COUNTY GOVERNMENT OF KAJIADO

P.O BOX 11-01100 KAJIADO COUNTY.

Kajiado County Climate Change Action plan,

2023 - 2027

DEPARTMENT OF ENVIRONMENT, NATURAL RESOURCES AND CLIMATE CHANGE.

25TH MAY 2023

FORWARD

I am pleased to present the Kajiado County Climate Change Action Plan (CCAP), the culmination of our collective efforts in undertaking the Participatory Climate Risk Assessment (PCRA) process. As the Governor of Kajiado County, I am proud to witness the outcomes of this comprehensive assessment, which has provided us with invaluable insights into the climate risks facing our county and guided us in developing a robust plan for action. The PCRA process has been a truly collaborative endeavor, bringing together experts, stakeholders, communities, and government agencies to collectively analyze and understand the climate risks and vulnerabilities in our county. Through extensive consultations, community engagement, and the sharing of knowledge, we have gained a deeper understanding of the challenges we face and the opportunities for building resilience and sustainability.

The Kajiado County Climate Change Action Plan represents our commitment to addressing these climate risks head-on. It serves as a roadmap that will guide us in adapting to the impacts of climate change, reducing our greenhouse gas emissions, and creating a more sustainable and resilient future for our county. This plan is rooted in the aspirations and needs of our communities. It incorporates their valuable input and ensures that their voices are heard and considered. By actively involving our citizens in the PCRA process, we have empowered them to be partners in shaping the future of Kajiado County and responding effectively to the challenges posed by climate change.

The CCAP encompasses a wide range of strategies and actions that align with our vision of a climate-resilient and sustainable county. It aims to enhance our adaptive capacity, promote sustainable land and water management practices, foster clean and renewable energy solutions, and strengthen our disaster preparedness and response mechanisms. Through these measures, we seek to safeguard our environment, protect our communities, and promote sustainable socio-economic development.

I extend my sincere gratitude to all the individuals and organizations who have contributed their time, expertise, and resources to the PCRA process and the development of the Kajiado County Climate Change Action Plan. Your commitment to this endeavor is commendable, and I applaud your dedication to the well-being of our county and its residents.

I urge all stakeholders, including government agencies, civil society organizations, private sector entities, and community members, to actively participate in the implementation of the CCCAP. It is through our collective actions and collaboration that we can truly make a difference in building a climate-resilient Kajiado County.

I am confident that the Kajiado County Climate Change Action Plan will serve as a catalyst for positive change. By embracing this plan and working together, we can create a future that is sustainable, prosperous, and resilient for generations to come.

HE Joseph Ole Lenku,

Governor Kajiado County

ACKNOLEDGEMENT

I would like to acknowledge and commend the Kajiado County Climate Change Action Plan, which aligns seamlessly with the visionary goals set forth by the governor. This plan encompasses the governor's vision of implementing modulated pastoralism, fostering a climate-proofed environment, and creating livable towns within Kajiado County.

First and foremost, I appreciate the emphasis placed on modulated pastoralism as an integral component of the action plan. Recognizing the importance of sustainable land use practices and the preservation of traditional livelihoods, this approach ensures a harmonious coexistence between the needs of the local communities and the conservation of natural resources. By promoting responsible grazing management, supporting the establishment of grazing reserves, and implementing strategies that safeguard rangelands, the action plan demonstrates a forward-thinking approach to sustainable pastoralism.

Furthermore, I would like to acknowledge the commitment of the Kajiado County Climate Change Action Plan to creating a climate-proofed environment. The plan's recognition of the threats posed by climate change and its proactive measures to mitigate and adapt to these challenges is commendable. By prioritizing climate resilience, investing in climate-smart agriculture, promoting afforestation and reforestation initiatives, and enhancing water resource management, the action plan aims to build a resilient county capable of withstanding climate impacts and protecting the well-being of its residents. The focus on creating livable towns within Kajiado County is also a noteworthy aspect of the action plan. By integrating sustainable urban development strategies, promoting green infrastructure, enhancing waste management systems, and improving access to essential services, the plan aims to create vibrant and inclusive towns that prioritize the well-being and quality of life of their inhabitants. This holistic approach to urban planning contributes to the overall vision of a thriving and sustainable county.

In conclusion, I extend my sincere appreciation to the Kajiado County Climate Change Action Plan for embracing the governor's visionary goals of modulated pastoralism, a climate-proofed environment, and livable towns. This comprehensive plan demonstrates a commitment to sustainable development, resilience, and the well-being of both present and future generations. I applaud the collective efforts of all involved in shaping this action plan and encourage its successful implementation for the benefit of Kajiado County and its residents.

Dr. Leina Mpoke

CECM- Water Services, Environment, Natural Resources and Climate Change.

EXECUTIVE SUMMARY

The Kajiado County Climate Change Action Plan (CCCAP) is a comprehensive and strategic roadmap that outlines the county's vision, objectives, and actions to address the challenges and opportunities posed by climate change. Developed through a participatory process, the CCCAP is designed to guide the county government, stakeholders, and communities in adapting to climate change, reducing greenhouse gas emissions, and promoting sustainable development.

The CCAP begins by providing a thorough analysis of the climate risks and vulnerabilities specific to Kajiado County. It identifies key sectors, communities, and ecosystems that are most at risk from climate change impacts. Through this assessment, the plan lays the foundation for targeted and effective interventions that address the county's unique challenges. The plan emphasizes the importance of enhancing adaptive capacity to build resilience in the face of climate change. It outlines strategies and measures to promote sustainable land management practices, protect and restore ecosystems, and improve water resource management. By integrating climate-smart practices into agriculture, livestock management, and rangeland conservation, the CCCAP aims to enhance the resilience of communities and safeguard their livelihoods.

Mitigation strategies form a crucial component of the CCCAP, aiming to reduce greenhouse gas emissions and contribute to global efforts to mitigate climate change. The plan promotes the transition to clean and renewable energy sources, energy efficiency, and sustainable transportation options. It also encourages sustainable waste management practices and advocates for the reduction of emissions from industrial processes. Mainstreaming climate change considerations into development planning is a key objective of the CCCAP. The plan emphasizes the integration of climate resilience and sustainability principles into sectoral policies, land-use planning, and infrastructure development. By incorporating climate change adaptation and mitigation measures into county planning processes, Kajiado aims to ensure that climate change is a cross-cutting priority in all aspects of governance and decision-making.

The CCCAP recognizes the importance of stakeholder engagement and collaboration. It encourages partnerships between the county government, communities, civil society organizations, and the private sector to foster knowledge sharing, capacity building, and participatory decision-making. The plan emphasizes the role of community participation in

shaping climate change responses and acknowledges the value of indigenous knowledge in building resilience. To ensure effective implementation and progress tracking, the CCCAP establishes a robust monitoring, evaluation, and review mechanism. It sets indicators, data collection systems, and evaluation frameworks to measure the outcomes and impacts of climate actions. Regular reviews will ensure that the plan remains adaptive and responsive to evolving climate risks and emerging opportunities.

The Kajiado County Climate Change Action Plan sets forth a bold vision for a sustainable, resilient, and low-carbon future. By implementing the strategies and actions outlined in this plan, Kajiado County aims to protect its communities, preserve its ecosystems, and contribute to global efforts to address climate change. The successful execution of the CCCAP relies on the collective efforts and collaboration of all stakeholders, and it is through their commitment that Kajiado County can navigate the challenges of climate change and achieve a prosperous and sustainable future.

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Definition of Terms

Climate Change	Change in the climate system that is caused by significant changes in the concentration of greenhouse gases due to human activities, and which is in addition to the natural Climate Change that has been observed during a considerable period.
Adaptation	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
Adaptive capacity	Ability of systems, institutions, humans, and other organisms to adjust to potential damage, take advantage of opportunities, or respond to consequences.
Global warming	Observed or projected gradual increase in global surface temperature. It is one of the consequences of Climate Change.
Greenhouse gases	Gases that absorb and emit radiant energy within the thermal infrared range. The main GHGs measured in a GHG inventory are, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), per-fluorocarbons (PFCs), hydro-fluorocarbons (HFCs), sculpture hexafluoride (SF6) and nitrogen tri-fluoride (NF3).
Mitigation	Human interventions to prevent or slow down atmospheric GHG concentrations by limiting current or future emissions, and/or enhancing potential sinks for greenhouse gases.
Resilience	Capacity of social, economic and environmental systems to cope with a hazardous event, trend, or disturbance.
Vulnerability	Propensity or predisposition to be adversely affected. It encompasses sensitivity or susceptibility to harm, and lack of capacity to cope and adapt.

List of Acronyms

ADSW	Anglican Development Services Western
CCAP	Climate Change Action Plan
CCF	County Climate Change Fund
CFA	Community Forest Association
CIDP	County Integrated Development Plan
CSO	Civil Society Organizations
ECDE	Early Childhood Development Education
GIS	Geographical Information Systems
KCB	Kenya Commercial Bank
KFS	Kenya Forest Service
KIHBS	Kenya Integrated Household Budget Survey
DNMP	Division of National Malaria Programme
KMD	Kenya Meteorological Department
KWS	Kenya Wildlife Services
MD	Managing Director
NEMA	National Environment Management Authority
PCRA	Participatory Climate Risk Assessment
PWD	Persons with Disability
TVET	Technical and Vocational Training Colleges
WG	Working Group
WRA	Water Resources Authority

CHAPTER 1. INTRODUCTION

1.1 Background and Context

Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases. As greenhouse gas emissions blanket the Earth, they trap the sun's heat. This leads to global warming and climate change. The world is now warming faster than at any point in recorded history. Warmer temperatures over time are changing weather patterns and disrupting the usual balance of nature. This poses many risks to human beings and all other forms of life on Earth.

In the Kenyan context, there is notable evidence of climate change including: a shift in agricultural seasons due to erratic rainfall; low agricultural production due to erratic weather patterns, prolonged drought that has led to death of animals, crops and people; increased spread of vector-borne diseases and pests such as malaria and armyworms respectively; increased acidity of agricultural soils and loss of biodiversity; and emergence of floods that come after the prolonged drought. These effects have resulted in famine, increased cases of malaria and waterborne diseases, food insecurity, increasing damage to infrastructure causing subsequent deaths all forms of live on earth.

Climate change is a global problem which demands global responses that seek to establish permanent solutions. The international response to climate change is founded upon the United Nations Framework Convention on Climate Change (UNFCCC) that entered into force in 1994. The objective of the UNFCCC as spelt in Article 2, is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate systems. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

The Kyoto Protocol, a greenhouse gas emissions reduction treaty linked to the UNFCCC, was adopted by the Conference of the Parties (COP) in 1997 and entered into force in 2005. The Kyoto Protocol is an international agreement that commits developed countries and countries in transition to market economics to reduce their overall GHG emissions. The Kyoto Protocol created the Clean Development Mechanism (CDM) under which developing country projects that reduced emissions and contributed to sustainable development earned credits that could be sold to countries or companies with a commitment to reduce emissions. More than 1.5 billion tonnes of carbon dioxide were avoided through the CDM, and US$ 9.5-13.5 billion in direct benefits went to host counties from the sale of credits as of 2012.63 The first commitment period started in 2008 and ended in 2012. Parties to the Kyoto Protocol adopted an amendment in 2012, which has yet to enter into force. The Paris Agreement entered into force internationally on 4th November 2016, thirty days after 5th October 2016, the date on which the threshold for entry into force was achieved. As of May 2018, 178 Parties had ratified the Convention, surpassing the threshold for entry of at least 55 Parties to the Convention accounting in total for at least an estimated 55% of the total global Green House Gas (GHG) emissions. Kenya signed the UNFCCC on 12th June 1992 and ratified the Convention on 30th August 1994. Kenya ratified the Kyoto Protocol on 25th February 2005. The Paris Agreement was ratified by Kenya on 26th December 2016 under section 9(1) of the Treaty Making and Ratification Act, and entered into force for Kenya on 27th January 2017. Kenya's NDC sets out the country's actions to contribute to achieving the global goal set out in the Paris Agreement. Additionally, Kenya through the Ministry of Environment and Forestry, developed the Kenya Climate Change Action Plan 2021-2016, as a roadmap to climate changes responses implementation.

Kajiado County's natural resources are an invaluable asset, with its diverse ecosystems supporting a wide range of flora and fauna. The county is home to wildlife species such as elephants, giraffes, zebras, and numerous bird species, attracting nature enthusiasts and conservationists from around the world. However, like many regions across the globe, Kajiado County faces the challenges posed by climate change. The impacts of climate change, including droughts, erratic rainfall patterns, land degradation, and rising temperatures, have profound implications for the county's socio-economic development, natural resources, and the well-being of its communities. Recognizing the urgency of addressing climate change and the need to build resilience, the County Government of Kajiado has taken proactive steps to develop

comprehensive strategies and action plans.

The Kajiado County Government has joined the global movement of Climate Change mitigation, adaption and resilience. As such, the County Government has mainstreamed climate change responses in the County Integrated Development Plan (CIDP) 2023 -2028. Additionally, the county developed the legal framework to implement Climate Change mitigation, adaptation and resilience. This far, the county has developed and adopted The Kajiado County Climate Change Act 2021 and The Kajiado County Climate Change Finance Regulations 2021. To further guide the implementation of climate change actions for the next five (5) years, the County has developed The Kajiado County Climate Change Action Plan 2023-2028.

1.1.1 Purpose of the CCCAP 2023-2028

The County Climate Change Action Plan (CCCAP) 2023-2028 will provide an informed platform for building climate change mitigation, adaptation and resilience Climate Change Action Plan (CCAP) serves as a roadmap to address climate risks, enhance adaptive capacity, promote sustainable development, and ensure a prosperous and resilient future for the county. With its commitment to sustainable development, community engagement, and innovative approaches, Kajiado County stands poised to navigate the challenges of a rapidly changing world while preserving its cultural heritage, protecting its natural treasures, and improving the quality of life for its residents. Kajiado County Climate Change Action Plan represents a transformative and forward-thinking strategy designed to address the challenges posed by climate change and promote sustainable development in our county. This comprehensive plan is the culmination of extensive research, stakeholder engagement, and participatory processes, aimed at understanding the unique climate risks faced by Kajiado County and formulating effective strategies to mitigate and adapt to these risks. Climate change presents significant threats to our county, impacting various sectors, including agriculture, water resources, ecosystems, infrastructure, and human settlements. The increasing frequency and intensity of droughts, erratic rainfall patterns, land degradation, and heatwaves directly affect the well-being and livelihoods of our communities. It is imperative that we take proactive measures to build resilience and ensure a sustainable future for our county. The County Climate Change Action Plan is rooted in the principles of sustainability, inclusivity, and community-driven approaches. It acknowledges the importance of local knowledge, expertise, and engagement in developing effective strategies. Through the

participatory processes, community members, governmental agencies, non-governmental organizations, and technical experts have come together to collectively address climate risks and envision a resilient future for Kajiado County.

The Action Plan encompasses a wide range of goals, objectives, strategies, and actions that aim to tackle the complex challenges of climate change. It seeks to build climate resilience, mitigate greenhouse gas emissions, promote sustainable water management, and strengthen institutional capacity and governance. By addressing these key areas, the plan provides a comprehensive framework for guiding our county towards a sustainable and climate-resilient future.

This plan recognizes the interdependencies among different sectors and the need for integrated approaches. It highlights the importance of sustainable agricultural practices, efficient water management, renewable energy adoption, ecosystem conservation, and climate-proofed infrastructure. These measures aim to not only mitigate climate change impacts but also contribute to the overall well-being and prosperity of our communities. The successful implementation of the Kajiado County Climate Change Action Plan relies on collaboration, cooperation, and partnerships among all stakeholders. It requires the active participation and commitment of government agencies, community leaders, civil society organizations, private sector entities, and development partners. By working together, we can leverage our collective strengths, knowledge, and resources to effectively address climate risks and create a sustainable future for our county.

As we embark on this transformative journey, the Kajiado County Climate Change Action Plan provides a roadmap for action, guiding us towards a future where our communities are resilient, our ecosystems are protected, and our economy thrives in a sustainable manner. It is a testament to our commitment to safeguarding the well-being of current and future generations, recognizing that climate change is not a distant challenge but an urgent priority that requires immediate attention.

1.1.1.1. Guiding Principles

Responsiveness; Responding to actual adaptation and mitigation needs in Kenya through taking of measures that reduce the adverse effects of climate change and preventing or minimizing the causes of climate change.

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

Consultation and cooperation; Implementing actions through consultation and cooperation between national and county governments and in consultation and cooperation with civil society and private sector.

Fairness; Ensuring that climate actions do not create competitive disadvantage for the Kenyan private sector, relative to its trading partners.

1.2 Climatic Conditions

Kajiado County experiences long rains between March and May every year with short rains falling between October and December. The rainfall patterns varies from place to place depending on the converging –ascending air flow, air temperature, moisture bearing winds and mountain ranges. As at the year 2022, the average highest rainfall recorded was 389.9mm around Ngong hills and the slopes of Mt. Kilimanjaro. The lowest was 2.3mm recorded around Amboseli basin and the western parts of the county. This shows a negative trend in the average yearly rainfall received owing to the effects of climate change.

Kajiado County has a cool dry climate with mean annual temperatures. Over the last seven (7) years, the mean annual temperature was 38.2°C with the years 2021,2020,2019 and 2017 receiving 29.2°C, 28.6°C, 28.4°C and 28.4°C consecutively. This shows an increasing trend of temperatures recorded over the past years. The highest temperatures of about 34^0C have previously been recorded around Lake Magadi while the lowest of 10^0C in Loitokitok on the eastern slopes of Mt. Kilimanjaro.

1.2 PCRA Process that led to development of CCAP

The PCRA exercise employed a systematic and participatory methodology. In addition, as described in the PCRA guide, Kajiado County PCRA was implemented through 8 main steps that is; Formation of the technical working group; training of the technical working group; mapping of stakeholders; preparation for community engagements; conducting participatory risk assessment at ward level; preparation of ward level risk assessment reports; data analysis and

preparation for county level multi-stakeholder workshop; multi-stakeholder climate change risk assessment workshop and final report writing as detailed in the section below:

a) **Creation of the Technical Working Group:** The technical working group was constituted in November 2022 through appointment by the Chief Officer in Charge of Climate Change. Considerations for appointment to the technical working group comprised of; representation of directors and technical officers in the climate change relevant sectors such as environment, water, agriculture, livestock, lands, public health, citizen participation, ICT & finance, gender and social services. Civil society organizations & Ministries, Departments and Agencies (MDA); committed to create time for the exercise, knowledge, skills and experience relevant to the task among others. In total, the technical working group had 15 members. This technical working group was supported by a wider consultative group which provided advice through the whole process. The Technical working group had a broader membership which included the Ward Climate Change Planning Committees, County Emergency Management Unit, Economic Planning, County Climate Change Steering Committee and County Climate Change Planning Committee, national government agencies, Members of the Civil Society organization, academia and media and communication unit.
b) **Stakeholders' engagement and analysis;** The stakeholders were identified during the PCRA stakeholders mapping and analysis process. The technical working group were divided into 5 groups according to the Sub-counties. Their roles were to Identify the stakeholders in order of their interest and roles in climate change which include climate action and building resilience, those involved in climate action and responses to climate impacts, those with knowledge and expertise relevant to climate adaptation and building resilience and community representatives and those impacted by climate change
c) **Preparation for ward level engagements:** The Climate Change Unit sensitized the citizens on radio of the upcoming climate change risk assessment exercise and mobilized participants with the support of Subcounty Administrator, Ward Administrators, Village Administrators, Chiefs and Citizen Participation officers. Given the big geographic area of the county, the Technical WG adopted a process where the wards were engaged in clusters of 2-3 wards per venue per day considering proximity to each other as well as common climate change challenges. The identified community participants were in

addition mobilized through their respective ward climate change planning committees. Programs, engagement tools and other materials relevant to the community engagements prepared included; Day program, community guiding questions and the note takers feedback forms.

d) **Engagement of Communities at Ward Level on PCRA;** An average of 50 participants were mobilized from the wards in line with the mobilization criteria stated above. The participants mobilized consisted of different livelihoods groups such as Pastoralists, farmers and traders, marginalized groups, youth and PWDs in addition to the members of the Ward Climate Change Planning Committees. Other participants included ward agriculture officers, Sub-county, ward administrators, foresters, citizens participation officer and other technical officers with ward level mandate. In the first session of the community meetings, all the 2-3 wards clustered were jointly taken through an introduction session. The introduction session covered the significance of the PCRA process, overview of climate change trends followed by explanation of the process and its application in the county planning and development cycle. The participants were then segregated into their respective villages clustered according to their similarities whereby they chose among the group a chair and secretary to take notes. The process took one cluster per day and it took the Technical WG 20 working days to cover all the 25 wards. The community engagement meetings started by sketching a climate hazard and community assets map. Thereafter, the climate change risk assessment tools were administered to determine the main hazards, prioritize them, identify vulnerabilities, local response actions and propose adaptation strategies. The output of this process was that the community's identified key climate change risks and hazards and priority response measures.

e) **Data Analysis and Preparations for County Level Participatory Climate Change Risk Assessment:** The data from the wards was summarized into reports and risk maps digitized by the GIS unit capturing the main hazards and prioritized response actions per ward and at the sub county level. This was followed by one-day meeting of technical committee to develop the workshop program and share responsibilities among team members as well as agree on the workshop execution strategy. The County Director Meteorology prepared an overview presentation on historical, current and projected

climate scenarios for the county while the director economic planning prepared presentation on the socio-economic status of the county. The Directors GIS and Climate Change presented the prevalent climate hazards and their geographic distribution in the county. A concept for the workshop was developed which detailed the background of the exercise, objectives, program and list of invitees.

f) **County Level Validation Workshop on Participatory Climate Change Risk Assessment;** The 2-day workshop was held from 22nd to 23rd May 2023 with objective to validate the findings from the wards and have the multi-stakeholders incorporate their views into the Kajiado County PCRA process. The workshop had 50 participants who included the PCRA Task Team, government officers from line departments such as water, agriculture, environment, climate change and public health; representatives of Civil Society Organisations implementing climate change related projects; academia; community representatives among others.

   During the workshop, the participants were introduced to the general overview of the county followed by the current and projected climate change scenarios. This presentation was followed by identification of climate change hazards, Societal, social/political challenges, current and historical climate hazards and trends which was compared to the hazards that had been prioritized by the wards and followed by updating the hazard maps from the wards. The participants prioritized the hazards, response measures as well as drivers of climate change vulnerability. The wards were clustered into sub-counties due to similarity of livelihoods pursued as well as for cross-fertilisation of ideas.

g) **Participatory Climate Risk Assessment Report;** The team then developed a participatory climate risk assessment report through consolidating the data gathered throughout the risk assessment process. The technical expert contracted by the national treasury provided the necessary backstopping and review of the report until final draft was developed leading to development of County Climate Change Action Plan (CCAP).

1.4. Climatic Change Impact

Kajiado County, located in [insert geographical location], is vulnerable to a range of climate change impacts that pose significant challenges to its environment, communities, and socio-economic development. These impacts are a result of global climate change trends combined

with the county's unique geographical and ecological characteristics. Here is a comprehensive overview of climate change impacts specific to Kajiado County:

a) **Droughts and Water Scarcity**:

Kajiado County experiences a semi-arid climate with limited and erratic rainfall patterns. Climate change exacerbates the frequency and severity of droughts in the region, leading to water scarcity and significant challenges for agriculture, livestock rearing, and human livelihoods. Prolonged droughts have a direct impact on the availability of water for domestic use, irrigation, and livestock watering, leading to decreased crop yields, livestock losses, and food insecurity.

b) **Erratic Rainfall Patterns**:

Climate change influences the distribution and intensity of rainfall in Kajiado County. Erratic rainfall patterns, including irregular and unpredictable seasonal rains, pose challenges for agricultural planning and productivity. Farmers rely on rain-fed agriculture, and the changing rainfall patterns can result in crop failures, reduced yields, and limited food production. These impacts have implications for food security, nutrition, and the overall well-being of the population.

c) **Land Degradation and Desertification**:

Kajiado County faces significant challenges related to land degradation and desertification, which are exacerbated by climate change. Soil erosion, deforestation, overgrazing, and unsustainable land management practices contribute to the degradation of land resources. Climate change further intensifies these processes, leading to reduced soil fertility, loss of vegetation cover, and increased vulnerability to droughts. Land degradation and desertification threaten agricultural productivity, grazing resources for livestock, and the resilience of ecosystems.

d) **Heatwaves and Temperature Extremes:**

Rising temperatures associated with climate change result in increased occurrences of heatwaves in Kajiado County. High temperatures have adverse effects on human health, particularly for vulnerable populations, including the elderly and young children. Heatwaves also impact

livestock, leading to reduced productivity, increased stress, and potential livestock losses. Additionally, temperature extremes affect water availability, exacerbate water scarcity issues, and impact the growth and survival of crops and vegetation.

e) Ecosystem Disruption:

Climate change affects the biodiversity and ecosystems in Kajiado County. Changes in temperature and rainfall patterns can lead to shifts in vegetation cover and species distribution. Native plant and animal species may face challenges in adapting to these changes, leading to potential loss of biodiversity. Ecosystem disruptions have cascading effects on ecosystem services, including pollination, nutrient cycling, and water regulation, impacting the overall resilience and functioning of the county's ecosystems.

f) Human Health Risks:

Climate change poses risks to human health in Kajiado County. Increased temperatures and heatwaves can result in heat-related illnesses, such as heatstroke and dehydration. Changes in rainfall patterns and temperature can also influence the transmission of vector-borne diseases like malaria and dengue fever. Water scarcity and poor sanitation resulting from climate change impacts further increase the risk of waterborne diseases. These health impacts require appropriate adaptation measures, public health interventions, and access to healthcare services.

g) Socio-economic Implications:

The climate change impacts in Kajiado County have socio-economic implications for its communities. The majority of the population relies on agriculture and livestock rearing for their livelihoods, making them highly susceptible to climate variability and change. Crop failures, livestock losses, and reduced income opportunities due to climate change can result in increased poverty, food insecurity, and migration. Furthermore, the costs associated with climate change adaptation, disaster response, and infrastructure repairs place a burden on the county's economy.

Addressing the climate change impacts in Kajiado County requires a multi-faceted approach that includes adaptation strategies, sustainable land management practices, water resource management, and community resilience-building initiatives. It is crucial to integrate climate change considerations into development planning, promote sustainable agricultural practices, enhance water storage and conservation mechanisms, and strengthen early warning systems to mitigate the adverse effects of climate change and build a more sustainable and resilient future for the county

1.5 Goal of Kajiado climate change county action plan 2023-2027

The Kajiado County Climate Change Action Plan (CCCAP), 2023-2027, is a 5 -year plan that seeks to enhance the capacity of the county to undertake adaptation, mitigation and resilience actions, and promote low carbon development pathways for sustainability in Kajiado County.

It aims to align the county with the Kenya's development goals as stipulated in the vision 2030 by providing mechanisms to achieve low carbon development in a manner that prioritizes adaptation and mitigation in the different sectors. In addition, Kajiado County Climate Change Action Plan (CCAP) seeks to provide a strategic framework and roadmap for addressing the challenges and opportunities presented by climate change in the county. The CCCAP aims to guide the county government, stakeholders, and communities in understanding, adapting to, and mitigating the impacts of climate change. It seeks to promote sustainable development, enhance resilience, and ensure the well-being of the county's population and ecosystems in the face of a changing climate.

Objectives of the Kajiado County Climate Change Action Plan (CCAP):

1. ***Assess Climate Risks and Vulnerabilities***: The CCCAP aims to conduct a comprehensive assessment of climate risks and vulnerabilities specific to Kajiado County. It seeks to identify the key sectors, communities, and ecosystems most at risk from the impacts of climate change. This objective involves analyzing historical data, engaging with local communities, and consulting scientific research to understand the specific climate risks faced by the county.

2. ***Enhance Adaptive Capacity:*** The CCCAP aims to enhance the adaptive capacity of Kajiado County by developing strategies and interventions to build resilience and reduce vulnerability. This objective involves identifying priority areas for adaptation, promoting sustainable land and water management practices, strengthening disaster preparedness and response mechanisms, and integrating climate considerations into development planning processes.

3. ***Promote Mitigation Strategies:*** The CCCAP seeks to promote mitigation strategies to reduce greenhouse gas emissions and contribute to global efforts to mitigate climate change. This objective involves identifying and implementing measures to reduce

emissions from key sectors, such as energy, transportation, agriculture, and waste management. It includes promoting renewable energy sources, energy efficiency, sustainable agricultural practices, and low-carbon transportation options.

4. ***Mainstream Climate Change into Development Planning***: The CCCAP aims to mainstream climate change considerations into the county's development planning processes. This objective involves integrating climate resilience and sustainability principles into sectoral policies, land-use planning, infrastructure development, and socio-economic programs. It seeks to ensure that climate change is a cross-cutting priority in all aspects of county governance and decision-making.

5. ***Foster Stakeholder Engagement and Collaboration***: The CCCAP recognizes the importance of stakeholder engagement and collaboration in addressing climate change. It aims to foster partnerships and collaboration among the county government, communities, civil society organizations, private sector entities, and other relevant stakeholders. This objective involves promoting awareness, knowledge sharing, capacity building, and participatory decision-making processes to ensure the effective implementation of climate actions.

6. ***Monitor, Evaluate, and Review Progress***: The CCCAP seeks to establish a robust monitoring, evaluation, and review mechanism to track progress, assess the effectiveness of implemented measures, and adapt strategies as needed. This objective involves setting up monitoring indicators, data collection systems, and evaluation frameworks to measure the outcomes and impacts of climate actions. Regular review processes ensure the plan remains responsive to evolving climate risks and emerging opportunities

1.6 Guiding principles

a. Clean and healthy environment
b. Sustainable development
c. Partnership
d. Cooperative governance
e. Equity and social inclusion
f. Accountability and transparency

g. Cost effectiveness:
h. The polluter pays principle (PPP)

1.7 Climate change actions undertaken by county

The department of Environment, Natural Resources and climate change has undertaken several activities in response to climate change effects. The actions are for the mitigation and adaptation for climate change effects;

Afforestation-The department has planted more than 5, 000,000 tree seedlings in all over county in collaboration with National Government and private entities for the past 3 years. This has enabled to improve forest cover from 3.4% to 7.6% .The department has also established two tree nurseries, at the headquarter office and in Nkaimurunya in Kajiado North sub-county for the growing of tree seedlings for distribution to institutions and individuals in the community.

Dumpsites produce methane which is a greenhouse gas, contributing to global warming. The county has decommissioned the Ngong Dumpsite to a sanitary landfill and established an Integrated Resource Recovery Centre. The county has also established a Taka ni mali hub in kitengela dumpsite for recycling of waste. There has been a series of public participation forums and sensitizing the public on the projects for efficiency.

Climate smart agricultural actions- The department of Agriculture, Livestock and fisheries have several programmes geared toward climate change mitigation and adaptation. Kenya Climate-smart agriculture project (KCSAP) that applies integrated approach to managing landscapes, cropland, livestock, forests and fisheries that addresses the interlinked challenges of food security and accelerating climate change. Integrated and climate smart innovations for pastoralists economies and landscapes (ICSIAPL) project- The project aims to enhance the livelihoods of agro-pastoralist communities through improved forage production and livestock farming while building on the commercialization of climate-smart innovations and sustainable landscape management. Agriculture contributes 26% to Kenya's Gross Domestic Product (GDP).

The department is mandated with Controlled pollution from our quarries. The project proponents are required to adhere to all quarrying requirements including, dust control measures, safety measures, noise control, and rehabilitation measures. The department also controls sand harvesting in our rivers to avoid overharvesting of sand that may lead to river degradation.

The department of water is also encouraging communities to harvest rain water. The department has a rain water harvesting Act, 2021 that requires landlords and homeowners to install water harvesting infrastructures. The county government in partnership with stakeholders is also helping communities to sink shallow wells, water dams and boreholes to collect water that will be used in the event of severe drought. The department is also doing solarization of community and institution boreholes and providing technical support to individuals that want to change from electricity or generators to solar panels for their boreholes.

CHAPTER TWO: LEGISLATIVE FRAMEWORKS

Climate change is a global problem that demands a global solution, and Kenya is an active participant in international efforts. This Action plan will be advised by the following legislation;

2.1 Enabling Policy and Legal Framework at international level

The Kajiado County Climate Change Action Plan (2023-2028), is informed and guided by key global, regional, national, and county climate change adaptation and/or targets, frameworks, policies, legislations, and aspirations.

This section specifies some of the key governance instruments context informing this plan and its linkage to various development plans. These are captured at three levels including International, National and County.

There exist frameworks that provide the basis for concerted international action to mitigate climate change and to adapt to its impacts.

Its provisions are far-sighted, innovative and firmly embedded in the concept of sustainable development as described hereunder:

2.1.1 Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits member countries to reduce greenhouse gas (GHG) emissions by setting internationally binding emission reduction targets.

Kenya ratified it in 2005 and has committed to reduce its emissions by 20% by the year 2030. To contribute to the achievement of this, the County is adopting a green developmental trajectory, promoting forestation and uptake of alternative energy sources.

2.1.2 United Nation Framework on Climate Change

The 21st Conference of Parties to the United Nation Framework on Climate Change (UNFCC-Cop 21) marked an important milestone in international climate governance system, shifting focus from “negotiations” to “implementation”.

The international response to climate change is founded upon this convention. 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. Under this convention, each country committed a set of actions known as the "Nationally Determined Contributions" aimed at combating climate change through establishment of policy and legal frameworks.

Kenya ratified the UNFCCC in 1994 and set out actions to contribute to achieving the global goal. The County has been actively participating in development of the second NDC that was submitted to UNFCCC.

2.1.3 Sustainable Development Goals

The agenda 2030 on Sustainable Development Goals emphasizes the global commitment to address climate change with goal 13 addressing the need to take urgent action to combat climate change and its impact. The county is obligated to mainstream the SDG in CIDP and other Development blue print.

2.1.4 East African Community Regional Climate Change Master Plan 2011-2031

East African Community Regional Climate Change Master Plan 2011-2031 serves as a blueprint to guide regional climate change response measures in the long term. This will help deal with Trans-boundary climate change issues.

2.1.5 National legislation

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.

Kenya has other legal frameworks for climate change actions including;

a) Environmental Management and Coordination Act, 1999 (2015 revised)-An Act of Parliament to provide for the establishment of an appropriate legal and institutional framework for the management of the environment

b) National Climate Change Act (2016)-This Act is applied for the development, management, implementation, and regulation of mechanisms to enhance climate change resilience and low carbon development for the sustainable development of Kenya.

c) National Climate Change Response Strategy (2010)-for providing a framework for a comprehensive and strategic approach to climate change adaptation, mitigation, technology and finance

d) National Climate Change Action Plan NCCAP (2018-2022)-for the mainstreaming of climate risk reduction into national, sector and local development plans and programs, the assessments of vulnerability and facilitation of capacity building, the formulation of a framework strategy and program, in consultation with the global effort to manage climate change.

e) National Adaptation Plan NAP (2015-2030)-The aim of NAP is to consolidate the country's vision on adaptation supported by macro-level adaptation actions that relate with the economic sectors and county level vulnerabilities to enhance long term resilience and adaptive capacity.

f) Kenya Climate Smart Agriculture Strategy (2017- 2026)-The broad objective of the Kenya CSA Strategy (KCSAS) is to adapt to climate change, build resilience of agricultural systems while minimizing emissions for enhanced food and nutritional security and improved livelihoods.

g) Climate Risk Management Framework (2017)-outlines how the government intends to harmonize its climate change and disaster risk policies.

h) National Climate Change Framework Policy (2018)-The goal of this framework Policy is to enhance adaptive capacity and resilience to climate change, and promote low carbon development for the sustainable development of Kenya.

i) Public health Act, 1986 (2012 revised)
j) Kenya Forest conservation and management Act, 2016-This Act makes provision for the conservation and management of public, community and private forests and areas of forest land that require special protection, defines the rights in forests and prescribes rules for the use of forest land.
k) Kenya meteorological Bill
l) Kenya Water Act, 2016
m) Irrigation Act 2019

2.1.6 Kenya Vision 2030

This is an economic blueprint that seeks to create "a globally competitive and prosperous nation with a high quality of life by 2030". The Vision is anchored on three key pillars: economic; social; and political. As a climate change adaptation measure, vision 2030 aspires to conserve water sources and initiate new ways of harvesting and using rainwater, underground water, and increasing acreage under irrigation.

The Plan envisages the rehabilitation of hydro- meteorological data gathering networks; construction of multipurpose dams and increasing tree cover by planting at least seven billion trees to address food, water, and energy security.

All efforts are incognizant of the fact that the Country is water-scarce amid the increasing water demand. The County Government of Kajiado has contextualized vision 2030 in HE Governor Joseph ole Lenku 5 years vision of Climate proofed environment, Modulated pastoralism and livable towns as a framework that will contribute to the realization of the strategic goals.

2.1.7 National Climate Change Action Plan (NCCAP) 2018-2022

This was a framework linked to the "Kenya National Priority" to enable Kenya to reduce vulnerability to climate change and to improve ability to take advantage of the opportunities that climate change offers. NCCAP (2018-2022), sets out a vision for a low carbon climate-resilient development in a manner that prioritizes adaptation. This plan builds on the first Action Plan (2013-2017) and provides a 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).

The Plan guides the climate actions of the National and County Governments, the private sector, civil society, and other actors as Kenya transitions to a low carbon climate-resilient development pathway.

2.1.8 Climate Change Plans

Kenya developed the first NCCAP (2013-2017), National Adaptation Plan (NAP 2015- 2030), Kenya Climate-Smart Agriculture Strategy (2017-2026), Climate Risk Management Framework (2017), and National Climate Finance Policy (2018), among other sector plans and policies that address aspects of climate change.

2.2 County legislations

At County level robust regulatory framework comprising laws, policies, plans, and institutions is being progressively established and adopted to address climate change. At the local level, Kajiado County has enacted the following legislation;

a) Kajiado county integrated development plan 2023 – 2027 This plan sets out the programmes and projects, financing framework and the timelines that will guide the implementation the county priorities in the five years.
b) County climate change Act 2020-establishes a climate change fund that allocates a portion of the development budgets to funds that support local climate change actions.
c) Environment Protection Act, 2020-provides for the protection and conservation of the Environment and other connected purposes.
d) Kajiado Rain Water harvesting Act, 2021-The Act provides for compulsory harvesting of rainwater in every residential, commercial and institutional building within Kajiado County, to conserve and ensure the availability of water while also ensuring the recharge of groundwater.
e) Climate-smart agriculture
f) Kajiado county finance Act, 2020

CHAPTER 3: PARTICIPATORY CLIMATE ACTION PLANNING

Participatory climate action planning was largely informed by the participatory climate risk assessment as well as other available material relevant for climate action planning at county, regional and national context, including any existing Climate Change Action Plan (CCCAP), drafts of the National Climate Change Action Plan and the CIDP. The technical working group leading the participatory climate risk assessment was also involved in the participatory climate action planning. Key stakeholders at all levels got an opportunity to actively input in the plan, discuss it and validate it and ensure the plan is developed through a process that adheres to the locally led climate action principles.

3.1. Participatory Climate Action Plan Process

a) Review of Key Documents

The technical working group held a 2 days meeting to review all key documents available. These documents include CIDP, National Climate Change Action plan 2018-2022, county spatial plan, Climate risk report etc. All key national and county plans were reviewed to ensure alignment between those and the county climate change action plan to be developed.

b) Collecting Public Input Objective:

The stakeholders identified during the PCRA stakeholders mapping and analysis process were given an opportunity to review and respond to the findings of the county climate risk analysis (and other relevant documents. The participatory sub-county workshops brought together different interest groups including community representatives, ward climate change planning committee representatives, civil society organizations, faith-based organizations, gender interest groups, government agencies, research organizations, youth and other key stakeholders. The participants were then allowed to suggest actions that would address the risks identified I the

PCRA report. The Climate Change Unit sensitized the citizens on radio of the upcoming climate change action plan public data collection exercise and mobilized participants with the support of Subcounty Administrator, Ward Administrators, Village Administrators, Chiefs and Citizen Participation officers. Given the big geographic area of the county and limitation of time, the Technical WG adopted a process where the wards were engaged in a sub county per day considering that most wards in each sub county has similar climate and challenges. Programs,

engagement tools and other materials relevant to the community engagements prepared included; Day program, community guiding questions and the note takers feedback forms. An average of 50 participants was mobilized from the wards in line with the mobilization criteria stated above. The participants mobilized consisted of different livelihoods groups such as Pastoralists, farmers and traders, marginalized groups, youth and PWDs in addition to the members of the Ward Climate Change Planning Committees. Other participants included ward agriculture officers, Sub-county, ward administrators, foresters, citizens participation officer and other technical officers with ward level mandate. In the first session of the community meetings, the wards were clustered differently and jointly taken through the PCRA report findings. Thereafter, the climate change action plan tools were administered to determine the priority local response actions and propose adaptation strategies that would address the risks identified. During these consultations, consideration were given to Ward climate investment priorities as well as trans-boundary climate risk issues cutting across different Wards as identified in their risk and resilience assessment reports or community-level consultations. The process took one sub county per day and it took the Technical WG 5 working days to cover the entire 5 sub county. The output of this exercise is the climate change action plan with detailed climate adaptation investments in line with the strategic adaptation priorities identified in the climate risk assessment report

c). Drafting the County Climate Change Action Plan

The technical working group convened a 3 days' workshop to synthesize all the information collection during public participation and secondary data review. The climate change action plan addresses the risks identified In the climate risk assessment report by ensuring integration with the actions proposed by the stakeholders and community with priority given to the climate resilience needs and priorities of women, youth, ethnic minorities, people living with disabilities and other marginalised and vulnerable groups. The CCCAP includes key parameters such as timing, actors responsible for various actions, sub-actions, budget, and key performance indicators. The output of this exercise is the First draft of the County Climate Change Action Plan.

d). Validation Workshop for the CCCAP

The technical working group convened a 2 days' workshop at the county level involving representatives of all key stakeholders and multi-sectoral experts to validate the action plans. The

stakeholders were given an opportunity to address gaps in the plan and refining proposed actions based on realistic situational assessment by diverse stakeholders. The stakeholders in the workshop were keen on inclusion especially of vulnerable groups and marginalized needs The first day entailed general review of the PCRA report and the action plan to ensure all key inputs from consulted stakeholders were captured. On the second day, the technical working group officers divided the stakeholders into five groups according to their sub county for focus group discussions where participants were be able to carry out in-depth review of the risks and actions drafted in the plan. The output of the exercise was the feedback that was captured by the technical working group for improvement of the first draft.

e). Public feedback

The department circulated the draft plan to key stakeholders including CSOs, community representatives and ward council members for them to make comments through memoranda or into the document. This gave an opportunity to stakeholders that did not sufficient time or opportunity to provide inputs in the document, making comments, suggestions, and recommendations on transboundary climate risk management actions. The technical working also used local radios e.g. bus radio, Maiyian FM, to seek broader feedback through radio feedback/discussion sessions.

f). Development of final draft of CCCAP

The CCCAP technical working group convened a one-day meeting to finalize drafting of the document. During this process the team developed an implementation framework or matrix and summary budget projections for delivering the plan. The output was the finalized CCCAP ready for review and approval by the county government executive committee.

g) . Presentation of the CCCAP to the County Executive Committee

The technical WG organized a one-day meeting on with the county executive committee to present the document to the team in detail, answer questions arising and seek approval. The TWG and committee members discussed the document and adopted it.

h). Presentation of the CCCAP to the County Assembly

The technical working group shared the draft CCAP with the relevant committee of the county assembly for their review before scheduling a one-day meeting to discuss the plan with the committee. During the meeting, the TWG presented the draft CCCAP to the county assembly committee for discussion and adoption. The output was the finalized and adopted CCCAP

3.2 PRIORITY CLIMATE CHANGE ACTIONS

This section outlines the priority climate change actions envisaged in CCAP 2023-2028 for implementation in the County from 1st July, 2023 to 30th June 2028. The actions will:

- ✓ Enable all county departments to concentrate efforts towards achieving climate change adaptation and mitigation objectives.
- ✓ Support achievement of the Kenya National Priority, Vision 2030 and Sustainable Development Goals.
- ✓ Enhance the adaptive capacity and resilience of communities, with emphasis on vulnerable groups in the society.
- ✓ Require to be undertaken in a way that limits GHGs emissions, to ensure a clean carbon pathway development.
- ✓ Require climate action to be undertaken in an integrated manner that includes all stakeholders ranging from the research institutions, academia, county departments, the civil society, the private sector and the community.
- ✓ Require that the proposed actions be locally driven to ensure community involvement and ownership of the projects.

3.2.1 Summary of Priority Climate Change Actions per sector

The major climate risks and hazards identified by stakeholders across the five sub-counties in Kajiado county include; Prolonged dry seasons, Environment degradation, Increased occurrence of pests and diseases, Storms and Floods, Erratic rainfall patterns that is felt within the county.

During community consultation forums and the County Level Multi-stakeholder workshop, the climate hazards in the county prioritized at ward level were presented in the view of the current and projected climate outlook.

This was followed by sector-wise identification and prioritization of the response actions for the identified climate risks. This section presents the prioritized strategies for addressing climate risks and their impacts in four priority areas namely water, agriculture, environment and disaster management. The strategies are summarized in the table 8 below

Table: **Strategic Priority Areas Summary**

Climate Change Priority 1: Water	
Strategic objective 1: To promote/Enhance sustainable utilization & access to adequate, safe water and sanitation services through mitigation of various climatic hazards in Kajiado county	
Hazard	**Actions**
Prolonged Dry Season	✓ Construction of sand dams ✓ Enhance Climate proof water harvesting and storage in public institutions, households and farms ✓ Rehabilitation, protection and conservation of water catchment areas and water sources ✓ Increase annual per capita water availability through the development of water infrastructure ✓ Climate-proof water harvesting and water storage infrastructure ✓ Promote water efficiency (monitor leakage, reduce, re-use, and recycle) and Water treatment ✓ Spring/water catchment and riparian areas protection

	✓ Capture of water run-off on roads ✓ Strategic placement of dams and water pans ✓ Capacity development in water sector; application of solar energy in water supply and mobilizing resources ✓ Promote water efficiency (monitor, reduce, re-use, and recycle) ✓ Capacity development in water sector; application of solar energy in water supply and mobilizing resource
Emerging pests, diseases and Invasive weeds	✓ Nature based solutions in addressing pests to avoid chemical pollution of water sources ✓ Reduce the incidence of malaria and other vector-borne diseases that increase with changes in climate ✓ Promote recycling to divert collected waste away from disposal sites ✓ Climate proof landfill sites ✓ Control flooding in human settlements ✓ Promote green buildings
Environmental degradation such as; Destruction of water sources by human activities (planting of eucalyptus along the riparian land),	✓ Promotion of water harvesting and storage ✓ Conservation and restoration of water catchment areas ✓ Climate proof water infrastructure and rehabilitation of existing infrastructure ✓ Including promotion of clean energy in water supply ✓ Removing of eucalyptus trees from the riparian zones ✓ Increase Stream protection projects across the county ✓ Discourage ploughing on steep slopes to minimize soil erosion and landslides ✓ Encourage use environment friendly pesticides to avoid water pollution

Soil Erosion &Pollution.	
Intense / erratic rainfall	✓ Rain water harvesting and expand storage ✓ promote on farm water storage and conservation ✓ Invest in early warning systems on weather and climate conditions
Flash Floods & Storms (Hailstorms & Thunderstorms)	✓ Storm and water harvesting and storage to be achieved through infrastructure development, capacity building on best water harvesting techniques and nature-based solutions ✓ Protection of riparian zones and river banks ✓ Construction of storms/run water management ✓ Afforestation and increase in vegetation cover
Climate Change Priority 2: Agriculture	
Strategic Objective 2: To Increase productivity in the agricultural sector, though mitigating for climate hazards in Kajiado county.	
Hazard	**Actions**
Prolonged Dry Season	✓ Promotion of climate Smart Agriculture achieved through irrigation, modern technology and early maturing and drought tolerant varieties and breeds, and certified seeds. ✓ Livelihood diversification such as apiculture and aquaculture. ✓ Strengthen extension services.
Emerging pests, diseases and Invasive weeds	✓ Strengthening crop pest and disease surveillance ✓ Promotion of pest resistant varieties and nature-based solutions to pests ✓ Vaccination campaigns and extension service

Environmental degradation such as; Destruction of water sources by human activities (planting of eucalyptus along the riparian land), Soil Erosion &Pollution.	✓ Afforestation, agroforestry and reforestation ✓ Soil erosion control through construction of gabions terracing in affected areas, grass striping and cover cropping with focus on ecosystem-based solutions ✓ Awareness, sensitization and capacity building
Intense /erratic rainfall	✓ Cover Cropping, ✓ Soil erosion control (Grass stripping, trenching, terracing, gabions among others)
Flash Floods & Storms (Hailstorms & Thunderstorms)	✓ Planting of cover crops ✓ Terracing, Maintaining buffer zones between farms and water sources. ✓ Promotion of crop insurances ✓ Agricultural enterprise diversification ✓ Use of agricultural nets ✓ Green house use
Climate Change Priority 3: Environment & Energy	
Strategic objective 3: To enhance environmental conservation and management in order to increase the resilience of the environment sector through mitigating of various climate	

hazards in Kajiado county	
Hazard	**Actions**
Prolonged Dry Season	✓ Conservation and protection of water catchment areas to be achieved through afforestation and reforestation. ✓ Establishment of fruit tree nurseries and agroforestry; Supporting private and community tree nurseries with fruit trees, bamboo and indigenous tree species. ✓ Capacity building and resource mobilization. ✓ Restore degraded landscapes. ✓ Increase renewable energy for electricity generation that is climate resilient and accounts for needs of rural areas. Transition to clean cooking through the uptake of liquefied petroleum gas (LPG) and other clean fuels in urban areas and efficient biogas cook stoves in rural areas.
Emerging pests, diseases and Invasive weeds	✓ Promote environmentally friendly pesticides ✓ Strengthen capacity to monitor and control use of agrochemicals ✓ More extension officers in the county
Environmental degradation such as; Destruction of water sources by human activities (planting of eucalyptus along the	✓ Conservation of water catchment areas such as springd to be achieved through fencing, afforestation and reforestation programs ✓ Promotion of green energy e.g., biogas and solar ✓ Capacity building and awareness creation on environmental conservation

riparian land), Soil Erosion &Pollution.	
Intense / erratic rainfall	✓ Increased tree planting ✓ Establish soil and water conservation structures
Flash Floods & Storms (Hailstorms & Thunderstorms)	✓ Improved drainage systems ✓ Physical planning requirements ✓ Conservation of riparian zones ✓ Capacity building of residents on livelihood diversification on livelihood resources such as Poultry, Apiculture, fish farming, ✓ Installation of lightening arrestors in institutional buildings
Climate Change Priority 4: Disaster management	
Strategic Objective 4: Build capacity for mitigation climatic hazards and resilience against the impacts of climate related disasters.	
Prolonged Dry Season	✓ Strengthening of Early Warning Systems to be achieved through ✓ Improving climate information systems. ✓ Scaling up and improving existing local weather stations.
Emerging pests, diseases and Invasive weeds	✓ Setting up of an Agricultural Emergency kitty. ✓ Pest surveillance Strengthening extension services. ✓ Promote the transition to clean cooking with alternative clean fuels,
Environmental degradation such as;	✓ Development and equipping of disaster response unit ✓ Promote research and strengthen early warning systems.

Destruction of water sources by human activities (planting of eucalyptus along the riparian land), Soil Erosion &Pollution.	
Intense / erratic rainfall	✓ Improve climate information services
Flash Floods & Storms (Hailstorms & Thunderstorms)	✓ Strengthen disaster response institutional capacity ✓ Community capacity building on Disaster Risk Reduction ✓ Strengthening Early Warning System ✓ Promote Livestock's and crop insurance schemes ✓ Map Floods prone areas, carry out sensitization and install lightning arrestors.

3.2.1.1 Summary of Wards Priority Climate Change Actions

Kajiado West Subcounty

Kajiado West Sub County is one of the sub counties found in Kajiado County. It covers an area of 7,862km2 and has a population of over 182,849 according to 2019 census. The Sub County is divided into five administrative wards namely Mosiro, Iloodokilani, Ewuaso, keekonyokie and Magadi ward. Livestock rearing and crop farming are the main activities practiced in the Sub County. The Sub - county is also known for minerals such as building materials in Kenya Marble Quarry (KMQ), sand, Lake Magadi which is the source of trona and animals licks. Despite of all this, the sun county was one of the most affected sub counties due to its remoteness, vastness and

over dependency of livestock farming. The development of the action plan will help the sub county to be adopted to current and future effects of climate change.

WARD	ACTION IN ORDER PRIORITIES	REMARKS
Mosiro	A mega water pan	The water pan will serve as a multipurpose dam for domestic use, livestock and irrigation. The water pan will solve issues of water accessibility thus reduce distance covered by women and children as well as waiting time. i.e oldepe village
	Irrigation scheme in oldorko	The irrigation scheme will build resilience, towards drought and solve issues of youth employment
	Climate proofed Bridge in Embarbal	This will enable Emparbal community to transport goods and services especially food during raining seasons. This will build resilience in terms of food security.
	Hay production (reseeding, harvesting, bailing and storage)	This will help in controlling soil erosion as well as fodder production.
Ilodokilani	A mega dam	This will solve the water shortage in the ward and save time for women who go long distances looking for water.
	Solarization of boreholes	this will drastically reduce production cost with expanded pumping hours to 8hrs a day and increase revenue in the long run.
	Provision of drought tolerant animal breeds and crops	These breeds will improve the local breed and make them drought resistant.

	Hay production (reseeding, harvesting, bailing and storage)	This will help in controlling soil erosion as well as fodder production
	Bead work value chain	Alternative source of livelihood for women
Magadi	Pipeline installation and extension of fresh water from Sampu to Oldonyonyokie and Magadi locations.	This will help solve the water scarcity and reduce walking distance to water points
	A mega dam along olekeju ngiro	The water will be used for domestic and livestock and irrigation by women and youth groups
	Restocking of drought tolerant animal breeds	Most families were affected the past drought hence the need to restock to enable them to adapt to future effects of climate change
	Mixed farming (milk goats, poultry, bee keeping, pigs, aquaculture and crops)	The community will be able to spread out risk that will lower the impact of future droughts
	Solar mini grid	There is huge deposit of solar energy that can be tapped.
	Improved cooking solutions	Women groups and youth groups to be trained on making clean cooking jikos for livelihood and environmental conservation
	Grassland and Rangeland management	This will regenerate the depleted indigenous grasses and eradication of invasive species like prosopis Juliflora
	Climate proof bridge	To connect Kamukurru and Loosinyai due to the floods.

Keekonyokie	3 Water pans (Inkiito, Kisaju and Oloontona). Mega dam at Olooseos	The water pans will help in irrigation and supply of water to the neighboring communities which will help in food security
	Hay production (reseeding, harvesting, bailing and storage)	This will help in controlling soil erosion as well as fodder production
	Borehole drilling and Solarization at Emboliei, Olooyiankalani, oloompaluani, Kipeto, Inchorroi	Alternative source of portable water at a lower coast
	Value addition of dairy products	This will solve the issue of milk storage by increasing its shell life.
	Beed work value chain Value addition of Kiserian Abature waste management	Alternative source of livelihood for women Waste management from the Kiserian Abature to bio gas production.
	Rangeland management at Esonorua	This will regenerate the depleted indigenous grasses
	Pipeline installation and extension from Oloropil to enkereyian and from oltinga to enkereyian as well as iloodoariak springs	This will help solve the water scarcity in the and reduce walking distance to water points
Ewuaso	Water pans at najile water grounds, enkorika public land, Olodungoro, namunyak enkusero keri and kimelok public land	The water pans will help in irrigation and supply of water to the neighboring communities which will help in food security
	Borehole drilling and	Alternative water supply

	equipping in Olngarua, Engusero sampu	
	Mixed farming- apiculture, aquaculture and poultry farming	To spread risks to reduce the impacts of hazards
	Beed work value addition.	Alternative source of livelihood for women to reduce over dependency on, milk selling.
	Provision of green cooking energy to eradicate charcoal burning	To conserve the environment as well improve women health and diversification of alternative livelihoods

3.2.2 Kajiado Central Summary of Priority Climate Change Actions

Kajiado Central has a population of 161,862 people according to the 2019 census.it covers an area of 4,240 kilometers per square areas. The Sub County is further divided into 5 County administrative wards namely Ildamat, Dalalekutuk,, Purko, Matapato North and Matapato South wards. Kajiado Central is predominantly semi-arid. The main economic activity is livestock and crop farming. Crop farming is mainly in the Southern and Western parts of the County along rivers and springs.

WARD	ACTION IN ORDER OF PRIORITIES	REMARKS
Ildamat ward	Drilling and solarization of boreholes	Reduce the coast of water production
	Value addition of livestock and livestock products	Alternative source of livelihood for women
	Protection of water springs i.e Oloyiangalani, nenkobei, olchorro and emugorr	Constant water supply and restoration of drying springs
	Building waste recycling plant	To achieve sustainable waste management and employment opportunities
	Rangeland management	Uprooting of invasive species

		such as Oltiameleki to improve room for grass regeneration
	Tree Nurseries to women groups and PWD	Source of income generation and environmental conservation
Purko Ward	Construction of water pans at Oloorera and Enkaroni. Distilling of Maalen dam	Reduce water shortage and distance to water points
	Mixed farming	To spread risks to reduce the impacts of hazards
	Rangeland management	This will regenerate the depleted indigenous grasses
	Diversification of alternative livelihood. Ie. Beadworks, kitchen gardening, table banking	To eradicate poverty and build resilience for the community to adapt to climate change
	Establishment of tree nurseries	Source of income generation and environmental conservation
Dalalekutuk	Provision of high breed/improved livestock breed	Quality not Quantity of livestock
	Rain water harvesting	Construction of water pans and earth pans
	Grass land and rangeland management/ Conservation of public land	Eradication of invasive species to pave way for grass germination and
	Establishment of tree nurseries	Source of income generation and environmental conservation

	Construction of sand dams along major rivers Olkejuado river and Olkeria river	This is to conserve sand and water
Matapato North	Establishment of tree nurseries	Source of income generation and environmental conservation
	Solarization of Boreholes	this will drastically reduce production cost with expanded pumping hours to 8hrs a day and increase revenue in the long run.
	Hay production (reseeding, harvesting, bailing and storage)	This will help in controlling soil erosion as well as fodder production
	Alternative sources of energy	
Matapato South	Establishment of tree nurseries	Source of income generation and environmental conservation
	Solarization of boreholes	this will drastically reduce production cost with expanded pumping hours to 8hrs a day and increase revenue in the long run.
	Hay production (reseeding, harvesting, bailing and storage)	This will help in controlling soil erosion as well as fodder production
	Drilling of Boreholes at strategic community location	Increase water accessibility for the community, schools and health facilities
	Establishment of tree nurseries	Source of income generation and environmental

		conservation
	Construction of water pans and earth pans	Reduce water shortage and distance to water points

3.2.3 Kajiado East Summary of Priority Climate Change Actions

Kajiado East Sub-County is a cosmopolitan area in Kajiado County. It lies within the Nairobi metropolis and borders Machakos and Makueni counties in the North East position respectively and it's approximately 20km from Nairobi city center. The Sub County is further divided into 5 County administrative wards namely Kitengela, Kenyewa-poka, Imaroro, Kaputei North and Oloorsirkon-Sholinke ward. The main activity economic activity for the Sub County is largely livestock and agricultural related business. Demographic features are dynamic especially in ethnic ratios, density and lifestyle parameters due to current land tenure system. Large track of Land which were livestock/wildlife grazing have been sub divided for sale into willing buyers who are putting up residential houses and real estate development. The Sub County has been experiencing human wildlife conflicts mostly due to drought such as in Kenyewa-Poka ward (Masimba) which is brought about by scarce resources (water) and encroachment of animal's corridors. The Action plan will help the Sub County to manage human wildlife conflicts and adopt to effects of Climate change.

WARD	ACTION IN ORDER OF PRIORITIES	REMARKS
Imaroro	Pasture management	This will help in controlling soil erosion as well as fodder production
	Drilling of boreholes, pipelines expansion and Construction of water pans	Reduce water shortage and distance to water points
	Tree nurseries	Source of income generation and environmental conservation
	Erecting weather focus points	For early warning systems for climate hazards and

		disasters
	Construction of sand dams along Olkeriai river	This is to conserve sand and water
	Improving of livestock breeds (fattening, crossbreeding, veterinary services) Milk coolant, Hides and skins industries	
Kenyewa poka	Mixed-farming	Alternative source of livelihood to spread climate risks
	Fodder value chain (sorghum, maize, sweet potatoes)	Alternative to the normal rain fed grass
	Livestock and livestock product value addiction	Increased income due to long lifespan of the products (Beef, milk, hide and skin
	Construction and solarization of Water pans and boreholes	Reduce water shortage and distance to water points
	Tree nurseries	Source of income generation and environmental conservation
Kitengela ward	Tree nurseries	Source of income generation and environmental conservation
	Mixed farming (poultry, aquaculture, fishponds, apiculture)	Alternative source of livelihood to spread climate risks
	Value addition of milk products	Increased income due to long shelf life of milk (butter, yoghurt, cheese, ghee, mala)

	Solarization of boreholes	Reduce the cost of water production
Oloosirkon/ sholinke	Tree nurseries	Source of income generation and environmental conservation
	Rain Water harvesting (plastic tanks)	To store water for future use
	Rehabilitation of abandoned quarries	To return the aesthetic value of the environment
	Borehole drilling and Solarizations.	Reduce the cost of water product
	Mixed farming Hay Production, Dairy farming & Community early sensitization.	Alternative source of livelihood to spread climate risks
Kaputiei North (fantastic city)	Planting of drought tolerant crops	Improved yields during the dry season.
	Tree nurseries establishment	Source of income generation and environmental conservation
	Alternative source of livelihood (bee keeping, pig rearing, poultry, aquaculture)	Diversification of livelihood to eradicate poverty and build resilience
	Introduction of improved livestock breeds	To enable our livestock to adapt to effects of climate change
	Beadwork value chain.	The will provide for other alternative sources of livelihood for women and youth

3.2.4 Kajiado South Summary of Priority Climate Change Actions

Kajiado south sub -county also known as Loitoktok Constituency. It is one of the five constituencies in Kajiado located in the southern part of Kenya. It borders Kenya and Tanzania. It has a population of estimated 191,846 according to the Kenya Population and Housing Census 2019. 94,613 Males and 97,225 females, covering an area of approximately 6337km2. It has five wards namely: Entonet/Lenkisim, Imbirikani/Eselenkei, Kimana, Rombo and Kuku. The main economic activity is nomadic pastoralism and small- scale farming. Kajiado South Sub County being an arid and semi-arid land has experienced prolonged drought, decline in water sources such as springs, loss of vegetation cover and increase in temperatures has led to increase in poverty, school dropouts, high mortality rate of livestock and human-wildlife conflicts.

WARD	ACTION IN ORDER OF PRIORITIES	REMARKS
Entonet/lenkisim	Boreholes drilling and solarization	To curb the issue of water scarcity in the wards
	Value addition of livestock product	This will protect livelihood and reduce poverty due to increased income
	Modulated pastoralism	Diversification of drought tolerant breeds to curb effects of climate change and eradicate poverty
	Open markets for livestock products	This will provide market for livestock product and increase income for the community.
	Beading value chain	This will provide for other alternative sources of livelihood for women and youth
	Hay production(reseeding)	This will help in controlling soil erosion as well as fodder production
Imbirikani eselenkei ward	Borehole drilling and solarization	To curb the issue of water scarcity and cost
	Provision of coolants	Increased shell life will attract more income for women

	Tree nurseries	Source of income generation and environmental conservation
	Improved cattle breeds	Better breeds that have high value
	Construction of water pans	Reduce water shortage and distance to water points
	Rangeland and grassland management	This will help in controlling soil erosion as well as fodder production
	Beading value chain	Alternative source of income for women
Kimana ward	Water pans for water harvesting	For sustainable supply of water
	Drilling and solarization of boreholes	To curb the cost and distance to water points
	Dairy farming and value addition	To increase the shell life for more income generation
	Beading value chain	Alternative source of livelihood for women
	Tree nurseries establishment	For conservation of environment and income generation for groups
	Hay farming	This will help in controlling soil erosion as well as fodder production to be used during dry season
Rombo ward	Protection of water catchment areas	to conserve environment and sustain supply of water
	Drilling of boreholes and solarization	To reduce the cost of water
	Fencing of swamps. Ie. Esosian and Nasera swamp	Water from the swamp will be used for irrigation as an alternative source of livelihood
	Rehabilitation of water canals	To enhance more food production and hence food security
	Construction of water pans	To reduce distance to water points

	Building of gabions, Rangeland management (Hay production)	To reduce gully erosion and farms to remain fertile
Kuku ward	Construction of Water pans and earth pans	Harvesting water to be used during dry seasons
	Protection of water catchment and wetlands	For constant supply of water and environmental protection
	rangeland and grassland management, Value addition of livestocks and crops	To reduce soil erosion and production of fodder
	Drilling of boreholes	To increase water accessibility to the community, schools and health facilities
	Clean cooking solutions	Clean cooking jikos for women groups

3.2.5. KAJIADO NORTH

Kajiado North Sub-County is one of the five constituencies in Kajiado County. It borders Kiambu and Nairobi counties. Kajiado North Sub-County is highly cosmopolitan with almost every ethnic community in Kenya. The constituency has a population of estimated 306,596 according to the Kenya Bureau of statistics 2019, covering an area of approximately 110.6km2. Kajiado North Sub-County comprises of five wards which includes; Olkeri, Ongata Rongai, Nkaimurunya, Oloolua and Ngong. Kajiado North Sub -County being within the Nairobi Metropolis ,business becomes a major economic activity. The constituency has been affected by climate change in various ways including low markets, drying up of rivers and decline in vegetation cover.

Ward	ACTION IN ORDER OF PRIORITIES	REMARKS
Ongata Rongai	Proper drainage systems	During floods there will be less cases of diseases
	Water harvesting	To store water to be used during dry seasons

	Growing of drought resistant crops	To curb food insecurity brought by crop failure during droughts
	Recycling of waste	To reduce dumping that causes health problems
Nkaimurunya	Drilling boreholes and solarization in primary schools	Decrease the cost of water and improve accessibility
	Water supply projects	Increase water accessibility and reduce distance to water points
	Value addition of farm and livestock products	Raise the value of the products and attract high incomes
	Tree nursery establishment	Income generating activity for groups
	Construction of climate proof social amenities ie. Social halls, markets, public sanitation facilities	Provide conducive environment
Olkeri	Alternative sources of energy (clean energy-LPG, Biogas, solar, wind)	Reduced deforestation and improve utilization of affordable energy sources
	Solid waste management system	Recycling of waste and proper drainage and sewerage systems for environmentally friendly towns
	Dairy farming and value addition of dairy products	High income for households and address food insecurity
	Underground water harvesting storages	For sustainable supply of water especially during dry seasons.
Ololua	Tree nursery for indigenous tree species and	Source of income for groups

	fruit trees	and for afforestation activities in the forest
	Alternative sources of livelihood (apiculture, ecotourism, herbal medicine extraction)	Sustainable income for households and spreading climate risks
	Protection of Water catchment areas and wetlands	Constant supply of water and environmental protection
	Green energy establishment- solar	To reduce production of greenhouse gases and reduce cost of energy
Ngong	Construction of proper drainage systems	To reduce water borne diseases especially during floods
	Rain water harvesting	To store water to be used during dry seasons
	Establishment of a recycling plant	To reduce open dumping that cause health challenges and also income generating activities for groups doing segregation
	Tree nursery establishment and afforestation of Ngong forest	Tree nurseries to be managed by the well-established community forest associations to be able to accrue income benefits and relatively enforce afforestation in the forest.

Kajiado County Climate Change Action Plan identifies areas where smart climate actions will be implemented over the next five years in line with global, national and county government plans and policies.

3.4 Alignment with Other Development Agenda

3.4.1 The Kenya National Priorities & Sustainable Development Goals (SDGs)

Relevant SDGs include; **Goal 1:** No Poverty; **Goal 2:** Zero Hunger; **Goal 3:** Good Health and Well-Being; **Goal 4:** Quality Education; **Goal 5:** Gender Equality; **Goal 6:** Clean Water and Sanitation; **Goal 7:** Affordable and Clean Energy; **Goal 8:**Decent Work and Economic Growth; **Goal 9:**Industry, Innovation and Infrastructure; **Goal 10:**Reduced Inequalities; **Goal 11:**Sustainable Cities and Communities; **Goal 12:** Responsible Consumption and Production; **Goal 13:**Climate Action; **Goal 14:** Life below Water; **Goal 15:** Life on Land; **Goal 16:** Peace, Justice and Strong Institutions and **Goal 17:** Partnership for the Goals.

3.2.1 Climate Change Priority 1: Water

Strategic objective 1: To promote/Enhance sustainable utilization & access to adequate, safe water and sanitation services through mitigation of various climatic hazards in Kajiado County

Addressing the Problem - National Priority

Provision of clean and safe water; surveillance of water quality and treatment and safe disposal of waste water. Minimizing overreliance on rain-fed agriculture; promotion of drought resistant crops; dissemination of climate information to farmers and reduction of post-harvest loses.

Recycling and reuse of water; and adaption of green energy for pumping water for industrial use. Roof catchment infrastructure for rain water harvesting; increased water connectivity and improved sanitation infrastructure. Provision of clean and safe water; surveillance of water quality and treatment and safe disposal of waste water.

Sustainable development Goals

Relevant SDGs include **Goal 13:** Climate Action; **Goal 6:** Clean Water and Sanitation; **Goal 9:** Industry, Innovation and Infrastructure; **Goal 10:** Reduced Inequalities; **Goal 12:** Responsible Consumption and Production; **Goal 14:** Life below Water; **Goal 1:** No Poverty; **Goal 2:** Zero Hunger and Goal **3:** Good Health and Well-Being.

Kajiado County is endowed with water resources both surface and ground. The main sources of water in the County are rivers, streams, dams, springs, boreholes and shallow wells.

This NCCAP addresses one of the largest challenges, which is dwindling water resources. The decline in access to quality water is exacerbated by climate change, and its associated prolonged drought, lack of climate resilient infrastructure; inadequate water harvesting systems to meet the demand/population; degradation of water catchment areas; pollution of existing sources; increased levels of siltation in our water reservoirs; flooding that led to destruction of water systems; and prohibitive costs of infrastructure development, repair and maintenance.

Lack of access to quality water has the potential to undermine achievement of the Kenya National Priority. Water is also linked to the Blue Economy, which refers to the "sustainable use and economic development of both aquatic and marine spaces, including lakes, rivers and underground water" to enhance livelihoods.

Dwindling water resources

Approximately 12% of the population in the county access piped water though the majority access water from improved sources (CIDP 2018). The County is endowed with water resources however climate change is a threat to future availability of this resource. Drought and anthropogenic activities such as deforestation, low storage capacity, growing demand for water and high pressure on our water resources including aquifers is threatening our water resources. As a result, rivers are reducing their flow, dams and water pans are silting, and water quality is deteriorating.

Erratic rains due to climate change have affected water supply, increased costs of acquiring water and lowered the hygiene standards with severe impacts on food production. In the year 2018, the county experienced prolonged dry spell resulting in drying of many rivers which impacted the quality and quantity of water in both rural and urban areas. Most communities' dependent on agriculture were exposed to food insecurity due to reduced incomes from water reliance productive activities.

Climate change also impacts the Blue Economy. Climate change is driving changes in the composition of species assemblages, the abundance, biomass and distribution of species, fish yields and the efficiency of fishing methods and gears. Increase in water flows may result in

siltation which may contribute to reduce Dissolved Oxygen that suffocates aquatic organisms including fish.

Climate change is not the only threat or stressor on a fisheries system but is an additional, possibly unidirectional one, adding to what is typically a range of other stressors and uncertainties from anthropogenic and natural causes including overfishing, pollution, habitat loss, competition for space and environmental variability.

Flooding leads to rise in water levels, submerges fish ponds, estuaries and swamps destroying aquatic breeding grounds. Increased water temperatures are not ideal for fish breeding. Changing rainfall patterns leads to water scarcity thus threat to diminish aquatic ecosystems.

Ensuring Access to Quality Water for All

The CCCAP 2023-2028 seeks to increase bulk water harvesting and storage strategies. This will be achieved through development of water infrastructure e.g. water harvesting infrastructure, gravity water schemes, and use of green energy technologies in water pumping.

The Plan proposes concrete actions to enhance the resilience of the water sector, by ensuring adequate access to, and efficient use of water for agriculture, manufacturing, domestic use and other uses. Conservation of water catchment areas ensures sustainability of water resources. Efficient use of water for example adoption of climate resilient methods of farming such as drip irrigation; climate proof water and sewerage treatment facilities and Public education on water conservation and management will be over emphasized.

Large volumes of treated water are lost at the household level where treated water ends up in gardens or septic tank. Efficient water management technologies such as Water catchment protection innovations, Non-Revenue Water Management (NRW), Commercial Financing, smart meter reading, billing and complaints management, solar water pumping and online leakage detection.

The climate actions are expected to result in adaptation; increased water availability through water harvesting and storage infrastructure such as earth dams, bulk water storage tanks, roof catchment in institutions; improved water efficiency, and improved water availability through Climate proof water supply infrastructure and storm water infrastructure

3.3. Kajiado County Actions to realize strategic objective 2023-2028

Kajiado County Climate Change Action Plan 2023-2028	
SECTOR	**ACTIONS FOR MITIGATION AND ADAPTATION TO CLIMATE CHANGE**
Environment, Natural Resources and forestry	● Increase forest cover to 10% of the total land area through Afforestation and reforestation programs to restore degraded and deforested areas in Counties ● Rehabilitate degraded lands, including rangelands and abandoned quarry pits with indigenous tree species; ● Implement initiatives to reduce deforestation and forest degradation ● Implement alternative sources of energy to reduce dependence on forest for charcoal and wood fuel. ● Establishment of tree nurseries for fast-growing tree species in each sub-county. ● School tree planting programs ● Encourage involvement of community in county tree planting days ● Encourage Forestation efforts with civil societies ● Farmer-managed natural regeneration ● Waste to energy -conversion of open dumpsites to sanitary landfills ● Proper waste management through recycling

	• Encourage the use of 4Rs-Reduce, Reuse, recover and Recycle • Encourage segregation of waste at source • Undertake routine clean-ups of towns • Control of over harvesting of sand in rivers • Control of quarrying activities
Water	• Increase annual per capita water availability through the development of water infrastructure • Climate-proof water harvesting and water storage infrastructure • Promote water efficiency (monitor leakage, reduce, re-use, and recycle) and Water treatment • Spring/water catchment and riparian areas protection • Capture of water run-off on roads • Strategic placement of dams and water pans
Agriculture, livestock and fisheries	**Crops** • Undertake farm forestry / agroforestry • Promoting planting of drought tolerant crops • Establishment of irrigation systems, such as construction of dams/water pans for irrigation and upscaling drip irrigation

	• Educating farmers on conservation agriculture (soil and water conservation) • Enhanced agricultural extension services • Crop diversification • Promote Agro ecology-sustainable farming that works with nature • Climate information services for farmers • Promote urban agriculture • Promotion of non-rain agricultural practices (greenhouse farming, aquaponics and hydroponics) • Initiate Crop insurance for farmers to caution them against climate-related disasters • Link farmers to market opportunities **Livestock** • Controlled grazing • Promote fodder banks • Encourage hay establishment, harvesting and storage for use in dry seasons • Promoting growth of drought tolerant animal feeds e.g. Brachiara • Promoting drought-resistant breeds of livestock and poultry • Encourage livestock insurance to cushion farmers from climate-related shocks.

	• Management of invasive tree species • Link farmers to market opportunities **Fisheries** • Promote aquaculture/ Fish farming • Promoting aquaponics • Promoting sustainable low cost feeds such as black soldier flies and crickets as fish feeds • Promote rearing of black soldier flies and crickets for management of solid waste • Link farmers to market opportunities
Health, Sanitation and Human Settlements	• Vaccination / immunization campaigns and programmes • Vector-borne disease surveillance, reporting and treatment • Distribution of mosquito nets • Controlling flooding in human settlements • Planning urban settlements to incorporate sewer systems • Controlling pollution from the sewerage systems by repairing leaks and enforcement of proper disposal • Promote construction of green and eco buildings • Encourage municipalities for management of waste.

Energy and Transport	• Promoting renewable/green energy (wind, solar, biogas) • Promotion of clean cooking solution e.g. efficient cooking stoves, biogas and briquettes • Construction of green roads • Designating walking and bicycle lanes on roads • Designate highway and roads for infrastructure that encourage uptake of electric technology e.g. charging points for electric cars. • Encourage individuals to acquire electric vehicles
Tourism and Wildlife	• Promote eco-tourism • Protect community wildlife conservancies • Encouraging direct financial benefits for conservation to the community • Promote designing, construction and operation of low impact facilities in conservancies and parks • Build environmental awareness to tourists and local
Trade	• Incorporate climate smart innovations into the existing market infrastructures • Incentivize climate smart innovations in businesses
Disaster Risk	• Provide timely response after the occurrence of a disaster

Management	● Support other sectors/departments to undertake measures to prepare and prevent for drought and flood disasters ● To reduce losses from drought disasters by buying livestock before emaciation by drought ● Put in place early warning system e.g. SMS based system for warning communities on a foreseen disaster ● Sensitize the community on the roles of the emergency response dockets and establish a 24 hour communication system

CHAPTER 4 DELIVERING THE CLIMATE ACTION PLAN.

4.1 Enabling Policy and Regulatory Framework

The process of developing a comprehensive policy and regulatory framework for climate change is well underway in Kajiado, as demonstrated by the Kajiado County Climate Change Act, 2020, and County Climate Change Policy, 2022.

At the County level, support is needed to develop appropriate legislation, including climate fund regulations, that are informed by the local context, aligned to county systems, and conform to national and county public finance policies and laws. This legal and policy framework will guide the development and utilization of County Climate Change Funds and enable climate finance to address County-specific local issues.

The two enabling actions are described below in the table below.

	Enabling action	**Coordinating institutions and relevant partners**	**Expected results(process indicator)**
1.	Prioritize, develop and implement the needed regulations to effectively implement the County Climate Change Act, 2020 through a multi-stakeholder process that includes women, youth, and marginalized and minority groups.	Department of Environment, Natural resources, and Climate Change	By 30th December 2022 – Assessment of needed regulations complete. By 30th September 2025 – two regulations developed and operationalized.
2.	County Government of Kajiado to develop County climate change fund regulations that are linked to the National Climate Change Fund.	Department of Finance Department of Environment, Natural resources, and Climate Change	By 30th December 2022 – Kajiado County Government to have developed climate change fund regulations.

4.2 Institutional arrangement and Capacity and Knowledge Management

The priority capacity development actions emphasize establishing the engendered coordination structures for the Climate Change Directorate to effectively implement the County Climate Change Act, 2020 and County Climate Change Policy. The actions will also build the capacity of climate change units in county departments. This action will include building the capacity of County Executive Committee (CEC) members responsible for climate change and officials assigned to the climate change units in County. This will include support to report on climate change, to enhance the implementation of public finance management in relation to climate finance, and to develop policies and frameworks linked to the County Climate Change Act 2020 and County Climate Change Policy, 2022.

The operation of the County Climate Change Unit is a priority action to promote climate information and knowledge management. This unit provides a one-stop repository of climate change-related information and is equipped with an online climate change portal. This unit will be under the department of environment and natural resources. 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 County Climate Change Act, 2020.

No.	**Enabling action**	**Coordinating institutions and relevant partners**	**Expected results(process indicator)**
1.	Operate a publicly accessible climate change unit that includes a climate change desk and officers, robust and up-to-date climate change knowledge management system and an updated climate change information portal that has platforms for children, youth, women, and marginalized and minority communities.	Department of Environment and Natural Resources	By 30th December 2022 – Business plan for climate change unit developed.

2.	Strengthen the capacity of the County Government institutions to implement the county Climate Change Act, including: Training of staff of climate change units on reporting and climate finance. Support to County Climate Change Council and ward climate change council. Mobilisation and tracking of climate finance allocations through County Climate Change Funds.	Department of finance Department of Environment and Natural Resources.	By 30th December 2022 – Climate change is mainstreamed in MTP sector plans. By 30th September 2025 – all relevant county departments providing annual reports on climate change.
3.	Build the capacity of stakeholders, including - Vulnerable groups, including women, youth, 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.	Finance Department Department of Environment, Natural Resources and Climate Change. Department of Gender, social services, youth and sports	By 30th December 2022 – Ten awareness sessions held. By 30th September 2025 – Twenty awareness sessions held.
4.	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,	Department of Environment, Natural Resources and Climate Change Department of citizen	By 30th March 2023 – Public awareness and engagement strategy delivered to the county climate

	youth, persons with disabilities, and members of minority and marginalized communities.	participation	change Council. By 30th June 2023 – Strategy operationalized in the county.
5.	Develop a county vulnerability assessment to identify and prioritize adaptation actions. To include identification and compilation of existing vulnerability assessment at the County level.	Department of Environment, Natural Resources and Climate Change	By 30th December 2023 – County vulnerability assessment developed. By 30th September 2025 – County vulnerability assessment informs updating of County Climate Change Action Plan.

4.3. Technology and Innovation

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

No.	**Enabling action**	**Coordinating institutions and relevant partners**	**Expected results(process indicator)**
1.	Improve the capacity of climate change unit, county climate change council and ward climate change council to coordinate the activities and services that	Research institutions Private sector	By 30th June 2024 – Information on five endogenous climate technologies

	it delivers. This includes the promotion, up scaling and dissemination of endogenous technologies that meet the needs of women and marginalized groups.		disseminated to stakeholders.
2.	Provide Climate Information Services (CIS) – including information to help farmers manage risk and to inform early warning systems, to inform decision making for organizations, businesses and households.	Department of Environment, Natural Resources and Climate Change Private sector	By 30th December 2024 – the County Climate Information Service Plans developed.
3.	Promote gender-responsive climate technologies and innovation in the private sector through the provision of financing, capacity building and start-up/scale-up services. Encourage youth innovation through outreach programmes with schools, universities and youth organisations.	Department of Environment, Natural Resources and Climate Change Private sector	By 30th December 2025– Clients, are supported to commercialize their clean technology businesses. By 30th September 2025 – Clean technology businesses reach 300 customers
4.	Identify policy and fiscal incentives to promote the uptake of climate-friendly technology (such as tax incentives, reduced energy tariffs, low-interest loans, public private partnerships).	Finance department Department of Environment, Natural Resources and Climate Change Private sector	By 30th December 2024 – Options identified and analyzed, including development of baseline information and expected climate results.

4.4 Climate Finance Resource Mobilization

The priority climate finance and resource mobilization actions emphasize designing and launching the Climate Change Fund, implementing the county resource mobilization strategy, improving access modalities and efficiency of climate finance, and ensuring that climate finance is available for actions in key sectors.

No.	**Enabling action**	**Coordinating institutions and relevant partners**	**Expected results(process indicator)**
1.	Operationalise the Climate Change Fund, including establishment of the management and oversight of the fund; annual budgeting and reporting; development of policies, guidelines and procedures; and development partner, and other contributions.	Department of finance Department of environment and natural resources.	By 30th December 2022 – Fund is operationalised, including establishment and the management councils as set out in the Climate Change Act, 2020.
2.	Enhance the capacity of the county designated authority to mobilise and manage climate finance, including the management of, access to, and tracking of county climate finance; and development of funding proposals. Operationalize the climate finance resource mobilisation strategy (including domestic allocations, international climate finance, access to carbon credits and markets, allocations from the private sector, and Public-Private Partnerships for climate-friendly investments).	Department of finance Department of Environment, Natural Resources and Climate Change	By 30th December 2023 –County resource mobilization strategy operationalized for climate finance mobilization.

3.	Report on county climate finance flows through an improved tracking system (including building capacity of government officials to track climate finance), that is supported through improved coordination with development partners.	Department of Finance Department of Environment, Natural Resources and Climate Change	By 30th December 2023 – The climate finance tracking system established at the county level. By 30th June 2024 – Climate finance tracking system reporting on domestic and international climate finance flows
4.	Build the capacity of the private sector and civil society to develop bankable projects and build the in-house capacity of financial institutions to assess climate risk and develop climate-related schemes.	Department of finance Department of Environment, Natural Resources and Climate Private sector	By 2024– Three financial institutions have developed climate-related lending schemes.
5.	Participate in the design and implementation of market-based mechanisms; promote investor confidence and participation in market-based and results-based mechanisms; enhance residents' capacity to engage in carbon asset activities; strengthen the viability of domestic carbon asset production;	Department of finance Department of Environment, Natural Resources and Climate Private sector	By 30th June 2025 – Unit established to promote projects responsible for generating carbon credits.

4.5 Implementation and Coordination Mechanisms

The department of climate change has developed a set of mechanisms to aid in the implementation of climate change programs within the department. The following mechanisms have been put in place;

Climate Change Unit: Established a dedicated unit within the county government responsible for coordinating climate change initiatives. This unit has a clear mandate and authority to oversee and implement climate actions across various sectors.

Climate Action Plan: Develop a comprehensive climate action plan that outlines specific goals, targets, and strategies for addressing climate change in Kajiado County. The plan should be developed in consultation with relevant stakeholders and should cover sectors such as energy, agriculture, water, and disaster risk management.

Interagency Collaboration: Foster collaboration and coordination among different departments and institutions involved in climate change-related activities. Regular meetings, workshops, and joint initiatives should be encouraged to share knowledge, resources, and best practices.

Stakeholder Engagement: Engage and involve various stakeholders, including local communities, civil society organizations, private sector entities, and academic institutions, in the planning, implementation, and monitoring of climate actions. This can be done through public consultations, workshops, and partnerships.

Capacity Building: Provide training and capacity-building programs for government officials and relevant stakeholders to enhance their understanding of climate change issues, mitigation, and adaptation strategies. This will enable them to effectively implement climate actions and mainstream climate considerations into their work.

Data Collection and Monitoring: Establish a system for collecting and analyzing climate-related data to monitor progress and evaluate the effectiveness of climate actions. This can include weather monitoring systems, greenhouse gas inventories, and impact assessments.

Financing Mechanisms: Identify and leverage various sources of funding, including government budgets, grants, and international climate finance, to support the implementation of climate actions. Explore innovative financing mechanisms such as public-private partnerships and carbon financing to mobilize additional resources.

Public Awareness and Education: Conduct public awareness campaigns and educational programs to increase understanding and knowledge of climate change issues among the public. This can include workshops, seminars, media campaigns, and community outreach activities.

Integration into Development Plans: Integrate climate change considerations into the county's development plans, policies, and regulations. Ensure that climate change is mainstreamed across sectors to ensure coordinated action and sustainability.

Monitoring and Evaluation: Regularly monitor and evaluate the progress of climate actions, using indicators and targets set in the climate action plan. This will help identify gaps, challenges, and opportunities for improvement and ensure accountability.

For successful implementation of climate change related programs in the department and the county, there is a need to integrate these mechanisms into the proposed community led actions that lead to sustainable development and resilience to climate change.

4.3.1 Directorate of Climate Change

The Directorate of Climate Change in Kajiado County plays a crucial role in addressing climate change-related issues and implementing climate change strategies at the local level. Some of the common roles and responsibilities within the Directorate of Climate Change:

Policy Development: The Directorate is responsible for developing and implementing climate change policies and strategies specific to the county's context. This involves conducting research, analyzing climate data, and formulating policies that address climate change mitigation, adaptation, and resilience.

Planning and Implementation: The Directorate oversees the integration of climate change considerations into county development plans, programs, and projects. This includes identifying climate change risks, setting targets and priorities, and coordinating the implementation of climate change actions across various sectors.

Coordination and Collaboration: The Directorate serves as a focal point for coordinating climate change initiatives within the county government and with external stakeholders. This involves collaborating with relevant departments, agencies, community groups, and development partners to foster synergy, information sharing, and effective implementation of climate change activities.

Capacity Building and Awareness: The Directorate conducts capacity-building programs to enhance the knowledge and skills of county officials, stakeholders, and the public on climate change issues. This includes organizing training workshops, awareness campaigns, and educational activities to promote climate change literacy and mainstream climate change into decision-making processes.

Monitoring and Evaluation: The Directorate establishes mechanisms for monitoring and evaluating the progress and effectiveness of climate change interventions in the county. This includes collecting and analyzing data, assessing the impacts of climate change, and identifying opportunities for improvement and learning.

Resource Mobilization: The Directorate plays a crucial role in mobilizing financial resources, grants, and partnerships to support climate change initiatives within the county. This involves identifying funding opportunities, preparing project proposals, and engaging with national and international institutions for financial and technical support.

Stakeholder Engagement: The Directorate facilitates stakeholder engagement and participation in climate change planning and decision-making processes. This includes conducting consultations, establishing platforms for dialogue, and involving communities, civil society organizations, academia, and the private sector in climate change actions.

Research and Innovation: The Directorate promotes research and innovation in climate change adaptation and mitigation strategies specific to the county's context. This involves collaborating with research institutions, promoting knowledge exchange, and supporting pilot projects and initiatives that demonstrate innovative solutions to climate change challenges.

4.3.2 County Climate Change Planning Committee

Outlined roles for the climate change planning committee include**;**

(a) Hold consultative meetings with communities together with relevant government sectors, planners, agencies and local organizations.

(b) Participate in livelihood and resilience assessments to enable different community groups identify challenges arising from increasing climate variability.

(c) Prioritize and design investments that will promote climate change resilience.

(d) Prepare project proposals, aggregate and coordinate Ward resilience needs.

(e) Prioritize proposals and submit them to the County Climate

CHAPTER FIVE: MONITORING AND EVALUATION

5.1.Introduction

M&E of CCCAP 2023-2028 will focus on demonstrating that investment in adaptation and mitigation actions leads to real climate results and development benefits that are linked to the Big 4 agenda and County Integrated Development Plan (CIDP). The M&E system will track the implementation and results of CCCAP 2022-2027, 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 reporting.

The establishment of the M&E system will include the development of reporting frameworks for the County Government and community, 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 the responsible departments' report on their progress and achievement of CCCAP actions.
- Ensure efficient reporting processes for the Councils, and draw on established reporting procedures where possible, such as the County Integrated Evaluation System.
- Report on climate finance that supports the delivery of CCCAP 2022-2027.
- Identify a limited number of County indicators that have baseline data and are tracked by The County Treasury and Planning to measure climate-related impacts at the County level
- Use gender-aggregated data where possible and priorities collection of this data if it is not available
- Track and measure GHG emissions on a sector basis at the county level**.**

5.2 Reporting

Kajiado County is required to provide information on mitigation, adaptation and support received, including

1. County inventory to enable tracking of progress on implementing and achieving the mitigation component.
2. Information related to climate change impacts, vulnerabilities, and adaptation.
3. Information on financial, technology development and transfer, capacity building needs, and support received from the national government, and partners.

The implementation of this action plan will be reviewed every five years. The review will utilize reports from communities and councils, as well as inputs from relevant stakeholders. Important stakeholders in the review process include academia, media, women, youth, and minority and marginalized groups including the pastoralists' community.

4.3 Enabling Action

No.	**Enabling action**	**Coordinating institutions and relevant partners**	**Expected results(process indicator)**
1.	Establish the monitoring and evaluation (M&E) component of the MRV+ system to report on adaptation actions and benefits, including identification and measurement of adaptation indicators (including collection of baseline information).	Climate Change Directorate County Government	By 30th June 2025 – Adaptation M&E system fully functional, setting out institutional structures and role of stakeholders in reporting.
2.	Establish a system to track and report on land-based emissions using the development of a monitoring and reporting system for a transparent accounting of emissions and removals in the forestry and land-use sectors.	Environment Department-climate change unit	By 30th September 2025 – Reporting on land-based emissions fully integrated GHG inventory.
3.	Establish a Climate Business Platform to	Climate Change	By 30th September

	support centralized reporting requirements of private entities.	Directorate Private sector	2025 – Private sector large emitters are reporting to Department on a voluntary basis.

6.2. Implementation matrix

6.5. Implementation matrix and Budgets

Strategic Objectives / Environment	Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Groups	Time frame	Source of Funds	Indicative Budget (KES million)					
								Total	23/24	24/25	25/26	26/27	27/28
To enhance environmental conservation and management in to order increase the resilience of the environment sector through	Afforestation and reforestation	Increased tree cover across all 25 wards	No. of hectares of land afforested.	Department of Environmental and water, NEMA, WRA, WRUA	Women, youths, persons living with disability and elderly	2023 - 2028	National Government, County Government & Development partners	50	10	10	10	10	10
			-Percentage of land under forest/tree cover.										
	Conservation and protection of water catchment areas.	Increase availability of water	25 water catchment areas protected	Department of Environmental and water, NEMA, WRA, WRUA	Women, youths, persons living with disability and elderly	2023 - 2028	National Government, County Government & Development partners	60	12	12	12	12	12
	Establishment of fruit tree nurseries and Indigenous tress	Increased seedlings supply for increased forest cover.	20 indigenous tree nurseries established per year	Department of Environment, KFS, KWS, WRA, NEMA	Community, Community groups.	2023 - 2028	National Government, County Government & Development partners	43	7	10	10	8	8
	Capacity building on resource mobilization and conservation programmes	Sensitization on mobilization and conservation programmes	10 sensitization workshops conducted.	Department of Environment, KFS, NEMA	Community, Community groups	2023 - 2028	National Government, County Government & Development partners	25	5	5	5	5	5

	Promotions of Technologies and innovations uptake on solid waste management technologies Incentivising waste management	Modern solid waste management technologies adopted	Number of modern solid waste management plants established	Department of Envrionment Public benefit organization, private sector, and civil society.	Community.	2023 - 2028	National Government, County Government & Development partners	35	7	7	7	7	7
	Rehabilitation of degraded landscapes	Increased number of rehabilitated quarries and brick making sites	Number of awareness forums conducted	Department of Environmental and water, NEMA, WRA, WRUA	Community	2023 - 2028	National Government, County Government & Development partners	60	12	12	12	12	12
	Conservation and restoration of riparian zones.	Degraded riparian zones restored with indigenous tree species and increased tree cover	-Percentage of land under forest/tree cover.	Department of Environment KFS, KWS, WRA	Community	2023 - 2028	National Government, County Government & Development partners	50	10	10	10	10	10
Sub-total								**323**	**63**	**66**	**66**	**64**	**64**

Strategic Objectives	Priority Actions	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Groups	Time frame	Source of Funds	Indicative Budget (KES million)					
Agriculture								**Total**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**
To increase productivity in agricultural sector, through mitigation of climatic hazards in ward.	Sensitize farmers & officers on emerging pests, diseases & invasive weeds	Farmers & officers sensitized on emerging pests & diseases	No. of farmers sensitized	- Department of Agriculture, Livestock and Fisheries	Farmers and farmer groups.	2023 - 2028	National Government, County Government & Development partners	20	4	4	4	4	4
	Establish emerging pest, diseases & invasive weeds surveillance & response team	Emerging pest, disease & invasive weeds surveillance team established & operationalized	No. of officers trained,	-KMD									
			No. of pest & disease surveillance team established										
	Establish plant & animal mobile clinics	Plant & animal mobile clinics established & operationalized	No. of pest & disease surveillance team established	-KALRO									
		Plant & animal mobile clinics established & operationalized	No. of plant & animal clinics established & operationalized	-Private sector									
		Reduced incidences of pests and diseases.	No. of pests and disease incidences reported.	ICRAF, ILRI									
	Animal Disease & vector control	Routine animal vaccination scaled up	No of animals vaccinated	Directorate of	Farmers and	2023 - 2028	National Governme	18	3	4	4	4	3

	through vaccination	Improved surveillance & reporting of Notifiable livestock disease outbreaks	No. of livestock farmers trained on emerging & notifiable diseases	Veterinary, Livestock, Kenya Veterinary Board	farmer groups		nt, County Governme nt & Developme nt partners						
	Train farmers on pre- and post-harvest loss reduction & management initiatives	Reduced pre- and post- harvest loses.	No. of farmers trained on pre- and post-harvest management.	Departme nt of Agricultur e, Livestock and Fisheries, ILRI,	Farmers and farmer groups.	2023 - 2028	National Governme nt, County Governme nt & Developme nt partners	20	4	4	4	4	4
	Formation of support groups/cooperati ves on value addition.	Increased agricultural produce processing and marketing.	No. of groups/cooperati ves supported on value addition	Departme nt of Agricultur e, Livestock and Fisheries, ILRI, KALRO	Farmers and farmer groups	2023 - 2028	National Governme nt, County Governme nt & Developme nt partners	10	2	2	2	2	2
	Promote soil and water conservation initiatives.	Reduced soil erosion and pollution.	No. HH trained & adopting soil conservation technologies	Departme nt of Agricultur e, Livestock and Fisheries, KALRO, ILRI	Farmers and farmer groups.	2023 - 2028	National Governme nt, County Governme nt & Developme nt partners	25	5	5	5	5	5
	Participatory Scenario planning to Dissemination of weather and climate information to local	Improved usage of climate information, Improved weather information	No. of HH trained, accessing and using weather and climate information.	- Departme nt of Agricultur e, Livestock and Fisheries	Farmers and farmer groups.	2023 - 2028	National Governme nt, County Governme nt & Developme nt partners	10	2	2	2	2	2

	communities												
Range - Land Management	Promotion of agroforestry/farm forestry	Distribution of drought resilient Pasture seedlings	No. Established Farmers group issued with drought resilient pasture distributed	- Department of Agriculture, Livestock and Fisheries	Famers issued with the seedlings and Area under pasture established	2023 - 2028	National Government, County Government & Development partners	35	7	7	7	7	7
		Improvement of Livestock breeds	No. of Breeding bulls purchased	-KALRO	No of improved livestock breeds purchased			50	10	10	10	10	10
		Construction of milk holding ares	No. of Milking areas constructed	-Private sector	Number of organized groups benefitted			35	5	5	5	5	5
		Distribution of milk coolants	No. of of milk coolants distributed		Number of organized groups benefitted			30	6	6	6	6	6
	Promotion of traditional foods, Drought tolerant & early maturing crops	Improved traditional food production, preservation & utilization	No. of HH producing traditional foods.	- Department of Agriculture, Livestock and	Farmers and farmer groups.	2023 - 2028	National Government, County Government & Development partners	49	9	10	10	10	10

				Fisheries									
		Drought tolerant/early maturing crops promoted	No. of farmers trained on traditional food crops production	-KALRO									
			Quantity of traditional food crops see/planting material procured & distributed	-Private sector									
	Construction of Climate resiliene irrigation and drainage infrastructure. (Set up Demos sites in public institutions eg TIVETs schools ,)	Increased production under irrigation.	No. of Hectares of crop under irrigation, Drainage and practicing irrigation	Department of Agriculture, Livestock and Fisheries, private sector	Farmers and farmer groups.	2023 - 2028	National Government, County Government & Development partners	30	5	6	6	6	7
	Improve availability of quality livestock feed throughout the year through farmers trainings on production of climate resilient fodder, feed formulation & feed preservation	Increased livestock fodder/feed/pasture production	Hectares under, Climate resilient fodder	Department of Agriculture, Livestock and Fisheries, Kalro, KFS, ILRI, Private Sector	Farmers and farmer groups.	2023 - 2028	National Government, County Government & Development partners	23	7	4	4	4	4
			No. of famers trained on feed formulation										
			No. of feed formulation equipment procured, installed &		Farmers and farmer groups.	2023 - 2028							

			operational										
			Quantity of feed formulated & utilized										
			No. of farmers doing on-farm feed formulation										
			Quantity of fodder/pasture seed distributed										
Sub-Total								**355**	**69**	**69**	**69**	**69**	**69**

Strategic Objectives	**Priority Actions**	**Expected Outputs/Outcomes**	**Key Performance Indicators**	**Responsible Institutions**	**Targeted Groups**	**Time frame**	**Source of Funds**	**Indicative Budget (KES million)**					
Water and Irrigation								**Total**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**
To promote sustainable utilization and access to clean, safe, potable	De-siltation and protection of dams	10 dams protected and desilted	Volume of water in dams increased	Department of Environmental and water, WRA, WRUA, NEMA	Community	2023-2028	National Government, County Government & Development partners	50	10	10	10	10	10
			-No. dams de-silted and protected										

water and sanitation services through mitigation of various climatic hazards	Drilling development, Equipping and distribution of solar powered water boreholes	2 boreholes to be drilled and equipped in each of 25 wards by end of 5 years	50 No. of boreholes drilled and equipped	Department of Environmental and water, WRA, WRUA, NEMA	Community	2023-2028	National Government, County Government & Development partners	150	30	30	30	30	30
	Solarization and equipping of bore holes	5 boreholes to be solarized and equipped in each of 25 wards by end of 5 years	25 No. of boreholes Solarized and equipped	Department of Environmental and water, WRA, WRUA, NEMA	Community	2023-2028	National Government, County Government & Development partners	75	15	15	15	15	15
	Construction of sand dams along the rivers	Sand dams constructed	No of Sand dams Constructed	Department of Environmental and water, NEMA, WRA, WRUA	Community	2023-2028	National Government, County Government & Development partners	150	30	30	30	30	30
	Construct of storms water/runover management interventions	Constructed storms and water runover constructed	No. of storms and water runover constructed	Department of Environmental and water, NEMA, WRA, WRUA	Community	2023-2030	National Government, County Government & Development partners	100	20	20	20	20	20
	Sub-total							**525**	**105**	**105**	**105**	**105**	**105**
5 Yrs Cumulative Budget								**1,203**	**237**	**240**	**240**	**238**	**238**