COUNTY GOVERNMENT OF TRANS NZOIA

DEPARTMENT OF WATER, ENVIRONMENT, NATURAL RESOURCES AND CLIMATE CHANGE

The Trans Nzoia County Climate Change Action Plan,

The development of this Climate Change Action Plan was jointly funded by World Bank through FLLoCA program, The County Government of Trans Nzoia and GIZ

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FOREWARD

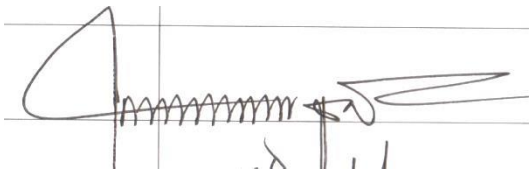
Trans-Nzoia County is extremely vulnerable to climate change impacts since its economy is highly dependent on climate sensitive sectors like agriculture, water, natural resources, health, transport among others. This threatens our Vision 2030, County Intergrated Development Plan (CIDP) 2023-2027 targeted achievements and County Climate Change Policy 2020 vision of becoming an outstanding Climate Resilient and Sustainable Agro-industrialized county. Addressing climate change impacts requires that we transform our economy by integrating climate change actions into development plans across all sectors.

This will lower greenhouse gas emissions, reduce our vulnerability to climate shocks and deliver poverty reduction gains because taking action to adapt to and mitigate climate change is in our County interest.

Over the past five years, considerable efforts have been made to integrate climate change considerations into the programmes, development plans and county policies and regulatory frameworks including the County Climate Change Policy, 2020 and Climate Change Fund Act, 2021 that provides for a regulatory framework to enhance response to climate change, provide mechanisms and measures for climate change financing and achieving low carbon climate resilient development.

Adaptation actions are prioritized in the County Climate Change Action Plan (CCCAP) 2023-2027 because of the devastating impacts of climatic hazards such as prolonged dry spells, floods, increased incidences of vectors, invasive species and diseases, erratic rainfall and wind storms and the negative effects of climate change on vulnerable groups in the society including women, older members of society, persons with disabilities, children, the youth and members of minority or marginalized communities. These actions are undertaken, where possible, in a way to limit greenhouse gas emissions to ensure that the county achieves its mitigation National Determined Contributions (NDCs). The climate change actions will be mainstreamed in the Third Medium Term Plans (MTPs) and in the CIDP to ensure that strategic climate change actions are taken up across the county and in all sectors. The CCCAP has set out 5 key priority areas/sectors for planning climate change interventions namely environment, water, agriculture/livestock, health and disaster management.

The purpose of this CCCAP, 2023-2027 is to improve our ability to sustainably plan, budget and effectively monitor and evaluate the impacts of our county adaptation and mitigation actions. It is against this background that we have developed this County Climate Change Action Plan.



H.E George Natembeya, EBS, MBS
Governor,

PREFACE

The County Climate Change Action Plan (CCCAP) is the County's Medium Term Development blue print that informs and guides the annual plan and budget for climate change interventions mainstreaming across the sector within a period of five years. The CCCAP 2023-2027 has been prepared in accordance with section 19, (2) of the Climate Change Act, 2016 and other relevant Acts and Legislations.

The Plan is aligned to the realization of Kenya's National Climate Change Action Plan (NCCAP) 2018-2022, Bottom-up Economic Transformation Agenda (BETA), the Kenya Vision 2030, Sectoral Plans, the National Medium Term Plan III and other international commitments such as the Sustainable Development Goals and Agenda 2023.

The priority area interventions proposed for implementation herein have been arrived at from a wide range of technical persons, stakeholders and public consultations in wards which identified adaptation and mitigation actions to be implemented during the plan period. Implementation of these projects is not only expected to spur economic growth and job creation for the youth, but also provide good governance for sustainable socio-economic development of the county.

The CCCAP has been organized into five chapters. Chapter one provides the county's general information which include position and size, physiographic and natural conditions, administrative and political units, demographic features, county climatic situational context among others. Chapter two outlines enabling legal and policy framework globally, regionally, nationally and at county levels while chapter three provides priority climate change actions for the plan 2023-2027. These priority areas have been informed by the Participatory Climate Risk Assessment (PCRA), 2023 report. Chapter four captures the action plans including the enablers, delivery and coordination mechanism. Finally, chapter five presents the references and sources of the information in the plan.

The County Department of Water, Environment, Natural Resources and Climate Change, and the County Climate Change Unit (CCU) will spearhead the preparation of annual reports on progress made in the implementation of the plan to the County Assembly. These reports will be made publicly available through the county website and other platforms. This will enable stakeholders and members of the public to access information on implementation of adaptation and mitigation programs and projects of interest to them.

Finally, I wish to reiterate that the County Government is committed to working closely with the National Government, civil society, private sector, development partners and other stakeholders to ensure we deliver the plan's strategic objectives and targets.

Hon. Patrick Gacheru

CECM Water, Environment, Natural Resources and Climate Change

ACKNOWLEDGEMENT

The process of preparation of this CCCAP was undertaken by various dedicated individuals, stakeholders and organisations whose invaluable contribution is worth mentioning. Sincere gratitude goes to H.E. The Governor, H.E the Deputy Governor, the County Secretary, members of the County Executive Committee and Chief Officers for providing technical input and policy direction that shaped the plan. We are further indebted to Honourable Members of the County Assembly of Trans Nzoia and Members of Parliament for their worthy input in the production of the plan.

Special thanks go to both National and County Governments whose technical contributions were valuable in analysing the county climate change priority areas for action. I acknowledge the contribution of all the Sector Working Groups (SWGs) and the County Climate Change Unit (CCU) who worked tirelessly in the formulation of the Plan.

Special mention must also be made of the Ministry of Environment and Forestry, National Climate Change Council, National Climate Change Directorate, National Treasury and Council of Governors for their role in developing the guidelines under (NCCAP) which were crucial in guiding the production of the plan.

Further contribution came from a number of staff members from County Government departments including Public Service Management, Agriculture, Livestock and Fisheries, Health, Finance and Economic Planning and Trade and Industry. We take this opportunity to thank them all for giving valuable input and taking time to critique the draft policy towards this effort.

We also recognize the invaluable contributions from CECM WENRCC Hon. Patrick Gacheru, and technical staff members in the Department including Director of Environment Mr. Godfrey Wekesa, Director of Administration Ms Sarah Kogo and Environment Officer Yona Okusi, for their unwavering support, coordination and technical leadership during the whole process.

Finally, we sincerely appreciate funding support from FLLoCA and GIZ, and technical assistance led by Nicholus Abuya (GIZ lead technical assistance) and Brenda Akinyi (assistant technical assistance) for technical and capacity support throughout the CCAP development process.

Lastly, special thanks go to various stakeholders including civil society organizations, community groups and the private sector for originating ideas and priorities on programmes and projects contained in this plan. We are extremely indebted to them.

Dorothy Nyukuri
County Chief Officer
Water, Environment, Natural Resources and Climate Change

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Abbreviations and Acronyms

AFLR1	African Forest Landscape Restoration Initiative
ASAL	Arid and Semi-Arid Land
ATAR	Adaptation Technical Analysis Report
DRMF	Disaster Risk Management Fund
UNCBD	United Nations Convention on Biological Diversity
CBIT	Capacity Building Initiative for Transparency
CCCAP	County Climate Change Action Plan
CCCF	County Climate Change Fund
CCD	Climate Change Directorate
CCIS	County Climate Information Service
CCU	Climate Change Unit
CDM	Clean Development Mechanism
CDMU	County Disaster Management Unit
CECM	County Executive Committee Member
CFA	Community Forestry Association
CIDP	County Integrated Development Plan
CIS	Climate Information Services
CM&EU	County Monitoring and Evaluation Unit
CO_2	Carbon dioxide
CoG	Council of Governors
CoP	Conference of the Parties
CPEBR	Climate Public Expenditure and Budget Review
CSA	Climate Smart Agriculture
CTCN	Climate Technology Centre and Network
EAC	East African Community
ERC	Energy Regulatory Commission
FAO	Food and Agriculture Organization
GCF	Green Climate Fund
GDP	Gross domestic product
GEF	Global Environment Facility
GESIP	Green Economy Strategy and Implementation Plan
GHG	Green House Gas
GNI	Gross National Income
ICAO	International Civil Aviation Organisation
ICT	Information and Communication Technology
IMO	International Maritime Organisation
IPCC	Inter-governmental Panel on Climate Change
KALRO	Kenya Agriculture and Livestock Research Organization
KCIC	Kenya Climate Innovation Centre
KEBS	Kenya Bureau of Standards
KEFRI	Kenya Forest Research Institute
KFS	Kenya Forest Service
KIRDI	Kenya Industrial Research and Development Institute
KMD	Kenya Meteorological Department
KNBS	Kenya National Bureau of Statistics
KWS	Kenya Wildlife Service
KWTA	Kenya Water Towers Agency
LPG	Liquefied Petroleum Gas
LULUCF	Land Use, Land-Use Change and

	Forestry
M&E	Monitoring and Evaluation
MAILF	Ministry of Agriculture , Irrigation ,Livestock and Fisheries
MEF	Ministry of Environment and Forestry
MITI	Ministry of Investment , Trade and Industries
MoE	Ministry of Energy
MRV	Measurement, Reporting and Verification
MTAR	Mitigation Technical Analysis Report
MTP	Medium Term Plan
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan
NCCAP	National Climate Change Action Plan
NCCC	National Climate Change Council
NCCRC	National Climate Change Resource Centre
NDC	Nationally Determined Contribution
NDEF	National Drought Emergency Fund
NEMA	National Environment Management Authority
NZOWASCO	Nzoia Water and Sewerage Company
REDD+	Reducing Emissions from Deforestation and forest Degradation plus
SDG	Sustainable Development Goal
SGR	Standard Gauge Railway
SLEEK	System for Land-based Emissions Estimation in Kenya
StARCK+	Strengthening Adaptation and Resilience to Climate Change in Kenya
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WCCPC	Ward Climate Change Planning Committee
WENRCC	Water, Environment, Natural Resources and Climate Change
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 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 (CO_2), methane (CH_4), nitrous oxide (N_2O), per fluorocarbons (PFCs), hydro fluorocarbons (HFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

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.

$MtCO_2eq$ or $MtCO_2e$ is an abbreviation for million tons 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).*

Executive Summary

Climate change has increased the frequency and magnitude of extreme weather events in the County causing loss of lives, diminished livelihoods, reduced crop and livestock production, and damaged infrastructure, among other adverse impacts. An example is the torrential rains and severe flooding from March to May 2018 that devastated communities that were already struggling to recover from a prolonged dry spell. Climate change is likely to negatively impact County's future development and achievement of the goals of *Kenya Vision 2030* – the long-term development blueprint, CIDP which is the County's blue print and the Government's BETA agenda for 2018-2022 that focuses on ensuring food and nutrition security, affordable and decent housing, increased manufacturing and affordable healthcare.

Kenya takes climate change seriously, as demonstrated by the enactment of the Climate Change Act (Number 11 of 2016). This Act requires the County Government to mainstream National Climate Change Action Plans (NCCAP) into their development plans which guides the mainstreaming of adaptation and mitigation actions into sector specific functions of the County Governments.

CCCAP 2023-2027 aims to further County's development goals by providing mechanisms and measures to achieve low carbon climate resilient development in a manner that prioritizes adaptation. This plan builds on the Participatory Climate Risk Assessment (PCRA) which provides priorities for Counties to plan on climate change actions and framework for Kenya to deliver on its Nationally Determined Contribution (NDC) under the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC). PCRA guides the climate actions of the County Governments, the private sector, civil society and other actors as County transitions to a low carbon climate resilient development pathway.

4.1.1. County's Changing Climate

Trans Nzoia county fall within three ecological zones; the upper highland, upper midland and lower highland zones. The Upper Highland Zone (UHZ) which is approximately 16% of the county, fall within the hills and slopes of Mt. Elgon and Cherangany Hills within altitude ranges of 2,400 and 4,313 metres above sea level. Mt. Elgon National Park, a key county tourism attraction and wildlife conservation is situated within this zone.

The Lower Highland Zone (LHZ) ranges between 1,800 to 2,400 meters above sea level, covering an area of 848.64 square kilometres, which represents 34% of the county land. It is found within the slopes of Cherangany Hills and Mt. Elgon. This is the zone with red and clay soils derived from the volcanic ash; supporting agriculture and livestock activities.

The Upper Midland Zone (UMZ) represents 50% (1,248 square kilometres) of the county land, lying between 1,700 and 2,000 meters above sea level and mean annual rainfall of 900 to 1,400mm per annum. The UMZ has well drained deep red and brown clays and sandy clays derived from the basement complex. This zone supports agricultural and livestock activities such

as cultivation of maize, sunflower, coffee, wheat and barley as well as dairy, beef, sheep and horticulture production.

Climatic Conditions

Trans Nzoia County has a cool and temperate climate with mean maximum (daytime) temperatures ranging between 23.40C and 28.40C and mean minimum (nighttime) temperatures ranging between 11.00C and 13.50C. The maximum (34.20C) and minimum (6.50C) extreme temperature are recorded in February and January respectively.

The county has average annual rainfall range from 1000mm to 1,700mm distributed in three major seasons; a.) long rainfall season- March, April, May (MAM); b.) intermediate Season- June-July-August (JJA); and c.) short rainfall season- October-November-December (OND). The long and intermediate rain seasons are more reliable in terms of agricultural activities. With climate change, the county is experiencing extended dry spells, flooding and emergence of diseases and pests among other impacts affecting various sectors of the county.

The current trend of rising annual temperatures is expected to continue in Kenya in all seasons. The precipitation projections are more uncertain and suggest that by the end of the 21st century East Africa will have a wetter climate with more intense wet seasons and less severe droughts. The proportion of rainfall that occurs in heavy events is expected to increase.

4.1.2. Climate Change Impacts in the County

Prolonging dry spell and floods are impacting County's residence, and human health is increasingly at risk. County's economy is very dependent on climate-sensitive sectors such as agriculture, water, energy, forestry, tourism, wildlife, and health. The increasing intensity and magnitude of weather related disasters in County aggravates conflicts, mostly over natural resources, and contributes to security threats.

Over the recent years Trans Nzoia County has been experiencing changes in weather and climate listed below:

- High spatial and temporal variability of rainfall; characterized by less predictable rainy seasons.
- Heavy rainfall events and flooding.
- Warmer average temperatures.
- Longer dry spells.
- Increase incidents of invasive species, pest and diseases

Floods have led to the greatest loss of human lives, livelihoods and resources in the County. The floods in early 2010 which affected more than 4,000 people including youth, women, people with disability, closing of schools and resources worth millions of shillings were wiped out. Roads and infrastructure were destroyed, seasonal crops across an estimated 8,500 hectares of land were destroyed.

4.1.3. Legal and Policy Framework

Climate change is a global problem that demands a global solution, and Kenya is an active player in international efforts. The international response to climate change is founded upon the **United Nations Framework Convention on Climate Change**. The Paris Agreement under the UNFCCC aims to strengthen the global response to the threat of climate change by keeping global temperature rise this century well below 2°C above pre-industrial levels. Kenya's NDC sets out the country's actions to contribute to achieving the global goal set out in the Paris Agreement, and includes mitigation and adaptation contributions. The Paris Agreement entered into force for Kenya on 27th January 2017, and as set out in Article 2(6) of the Constitution of Kenya (2010), the Paris Agreement now forms part of the law of Kenya.

At the domestic level, a robust regulatory framework comprising laws, policies, plans and institutions is being progressively established at the National and County levels to address climate change. 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.

The **Climate Change Act**, 2016 is the main legislation guiding Kenya's and County's climate change response through mainstreaming climate change into sector functions, and it is the legal foundation of the CCCAP. In addition, Trans-Nzoia County has developed the County Climate Change Policy, 2020, Climate Change Fund Act, 2021, Climate Finance Policy, Climate Adaptation Plan, CIDP 2018-2022 and County Climate Resource Mobilization Strategy among other sector plans and policies that address aspects of climate change at the County level. CCCF regulations allocate a portion of the development budgets to County-level funds that to support local adaptation and mitigation actions.

4.1.4. Priority Climate Change Actions

CCCAP 2023-2027 takes cognizance of the impacts of climate change on County's socioeconomic sectors. It identifies strategic areas where climate action is linked to the BETA agenda, recognizing that climate change is likely to limit the achievement of 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, business, schools and hospitals) caused by flooding and storm events. The seven priority climate action areas, their strategic objectives and main actions are set out in the table above. The detailed descriptions in CCCAP 2023-2027 include information on the problem

being addressed, the action needed to address the problem, expected results, alignment with the BETA Agenda, alignment with Sustainable Development Goals (SDGs), and relevant institutions to deliver the actions.

Table 1: Key Sector Adaptation Strategies

Prolonged dry spell			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health, energy and infrastructure services)**
• Construction of ground and surface climate proofed water harvesting and storage infrastructures e.g. water dams/pans/boreholes. • Rehabilitation of the existing water harvesting and storage infrastructures such as dams/pans. • Protection and conservation of riparian/catchment areas such as wetlands, along river banks and springs. • Enhanced capacity building of the community/stakeholder on climate smart water management practices either for domestic/agricultural/industrial use. • Enhance roof water catchment. • Enact and enforce county laws on protection of water catchment areas	• Promote Climate smart agriculture through: a) Conservation Agriculture; b) Irrigation farming; c) Regenerative agriculture; and d) Crop diversification (mixed cropping/drought resistant crops/short season crops). e) Vertical Farming technology • Promotion of agri-nutrition • Capacity building of stakeholders/community on climate smart agricultural initiatives. • Water harvesting and storage (farm ponds and pans) • Promote climate adaptive livestock management practices through: a) Climate Adaptive breeds; b) Pasture/fodder/feeds production, storage and conservation. c) Livestock housing • Promotion of agroforestry practices (Multi-purpose Trees and Shrubs-MPTs e.g. calliandra, sesbania, gliricidia).	• Formulation, enactment and Enforcement of relevant environmental county laws. • Capacity building on sustainable environmental management practices. • Capacity building to promote biodiversity protection & conservation in protected areas like Saiwa swamp. • Promote growing of environment friendly tree species • Promote nature based solutions e.g. community tree nurseries (fruits and non-fruits trees) bee keeping, ecotourism, protection of catchment, agroforestry, green spaces	**Disaster management** • Timely dissemination of climate information • Enhance early warning system in forested areas. • Capacity building on disaster preparedness and management • Equip the disaster management unit • Enact and enforce disaster management county laws **Health** • Capacity build CHVs on case identification and management • Enforcement of waste management county laws • Provide confirmed disease case management kits to CHVs **Energy and Infrastructure** • Climate proofing of existing infrastructures. • Construction of climate proofed infrastructures • Promotion of green/clean/alternative energy sources to minimize deforestation e.g. biogas, solar energy, and clean stoves/jikos.
Floods			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health, energy and infrastructure services)**

• Enhancing surface overflow Rain water harvesting and storage through construction/rehabilitation of water pans, ponds, tanks and dams • Construction of Flood control structures such as water ponds, pans, dams, Gabions, Cut-off drains and terraces • Enhance access to clean and safe water through pipeline extension and water treatment. • Early flood warning systems from hydrological forecast • Training of Divers • Improve solid and liquid waste management • Community water treatment • Education and awareness campaigns on impacts of climate change on water resources and sustainable water management practices.	• Promote agroforestry (agri-silviculture, silvopastral) • Promote Climate smart agriculture through: a) Conservation Agriculture (gabions, cut off drains, terraces, farm ponds); b) Regenerative agriculture; and c) Crop diversification (mixed cropping/drought resistant crops/short season crops). • Promotion of fish farming e.g. along river Sabwani • Capacity building on floods control and management measures • Integrated soil fertility practices. • Promote climate adaptive livestock management practices through: a) Climate Adaptive breeds; b) Pasture/fodder/feeds production, storage and conservation. c) Livestock housing	• Proper integrated waste management to minimize clogging of drainage systems and contamination of the environment. • Promote nature based solutions e.g. tree nurseries (fruits and non-fruits trees) bee keeping, ecotourism, protection of catchment, agroforestry, green spaces • Capacity building on effects of encroachment of riparian land, wetlands and deforestation • Enforcement of existing policies in management and conservation of riparian reserves and wetlands	**Disaster Management** • Early warning systems • Timely dissemination of climate information • Capacity building and awareness Creation on disaster response during floods. • Mapping of flooding hotspots. • Operationalization of the County Disaster Management Unit • Review and enactment of the draft County Disaster Management Bill. **Infrastructure** • Enhance implementation of spatial plans • Climate proofing of existing infrastructures. • Construction of climate proofed infrastructures **Health** • Community water treatment Capacity build community on water treatment, food storage, sanitation, nutrition and housing • Put in place contingent measures for disease prevention and control.
Increased incidents of vector, invasive species, pests and diseases			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health, energy and infrastructure services)**
• Promotion of nature based solutions to reduce pollution of water sources from agrochemicals. • Enhance protection of riparian areas • Improved solid and liquid waste management. • Water treatment	• Enhance timely/routine vaccination. • Capacity building on prevention and treatment of pests and diseases • Promote Crops & Livestock Insurance • Integrated pest management practices e.g. use of allelopathic plants like Sunflower to control weeds. • Promote regenerative agricultural practices such as Integrated Soil	• Promotion of integrated pest & disease control (cultural, biological and organic) allelopathic plants e.g. Sunflower • Incorporation of research programs to conserve existing biodiversity • Enhance surveillance of invasive species • Mechanical control of invasive species and promoting their utilization • Strengthen capacity on livelihood	**Disaster Management** • Early warning systems • Developing human disease contingency control and surveillance plan **Health** • Enhance vector control initiatives e.g. supply of the mosquito nets, unclogging of drainage, stagnated

• Capacity building on water treatment, solid and liquid waste management	fertility practices and organic pest/disease control methods, Phytosanitary measures among others. • Control trans boundary movement on crop produce and livestock. • Promotion of resilient/adaptive livestock species to pests and diseases • Developing crop and livestock pest and disease contingency plan. • Enhance farmers disease and pest surveillance actions.	diversification and planting of alternative tree species	water and awareness creation • Promote human Insurance cover • Capacity build community on sanitation, nutrition and housing. • Put in place contingent measures for disease prevention and control. • Capacity Building on emerging and re-emerging vectors • Strengthen surveillance systems on vectors and diseases • Enforce the malaria control act • Vaccination against diseases e.g. Malaria, Cholera, • Treatment of emerging and re-emerging diseases
Landslides			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health, energy and infrastructure services)**
• Protection of the water catchment areas	• Conservation agriculture e.g. gabions, cut off drainage, terraces, contour ploughing • Promote Agroforestry (agrosilvopastoral). • Capacity building on riparian agricultural laws and policies	• Promote Agroforestry (silvo-agriculture e.g.). • Reforestation & afforestation • Promote riparian forestry buffers. • Promotion of community tree nurseries • Capacity building on SLM practices • Rehabilitation of the degraded landscapes.	**Disaster Management** • Early warning systems; • Timely dissemination of climate information; • Community awareness Creation on disaster response during landslides; • Mapping of landslides hotspots
Hailstorms			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health and infrastructure services)**
• Climate proofing of existing and new water infrastructures	• Climate smart agroforestry practices such as agrosilvopastoral through alley cropping and hedgerows. • Growing of short season crops; • Multistory cropping	• Promote climate smart agroforestry (boundary tree growing- windbreakers/hedgerows and silvo-agriculture). • Promote forest farming (Multistory cropping.	**Disaster Management** • Early warning systems; • Timely dissemination of climate information; • Community awareness Creation on disaster response;

Adaptation actions are prioritized in CCCAP 2023-2027 because of the devastating impacts of prolonging dry spell and floods, and the negative effects of climate change on vulnerable groups in society including women, older members of society, persons with disabilities, children, youth, and members of minority or marginalized communities. These actions are undertaken, where possible, in a way to limit greenhouse gas emissions to ensure that the country achieves its mitigation CDC. The climate change actions will be mainstreamed in the Third Medium Term Plan and in County Integrated Development Plans, ensuring that strategic climate change actions are taken up across the county and in all sectors.

4.1.5. Enabling Actions to Support the Delivery of Priority Climate Actions

Thirty-eight crosscutting enabling actions are required to implement the priority adaptation and mitigation actions. These enabling actions include the following:

- enabling policy and regulatory framework;
- Mainstreaming in the CIDP;
- Multi-stakeholder participation process
- Capacity development and knowledge management;
- Technology and innovation;
- Climate finance and resource mobilization;
- Governance-County Government Structures.

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CHAPTER 1:
1. INTRODUCTION AND BACKGROUND

1.1.Purpose and process of the CCCAP

The County Climate Change Action Plan (CCCAP 2023-2027) addresses climate change's impact on physical and socio-economic sectors. It focuses on strategic areas linked to BETA national agenda, vision 2030, and County climate change policy, addressing food security, agricultural productivity declines, vector-borne diseases, and infrastructure damage.

The devastating effects of prolonged dry spells, floods, and landslides, increased instances of pest and disease, and the adverse effects of climate change on vulnerable groups, such as women, older members of society, people with disabilities, children, youth, and members of minority and marginalized communities, adaptation actions are prioritized in CCCAP 2023–2027

The Action Plan focuses on climate change actions for sustainable development, benefiting vulnerable groups like women through increased agricultural productivity and improved water accessibility. It prioritizes action in various sectors to address climate change risks, aiming for sustainable development, the Bottom-up Economic Transformation Agenda, Governors manifesto, and low carbon climate resilience development.

4.1.6. Objectives of the CCAP

Specific objectives of this Climate Change Action Plan are:

i. To prioritize response measures to address the climate hazards, risks and impacts identified during the PCRA Process;
ii. To guide the mainstreaming of climate action in various sectors in the county through identification of sector response strategies;
iii. To enable the County to Access the County Climate Resilience investment grants from the FLLoCA program and
iv. To provide basis for planning, budgeting, implementation, monitoring and reporting for County Climate Change Funds; and
v. To provide a basis for mobilization of resources from external sources for climate action.

4.1.7. The Process of Developing County Climate Change Action Plan

The climate change action plan started with the participatory climate risk assessment through which communities identified climate risks. This was then validated by various stakeholder forums and formed the basis for climate action planning. The Climate Change Action Planning process is as summarized in Table 2 below:

Table 2 C*limate Change Action Planning process*

Steps	Activities	Output
Step 1.	**Constitution of the Technical Working Group (TWG) and Review of Key Documents:** A technical task force was appointed by the County Executive Committee Member (CECM) responsible for Climate Change affairs. The Task force drew membership from various sectors such as environment, water, public participation, national government agencies and the civil society. Various key documents that were reviewed among others include policy frameworks such as National Climate Change Action Plan, 2018-2022, CIDP 2023-2027, Climate Change Act, 2016, The Trans Nzoia County Climate Change Policy, 2020, County Climate Change Fund Act, 2021 and the PCRA report	• Secondary data collected and input into the action plan collected • Understanding the Theoretical of the Climate Change Action Planning
Step 2:	**Collection of Public Input:** Ward and County level engagements were held to collect inputs of the communities in the action plan. Deliberate efforts were made to ensure inclusion of the PWDS, Women, Youth, Community Interest Groups, IP, Civil Society organizations and technical officers at ward level were involved. Average of Fifteen (15) members of the community were engaged in the Focused Group Sessions per ward. This was followed by County level multi-stakeholder (both those with high/low influence/interest) engagement to collect inputs. Among the sectors that participated in the County level (both State actors and Non-state actors) engagement process were environment (including NEMA), forestry, water, forestry, fisheries, livestock, agriculture, lands, public works, health, public participation, researchers(Ecofix consult, Manor House Agriculture institute and cranes international), learning institutions and civic education	

	cooperatives and CSOs among others.	
Step 3:	**Drafting the Action Plan:** The TWG held Workshops to develop the first draft of the action plan based on the secondary data reviewed and the data collected from ward level community discussions.	Draft 1 Climate Change Action Plan developed
Step 4:	**Validation of the Action Plan:** The Action Plan was validated by stakeholders drawn from various sectors including environment, agriculture, livestock, social and gender, land, water, forestry, health, public participation and civic education and researchers among others. Community representatives, PWDS, youth, women and other marginalized segments of society were mobilized for the task	Climate Change Action Plan Validated by sector stakeholder/experts and communities
Step 5:	**Second Drafting Workshop**: Incorporation of the inputs of the validation workshop into the draft action plan by the TWG.	Final draft Climate Change Action Plan
Step 6:	Presentation of the Action Plan to the Cabinet and Assembly: The Action Plan was presented to the cabinet on **30th May 2023** and to the County Assembly on **31st May, 2023**.	Cabinet Endorsed the Action Plan.

1.2 Underlying Climate Resilience Context

1.2.1 Impacts of Climate Hazards in the County

Over the recent years Trans Nzoia County has been experiencing changes in weather conditions listed below as identified in the PCRA process:

- High spatial and temporal variability of rainfall; characterized by less predictable rainy seasons;
- Heavy rainfall events and flooding;
- Warmer average temperatures;

- Longer dry spells; and
- Increase incidents of invasive species, vector, pest and diseases

These changes are negatively affecting agricultural production, environment, water, health, transport, trade, industry as well as the overall economic development of the county. In the current prolonged rain, the extended heavy storms, floods, incidents of pest and diseases and landslides among others have affected various County activities as indicated on **Table 3** below.

Table 3: Likely Impacts of Climate Change to Sector specific in Trans Nzoia County

Sector Sectors	Likely impacts of climate change
Crops	• Greater food insecurity • Uncertainty regarding the impact of production of specific crops, but likely reduction on yields of maize and beans. • Post-harvest losses. • Higher temperatures in highland areas may have a positive impact on agricultural production • Greater reliance on irrigation due to reduced precipitation • Decline in overall crop yields in most parts of the county due to insufficient availability of water, excessive moisture conditions, storms, hailstones and increased incidents of pests (Fall army worms, African Armyworm, *Tuta absoluta* in tomatoes and maize stalk borer) mostly experienced in Cherangany areas and diseases (leaf rust) and Kiminini areas   **Figure 1: Maize stalk borer Figure 2: Maize leaf rust**
Livestock	• Livestock diseases (foot and mouth disease, anthax and black quarter in areas of Kwanza, Keiyo, Chepchoina, and Chepsiro – Kiptoror and Chicken Newcastle disease, due to off-taking -to the markets some diseases resulting to deaths caused by extended dry spell • Decline in production due to lack of pasture, reduced access to water, and heat stress during months of extended dry spell. • Changes in disease patterns.
Fisheries	• Thinning of species and biomass abundance owing to the effects of temperature increase on nesting and feeding grounds • Declining water levels due to prolonged dry spells. • Increased risk of alien invasive species
Transport, Energy, Infrastructure,	• Decline in forest productivity restricts availability of fuel wood • Increased demand for energy as high temperatures encourage the use of air conditioners

Sector Sectors	Likely impacts of climate change
housing and ICT	and refrigeration while extreme low temperatures encourage use of heaters/charcoal to increase room temperature. • Damage to infrastructure (buildings- social amenities, power lines, roads, bridge etc.) especially during heavy rainfalls/storm and floods along River Sabwani and Nzoia basin, and in urban informal settlements of Tuwan, Matisi and Kipsongo • Increased power outage due to prolonged dry spell/ • Increase in risk of collapse, declining health of buildings, and loss of value as a result of more frequent and heavier rain events, water encroachment, and storm surges in areas. • Increasing safety risk in existing buildings especially during heavy rain of hailstorms. • Interruptions to road and air networks because of flooding and heavy rainfall events
Environment	• Climate change exacerbates environmental degradation, desertification and biodiversity loss in terrestrial ecosystems resulting in soil erosion, deforestation, water scarcity, receding water bodies and drying wetlands among others. • Increased likelihood of contestation and conflict over diminishing natural resources (pasture and water supply in areas of Endebess, Kwanza and Kiminini Sub-Counties) • Increases incidents of invasive species, , vectors and diseases e.g. Bilharzia, jigger infestation and bedbugs in Kapomboi and Endebess Wards and increased malaria cases in within Mt. Elgon areas and Cherangany hill areas. • Increased incidences of landslides/mudslide, floods, strong winds/storm, hailstones in areas of Cherangany, Sikhendu, Saboti, Kinyoro, Kwanza and Keiyo Wards
Forestry	• Increased exposure to wild fire in Mt. Elgon National park, Kitale Township forest, pathogens and invasive species especially affecting Saiwa Swamp National Park in Sinyereri Ward. • Reduced provision of environmental resources and economic activity. • Increased rate of forest/tree destruction due to strong winds/storm especially in areas of Saboti, Kwanza and Endebess Sub-Counties
Health	• Shift in the geographic range of malaria to higher altitudes in Mt. Elgon regions, Gitwamba in Saboti, Chemichemi in Machewa Ward, Nasianda in Kinyoro ward and Cherangany hill regions • Increase in the incidence of Rift Valley fever, malnutrition, scabies, jiggers, and lice infestations. in Kapomboi, Matisi- Shanti, Kipsongo, Shimo la Tewa in Hospital Ward , Jamanur in Bidii Ward and Endebess Ward • Increased in inccidents of food poisoning as a result of aflatoxins • Increased incidents of Zoonotic diseases. Reported cases of Anthax in areas of Mt. Elgon National Park, and Brucellosis countywide • Increase in water-borne diseases such as Neglected Tropical Diseases- Soil Transmitted Helmiths, Bilharzia in Keiyo and Hospital Wards, cholera and typhoid
Governance, justice, law and order	• Internal population displacement and consequent complications. During flooding in Namanjalala for instance, most communities and livestock are displaced owing to loss of properties and livelihoods. • Increased likelihood of conflict within and between communities e.g. limited natural resources such as water between upstream and downstream communities in Endebess, Cherangany –Kapolet forest and Sikhendu Wards • Political and financial instability through supply line disruptions and increased risks of doing business

Sector Sectors	Likely impacts of climate change
Tourism and Wildlife	• Tourist facilities e.g. M.t Elgon and Saiwa Swamp National parks are affected by reduced water availability and lack of access due to damage to roads and infrastructure • Adverse impacts on ecologically sensitive tourist destinations • Potential for migration of wildlife; Sitatutanga and Crested crane populations with implications for park boundaries and human-wildlife conflict in M.t Elgon and Saiwa Swamp National parks • Potential for species extinction e.g. the Sitatunga in Saiwa national park.
Water	• Reduced availability of surface water and ground waterfor activities such as irrigation, livestock production, household use, wildlife and industry during extended dry spell months/periods • Increased water loss from reservoirs dues to evaporation example is Wiyeta, Namanjalala and Kipsaina Wetlands

1.2.2 County Climate Change Hazard Map

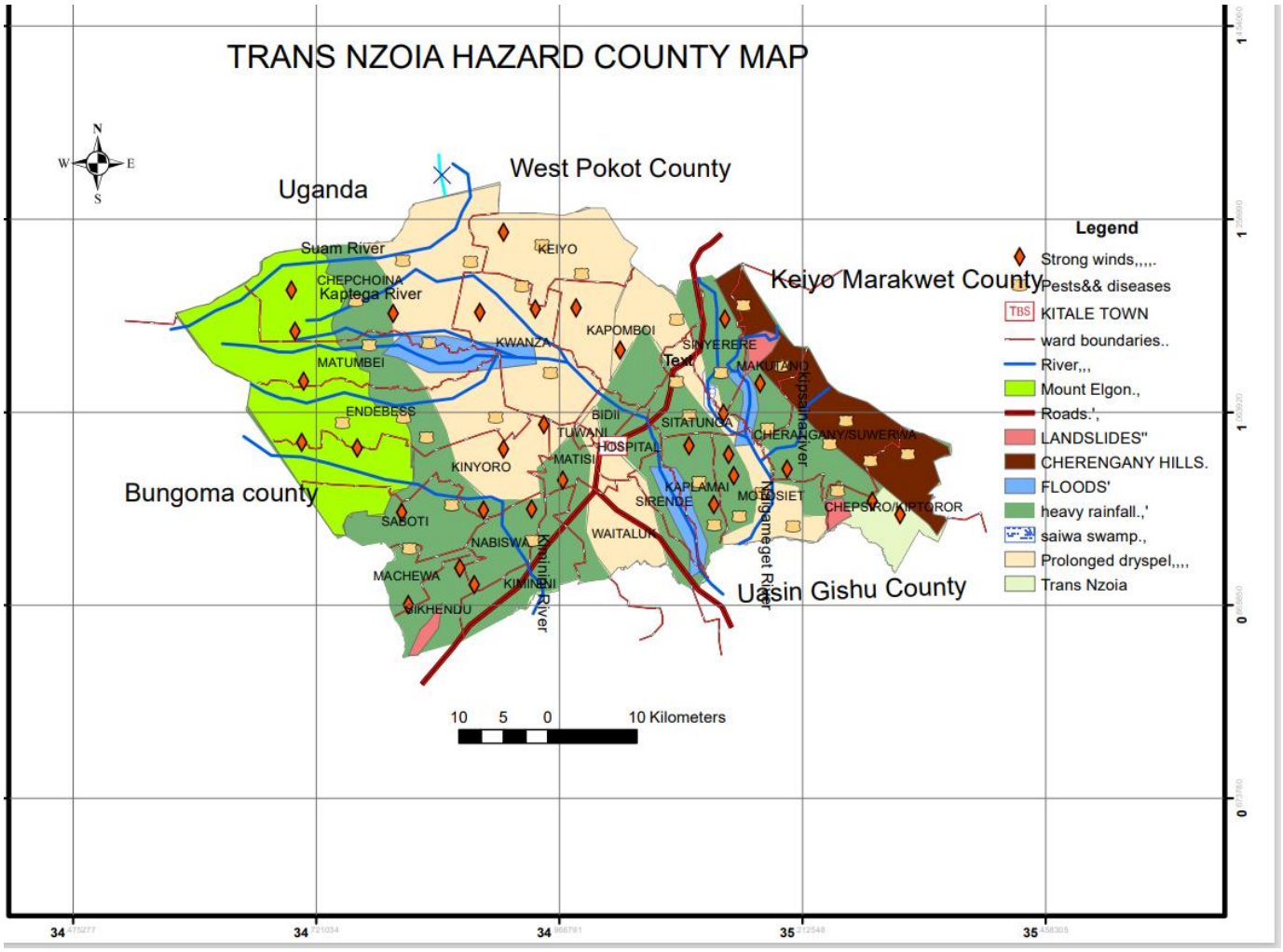

Figure 3: County Climate Change Hazard Map (Source: PCRA process, 2023)

1.2.3 Summary of Differentiated Climate exposure and Vulnerability of key groups and Livelihoods in the County

1.2.3.1 Crops and Livestock

According to the PCRA FGD, late onset, early cessation of rains and erratic rainfall patterns in areas like Keiyo, Chepchoina, Chepsiro/Kiptoror and Kapomboi wards has led to crop failure, shrinking of productive crop areas, declining production per unit and loss of livestock leading to reduced food security and increased malnutrition with impacts particularly for expectant mothers, lactating mothers, children and the elderly.

1.2.3.2 Water

The county experiences extreme water shortages due to climate change with In Kapomboi, Keiyo, Kwanza, Saboti,Tuwan, Matisi and Hospital wards being the most affected.

The situation is compounded by, low storage capacity and growing demand for water. The rivers are drying up hence long distances to the fewer water points. Women and people living with disabilities are the most affected.

Extreme weather events due to climate change have affected clean water supply with impacts on food production and nature-based livelihood interventions. Kitale, Kiminini, Sibanga, Endebess and Kwanza and other populated areas face acute water shortages as surface runoffs during floods contaminate the existing water sources.

1.2.3.3 Forestry and Wildlife

Forests offer water catchments, biodiversity and conservation functions, and are home to and provide a variety of goods that support the subsistence livelihoods of many Indigenous People such as Sengwer communities in areas of Cherangany and Ogiek in Mt. Elgon

Climate change is likely to affect the growth and development of tree species, resulting in reduced biodiversity and capacity to deliver important forest goods and services. It also affects biodiversity with subsequent impacts on tourism. In regard to wildlife, climate change is expected to shift species distribution, reduce population size and lead to extinction of some species.

1.2.3.4 Health, Sanitation and Human Settlements

The rising temperatures due to climate change will lead to greater incidences of malaria in higher altitudes of the Trans-Nzoia highlands, and the number of people at risk could increase due to lack of immunity, lack of preparedness, climate variability, and other factors. In areas where malaria already occurs, transmission intensity is expected to increase along with the length of the transmission season. Expectant mothers, people living with disabilities, elderly and children under five years are the most vulnerable groups affected by malaria.

1.2.3.5 Vulnerable Community Groups

The impacts of Climate Change affect everyone and can strain many aspects of our lives. However, the extent to which differentiated groups experience the adverse impacts of climate change will vary as summarized in the table below:

Table 4: Likely Impacts of Climate Change to Specific Vulnerable Community Groups (Source: PCRA-FGD during Stakeholder engagement)

Vulnerable Community groups	Likely Impact of Climate Change
Children/youths	• Disrupt access to utility services e.g. health, schools which can attributes to premature deaths. • Inherent long term consequences of climate change impacts increases cases of Retarded growth reported Countywide.

	• Threats to children's/youths' physical health due to malnutrition, increased exposure to environmentally-catalyzed illnesses, including asthma and allergies, dehydration, diarrhea illnesses infectious and parasitic diseases that are more prevalent in warmer temperatures • Increase in post-traumatic stress disorder, cognitive deficit and learning problem. For instance, water stress, whereby children/youths walk long distances in search for water and pasture resulting to increased cases of school drop outs.
Indigenous People and Informal settlement	• They face differentiated climate exposure due to combination of social, economic and political context. For instance, they often do not fully participate in planning and budgeting process for climate change issues. • Low income communities typically have inadequate infrastructure, fewer resources, and lack of means to evacuate during storms or to relocate their families permanently, often rendering them displaced, malnourished, or psychologically distressed in instances of food insecurity, community damage and flooding.
VMGs/PWDs	• Aging population-which include people living with pre-existing conditions, low immunity, and limited mobility frequently succumb to dehydration, heat-related illness, falls, heart disease, and psychological stress when faced with extreme heat, air pollution and flooding. • Difficulty in accessing evacuation routes and other critical emergency services during extreme weather events. • Most infrastructures are not designed to accommodate their specific needs making it difficult for them to move to safer locations or receive necessary assistance.
Women	• Most women depend on climate sensitive sectors like agriculture and natural resources for livelihood. Women often experience disproportionate vulnerability to climate change due to existing gender inequalities. They tend to have limited access to resources, education and decision making power which hampers their ability to cope with and adapt to climate impacts. • Women often bear the burden of water and food scarcity, increased workload and health risks resulting from climate change

1.3 Brief Overview of Climate Change Actions in the County

1.3.1 Mainstreaming of NCCAP in County Actions

Table 3 Mainstreaming of NCCAP in County Actions

	NCCAP	COUNTY ACTIONS
1.	Agriculture Sector	• Increase of area under Agroforestry done countywide. • Sustainable land management practices especially along the slopes of Mt. Elgon and Cherangany hills. • Increase the land area under the Climate Smart Agriculture done countywide
2.	Livestock Sector	• Improve of livestock breed quality. • Improvement in pasture production, conservation and storage. • Enhance livestock immunization.
3.	Energy Sector	• Promotion of solar energy through street lighting, domestic use and water pumping. • Promotion of use of energy efficient cooking stoves. • Promotion of use of biogas for cooking and lighting.
4.	Forestry	• Rehabilitation and protection of degraded Mt. Elgon and Cherangany forests. • Enhancing afforestation/reforestation/agroforestry on both farmlands and gazetted forests. • Reclaiming encroached community forests e.g. the Kwanza forest.
5.	Industry Sector	• Enhance utilization of raw materials to reduce wastage.

6.	Transport Sector	• Encourage utilization of modern technology, e.g. hybrid and electric vehicles. • Encourage use of pooled transport. • Encouraging use of non-motorized transport and provision of walk lanes. • Improvement of roads to bitumen standards to reduce pollution by slow moving vehicles and minimize dust
7.	Waste Management Sector	• Promotion of material recovery from waste. • Draft Waste Management Policy already in place. • Modern incinerator procured for medical waste. • Training on waste management to the community on going.

1.3.2 Mainstreaming Climate Change in CIDP

Table 4: Mainstreaming of the Climate Change Actions in the CIDP 2023-2027

Sector	4.1.8. Intervention
Agricultural sector	• Promotion of crop diversification • Enhanced access to quality farm inputs • Enhanced soil management and conservation • Pest and disease control • Improved post-harvest management • Conservation agriculture
Livestock sector and Fisheries	• Enhanced disease control and management • Enhanced livestock feeds production and storage • Promote modern breeding technologies • Apiculture promotion • Strengthen livestock market access and value addition • Enhanced aquaculture development • Enhanced access to fish inputs • Strengthen the fish market access and value addition.
Land and Urban Housing Development sector	• Strengthen land use, planning and development • Enhanced urban development e.g., drainage system and waste management • Develop housing [climate proofed] infrastructures
Health sector	• Enhanced immunization coverage • Enhanced nutrition services • Management of communicable diseases e.g.Water borne diseases • Promotion of environmental health and sanitation
Infrastructure sector	• Develop climate proofed road infrastructure • Promotion of renewable energy • Enhanced disaster management
Water and environment	• Development of water infrastructure e.g. , promotion of solar powered infrastructure, roof and surface water harvesting, promotion of water gravity schemes and protection of water springs. • Protection and conservation of wetlands and riparian lands • Promote water harvesting and flood control activities

	• Develop solid waste management infrastructure. • Afforestation and Reforestation • Climate change mitigation and adaptation actions • Strengthen environmental management.
Trade and Industry	• Enhancing access to market opportunities • Develop environmental friendly trade and industrial infrastructure
Tourism sector	• Improvement of tourism infrastructure • Diversification of tourism products and services through protection of culture / indigenous biodiversity that enhance carbon sinks.
Social protection, culture and recreation	• Enhance access to social protection • Enhance access to youth empowerment opportunities • Enhance preservation of culture and heritage.

1.3.3 Other Key Climate Actions/strategies in the County

The County realizes that climate change issues are multifaceted and require multisectoral approach. Other key strategies that County has focused on include but not limited to:

- Appointment of the County Executive Committee Member for Water, Environment, Natural Resources and Climate Change as designate CECM for climate change matters;
- Creation of County Climate change unit;(CCU)
- Annual budgetary allocation for climate change initiatives;
- Creation of a disaster management unit;
- Establishment of County climate change related policies, plans and legal frameworks (Climate Change Policy, Climate Information Service, 2020, Climate Change Fund Act, 2021, Climate Change Fund Regulations, Sand Harvesting Act, 2022, Solid Waste Management Act, 2022 and Sustainable Forest Management Bill);
- Establishment of Climate Change Fund
- Establishment of County climate change management and coordination institutions (County Climate Change Steering Committee, County Climate change Planning committee, Ward Climate Change Planning Committee and Fund administrator)
- Collaborating and networking with other stakeholders on matters pertaining to climate change actions for example, the county government is collaborating with NGOs, CBOs, FBOs and other government agencies..

CHAPTER 2:
POLICY CONTEXT

2.1. National Policy Context

4.1.9. 2.1.1 The National Perspective

In Kenya Climate change is becoming one of the most serious challenges. The country is susceptible to climate-related events, and projections indicate that climate impacts will continue to affect Kenya in the future. In many areas, extreme and variable weather is now the norm. Rainfall is irregular and unpredictable; some regions experience frequent droughts during the ideally long rainy season or severe floods during the short rains. Arid and semi-arid areas are especially vulnerable to these extreme changes, putting the lives and socioeconomic activities of millions of households at risk.

Kenya's updated NDC 2020 seeks to undertake an ambitious mitigation contribution towards the Paris Agreement Kenya therefore seeks to abate her GHG emissions by 32% by 2030 relative to the BAU scenario of **143 $MtCO_2eq$** and in line with her sustainable development agenda. Subject to national circumstances, Kenya intends to bear **21% of the mitigation** cost from domestic sources, while **79% of this is subject to international** support in the form of finance, technology development and transfer, and capacity building.

2.1.2 National Legal and Policy Framework

2.1.2.1The Constitution of Kenya 2010

The Constitution of Kenya 2010 establishes a devolved system of governance with two levels of government: the national government and the 47 county governments. These levels of government are distinct and inter-dependent, conducting their mutual relations through consultation and cooperation.

The county governments have specific roles and responsibilities outlined in Schedule Four of the Constitution, including natural resources management, pollution control, agriculture, implementation of national government policies, and environmental conservation.

The Constitution also guarantees the right to a clean and healthy environment, protecting it for the benefit of present and future generations. Article 43 recognizes every person's right to reasonable standards of sanitation and access to clean and safe water in adequate quantities.

Under Article 69(1), the State is mandated to ensure sustainable exploitation, utilization, management, and conservation of the environment and natural resources, while promoting the equitable sharing of benefits. It encourages public participation, protects genetic resources and biodiversity, enhances intellectual property and indigenous knowledge, and utilizes the environment and natural resources for the benefit of the people of Kenya.

The Constitution includes provisions for affirmative action for marginalized groups (Article 56) and the management of community land (Article 63). Chapter five of the Constitution specifically addresses land, environment, and natural resources.

In summary, the Constitution of Kenya 2010 establishes a devolved system of governance, guarantees the right to a clean and healthy environment, and emphasizes sustainable management and utilization of natural resources for the benefit of the people of Kenya.

2.1.2.2 The Kenya Vision 2030

The Kenya Vision 2030 is a national blueprint that aims to transform Kenya into a middle-income country by 2030, providing a high quality of life for its citizens in a clean and secure environment. It is based on three pillars: economic, social, and political.
The economic pillar focuses on achieving a 10% annual GDP growth rate, while the social pillar aims to build a just and cohesive society with social equity and a clean environment. The political pillar aims to establish a democratic political system that protects individual rights and freedoms.

The Vision is implemented through successive 5-year Medium Term Plans (MTPs). The third MTP, with the theme "Creating jobs, transforming lives for shared prosperity through the 'BETA' plan," emphasizes manufacturing, food security, universal healthcare coverage, and affordable housing.

The threats of climate change pose a significant hindrance to achieving the MTPs and the Kenya Vision 2030. Adverse weather conditions in Trans Nzoia County have led to the spread of pests and diseases, affecting crop production and posing risks to human and livestock health, infrastructure, agriculture, and the economy.

To address these challenges, it is crucial to develop and customize national policy and legal frameworks that focus on mitigation and adaptation actions, as well as early warning and response to disasters. These efforts are aligned with the United Nations' Sustainable Development Goals and the African Union Agenda 2063, which guide socio-economic transformation in the region.

2.1.2.3 Kenya National Climate Change Response Strategy

In 2010, Kenya developed the National Climate Change Response Strategy (NCCRS) to address the impacts of climate change on the country's development. The NCCRS recognizes the evidence of climate change in terms of temperature and rainfall variations in Kenya and identifies the impacts of climate change on the country. It also provides recommendations for actions to reduce these impacts and capitalize on the potential benefits of climate change.
The recommended actions outlined in the NCCRS include adaptation and mitigation measures in key sectors, policy and legislative adjustments, institutional changes, climate change awareness and education initiatives, capacity building efforts, and research and technology development for climate change response.

To implement the NCCRS, the National Climate Change Action Plan 2012 was developed, which focuses on adaptation priorities at the national level. However, it is crucial to

mainstream climate change considerations into county-level policies, programs, and development plans. This requires locally relevant and integrated adaptation responses that actively involve local stakeholders.

Overall, Kenya recognizes the importance of addressing climate change and has developed strategies and plans to mitigate its impacts and take advantage of potential opportunities. The country aims to incorporate climate change considerations into various levels of governance and promote collaboration among stakeholders to achieve effective climate change response

2.1.2.4 National Climate Change Framework Policy, 2016

The National Climate Change Framework Policy was created through Sessional Paper Number 3 of 2016 with a goal to enhance adaptive capacity and resilience to climate change, and promote a low carbon development path for the sustainable development of Kenya. The framework is expected to facilitate a coordinated, coherent and effective response to the local, national and global challenges and opportunities presented by climate change.

The objectives of the CCF Policy are to:

a) Provide effective and efficient institutional framework
b) Reduce vulnerability to the impacts of climate change
c) Catalyse Kenya's transition to cleaner, low emission development
d) Incentivize private sector involvement
e) Public awareness, participation, ownership
f) Framework to mobilise resources
g) intergenerational, special needs and gender mainstreaming approaches
h) policy framework to facilitate effective implementation
i) Enhance research and use of science and technology in policy decisions and sustainable management of resources

Climate Change Framework Policy: Thematic areas

1. Low Carbon Climate Resilient Development
2. Enhancing Climate Resilience and Adaptive Capacity
3. Towards Low Carbon Growth
4. Mainstreaming Climate Change
5. Research and Technology
6. Education and Public Awareness
7. Knowledge Management and Access to Information
8. Climate Change Governance
9. Implementation Framework

2.1.2.5 The National Environmental Policy, 2014

Environment has been an essential feature of Kenya's development policy. The Rio Earth Summit of 1992 brought an understanding between environment and development in Kenya. The National Environment Action Plan (NEAP) of 1994 recommended a need for national

policy and law on environment. The Session Paper No. 6 of 1999 entitled Environment and Development gave forth to the Environmental Management and Coordination Act (EMCA) No. 8 of 1999 as the Kenya's first framework on environmental law. The development of national environmental policy was started in 2006, with first draft available in 2008. This was further reviewed to align to the new governance dispensation, culminating to the revised policy in 2013 which come into effect in October 2014. As a result of Kenya's engagement in environmental issues at the global level, the global environmental body United Nations Environmental Programme (UNEP) is headquartered in Nairobi.

Kenya is well endowed with environment and natural resources, both valuable natural capital providing important ecosystems goods and services. Majority of Kenyan citizens directly or indirectly depend on the environmental goods and services. Environment also contributes to both local and national economies through revenue generation and wealth creation in the productive sector of agriculture, fisheries, livestock, water, energy, trade, tourism and industry. Under the Kenya development blueprint 'Vision 2030', environment is identified as key pillar for achieving sustainable economic development.

2.1.2.6 Climate Change Act, 2016

The Act provides for a regulatory framework for enhanced response to climate change, mechanism and measures to achieve low carbon climate development, and for connected purposes. The Act was purposed for the development, management, implementation and regulation of mechanisms to enhance climate change resilience and low carbon development for the sustainable development of Kenya.

The objectives of the CCF Policy are to:

- mainstream climate change responses into development planning, decision making and implementation;
- build resilience and enhance adaptive capacity to the impacts of climate change; and
- formulate programmes and plans to enhance the resilience and adaptive capacity of human and ecological systems to the impacts of climate change

Currently, Kenya's climate change response is mainly guided by the Climate Change Act, 2016, which provides for establishment of climate change governance structures. Section 19 of the Climate Change Act, 2016 requires counties to mainstream climate change in their programmes, plans and functions; enact legislation that further defines implementation of its obligations, or other climate change functions relevant to the county; undertake climate change action planning as well as establish a climate change governance framework.

2.1.2.7 Regional Blocs and their contribution to Climate Resilience

Trans Nzoia County is part of both the Lake Region Economic Bloc (LREB) and the North Rift Economic Bloc (NoREB). These blocs are established to leverage economies of scale, expand markets, and foster economic cooperation among member counties.

The LREB comprises 13 counties, including Trans Nzoia, and aims to access larger markets, tap into a substantial labor force, and promote shared resources and strengths.
The strategic plan of the LREB focuses on 10 economic pillars, including:

- **Productive sectors:** like agriculture, tourism, trade, and industrialization, as well as
- **Social sectors:** such as education, health, and water.
- **Enablers**: like ICT, financial services, and infrastructure are also emphasized.

Environmental conservation, including the preservation of forests, rivers, and water towers, is prioritized as one of the bloc's flagship programs.

The NoREB consists of eight counties, including Trans Nzoia, and aims to harness economies of scale in resource exploitation and marketing. With approximately 8 million people and strategic infrastructural investments, the bloc serves as a gateway to COMESA and international markets.

Both blocs provide opportunities to address climate change and environmental challenges, particularly in the agricultural sector. They recognize the significance of proper resource management in ensuring food security within the regions they represent. Collaborative efforts, including the development of policy and legal frameworks and joint initiatives with development partners, are pursued to enhance climate change resilience and environmental conservation.

2.2 County Enabling Legal and Policy Framework

2.2.1 County Climate Change Policy, 2020

The County Government of Trans Nzoia has enacted Climate Change Policy 2020, upon which this climate change risk assessment process is anchored. The policy envisages that among other actions, the county government of Trans Nzoia shall undertake Climate Change Action Planning, Risk Assessment, Vulnerability Assessment and Adaptation planning for effective implementation of climate actions. The policy vision for the County is “an outstanding climate resilient and sustainable agro-industrialized county” with a mission, “To enhance integrated climate change adaptive and mitigative actions for sustainable economic and socio-ecological development”

The strategic goals for this policy are:

1. To enhance community resilience to climate change
2. To develop and promote integrated waste management and sustainable natural resource management
3. To promote protection, rehabilitation and conservation of water resources.
4. To promote protection, management and conservation of forests and allied resources
5. To enhance prevention and control of vector and water borne diseases.
6. To enhance food security and nutrition
7. To enhance livestock production and value chain development.
8. To promote productivity and industrial growth

9. To promote climate proof, quality and suitable infrastructure
10. To protect and conserve wildlife resources for tourism promotion and posterity
11. To improve planning, coordination and management for better governance of the Trans Nzoia county climate change sector

2.2.2 Trans Nzoia County Climate Change Fund Act, 2021

This Act was enacted to guide budgeting and governance for climate change in the county. The Act dedicates 2% of the County Budget into a fund, specifically for climate change programs coordination and implementation hence the climate change risk assessment will form a basis for evidence based climate response.

2.2.3 The County Integrated Development Plan (CIDP) 2023-2027

The County Integrated Development Plan (CIDP) is a crucial planning tool mandated by the Constitution of Kenya and the Public Finance Management Act. It involves a long-term and medium-term planning process to establish strategic priorities for county governments. In line with this, the climate change Act emphasizes the integration of climate change actions into CIDPs and county sectoral plans.

Trans Nzoia County's CIDP for the period 2023-2027 focuses on priority areas such as poverty reduction, youth employment, and increased land productivity. Agriculture is recognized as the backbone of the county's economy, with mixed farming and horticulture gaining prominence. Environmental concerns include climate change, land degradation, loss of biodiversity, and challenges related to pollution, deforestation, solid waste management, and natural disasters.

The development thrust of the CIDP includes initiatives to increase land productivity, promote agricultural value chains and marketing, improve access to clean water and sanitation services, enhance early childhood education, provide technical skills training, generate employment through industrialization, improve infrastructure, ensure access to quality healthcare, facilitate land ownership, and empower youth and women through dedicated funds. These projects and targets aim to address the identified priorities and contribute to the county's overall development..

2.2.4 Governor's Manifesto

The Governor's Manifesto is a crucial planning tool that informs purpose and objective of all other County planning tools. It involves a long-term and medium-term planning process to establish strategic priorities for county governments. In line with this, the CCAP emphasizes the integration of climate change actions towards achievement of the Governor's manifesto, CIDP, BETA and Vision 2030.

The development thrust of the Governor's manifesto towards Climate Change resilience building includes initiatives to increase land productivity through climate smart agricultural activities such as agricultural value chains and marketing, livelihood diversification and conservation agriculture among others; improve access to clean and adequate water and sanitation services through pipeline extension, equipping and solarization of the boreholes, rehabilitation of water pans/dams, establishment of water supply systems and protection of water catchments; Reduce greenhouse gas emission through growing of at least 1,000,000 trees annually and development of Non-Motorized Transport (NMT) including pedestrian walk ways and cycling lanes; modernize county infrastructure

infrastructures to a more climate compliante; Ensure youth, women and PWLDs companies access government procurement opportunities (AGPO);: enhance early childhood education, provide technical skills training, generate employment through industrialization, improve infrastructure, ensure access to quality healthcare, facilitate land ownership, and empower youth and women through dedicated funds. These projects and targets aim to address the identified CCAP priorities and contribute to the county's overall development.

CHAPTER 3:
3. PRIORITY CLIMATE CHANGE ACTIONS

3.1 Identification of Strategic Climate Change Actions Priority in the PCRA

The priority climate change actions in this Action Plan reflect input received from PCRA process and during public participation, validation stages ward levels, county level (technical staff and stakeholders) and assembly (MCAs) level. Ward and County level engagements were held to collect inputs of the communities/stakeholders in the action plan. Deliberate efforts were made to ensure inclusion of the PWD, Women, Youth, Community Interest Groups, IP, Civil Society organizations, technical officers and political leaders at ward level were involved. Averages of Fifteen (15) members of the community were engaged in the Focused Group Sessions per ward. This was followed by County level multi-stakeholder (both those with high/low influence/interest) engagement to collect inputs. Among the sectors that participated in the County level (both State actors and Non-state actors) engagement process were environment (including NEMA), forestry, water, forestry, fisheries, livestock, agriculture, lands, public works, health, public participation, researchers(Ecofix consult, Manor House Agriculture institute and cranes international), learning institutions and civic education cooperatives and CSOs among others.

These climate change actions are mainstreamed in the Third Medium Term Plan in all sectors and in County Integrated Development Plans 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 programmes 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 BETA agenda 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 country achieves its mitigation NDC under the Paris Agreement; and
- Enables actions to be undertaken in an integrated manner that address several priorities. For example, actions to plant trees also contribute to disaster risk management, water and food security objectives.

The priority climate change actions are summarized and described in this chapter. Further details on the priority actions and all other climate change actions identified by stakeholders.

Table 5: County Priority climate change strategies

Prolonged dry spell			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health, energy and infrastructure services)**
• Construction of ground and surface climate proofed water harvesting and storage infrastructures e.g. water dams/pans/boreholes. • Rehabilitation of the existing water harvesting and storage infrastructures such as dams/pans. • Protection and conservation of riparian/catchment areas such as wetlands, along river banks and springs. • Enhanced capacity building of the community/stakeholder on climate smart water management practices either for domestic/agricultural/industrial use. • Enhance roof water catchment. • Enact and enforce county laws on protection of water catchment areas	• Promote Climate smart agriculture through: f) Conservation Agriculture; g) Irrigation farming; h) Regenerative agriculture; and i) Crop diversification (mixed cropping/drought resistant crops/short season crops). j) Vertical Farming technology • Promotion of agri-nutrition • Capacity building of stakeholders/community on climate smart agricultural initiatives. • Water harvesting and storage (farm ponds and pans) • Promote climate adaptive livestock management practices through: d) Climate Adaptive breeds; e) Pasture/fodder/feeds production, storage and conservation. f) Livestock housing • Promotion of agroforestry practices (Multi-purpose Trees and Shrubs-MPTs e.g. calliandra, sesbania, gliricidia).	• Formulation, enactment and Enforcement of relevant environmental county laws. • Capacity building on sustainable environmental management practices. • Capacity building to promote biodiversity protection & conservation in protected areas like Saiwa swamp. • Promote growing of environment friendly tree species • Promote nature based solutions e.g. community tree nurseries (fruits and non-fruits trees) bee keeping, ecotourism, protection of catchment, agroforestry, green spaces	**Disaster management** • Timely dissemination of climate information • Enhance early warning system in forested areas. • Capacity building on disaster preparedness and management • Equip the disaster management unit • Enact and enforce disaster management county laws **Health** • Capacity build CHVs on case identification and management • Enforcement of waste management county laws • Provide confirmed disease case management kits to CHVs **Energy and Infrastructure** • Climate proofing of existing infrastructures. • Construction of climate proofed infrastructures • Promotion of green/clean/alternative energy sources to minimize deforestation e.g. biogas, solar energy, and clean stoves/jikos.
Floods			

Water	Agriculture	Environment	Others (Disaster management, health, energy and infrastructure services)
• Enhancing surface overflow Rain water harvesting and storage through construction/rehabilitation of water pans, ponds, tanks and dams • Construction of Flood control structures such as water ponds, pans, dams, Gabions, Cut-off drains and terraces • Enhance access to clean and safe water through pipeline extension and water treatment. • Early flood warning systems from hydrological forecast • Training of Divers • Improve solid and liquid waste management • Community water treatment • Education and awareness campaigns on impacts of climate change on water resources and sustainable water management practices.	• Promote agroforestry (agri-silviculture, silvopastral) • Promote Climate smart agriculture through: d) Conservation Agriculture (gabions, cut off drains, terraces, farm ponds); e) Regenerative agriculture; and f) Crop diversification (mixed cropping/drought resistant crops/short season crops). • Promotion of fish farming e.g. along river Sabwani • Capacity building on floods control and management measures • Integrated soil fertility practices. • Promote climate adaptive livestock management practices through: d) Climate Adaptive breeds; e) Pasture/fodder/feeds production, storage and conservation. f) Livestock housing	• Proper integrated waste management to minimize clogging of drainage systems and contamination of the environment. • Promote nature based solutions e.g. tree nurseries (fruits and non-fruits trees) bee keeping, ecotourism, protection of catchment, agroforestry, green spaces • Capacity building on effects of encroachment of riparian land, wetlands and deforestation • Enforcement of existing policies in management and conservation of riparian reserves and wetlands	**Disaster Management** • Early warning systems • Timely dissemination of climate information • Capacity building and awareness Creation on disaster response during floods. • Mapping of flooding hotspots. • Operationalization of the County Disaster Management Unit • Review and enactment of the draft County Disaster Management Bill. **Infrastructure** • Enhance implementation of spatial plans • Climate proofing of existing infrastructures. • Construction of climate proofed infrastructures **Health** • Community water treatment Capacity build community on water treatment, food storage, sanitation, nutrition and housing • Put in place contingent measures for disease prevention and control.
Increased incidents of vector, invasive species, pests and diseases			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health, energy and infrastructure services)**
• Promotion of nature based	• Enhance timely/routine vaccination.	• Promotion of integrated pest & disease control	**Disaster Management**

solutions to reduce pollution of water sources from agrochemicals. • Enhance protection of riparian areas • Improved solid and liquid waste management. • Water treatment • Capacity building on water treatment, solid and liquid waste management	• Capacity building on prevention and treatment of pests and diseases • Promote Crops & Livestock Insurance • Integrated pest management practices e.g. use of allelopathic plants like Sunflower to control weeds. • Promote regenerative agricultural practices such as Integrated Soil fertility practices and organic pest/disease control methods, Phytosanitary measures among others. • Control trans boundary movement on crop produce and livestock. • Promotion of resilient/adaptive livestock species to pests and diseases • Developing crop and livestock pest and disease contingency plan. • Enhance farmers disease and pest surveillance actions.	(cultural, biological and organic) allelopathic plants e.g. Sunflower • Incorporation of research programs to conserve existing biodiversity • Enhance surveillance of invasive species • Mechanical control of invasive species and promoting their utilization • Strengthen capacity on livelihood diversification and planting of alternative tree species	• Early warning systems • Developing human disease contingency control and surveillance plan **<u>Health</u>** • Enhance vector control initiatives e.g. supply of the mosquito nets, unclogging of drainage, stagnated water and awareness creation • Promote human Insurance cover • Capacity build community on sanitation, nutrition and housing. • Put in place contingent measures for disease prevention and control. • Capacity Building on emerging and re-emerging vectors • Strengthen surveillance systems on vectors and diseases • Enforce the malaria control act • Vaccination against diseases e.g. Malaria, Cholera, • Treatment of emerging and re-emerging diseases
Landslides			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health, energy and infrastructure services)**
• Protection of the water catchment areas	• Conservation agriculture e.g. gabions, cut off drainage, terraces, contour ploughing • Promote Agroforestry (agrosilvopastoral). • Capacity building on riparian agricultural laws and policies	• Promote Agroforestry (silvo-agriculture e.g.). • Reforestation & afforestation • Promote riparian forestry buffers. • Promotion of community tree nurseries • Capacity building on SLM practices • Rehabilitation of the degraded landscapes.	**<u>Disaster Management</u>** • Early warning systems; • Timely dissemination of climate information; • Community awareness Creation on disaster response during landslides; • Mapping of landslides hotspots

Hailstorms			
Water	**Agriculture**	**Environment**	**Others (Disaster management, health and infrastructure services)**
• Climate proofing of existing and new water infrastructures	• Climate smart agroforestry practices such as agrosilvopastoral through alley cropping and hedgerows. • Growing of short season crops; • Multistory cropping	• Promote climate smart agroforestry (boundary tree growing- windbreakers/hedgerows and silvo-agriculture). • Promote forest farming (Multistory cropping.	**Disaster Management** • Early warning systems; • Timely dissemination of climate information; • Community awareness Creation on disaster response;

CHAPTER 4:

4. DELIVERY MECHANISMS FOR THE CLIMATE CHANGEACTION PLAN

4.1.Enabler

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 crosscutting enabling actions described in this section include:

- Enabling Policy and Regulation
- Mainstreaming in the CIDP
- Multi-stakeholder participation processes
- Finance - County Climate Change Fund
- Governance - County Government Structures
- Governance - Climate Change Planning Committees
- Climate Information Services & Climate Data Access
- Resilience Planning Tools
- Measurement, Reporting and Verification
- Institutional Roles and Responsibilities

This section provides brief descriptions of the priority enabling actions to be completed from 1st July 2023 to 30th June 2028. The descriptions note if the actions are continued from CCCAP 2023-2027, identify the relevant institutions, and set out process indicators to measure progress and achievements.

4.1.1. Enabling Policy and Regulatory Framework

The process of developing a comprehensive policy and regulatory framework for climate change is well underway in Trans-Nzoia, as demonstrated by the Climate Change fund Act, 2021, County Climate Change Policy, 2020 and CIDP 2023-2027.

A key element of the Climate Change fund Act, 2021 is the requirement for various regulations to provide further interpretation of certain provisions, and to support operationalization of the administrative aspects of the Act such as reporting requirements. The County has prioritized to develop appropriate legislation, including robust Climate Change Act that are informed by the local context, aligned to county systems, and conform to relevant county, national and international legal frameworks. This legal and policy framework will guide development, mobilization and utilization of County Climate Change Funds, prioritization of climate actions and addressing County-specific local climate change issues. The enabling actions are described below in **Table 6.**

Table 6: Priority enabling actions – Enabling Policy and Regulatory Framework

	Enabling Actions	Coordinating Institution and Relevant Partners	Expected Results (Process Indicator)
P1	Prioritize, develop and implement the needed regulations to effectively implement the Climate Change Fund Act, 2021 through a multi-stakeholder process that includes women, youth and marginalized and minority groups.	WENRCC; CCU; County Treasury and Planning; Office of Legal person	**By 30th December 2023** – Assessment of needed regulations complete. Regulations developed and operationalized
P2	Prioritize, develop and implement the needed legal framework, policies and plans (Climate change Act, adaptation plan; climate change resource mobilization) to effectively implement the Climate Change Fund Act, 2021 and Climate Change policy, 2020 through a multi-stakeholder process that includes women, youth and marginalized and minority groups.	WENRCC; CCU; County Treasury and Planning; Office of Legal person	**By 30th December 2024** – Assessment of needed regulations complete. Plans/Policies/Regulations developed and operationalized
P3	Prioritize mid-term review of the CIDP 2023-2027 to mainstream Prioritized actions in the PCRA and CCAP.	WENRCC; CCU; County Treasury and Planning; Office of Legal person	**By 30th July, 2024** – Assessment of needed regulations complete. Regulations developed and operationalized

4.1.2. Mainstreaming in the CIDP 2023-2027

The County blue print, the CIDP 2023-2027 commits to integrate Climate Change actions and adopt a cleaner/green pathway through investment in clean and green technologies. The CIDP has been tailored to enhance community resilience to Climate Change impacts through promotion of Climate Change adaptation and mitigation programs. The target sectors for mainstreaming are agriculture, livestock, fisheries, gender, transport, environment, land use, water, energy, and natural resource management and education sectors among others. The table 7 below has given brief of prioritized climate change interventions from various sectors geared towards strengthening community and institutional resilience to climate change impacts and further more in supporting implementation of the CCAP 2023-2027.

The enabling CIDP mainstreamed actions towards implementation of the CCAP 2023-2027 are described in the **Table 4.**

4.1.3. Multi-stakeholder participation process

This CCAP was developed through a multi-stakeholder participatory process. The Identification of climate risks/hazards and the response strategies involved multi-stakeholder consultative processes right away from ward level to county level. Multi-stakeholder engagements were organized during collection of public inputs and during various validation stages (ward level, county level and assembly level).

Ward and County level engagements were held to collect inputs of the communities/stakeholders in the action plan. Deliberate efforts were made to ensure inclusion of the PWD, Women, Youth, Community Interest Groups, IP, Civil Society organizations, technical officers and political leaders at ward level were involved. Averages of Fifteen (15) members of the community were engaged in the Focused Group Sessions per ward. This was followed by County level multi-stakeholder (both those with high/low influence/interest) engagement to collect inputs. In addition, the process involved engagement of practitioners in technical, professional and academic spheres in the relevant sectors such as environment (including NEMA), forestry, water, forestry, fisheries, livestock, agriculture, lands, public works, health, public participation, researchers(Ecofix consult, Manor House Agriculture institute and cranes international), learning institutions and civic education cooperatives and CSOs among others.

The stakeholder engagement processes shall continue in the implementation of the action plan as guided by the County Climate Change Fund Action, 2021 and other relevant legal and policy frameworks which calls for community consultation forums, with all-inclusive participation in implementation of climate change projects.

Mainstreaming and reinforcing climate change adaptation, mitigation and resilience building into strategies and actions of public and private entities will require participation of the following County government entities and stakeholders among others:

- The **County Disaster Management Unit** is the focal point for disaster management and response in County, including prolonged dry spell, floods, forest fire and landslides. The Centre 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 CCAP 2023-2027 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 minimize the impacts of climate change in the future and also enhancing creation of carbon sinks. The County steering committee may impose climate change obligations on private entities likely to be reporting requirements that would be introduced in a phased manner and developed in consultation with the private sector.

- **Public Benefit Organizations:** This includes non-governmental organizations, civil society organizations and faith-based organizations, amongst others. They have been involved in climate change activities in the County. Civil societies are known to be a powerful agent of change through public awareness creation, policy research and analysis, and advocacy on key socio-economic issues including climate change.
- **Vulnerable groups within society,** including women, older members of society, persons with disabilities, children, youth, and members of minority or marginalized 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 CCAP 2023-2027 and women will be engaged through 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 County, will be encouraged through schools, post-secondary institutions, and youth-focused organizations. Youth are agents of change and have influence on 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.
    - **Indigenous People (Ongiek and Sengweries):** These groups are a critical constituency. Article 56 of the Constitution of Kenya 2010, read together with Article 260, recognizes these groups as marginalized communities for whom efforts must be put in place to ensure they participate and are represented in governance and other spheres of life. The livelihoods of these communities are at risk because of climate change, and adaptation actions engage these communities in implementation and monitoring.
- **Academia and research institutions:** Researchers help to provide the evidence and science for knowledge-based decision making by National and County Governments, 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.

The enabling public participation and stakeholder involvement enabling actions towards implementation of the CCAP 2023-2027 are described below in **Table 8**

Table 7: Enabling actions in the Multi-stakeholder participation process

P1	Build the capacity of stakeholders, including - Vulnerable groups, including women, youth, and persons with disabilities and marginalized and minority communities, to participate in, attract funding for, and report on climate change actions. - Private sector and civil society to implement and report on climate actions.	WENRCC CCCU Gender and youth dept. PSM	**By 30th December 2023** – Ten awareness sessions held. **By 30th June 2024** – Twenty awareness sessions held.
P2	Develop and operationalize a public awareness and engagement strategy that highlights outreach to politicians and media; and engagement of vulnerable groups, including women, older members of society, children, youth, persons with disabilities, and members of minority and marginalized communities.	CCCU Departments of Gender and youth, WENRCC	**By 30th December 2027** – Public awareness and engagement strategy delivered to the County Steering committee. **By 30th June 2027** – Strategy to operationalized at County level.
P3	Integrate climate change in the education system, emphasizing integration in existing curriculum	Dept. of Education CCU	**By 30th December 2024** – Draft climate change curriculum developed and piloted for ECDE. **By 30th June 2025** – Climate change curriculum introduced for lower secondary grades.
P4	Strengthen the capacity of county departmental sectors and institutions to implement the CCAP including: - Training of staff of climate change units on reporting, climate finance. - Support to County Climate Change steering and planning committees for their co-ordination and planning - Training on the climate change-gender nexus	WENRCC CCCU	**By 30th December 2023**– Climate change is mainstreamed in MTP sector plans. **By 30th December 2024** – All departments providing annual reports with gender disaggregated information.
P5	Build the capacity of County sectors, including: - Strengthening of Climate Change Coordination Units. - Setting up functional Climate Change Units, gazettement of County Environment Committees and other supportive structures. - Coordination of climate change programmes across Counties. - Mobilization and tracking of climate finance using gender-disaggregated data, including allocations through County Climate Change Funds. Monitoring and reporting on the impact of climate change programmes.	WENRCC CCCU	**By 30th December 2024** –County Governments reporting on a pilot basis. **By 30th June 2024** – All County sectors providing annual reports on climate change with gender-disaggregated information.

4.1.4. Financial Requirements

The County Climate Change Fund Act 2021 dedicates at least 2% of the County development Budget into a fund, specifically for climate change programs coordination and implementation hence the priorities identified in the CCAP 2023-2027 will be able to source funds for implementation some of the community prioritized activities. The grants

expected from the FLLoCA program shall provide the financing gaps required in the implementation of this action plan for at least 3 years. The County Government of Nandi shall also mobilize resources externally for climate action

Other sources of climate change funds as stipulated in the act include monies from the National Government; grants and loans from the National Climate Fund; climate finance from international entities; monies received from Public Benefit Organizations; fees and charges from climate finance activities; and other grants and donations. CCU will spear-head implementation process of the CCAP 2023-2027.

CCU will require approximately a minimum of 4% of the allocated climate change funds annually to carry out its duties and functions and to ensure effective coordination and delivery of CCCAP 2023-2027. This funding will enable CCU to participate in local, County and national discussions and negotiations on climate change; build capacity of County Government departmental sectors and other stakeholders; develop regulations and guidelines; mobilize and track climate finance to deliver CCCAP 2023-2027; and monitor and report on climate actions.

4.1.5. Governance - County Government Structures

Implementation of the action plan shall be guided by the County Executive Committee where cabinet endorsement is required for high level decision making. The County government has appointed a CECM and a Chief Officer responsible for climate change affairs who provides executive leadership in climate action implementation. The implementation shall further draw support from the county government for functions as accounting, auditing, procurement, communication, transport and logistics and accommodation. The county assembly shall provide oversight during the process of implementation. The County Climate Change Unit the lead technical agency at the county level in the implementation of this Action Plan. It is also the secretariat of all the climate change planning committees; prepares and submit operational and statutory reports to the relevant authorities; and monitor implementation progress of the CCAP.

4.1.6. Governance-Climate Change Planning Committee

The County Government of Trans Nzoia has established climate change planning committees at county and ward level. County Climate Change Planning Committee is chaired by the CECM for the time being in charge of climate change affairs and is mainly composed of County Executive Committee Members. The County Planning Committee is the implementation arm of the CCAP 2023-2027. The County Climate Change Planning Committee shall provide guidelines for identifying and conducting countywide climate change risk assessment, vulnerability mapping and adaptation strategies prioritize, sequence and approve projects activities (from CCAP) submitted by the ward climate change committee through CCU based on the approval criteria. On the other hand, Ward Climate Change Planning Committees shall provide an interface between the county governments and communities during planning and execution of climate change adaptation initiatives. These committees are popularly elected among community members and they typically comprise of representative of: women, youth, people with disabilities, faith based organization in the wards, the elder/men, and community based organizations.

4.1.7. Climate Information Services & Climate Data Access

The County Department of Meteorological Services is responsible for generating climate/weather information. Timely dissemination of climate information is required for enhanced resilience of citizens against climate shocks. The County Government shall

partner with the KMD in generation and dissemination of climate data such as: historical data, weather Forecasts, early warnings and advisories.

The operation of the Climate Change Information System (CCIS) is a priority action to promote climate information and knowledge management. The integration of climate change in education curriculum, the development of a gender and inter-generational awareness plan, and the development of a public awareness and engagement strategy are priority actions required under the Climate Change Act, 2016.

Table 8: Priority enabling actions – Climate Information and Climate Data Access

	Enabling Actions	Coordinating Institution and Relevant Partners	Expected Results (Process Indicator)
C1	Operationalize County CIS including provision of robust and up-to-date climate change knowledge management system and establishment of updated climate change information portal that has platforms for children, youth, women, and marginalized and minority communities. Use *Knowledge Harvesting* techniques to capture and share climate change information, including information on local Traditional Knowledge, especially from women and the elderly.	WENRCC CCCU CMD County Treasury and Planning Disaster management unit Red cross	**By 30th December 2024** – well developed information sharing channels.
C2	Strengthen the capacity of county departmental sectors and institutions to implement the CIS including: - Training of staff of climate change units on reporting, climate finance. - Support to County Climate Change steering and planning committees for their co-ordination and planning - Training on the climate change-gender nexus	WENRCC CCCU	**By 30th December 2023**– Climate change is mainstreamed in MTP sector plans. **By 30th December 2024** – All departments providing annual reports with gender disaggregated information.

4.1.8. Resilience Planning Tools

The County Climate Information Service will play a crucial role in the county development planning, for managing development opportunities and risks and for mitigation and adaptation. Efficient application of climate services requires that there should be proper and efficient gathering and processing of weather information. Climate services include the dissemination of climate information to the public or a specific user. Timely communication of climate information helps prevents the economic setbacks and humanitarian disasters that can result from climate extremes and long term climate change. Climate Information Services (CIS) can also support society to build resilience to future climate change and take advantage of opportunities provided by favourable climate conditions. An effective CIS require adequate technical capacities and appropriate communication strategy that enables good exchange within information producers, translators, and user communities.

The Participatory Climate Change Risk Assessment(PCRA) shall be continually undertake to enable communities identify the climate change hazards, their impacts and propose practical solutions for evidence-based county Climate Change Action Planning and implementation of climate action. Based on the findings of the PCRA the County Government shall prioritize strengthening climate change governance institutional framework through strengthening capacity of the directorate of climate change, mainstreaming of climate change across all sectors and strengthening capacity to monitor and report climate action across the sectors at the county level and at ward level. This County Climate Change Action Plan identifies and prioritizes hazards experienced in the county and provides strategies and framework of addressing them.

4.1.9. Monitoring and Evaluation (M&E) of the CCCAP

The CCU is responsible for M&E of CCCAP 2023-2027 and will work hand in hand with County M&E Unit. The implementation of the CCCAP will be reviewed as required by the Climate Change Act, 2016 and any other County Climate change policies and legal frameworks. The review will utilize reports from County Governments and departments, as well as inputs from relevant stakeholders. Important stakeholders in the review process include private sector, women, youth, and minority and marginalized groups including Sengweri and Ongiek communities.

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 SDGs, Agenda 2063, BETA agenda and CIDP 2023-2027. 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 will be linked to the MRV+ system and SDG reporting. The establishment of the M&E system will include the development of reporting frameworks for County Government and processes to compile, analyze, and report on actions and results. The key to success is a workable M&E structure that is appropriate for a devolved governance system and for the available resources. The M&E system will:

- **Ensure that all County departments** report on their progress and achievement of CCCAP actions.
- **Ensure efficient reporting processes for the County Governments**, and draw on established reporting procedures where possible, such as the County 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 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 CIDP, Government's BETA agenda and SDGs.

- **Use gender-aggregated data where possible** and prioritize collection of this data if it is not available.
- **Track and measure GHG emissions on a sector basis at the county level**. Measuring GHG emissions on an action or County basis is costly and resource intensive, and unlikely to generate robust information that is aligned with the County GHG inventory approach.

4.1.10. Institutional Roles and Responsibilities Implementation

The Department of Water, Environment, Natural Resources and Climate Change and Department of Finance will lead and facilitate the implementation of this CCAP. The Departments shall mobilize adequate resources for the successful implementation of the CCAP and develop required laws and regulation.

The strategic interventions identified will be operationalized by the County Government and its partners, including private sectors, civil societies and community through the incorporation of specific actions in their strategic and operational plans. These plans will provide detailed information on specific actions to be undertaken, the implementing agencies and partners, timelines and costs.

The main County institutions that will be engaged coordinate implementation of this CCAP are as below.

1) Climate change steering committee
2) County climate change Planning committee
3) Ward climate change planning committee
4) Climate Change Unit

Each of the above committee shall have a structure with specified period and clear roles and mandates as stipulated in the Climate Change Fund Act, 2021.

1. Climate Change Steering Committee

This is the apex body overseeing county climate change matters. The Steering committee shall be appointed in writing by the Governor.

The membership of the steering committee shall consist of the following as provided for in the County Climate Change Fund Act, 2021.

a) The County Governor who shall be the chair of the Steering Committee in whose absence Deputy Governor will chairperson;
b) The County Deputy Governor as the Vice Chairperson;
c) County Executive Committee Member in charge of Water, Environment, Climate Change and Natural Resource, as the secretary;
d) The Fund administrator as an ex-officio member;
e) County Executive Committee Member in charge of Planning and Finance;
f) County Executive Committee Member in charge of Agriculture, Livestock production and Fisheries and Cooperative Development;
g) the County Attorney;

The functions of the Steering Committee shall be to: -

a) oversee implementation of county climate change activities financed by the Fund;
b) support the Executive Member climate change to mobilize resources for Climate Change financing consistent with the approved county Framework;
c) develop necessary linkages for the Fund with the other county climate change activities;
d) coordinate with other relevant stakeholder's monitor compliance of the Fund administration to ensure compliance with the public finance management principles under article 201 of the Constitution of Kenya 2010, the Procurement and Asset Disposals Act 2003 and the Public Finance Management Act 2012;
e) ensure that projects financed by the Fund are approved by the County Planning Committee in conformity with the prescribed criteria and the County Climate Change Finance Framework;
f) oversee the administrative costs of the fund including the costs of the meetings and sitting of the Steering Committee and the Ward Planning Committee;
g) oversee the execution of the County Climate Finance Budget as approved by the County Assembly;
h) mobilize funding for projects, programs and activities listed in the Climate Finance Framework;
i) oversee coordination of Climate Finance projects and programs with other programs in the County;
j) prepare Climate Change Awareness and advocacy strategy for the County based on Fund activities;
k) regularly review operations of the Fund and submit biannual reports to the County Assembly, to ensure consistency with the County Climate Change Finance Framework; and
l) carry out any other matter relevant to Climate Change Finance in the County.

2. County Climate Change Planning Committee

This is the technical arm of the in charge of the county climate change matters. The membership of the county climate change committee shall compose of the following as provided for in the County Climate Change Fund Act, 2021;

a) County Executive Committee Member for Water, Environment, Climate Change and Natural Resources, who shall be the **Chairperson**;
b) Chief Officer, Finance & planning (**vice-chairperson**);
c) Chief Officer for Water, Environment, Climate Change and Natural Resources, who shall be the **secretary**.
d) Chief officer for Agriculture Livestock, Fisheries and Corporation;
e) Director in charge of Environment;
f) Director in charge of Climate change;
g) One representative of Public Benefit Organization;
h) One representative of the youth, being of either gender;
i) One representative of women;
j) One representative of persons living with disability;
k) One Representative of each of the major economic activities (Trade and Agriculture) nominated by the departments in charge;
l) Representative of the Office of the County Commissioner;

m) County Director of Meteorology Services;
n) A representative of the National Environmental Management Authority;
o) A representative of the Kenya Forest Service;
p) A representative of Kenya Wildlife Service; and
q) A representative of the Water Resources Authority

The Function of the County Climate Change Committee shall be as follows;

a) to develop projects' eligibility criteria under this act;
b) to receive, compile, evaluate and approve the projects submitted by the Ward Planning Committee based on the prescribed criteria, and prepare the County Climate Finance Budget;
c) based on criteria, ensure equitable allocation of the monies available in the Fund with regard to the projects received from the Ward Planning Committee;
d) provide monitoring and evaluation for the projects financed by the Fund;
e) provide the essential linkages between the County Climate Change Steering Committee and the County Assembly with regard to management of the Fund;
f) coordinate capacity building for Climate Change Awareness and Climate Finance in the County;
g) coordinate research and development for Climate Change Finance in the County;
h) mobilize funds for Climate Change Finance in the County;
i) design a climate change awareness strategy for the county;
j) develop a climate finance research priority needs list for the county;
k) assign and coordinate technical assistance from County departments to projects funded under this Act;
l) assist the Steering Committee in developing the Climate Finance Framework; and
m) any other matter relevant to the execution of the County Planning Committee's mandate.

3. Ward Climate Change Committee

At every ward, there shall be ward climate change committee. The membership of the ward climate change committee shall compose of the following as provided for in the Climate Change Fund Act, 2021:

a) Community representatives appointed as follows—
    i. Two persons, a male and a female, nominated by the youth in the ward;
    ii. one person nominated by women in the ward;
    iii. a representative of persons with disability in the ward;
b) one person representing Ward based Public Benefit Organizations/CBOs;
c) one person representing faith based organizations in the ward;
d) Ex –officio members with no voting rights comprising of:
    i. the Sub–County Administrator of the respective sub-county;
    ii. Ward Administrator of the respective ward;
    iii. ward level technical representatives from line ministries, that is, extension officers from Livestock, Agriculture, water and environment;
    iv. Location administration chief; and
    v. The Member of the County assembly for the ward.
e) Four representatives nominated by communities representing various locations in the ward;

The function of the ward climate change committee shall be as below

a) consult with the community on the relevant climate finance activities;
b) facilitate public participation at the ward level;
c) receive project proposals from the community at the ward level;
d) develop technical components of project proposals;
e) procure goods and services for projects, including development of procurement plans for each project at ward level;
f) monitor implementation of projects at the ward level;
g) prepare the budget at the ward level;
h) preparing the ward level project reports; and
i) any other duty assigned by the County Planning Committee.

The county executive committee member in charge of climate change matters will have to develop mechanisms for the operationalization of the climate change fund structure, the act, rules and regulations. The climate change fund will be used to address climate change concerns at the sector levels.

4. Climate Change Unit

This is the technical arm of the county climate change matters. The unit shall be domicile in the department of water, environment, natural resources and climate change and shall be subjected to the administrative cost of not less than 4% of the annual climate change funds to enhance its operation.

Climate change unit shall comprise of County technical staff seconded from the key County Departmental sectors as follows:

(a) Climate Change;
(b) Environment;
(c) Natural Resources sector;
(d) Water;
(e) Forestry;
(f) Agriculture;
(g) Livestock;
(h) Economic planning;
(i) Information and Communication;
(j) fund administrator;
(k) Public health; and
(l) Social services.

The Climate change unit may co-opt other members whenever need arises.

The unit shall be headed by the senior staff in the climate change sector. Members of the County Climate Change Unit shall be designated by written by the CECM in charge of the county climate change affairs through steering committee approval.

Functions of the climate change unit

(a) Serve as technical secretariat to the steering Committee, County planning Committee and Ward Planning Committee;
(b) Provide technical support to the institution under climate change act;
(c) Coordinate establishment of County Climate Risk Assessment in a participatory manner;
(d) Integrate the climate change action plan into sectorial strategies, action plans and other implementation projections for the assigned legislative and policy functions;
(e) report on sectorial greenhouse gas emissions for the county and national inventory;
(f) coordinate the mainstreaming of the climate change action plan and other climate change statutory functions and mandates into sectorial strategies for implementation;
(g) regularly monitor and review the performance of the integrated climate change functions through sectorial mandates;
(h) Monitor and evaluate climate change projects implemented under climate change fund.
(i) serve as the County knowledge and information management centre for collating, verifying, refining, and disseminating knowledge and information on climate change;
(j) receive, analyze ward planning committee project proposals, plans, reports and budgets before submission to the County Planning Committee for approval;
(k) have Grievance Redness Mechanism Desk to receive all grievances;
(l) provide analytical support on climate change to the various sector departments, agencies;
(m) establish and manage a county registry for appropriate mitigation and adaptation actions by public and private entities;
(n) in collaboration with other agencies at the national and county government levels-
    i. identify low carbon development strategies and coordinate related measurement, reporting and verification;
    ii. develop strategies and coordinate actions for building resilience to climate change and enhancing adaptive capacity;
    iii. optimize the country's opportunities to mobilize climate finance;
(o) coordinate adherence to the county's national obligations including associated reporting requirements;
(p) coordinate implementation of the gender and intergenerational climate change education, consultation and learning at the county governments levels;
(q) put in place and implement mechanisms for sustainability in performance of sectorial mandates; and
(r) report annually to the designated CECM responsible of climate change affairs and copy to Chief officer responsible of climate change affairs, on the status and progress

of implementation of climate change actions and all assigned climate change duties and functions;

4.2 Implementation and Coordination Mechanism

4.2.1. Role of the Climate Change Unit

The CCU is responsible for the overall coordination of the implementation of this CCCAP 2023-2027, including coordination and reporting on implementation of actions by partners. Roles of the CCU are as below.

- **Serve as secretariat** to the climate change institutions i.e. Steering Committee, Planning Committee and Ward Committee;
- **Provide analytical support on climate change** – for the various department, agencies, and Local Government. **Provide technical assistance** – based on needs identified by County Government.
- **Establish and maintain a county registry** – for both mitigation and adaptation actions.
- coordinate the mainstreaming of the climate change action plan and other climate change statutory functions and mandates into sectorial strategies for implementation;
- **Serve as the county knowledge and information management Centre** – for collating, verify, refining, and disseminating knowledge and information on climate change.
- **regularly monitor and review** the performance of the integrated climate change functions through sectorial mandates;
- **Coordinate implementation of the gender and intergenerational plan** – at the County and Local levels.
- **Coordinate actions related to climate finance**.
- put in place and implement mechanisms for sustainability in performance of sectorial mandates;
- **report annually to the designated CECM** on the status and report on progress of implementation of climate change actions and all assigned climate change duties and functions.

Additionally, the CCU is to work in collaboration with other agencies at the Local, County and national levels to:

- Identify **low carbon development strategies** and coordinate related MRV;
- Develop strategies and coordinate actions for **building resilience to climate change** and enhancing adaptive capacity; and
- Optimize the County's opportunities to **mobilize climate finance.**

The CCU is delivering on these roles, including the establishment of a pilot registry, developing and launching the County Climate Change Resource Centre, and providing analytical support; but much work remains and will be supported by the enabling actions set out in Section 4.1.

The CCU will establish an inter-county platform to improve its climate change coordination function. This platform will include key players in the climate change response, including County sector department, national agencies, private sector, civil society, academia, and representatives of vulnerable and marginalized groups (which could include women, youth, and minority and marginalized communities). The members of this platform will assist the CCU to access required information, mainstream climate change in plans and policies, guide the actions of the county departmental sectors, monitor progress on implementing the Climate Change Act, 2016, and report on the implementation of County Climate Change Action Plan. CCU will report quarterly to CECM for the time being in charge of Climate Change who will then be reporting annually, at the end of every financial year, to the County Assembly on progress achieved on the implementation of climate change actions. A copy of the report will be sent to the National Climate Change Directorate, which is responsible for compiling reports and submitting a summary report to the Cabinet Secretary and the National Climate Change Council.

4.2.2. County Climate Change Planning Committee

In line with the County Climate Change Fund Act, 2021, the county climate change planning committee shall ensure need based allocation of the moneys available in the fund with regard to the projects received from the Ward planning committees. The committee shall also provide linkages between the county executive committee and the county assembly with regard to the Climate Change Fund. The Planning committee is responsible for evaluation of project proposals from ward committees through CCU to ensure that the projects to be implemented are socially, environmentally and economically viable.

4.3. IMPLEMENTATION MATRIX

Table 9: Implementation Matrix

Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Area/Communities groups	Time-frame	Source of Funds	Indicative Budget (KES million)					
							Total	23/24	24/25	25/26	26/27	27/28
Hazard: Prolonged dry spell **Impact**: Water scarcity, crop failure, loss of biodiversity; Reduced pasture;Increased incidents of invasive species, vectors, pests anddiseases; human-wildlife conflict **Strategic objective**; Reducerisks to communities and infrastructures resulting from prolonged dry spell **OUT COME**: Enhanced climate- resilience of the vulnerable members of society												
Strengthening climate-resilience of the vulnerable members of society by: 1. Climate proofing of the existing water harvesting and storage through: a) Solarization of the borehole; b) Rehabilitation of at water pans/dams/pond..	**The climate-resilience of the vulnerable members of society enhanced by:** Existing water harvesting and storage infrastructures Climate proofed through: a) Solarized borehole; b) Rehabilitated water ponds/pans/dams	***Adaptation*** ✓ Climate proofed of existing water harvesting and storage infrastructure constructed; ✓ No. of borehole Solarized; ✓ No. of water ponds/pans/dams Rehabilitated	County Government, CDMU, KMD, Water Resources Authority (WRA), WRUAs, WCCPC, community groups, civil society, private sector.	County wide (**all wards**) targeting women, youths, IPs, PWD and informal settlement	2023 - 2027	GoK / CGTN /DPs/FLLoCA	**270**	70	70	70	30	30
2. Rehabilitation and protection of the catchment areas (springs, wetlands and riparian).	Water catchment areas protected and rehabilited.	✓ Ha. of catchment areas protected and rehabilited.										
3. Construction of ground/surface/rain water harvesting and storage infrastructures through: a) Drilling and equipping of borehole; b) Enhancing roof catchments. c) Water pans/dams/ponds	a) Drilled and equipped boreholes; b) Enhanced roof catchments. c) Water pans/dams/ponds constructed.	✓ No. of boreholes Drilled and equipped; ✓ No. of roof catchments established.										
4. Promote adoption of climate smart agriculture through: a) Conservation Agriculture;	a) Conservation Agriculture promoted;	✓ No. of Conservation Agriculture practices promoted;										

Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Area/Communities groups	Time-frame	Source of Funds	Indicative Budget (KES million)					
							Total	23/24	24/25	25/26	26/27	27/28
b) Efficient Irrigation farming; c) Regenerative agriculture; and d) Crop diversification	b) Efficient Irrigation farming promoted; c) Regenerative agriculture promoted; and d) Crop diversification promoted.	✓ Ha. Under Efficient Irrigation farming promoted; ✓ No. of households adopted regenerative agriculture practices; and ✓ No. of farmers adopted Crop diversification.										
5. Promote climate adaptive livestock management practices through: a) Climate Adaptive breeds; b) Pasture/fodder/feeds production, storage and conservation; and c) Livestock housing.	Climate Adaptive breeds promoted; Climate adaptive Pasture/fodder/feeds production, storage and conservation promoted; and Climate adaptive Livestock housing promoted.	✓ No. of Climate Adaptive breeds promoted; ✓ No. of Climate adaptive ✓ No. of Pasture/fodder/feeds production, storage and conservation promoted; and ✓ No. of Climate adaptive Livestock housing promoted.										
6. Promote nature based	Nature based solutions promoted	✓ No. of nature based solutions promoted										
7. Updating and operationalization of the (CCIS);	CCIS updated and operationalized	✓ No. of CCIS updated and operationalized										
8. Enhance early warning systems;	Early warning systems strengthened	✓ No of early warning systems strengthened										
9. Timely dissemination of climate information	Climate information Timely disseminated to farmers/communities/stake holders.	✓ No. of farmers/communities/stakeholders receiving timely climate information increased.										
10. Formulation, enactment and Enforcement of relevant environmental laws.	Relevant environmental laws formulated, enacted and Enforced.	✓ No. of relevant environmental laws formulated, enacted and Enforced.										
11. Capacity building of farmers/community on efficient utilization of natural resources	Farmers/communities Capacity build of on efficient utilization of	✓ No. of farmers/communities Capacity build of on efficient utilization of natural resources.										

Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Area/Communities groups	Time-frame	Source of Funds	Indicative Budget (KES million)					
							Total	23/24	24/25	25/26	26/27	27/28
	natural resources.											
12. Promotion of green/clean/alternative energy sources	Green/clean/alternative energy sources promoted	✓ No. of green/clean/alternative energy sources promoted										
13. Capacity building of the farmers/community/stakeholders	Farmers/communities/stakeholders Capacity build	✓ No. of Farmers/communities/stakeholders Capacity build										
Hazard: Floods **Impact**: Destructions of crops, human settlement/infrastructures, livestock, out- break of vector and water borne diseases, death of livestock, **Strategic objective**: Reduce risks to communities and infrastructure resulting from floods **Outcome:** Reduced risks to communities and infrastructure from floods												
Improve the ability of people to cope with, and for the infrastructure to withstand floods by: a) Strengthening of early warning systems; b) Construction of Flood control structures c) Rehabilitation of water ponds/pans/dams; d) Establishment of Dam/pan Safety Control System; e) Enhance access to clean and safe water through pipeline extension and water treatment f)Strengthen CIS through increasing number of recipients of CIS; g) Capacity building of the community including Wruas on floods control/response measures;	People better able to cope with drought because of: a) Strengthened early warning systems; b) Flood control structures Constructed c) Ponds/pans/dams rehabilitated; d) Dam/pan Safety Control System established; e) Enhanced access clean and safe water through pipeline extension and water treatment f) Increased recipients of CIS; g) Communities/farmers capacity build; h) Flood control structures	*Adaptation* ✓ Number of early warning systems ✓ No. of flood control structures Constructed ✓ No. of Ponds/pans/dams rehabilitated; ✓ No. of Dam/pan with Safety Control System; ✓ Communities/farmers capacity build; ✓ Km. of pipeline extensions; ✓ No. of intake treatment; ✓ Number of recipients accessing CIS; ✓ No. of flood control structures Constructed; ✓ No. of early warning systems established; ✓ No. of Nature-based solutions	County Government, CDMU, KMD, Water Resources Authority (WRA), WRUAs, WCCPC, community groups, civil society, private sector. All sectors identify actions to realize the strategic	Marginalized communities; Women and children along Sabwani and Nzoia basins and within informal settlement such as Matisi, Kipsongo, Shimo la tewa, Tuwan and Shanti that experience frequent	2023 - 2027	GoK / CGTN /DPs/FLLoCA	**180**	50	50	50	15	15

Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Area/Communities groups	Time- frame	Source of Funds	Indicative Budget (KES million)					
							Total	23/24	24/25	25/26	26/27	27/28
h) Construction of flood control structures; i) Promote fish farming; j) Promote regenerative agricultural practices; k) Promotion of nature-based solutions; l) Mapping of flood prone/hotspots areas m) Proper integrated waste management to minimize clogging of drainage systems; n) Strengthen coordination and delivery of disaster management response through: ➢ Enactment of Disaster Risk Management Bill; ➢ Operationalization of the County Disaster Risk Management Unit; ➢ Establish and Operationalization of DRMF.	Constructed; i) Establishment of early warning systems; j) Capacity building of the community including Wruas on floods control/response measures; k) Nature-based solutions promoted; l) Coordination and delivery of disaster management response strengthened through: ➢ Enactment of Disaster Risk Management Bill; ➢ Operationalization of the County Disaster Risk Management Unit; ➢ Establish and Operationalization of DRMF.	promoted; ✓ DRM Bill reviewed, enacted and operationalized; and ✓ No. of DRM Units operationalized.	objective	flash floods								
Hazard: Increasing incidents of vectors, invasive species, pest and diseases **Impacts:** Cause declining of crop yields; Declining of livestock productivity; Death of livestock; Human malnutrition, morbidity and mortality **Strategic objective:** Reduce risks to communities livelihoods resulting from incidents of vectors, invasive species and diseases **Outcome** Enhanced invasive/vector/disease/pest surveillance and control measure												

Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Area/Communities groups	Time-frame	Source of Funds	Indicative Budget (KES million)					
							Total	23/24	24/25	25/26	26/27	27/28
Enhance invasive/vector/disease/pest surveillance and control measures. Enhance vet services Develop disease and pest contingency plan a) Promotion of routine vaccination programs b) Establishment of community agro-vet c) Integrated disease and pest management including organic and biological interventions. d) Control livestock trasnboundary; e) Enhance surveillance of invasive species; f) Mechanical control of invasive species and promoting their utilization; g) Promote regenerative agricultural practices h) Early warning systems. i) Strengthen capacity on livelihood diversification j) Promotion of resilient/adaptive livestock/crops species to pests and diseases k) Promote Crops & Livestock Insurance l) Equipping of the health facilities	Farmers groups Capacity building on disease and pest surveillance and control; a) Enhanced vet services b) Developed disease contingency plan c) Enhanced routine vaccination programs d) community agro-vet Established; e) Implemented Integrated disease and pest management including organic and biological interventions. f) trasnboundary livestock movement Controlled; g) Enhanced surveillance of invasive species; h) Mechanical control of invasive species and promoting their utilization; i) Established early warning systems; j) Community livelihood Strengthened and diversified.	Adaptation ✓ No. of Farmers groups Capacity build on disease and pest surveillance and control; ✓ Enhanced vet services ✓ Developed disease contingency plan ✓ Enhanced routine vaccination programs ✓ community agro-vet Established; ✓ Implemented Integrated disease and pest management including organic and biological interventions. ✓ trasnboundary livestock movement Controlled; ✓ Enhanced surveillance of invasive species; ✓ Mechanical control of	County Government, CDRMU, KMD, Water Resources Authority (WRA), WRUAs, WCCPC, community groups, civil society, private sector.	Cherangany/ Suwerwa, Motosiet, Chepchoina, Sitatunga, Keiyo, Kaplamai, Sinyereri, Hospital, Kiminini and Saboti among other wards	2023 - 2027	GoK / CGTN /DPs/FLLoCA	**118**	36	36	36	5	5

Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Area/Communities groups	Time-frame	Source of Funds	Indicative Budget (KES million)					
							Total	23/24	24/25	25/26	26/27	27/28
Hazard: Landslides **Impact:** Leads to loss of livelihoods; Loss of lives; Degradation of arable land; Destruction of properties; Displacement of human beings; **Strategic Objective:** Reduce risks to communities livelihoods resulting from landslides **Outcome:** Reduced risks to communities livelihoods resulting from landslides												
❖ Reduce risks to communities livelihoods resulting from landslides through: a) Promotion of landscape rehabilitation of the degraded sites; b) Sustainable Land Management practices; c) Promote conservative agriculture; d) Agroforestry practices	❖ Reduce risks to communities livelihoods resulting from landslides through: a) landscape rehabilitated; b) Gabbions/terraces/conservation structures constructed; c) Fruit trees grown. d) Growing of environmentally and social friendly indigenous trees species; e) Land tillage controlled;	✓ Ha of landscape rehabilitated; ✓ Km Gabbions/terraces/conservation structures constructed; ✓ No. of Fruit trees grown. ✓ No. of Growing of environmentally and social friendly indigenous trees species; ✓ Acreage of Land under controlled tillage;	County Government, CDRMU, KMD, Water Resources Authority (WRA), WRUAs, WCCPC, community groups, civil society, private sector	Ares of Kwanza, Keiyo Saboti, Machewa, Matumbei, Kapomboi, Sikhendu and Endebess wards	2023 - 2027	GoK / CGTN /DPs/FLLoCA	**80**	20	20	20	10	10
Hazard: Hailstorm and Windstorm **Impacts:** Cause declining of crop yields; Declining of livestock productivity; Death of the livestock; malnutrition; Pre -harvest losses; destruction of food crop/pasture/vegetation. **Strategic objective:** Reduce risks to communities livelihoods resulting from hail and wind storm **Outcome:** Reduced risks to communities livelihoods resulting from hail and wind storm												
a) Promotion of climate smart agroforestry practice; b) Community boundary tree growing; c) Promote utilization of wind energy;	a) climate smart agroforestry practice promoted; b) Community boundary trees grown; c) Promote wind energy	✓ No. climate smart agroforestry practice promoted; ✓ Acreage under Community boundary trees growing; ✓ No. of wind energy utilization; ✓ No. of public infrastructures	County Government, CDRMU, KMD, Water Resources	Kwanza, Saboti, Kiminini and Cherangany sub-counties	2023 - 2027	GoK / CGTN /DPs/FLLoCA	**60**	20	20	20	-	-

Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Area/Communities groups	Time-frame	Source of Funds	Indicative Budget (KES million)					
							Total	23/24	24/25	25/26	26/27	27/28
d) Afforestation and forestation e) Agroforestry (boundary tree growing) f) Awareness creation g) Early warning systems	utilization; d) Climate proofing of public infrastructures (roads and houses); e) Public sensitized on adaptation measures	(roads and houses) Climate proofed; ✓ No. of Public sensitized on adaptation measures	Authority (WRA), WRUAs, WCCPC, community groups, civil society, private sector									
		✓					**708**	**196**	**196**	**196**	**60**	**60**

Table 10: Action Plan for the Climate Change Resilience Investment (CCRI) Grant for the FY 2023-2024

Climate Change Resilience Investment Grant									**136,000,000**
Summary Sector Distribution								**Percentage**	**Amount**
Environment								**30%**	**40,800,000**
Agriculture								**25%**	**34,000,000**
Water								**35%**	**47,600,000**
Others: Health and Public works								**10%**	**13,600,000**
Strategic Objective	**Activities**	**Outputs**	**Key performance indicators**	**Time frame**				**Responsible person**	**Budget (cash)**
				Q1	**Q2**	**Q3**	**Q4**		
Climate Change Resilience Investment Grant									**136,000,000**
Summary Sector Distribution								**Percentage**	**Amount**
Environment								**30%**	**40,800,000**
Agriculture								**25%**	**34,000,000**
Water								**35%**	**47,600,000**
Others:	Health and Public works							**10%**	**13,600,000**
Climate Change Mitigation, Adaptation, resilience building and institutional strengthening									
	Environment Sector								**40,800,000**
	Climate change Mitigation actions								**29,000,000**
Enhance carbon sinks	Rehabilitation of the Kitale urban forest	Rehabilitation of the urban forest	Ha. of urban forest rehabilitated					Chief Officer	3,000,000
	Establishment of the arboretum	arboretum established	Ha. of arboretum					Chief Officer	5,000,000

	Rehabilitation of degraded landscapes	Hectares of degraded area rehabilitated	No. of ha rehabilitated					Chief Officer	5,000,000
	River bank protection	Riverbank protected	Km of riverbank protected					Chief Officer	4,000,000
Enhance emission reduction	Promotion of green energy	Procurement of charcoal Jiko-Koa	Number of Jiko Koa procured (Vulnerable groups)					Chief Officer	4,000,000
		Solar unit for lighting promoted	No. of solar unit promoted					Chief Officer	4,000,000
		Procurement and installation of inserts	Number of Insert procured and installed					Chief Officer	4,000,000
Climate change adaptation and resilience building actions	**Climate Change Adaptation actions and Resilience building**								**11,800,000**
	Promotion of Nature based enterprises	Community tree nurseries supported	No. of community tree nurseries supported					Chief Officer	2,300,000
		Fruit tree growing supported	No. of fruit trees grown					Chief Officer	5,500,000
	Promotion of climate smart agroforestry practices	Agroforestry practices promoted	No. of community adopting agroforestry practices					Chief Officer	4,000,000
Promotion of climate adaptive agricultural practices	**Agriculture sector**								
	Climate Change Adaptation actions and Resilience building								**34,000,000**
	Training of Community and staff on Climate smart Agriculture	Community and staff trained on climate smart agriculture	Number of Community and staff trained on climate smart agriculture (25 wards)					Chief Officer	4000000
	Climate Smart Solar Irrigation Units	Solar irrigation units acquired	Number of solar irrigation units acquired (Demosites)					Chief Officer	6000000

	Integrating fruit trees in Farming Systems	Fruit trees integrated in the Farming Systems	Number of Fruit trees integrated in the Farming Systems					Chief officer	4000000
	Conservation Agriculture	Improved farming practices on demo sites	Number of demo sites on conservation agriculture					Chief Officer	7000000
	Farmer Trainings on fruit establishment/management	Farmers trained on fruit establishment/management	Number of Farmers trained on fruit establishment/management (In 5 sub counties)					Chief Officer	3000000
	Promotion the beehives to the farmers	Procurement and supply of the beehives to the farmers	Number of beehives procured					Chief Officer	5000000
	Establishment of forage bulking sites	Forage bulking sites established	Acrearage planted with forage material					Chief Officer	5000000
	Water Sector								**47,600,000**
	Climate Change Adaptation actions and Resilience building								**47,600,000**
Promotion climate compliant water infrastructures	Borehole equipping with solar hybrid pump and plastic tank installation	Borehole with solar hybrid pump and plastic tank installed	Number of boreholes with solar hybrid pump and plastic tank installed					Chief Officer	15,000,000
	Catchment protection, rehabilitation of intake and pipeline	Catchment protected; Intake and pipeline rehabilitated	Number of intake and kilometers of pipeline rehabilitated and laid					Chief Officer	5,000,000
	Spring construction and protection	Springs constructed and protected	Number of springs protected					Chief Officer	2,600,000
	Flood control infrastructures (dykes, pans and trenches)	Flood control structures constructed	No. of flood control structures constructed					Chief Officer	10,000,000
	Water harvesting (roof catchment, pans, ground/raised tanks)	Water harvesting structures constructed	No. of water harvesting structures constructed					Chief Officer	15,000,000

	Other Sectors								**13,600,000**
Climate proofing infrastructures	Construction of drainage systems and Gabions	Drainage systems constructed	Km of drainage system constructed					Chief Officer	5,000,000
Control vectors and livestock/crop pest & diseases	Vector born diseases control mechanism	Vector born diseases controlled	No. of vector born disease control mechanisms					Chief Officer	2,000,000
	Enhance livestock vaccination	Vaccination programmes enhanced	No. of vaccination programmes promoted					Chief Officer	3,000,000
	Control of livestock pest	Livestock pest control mechanism enhanced	No. of Livestock pest control mechanism enhanced					Chief Officer	3,600,000

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ANNEXES