

TAITA TAVETA COUNTY **CLIMATE CHANGE** **ACTION PLAN**

2023-2027



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PREFACE



Climate change is no longer a new phenomenon, it is one of the foremost challenges of the 21st century and is a serious threat to mankind. Although it has all along appeared as an international spectacle, and often viewed from a global lens that demands a global approach, for the poor and hard hit, it is no longer a boardroom affair but a daily reality and fight for survival. My administration is alive to this harsh reality and has developed a comprehensive policy and legal framework to spur climate action in the County.

Taita Taveta County is largely ASAL and is heavily impacted by Climate Change largely by way of prolonged drought, flush floods and increased incidences of Human Wildlife Conflict. This calls for solutions that are locally led and that have the potential to increase climate resilience of communities and their livelihoods. This has become ever more urgent, considering the fact that the climate crisis has eroded hard-won development gains and deepened the cycles of poverty and vulnerability across the county.

The County Climate Change Action Plan 2023-2027 is a carefully crafted set of climate actions that were developed through an elaborate participatory climate risk assessment process. It consolidates locally determined climate interventions that were gathered through countywide community consultations that ensured inclusive representation with special focus on the vulnerable and marginalized groups. This is the County's climate change response blue print for the next 5 years that is aimed at transformational change that brings about low carbon climate resilient economic growth. Interventions span virtually across all sectors of the economy but special emphasis is directed at agriculture, water, environment, health, energy and infrastructure, being the most severely impacted by climate change.

The CCCAP 2023-2027 is in line with SDG no.13, which aims at strengthening resilience and adaptive capacity to climate related hazards and natural disasters. Taita Taveta county has taken a front seat in efforts to mainstream climate change measures in sync with the national government global obligation towards adaptation and mitigation of climate change. This Action Plan thus provides a road map detailing the priority areas that my administration will undertake in the next five years in a bid to address the causes and consequences of climate change and to work towards net zero emissions by the year 2050. I therefore call upon both state and non-state actors within the county to put in place the necessary mechanisms to facilitate the successful implementation of the County Climate Change Action Plan.

H. E. ANDREW MWADIME
GOVERNOR, TAITA TAVETA COUNTY.

ACKNOWLEDGEMENT



The successful development of this County Climate Change Action Plan is the culmination of a long and painstaking process which involved wide consultations and inputs from various institutions and individuals; integrating both local and global expert knowledge while upholding the principle of public participation as entrenched in the Constitution of Kenya, 2010. I am immensely grateful to the County Climate Change Steering committee under the leadership of H.E Governor Andrew Mwadime and the stewardship of H.E. DG Christine Kilalo, together with my fellow County Executives, for providing strategic guidance and direction in the development of this document. Special thanks are due to the dedicated Technical Working Group who worked tirelessly in adhering to the strict guidelines and finally coming up with this document.

Am deeply Indebted to the World Bank, The Governments of Denmark and Sweden and GoK for the financial support extended through the FLLOCA program under (County Institutional Support Grant) that helped the County undertake the participatory Climate Risk Assessment and eventually the preparation of CCCAP 2023-2027.

Last but not least, my invaluable gratitude goes to the wide spectrum of individuals and organizations in the private sector, academia, civil society and government agencies who wholeheartedly gave their time and input to this important exercise. It's my assurance that all your views and contributions were well received and incorporated into the plan. I encourage you all in your respective sectors to fully participate in the implementation of the action plan.

A handwritten signature in dark ink, appearing to read 'Grantone Mwandawiro', written in a cursive style.

Hon. Grantone Mwandawiro
County Executive Committee Member

MEMBERS OF MULTI SECTORAL TECHNICAL WORKING GROUP

1. John Mlamba Director Climate Change and Environment
2. Joan Lavoga Principal Environment Officer
3. Godfrey Mfuko County Climate Change and Environmental Safeguards Officer
4. Ronald Mwakazi Climate Change, M&E, Reporting and Verifications Officer
5. Michael Mwakio Sub County Climate Change and Environment Officer
6. Justus Kioko Sub County Climate Change and Environment Officer
7. Vincent Mwachia Sub County Climate Change and Environment Officer
8. Annah Mwatika Sub County Administrator-Taita
9. Dr. Seboru Sikujua Sub County Administrator, Taveta
10. Godfrey Kisombe Sub County Administrator, Voi
11. Donald Ndau Social safeguards Officer
12. Kevin Ngige County Lands Officer
13. Clifford Kagera ICT/GIS specialist
14. Robinson Asira County Director Meteorological Services, KMD
15. Marsden Mwangemi Sub County Water Officer
16. Ali Ahmed Sub County Agriculture Officer
17. Monica Mwawana Sub County Livestock Officer
18. Emanuel Kirigha Sub County Administrator
19. Job Ngeno County Environment Officer-NEMA
20. Stanley Maighacho County Monitoring and Evaluation Officer
21. Valentine Mwata Fund Administrator
22. Gershon Mwaluda FLLOCA Project Accountant
23. Gladys Machua Officer-Nature Kenya
24. Emmanuel Mwamburi Officer-TTWCA
25. Livingstone Moto Communications Officer

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ACRONYMS

AWF	African Wildlife Foundation
ASAL	Arid and Semi-Arid Lands
CCCAP	County Climate Change Action Plan
CECM	County Executive Committee Member
CoK	Constitution of Kenya
UNFCCC	United Nation Framework Convention on Climate Change
PCRA	Participatory Climate Risk Assessment
FLLoCA	Financing Locally Led Climate Actions
GHG	Green House Gases
MRF	Material Recovery Facility
NAP	National Action Plan
CCRI	Climate Change Resilient Investment
MESPT	Micro Enterprise Support Programme Trust
NDMA	National Drought Management Authority
KALRO	Kenya Agriculture and Livestock Research Organization
NPS	National Police Service
FAO	Food Agriculture Organization
KEPHIS	Kenya Plant Health Inspectorate Service
ICIPE	International Center for insect Physiology and Ecology
JICA	Japan International Cooperation Agency
TTWCA	Taita Taveta Wildlife Conservation Association
NGAO	National Government Administration Officers
KEFRI	Kenya Forestry Research Institute
WWF	World Wildlife Fund
WFP	World Food Program
KMC	Kenya Meat Commission

DEFINITION OF TERMS

Adaptive capacity: refers to the ability of a system or a community to adjust to climate change effects, to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

The **carbon market** is a market that is created from the trading of units of GHG emissions.

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

Coping: refers to the use of existing resources to achieve desired goals during and immediately after climate-induced hazards.

Disaster: A disaster can be defined as a serious disruption of the functioning of the society causing widespread human, material or environmental damage and losses which exceed the ability of the affected community to cope using their own resources.

Global warming refers to the gradual increase, observed or projected, in global surface temperature, as one of the consequences of climate change.

The main **greenhouse gases** that are measured in a GHG inventory are: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), Sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃)

Hazard: A potentially damaging physical event, human activity or phenomenon with a potential to cause loss of life or injury, property damage, social and economic disruption of life, environmental degradation among other effects

Impacts: Specific effects of hazards or disasters also referred to as consequences or outcomes.

Mitigation: Short and long-term actions, programmes or policies implemented in advance of a natural hazard or in its early stages, to reduce the degree of risk to the people, property, and productivity capacity.

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

Preparedness: Pre-disaster activities designed to increase the level of readiness or improve operational capabilities for responding to an emergency.

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

the carbon stored in forests by avoiding deforestation and increasing the carbon stock in existing forests.

Response: Actions taken immediately before, during or directly after a disaster to reduce impacts and improve recovery.

Risk: Risk is the probability of harmful consequences or loss resulting from the interaction between natural hazards and vulnerable conditions of property and people.

Vulnerability: Vulnerability refers to a set of conditions resulting from physical, social, economic and environmental factors, which increase the susceptibility of a community to the impact of disasters. Vulnerability also refers to the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard.

EXECUTIVE SUMMARY

The Taita Taveta County Climate Change Action Plan (CCCAP) for 2023-2027 addresses the urgent need to tackle climate change and promote resilience in the county. Aligned with national and global climate change goals, the CCCAP outlines strategic actions to mitigate and build resilience to the impacts of climate hazards and enhance sustainable low carbon climate resilient development.

The underlying climate resilience context in Taita Taveta County reveals the significant challenges posed by climate change. Droughts have led to consecutive failed crop seasons, threatening food security and contributing to high poverty levels. Human-wildlife conflict has escalated due to wildlife encroaching on community areas in search of water, leading to property damage and loss of life. Floods, pests and diseases, soil degradation, and deforestation further aggravates the social, environmental, and economic impacts faced by the county.

To address these challenges, the CCCAP prioritizes six key areas for action. Disaster risk management focuses on reducing risks from droughts and floods through early warning systems, emergency response plans, and climate-resilient agricultural practices. Food and nutrition security measures aim to increase productivity and resilience in the agricultural sector, supporting farmers with access to quality inputs and market linkages.

Water resource management is also a crucial priority, involving initiatives such as water storage infrastructure development, water conservation practices, and the promotion of sustainable fisheries and aquaculture. Forest conservation, land rehabilitation, and wildlife protection form the core of forestry, wildlife, and tourism actions, with a focus on increasing forest cover and enhancing community participation.

Actions targeted in the Health, sanitation, and human settlements sector address the impacts of climate change on disease prevalence, resilient building practices, access to clean water and sanitation, and sustainable waste management.

Finally, the energy and transportation sector has climate actions that aim at climate-proofing infrastructure, promote renewable energy adoption, and development of sustainable transport systems.

The CCCAP reflects the commitment of the Taita Taveta County Government towards building climate resilience, ensuring sustainable development, and contributing to national and global climate change targets. By implementing these priority actions, the county strives to reduce vulnerabilities, enhance adaptive capacity, and foster sustainable economic growth.

The plan's success relies on strong collaboration and partnerships among government agencies, civil society, private sector, stakeholders, and the community at large. Continuous monitoring, evaluation, and reporting (MRV) will be crucial for effective implementation and ensuring the achievement of desired outcomes.

Taita Taveta County acknowledges the urgency and importance of climate action, recognizing that a proactive approach to climate change mitigation and adaptation is essential for the well-

being and future prosperity of its communities. Through the CCCAP, the county strives to lead by example and become a Climate Change Adaptation center of excellence that embraces sustainable practices, ensuring a resilient and sustainable future. The estimated cost for the implementation of the CCCAP is **KSHS 17.81 Billion.**

1.0. BACKGROUND AND CONTEXT

Taita Taveta County is located approximately 360 km southeast of Nairobi and 200 km northwest of Mombasa, and is a port and major gateway to the United Republic of Tanzania through Taveta town. The county, whose headquarters are situated in Mwatate sub-county, is one of the six counties in the Jumuiya ya Kaunti za Pwani(JKP) regional economic bloc. The major towns in the County include Voi, Taveta, Mwatate and Wundanyi.

The county covers a total area of 17,084.1km² with 10,649.9 km²(62.3%) being within Tsavo East and Tsavo West National Parks, providing a major tourism destination. Water bodies within the county occupy 106 km² comprising of Lakes Jipe and Chala in Taveta sub-county. The rest of the area is spread within public and private land such as ranches. Sisal estates and hilltop forests occupy less than 100 km².

The projected 2022 population of the county stands at 360,000 with a gender split of 51% being male and 49% being female. The population density per km² in the county ranges from 6 persons in rural areas to more than 900 persons in urban areas. The population distribution in the county is influenced by cultural heritage, rainfall and terrain. The main ethnic groups in the county include: Taita, Taveta, Kambas, Maasai, Luos, Kikuyu and Somalis.

The lower regions of the County receive an average of 440 mm of rain per annum whereas the highlands receive up to 1900 mm. Altitudes range from 500 meters above sea level to almost 2300 m at the highest point in the county Vuria Peak. The highest temperature of the County is 32 degrees Celsius while the lowest is 15 degrees Celsius.

The size of the county arable land is 2,055 km² while non-arable land is 14,307 Km². There are 48 forests in Taita Taveta County, 28 of which are gazetted and managed by the national government. The size of the gazetted forests is 1,489.80 ha, non-gazetted forests is 9,000 ha and the approximate forest cover is 3.41%. The forests range in size from 500 m² to 2 km² encompassing both exotic and indigenous forest mountains. In addition, they form part of a unique Eastern Arch range of forests made up of the Taita Hills and Eastern Tanzania mountains. The Taita Hills have a unique biodiversity of flora and fauna with 9 species of animals and 13 species of plants exclusively found within the region. The water mass of the County is 106 Km².

The main activity in the County is crop farming; food crops and cash crops. The total acreage under food crops is 44787.85 acres and 8144.59 acres under cash crops. The main food crops are maize, beans, rice, green grams and bananas while the main cash crops are macadamia, avocados, assorted vegetables, mangoes, sisal and French beans.¹

1.1. PURPOSE AND PROCESS OF CCCAP

The County Climate Change Action Plan is a five-year plan that provides the County Government of Taita Taveta with a framework that promotes adaptation to climate change;

¹ Source Taita Taveta CIDP 2023-2027

mainstreaming of climate change in program design and development planning and building community resilience to climate change. This is further guided and aligned to the National Climate Change Action Plan which supports Kenya to adapt to climate change and reduce greenhouse emissions.

The Goal of CCCAP 2023-2027 is **to provide a framework mechanism for the implementation of climate actions that increase resilience of both community and economic systems and brings about rapid low carbon climate resilient growth of the County.**

The CCCAP also speaks to the Nationally Determined Contributions (NDC), and by extension the regional and global climate change conventions as guided by the UNFCCC, IPCC and the Paris Agreement. The Action plan further seeks to;

- Align climate change actions to the County's development agenda as articulated in the CIDP 2023-2027 and in the Governor's manifesto;
- Encourage participation of the private sector, civil society, and vulnerable groups within society, including women, older members of society, persons with disabilities, children, youth, and members of minority or marginalised communities.
- Support the Country's framework to deliver Kenya's Nationally Determined Contribution for the 5-year period 2023-2027
- Provide a framework for mainstreaming climate change actions in sector functions at the County level.

For the achievement of climate change actions that advances County economic and sustainable development objectives, the CCCAP is guided by the following principles;

- Responsiveness- responds to actual adaptation and mitigation needs in the County by taking measures that reduce the adverse effects of climate change and prevent or minimize climate change.
- Equity and social inclusion-addresses the needs of vulnerable groups and members of minority or marginalized community through an inclusive approach to climate action
- Consultation and cooperation- implements actions through consultation and cooperation between the National Government and County Governments, as well as consultation and cooperation with civil society and the private sector.
- Fairness – ensures that climate actions do not create competitive disadvantage for the private sector relative to its trading partners

The County Department of Water, Sanitation, Environment, Climate Change and Natural Resources undertook the development of the CCAP through a comprehensive Participatory Climate Risk Assessment process. The process entailed formation of a multi-sectoral technical working group (TWG) that comprised of director's and heads of climate related sector departments, agencies, Civil Society and Private Sector. Thereafter, the TWG received training on the PCRA process ahead of an elaborate PCRA data gathering and community engagement exercise. This was followed by a stakeholders' consultative engagement which drew participants from a wide spectrum comprising County Government, Civil Society, academia, MDAs and community organizations.

1.2. UNDERLYING CLIMATE RESILIENCE CONTEXT

1.2.1. Impact of Climate Hazards in the County

According to the County Climate Risk Profile, “Taita Taveta County has been experiencing changes and variabilities in climate for the last four decades. These changes have had adverse effects and impacts in the county’s communities and their livelihoods.” This section looks at the impacts of climate change through the social, environmental and economic lenses.

Social impacts

During the PCRA exercise it was clear that the society had been adversely impacted socially, environmentally and economically. Drought was listed as the greatest climate risk and hazard in the County. A clear indication from the data gathered is that there have been five consecutive failed rainy seasons and the sixth is imminent. This hazard has affected households and have required the County Government and development partners to step in to offer food relief alongside other humanitarian assistance.

The second most prominent hazard attributed to climate change is Human-wildlife Conflict. Given that 62% of Taita Taveta County is National Parks and a further 24% ranches and sisal plantations which also double as wildlife dispersal areas, the communities which live around parks and ranches have increasingly reported attacks and invasion by wild animals. The conflict is largely fueled by lack of water inside the National Parks as well as in the ranches which results in the wildlife venturing into community areas in search of the same. As the animals cross paths with communities, conflict occurs and sometimes results in loss of life. The PCRA established that the conflict has in hotspot areas disrupted school attendance, restricted community movement especially in the early and late hours of the day hence reducing available time for productive undertakings. This has been one of the drivers of the escalating poverty levels in HWC prone areas.

The other hazard that was identified was floods, and was mainly reported in Taveta Sub County with other incidences reported in Voi Town and Mwatate. A most recent incident was reported in Mwatate Sub County in a village near the Mwatate dam where four members of one family were swept away by flush floods at the onset of March to May rains in the year 2023.

Pests and disease outbreaks have also seen a marked rise in frequency and intensity. In agricultural food crops especially maize, cases of fall army worm invasion have been on the increase within the County. This has greatly affected agricultural production and impacted on farmer livelihoods. The spread of the worm has extended to cover nearly the entire county. This has meant that farmers have to incur additional cost for pest and disease control which makes production costs higher.

Last but not least, landslides have been reported especially in Mwanda Mgange, Ronge, Wundanyi/ Mbale and other wards that have people settled on steep slopes. Cases of people getting buried by landslides have been reported. The landslides happen as a result of heavy/intense downpour which are now frequently experienced.

Environmental Impacts

The long-term environmental changes include soil degradation, reduction of water volumes in rivers, landslides, deforestation, drying up of springs, wells and rivers, and increased human wildlife conflict.

Soil degradation happens due to extreme heat as a result of very high temperatures that are experienced during the dry season especially in the period January to March. The desiccation leads to loss or release of soil nutrients and minerals and the death of soil microbes and organisms rendering the soils infertile and unproductive

The frequent failure of rains and resulting drought conditions leads to reduction of water volumes in rivers and the drying up of wells, springs and rivers. This in turn affects aquatic biodiversity in the form of declining fish populations and aquatic life in general. This also means that there is insufficient water to be used for environmental conservation activities such as tree growing as priority is usually given to domestic and institutional consumption.

Deforestation on the other hand is a serious impact of climate change in the county. This has been exacerbated by wanton destruction through uncontrolled tree felling, clearing land for cultivation agriculture, charcoal burning and extraction of poles and construction materials. Deforestation has far reaching consequences in terms of loss of biodiversity and diminishing ecosystem services such as destruction of water catchment.

Increased human wildlife conflict is reported in most low land wards in the County. The worst affected wards are, Sagalla, Ngolia, Kasighau in Voi Sub County; Bura/Maktau, Chawia and Mwatate Wards in Mwatate Sub County and Mata and Challa Wards in Taveta Sub County. The conflict has impacted the environment by way of overuse of rangeland resources leading to land degradation and vegetation loss.

Economic Impacts

Among the most noticeable impact of climate change on the economy is the hit that the agriculture sector has taken in the county. The increased frequency of failed rainy seasons which has resulted in prolonged droughts have affected farm outputs resulting in decreased farmer earnings. Considering that agriculture remains to be the largest employment sector in rural Taita Taveta County, this interruption in seasonal agriculture has rendered most members of the community out of employment and consequently contributed to the high poverty levels which are pegged at 57% (CIDP III).

NCCAP 2018-22 reports Droughts have had the greatest economic impact – on average, a 0.6 percentage point decline in GDP growth is observed in Kenya in years of poor rains (see Figure 3).⁴⁹ The agriculture sector grew by 1.6% in 2017, compared to 4.7% in 2016, because drought suppressed production of crops and adversely affected livestock production.⁵⁰ The drought depressed generation of hydroelectricity leading to an increase in generation of electricity from thermal sources that are more costly and produce greenhouse gas emissions. From 2007 to 2017,

losses in livestock populations due to drought-related causes amounted to nearly US\$ 1.08 billion.

Human wildlife Conflict has resulted in crop and property destruction in the County. This has had far reaching economic impact by way of loss of farmer incomes and financial losses occasioned by property damage. Cases of elephants raiding homes and institutions and destroying water tanks and water infrastructure such as pipelines has been on the rise. This has serious financial implications that directly affect communities. Moreover, these conflicts occasionally result in injury and loss of lives. The injuries that are caused by human wildlife conflict further puts additional burden on the County's health system.

Floods equally, subject the community and the county at large to additional economic losses. A case was reported in Mata in 2021 where hundreds of goats and sheep were washed away by flash floods, homes destroyed, farms waterlogged. This obviously has great economic ramifications. However, due to a lack of a properly crafted cost analysis and determination framework to capture the losses the true value and extent of loss is never ascertained. Therefore, as the scenario continues to play out whenever floods occur, there is need for the County to come up with evaluation mechanisms that will assist it in quantifying the economic impact.

According to NCCAP 2018-2022 "The economic impacts of floods are severe; in 2018, rain and flooding wiped out resources worth billions of shillings. Roads and infrastructure were destroyed, seasonal crops across an estimated 8,500 ha of land were destroyed and over 20,000 livestock drowned. The Government allocated over KES 75 billion to combat floods and fix roads destroyed by the rains. The El Niño induced floods in 1997/1998 caused losses and damages of between US\$ 800 million and US\$ 1.2 billion."

	Hazard	Impact
1.	Drought	<ul style="list-style-type: none"> ▪ Loss of pasture and vegetation ▪ Depletion of water and water sources ▪ Reduced crop production ▪ Environmental degradation ▪ Economic disintegration
2.	Floods	<ul style="list-style-type: none"> ▪ Escalation of water borne diseases ▪ Displacement of people ▪ Loss of lives and livelihoods ▪ Loss of property and livestock ▪ School disruption ▪ Infrastructure damage ▪ Land degradation and soil erosion
3.	Human wildlife conflict	<ul style="list-style-type: none"> ▪ Destruction of crops ▪ Loss of food ▪ Destruction of property ▪ Livestock depredation ▪ Disruption of normal school hours ▪ Disruption of normal daily social activities
4.	Pests and diseases outbreaks	<ul style="list-style-type: none"> ▪ Reduction in crop and food production ▪ Reduction in livestock production

		<ul style="list-style-type: none"> ▪ Emaciation and death of livestock ▪ Economic losses due to lost man-hours due to increased prevalence of ill health ▪ Increased Pressure on health facilities
5.	Landslides/ Mudslides	<ul style="list-style-type: none"> ▪ Destruction of Property ▪ Destruction of infrastructure ▪ Loss of agricultural land ▪ Loss of life ▪ Loss of livelihoods ▪ River and road blockage
6.	Fires (Wild/Forest)	<ul style="list-style-type: none"> ▪ Loss of biodiversity ▪ Loss of vegetation ▪ Catchment destruction ▪ Destruction of pasture in rangelands ▪ Destruction of property ▪ Loss of lives ▪ Death of livestock and wildlife

1.2.2. Overview of climate change actions in the county

From the PCRA exercise it was evident that the County jointly with development partners has initiated several climate actions. The County through its various departments has also lined up a number of potential climate actions that it plans on rolling out to enhance climate resilience and reduced emissions. For ease of presentation, the climate change actions have been clustered under each identified climate hazard. The following table summarizes the climate actions that were enumerated in both the PCRA community engagement and data gathering and stakeholders' consultative engagement stages of the PCRA process.

Risk/hazard	Livelihood/economic system	Climate resilience strategies	Stakeholder group applying the strategy	Gender and social inclusion information
Drought	Agriculture	Food aid/assistance	Red Cross, World Vision, Department of Special Programs at National and County levels, Ministry of Agriculture (National level and County levels), Action Aid, FAO, WFP, Compassion, Inua Jamii	Men, women, children, youth, old age and PLWD
	Agriculture	Drought tolerant crops and livestock breeds	FAO, County Department of Agriculture and Livestock, Ministry of Agriculture and Livestock, KALRO, Kenya Seeds, SNV, ASDSP, MESPT, CRS, ICRISAT, WB	Men, women, youth, old age and PLWD
	Water and environment	Water infrastructure development	County Department of Water and Sanitation, NDMA, Action Aid, World Vision, Red Cross, JICA, Ministry of Water, Water Services Trust Fund (WSTF), Coast Water Works Development, Wildlife Works, NPS Water Protection Unit, KEWASNET, CDA, EU, NGCDF, WB, WSP	Men, women, children, youth, old age and PLWD
	Agriculture	Livestock off take	County Department of Agriculture and Livestock, Ministry of Agriculture and Livestock, Kenya Climate Smart Agriculture Project, KCEP CRAL, KALRO, KMC, FAO, NDMA, Red Cross, AFC, NGAO	Men, women, youth, old age and PLWD

	Meteorological	Early warning system	KMD, FAO, KALRO, Red Cross, NDMA, County Department of Agriculture and Livestock, Ministry of Agriculture, ICRISAT, NGAO,	Men, women, children, youth, old age and PLWD
	Livestock and Agriculture	Pasture farming and fodder storage	County Department of Agriculture and Livestock, FAO, ASDSP, SNV, TTWCA, KCB, Coop Bank, Mngama Cooperative	Men, women, youth, old age and PLWD
	Agriculture and livestock	Diversification of livelihoods	County Department Agriculture and livestock, FAO, ASDSP, SNV, Nature Kenya, Action Aid, NDMA, Kenya Red Cross, World Vision, Social Services, TTWCA	Men, women, aged, PLWD
	Community capacity building	Cash transfers	Action Aid, World Vision, Labour and Social Protection, Department of Social Services, Red Cross, FAO, Compassion, Wildlife Works, carbon credit, KNSP	Men, women, children, youth, old age and PLWD
	Water and irrigation	Irrigation systems	Ministry of Agriculture, County Department of Agriculture and livestock, NDMA, Action Aid, Coast Water, Kenya Water Towers Agency, WRUAS, NPS water unit, NIA, CRS, IWUA, World Vision, Red Cross, WB, CDA	Men, women, youth, old age and PLWD
	Water and irrigation	Boreholes	County Department of Water and Sanitation, NDMA, Kenya Red Cross, World Vision, Wildlife Works, Action Aid, MESPT, NPS water unit, CRS, CDA	Men, women, youth, old age and PLWD
	Forestry	Afforestation	County Department of Environment,	Men, women,

			Climate Change and Natural Resources, County Department of Water and Sanitation, Nature Kenya, KFS, KEFRI, NEMA, KWS, TAITA TAVETA YOUTH ALLIANCE, Wildlife Works, TTWCA, Teita Sisal Estate, MESPT, Red Cross, learning institutions, Town committees and Municipal Boards, Self Help Groups, AWF, WCK	children, PLWD, aged
	Lands/Agriculture	Land management	Department of Lands and Physical Planning, Ministry of Lands, Agriculture, FAO, World Vision, NDMA, Red Cross, Department of Water, Sanitation, Department of Environment and Climate Change, Action Aid, NLC, NEMA, NGAO, TTHRW, Land Control Boards, Community Land Committees, KLA, Kituo cha Sheria, Judiciary, TTU	Men, women, youth, old age and PLWD
	Social services	Community education and awareness	Department of Gender Sports and Culture, Red Cross, NDMA, World Vision, Wildlife Works, FAO, WFP, learning institutions, KMD, Department of Children, Action Aid, Nature Kenya, KLRO, Department of Livestock and Agriculture, media, NGAO, County Administration, TTHRW, CRS, TAITA TAVETA YOUTH ALLIANCE, Sauti ya Wanawake, CHVs, Council of Elders	Men, women, children, youth, old age and PLWD
	Trade and industry	Climate resilient Value	KALRO, MESPT, Department of	Men, women, PLWD

		chain development	Livestock and Agriculture, Department of Environment, Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision, KCPB, Kenya Dairy Board, KMC, Gemology Ctr., EASSI, SETA	and the aged
		Functional markets	County Department of Trade, Ministry of Trade, FAO, County Department of Agriculture, Ministry of Agriculture, KCPB, Kenya Dairy Board, KMC, Chamber of Commerce, KIE, EASSI, Jua Kali Associations, SMEs	Men, women, PLWD and the aged
	Agriculture and environment	Nature based interventions	County Department of Agriculture, Ministry of Agriculture, Ministry of Tourism, Department of Trade and Tourism, Nature Kenya, AWF, WWF, Wildlife Works, KWS, Equity Bank, KCB Bank	Men, women, PLWD, the aged
	Education	School feeding programme	Action Aid, World Vision, Shake Foundation, Teita Sisal Estate, Qwetu Sacco, KCB Foundation, Red Cross, County Department of Special Program, Primary and Secondary schools, CRS, Youth 4 Charity, NDMA,	Children
	Peace and security	Conflict resolution committees	NGAO, County Administration, DCI, NPS County Steering Peace Committee, Community Policing, NCIC, UNDP, NPS, Judiciary,	Men, women, PLWD, and the aged
	Disaster response	Water trucking	County Department of Water and	Men, women, PLWD,

			Sanitation, Tavevo, Red Cross, World Vision, Department of Special Programs at National and County Levels, Action Aid, FAO, WFP, Teita Estate, KWS, County Department of Public Works, PPP, KFS	children and the aged
	Governance	Formulation/review and implementation of Policy, legal and regulatory frameworks	Red Cross, NGAO, County Department of Special Program, World Vision, FAO, WFP, Action Aid, County Department of Health, Ministry of Special Programs, County Assembly, UN Habitat, GIZ, UNDP, Nature Kenya, AWF, NEMA, Enforcement, KFS	Men, women, PLWD and the aged
Floods	Disaster response	Evacuation planning	Red Cross, NGAO, World Vision, NYS, Department of Health, learning institutions, NPS, Action Aid, Ministry of Health, Wildlife Works, Compassion, Teita Estate, Safaricom, Shake Foundation, KCB Foundation, Special programmes, FBOs, DSWT. TTWCA,	Men, women, children, youth, old age and PLWD
	Disaster response	Provision of Relief food and Non-food items	Red Cross, World Vision, Department of Special Programs at National and County levels, Ministry of Agriculture (national level and County levels), Action Aid, FAO, WFP, NDMA, CRS, USAID, FBOs, PPP,	Men, women, children, youth, old age and PLWD
	Disaster response	Water trucking	County Department of Water and Sanitation, Tavevo, Red Cross, World Vision, Department of Special Programs	Men, women, children, aged, youth and PLWD

			at National and County Levels, Ministry of Agriculture (national level and County levels), Action Aid, FAO, WFP, Teita Estate	
	Disaster response	Community sensitization and support in ensuring drinking water safety (Provision of WASH supplies)	Red Cross, Tavevo, County Department of Health, World Vision, County Department of Water and Sanitation, CHVs, NEMA, NGAO, County Administration	Men, women, children, aged, youth and PLWD
	Emergency preparedness	Early warning system	KMD, FAO, KALRO, Red Cross, NDMA, County Department of Agriculture and Ministry of Agriculture, Local Resource Persons	Men, women, children, aged, youth and PLWD
	Resource use	Land management	Department of Lands and Physical Planning, Ministry of Lands and Survey, KEFRI, KEPHIS, KALRO, KFS, nature KENTA, FAO, World Vision, NDMA, Red Cross, Department of Water, Sanitation, Department of Environment Climate Change and Natural Resources, TTWCA, NEMA	Men, women, aged, youth and PLWD
	Capacity building	Community awareness and sensitization	Department of Gender Sports, Department of Social Service, Red Cross, NDMA, World Vision, Wildlife Works, FAO, WFP, learning institutions, KMD, Department of Children, Action Aid, Nature Kenya, KALRO, Media, NGAO, County Administration, CFAs, CBOs	Men, women, aged, youth and PLWD

	Flash floods	Storm water management	Department of Lands and Physical Planning, Department of Water and Sanitation, Town committees and Municipal Boards, Public Works, NYS, Kenya Rainwater Harvesting Authority	Men, women, youth, PLWD, aged
	Disaster Preparedness/ resilience	Flood resistant infrastructure	County Department of Lands and Physical Planning, Department of Public Works, Town committees and Municipal Boards, NEMA, NCA, County Directorate of Enforcement	Men, women, youth and aged
		Site and location of critical facilities to consider flood risk	County Department of Lands and Physical Planning, Department of Public Works, Town committees and Municipal Boards, NEMA, NCA	Men, women, youth, aged and PLWD
		Enforcing building codes and standards	County Department of Lands and Physical Planning, Department of Public Works, Town committees and Municipal Boards, NEMA, NCA, County Directorate of Enforcement, Public Health, Administration,	Men, women, youth, PLWD and the aged
		Resettlement to safer zones	National Land Commission, Ministry of Lands and Survey, Department of Lands and Physical Planning, Kenya Red Cross Society, NDMA, World Vision, World Bank,	Men, women, children, aged, youth and PLWD
		Opening of drainage channels	NYS, Ministry of Agriculture and Irrigation, County Department of Public Works, Town committees and Municipal Boards, World Vision, County	Men, women, youth, PLWD and the aged

			Department of Environment Climate Change and Natural Resources, County Department of Water and Sanitation, NIA, PPP, OOP	
	Physical planning	Land use planning/spatial planning	County Department of Lands and Physical Planning, Department of Public Works, Town committees and Municipal Boards Boards, NEMA, NCA, County Directorate of Enforcement, SNV, FAO, TTWCA, Wild Life Works, KWCA, AWF, UN Habitat, TTU,	Men, women, youth, PLWD and the aged
		Formulation and implementation of a Development Control Policy	County Department of Lands and Physical Planning, Department of Public Works, Town committees and Municipal Boards Boards, NEMA, NCA, County Directorate of Enforcement, UN Habitat, TTU,	Entire community gender spectrum
		Develop urban development plans and guidelines where tree growing provision is included in plot development plans	County Department of Lands and Physical Planning, Department of Public Works, Town committees and Municipal Boards Boards, NEMA, NCA, County Directorate of Enforcement, UN Habitat, TTU,	Entire community gender spectrum
		Promote waste water treatment and recycling solutions in buildings, homes and institutions	County Department of Lands and Physical Planning, Department of Public Works, Town committees and Municipal Boards Boards, NEMA, NCA, County Directorate of Enforcement, UN Habitat, TTU,	Entire community gender spectrum

		Proper planning of urban road infrastructure to provide pedestrian walkways that ensures pedestrian safety and encourages walking hence reduction of use of motorable transport and reduced emissions	County Department of Lands and Physical Planning, Department of Public Works, Town committees and Municipal Boards, NEMA, NCA, County Directorate of Enforcement, UN Habitat, TTU,	Entire community gender spectrum
	Governance	Development and implementation of Policies, legal and regulatory framework	Red Cross, NGAO, County Department of Special Program, World Vision, FAO, WFP, Action Aid, County Assembly	Men, women, youth, PLWD and the aged
	Community resilience	Cash transfer	County Department Agriculture and Livestock, FAO, ASDSP, SNV, Nature Kenya, Action Aid, NDMA, Kenya Red Cross, World Vision	Men, women, youths and the aged
	Education	School feeding program	Action Aid, World Vision, Shake Foundation, Teita Sisal Estate, Qwetu Sacco, KCB Foundation, Red Cross, County Department of Special Program.	Children
Human wildlife conflict	Agriculture and food security	Promotion and provision of animal scare technologies/equipment such as thunder flashes, flash lights	KWS, TTWCA, Tsavo Conservation Area, AWF, Flora and Fauna International, County Department of Agriculture, KCEP CRAL, Wild Life Works,	Men, women, youths
			KWS, TTWCA, Tsavo Conservation Area, AWF, Flora and Fauna	Men, women, PLWD youths

			International, County Department of Agriculture, KCEP CRAL, NDMA,	
		Enhance Early warning systems through capacity building of community scouts	KWS, TTWCA, Tsavo Conservation Area, AWF, Flora and Fauna International, County Department of Agriculture, KCEP CRAL, CFAs, Nature Kenya	Men, women, PLWD and youth
		Promote the uptake of crops compatible with wildlife e.g pepper/ hot chillies, thorn sunflower, aloe vera and citrus fruits e.t.c	KWS, TTWCA, Tsavo Conservation Area, AWF, Flora and Fauna International, County Department of Agriculture, KCEP CRAL, KALRO, KEPHIS,	Men, women, youth, PLWD and the aged
		Promote and support on farm livelihood diversification through farmer uptake of wildlife user rights	KWS, TTWCA, AWF, FFI, Department of Water, Sanitation, Environment, Climate change and Natural resources, NEMA, KALRO	
		Bee keeping	Nature Kenya, Kenya Red Cross, ICIPE, KWS, TTWCA, Tsavo Conservation Area, AWF, Flora and Fauna International, County Department of Agriculture, KCEP CRAL, KALRO, KEPHIS, Save the Elephants, WWF,	Men, women, youth and aged
	Human wildlife conflict mitigation	Enhancing ground and aerial patrols of game rangers	KWS, AWF, Wildlife Works, DSWT,	Men, women and youth
		Construction of water pans and animal water	Wildlife Works, NEMA, TTWCA, KWS, AWF	Men, women and youth

		drinking points inside the park		
		Electric fencing of parks and digging of trenches	KWS, AWF, Wildlife Works, NEMA, TTWCA, WWF, AWF	Men, women and youth
		Security lighting	KWS, AWF, Wildlife Works, NEMA, TTWCA	Men, women, youth and the aged
		Fast track human wildlife compensation mechanism	KWS, County Department of Agriculture and Livestock, NGAO, County Department of Environment, Climate Change and Natural Resources, Public Works, ministry of Tourism and Wildlife, County Wildlife Conservation Committee	Men, women, youth and aged
Land slides	Disaster preparedness	Early warning system	KMD, Red Cross, County Department of Devolution and Administration, media, NGAO, Special Programs	Men, women, children, PLWD, and the aged
	Disaster response	Emergency response	County Department of Water and Sanitation, Tavevo, Red Cross, World Vision, Department of Special Programs at National and County levels, Ministry of Agriculture (national level and County levels), Action Aid, FAO, WFP, Teita Estate, NYS, Public Works, County Directorate of Fire	Men, women, children, PLWD and the aged
		Soil conservation structures (fanya juu), planting of nappier and vertiva grass	Department of Lands and Physical Planning, Ministry of Lands, Agriculture, County Department of Agriculture, FAO, World Vision, NDMA, Red Cross,	Men, women, youth and the aged

			Department of environment, water, sanitation, Department of Environment and Climate Change, SNV, NEMA, KFS, KEFRI, Nature Kenya, CFAs, CBOs, KALRO	
		Regulated settlements	County Department of Lands and Physical Planning, Department of Public Works, administration of Town committees and Municipal Boards, NEMA, NCA, County Directorate of Enforcement, WRA	
		Riveting of rocky terrain to prevent further cracking	Public works, Department of mining, World Vision, Red Cross, NEMA	Men, women and youth
Pest and diseases	Crop and livestock protection	Implement regular surveillance and monitoring program	KALRO, MESPT, KCSAP KEPHIS, ICIPE, Department of Livestock and Agriculture, County Department of Environment, Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision, KCPB, Kenya Dairy Board, AFC, Farmers,	Men, women, youth, PLWD and the aged
	Livestock protection	Impose strict quarantine measures	Department of Livestock and Agriculture, County Department of Environment Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Kenya Dairy Board, ICIPE, Ministry of Interior, KALRO	Men, women, youth, PLWD and the aged
	Risk management	Deploy targeted	County Department of Agriculture and	Men, women, youth,

		treatments	Livestock, KCEP CRAL, KCSAP, FAO, ICIPE, KALRO,	PLWD and the aged
	Surveillance	Establish dedicated response teams	County Department of Agriculture and Livestock, KCEP CRAL, KCSAP, ICIPE, FAO, WFP,	Men, women, youth, PLWD and the aged
	Farming practices	Promote crop rotation and diversification	KALRO, MESPT, KCSAP KEPHIS, ICIPE, Department of Livestock and Agriculture, County Department of Environment Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision, KCPB, Kenya Dairy Board,	Men, women, youth, PLWD and the aged
	Agricultural practices	Implement integrated pest management practices	KALRO, MESPT, KCSAP KEPHIS, ICIPE, Department of Livestock and Agriculture, County Department of Environment Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision, KCPB, Kenya Dairy Board,	Men, women, youth, PLWD and the aged
	Sustainable practices	Promote good agricultural practices	KALRO, MESPT, KCSAP KEPHIS, ICIPE, Department of Livestock and Agriculture, County Department of Environment Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision, KCPB, Kenya Dairy Board	Men, women, youth, PLWD and the aged
	Sustainable practices	Promote use of tolerant varieties	KALRO, MESPT, KCSAP KEPHIS, ICIPE, Department of Livestock and Agriculture, County Department of	Men, women, youth, PLWD and the aged

			Environment Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision	
	Science and research	Investing in research and innovation	KALRO, KEPHIS, KEFRI, MESPT, ICIPE, TTU, Department of Livestock and Agriculture, Nature Kenya, County Department of Environment and Climate Change	Men, women, youth, PLWD and the aged
	Farmer capacity building	Provide education and training programs	KALRO, MESPT, KCSAP KEPHIS, ICIPE, Department of Livestock and Agriculture, County Department of Environment, Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision,	Men, women, youth, PLWD and the aged
	Community resilience	Develop climate change adaptation strategies	KALRO, MESPT, KCSAP KEPHIS, ICIPE, Department of Livestock and Agriculture, County Department of Environment, Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision,	Men, women, youth, PLWD and the aged
	Food security	Food preservation	KALRO, MESPT, KCSAP KEPHIS, ICIPE, Department of Livestock and Agriculture, County Department of Environment, Climate Change and Natural Resources, FAO, WFP, Wildlife Works, Action Aid, World Vision,	Men, women, youth, PLWD and the aged
Forest fires	Fire management	Mobilization of CFAs for fire fighting	County Department of Environment, Climate Change and Natural Resources, CFAs, Nature Kenya, KFS, NEMA,	Men, women, youth, PLWD and the aged

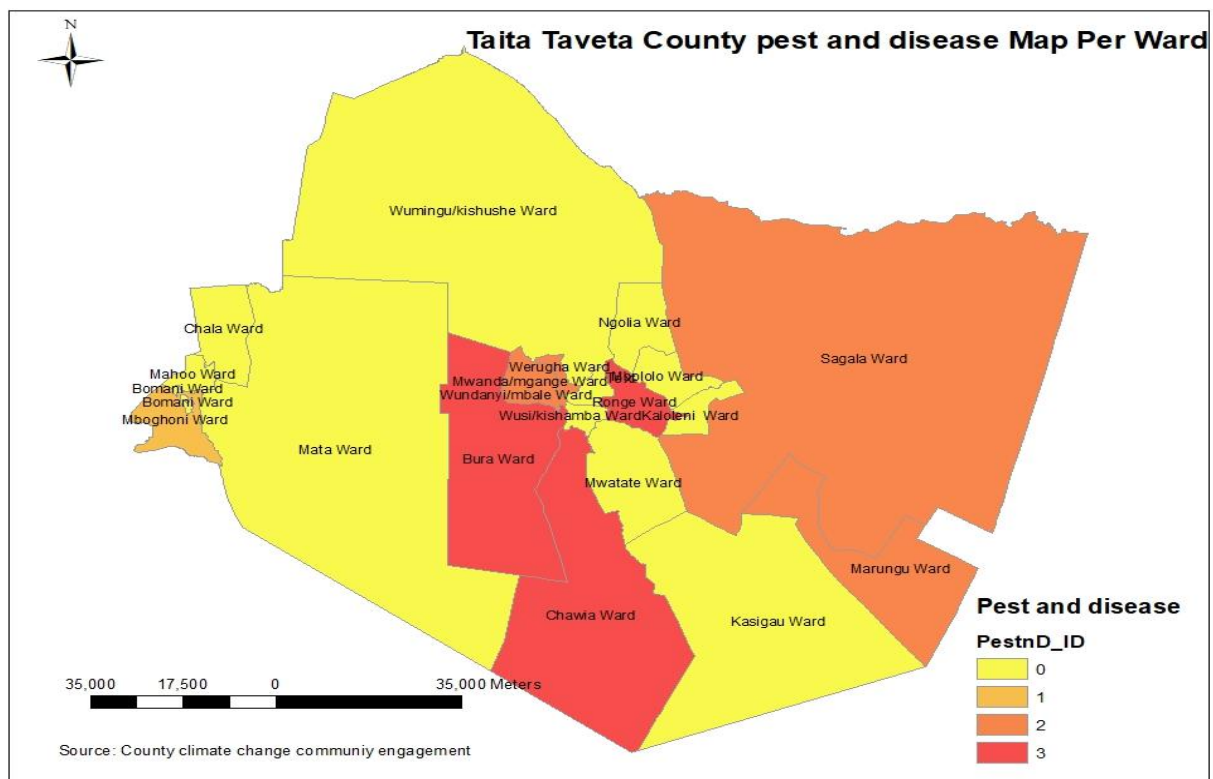
			TTWCA, ICIPE, JICA, Red Cross, MESPT,	
	Fire management Disaster preparedness	Create fire breaks / clearing forest boundaries/fire management practices	County Department of Environment, Climate Change and Natural Resources, Ministry of Lands and Survey, County Department of Livestock and Agriculture, CFAs, County Department of Public Works Nature Kenya, KFS, NEMA, TTWCA, JICA, Red Cross,	Men, women, youth, PLWD and the aged
		Activating early warning systems	County Department of Environment, Climate Change and Natural Resources, CFAs, Nature Kenya, KFS, NEMA, TTWCA, ICIPE, JICA, Red Cross, MESPT,	Men, women, youth, PLWD and the aged
	Capacity building	Provision of firefighting equipment and training	County Department of Environment, Climate Change and Natural Resources, CFAs, County Department of Public Works, Nature Kenya, KFS, NEMA, TTWCA, JICA, Red Cross,	Men, women, youth, PLWD and the aged
		Awareness and sensitization	County Department of Environment, Climate Change and Natural Resources, CFAs, County Department of Public Works, Nature Kenya, KFS, NEMA, TTWCA, JICA, Red Cross, Wildlife Works, KWS, AWF, TTWCA, Taita Taveta Youth Alliance, media	Men, women, youth, PLWD and the aged
		Recruiting of forest rangers	County Department of Environment, Climate Change and Natural Resources, KFS, KWS	Men, women, youth, PLWD and the aged

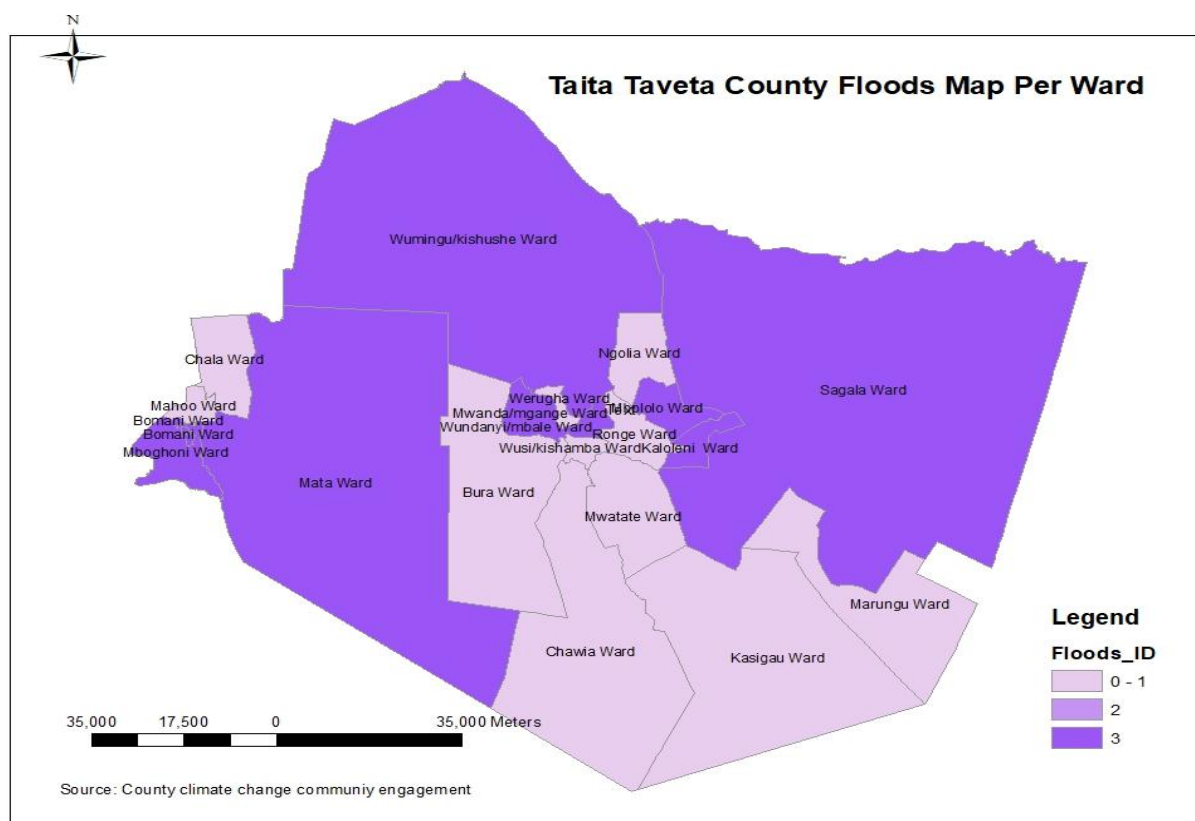
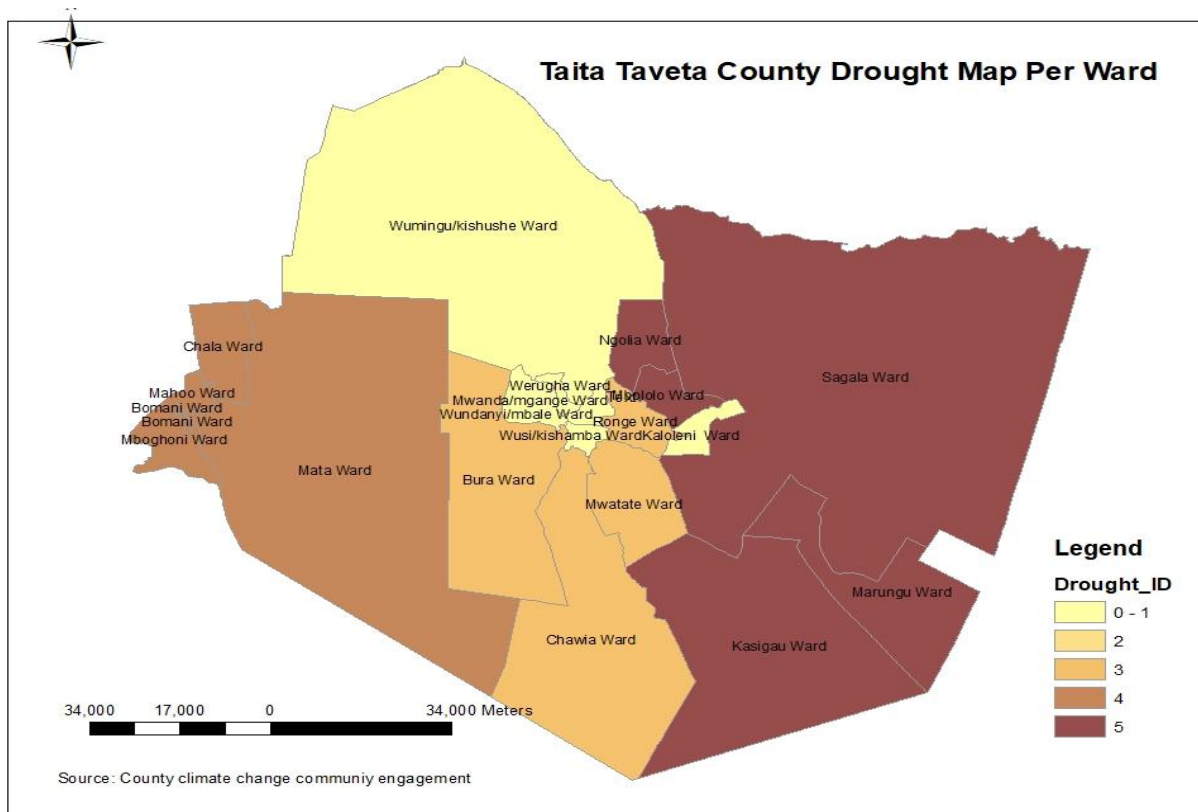
		Formation of CFA and PFMP	County Department of Environment, Climate Change and Natural Resources, Nature Kenya, KFS, NEMA, TTWCA, ICIPE, JICA, Red Cross, MESPT,	Men, women, youth, PLWD and the aged
	Afforestation	Collaboration of sector agencies and the communities in tree growing	County Department of Environment, Climate Change and Natural Resources, KFS, KWS, TTWCA, Taita Taveta Youth Alliance, CFAs, Nature Kenya, KEFRI,	Men, women, youth, PLWD and the aged
	Forest Protection	Survey, mapping and boundary delineation of County and community forests	County Department of Environment, Climate Change and Natural Resources, Ministry of Lands and Survey, CFAs, County Department of Public Works Nature Kenya, KFS, NEMA, TTWCA, JICA, Red Cross, KEFRI,	Men, women, youth, PLWD and the aged
	Research and technology	Research on forest fire regimes/ history and predictions	KFS, KEFRI, TTU, Nature Kenya	Men, women, youth, PLWD and the aged
	Forest Governance	Formulation and implementation of a County forest policy, legal and regulatory framework	County Department of Environment, Climate Change and Natural Resources, CFAs, County Assembly, County attorney, KFS, NEMA, TTWCA, JICA, Red Cross, KEFRI,	Men, women, youth, PLWD and the aged

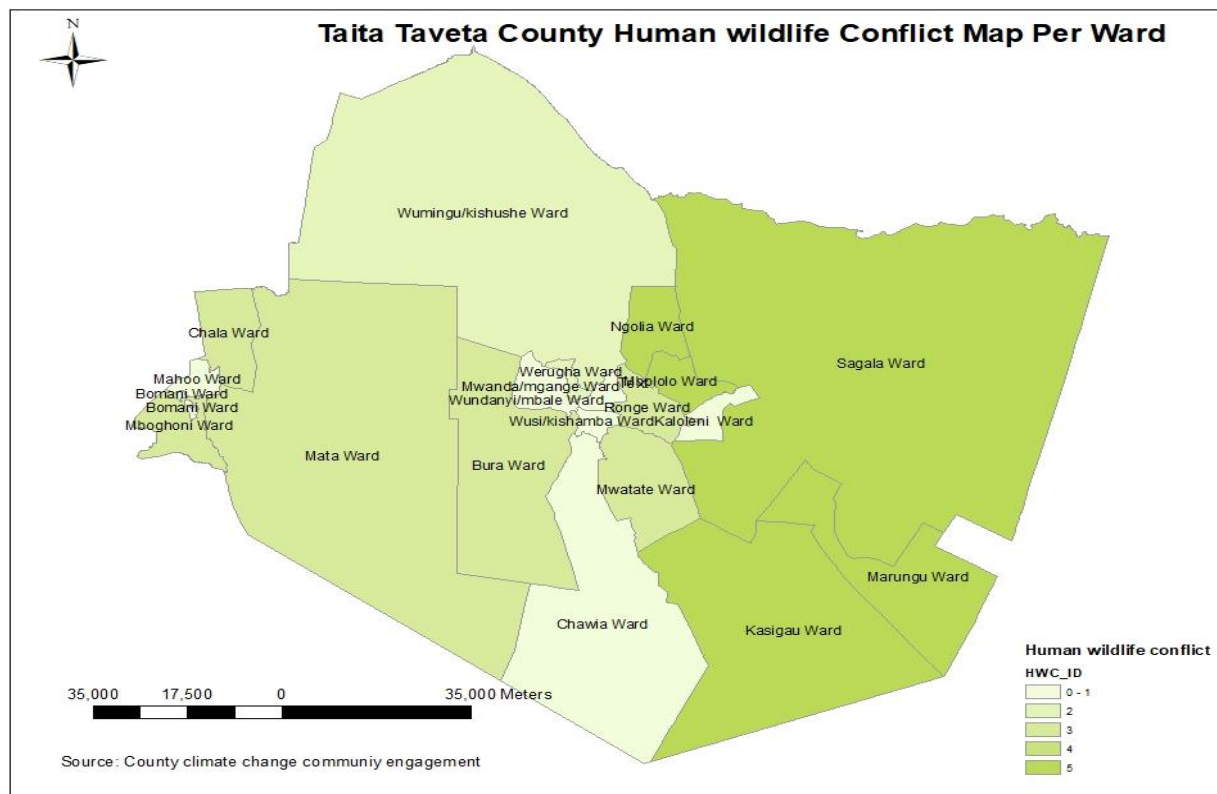
1.3 County Climate Hazard Map(s)

This section provides a graphical spatial representation of the County's top climate hazards. As expressed elsewhere in this document, the PCRA report listed drought, floods, human wildlife conflict, pests and diseases, landslides and wildfires as the most experienced climate Hazards in the County.

The maps are GIS generated based on the hazard maps that were developed for the wards during the data gathering and community mobilization process.







2.0. POLICY ENVIRONMENT

2.1. NATIONAL POLICY CONTEXT

Climate Change has been identified as a key challenge and impediment to socio-economic development and livelihoods in Kenya. In order to address the climate risks, impacts that have become more pronounced both in frequency and intensity, the Government of Kenya has instituted a robust Climate Change legal and policy framework.

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

The Constitution of Kenya (2010) further introduced the devolved system of Government which gave rise to the National and 47 Sub-National governments. The County Governments have a key delivery role in implementing the Climate Change Act, 2016, having jurisdiction, as set out in the Fourth Schedule (Part 2) of the Constitution, over sectors relevant for climate change such as agriculture, soil and water conservation, forestry, water and sanitation, and health.

Article 203(2) of the Constitution requires that County governments be allocated a minimum of 15% of national revenue received annually, but the allocation often surpasses the minimum thus giving County governments considerable scope to influence climate change investments.

The following is a brief highlight of some of the key policy and legislative instruments that Kenya has developed towards tackling Climate Change:

The Climate Change Act, 2016 is the key legislation guiding Kenya's climate change response, setting the legal basis for mainstreaming climate change considerations and actions into sector functions, and providing the legal foundation of the NCCAP and CCCAP.

This is the National legislation that primarily provides for enhanced response to climate change, and provides mechanisms and measures to achieve low carbon climate resilient development.

Below is a snapshot of Kenya's National Climate Change legal and policy framework (NCCAP 2018-2022)

National Framework	Description
Kenya Vision 2030	Kenya Vision 2030 – the country's development blueprint – recognised climate change as a risk that could slow the country's development. Climate change actions were identified in the Second Medium Term Plan (MTP) (2013-2017). The Third Medium Term Plan (2018-2022) recognised climate change as a crosscutting thematic area and mainstreamed climate change actions in sector plans.
National Climate Change Strategy (2010)	Kenya's National Climate Change Response Strategy was the first national policy document on climate change. It aimed to advance the integration of climate change adaptation and mitigation into all government planning, budgeting and development objectives.
National Climate Change Action Plan	Kenya's National Climate Change Action Plan, 2013-2017 was a five-year plan that aimed to further Kenya's development goals in a low carbon climate resilient manner. The plan set out adaptation, mitigation and enabling actions.
National Adaptation Plan (2015-2030)	Kenya's National Adaptation Plan 2015-2030 was submitted to the UNFCCC in 2017. The NAP provides a climate hazard and vulnerability assessment and sets out priority adaptation actions in the 21 planning sectors in MTP II
Kenyan Nationally Determined Contributions (2016)	Kenya's NDC under the Paris Agreement of the UNFCCC includes mitigation and adaptation contributions. In regard to

	adaptation, “Kenya will ensure enhanced resilience to climate change towards the attainment of Vision 2030 by mainstreaming climate change into the Medium Term Plans (MTPs) and implementing adaptation actions.” The mitigation contribution “seeks to abate its GHG emissions by 30% by 2030 relative to the BAU scenario of 143 MtCO ₂ eq.” Achievement of the NDC is subject to international support in the form of finance, investment, technology development and transfer and capacity development.
Climate Change Act (No 11 of 2016)	The Climate Change Act (No. 11 of 2016) is the first comprehensive legal framework for climate change governance for Kenya. The objective of the Act is to “Enhance climate change resilience and low carbon development for sustainable development of Kenya.” The Act establishes the National Climate Change Council (Section 5), Climate Change Directorate (Section 9), and Climate Change Fund (Section 25).
Kenya Climate Smart Agriculture Strategy (2017-2026)	The objectives of the Kenya Climate Smart Agriculture Strategy (KCSAS) are to adapt to climate change and build resilience of agricultural systems while minimising greenhouse gas emissions. The actions will lead to enhanced food and nutritional security and improved livelihoods.
Climate Risk Management Framework (2017)	The Climate Risk Management Framework for Kenya integrates disaster risk reduction, climate change adaptation, and sustainable development so that they are pursued as mutually supportive rather than stand-alone goals. It promotes an integrated climate risk management approach as a central part of policy and planning at National and County levels.
National Climate Change Framework Policy (2018)	The National Climate Change Framework Policy aims to ensure the integration of climate change considerations into planning, budgeting, implementation and decision-making at the National and County levels and across all sectors.
National Climate Finance Policy (2018)	The National Climate Finance Policy promotes the establishment of legal, institutional and reporting frameworks to access and manage climate finance. The

	goal of the policy is to further Kenya's national development goals through enhanced mobilisation of climate finance that contributes to low carbon climate resilient development goals.
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Table 1: Kenya's National Climate Change Legal and Policy Framework (NCAPP 2018-22)

National sector climate change relevant strategies, plans and regulations

Sector	Climate Change -Relevant Plan	Ministry/Department
Agriculture	National Strategy on Genetic Resources within the Context of Climate Change (2016-2021)	Kenya Agricultural and Livestock Research Organization
Blue Economy (fisheries, coastal zones, marine transport)	Blue Economy Strategy (2017)	Ministry of Agriculture and Irrigation Ministry of Transport, Infrastructure, Housing and Urban Development
Disaster Risk management	Kenya's Disaster Risk Financing Strategy (2018-2022) National Disaster Risk Management Policy (2017)	National Treasury Ministry of Interior and Coordination
Drought Management	National Drought Management Authority Act (No 4 of 2016) Ending Drought Emergencies Strategy Public Finance Management (National Drought Emergency Fund) Regulations, 2018	NDMA
Energy	Energy Bill (2017)	Ministry of Energy
Environment	Environmental Management and Coordination Act, 1999 (Cap 387) Green Economy Strategy and Implementation Plan (GESIP 2016-2030) Kenya Strategic Investment Framework on Sustainable Land Management (2017-2027)	Ministry of Environment and Forestry

Forestry	National Forestry Programme (2017) REDD+ Readiness Plan and Analysis (2013-2017)	KFS Ministry of Environment and Forestry
Health	Health Act (No 21 of 2017)	Ministry of Health
Infrastructure	Kenya Building Research Centre: Strategic Plan	Ministry of Transport, Infrastructure, Housing and Urban Development
Land Management	National Spatial Plan (2015-2045)	Ministry of Lands and Physical Planning
Transport	Action Plan to Reduce CO2 from Aviation (2015) Executive Order: The Nairobi Metropolitan Area Transport Authority (2017) Kenya National Aviation Action Plan for International Civil Aviation (ICAO) and mitigation plan for International Maritime Organizations (IMO) (2017)	Ministry of Transport, Infrastructure, Housing and Urban Development
Water	Water Act (No 43 of 2016)- establishes the National Water Harvesting and Storage Authority	Ministry of Water and Sanitation

Table 2: National sector climate change relevant strategies, plans and regulations

2.2. COUNTY ENABLED LEGAL AND POLICY FRAMEWORK

Taita Taveta County, in line with provisions of the National Climate Change Act, 2016, has put in place a robust Climate Change legal and policy framework to guide its climate change response and lay a legal basis for mainstreaming climate change and integrating climate actions into sector plans as outlined in the County Integrated Development Plan (CIDP) 2023-2027.

County Framework	Description
County Climate Change Policy, 2020	The policy lays out the Government's intent to mainstreaming Climate Change in Sector Development Plans and CIDP.
County Climate Change Act, 2022	The Act provides for Coordination and Implementation mechanisms for County Climate Change response. It also establishes the County Climate Change Fund and sets aside 2% of the annual development budget

	to capitalize the fund.
County Climate Change Fund Regulations, 2022	The regulations provide for a financing mechanism for climate actions and resilience investments through the setting aside of 2% of the County Annual Development Budget for the County Climate Change Fund.
County Integrated Development Plan (2023-2027)	The County Government of Taita Taveta has mainstreamed Climate Change across sectors and outlined appropriate adaptation and mitigation measures with emphasis being placed on Adaptation.
Draft Forest Conservation and Tree Growing Bill	to provide for the establishment of an appropriate legal and institutional framework to give effect to the fourth schedule of the constitution with regard to forestry; to provide for the development and sustainable management of the forests and forest resources for the socio-economic prosperity of the County

3.0. PRIORITY CLIMATE ACTIONS

3.1. IDENTIFICATION OF STRATEGIC CLIMATE ACTIONS AS PRIORITISED IN THE PCRA

The Taita Taveta Climate Change Action Plan (2023-2027) takes cognizance of the impact of climate change on the County's socio-economic spectrum. It identifies strategic areas where Climate Action is to be directed over the next five years and linked to the County Integrated Development Plan in recognition that climate change is likely to limit the achievement of the County's growth ambition.

According to the recently concluded Participatory Climate Risk Assessment in the County, the agriculture/livestock, water, environment, forestry, health and infrastructure are the main climate impacted sectors. The increased frequency and prolonged droughts ranking highest in terms of climate risks. This has occasioned 5 successive failed crop seasons leading to food and nutritional insecurity in the County.

Another Climate risk that featured highly in the PCRA is flooding. This is mostly experienced in areas around the foothills of Mt. Kilimanjaro which lie in Taveta Sub County. Other areas that have reported floods include Mwatate and Voi Sub Counties. The severity of the floods has been on the rise as seen in the recent flash floods near Mwatate Dam where a pregnant woman and her three children were swept away and the house completely flattened by the raging waters which area residents claimed was an incident that had never been witnessed before.

Prolonged Droughts coupled with unreliable and unpredictable rain seasons has led to acute water scarcity in the County. Water sources are drying up, streams and rivers are drying up

and the few remaining ones becoming extremely seasonal. Meanwhile, incidences of Human Wildlife Conflict are on the rise; which is a clear manifestation of effects of climate change.

3.2. PRIORITY CLIMATE ACTIONS

Adaptation actions are prioritised in CCCAP 2023-2027 because of the devastating impacts of droughts and floods, and the negative effects of climate change on vulnerable groups, mainly women, older members of society, persons with disabilities, children, youth, and members of minority and marginalised groups. These actions will be undertaken, where possible, in a way to limit GHG emissions and to ensure that they contribute towards the country's achievement of its NDC under the Paris Agreement to reduce GHG emissions by 30% by 2030 relative to the business-as-usual scenario of 143 MtCO₂e. Therefore, Taita Taveta County Climate Change Action Plan (2023-2027) will ensure that the adaptation actions are in line with the NDC and cascaded down as County Determined Contribution (CDC).

The priority actions that the CCCAP 2023-2027 has set out to undertake are intended to contribute towards the achievement of sustainable development whose benefits will to a greater extent be felt by vulnerable groups in terms of increased food productivity, improved access to water and women will enjoy clean cooking and easy access to fuelwood through innovative and transformative afforestation and agroforestry initiatives as proposed in the plan.

Aligning the County Climate Actions to NCCAP's 7 priority climate Action areas has greatly helped in defining, arranging and grouping the proposed actions as identified through the PCRA process. Considering that National targets are a derivative of the combined contribution of the 47 County Governments, Taita Taveta CCCAP 2023-2027 reflects the outlined NCCAP climate change priority areas and hinges its targets on Kenyans emission and adaptation ambitions as expressed in the NDCs.

Climate Change Priority 1: Disaster (Drought and Flood) Risk Management

Drought was listed as the greatest climate risk and hazard in the County. A clear indication from the data gathered is that there have been five consecutive failed rainy seasons and the sixth is imminent. This hazard has affected households and have required the County Government and development partners to step in to offer food relief alongside other humanitarian assistance.

Taita Taveta County is largely ASAL and therefore suffers great exposure and vulnerability to drought. Climate trends in the County based on rainfall data collected and analysed over time clearly demonstrates that droughts are increasingly becoming a common phenomenon. The climatic data is corroborated by the 5 consecutive failed rain seasons which were harshest in the year 2021/22 with reported livestock and wildlife deaths. The droughts were so severe that KWS reported the death of over 100 elephants in the Tsavo Conservation Area that forms 62% of the county land area. In a quote attributed to the then KWS Director General Brg (Rtd) John Waweru by the Star Newspaper (4th November 2022), “The region is experiencing a very severe drought that has affected wildlife. In the Tsavo ecosystem alone, we have lost 120 wild animals of different types out of which more than 100 are elephants,” he said.

Prolonged droughts lead to crop failure, shrinking of productive crop areas, and loss of livestock leading to reduced food security and increased malnutrition with impacts particularly for pregnant women, lactating mothers, children and the elderly.

Floods have more immediate, and often large-scale impacts, for instance in December 2021, “over 3000 livestock were killed in Mata, Taveta Sub county following a night of floods after intense downpour affecting several farmers. One farmer reportedly lost over 1000 animals”.²

CCCAP 2023-2027 has identified priority actions that will go a long way to address the challenges posed by the drought and flood hazards. These will be undertaken with the strategic objective 1: Reduce risks to communities and infrastructure resulting from climate related disasters such as droughts and floods. The Actions recommended are;

strategic objective 1: Reduce risks to communities and infrastructure resulting from climate related disasters such as droughts and floods.		
Actions	Expected results by June 2028	Adaptation/Mitigation
1.1. Increase number of households and entities benefiting from devolved adaptive services	<ul style="list-style-type: none"> Number of beneficiaries of social protection mechanisms and other safeguards (under the Hunger Safety Net Programme) increased by 15% for regular beneficiaries Climate Change Funds address local adaptation priorities that are identified and monitored by community committees comprised of women and men. At least 60 Resilience Investments benefiting 10,000 Households 	Adaptation
1.2. Improve ability of people to cope with drought	<ul style="list-style-type: none"> Drought early warning systems improved, including the promotion of people-centred systems at the national and county levels. Number of recipients of climate information services that use the information in their risk management 	Adaptation/Mitigation

² Source look up TV News

	<p>decisions to reach to 10,000.</p> <ul style="list-style-type: none"> Water harvesting and storage (see expected results under Climate Action 3 – Water and the Blue Economy). 	
1.3. Improve ability of people to cope with, and infrastructure to withstand, floods	<ul style="list-style-type: none"> Flood early warning systems improved, taking advantage of widespread access to mobile technology that provides an avenue for disseminating information. Implement the existing 11 integrated flood management plans; for example, water storage, drainage networks, reforestation and rehabilitation of riparian areas, construction of dams, and land use restrictions. Implement the Dam Safety Control System established as guided by the safety manuals and codes of practice developed. Capacity development of at least 5 Water Resources Users Associations (WRUA), which are community-based organizations that are rights-based groups with female and male membership. Water and flood control including dams/dykes, drainage systems, and water storage (see expected results under Climate Action 3 – Water and the Blue Economy). 	Adaptation/Mitigation
1.4. Improve coordination and delivery of disaster risk management	<ul style="list-style-type: none"> Engendered County Disaster Risk Management Committees to coordinate disaster response at the County level. Disaster Risk Management Fund to provide funds for disaster preparedness, mitigation of disaster impacts, and disaster recovery measures, particularly for vulnerable groups. 	Mitigation
1.5. Enabling (legal)		
1.6. Enabling (Finance)	<ul style="list-style-type: none"> Contingencies Fund allocations to address urgent and unforeseen needs 	Adaptation
1.7. Enabling (Technology)	<ul style="list-style-type: none"> Adoption of climate smart Agriculture and irrigation technologies 	Adaptation
Relevant Institutions: County Governments, CoG, NDMA, National Treasury and Planning, KMD, Water Resources Authority (WRA), WRUAs, community groups, civils society, private sector. All sectors identify actions to realise the strategic objective.		

Climate Change has severely affected crop and livestock production in Taita Taveta County. This is mainly as a result of unreliable rains, increasing unpredictability of rain seasons and late onset and early end of seasonal rainfall. This increasing unpredictability has also contributed to disregard of climate information by communities making it even more difficult to effectively utilize credible seasonal forecasts and advisories.

Nevertheless, the Kenya Meteorology Department has increasingly improved its forecasting capabilities and constantly gives up-to sub county level weather prediction. This has enabled the Department of Agriculture in collaboration with partners in the crop and livestock production sector to offer farmers timely advisories.

Unfortunately, most of the crop production in the County is rain-fed and hence extremely vulnerable to climate risks. According to the Taita Taveta County Climate Risk Profile, 48% of the population suffers from food poverty, 34% of the children are stunted and 11% of the children wasted. The figures are a clear indictment of the impact of climate change on food and nutritional security in the County.

Strategic Objective 2: Increase food and nutrition security by enhancing productivity and resilience of the agricultural sector in as low carbon manner as possible		
Action	Results by 30 th June 2028	Adapttton/Mitigation
2.1. Improve crop productivity through the Implementation of CSA interventions	<ul style="list-style-type: none"> ▪ Number of institutions/value chain actors and households harvesting water for agricultural use/production increased ▪ Agricultural pre- and post-harvest losses reduced ▪ Number of beneficiaries accessing climate-oriented crop insurance increased. ▪ Number of farmers accessing appropriate agricultural inputs subsidies increased 	Adaptation
	<ul style="list-style-type: none"> ▪ Number of households and acreage under sustainable land management (SLM) increased for agricultural production: <ul style="list-style-type: none"> ▪ Support the reclamation of degraded land ▪ Area under integrated soil nutrient 	Adaptation

	<p>management increased while incorporating minimum/no tillage</p> <ul style="list-style-type: none"> ▪ Total area under agroforestry at farm level increased 	
2.2. Increase crop productivity through improved irrigation	<ul style="list-style-type: none"> ▪ Acreage under irrigation increased ▪ Production efficiency from irrigated fields increased 	Adaptation
2.3. Improve productivity in the livestock sector through the Implementation of CSA interventions	<ul style="list-style-type: none"> ▪ Livestock productivity improved: <ul style="list-style-type: none"> - No. of Hectares of rangelands re-seeded in the county - Annual rangeland water harvesting and storage capacity increased via small dams and water pans and through large multipurpose dams. - Improved animal disease control and surveillance ▪ Number of customers/ beneficiaries accessing climate-oriented livestock insurance increased 	Adaptation
	<ul style="list-style-type: none"> ▪ Efficiency in dairy management improved ▪ Manure management improved through the adoption of biogas technology by households and abattoirs 	Adaptation/Mitigation
2.4. Improve productivity in the fisheries through Implementation CSA interventions	<ul style="list-style-type: none"> ▪ Aquaculture production increased: <ul style="list-style-type: none"> - 7 No. of cages for fish farming installed in Lake Challa and Jipe - 125 No. of inactive fish ponds revived and new ones constructed 	Adaption
2.5. Diversify livelihoods to adjust to a changing climate	<ul style="list-style-type: none"> ▪ Number of households supported to adopt 	Adaptation

	<div>diversified adaptive enterprises/value chains for sustained livelihoods and nutrition security</div> <ul style="list-style-type: none"> ▪ Number of Small-scale famers, pastoralists and fisher communities supported to transition to specialised and market-oriented output priority value chains, including drought-tolerant values chains 	
Enabling Action – technology and knowledge management	Develop and implement a Climate information services Plan	Enabling

Climate Change Priority 3. Water and Blue Economy

The water and blue economy is susceptible and highly vulnerable to climate change. In Taita Taveta County this is evidenced by the drying up of water sources (springs, wetlands, streams and rivers). Lake Jipe along the Kenya/Tanzania border has lost a considerable chunk of its original size in the past few decades. Communities around the lake, more so the fisher folk that are dependent on the lake confirmed this trend. The lake is mostly threatened by heavy siltation which is directly linked to the increasingly intense storms that result in soil erosion which is deposited into the lake. This continued silt loading of Lake Jipe threatens its very survival. However, there have been efforts by SAGAs, the County Government of Taita Taveta and other stakeholders to develop the Lake Jipe Ecosystem Management Plan. Nevertheless, it should be remembered that this is a Trans-National resource which will no doubt require the involvement of the regional authority- the EAC.

The County's riparian zones, wetlands and springs have greatly been compromised. A lot of unregulated activities happen around and along these important water sources. A clear lack of enforcement of prevailing Government policies and laws on protection of water sources and systems has contributed to the sad state of affairs in the county water resource conservation and management. This is exacerbated by the lack of a County policy and legislative framework for water.

Encroachment of and conversion of wetlands into cultivation has greatly contributed to the loss of several wetlands in the County and highly threaten the few existing ones such as Ndiwa ya Ngulu in Mwatate Sub County. Under this Climate change priority area, the focus is mainly on catchment conservation, development and full implementation of a County policy and legislative framework, Improvement of water harvesting, storage and supply infrastructure and strengthening the capacity of Water Resources Users Association as co-managers of the water resource.

The CCCAP 2023-2027 has aligned its priority actions on water conservation and management in line with the NCCAP 2018-2027 strategic objective 3. Enhance resilience of the blue economy and water sector by ensuring adequate access to and efficient use of water for agriculture, manufacturing, domestic, wildlife, and other uses.

Strategic objective 3. Enhance resilience of the blue economy and water sector by ensuring adequate access to and efficient use of water for agriculture, manufacturing, domestic, wildlife, and other uses.		
Priority Action	Results by 30 th June 2027	Adaptation/Mitigation
1. Increase annual per capita water availability through the development of water infrastructure (mega dams, small dams, water pans, untapped aquifers)	<ul style="list-style-type: none"> ▪ No. of feasibility studies and development of new sources ▪ Two bulk water supply projects undertaken (Mzima 2, and Njoro Kubwa) ▪ Expansion of existing supply infrastructure (5.1 Km) ▪ 	Adaptation
2. Climate proof water harvesting and water storage infrastructure and improve flood control	<ul style="list-style-type: none"> ▪ Harness storm and flood water through the construction/rehabilitation of 3 No. Small size Dams (Kighombo, Kishenyi and Mwatatedams) ▪ Enhance rain water harvesting and storage through the Construction of 30 No. Sand/Check dams and 5 No. Main dams ▪ Undertake water catchment and riparian zone conservation and protection by growing 5 million trees and Pegging, fencing and rehabilitation of 20 km stretch of rivers/streams ▪ Prevention of soil and gulley erosion through construction of gabions and Dykes 	Adaptation
3. Increase gender responsive affordable water harvesting-based livelihood resilience	<ul style="list-style-type: none"> ▪ Enhancement of County's irrigation infrastructure through the construction and 	Adaptation

programmes	<p>expansion of 20 No. Water pans.</p> <ul style="list-style-type: none"> ▪ Support farm level water harvesting efforts by constructing 5,000 farm ponds ▪ Renovate existing irrigation infrastructure through the rehabilitation of 5 No. irrigation canals in Taveta (Canal lining and de-silting) ▪ Conduct community awareness and sensitization campaigns 	
4. Promote water efficiency (monitor, reduce, re-use, recycle and modelling)	<ul style="list-style-type: none"> ▪ Reduce water wastage and non-revenue water through, for example: - Innovation in water tracking and leakages identification and reporting - Awareness programme for water efficiency 	Mitigation
5. Improve access to good quality water	<ul style="list-style-type: none"> ▪ Number of people and entities accessing good quality water for domestic, agricultural and industrial use increased through: - Large-scale installation of water meters - Regular inspection of water quality 	Adaptation
6. Enabling actions (policies and regulations)	<ul style="list-style-type: none"> ▪ Support development of the County Water Masterplan ▪ Develop and implement a County water policy, Legislation and regulations 	Enabling
<p>Relevant Institutions: Department of Water, Sanitation, Environment, Climate Change and Natural resources, Ministry of Water and Sanitation (MWS), Department of lands, department of Physical Planning, Infrastructure , Housing and roads, WRA, WRMA, WRUAs, KRCS, WV, National Treasury and Planning, Kenya Forest Service,</p>		

Taita Taveta County is blessed with an expansive wildlife conservation area in the name of Tsavo East and West National Parks which occupy 62% of the total land area. A further 22% is rangeland comprising of ranches and conservancies and which serve as wildlife dispersal areas and migratory corridor between the two Parks.

The county also boasts of the unique Taita Hills formation which are home to unique cloud forests that are associated with the greater Eastern Arc chain of mountains that run from Uzungwa in South Western Tanzania (see fig. 1). The forests exhibit high levels of species endemism and biodiversity richness. Taita Hills are notable for threatened Avifauna species, the Taita Apalis and Taita Thrush and the common Taita White eye. The threat to these endemic species is as a result of years of forest degradation and fragmentation which has resulted in the remnant forest patches that dot the landscape with the large ones sitting on an area averaging 100-220 ha (Ngangao, Mbololo, Mwambirwa, Chawia and Kasigau).

The forests play a critical role as a water catchment for the County. Their degraded state combined with effects of climate change has severely diminished the forests' catchment capacity and negatively impacted its ecological role. The CCCAP has outlined several actions that were generated through the elaborate PCRA exercise.

As home to the largest terrestrial wildlife conservation area in Kenya, Taita Taveta County has immense potential for tourism. However, this economic potential is threatened by climate change and especially prolonged droughts which pose a great threat to wildlife survival. The presence of wildlife in the County has also become a pain to the community due to increasing incidents of Human-Wildlife Conflict. The conflict has been heightened by climate change with drought being the most experienced hazard. In 2021, Tsavo Conservation area lost over 100 elephants (KWS). The same period saw heightened conflict in traditional wildlife conflict hotspots of Mata, Mwachabo, Mwatate, Kishushe, Maktau, Marungu, Kamtonga, Voi, Sagalla, Kasigau, Mbololo and Ngolia. Therefore, the plan has set out to implement a number of priority actions to mitigate the conflict and foster co-existence.

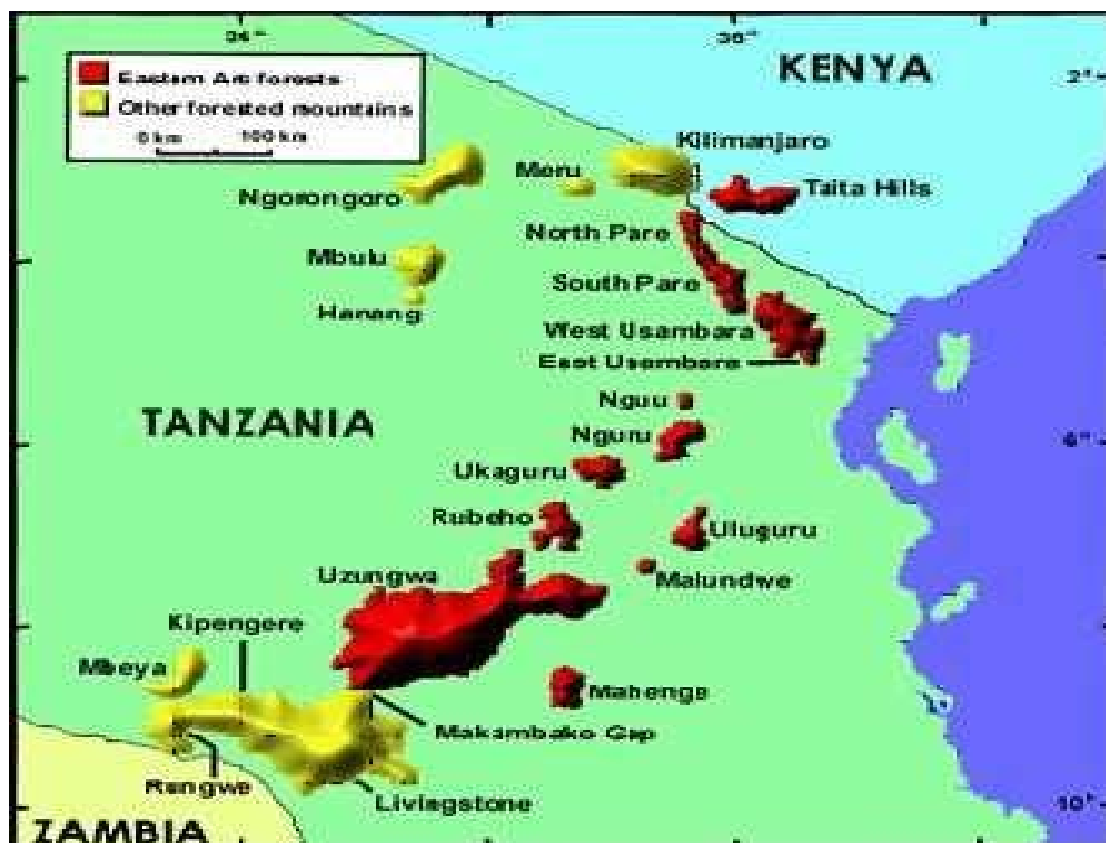


Figure 1 The Eastern Arc Mountain Range –Source ResearchGate

The following is a table listing identified and prioritized climate action arising from the PCRA process.

Strategic Objective 4: Increase forest/tree cover to 10% of total land area; rehabilitate degraded lands, including rangelands; increase resilience of wildlife.		
Priority Action	Results by 30 th June 2028	Adaptation/Mitigation
1. Afforest and reforest degraded and deforested areas in Counties	<ul style="list-style-type: none"> ▪ Increase the county's forest cover from 3% to 8% by 2027 (area under forestry increased by 50 ha) ▪ Increase tree cover by placing 100 ha. Of farmland under woodlot establishment ▪ Improve urban forestry by 5% in the County's main urban Centres through; <ul style="list-style-type: none"> -the establishment of 10 No. arboreta and recreational areas 	Adaptation/Mitigation

	<ul style="list-style-type: none"> -Promotion of tree growing in public and private premises/homes - 60 No. forests 	
2. Reduce deforestation and forest degradation	<ul style="list-style-type: none"> ▪ Undertake survey, mapping and delineation of County and Community forests ▪ Strengthen Participatory Forest Management by capacity building of 12 No. CFAs ▪ Regulate Charcoal Production and trade in the County by registering, supporting and streamlining operations of 4 No. Charcoal Producer Associations ▪ Reduce pressure on wood based forest exploitation by supporting 20 No. community groups in embracing NBEs (bee keeping, butterfly farming and bio-prospecting) 	Adaptation/Mitigation
3. Restore degraded forest landscapes (ASALs and rangelands)	<ul style="list-style-type: none"> ▪ Enhance Forest Extension support services to reach 2000 farmers ▪ Undertake restoration of degraded hilly areas across the County through the proposed “adopt a hill” program to reclaim at least 500ha. 	Adaptation/Mitigation
4. Promote sustainable timber production on privately owned land	<ul style="list-style-type: none"> ▪ Area under private sector-based commercial and industrial plantations increased by at least 100 ha. 	Adaptation/Mitigation
5. Conserve land areas for wildlife	<ul style="list-style-type: none"> ▪ Partner with the conservancies in rangeland conservation initiatives-especially in mitigating conflict and reducing conflict by 50% 	Adaptation/Mitigation

	<ul style="list-style-type: none"> Strengthen and Support conservancy development 5 No. conservancies supported 	
6. Enabling action (Policy and regulatory)	<ul style="list-style-type: none"> Review and Implement TIPs Develop a County Wildlife Conservation Policy Establish a County Wildlife Conservation and Consolation Fund Establish a County Wildlife liaison Office to improve relations with KWS and wildlife conservation stakeholders operating within the County 	Enabling
7. Enabling action (Capacity development)	1. Build the capacity of county forest unit for the efficient transfer and implementation of the devolved function with respect to community and county forests	Enabling
<p>Relevant Institutions: County Dept. of Water, Sanitation, Environment, Climate Change and Natural Resources, MoEF, MoTW, National Treasury and Planning, KFS, KEFRI, KWS, NEMA, NDMA, KWCA, TTWCA, Nature Kenya, AWF, IFAW, WWF, Wildlife Works, County Department of Finance and planning, Department of lands and mining, Community Forestry Associations (CFAs), Community Institutions, Farmer organisations, Private sector, civil society, WRA. All sectors identify actions to realise the strategic objective.</p>		

Climate Change Priority 5: Health, Sanitation and Human Settlements Priority Climate Change Actions (NCCAP 2018-2022)

The risk of malaria and other vector-borne diseases is projected to increase due to changing climate conditions. Approximately 13 to 20 million Kenyans are at risk of malaria, with the percentage at risk potentially increasing as climate change facilitates the movement of malaria transmission up the highlands. Rising temperatures will likely lead to greater incidence of malaria at higher altitudes of the Kenyan highlands, and the number of Kenyans at risk could increase to 89% by 2050. In areas where malaria already occurs, transmission intensity is expected to increase along with the length of the transmission season. Communities living at altitudes above 1,100 meters are more vulnerable to malaria epidemics due to lack of immunity, lack of preparedness, climate variability, and other factors. Pregnant women and children under five are the most vulnerable groups affected by malaria. (NCCAP 2018-2022)

Taita Taveta County has been experiencing a rapid expansion and cropping up of towns (Voi, Taveta, Mwatate, Maungu, Msharinyi, Manga and Landi). This concentrate populations, economic activities and built environments, thus increasing the risk of flooding, heat waves, and other climate and weather hazards. The most affected populations are the urban poor who tend to live along river banks, on hillsides and slopes prone to landslides, near polluted grounds, and in unstable structures vulnerable to collapse during heavy rains. Therefore, improving the resilience of the built environment in human settlements is needed including flood control, green building technologies, and waste management.

CCCAP 2023-2027 takes into account the need to undertake actions that will climate proof human settlements, reduces emissions from waste and improves the health of residents of Taita Taveta County.

Strategic Objective 5: Mainstream climate change adaptation into the health sector; and increase the resilience of human settlements, including improved solid waste management in urban areas		
Priority Action	Results by 30 th June 2028	Adaptation/Mitigation
1. Reduce the incidence of malaria and other vector borne disease	<ul style="list-style-type: none"> ▪ Increased Community awareness of Malaria Services through observance of World Malaria Day celebrations ▪ All health facilities in the county distributing LLITNs ▪ 200 No. schools reached under the school health outreach program 	Adaptation
2. Promote recycling to divert collected waste away from disposal sites.	<ul style="list-style-type: none"> ▪ Construction of 40 No. receptacles and 1 incinerator for enhanced waste handling and disposal ▪ Construction of 2 No. MRFs (Taveta and Voi) ▪ Purchase of 4 No. Garbage Trucks and 1 bio-medical waste transporting vehicle ▪ Construction of 1 No. Waste water treatment and sewerage system in Voi, Town 	Mitigation
3. Climate proof landfill sites	<ul style="list-style-type: none"> ▪ Procure and Purchase 3 No. landfills (Taveta, Voi and Maungu) ▪ Construct perimeter walls and proper drainage to 	Mitigation

	avoid contamination	
4. Control flooding in human settlements	<ul style="list-style-type: none"> ▪ Support RWH at Household level by offering subsidy to 2000 No. VMG HH in procuring gutters and storage tanks ▪ Design, Construct and maintain storm water Drainage infrastructure in urban centers ▪ 2000 No. culverts constructed and maintained 	Adaptation
Enabling Action (technology and capacity building)	<ul style="list-style-type: none"> ▪ Improve the surveillance and monitoring of climate related diseases. 	Adaptation
Enabling action (capacity building)	<ul style="list-style-type: none"> ▪ 150 No. HCWs capacity-built on Malaria case management 	Adaptation
Enabling Action (policy and regulation)	<ul style="list-style-type: none"> ▪ Implement the Development Control Policy ▪ Development of building and constructions guidelines to make compulsory guttering and roof rain water harvesting ▪ Develop policy for green building, and green building codes and regulations that account for climate information ▪ Enforce laws on urban planning and storm water management in urban areas – desilting of drainage, riparian protection ▪ Develop a County Policy and legal framework for sustainable waste management 	Enabling
<p>Relevant Institutions: CG, WHO, Ministry of Water and Sanitation (MWS), CHPs, Global Fund, Ministry of Health, Unicef, NEMA, National Construction Authority, KRCS, NSDCC, USAID, KEMRI, Kenya Institute of Highways and Building Technology, Private Sector, Civil society, Youth organizations, Women’s Groups. All sectors identify actions to realise the strategic objective.</p>		

Climate Change Priority 6. Energy, Transport, Manufacturing and Mining

The county's energy demands are mostly for domestic and institutional use. The county has very little manufacturing activity save for mining and sisal processing factories. Therefore, CCCAP 2023-2027 shall mostly confine its focus to domestic and institutional energy requirement and their influence to or by climate change.

Most of the population in the county resides in the rural areas where the main source of energy is biomass fuel in the form of firewood and charcoal. In the highlands where dairy farming is practiced, biogas is beginning to gain tract. Despite extensive on grid power penetration in the County, not many people use it for cooking arguably because of the high cost. This implies that, even majority of Households in urban and peri-urban environments still use charcoal as the main form of energy for cooking.

'The transition to clean cooking – through the uptake of liquefied petroleum gas (LPG), ethanol and other alternative fuels in urban areas, and improved biomass cookstoves in rural areas – is about more than energy. It improves the health of women and children, and protects forests. About 70% of Kenyans rely on biomass (fuel wood and charcoal) energy for cooking, which is a main driver of deforestation and forest degradation.¹¹⁵ The use of biomass fuels for cooking is a pressing health, social, and environmental problem. About 21,560 Kenyans die every year from health conditions that can be traced back to indoor air pollution.¹¹⁶ Use of LPG to replace charcoal can reduce 55 deaths per year per 25,000 households and save up to 30 trees per household each year.' The County Government of Taita Taveta has an ambitious plan to solarize community boreholes, water pumping stations and public institutions starting with County Government offices. This will reduce expenditure on power bills and move the

Transportation in the County has witnessed a dramatic increase in the number of 'boda boda' and 'Tuk Tuks' as main forms of short distance public transportation. This increase comes with it the problem of emissions. Therefore, it is incumbent of the plan to devise actions that will mitigate against emission in line with the Country's NDC target of reducing emissions by 30% by 2030.

Strategic objective 6. Reduce reliance on biomass energy through investment in renewable energy forms and create favorable conditions for uptake of non-motorised forms of transportation		
Action	Results by 30 th June 2027	Adaptation/Mitigation
1. Reduce dependency on biomass fuels through uptake of renewable forms of energy and clean cooking technologies	<ul style="list-style-type: none">▪ Promote the use of biogas in dairy farming households through a subsidy scheme▪ Increase access to clean cooking to 70% of Households▪ Support 4 No. Community Groups in the production and marketing of charcoal briquettes	Mitigation
2. Increase use of green	<ul style="list-style-type: none">▪ Promote the use of solar	Mitigation

energy in public institutions and installations	<p>energy to power boreholes and water pumping stations</p> <ul style="list-style-type: none"> ▪ Install solar in all public institutions to bring down the County's power bill 	
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Priority Climate Actions (as per Taita Taveta County PCRA Report)

Priority Area/Sector	Priority actions	Specific intervention	Objectives	Key performance indicators	Locality	Key partners
Water and sanitation	1. Water harvesting	<ul style="list-style-type: none"> • Construction of water pans • Construction of dams • Installation of gutters and storage tanks • Sinking of bore holes • Rock catchment construction 	<ul style="list-style-type: none"> ➤ Preserve and store rain water to be used during dry season ➤ Reduces soil erosion and flow of storm water to prevent flooding ➤ To increase water availability 	<ul style="list-style-type: none"> ➤ Number of water pans, dams, storage tanks, boreholes 	Countywide	<ul style="list-style-type: none"> ➤ Department of water and sanitation, Partners

			ility.			
	2. Improve water distribution from community water projects	<ul style="list-style-type: none"> • Piping • Water kiosks • Water tracking 	➤ To increase water accessibility to the community.	➤ Distance covered to access water	➤ Countywide	
	3. waste management	<ul style="list-style-type: none"> • Reusing items like water bottles, travel mugs • Reduce emissions from incinerator • Recycling • Tree planting for carbon sinking • Development of landfills 	To promote climate resilient waste management	➤ Number of landfills, number of trees planted, percentage of waste recycled	Countywide	Department of environment and climate change, ministry of environment and climate change
	4. Protection of water catchment areas and	<ul style="list-style-type: none"> • Desilting • Planting trees • Fencing of catchment areas 	➤ Prevent livestock access to	<ul style="list-style-type: none"> ➤ Number of committees and WRUAs trained ➤ Number of trees planted 	➤ Countywide	➤ Department of Water and sanitation, ministry of water,

	sources e.g springs and wetlands.	<ul style="list-style-type: none"> Capacity building a dedicated committee and WRUAs 	<p>water ways</p> <ul style="list-style-type: none"> ➤ To increase the storage volumes of and restore natural capacity. ➤ Prevent soil erosion ➤ Prevent encroachment ➤ Maintain onsite water treatment system ➤ Improve 	<ul style="list-style-type: none"> ➤ Number of catchment areas protected 		Partners
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			water ways fronta ges with reveg atatio n			
Forestr y	5. Afforestat ion and reforestati on	<ul style="list-style-type: none"> • establishment of tree nurseries • tree growing • capacity building of CFAs • Recruit, train and equip county forest guards • Promotion of nature based enterprises: beekeeping, butterfly farming, silk farming, 	<ul style="list-style-type: none"> ➤ Increase forest cover ➤ rehabilitate degraded lands, including rangelands; ➤ Promote agroforestry 	<ul style="list-style-type: none"> ➤ Atleast one tree nursery per ward(6000 seedlings per year) established ➤ Number of trees planted ➤ Number of nature based enterprises established ➤ Number of forests mapped 	➤ countywide	<ul style="list-style-type: none"> ➤ DCC, Partners, (NGOs, KFS, KEFRI), local administration ➤ Dep of Environment Climate change and naural resource, CGTT, KFS,Local community, partners, Nature Kenya, AWF, NEMA

		ecotourism <ul style="list-style-type: none"> • Survey and mapping of forests 				
	6. Manage forest fires	<ul style="list-style-type: none"> • Create fire breaks • Procure fire engines • Train fire fighting crews 	➤ minimize forest biodiversity loss and spread of fire	➤ Reduced deforestation and fire incidences	➤ County wide	➤ Directorate of climate change
Agriculture, Livestock, Fisheries and Irrigation	1. Food and nutrition security	<ul style="list-style-type: none"> • Provision of drought tolerant crops • Provision of improved livestock breeds • Provision of subsidized farm inputs • Capacity building on Good Agricultural practices • Capacity building on value addition on crop and livestock products 	➤ To improve food and nutrition security through enhanced productivity and resilience of the agriculture sector. ➤ Improve income and job creation	➤ Number of drought resistant crops distributed ➤ Survival and productivity rate of improved livestock breeds ➤ Number of farmers utilizing subsidized farm inputs ➤ Improvement in food security	➤ County wide	Department of Agriculture, FAO, World vision
	2. Soil conservation and water	<ul style="list-style-type: none"> • Soil sampling and testing • Provision of - fruit tree 	To Promote natural resource management	➤ Number of soil samples tested ➤ Fruit tree survival rate	➤ County wide	Department of Agriculture, FAO, World vision

	managem ent	seedlings. • Promotion of on-farm water harvesting structures e.g Terraces		<ul style="list-style-type: none"> ➤ Area covered by water harvesting structures ➤ Length of rehabilitated irrigation canls ➤ Number of WRUAs trained 		
	3. Develop ment of irrigation infrastruct ure	<ul style="list-style-type: none"> • Excavation of water pans and farm ponds • Rehabilitation of irrigation canals • Capacity build of water resource users associations (WRUAs) 	<ul style="list-style-type: none"> ➤ To promote irrigated crop productio n ➤ Improve food security through ensuring crop productio n throughou t the year 		➤ County wide	Department of Agriculture, FAO, World vision, Partners
	4. Livelihoo d diversifica tion	<ul style="list-style-type: none"> ➤ Provision of improved indigenous poultry breeds. ➤ Provision of bee hives ➤ Establishment kitchen gardens ➤ Value addition 	<ul style="list-style-type: none"> ➤ To improve food security through sustainabl e livelihoods ➤ Increase disposabl 	<ul style="list-style-type: none"> ➤ Number of improved indigenous poultry breeds distributed ➤ Number of beehives distributed ➤ Number of kitchen gardens established 	➤ County wide	➤ Department of livestock, World vision, Partners

			<ul style="list-style-type: none"> ➤ e income ➤ Promote Climate resilient crop production ➤ Promote Climate resilient livestock production 	<ul style="list-style-type: none"> ➤ Increase in household dietary diversity 		
	5. Use of biotechnology in agriculture production	<ul style="list-style-type: none"> ➤ Establishment of tissue culture laboratories ➤ Establishment of hardening nurseries ➤ Establishment of postharvest physiology 	<ul style="list-style-type: none"> ➤ To facilitate access of high quality planting materials. 	<ul style="list-style-type: none"> ➤ Number of tissue culture laboratories established ➤ Quantity of plant materials produced ➤ Survival and growth rate of tissue cultured plants ➤ Number of hardening nurseries established 	<ul style="list-style-type: none"> ➤ County wide 	Department of Agriculture, FAO, World vision, Partners
	6. Range land rehabilitation	<ul style="list-style-type: none"> ➤ Reseeding programs ➤ Development of grazing plans ➤ Planting of fodder trees 	<ul style="list-style-type: none"> ➤ To promote effective landscape management 	<ul style="list-style-type: none"> ➤ Number of grazing plans developed, ➤ Number of reseeded programs implemented ➤ Number of fodder 	<ul style="list-style-type: none"> ➤ County wide 	<ul style="list-style-type: none"> ➤ Directorate of Climate change ➤ Department of agriculture

		and agroforestry		trees planted		
	7. Pest and disease outbreaks	<ul style="list-style-type: none"> ➤ vaccinations against notifiable diseases that arise due climate change effects e.g. Foot and Mouth Disease and Rift Valley Fever ➤ vector and parasite control 	<ul style="list-style-type: none"> ➤ To Reduce economic loss due to pest and diseases 	<ul style="list-style-type: none"> ➤ Decrease in the financial loss incurred due to pest and disease outbreaks in a given period 	<ul style="list-style-type: none"> ➤ County wide 	<ul style="list-style-type: none"> ➤ Department of livestock
Wildlife and Tourism	1. Human and wildlife co-existence	<ul style="list-style-type: none"> ➤ electric fencing of the wildlife areas ➤ Promote the growing of crops that are wildlife repellent and compatible e.g. chillies, thorn sunflower etc ➤ Promote and adopt emerging innovative wildlife repellent techniques-bee fences 	<ul style="list-style-type: none"> ➤ Increase resilience of the wildlife and tourism sector ➤ To prevent the wildlife from invading the community areas ➤ Provide alternative livelihood 	<ul style="list-style-type: none"> ➤ Decrease in the number of wildlife related incidents ➤ Wildlife Intrusion Rate ➤ Number of Beehives Provisioned ➤ Number of Community Capacity Building Sessions ➤ Access to Water ➤ number of spatial plans developed 	<ul style="list-style-type: none"> ➤ HWC hotspots areas ➤ Farm bordering Parks, wildlife corridors ➤ Inside parks 	<ul style="list-style-type: none"> ➤ KWS< Partners, WWF, AWF, Wildlife Works, IFAW, Ministry of Agriculture livestock and fisheries

		etc. <ul style="list-style-type: none"> • Support provision of beehives • Capacity building of the community on the importance of wildlife resources • Water provision: water pans, dams, boreholes • Spatial planning to consider wildlife corridors 		and implemented	➤ Ranches with corridors	
Health services	Human health and well being	<ul style="list-style-type: none"> • Provision of mosquito nets • Provision of supplements to children and vulnerable people • Provision of safe drinking water • Capacity building on proper hygiene management, 	<ul style="list-style-type: none"> ➤ Reduce incidences of diseases expected to increase because of Climate Change ➤ To help curb malnutrition 	<ul style="list-style-type: none"> ➤ number of mosquito nets distributed ➤ quantity of nutritional supplements provided ➤ Number of Capacity Building Sessions ➤ Community 	➤ County wide	<ul style="list-style-type: none"> ➤ Ministry of health, Community health workers, NACADA, Red cross, Action Aid, Partners

		<p>public health and drugs and substance abuse</p> <ul style="list-style-type: none"> • Sensitization on mental health 	<ul style="list-style-type: none"> ➤ to reduce consumption of alcohol and recreational drugs ➤ Reduce incidences of suicides, Gender based violence and depression 	<p>Knowledge Level</p> <ul style="list-style-type: none"> ➤ number of mental health sensitization campaigns 		
Lands, Mining, Energy and physical planning	Land use management	<ul style="list-style-type: none"> • Planting of Napier and vertiver grass • Construction of gabions and terraces • Regulation of settlements/enforcement of building codes • Development of spatial plans • Construction of check/sand dams along the gulleys • Developing 	<ul style="list-style-type: none"> ➤ Promote climate resilient buildings and settlements ➤ To prevent soil erosion 	<ul style="list-style-type: none"> ➤ Number of Napier and Vertiver Grass Planted ➤ area covered by gabions and terraces constructed ➤ number of new or revised policies/regulations on settlement implemented ➤ number of check dams constructed 	<ul style="list-style-type: none"> ➤ Mahoo, Chawia, Bura, Challa, Kishush e, Rong'e and Kasigha u wards 	<ul style="list-style-type: none"> ➤ Ministry of lands and physical planning, Redcross, Nature Kenya, Action Aid

		recreation sites to reclaim quarry sites		along gullies ➤ Number of Reclaimed Quarry Sites		
	Clean Energy Development	<ul style="list-style-type: none"> • Capacity building the community on alternative sources of energy • Installation of bio digesters • Provision of energy saving jikos • Promote Use of non-fuel irrigation systems (solar powered) • Construct Biogas plants in Hospitals and schools 	<ul style="list-style-type: none"> ➤ promote renewable energy development ➤ To increase uptake of clean energy solutions ➤ Reduce greenhouse gas emissions 	<ul style="list-style-type: none"> ➤ Number of Trainings Held ➤ number of bio-digesters installed ➤ number of energy-saving jikos provided ➤ number of solar-powered irrigation systems installed ➤ number of biogas plants constructed ➤ amount of energy saved 	➤ County wide	➤ Ministry of energy and mining, Department of lands, energy and mining, NEMA, Partners
Public works infrastructure and housing	Climate change resilient infrastructure	<ul style="list-style-type: none"> • Maintaining proper drainage on roads • Construction of culverts along storm water ways • Development 	<ul style="list-style-type: none"> ➤ To achieve maximum roof top water harvesting ➤ To reduce destruction of roads 	<ul style="list-style-type: none"> ➤ Number of Drainages Maintained ➤ number of culverts constructed ➤ Flood Incidents 	➤ County wide	➤ Department of public works, KeNHA, KERRA, KURRA

		and implementation of policies and Regulations on climate resilient buildings and infrastructures.	<ul style="list-style-type: none"> ➤ by stormy water ➤ Develop sustainable transport systems. ➤ To promote climate resilient buildings and settlements. 	<ul style="list-style-type: none"> ➤ cases ➤ Number of Regulations Developed and Implemented ➤ Compliance rates 		
Disaster (Drought and flood risk management)	Flood prevention	<ul style="list-style-type: none"> • Sensitize the community about flooding • Develop effective early warning system using technology. 	<ul style="list-style-type: none"> ➤ Reduce the potential damage from floods ➤ Foster community adaptive capacity and resilience 	<ul style="list-style-type: none"> ➤ Number of trainings conducted ➤ Number of early warning systems developed ➤ Number of Large-Scale Water Harvesting Systems Implemented ➤ Number of Youths Engaged in Alternative Livelihoods ➤ Number of 	Mata/Mahoro/Bomeni/Kaloleni Rong'e, Mboghoni, Ngolia, Wumingu Kishushe, Mbololo, Kasi gau, Marungu	Kenya Red Cross, world vision, KWS, NDMA, National Govt, Metrological dept. County govt NEMA
		<ul style="list-style-type: none"> • Investment in large scale water harvesting and storage infrastructure. • Promotion of alternative livelihoods to sand harvesting and brick 				

		<ul style="list-style-type: none"> making by youth Set up an emergency response system of trained divers, evacuators, first aiders Constructing gabions and dykes Revive water canals Legal framework to for sustainable sand harvesting to be developed and implemented Support community (women, youth) tree growing initiatives 		<ul style="list-style-type: none"> gabions and dykes constructed ➤ Number of water canals revived ➤ Number of regulations developed ➤ No. of community led tree growing initiatives and size of area planted 		
	Drought Management	<ul style="list-style-type: none"> Purchase updated Climate/drought predicting technologies Sensitize 	<ul style="list-style-type: none"> ➤ Minimize adverse impacts of drought on 	<ul style="list-style-type: none"> ➤ number and types of updated technologies purchased and in use 	Countywide	Kenya Red Cross, world vision, KWS, NDMA, National Govt, Meteorological dept. County govt

		<p>communities on benefits of environmental conservation</p> <ul style="list-style-type: none"> • Capacity build communities on drought tolerant crops & livestock • Destocking of livestock in the communities • Growing of trees • Construction of large underground water tanks/rain water harvesting 	<p>livelihoods, economy and the environment</p> <p>➤ To establish an effective drought monitoring system for prompt and efficient response</p>	<p>➤ number of community sensitization sessions conducted</p> <p>➤ number of farmers or herders trained in drought-tolerant crop cultivation and livestock rearing</p> <p>➤ number of livestock destocked</p> <p>➤ number and types of trees planted</p>		<p>KALRO TTU KFS TTWCA Other development partners</p>
		<ul style="list-style-type: none"> • Capacity building through benchmarking 				

4.0. DELIVERY MECHANISMS FOR THE CCCAP

4.1. ENABLING FACTORS

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

The crosscutting enabling actions described in this section include:

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

This section provides brief descriptions of the priority enabling actions to be completed from 1st July 2018 to 30th June 2023. The descriptions note if the actions are continued from NCCAP 2013-2017, identify the relevant institutions, and set out process indicators to measure progress and achievements

4.1.1. Enabling Policy and regulatory framework

The County Government of Taita Taveta has a robust Climate Change policy, legal, institutional and regulatory framework. The policy sets out with a goal to enhance adaptive capacity and resilience to climate in the County. The policy identifies the following strategic objectives;

- i. Establish and maintain an effective and efficient institutional framework to mainstream climate change across sectors
- ii. Reduce vulnerability to the impacts of climate change by building adaptive capacity, enhancing climate change resilience and strengthening capacity for disaster risk reduction
- iii. Facilitate widespread public awareness, ownership, participation and oversight of the County's/national climate change response and action plans
- iv. Provide a framework to mobilise resources for the county's climate change response and ensure effective and transparent utilisation of the resources
- v. Adopt intergenerational, special needs and gender mainstreaming approaches across all aspects of the County's climate response
- vi. Provide the policy framework to facilitate effective implementation of regularly updated and scientifically informed Climate Change Action Plans
- vii. Enhance research and use of science and technology in policy decisions and sustainable management of resources.

The policy informed the enactment of the County Climate Change Act 2022 which establishes requisite legal instruments for the implementation and mainstreaming of climate change actions in the County. The Act further provides for structural and institutional framework for the effective planning, coordination, implementation and oversight of climate actions. The Climate

Change Act 2022, establishes the County Climate Change Steering Committee, The County Climate Change Planning Committee and the Ward Climate Change Planning Committee. It further establishes a County Climate Change Fund into which the County is bound by law to contribute 2% of the annual development budget into the Fund each financial year.

Last but not least, the County developed the Climate Change Fund regulations which provides the Fund management framework and establishes

4.1.2. Mainstreaming in the CIDP

The County Integrated Development Plan (CIDP) is a medium-term development framework for County Governments as enshrined in the Constitution of Kenya 2010 and in Devolved legislation. This is a five-year plan that runs in tandem with the elections cycle in Kenya. The Current CIDP runs from 2023-2027.

The Taita Taveta County Government has ensured the mainstreaming of climate change actions in the CIDP III. The Directorate of Climate Change played a big part during the preparation of the CIDP and ensured that there was sector alignment with the County's climate change action priority areas. Although the CIDP process preceded the development of the Climate Change Action Plan, the two documents benefited from similar public participation processes that resulted in reciprocal proposals from members of the CIDP sector steering teams, community and stakeholders.

The CCCAP 2023-2027 was further informed and aligned to the Governor's manifesto so as to fit into the Government's campaign promise to his constituents. Among the key promises by H.E. The Governor, was tackling the effects of climate change by enhancing adaptive capacity through appropriate resilience investments.

According to the CIDP III, the County has clearly illustrated cross sectoral linkages with clear pointers at actions aimed at addressing the impact of climate change. In the Agriculture sector, the Department has outlined various adaptation and mitigation actions that relate to the proposed interventions and resilience investments in the CCCAP 2023-2027. Key among these actions;

- a) Promotion of Climate Agriculture technologies
- b) Human wildlife conflict management
- c) Promotion of pest surveillance and control
- d) Improve rangeland and ranch resource utilization and Management
- e) Development of disease and pest control infrastructure
- f) Improve capture fish and aquaculture development
- g) Promotion of Agroforestry and fodder trees
- h) Promotion of soil and water conservation and rain water harvesting

Knowledge management refers to the organization and sharing of climate change knowledge. The ability of the county to respond appropriately and effectively to climate change depends, to a great extent, on the ability to understand and assess impacts and vulnerability. Policy makers, the public and private sector can then use that knowledge to make informed decisions on appropriate steps for adaptation and mitigation.

A major concern in Kenya is the lack of adequate and appropriate climate change information and knowledge and the lack of data available to researchers, planners, policy-makers and the general public. Knowledge can exist as undocumented or documented. The process of knowledge management is therefore cognizant of this. Availability of knowledge may be restricted by intellectual property or public safety protections. Indigenous, traditional and local knowledge, which are critical elements of sharing and building resilience and enhancing adaptive capacity, are not protected through intellectual property rights. Generation of climate change knowledge and information, combined with effective communication strategies, can enhance public participation and awareness. The nature of knowledge is diverse and the stakeholders are extensive. Knowledge and information management should utilise appropriate high- and low-tech dissemination technologies to meet the needs of the public.

The County Government of Taita Taveta is aware of the need to gather and organize already existing data, while generating additional knowledge and information to inform decision-making. In order to enhance public participation and climate change knowledge and information management systems, the County Government in line with the Constitution is obliged to protect and enhance this knowledge and collaborate with the county meteorological Office (CMO) to develop a climate change knowledge and communication needs assessment required to develop appropriate systems and processes for climate related data collection, knowledge gathering, storage, utilization and effective communication.

As a matter of policy, The Taita Taveta County Government shall:

- i. Facilitate establishment and operation of a county climate change information hub and clearing house, including county meteorological office (CMO) to generate, coordinate, collect, collate, store, retrieve and disseminate reliable, high quality and up-to-date data and information.
- ii. Facilitate and support CMO set up a climate change information hub to collect primary information and act as dissemination points for knowledge and information.
- iii. Put in place mechanisms for climate actions and undertake climate change knowledge and communication needs assessment in order to develop appropriate systems and processes for climate related data collection.
- iv. Develop a comprehensive communication strategy to enhance dissemination of timely, credible and reliable climate change information and research findings.
- v. Put in place mechanisms to gather, document and promote application of traditional indigenous knowledge and practices on climate change.
- vi. Mainstream gender analysis into climate change knowledge and information management.
- vii. Implement mechanisms to facilitate and support access to climate change information

Capacity development is the enhancement of the capacity and ability of a county to undertake effective climate change action. The County priority capacity development actions emphasize establishment of the engendered coordination structures for the Climate Change Directorate to effectively implement the Taita Taveta County Climate Change Act, 2022. The actions incorporate climate change in environmental assessments and develop its enforcement role.

The action also builds the capacity of County Executive Committee (CEC) members responsible for climate change and officials assigned to the climate change unit. The actions include;

- i. support to report on climate change,
- ii. enhance the implementation of public finance management in relation to climate finance
- iii. develop policies and frameworks linked to the Climate Change Act, Climate Change Policy, and Climate Finance Policy.

4.1.3. Technology and innovation

The technology and innovation actions are important enablers of success for the adaptation and mitigation actions. An overall objective is to support the sectors to promote appropriate technologies to deliver adaptation and mitigation actions, such as water harvesting, climate information services, and clean cooking technologies. Technology development and transfer is a broad set of processes covering the flows of know-how, experience, and equipment for mitigating and adapting to climate change

Climate Change is complex and dynamic. It is therefore a field that requires continuous collection of data and assessment. This will enable Taita Taveta County to plan for potential climatic risks, respond to emergencies triggered by climatic events and tap opportunities generated by climate change and variability. On this basis, technology and innovation will play a critical role in determining and implementing optimal and cost-effective climate change adaptation and mitigation strategies and interventions.

The technology and innovation enabling actions in Taita Taveta County include:

- i. Promoting the development and use of local technologies in combination of innovation and technological advancement in the field of climate change as an effective way to implement the adaptation and mitigation measures;
- ii. Establishing the infrastructure necessary for promoting innovation at grassroots level, learning institutions including vocational training institutions, polytechnics, universities and research institution;
- iii. Establishing partnerships for technology transfer and development with the Industries, Higher learning institutions, international research organization and village polytechnics.
- iv. Establishing a system for climate monitoring, modelling and early warning systems connected to all the farmers in the county;
- v. Promoting the introduction and uptake of new breeds of crops and livestock which are early maturing and less vulnerable to impacts of climate change;
- vi. Liaise with stakeholders to identify research and technology needs; and promote strategic and systematic climate change-related research, impact and vulnerability assessments, and technology development and diffusion.

4.1.4. Finance- County Climate Change Fund

The developed countries have a responsibility to support climate change financing under the UNFCCC based on the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR&RC) and the financial mechanisms developed within and without the UNFCCC. In the recent UNFCCC conference, the developed countries have committed to create a Green Climate Fund and fast start finance.

Due to the extent of the predicted climate change adaptation and mitigation needs in Taita Taveta County, it is imperative to ensure that all sources of finances are mobilized (international, domestic, public and private), including through Public-Private Partnerships (PPPs). To secure an appropriate share from this initiative, there is need for the County to have a suitable framework and an enabling environment to attract and efficiently utilize climate finance.

Resource Mobilisation Funding required for financing climate change responses will be mobilized from both internal and external sources. In this context, resource mobilisation will be closely linked to Taita Taveta County climate change fund, particularly in regard to mobilizing external financing.

The County Government of Taita Taveta shall take the following interventions:

- i. Develop Public, Private and non-state actor's partnership for financing and implementation of climate change adaptation and mitigation projects;
- ii. Commit at least 2% of the county development budget to the County Climate Change Fund to support activities identified by communities through the established county climate change institutional framework
- iii. Explore possible avenues to attract internal and external climate finance, including through foreign direct investment and other multilateral or bilateral funding.
- iv. Put in place a mechanism and criteria for balance in the allocation of mobilized climate finance to adaptation and mitigation actions.
- v. Promote private sector involvement in climate finance opportunities through the introduction of incentives, removal of investment barriers, creation of a conducive investment climate and facilitation of access to finance.
- vi. Put in place a framework for coordination and monitoring and tracking sources, application and impacts of climate finance.
- vii. Allocate resources for climate change actions in county budgetary processes.
- viii. Build capacity to mobilize and enhance absorption of resources for climate change interventions.
- ix. Mobilize substantial levels of climate finance to fund implementation of this plan from internal and external sources.
- x. Put in place mechanisms to attract and leverage PPPs as a vehicle to mobilize resources and enhance private sector participation in low carbon climate resilient development activities.

4.1.5. Measurement, Reporting and Verification

All actions taken to respond to climate change should be measured, reported and verified. The Measurement, Reporting and Verification (MRV) requirements established under the UNFCCC

requires that Kenya submit national communications on climate change action every four years, and biennial update reports every two years. The County Climate Change Act 2022 requires the County Executive Committee member in charge of climate change to submit annual reports to the County Assembly. These reports should include information on greenhouse gas emissions, mitigation and adaptation actions, needs and support received. These reports are important to demonstrate that adaptation efforts and emission pathways are on the right track or that additional efforts are necessary. Currently, there are weak mechanisms for collecting information on climate change, with relevant indicators unconsolidated and scattered throughout different agencies and departments. This fragmented framework makes it difficult for the public and other key stakeholders to track progress, share results and access information.

The role of the public in the MRV process, especially stakeholders in target groups, should therefore be identified, including their role in tracking outcomes and measuring benefits. In response to this challenge, an integrated, holistic and adequately resourced monitoring, reporting and benefit measurement system is needed to respond to this challenge. An integrated MRV mechanism (MRV+) that tracks adaptation and mitigation actions, impacts and benefits is needed to determine progress toward the achievement of low carbon climate resilient development. MRV for climate finance is also necessary to track allocations, and their results and benefits in regard to enhancing climate resilience, building adaptive capacity and reducing emissions. This integrated approach where MRV is applied to mitigation and adaptation actions and climate finance will help to determine the impact of actions and implementation challenges, as well as facilitate evidence-based decision-making. It further provides a vital governance tool to assess performance against set targets and to update action plans accordingly.

By demonstrating Taita Taveta county progress toward climate resilience and emission reduction goals, the MRV approach will further contribute to attracting climate finance. The County Government shall:

- i. Establish an integrated MRV framework for performance, outcomes and benefits of mitigation, adaptation and climate finance actions.
- ii. Prioritize the use of existing MRV processes, data collection and information management systems to ensure efficiency in climate change related monitoring, reporting and benefit measurement.
- iii. Prioritize the integration of climate change parameters, data and information required for MRV into the national statistical management system.
- iv. Ensure that the national MRV system is transparently linked with national sustainable development planning, budgeting and monitoring systems.
- v. Enhance awareness and build capacities of both national and county entities to participate in the MRV process and systems

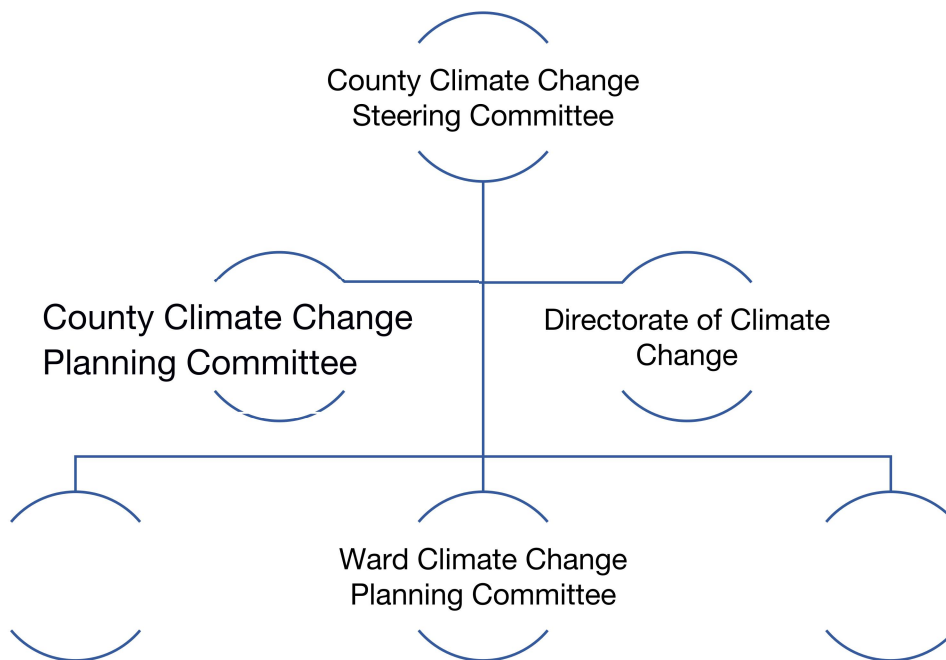
4.1.6. Multi Stakeholder engagements and Public Private Partnerships

Climate action requires concerted multi stakeholder engagement and public private partnerships for effective delivery. The Taita Taveta Action Plan 2023-2027 shall set up mechanisms for multi stakeholder collaboration as well as PPPs in its implementation. The plan has provided a clear framework for partnerships and collaboration that will allow for

coordinated climate action. It has further recognized the ongoing contribution by both public and private sector actors as outlined in the plan implementation matrix. This goes out to emphasize the role and space that each actor plays in the county in as far as climate action is concerned.

4.2. IMPLEMENTATION AND COORDINATION MECHANISMS

The Taita Taveta County Climate Change Act provides for institutional structures and responsibilities that guide the oversight and management of the CCCAP 2023-2027.



4.2.1. The County Climate Change Steering Committee

The County Climate Change Steering Committee is Chaired by H.E Deputy Governor, is responsible for overall coordination and advisory functions, including guiding the implementation of the County Climate Change Action Plan (CCCAP 2023-2027). The steering committee will among other things, “ensure mainstreaming of climate change functions by the County Government”, and, “approve and oversee the implementation of the CCCAP.”

Members of the Steering Committee are appointed by H.E. The Governor as set out in section 9 of the County Climate Change Act, 2022 and are listed below;

- (a) Deputy Governor who shall be the chairperson
- (b) Executive Committee Member who shall be the Secretary
- (c) Executive Committee Member in charge of the County Treasury
- (d) Executive Committee Member in charge of agriculture
- (e) representative of the private sector nominated by the body representing the largest number of institutions in the private sector operating in the County

- (f) a representative of the Civil Society nominated by the most representative registered association of civil societies working on climate change in the County;
 - (g) a representative of the youth nominated by the most representative registered association of youths in the County
 - (h) a representative of women nominated by the most representative registered association of women in the County;
 - (i) a representative of persons living with disability nominated by the umbrella body representing persons living with disability in the County.
- (j) Fund Administrator, who shall be as an ex-officio member with no voting rights

The functions of the committee are laid out in section 8 of the Act. They include;

- (a) ensure mainstreaming of climate change into county planning and development processes;
- (b) oversee formulation and monitor implementation of the County Climate Change Action Plan, County Climate Finance Framework and any other county climate change policies, plans and strategies
- (c) mobilize funds into and oversee the administration of the County Climate Change Fund established under this Act;
- (d) review, approve and monitor implementation of Regulations for administration and management of the Fund
- (e) review and make recommendations on the biennial report on implementation of the County Climate Change Action Plan and any other reports on climate change response interventions in the county
- (f) advise the county government on legislative, policy and other measures necessary for climate change response and attainment of low carbon climate resilient development;
- (g) approve and oversee the implementation in the county of a comprehensive programme of climate change education, awareness creation and capacity building;
- (h) provide policy direction on research, training and dissemination of information relating to climate change to the public and other stakeholders the county;
- (i) ensure positive linkages, interactions and synergy between the county, neighboring counties and the national government in climate change response programming and action;
- (j) ensure a coordinated approach to climate change response programming and action within the county government, between the county government and national government, and among the different stakeholders in the county; and

- (k) guide the formulation of a climate change reporting framework, and the preparation and dissemination of an annual report on climate change response activities in the county
- (l) perform any other functions that may further the foregoing objectives and/or may be assigned by the Governor

4.2.2. Directorate of Climate Change

The Act further establishes the County Climate Change Directorate that is tasked with the implementation of the CCCAP and is responsible for the operational coordination and implementation of all climate change response measures and actions in the County. The County Climate Change Directorate oversees the implementation of climate actions in the county. According to the County Climate Change Act, 2022, the County Directorate of Climate Change has been assigned the following functions;

- (a) coordinate the implementation of the County Climate Change Action Plan, County Climate Change Finance Framework and other climate change related policies, plans, programmes and projects;
- (b) coordinate and provide technical support to relevant County Government departments to integrate and mainstream climate change response measures and actions into all County Government development policies, plans, programmes and projects;
- (c) provide capacity building and technical support to communities and other stakeholders in the county to formulate and implement low carbon development strategies and actions to build resilience and enhance adaptive capacity to climate change;
- (d) coordinate climate change related research activities, knowledge dissemination and public awareness in the County;
- (e) coordinate public participation and facilitate access to information pertaining to climate change with regard to all development plans, programmes and projects in the County;
- (f) coordinate measurement, reporting and verification of all climate change policies, plans, programmes and projects in the County;

(g) mobilize resources for the County Climate Change Fund established by this Act; and,

(h) perform any other climate change related function as may be assigned by the County Climate Change Steering Committee established under this Act.

4.2.3. County Climate Change Committee

The Taita Taveta County Climate Act, 2022, section 15, establishes the County Climate Change Planning Committee which is appointed by the County Executive Member responsible for climate change matters in the County. The committee was appointed in May 2023 and is comprised of the following 12 members;

- (a) Chief Officer in charge of climate change matters who shall be the chairperson.
- (b) Director in charge of the climate change, who shall be the Secretary.
- (c) County Director in charge of finance.
- (d) County Director in charge of agriculture.
- (e) County Director in charge of health.
- (f) County Director in charge of water.
- (g) one representative of persons living with disabilities in the County nominated by the umbrella body representing persons living with disabilities in the County
- (h) Two representatives of civil society nominated by the umbrella body of public benefit organizations working on climate change in the County.
- (i) One representative of the private sector nominated by the umbrella body of private sector organizations in the county
- (j) One representative of women nominated by the umbrella body of women working on climate change in the county
- (k) One representative of youth nominated by the umbrella body of youth working on climate change in the county
- (l) The Fund Administrator who shall be an ex-officio member with no voting rights

The committee is tasked with the following functions;

- (a) coordinate planning, and implementation of projects and activities for climate change response in the county;
- (b) coordinate implementation of the County Climate Change Action Plan and the County Climate Finance Framework

- (c) establish guidelines to be used by Ward Planning Committees in formulating climate response projects for funding by the County Climate Change Fund
- (d) support Ward Planning Committees in development and implementation of climate response projects
- (e) coordinate development and implementation of the County Climate Change Fund Regulations
- (f) advise the Steering Committee on strategies, priority programmes, projects and activities for climate change response in the county
- (g) formulate and implement strategic actions to foster climate change education, awareness creation and capacity development in the county
- (h) coordinate research and knowledge management on climate change, its impacts and strategies for responding thereto
- (i) prepare and disseminate an annual report on climate change response activities in the county
- (j) formulate and implement a county monitoring, evaluation and reporting framework for climate change response
- (k) perform any other functions assigned to it by the Steering Committee

4.2.4. Ward Climate Change Planning Committee

The County Climate Change Act, 2022 section 21 establishes the Ward Climate Change Planning Committees. Taita Taveta has already established 20 Ward planning committees which have a composition of 9 members each appointed by the County Executive Committee Member responsible for Climate Change matter in the County. The committee is made up the following members;

- (a) a person ordinarily resident in the Ward and holder of a Diploma qualification in a field relevant to environmental management who shall be the Chairperson.
- (b) an officer of the Directorate nominated by the Executive Committee Member who shall be the Secretary.
- (c) a representative of the youth who ordinarily resides in the Ward nominated by registered community-based organizations of youth working on environment and development in the Ward.
- (d) a representative of the women who ordinarily resides in the Ward nominated by registered community-based organizations of women working on environment and development in the Ward.
- (e) a representative of persons living disability who ordinarily resides in the Ward nominated by the umbrella body of persons living with disability in the County.

- (f) a representative of the business community who ordinarily resides in the Ward nominated by the umbrella body representing the sector in the County.
- (g) a representatives of community-based organizations nominated by such organizations working on climate change in the County
- (h) two representatives of faith-based organizations being persons who ordinarily reside in the Ward nominated by registered faith-based organizations operating in the Ward.
- (i) the Ward Administrator as an ex officio.
- (j) a representative of the MCA as an ex officio

The functions of the ward climate change planning committee are;

- (a) to coordinate and mobilize communities and other stakeholders in the ward to design and implement climate change response activities
- (b) to facilitate research and knowledge management at the ward level on climate change, its impacts and strategies for responding thereto
- (c) facilitate public education, awareness creation, and capacity building at the ward level on climate change, its impacts and strategies for responding thereto
- (d) to coordinate, facilitate and manage community consultations on priority climate change response activities
- (e) participate in county planning and budgeting processes with a view to ensuring the mainstreaming of climate change and prioritization of climate change response in county development plans
- (f) facilitate public participation in climate change governance, implementation of agreed climate change response activities, and monitoring of those activities
- (g) coordinate and facilitate provision of technical support to communities in the ward in developing proposals on climate change response projects for funding by the County Climate Change Fund
- (h) oversee implementation of climate change response projects funded by the County Climate Change Fund and report thereon to the Planning Committee
- (i) perform any other functions that may be assigned to it by the Planning Committee

The County Executive Committee Member in charge of Climate Change is tasked with facilitating the development of the CCCAP and presenting it to cabinet for approval and finally to the County Assembly for adoption. The CECM is further required to submit annual implementation status reports on the CCAP to the County Assembly.

4.3. Monitoring and evaluation (M&E) of the CCCAP

The CCCD is responsible for M&E of CCCAP 2023-2027. The implementation of the CCCAP will be reviewed every five years as required by Section 27(4) of the Taita Taveta Climate Change Act, 2022. The review will utilise reports from sector departments and MDAs, as well as inputs from relevant stakeholders. Important stakeholders in the review process include private sector, academia, women, youth, and minority and marginalized groups including pastoralists, hunter gatherers, and fisher communities.

M&E of CCCAP 2023-2027 will focus on demonstrating that investment in adaptation and mitigation actions leads to real climate results and development benefits that are linked to the Big 4 agenda. The M&E system will track implementation and results of CCCAP 2023-2027, and climate finance raised to deliver on the action plan. This will provide the evidence base for planning and implementing future actions, seeking support, and domestic and international reporting. The County will embrace the National reporting framework that will be provide to counties based on the devolved governance system. The M&E system will:

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

4.4. PLAN IMPLEMENTATION MATRIX

Priority action area	Result by 30 th June 2027	Adaptation/Mitigation	Indicators	Implementing Agencies	Time Frame By 30 th Jun-2028	Sources of Funds	Indicative budget in (KES. Millions)
strategic objective 1: Reduce risks to communities and infrastructure resulting from climate related disasters such as droughts and floods.							
Increase number of households and entities benefiting from devolved adaptive services	<ul style="list-style-type: none"> Number of beneficiaries of social protection mechanisms and other safeguards (under the Hunger Safety Net Programme) increased by 15% for regular beneficiaries Climate Change Funds address local adaptation priorities that are identified and monitored by community committees comprised of women and men. At least 60 Resilience Investments benefiting 10,000 Households 	Adaptation	<ul style="list-style-type: none"> No. of individuals No. of projects No. of HH 	CG, FAO, KALRO, WFP, KRCS,		CCF, CG, GoK, Partners	1,700
Improve ability of people to	<ul style="list-style-type: none"> Drought early warning systems improved, including the promotion of 	Adaptation/Mitigation	<ul style="list-style-type: none"> No. of advisories and alerts 	KMD, CG, NDMA, KALRO,		CCF, CG, GoK,	50

cope with drought	<p>people-centred systems at the county levels.</p> <ul style="list-style-type: none"> ▪ Number of recipients of climate information services that use the information in their risk management decisions to reach to 10,000. ▪ Water harvesting and storage (see expected results under Climate Action 3 – Water and the Blue Economy). 		<ul style="list-style-type: none"> ▪ issued ▪ No. of people ▪ No. of water harvesting and storage infrastructure as reported under action no. 3. 	NEMA, GoK		Partners	
Improve ability of people to cope with, and infrastructure to withstand, floods	<ul style="list-style-type: none"> ▪ Flood early warning systems improved, taking advantage of widespread access to mobile technology that provides an avenue for disseminating information. ▪ Domesticated and Implement the existing 11 integrated flood management plans; for example, water storage, drainage networks, reforestation and rehabilitation of riparian areas, construction of dams, and land use restrictions. ▪ Capacity development of at least 5 Water Resources Users Associations (WRUA), which are 	Adaptation/Mitigation	<ul style="list-style-type: none"> ▪ No. of alerts and advisories issued ▪ No. of flood management plans domesticated and implemented ▪ No. of WRUAs trained and supported ▪ No. of flood control structures (Dykes/Dams) built 	KMD, KRCS, CG, MOWI, World Vision, Development Partners, WRUAs, WUAs, CFAs, KFS, KEFRI, KENHA		CCF, CG, GoK, Partners	50

	<p>community-based organizations that are rights-based groups with female and male membership.</p> <ul style="list-style-type: none"> Water and flood control including dams/dykes, drainage systems, and water storage (see expected results under Climate Action 3 – Water and the Blue Economy). 						
Improve coordination and delivery of disaster risk management	<ul style="list-style-type: none"> Engendered County Disaster Risk Management Committees to coordinate disaster response at the County level. Disaster Risk Management Fund to provide funds for disaster preparedness, mitigation of disaster impacts, and disaster recovery measures, particularly for vulnerable groups. 	Mitigation	<ul style="list-style-type: none"> No. of committees Proof of inclusive Composition by gender Amount of money raised and disbursed 			CCF, CG, GoK, Partners	100
Enabling (legal)	Policy review, development and implementation	Enabling	No. of policies reviewed/developed and implemented			CCF, CG, GoK, Partners	20
Enabling (Finance)	Contingencies Fund allocations to address urgent and unforeseen needs	Adaptation	<ul style="list-style-type: none"> Amount of funds allocated 			CCF, CG, GoK, Partners	500

						rs	
Strategic Objective 2: Increase food and nutrition security by enhancing productivity and resilience of the agricultural sector in as low carbon manner as possible							
2.1. Improve crop productivity through the Implementation of CSA interventions	<ul style="list-style-type: none"> Number of institutions/value chain actors and households harvesting water for agricultural use/production increased Agricultural pre- and post-harvest losses reduced Number of beneficiaries accessing climate-oriented crop insurance increased. Number of farmers accessing appropriate agricultural inputs subsidies increased 	Adaptation	<ul style="list-style-type: none"> No. of institutions -No. of HHs Agricultural data No. of beneficiaries No. of farmers 				200
	<ul style="list-style-type: none"> Number of households and acreage under sustainable land management (SLM) increased for agricultural production: Support the reclamation of degraded land Area under integrated soil nutrient management increased while incorporating minimum/no tillage Total area under agroforestry at farm level increased 	Adaptation	<ul style="list-style-type: none"> No. of HHs No. of ha. No. of ha. No. of ha. 			CCF, CG, GoK, Partners	500
2.2. Increase	<ul style="list-style-type: none"> Acreage under irrigation increased 	Adaptation	<ul style="list-style-type: none"> No. of ha Amount of 			CCF, CG,	1,000

in the fisheries through Implementation CSA interventions	farming installed in Lake Challa and Jipe - 125 No. of inactive fish ponds revived and new ones constructed		<ul style="list-style-type: none"> No. of cages No. of fish ponds 			Partners	
2.5. Diversify livelihoods to adjust to a changing climate	<ul style="list-style-type: none"> Number of households supported to adopt diversified adaptive enterprises/value chains for sustained livelihoods and nutrition security Number of Small-scale farmers, pastoralists and fisher communities supported to transition to specialised and market-oriented output priority value chains, including drought-tolerant values chains 	Adaptation	<ul style="list-style-type: none"> No. of HH No. of individuals 			CCF, CG, GoK, Partners	100
Enabling Action – technology and knowledge management	<ul style="list-style-type: none"> Develop and implement a Climate information services Plan 	Enabling	<ul style="list-style-type: none"> No. of plans developed 			CCF, CG, GoK, Partners	10
Strategic objective 3. Enhance resilience of the blue economy and water sector by ensuring adequate access to and efficient use of water for agriculture, manufacturing, domestic, wildlife, and other uses.							
Increase annual per capita water availability	<ul style="list-style-type: none"> No. of feasibility studies and development of new sources Two bulk water supply 	Adaptation	<ul style="list-style-type: none"> No. of feasibility reports No. of 			CCF, CG, GoK, Partners	5,000

through the development of water infrastructure (mega dams, small dams, water pans, untapped aquifers)	<ul style="list-style-type: none"> projects undertaken (Mzima 2, and Njoro Kubwa) Expansion of existing supply infrastructure (5.1 Km) 		<ul style="list-style-type: none"> projects Length of pipeline in Km 			rs	
Climate proof water harvesting and water storage infrastructure and improve flood control	<ul style="list-style-type: none"> Harness storm and flood water through the construction/rehabilitation of 3 No. Small size Dams (Kighombo, Kishenyi and Mwatatedams) Enhance rain water harvesting and storage through the Construction of 30 No. Sand/Check dams Undertake water catchment and riparian zone conservation and protection by growing 5 million trees and Pegging, fencing and rehabilitation of 20 km stretch of rivers/streams Prevention of soil and gully erosion through construction of gabions and Dykes 	Adaptation	<ul style="list-style-type: none"> No. of small size dams No. of Sand/check dams No of trees planted Length of rivers/streams rehabilitated No. of gulleys rehabilitated 			CCF, CG, GoK, Partners	2,500
Increase gender	<ul style="list-style-type: none"> Enhancement of County's irrigation infrastructure 	Adaptation	<ul style="list-style-type: none"> No. of water pans 			CCF, CG,	1,000

responsive affordable water harvesting-based livelihood resilience programmes	<ul style="list-style-type: none"> through the construction and expansion of 20 No. Water pans. Support farm level water harvesting efforts by constructing 5,000 farm ponds Renovate existing irrigation infrastructure through the rehabilitation of 5 No. irrigation canals in Taveta (Canal lining and de-silting) Conduct community awareness and sensitization campaigns 		<ul style="list-style-type: none"> No. of farm ponds No. of canals No. of people reached 			GoK, Partners	
Promote water efficiency (monitor, reduce, re-use, recycle and modelling)	<ul style="list-style-type: none"> Reduce water wastage and non-revenue water through, for example: Innovation in water tracking and leakages identification and reporting Awareness programme for water efficiency 	Mitigation	<ul style="list-style-type: none"> % reduction o NRW No. of reports No. of meetings held 			CCF, CG, GoK, Partners	10
Improve access to good quality water	<ul style="list-style-type: none"> Number of people and entities accessing good quality water for domestic, agricultural and industrial use increased through: <ul style="list-style-type: none"> - Large-scale installation of water meters - Regular inspection of water quality 	Adaptation	<ul style="list-style-type: none"> No. of people No. of large scale meters installed Inspection reports 			CCF, CG, GoK, Partners	10
Enabling	<ul style="list-style-type: none"> Support development of 	Enabling	<ul style="list-style-type: none"> Water 			CCF,	110

actions (policies and regulations)	the County Water Masterplan ▪ Develop and implement a County water policy, Legislation and regulations		Masterplan ▪ No. of policies, laws and regulations			CG, GoK, Partne rs	
Strategic Objective 4: Increase forest/tree cover to 10% of total land area; rehabilitate degraded lands, including rangelands; increase resilience of wildlife.							
Priority Action	Results by 30 th June 2028	Adaptation/Mitigati on					
Afforest and reforest degraded and deforested areas in Counties	<ul style="list-style-type: none"> ▪ Increase the county's forest cover from 3% to 8% by 2027 (area under forestry increased by 50 ha) ▪ Increase tree cover by placing 100 ha. Of farmland under woodlot establishment ▪ Improve urban forestry by 5% in the County's main urban Centres through; <ul style="list-style-type: none"> -the establishment of 10 No. arboreta and recreational areas -Promotion of tree growing in public and private premises/homes -60 No. forests 	Adaptation/Mitigati on	<ul style="list-style-type: none"> ▪ % Increase ▪ No. of ha. ▪ No. of ha. ▪ % increase ▪ No. of arboreta/recreational sites ▪ No. of ha ▪ No. of trees planted 			CCF, CG, GoK, Partne rs	320
Reduce deforestation and forest degradation	<ul style="list-style-type: none"> ▪ Undertake survey, mapping and delineation of County and Community forests 	Adaptation/Mitigati on	<ul style="list-style-type: none"> ▪ No. of forests ▪ No of CFAs ▪ No of CPAs 			CCF, CG, GoK, Partne	100

	<ul style="list-style-type: none"> Strengthen Participatory Forest Management by capacity building of 12 No. CFAs Regulate Charcoal Production and trade in the County by registering, supporting and streamlining operations of 4 No. Charcoal Producer Associations Reduce pressure on wood based forest exploitation by supporting 20 No. community groups in embracing NBEs (bee keeping, butterfly farming and bio-prospecting) 		<ul style="list-style-type: none"> No. of groups supported 			rs	
Restore degraded forest landscapes (ASALs and rangelands)	<ul style="list-style-type: none"> Enhance Forest Extension support services to reach 2000 farmers Undertake restoration of degraded hilly areas across the County through the proposed “adopt a hill” program to reclaim at least 500ha. 	Adaptation/Mitigation	<ul style="list-style-type: none"> No. of people reached No. of ha. restored 			CCF, CG, GoK, Partners	520
Promote sustainable timber production on privately owned land	<ul style="list-style-type: none"> Area under private sector-based commercial and industrial plantations increased by at least 100 ha. 	Adaptation/Mitigation	<ul style="list-style-type: none"> No. of ha. 			CCF, CG, GoK, Partners	100
Conserve land areas	<ul style="list-style-type: none"> Partner with the conservancies in 	Adaptation/Mitigation	<ul style="list-style-type: none"> % reduction in conflict 			CCF, CG,	50

for wildlife	<ul style="list-style-type: none"> rangeland conservation initiatives-especially in mitigating conflict and reducing conflict by 50% Strengthen and Support conservancy development 5 No. conservancies supported 		<ul style="list-style-type: none"> No. of conservancies supported 			GoK, Partners	
Enabling action (Policy and regulatory)	<ul style="list-style-type: none"> Review and Implement TIPs Develop a County Wildlife Conservation Policy Establish a County Wildlife Conservation and Consolation Fund Establish a County Wildlife liaison Office to improve relations with KWS and wildlife conservation stakeholders operating within the County 	Enabling	<ul style="list-style-type: none"> No. of review and implementation reports No. of policies developed No. of officers engaged 			CCF, CG, GoK, Partners	60
Enabling action (Capacity development)	Build the capacity of county forest unit for the efficient transfer and implementation of the devolved function with respect to community and county forests	Enabling	<ul style="list-style-type: none"> No. of officers trained 			CCF, CG, GoK, Partners	5
Strategic Objective 5: Mainstream climate change adaptation into the health sector; and increase the resilience of human settlements, including improved solid waste management in urban areas							
Priority Action	Results by 30 th June 2028	Adaptation/Mitigation					
Reduce the incidence of	<ul style="list-style-type: none"> Increased Community awareness of Malaria 	Adaptation	<ul style="list-style-type: none"> No. of 			CCF,	20

<p>malaria and other vector borne disease</p>	<p>Services through observance of World Malaria Day celebrations</p> <ul style="list-style-type: none"> All health facilities in the county distributing LLITNs 200 No. schools reached under the school health outreach program 		<p>people reached</p> <ul style="list-style-type: none"> No. of health facilities/ No. of nets issued No. of schools participating 			<p>CG, GoK, Partners</p>	
<p>Promote recycling to divert collected waste away from disposal sites.</p>	<ul style="list-style-type: none"> Construction of 40 No. receptacles and 1 incinerator for enhanced waste handling and disposal Construction of 2 No. MRFs (Taveta and Voi) Purchase of 4 No. Garbage Trucks and 1 bio-medical waste transporting vehicle Construction of 1 No. Waste water treatment and sewerage system in Voi, Town 	<p>Mitigation</p>	<ul style="list-style-type: none"> No. of receptacles constructed No. of MRFs constructed No. of garbage trucks and biomedical waste transporting vehicle No. of facilities 			<p>CCF, CG, GoK, Partners</p>	<p>500</p>
<p>Climate proof landfill sites</p>	<ul style="list-style-type: none"> Procure and Purchase 3 No. landfills (Taveta, Voi and Maungu) Construct perimeter walls and proper drainage to avoid contamination 	<p>Mitigation</p>	<ul style="list-style-type: none"> No. of landfills No. of landfills fenced 			<p>CCF, CG, GoK, Partners</p>	<p>50</p>
<p>Control flooding in human settlements</p>	<ul style="list-style-type: none"> Support RWH at Household level by offering subsidy to 2000 No. VMG HH in procuring gutters 	<p>Adaptation</p>	<ul style="list-style-type: none"> No. of HH supported No. of gutters and 			<p>CCF, CG, GoK, Partners</p>	<p>500</p>

	<ul style="list-style-type: none"> and storage tanks ▪ Design, Construct and maintain storm water Drainage infrastructure in urban centers ▪ 2000 No. culverts constructed and maintained 		<ul style="list-style-type: none"> tanks issued ▪ Length of drainage infrastructure ▪ No. of culverts constructed 			rs	
Enabling Action (technology and capacity building)	<ul style="list-style-type: none"> ▪ Improve the surveillance and monitoring of climate related diseases. 	Adaptation	<ul style="list-style-type: none"> ▪ No. of reports 			CCF, CG, GoK, Partners	10
Enabling action (capacity building)	<ul style="list-style-type: none"> ▪ 150 No. CHPs capacity-built on Malaria case management 	Adaptation	<ul style="list-style-type: none"> ▪ No. of CHPs trained 			CCF, CG, GoK, Partners	5
Enabling Action (policy and regulation)	<ul style="list-style-type: none"> ▪ Implement the Development Control Policy ▪ Development of building and constructions guidelines to make compulsory guttering and roof rain water harvesting ▪ Develop policy for green building, and green building codes and regulations that account for climate information ▪ Enforce laws on urban planning and storm water 	Enabling	<ul style="list-style-type: none"> ▪ No. of policy developed ▪ No. of guidelines developed ▪ No. of policies, codes and regulations developed ▪ No. of Enforcement reports ▪ No. of 			CCF, CG, GoK, Partners	50

	management in urban areas – desilting of drainages, riparian protection <ul style="list-style-type: none"> Develop a County Policy and legal framework for sustainable waste management 		policy, law and regulations				
Strategic objective 6. Reduce reliance on biomass energy through investment in renewable energy forms and create favorable conditions for uptake of non-motorised forms of transportation							
Action	Results by 30 th June 2027	Adaptation/Mitigation					
Reduce dependency on biomass fuels through uptake of renewable forms of energy and clean cooking technologies	<ul style="list-style-type: none"> Promote the use of biogas in dairy farming households through a subsidy scheme Increase access to clean cooking to 70% of Households Support 4 No. Community Groups in the production and marketing of charcoal briquettes 	Mitigation	<ul style="list-style-type: none"> No. of biogas units constructed % Increase in clean cooking No. of groups supported 			CCF, CG, GoK, Partners	10
Increase use of green energy in public institutions and installations	<ul style="list-style-type: none"> Promote the use of solar energy to power boreholes and water pumping stations Install solar in all public institutions to bring down the County's power bill 	Mitigation	<ul style="list-style-type: none"> No. of boreholes/water pumping stations No. of public institutions installed with 			CCF, CG, GoK, Partners	500

			solar				
Total							17,810

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FEBRUARY, 2023



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