productive crop areas, and loss of livestock leading to reduced food security

Droughts increase water scarcity with negative impacts for communities, especially for women and girls who have to travel long distances for water and have less water for hygiene. Droughts mean that women work harder to feed and care for their families, and women take up roles that used to be the preserve of men, who often migrate to take up paid work in urban areas.

The climate change actions to proactively manage climate-related disasters result in:

- Adaptation – increased number of households benefiting from County Climate Change Funds, with an emphasis on reaching the poor and marginalised and minority groups; improved ability to cope with droughts and floods through early warning systems, water harvesting and storage; and implementation of integrated flood management plans.
- Nguzo Kumi Manifesto – progress toward the achievement of all the ten pillars by ensuring that climate-related disasters do not divert resources.
- Sustainable Development – reduced exposure and vulnerability of the country, and especially of the poor and vulnerable groups, to climate disasters and shocks.

Issue/problem: Floods and drought have economic consequences and extensive socio-economic effects at the household and community levels, Current responses are reactive rather than proactive and are impeded by inadequate early warning systems, lack of disaster management coordination, and limited support to build disaster preparedness.		
Nguzo Kumi: Agriculture & food security, infrastructure and public works		
SDGs: 1 – No poverty; 2 – Zero hunger; 3 – Healthy lives; 4 – Education; 5 – Gender equality; 6 – Sustainable water management; 8 – Sustained economic growth; 9 – Resilient Infrastructure; 10 – Reduced inequalities; 11 – Sustainable communities; 13 – Climate action		
Actions	**Expected Results by 30th June 2027**	**Adaptation/Mitigation**
1. Improve the ability of people to cope with drought	▪ Capacity building the communities on climate-related risks and resilience ▪ Drought early warning systems improved, including the promotion of indigenous knowledge at the ward and county levels. ▪ Construction of water pans to retain surface runoff	Adaptation strategy- high temperatures and lack of rain leading to loss of crops and animals (livelihoods), water scarcity, hygiene issues, especially for women, girls & PWDs
2. Improve the ability of people to cope with storms and floods especially in crop and infrastructure destruction	▪ Early warning systems, taking advantage of widespread access to mobile technology and local radio stations. ▪ Implement the existing drainage masterplan; ▪ Water storage, drainage networks, reforestation and rehabilitation of riparian areas, construction of dams ▪ Enforcement of land use and physical planning policies. ▪ Dam Safety Control System established including a needs assessment, and development of safety manuals and codes of practice. ▪ Capacity development of 10 Water Resources Users Associations (WRUA), which are community-based organizations that are rights-based groups with female and male membership. ▪ Water and flood control including dams/dykes, drainage systems, and water storage ▪ Crop and livestock insurance	Adaptation strategy- Climate risk: heavy rainfall and flooding leading to damage and loss of infrastructure (houses, roads, health clinics, schools); loss of property and livelihoods; increase in water-borne diseases such as cholera
Legal framework	▪ Operationalize the county disaster and risk management Act, 2021. ▪ Implement the mandate of the Disaster Risk management department in the county	Enabling

	▪ Enforce climate change policies	
Finance	▪ Allocations of funds to address urgent andunforeseen climate risks ▪ Resource mobilization	Enabling

iv. Climate Change Priority 4: Forestry

Sustainable and productive management of land and land resources are enshrined in Chapter 5 of the Constitution of Kenya, which among other things, stipulates that the state will work to achieve and maintain a tree cover of at least 10% of the total land area. The CCCAP 2023-2027 will contribute to restoring, preserving, and sustainably managing forests and other ecosystems.

Uasin Gishu is an agricultural county and the CCCAP will seek to enhance agroforestry and fruit farming to enhance the 10% tree cover in private farms, schools, public institutions and conservation of wetlands and riparian areas. The climate change actions in the forests, wildlife and tourism sector result in:

- Adaptation – sustainability managed forests, increased forest cover, improved management of wetlands and riparian areas
- Sustainable Development – restored and protected forests and rangelands, and their ecosystems and biodiversity; increased forest cover; improved food and water security; improved livelihoods of forest resource users;

Table 12: Priority4 -forestry

Strategic Objective 4: Increase forest/tree cover to 10% and vegetation cover through land use policy of having 10% of tree cover in private farmlands, protection of wetlands and riparian Lands.		
Problem: Agricultural expansion, settlement, and infrastructure development and reliance on wood fuel for cooking leads to deforestation andforest degradation, with negative impacts on soil, human life and increased GHG emissions.		
Nguzo Kumi:		
SDG 15 – Life on land; 5 – Gender Equality; 6 – Sustainable Water; 7 – Sustainable Energy; 13 – ClimateAction		
Actions	**Expected Results by 30th June 2027**	**Adaptation/ Mitigation**
1. Afforest and reforest degraded and deforested areas in Counties	▪ Planting of 10 million trees annually to rehabilitate 4000ha of land afforested or reforested (including agroforestry), aiming to grow one million trees perCounty per year through such initiatives as: -Tree growing Exercises with appropriate species including indigenous trees	Adaptation strategy- Reduces exposure by increasing surface cover

	-Revived Green Schools Programme – 10% of school land areas planted with trees -Establishing community tree nurseries and production and availability of seedlings -Forest management and planning -Silviculture interventions	
2. Promote sustainable timber production on privately-owned land	▪ The area under private sector-based commercial and industrial plantations increased from 71,000 ha to at least 121,000 ha through agroforestry and implementing the 10% tree cover in all the farms ▪ sensitization	Mitigation-reduces GHG emission
policy and regulatory)	▪ Develop standards and regulations, including social and environmental safeguards, for sustainable forestry management (voluntary moving to regulated) ▪ Develop guidelines and standards for the establishment of green zones as required by the 2016 Forest Act. This requires linkage with county physical planning and development control functions ▪ Develop an adaptation strategy for the tourism sector ▪ Land use planning and zoning to segregate and identify forest areas for conservation ▪ Mainstream climate change into environment audits, environmental impact assessments and strategic environmental assessments	Enabling
Enabling action (capacity development)	▪ Build the capacity of county-level institutions for the efficient transfer and implementation of the devolved function with respect to community forests	Enabling

v. Climate Change Priority 5: Health, Sanitation and Human Settlements

Sustainable human settlements and sanitation services are essential for human health, CCCAP 2023-2027 proposes an integrated approach to climate actions that address sustainable human settlements and health and sanitation services.

Climate-related Threats to human health

The risk of malaria and other vector-borne diseases is projected to increase due to changing climate conditions. Approximately 13 to 20 million Kenyans are at risk of malaria, with the percentage at risk potentially increasing as climate change facilitates the movement of malaria transmission up the highlands.

Rising temperatures in Uasin Gishu which is a highland will likely lead to a greater incidence of malaria and the risk would increase with increasing temperatures unlike a few years back when malaria was low in the county. The county's malaria prevalence is at 6 percent currently. The leading sub-county being Turbo, Soy. Kapseret, moiben, Kesses and Ainabkoi in that order due to the varying increased temperatures.

Frequent flooding and stormwater also pose a risk to the people of Uasin gishu when it comes to water-borne diseases, such as cholera, dysentery, and typhoid. This comes as a result of the increase in population in informal settlements where sanitary facilities are strained. The subdivision of land into several plots where shallow wells and pit latrines are so many in the same vicinity causes contamination of water bodies especially the wells which is the leading source of water in the county.

Contamination of water also occurs in areas with high water tables where wells become contaminated especially during rainy seasons. The other challenge is the diversion of stormwater into the sanitary lanes especially in the urban setup of the county.

Short-lived climate pollutants, including black carbon (soot) and methane, are released through inefficient use and burning of biomass and fossil fuels. Household air pollution is a big health challenge, leading to about 21,560 deaths annually in Kenya. Women and children are particularly impacted. Exposure to household air pollution almost doubles the risk for childhood pneumonia, and women exposed to high levels of indoor smoke are more than two times as likely to suffer from chronic obstructive pulmonary disease than women who use cleaner fuels and technologies. Exposure to methane gases from burning in huruma dumpsites also poses a health risk to the people living around them.

The climate action to be undertaken should result in:

- Adaptation – reduced incidence of malaria, climate-proofed landfill sites, and flood control in urban settlements.
- Nguzo kumi manifesto – improved health services and sanitation.
- Sustainable Development – improved human health, reduced burden of disease for households, and greater individual productivity; improved engagement of women as community health workers; improved and sustainable waste management; more sustainable human settlements; reduced health impacts from inappropriate waste disposal and biomass cookstoves; and improved surveillance and monitoring of climate change-related diseases, including monitoring of deaths resulting from indoor air pollution.

Table 13: Priority 5-Health And Sanitation

Strategic Objective 5: Mainstream climate change adaptation into the health sector; and increase the resilience of human settlements, including improved solid waste management inurban areas		
Problem: Malaria control, water-borne diseases, and respiratory diseases, are vulnerable to setbacks from climate change. Inappropriate wastemanagement can have negative health impacts and contribute to GHG emissions.		
Nguzo kumi: Linked to Health and Housing		
SDG 3 – Good Health; 5 – Gender Equality; 6 – Clean water and sanitation; 9 – Sustainable Infrastructure;11- Sustainable Cities; 12 – Sustainable consumption and production; 13 – Climate Action		
Action	**Expected Results by 30th June 2027**	**Adaptation/ Mitigation**
1. Reduce the incidence of malaria and other vector-borne disease	▪ Scale-up community-level interventions(WASH), with an emphasis on individual and community health workers, on malaria control county-wide ▪ Reduce breeding sites of mosquitoes by draining stagnant water through proper establishment of drainages both in urban and rural areas. ▪ Adopt biological means of dealing with mosquitoes in wet lands ,waterpans and dams through use of gumbusia fish to feed on the mosquitoe larvae. ▪ Uptake and utilisation of malaria treatment services increased in new malaria areas to reduce the incidenceof malaria.	Adaptation strategy- Addresses climate risk of increases in diseases
2. Promote recycling to divert collected waste away fromdisposal sites.	▪ Implement a circular economy solid waste management approach in Eldoret that diverts at least 90% of collectedwaste away from disposal sites toward various recycling practices ▪ Explore options for waste to energy technologies in the main dumpsite at Kipkenyo. ▪ MRFs	Mitigation- reduces GHG emission
3. Engineered landfill sites	▪ Existing dumpsites in Eldoret Town is screened for vulnerability to climate change and plans have been developedto adapt to extreme climate patterns ▪ Proper solid waste management	Adaptation strategy- Increases resilience

4. Control floodingin human settlements and the waterborne diseases	▪ Implement the Eldoret town drainage master plan in settlements within Eldoret town to divert storm water from human settlements. ▪ Increase water treatment and sewerage systems in urban and periurban areas ▪ Ensure all wells are protected during construction to reduce contamination during flooding.	Adaptation strategy- Addresses climate risk of flooding caused by extreme rain events
Enabling Action (technology and capacity building)	▪ Track the health impacts of the transition to clean cooking, aiming to reduce the number of household wood fuel related deaths from 21,560 annually (49% of total deaths) to 20%. ▪ Empowering communities to reduce household air pollution through adopting the let's act together to save lives manual launched by MOH and development partners.	Enabling
Enabling action (capacity building)	▪ Strengthen the awareness of community health workersand volunteers by developing materials on climate-related health risks, including disaster risk management and the impacts on women, children and persons with disabilities ▪ Partner with NGOs such has fresh life (dry toilets)	Enabling

vi. Climate Change Priority 6: Energy and Transport

Clean, sustainable and affordable energy and transportation systems are essential in Uasin Gishu since most of the County is rural setting and the roads are Earth Roads, this priority is also in line with the county development plans and the Nguzo Kumi Manifesto.

The major impact of climate change on the energy and transport sectors

Climate change, including temperature increase, sea level rise, and a greater number and severity of extreme weather events – such as heavy rains resulting in floods – damages energy and transport infrastructure.

The transition to clean cooking – through the uptake of liquefied petroleum gas (LPG), ethanol and other alternative fuels in urban areas, and improved biomass cookstoves in rural areas – is about more than energy. It improves the health of women and children, and protects forests. About 70% of the population in Uasin Gishu rely on biomass (fuel wood and charcoal) energy for cooking, which is a main driver of deforestation and forest degradation.

The use of biomass fuels for cooking is a pressing health, social, and environmental problem.

Clean cooking can also save money at the household level. Charcoal briquettes cost KES 3 to cook a meal of maize and beans for a family of five, compared to KES 26 for charcoal and KES 45 for kerosene.

Women and children are disproportionally affected by this challenge, suffering from toxic smoke, time poverty, and the consequences of deforestation. The use of clean cooking technologies should

be integrated into community development initiatives and activities involving women. They are the most affected and have the potential to drive the achievement of the desired outcomes.

Mitigation

- Electricity supply - GHG emission reductions through the development the use of solar power and biogas energy development and use of clean coal technology.

- Energy demand - GHG emission reductions through the uptake of alternative fuels and efficient cook stoves.

- Sustainable Development – sustainable and renewable energy; new business opportunities for clean energy and transport sectors; reduced deforestation, forest degradation and stress on forests; protection of water catchment areas; and reduction of deaths from indoor air pollution from 49% of the total annual deaths (21,560 in 2017) to 20%.

Table 14: Renewable Energy And Infrastructure

Strategic Objective 6: Renewable energy that is resilient to climate change and promotes energy efficiency; encourage the transition to clean cooking that reduces the demand for biomass.		
Issue/Problem: Renewable and affordable electricity supply with low GHG emissions. 70% of communities in uasingishu county depend on biomass for primary energy most of which is non-renewable. This leads to indoor air pollution, deforestation, and GHG emissions.		
Nguzo kumi: linked to energy and infrusture		
SDG 7 – Affordable and clean energy, 1 – End poverty; 2 – Food security; 3 – Health; 5 – Gender equality; 8 – Sustainable growth; 9 – Resilient infrastructure; 11 – Sustainable cities; 13 – Climate action, 15 – Sustainable forests		
Outcome	**Actions and Expected Results by 30th June 2027**	**Adaptation/Mitigation**
1. Increase renewable energy for electricity generation that is climate resilient and accounts for needs of the communities.	- Biogas generation - Solar - Wind	Mitigation –reduce emission of GHG Adaptation- Increases resilience of energy system to drought

2. Improve energy efficiency and energy conservation	▪ Losses in transmission and distribution reduced from 18% to 14% ▪ 3.3 million Compact Fluorescent Light (CFL) distributed to households through CFL initiative. ▪ Energy efficiency and conservation projects delivered that focus on: - Efficient lighting - Energy efficiency in buildings - Minimum energy performance standards - Distribution of clean lighting	Mitigation
3. Promote the transition to clean cooking with alternative fuels, such as LPG, ethanol and other clean fuels in urban areas	▪ Number of households using LPG, ethanol or other cleaner fuels for cooking increased to 2 million, through a Programme that promotes: - Local manufacture and servicing of clean cookers, e.g., tax-relief incentives for manufacturers; training and loans for local service - Engagement of women and youth groups to promote energy efficient cooking methods. - Increased production of non-forest biomass fuel briquettes (such as agricultural waste, sawdust and human waste) with an emphasis on women and youth	Mitigation- reduce the emission of GHG
4. Encourage the uptake of clean biomass (charcoal and wood) cookstoves and alternatives in rural areas	▪ The number of households using improved biomass cookstoves increased by 4 million through a programme that promotes: - Loan programme through micro-finance institutions to assist with the up-front cost of cookstoves	Mitigation- reduce the emission of GHG

	- Local manufacture and servicing of clean cookstoves, through incentives for manufacturers, and training and loans for local service providers - Local businesses to stock improved cookstoves, with an emphasis on women-led businesses ▪ Biogas technology scaled up to increase access to clean energy through the construction of 6,500 digesters for domestic use and 600 biogas systems in various schools and public facilities	
5. Technology	▪ Promote climate change resilient technologies, such as modern coolers and scrubbers ▪ Research into new and emerging energy technologies in the energy sector that will reduce GHG emissions.	Enabling
6. Capacity Development	▪ Training and public awareness programs on climate change adaptation and mitigation mechanisms	Enabling

CHAPTER FOUR

4.0 DELIVERY MECHANISMS FOR CCCAP

4.1 ENABLING FACTORS

4.1.1 Enablers

A range of crosscutting enabling actions are required to implement the adaptation and mitigation actions set out in the seven priority climate change areas described in Chapter 3. These enabling actions equip government and stakeholders with the finance, knowledge, skills and technologies needed to deliver and report on adaptation and mitigation actions.

The cross-cutting enabling actions described in this section include:

- Enabling policy and regulatory framework;
- Capacity development and knowledge management;
- Technology and innovation;
- Climate finance and resource mobilization and Measuring climate results.

4.1.2 Enabling Policy and Regulatory Framework

The county has developed the County Climate Change Policy, 2021, A key element of the Climate Change Act which is a requirement for various regulations to provide further interpretation of certain provisions, and to support the operationalization of the administrative aspects of the Act such as reporting requirements. The County has developed appropriate legislation, including climate fund regulations, that are informed by the local context, aligned to county systems, and conform to national public finance policies and laws. This legal and policy framework will guide the development and utilization of County Climate Change Funds and enable climate finance to address County-specific local issues.

Table 15: Enabling Policy And Regulatory Framework

	Enabling Actions	**Coordinating Institutions and Relevant Partners**	**Expected Result (Process Indicator)**
P1	Prioritise, develop and implement the needed regulations to effectively implement the County Climate Change Act, 2021 through a multi-stakeholder process that includes women, youth and marginalised and minority groups.	Department of Environment and climate change County Treasury and Planning	**By 30th December 2027**
P2	Capacity build the climate change institutions on building resilience and developing proposals	CCU County Treasury and Planning CC department	**By 30th December 2027** – all the 30 ward committees and the CCU has been trained

4.1.3 Mainstreaming in the CIDP

Mainstreaming and reinforcing climate change disaster risk reduction into the CIDP was done through the participation of the following stakeholders:

• The National Environment Management Authority which plays a critical role in mainstreaming and reinforcing environmental protection strategies in the County.

• The Water Resource Authority plays a critical role in mainstreaming and reinforcing climate change disaster risk reduction into strategies and actions of public and private entities.

- Public: The public play a role in the planning, implementation, and monitoring of climate change interventions, with an emphasis on enhancing adaptive capacity and improving ability to withstand climate shocks.
- Private sector: Action on climate change and implementation of the CCCAP and Act can be supported by the private sector in two ways: 1) Adaptation – making sure businesses can adjust as well as possible to any consequences of climate change by managing risk and exploiting opportunities; and 2) Mitigation – reducing greenhouse gas emissions from business operations to minimise the impacts of climate change in the future. The Council may impose climate change obligations on private entities (Section 16 of the Climate Change Act), likely to be reporting requirements that would be introduced in a phased manner and developed in consultation with the private sector.
- Public Benefit Organisations: This includes non-governmental organisations, civil society organisations and faith-based organizations, amongst others. They have been involved in climate change activities in the county.
- Vulnerable groups within society, including women, older members of society, persons with disabilities, children, youth, and members of minority or marginalised communities are engaged through an inclusive approach to climate change action. Due to inequities and disparities, these groups face disproportionate climate impacts. Climate change actions will be delivered in a way that accounts for the unique needs of these groups.
- Women: Gender equality is a critical component of CCCAP 2023-2027 and women will be engaged through the planning, implementation, and monitoring of climate change interventions. Women will be involved in reviews of implementation of actions, and the development and implementation of the gender and intergenerational plan.
- Youth: Engagement of youth, who comprise the majority of the population in many Counties, will be encouraged through schools, post-secondary institutions, and youth-focused organisations. Youth are agents of change and influence the broader community through their parents, relatives, and families. They will be engaged through climate change actions and the development and implementation of the gender and intergenerational plan.
- Academia and research institutions: Researchers help to provide the evidence and science for knowledge-based decision-making by National and County Governments, the private sector, development partners and civil society. They conduct research on different aspects of climate change, including improving the understanding of climate change attribution in Kenya and developing appropriate technologies for reducing greenhouse gas emissions and adapting to climate change.

- Media: The media provides vital information at times of emergency — from warning of imminent floods to explaining how to deal with disease outbreaks. The media helps to disseminate information about climate change. Accurate, timely, and relevant information is a critical component of resilience and appropriate climate change action.

4.1.4 Multi-stakeholder participation processes

The following is the process of the participatory climate risk assessment that led to the development of the CCCAP 2023-2027

Step 1. Formation of the cross-sectoral technical working group.

Step 2. Analysis of stakeholders

Step 3. Stakeholder engagement at all levels.

Step 5. Multi-stakeholder climate risk assessment workshop

Step 6. Climate risk assessment report.

4.1.5 Finance-County Climate Change Fund

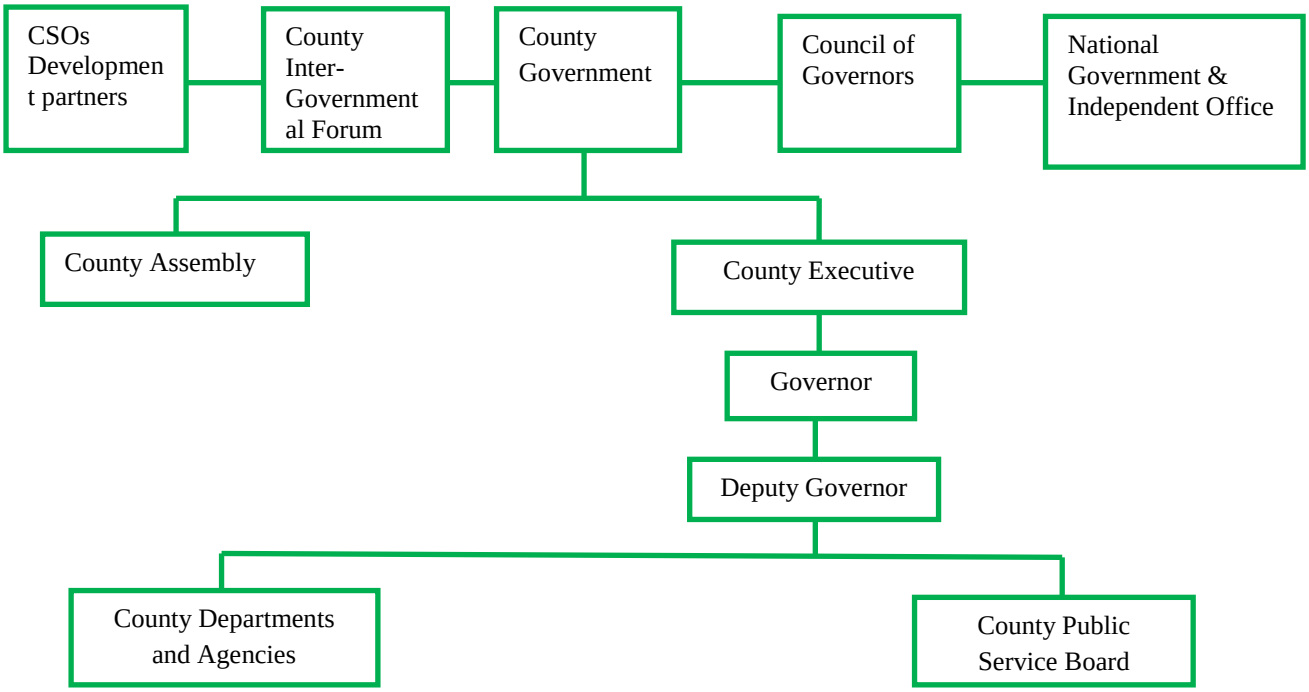
The County Government will be required to integrate climate change response actions into budgetary processes of government. This will complement and be in addition to any external climate finance resources. In particular, sufficient budgetary allocation for all institutions performing climate change functions will be prioritized to ensure that the necessary human, technical and financial resources are available the County Government will:

1. Allocate at least 2% of the county budget to the climate change fund as provided for in the county climate change act 2021.

2. Mobilize substantial levels of climate finance to fund the implementation of this Policy and the associated Climate Change Action Plans.

3. Put in place mechanisms to attract and leverage PPPs as a vehicle for resource mobilization and enhancing private sector participation in low carbon climate resilient development activities

4.1.6 Governance-County Government Structures



4.1.7 Governance-Climate Change Planning Committees

To ensure effective and efficient management of climate change mitigation and adaptation programs, the county government shall establish:

a) Climate Change Steering Committee

Functions of the steering committee

1. Ensure mainstreaming of climate change into county planning and development processes
2. Coordinate the formulation and monitor implementation of the county climate change Action Plan, County Climate Change Finance Framework and any other County Climate change policies, plans and strategies
3. Mobilize funds into and administer the County Climate Change Fund established under this Act.
4. Review, approve and monitor the implementation of regulations for the administration and management of the fund
5. Review, approve and monitor the implementation of regulations for the administration and management of the fund

6. Review and make recommendations on the biennial report on the implementation of the County Climate change Action plan and any other reports on climate change response interventions in the county
7. Advise the county government on legislative, policy and other measures necessary for climate change response and attainment of low carbon resilient developments
8. Approve and oversee the implementation in the county of a comprehensive program of climate change education, awareness creation and capacity building
9. Provide policy direction on research, training and dissemination of information relating to climate change to the public and other stakeholders in the county
10. Ensure positive linkages, interactions and synergy between the county, neighboring counties and the national government in climate change response programming and action
11. Ensure a coordinated approach to climate change response programming and action within the county government, between the county government and national government and among the different stakeholders in the county
12. Coordinate the formulation of a climate change reporting framework and the preparation and dissemination of an annual report on climate change response activities in the county
13. Perform any other functions that may further the foregoing.

Composition of the steering committee

It consists of 13 members

1. Deputy governor as chairperson
2. Executive committee member in charge of climate change as secretary
3. Executive committee member in charge of the county treasury
4. Executive committee member in charge of agriculture
5. Executive committee member in charge of health
6. County drought coordinator or national government official for the time being responsible for the coordination of drought response in the county
7. County representative of the National Environment Management Authority
8. One representative of duly registered public benefit organizations working in the county nominated by the umbrella organization representing the largest number of public benefit organizations in the county.
9. One representative of the private sector in the county nominated by the umbrella organization representing the largest number of private sector organizations in the county
10. One representative of women in the county nominated by the umbrella organization representing the largest number of women's organizations in the county
11. One representative of youth in the county nominated by the umbrella organization representing the largest number of youth organizations in the county.
12. Fund administrator, as an *ex-officio* member with no voting rights

b) Climate Change Planning Committee

It comprises 14 members appointed by the CEC in charge of climate change matters

The functions of the planning committee shall be:

1. Coordinate planning and implementation of projects and activities for climate change response in the county
2. Coordinate and implementation of the County Climate Change Action plan and the county climate finance framework
3. Establish guidelines to be used by ward planning committees in formulating climate response projects for funding by the county climate change fund
4. Support ward planning committees in development and implementation of climate response projects
5. Coordinate developments and implementation of the county climate change fund regulations
6. Advise the steering committee on strategies, priority programs, projects and activities for climate change response in the county
7. Formulate and implement strategic actions to foster climate change education, awareness creation and capacity development in the county
8. Coordinate research and knowledge management on climate change, its impacts and strategies for responding thereto.
9. Prepare and disseminate an annual report on climate change response activities in the county
10. Formulate and implement a county monitoring, evaluation and reporting framework for climate change response
11. Perform any other function assigned to it by the steering committee

Composition of the planning committee

1. The chief officer in charge of climate change matters who shall be the chairperson
2. Director in charge of the climate change unit who shall be the secretary
3. County director in charge of finance and planning
4. County director in charge of agriculture, livestock and fisheries
5. County director in charge of health
6. County director in charge of water and irrigation
7. County representative of the National Environmental Management Authority or a designated representative
8. County drought coordinator or a designated representative
9. One representative of duly registered public benefit organizations working in the county nominated by the umbrella organization representing the largest number of public benefit organizations in the county.
10. One representative of the private sector in the county nominated by the umbrella organization representing the largest number of private sector organization in the county
11. One representative of women in the county nominated by the umbrella organization representing the largest number of women organizations in the county.
12. One representative of youth in the county nominated by the umbrella organization representing the largest number of youth organizations in the county.
13. The administrator of the Fund, who shall be an *ex-officio* member with no voting rights.

c) Ward Climate Change Planning Committee

There shall be an established ward climate change planning committee in each ward

Functions of the Ward Planning Committee

1. Coordinate and mobilize communities and other stakeholders in the ward to design and implement climate change response
2. Facilitate research and knowledge at the ward level on climate change, its impacts and strategies for responding thereto
3. Facilitate public education, awareness creation and capacity building at the ward level on climate change its impacts and strategies for responding thereto
4. Coordinate, facilitate and manage community consultations on priority climate change response activities
5. Participate in county planning and budgeting processes with a view to ensuring the mainstreaming of climate change and prioritization of climate change response in county development plans
6. Facilitate public participation in climate change governance, implementation of agreed climate change response activities, and monitoring of those activities.
7. Coordinate and facilitate the provision of technical support to communities in the ward in developing proposals on climate change response projects for funding by the county climate change fund
8. Oversee implementation of climate change response projects funded by the county climate change fund and report thereon to the planning committee
9. Perform any functions that may be assigned to it by the planning committee

Composition of the Ward Planning Committee

It shall consist of 9 members:

1. One male elder
2. One female elder
3. One male youth
4. One female youth
5. One male person living with a disability
6. One female person living with a disability
7. A representative of relevant sectors appointed by the ward administrator
8. One person representing Community Based Organization inward and actively engaged in climate change response activities shall be nominated by an umbrella organization.
9. The ward administrator shall be the secretary, and an ex-officio member with no voting right.

4.1.8 Climate Information Services & Climate Data Access

The technology and innovation actions are important enablers of success for the adaptation and mitigation actions described in Chapter 3 of this action plan. An overall objective is to support the sectors to promote appropriate technologies to deliver adaptation and mitigation actions, such as water harvesting, climate information services, and clean cooking technologies.

Technology development and transfer is defined by the IPCC as a broad set of processes covering the flows of know-how, experience, and equipment for mitigating and adapting to climate change amongst stakeholders such as governments, private sector entities, financial institutions, civil society, and academia.

Research institutions will be supported to promote climate innovation role, including the Kenya Agriculture and Livestock Research Organization (KALRO), Kenya Forestry Research Institute (KEFRI) and NEMA

The enabling actions promote the role of the private sector in developing and disseminating adaptation and mitigation technologies to deliver the priority climate actions. The development and deployment of locally-relevant climate change technologies will be supported through the provision of incubation and capacity-building services and financing to Kenyan entrepreneurs.

Another priority is to assist KMD to improve the provision of Climate Information Services (CIS), which includes immediate and short-term weather forecasts and advisories. Climate information is important for farmers to manage risk, for planning standards and regulations, and for assessing climate change risks in environmental assessments. Climate information is a critical element of early warning systems that help communities, especially vulnerable groups, cope with extreme weather events like droughts and floods.

4.1.9 Resilience Planning Tools

Tools and Resources Appendix B summarizes resilience planning resources and toolkits for a variety of Hazards in Uasin Gishu County, including water (drinking water, wastewater, stormwater, and flood protection), energy, land management and wildfire, solid waste, and transportation.

Appendix B is intended to help program managers, directors, utility owners, and other decision-makers evaluate existing tools and identify the most appropriate one(s) for a given phase or step within resilience planning and the relevant sector.

Within the various sectors, tools and resources are categorized into 6 different types of assessments and plans.

Impact Assessment Vulnerability Assessment Hazard Assessment Adaptation Plan Mitigation Plan Recovery Plan

Impact Assessment	**Vulnerability Assessment**	**Hazard Assessment**
Adaptation plan	**Mitigation plan**	**Recovery plan**

4.1.10 Measurement, Reporting and Verification

The Directorate of Environment and Climate Change is responsible for M&E of CCCAP 2023-2027. The implementation of the CCCAP will be reviewed every two years as required of the County Climate Change Act, 2021. The review will utilize reports from the wards and the relevant departments within the County. Important stakeholders in the review process include private sector, academia, women, youth, and minority groups like the Ogiek.

M&E of CCCAP 2023-2027 will focus on demonstrating that investment in adaptation and mitigation actions leads to real climate results and development benefits that are linked to the Nguzo Kumi Manifesto. The M&E system will track implementation and results of CCCAP 2023-2027, and climate finance raised to deliver on the action plan. This will provide the evidence base for planning and implementing future actions, seeking support, and domestic and National reporting.

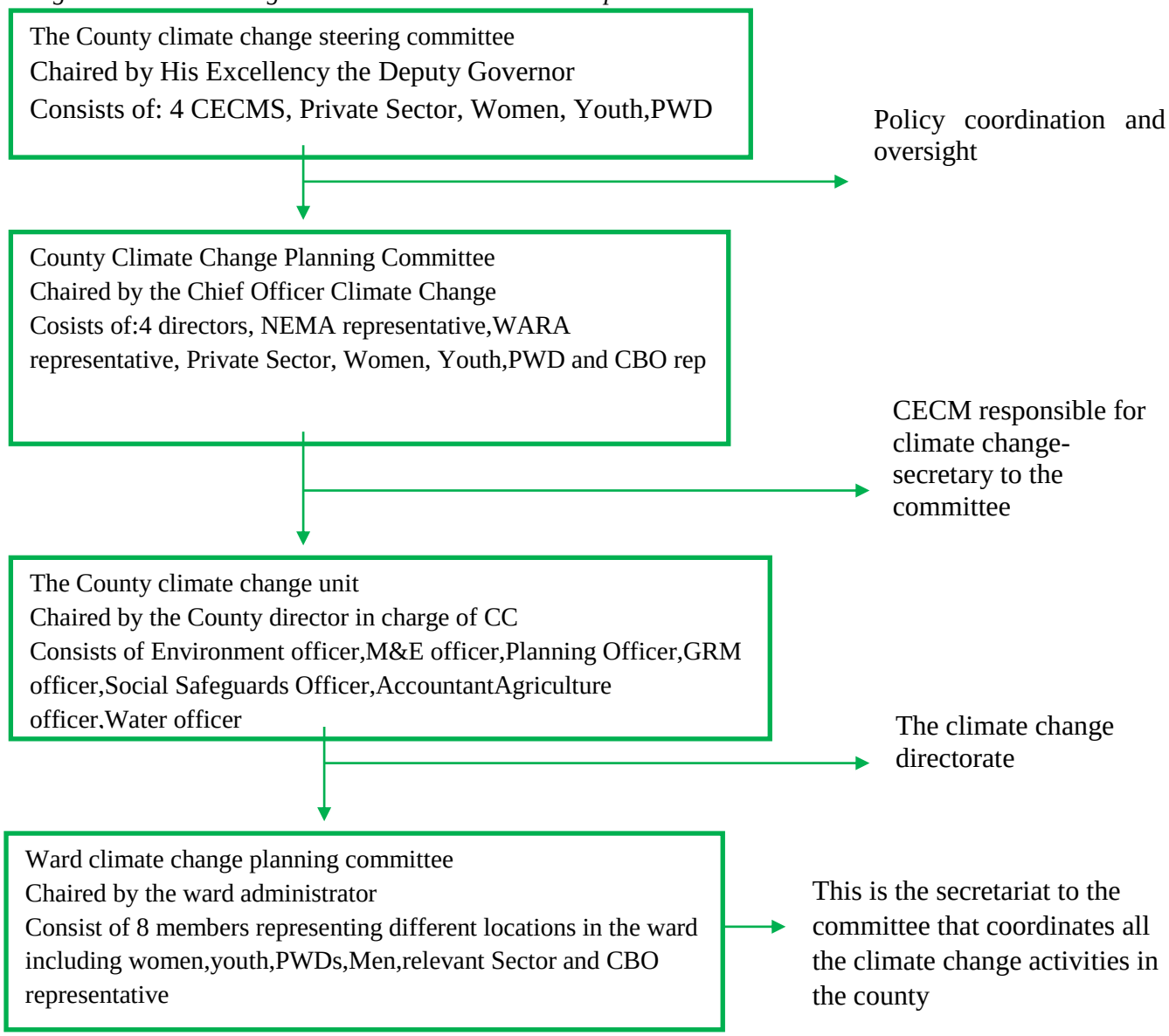
The M&E system to report on implementation of CCCAP 2023-2027 Wards, County Departments, and processes to compile, analyse, and report on actions and results. The County has a working M&E department which is key to the success reporting of the CCCAP 2023-2027. The M&E system will:

- Ensure that all relevant departments report on their progress and achievement of CCCAP actions.
- Ensure efficient reporting processes for the County draw on established reporting procedures where possible, such as the National Integrated Monitoring and Evaluation system and County Integrated Evaluation System.
- Report on climate finance that supports the delivery of CCCAP 2023-2027.
- Identify a limited number of County indicators that have baseline data and are tracked by The County treasury and Planning to measure climate-related impacts at the County level. This will help to align the tracking and measurement of climate change co-benefits with the Government's agenda and SDGs.
- Use gender-aggregated data where possible and priorities collection of this data if it is not available.

4.1.11 Institutional Roles and Responsibilities

The County Climate Change Act, 2016 sets out institutional structures and responsibilities that guide the oversight and management of NCCAP 2018-2022. The responsibilities of the main institutions engaged in the oversight, implementation, and monitoring of the CCCAP 2023- 2027 are described below and illustrated in Figure 11.

Figure 5: climate change institutional structure and responsibilities



4.2 Implementation and Coordination Mechanisms

4.2.1 Directorate of Climate Change

The Department of Environment and Climate Change is responsible for the coordination of the implementation of CCCAP 20123-2027, including coordination of climate change actions and related measurement, monitoring, and reporting. The CCU is the Secretariat for the County Climate Change Steering Committee and coordinates the technical implementation of climate change functions. This includes providing analytical support and technical assistance on climate change, and coordinating the implementation of and reporting on the CCCAP 2023-2027. The responsibilities of the CCU are described in greater detail below in Section 4.2.2.

In regard to the implementation of climate change actions and implementation of CCCAP 2023-2027, the Climate Change Act,2021 out roles and responsibilities for County Departments:

- Integrating and mainstreaming climate change into CIDPs, designating a County Executive Committee (CEC) member to coordinate climate change affairs, and reporting on the implementation of climate change on an annual basis.
- County governments are expected to establish Climate Change Units, led by the CEC member responsible for climate change, that will oversee the implementation of climate change actions stipulated in the 2023-2027 CIDPs.
- County Governments are to establish Climate Change Units responsible for integrating the CCCAP into strategies and implementation plans; and report to the Steering Committee on an annual basis on performance and implementation. All County departments and Agencies will be required to report on the priority actions in CCCAP 2023-2027, even if they did not implement climate change actions.
- County Treasury and Planning is responsible to develop a strategy and make regulations setting out procedures and powers to identify sources of climate finance and to monitor use, and to work with the CECM responsible for climate change affairs to develop incentives for the promotion of climate change initiatives. The Climate Change Fund is vested in County Treasury.
- The National Environment Management Authority is responsible, on behalf of the County Steering Committee, for monitoring and enforcing compliance of climate change interventions

4.2.2 County Climate Change Unit

The functions of the unit will include the following in relation to Climate Change programs in the County:

a) Planning and implementation of Climate Change action plans
b) Mainstreaming climate change
c) Preparation of quarterly and annual reports
d) Planning and budgeting for climate change programs and projects
e) Resource mobilization
f) Climate change data collection analysis and reporting
g) Undertaking climate change sensitization programs in the county
h) Enforcing the climate change Act
i) Any other responsibilities allocated

Composition of the Climate Change Unit

a) County Director Incharge of Environment and Climate Change
b) Monitoring and evaluation officer
c) Economic Planning and Budgeting Officer
d) Water Engineer
e) Agriculture/Livestock/Fisheries Officer
f) Accountant trained on Climate Change Financing
g) Environment Officers and Natural Resource Officers
h) Communication Officer
i) Any other officer seconded to serve in the unit as need arises

The CECM for Environment may constitute an ad-hoc committee as he/she may deem necessary.

4.2 IMPLEMENTATION MATRIX

Sub Programme	Key Outputs	Key Performance Indicators (KPI)	Linkages to SDGs	Planned Targets and Indicative Budget (KSh M)										
				Year 1		Year 2		Year 3		Year 4		Year 5		Total Budget
				Target	Cost	Target	Cost	Target	Cost	Target	Cost	Target	Cost	
Programme: Environmental Conservation and Management **Outcome: Clean and sustainable environment**														
Environmental Conservation Services	Wetlands protected, restored and conserved	Acreage of wetlands protected, restored and conserved	SDG 6,10,13, 15	2	2	2	2	2	2	2	2	2	2	10
	Riparian areas protected, restored and conserved	Acreage of riparian areas protected, restored and conserved	SDG 6,10,13, 15	2	1	2	1	2	1	2	1	2	1	5
Beautification and recreational services	Water catchment areas conserved	No. of water catchment areas conserved	SDG 6,10,13, 15	1	1	1	1	1	1	1	1	1	1	5
	Soil erosion controlled	No. of gabions constructed	SDG 6,10,13, 15	6	2	6	2	6	2	6	2	6	2	10
Afforestation, Re-afforestation and Agroforestry	County forest policy and regulation developed	County forest policy and regulation		1	5	0	0	0	0	0	0	0	0	5

Sub Programme	Key Outputs	Key Performance Indicators (KPI)	Linkages to SDGs	Planned Targets and Indicative Budget (KSh M)										
				Year 1		Year 2		Year 3		Year 4		Year 5		Total Budget
				Target	Cost	Target	Cost	Target	Cost	Target	Cost	Target	Cost	
	Afforestation, re-afforestation and Agroforestry done	No. of tree seedlings planted	SDG 6,10,13, 15	2	2	2	2	2	2	2	2	2	2	10
		No. of tree seedlings distributed	SDG 3,11,13, 15	200,000	2	200,000	2	200,000	2	200,000	2	200,000	2	10
		No. of fruit trees distributed to the community	SDG 3,13 ,15	300,000	3	300,000	3	300,000	3	300,000	3	300,000	3	15
	PELIS promoted	No. of forest communities supported		2	2	2	2	2	2	2	2	2	2	10
Climate Change Services	Community and other stakeholders trained on climate change adaptation and mitigation	No. of community members and stakeholders trained on climate change adaptation and mitigation	SDG 3,11,13, 15	600	0.6	600	0.6	600	0.6	600	0.6	600	0.6	3
Nature Based Enterprise Service	Indigenous tree and fruit tree nurserie	No. of indigenous tree nurseries establishe	SDG 7,13	10	2	10	2	10	2	10	2	10	2	10

Sub Programme	Key Outputs	Key Performance Indicators (KPI)	Linkages to SDGs	Planned Targets and Indicative Budget (KSh M)										
				Year 1		Year 2		Year 3		Year 4		Year 5		Total Budget
				Target	Cost	Target	Cost	Target	Cost	Target	Cost	Target	Cost	
s	s established by the vulnerable groups	d by vulnerable groups												
		No. of fruit trees nurseries established by vulnerable groups	SDG 7,13	10	2	10	2	10	2	10	2	10	2	10
Waste Management Services	Recycling plant established	Operational recycling plant	SDG 3,8, 11,13	0	0	0	0	0	0	1	300	0	0	300
	Engineered landfill established	No. of engineered landfills established	SDG 3,8, 11,13	0	0	1	500	0	0	0	0	0	0	500
	Capacity building on waste management held	No. of people capacity build on waste management held	SDG 3,8, 11,13	600	0.6	600	0.6	600	0.6	600	0.6	600	0.6	3
	Material recovery facilities established	% completion	SDG 3,8, 11,13	10	10	30	10	50	10	80	10	100	20	60
Programme: Drought mitigation and Flood Management **Outcome: Improved ability to cope with drought,**														

Sub Programme	Key Outputs	Key Performance Indicators (KPI)	Linkages to SDGs	Planned Targets and Indicative Budget (KSh M)										
				Year 1		Year 2		Year 3		Year 4		Year 5		Total Budget
				Target	Cost	Target	Cost	Target	Cost	Target	Cost	Target	Cost	
floods and unpredictable weather patterns														
Drought Mitigation Services	Drought early warning system established	Functional early warning system	0	0	0	0	3	0	0	0	0	0	0	3
		Functional mobile application	0	0	0	0	1	0	0	0	0	0	0	1
	Climate change sensitization enhanced	No. of climate change sensitization workshops held		4	3	4	3	4	3	4	3	4	3	15
		No. of media awareness /sensitization sessions held		4	3	4	3	4	3	4	3	4	3	15
Flood Control Management	Drainage master plan system established	% completion		10	2	30	2	50	2	70	2	100	2	10
	Drainages maintained	No. of routine drainages maintained		10	3	10	3	10	3	10	3	10	3	15
Programme: Water and Sanitation Services Outcome: Increased access to potable water and sanitation services														
Water services	Community water	No. of boreholes drilled	SDG 2,6	12	48	12	48	12	48	12	48	12	48	240

Sub Programme	Key Outputs	Key Performance Indicators (KPI)	Linkages to SDGs	Planned Targets and Indicative Budget (KSh M)										Total Budget
				Year 1		Year 2		Year 3		Year 4		Year 5		
				Target	Cost	Target	Cost	Target	Cost	Target	Cost	Target	Cost	
development	projects	No. of springs protected	SDG 2,6	3	1.5	3	1.5	3	1.5	3	1.5	3	1.5	15
		Rivers/streams abstraction developed	SDG 2,6	5	5	5	5	5	5	5	5	5	5	25
	Equipping of community water projects	No. of community water projects equipped	SDG 2,6	200	800	200	800	200	800	200	800	200	800	4B
	Rain water harvesting systems	No. of rain water harvesting systems installed	SDG 2,6, 13	0	0	30	20	30	20	30	20	30	20	100
	In-situ water treatment	No. of projects fitted with water treatment systems	SDG 2,6, 13	100	300	100	300	100	300	100	300	100	300	1.5B
	Adoption of green energy for water supply	No. of water projects fitted with solar powered systems	SDG 2,7, 13	50	10	50	10	50	10	50	10	50	10	50
	Dams and water pans desilted	No. of dams and water pans desilted	SDG 6,13	3	30	3	30	3	30	3	30	3	30	150
Programme: Energy Services **Outcome: Enhanced access to clean and affordable energy**														

Sub Programme	Key Outputs	Key Performance Indicators (KPI)	Linkages to SDGs	Planned Targets and Indicative Budget (KSh M)										Total Budget
				Year 1		Year 2		Year 3		Year 4		Year 5		
				Target	Cost	Target	Cost	Target	Cost	Target	Cost	Target	Cost	
Green Energy Services	Green technologies adopted	No. of energy efficient *jikos* adopted	SDG 7	500	2	500	2	500	2	500	2	500	2	10
		No. of efficient cooking gas distributed	SDG 7	500	3	500	3	500	3	500	3	500	3	15
		No. of solar mini grids installed	SDG 7	30	20	30	20	30	20	30	20	30	20	100
		No. of biogas plants installed	SDG 7	5	4	5	4	10	8	20	10	10	12	38
		No. of hydro plants constructed	SDG 7	0	0	2	50	0	0	0	0	0	0	50
	Green energy interventions adopted	No. of exhibitions on use of green energy conducted	SDG 7	30	10	30	10	30	10	30	10	30	10	50
		No. of people trained	SDG 7	200	5	300	6	600	6	600	6	600	6	29
Programme: Crop Production Outcome: Increased crop yield														
Crop Pest and Disease Control Service	Crop pests and diseases controlled	Acreage sprayed with pesticides		300	10	300	10	300	10	300	10	300	10	50

Sub Programme	Key Outputs	Key Performance Indicators (KPI)	Linkages to SDGs	Planned Targets and Indicative Budget (KSh M)										Total Budget
				Year 1		Year 2		Year 3		Year 4		Year 5		
				Target	Cost	Target	Cost	Target	Cost	Target	Cost	Target	Cost	
s														
Climate Smart Agriculture	Climate smart agriculture promoted	No. of technologies and innovation promoted		5	5	5	5	5	5	5	5	5	5	25
		Acreage of land under irrigation		300	10	300	10	300	10	300	10	300	10	50
		No. of potato multiplication sites established		5	5	5	5	5	5	5	5	5	5	25
		No. of farmers provided with high value crops seeds		1000	1	2000	2	1000	1	1000	1	1000	1	6
Post-harvest Management Services	Post-harvest facilities constructed and equipped	No. of collection centres constructed		0	0	1	4	2	6	2	6	1	4	20
	Driers purchased	No. of driers purchased	SDG 2	2	10	2	10	2	10	2	10	2	10	50
Programme: Livestock Development Outcome: Increased livestock production														
Livestock Disease	Pest and parasite-borne diseases	No. of cattle dips rehabilitated	SDG 1	5	5	5	5	5	5	5	5	5	5	25

Sub Programme	Key Outputs	Key Performance Indicators (KPI)	Linkages to SDGs	Planned Targets and Indicative Budget (KSh M)										Total Budget
				Year 1		Year 2		Year 3		Year 4		Year 5		
				Target	Cost	Target	Cost	Target	Cost	Target	Cost	Target	Cost	
Control	controlled	No. of cattle dips facilitated with acaricides	SDG 1	60	0.6	60	0.6	60	0.6	60	0.6	60	0.6	3
		No. of animals dewormed /treated against parasites	SDG 1	100,000	1	100,000	1	100,000	1	100,000	1	100,000	1	5
		No. of animals vaccinated		50,000	2.5	50,000	2.5	50,000	2.5	50,000	2.5	50,000	2.5	12.5

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