

THE COUNTY GOVERNMENT OF TAITA TAVETA



CLIMATE CHANGE POLICY DRAFT

**DEPARTMENT OF WATER, SANITATION, CLIMATE CHANGE, ENVIRONMENT
AND NATURAL RESOURCES**

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ACRONYMS

CIDP	County Integrated Development Plan
MTP	Medium Term Plan
REDD+	Reducing Emission from Deforestation and Forest Degradation
CEAP	County Environment Action Plan
ADP	Annual Development Plan
EAC	East Africa Community
GHG	Green House Gas
CSR	Corporate Social Responsibility
SGR	Standard Gauge Railway
IPCC	Inter governmental Panel on Climate Change
AGPO	Access to Government Procurement Opportunities
CMO	County Metrological Office
MRV	Measurement Reporting and Verification
M&E	Monitoring and Evaluation
CIMES	County Integrated Monitoring and Evaluation System
UNFCCC	United Nations Framework Convention on Climate Change

FOREWORD

Kenya in the last two decades has increasingly continued to experience effects of climate change. Taita Taveta high dependence on climate sensitive natural resources for livelihoods and economic sustenance has increased vulnerability of communities. Climate change is not only a threat to the achievement of sustainable development, but also has the potential to reverse the gains achieved towards attaining vision 2030 and implementation of the Big Four Agenda.

Kenya's Nationally Determined Contributions (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 Medium Term Plans (MTPs), and implementing adaptation actions. The mitigation contribution seeks to abate Kenya's GHG emissions by 30% by 2030, relative to the business as usual scenario of 143

MtCO₂eq. Achievement of Kenya's NDC is subject to international support in the form of finance, investment, technology development and transfer, and capacity development.

Mainstreaming of climate change into development plans puts the country in a better position to address climate change effects in the short, medium and long-term. Taita Taveta county is mainstreaming climate change actions in the County Integrated Development Plans. I personally commit to offer all the support that will be required to ensure effective and successful implementation of this policy so as to ensure that the overall goal of this policy of enhancing the social-economic and ecological resilience and reducing vulnerability to impacts of climate change in Taita Taveta County is achieved.

Hon. Esther Mwanyumba
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County Government of Taita Taveta

CHAPTER 1: INTRODUCTION

1.1 Background

Taita Taveta County is one of the six counties in the Coast region of Kenya. Taita Taveta County is located approximately 200 Km northwest of the coastal city of Mombasa and 360 Km southeast of Nairobi. It borders Tana River, Kitui and Makueni Counties to the North, Kwale and Kilifi Counties to the East, Kajiado County to the North-west, and the Republic of Tanzania to the South and South-west. The County covers an area of 17,084.1 Km² and lies between latitude 20 46' South and 40 10' South and longitude 370 36' East and 300 14' East.

The County is divided into three major topographical zones, The upper, The lower and the volcanic foothills zones. The upper zone of an altitudes ranging between 304 metres and 2,208 metres above sea level comprising of Taita, Mwambirwa and Sagalla hills regions is suitable for horticultural farming. The lower zone consists of the plains where there is ranching, national parks and mining sites/areas, while the Volcanic foothills zone covers the Taveta region with potential for underground water and springs emanating from Mt. Kilimanjaro.

The County is mainly dry, except for the Taita hills, which are considerably wet. The County experiences uneven distribution of rainfall in two seasons influenced by south easterlies and the relief of the County, with the long rains between the months of March and May and the short rains between October and December. The mean annual rainfall in these hills ranges from 500 mm in the lowlands to over 1,200 mm in the upper mountain zone. The annual mean rainfall is 650 mm. The average temperature in the County is 23 Celcius, with temperatures getting as low as 18.2 Celcius in the hilly areas (Taita, Mwambirwa and Sagalla), while on lower zones, temperatures rise to about 25 Celcius.

The total land area in Taita Taveta County, 10,650 Km² constitutes the Tsavo National Park (Tsavo East and Tsavo West National Parks), which translates to about 62% of the total land area forming the Tsavo ecosystem. The average wildlife density in Topical Livestock Units (TLU) per Km² stood at 4.35 (Nature's Benefits in Taita Taveta, 2007). The parks, sanctuaries and forests are home to a prolific birdlife that features over 500 species.

The County is endowed with a wide range of environmental resources, which contribute directly and indirectly to the local and national economy through revenue generation and wealth creation. These resources support reproductive sectors like agriculture, fishing, livestock, water, tourism, forestry, energy, trade, and industry.

The County has 68 Forest parcels, of which 28 are gazetted under The Kenya Forest Service (KFS) and 40 are under County Government are yet to be gazetted. The gazetted forests cover an area of 1,489.8 Ha whereas the non-gazetted ones cover an area of approximately 9,000 Ha. These forests are part of a unique Eastern Arc range of forests, which are found mostly in Eastern Tanzania with the Taita Hills forming the Taita Taveta Eastern Arc forest type in East Africa. The Taita Hills forest holds a unique biodiversity with 13 taxa of plants and 9 taxa of animals.

The main rivers in the County are the Tsavo, Lumi and Voi River. Mzima springs is the major water supplier to Voi town and Mombasa City, while small springs and streams include Njukini, Njorokubwa, Kitobo, Maji ya Waleni, Humas Springs and Lemonya Springs. There are two lakes, Jipe and Challa, both found in Taveta area. Lake Challa is a crater lake with little economic exploitation, while Lake Jipe is slightly exploited through small-scale fishing. Both lakes are served by springs emanating from Mt. Kilimanjaro.

Taita Taveta has been experiencing changes and variabilities in climate for the last four decades. The long-term environmental changes include soil degradation, reduction of water volumes in rivers, landslides, deforestation, drying of wells and rivers, and increased human wildlife conflicts.

Agriculture is the main source of livelihood in Taita Taveta. It contributes about 95% of the household incomes and more than 80% of employment. Absolute poverty stands at 57% while 48% of the population experience food poverty. The agriculture sector is greatly affected by droughts, floods, unpredictable and unreliable rainfall, and high temperatures brought about by climate change

The County Government of Taita Taveta recognizes climate change as an emerging threat to sustainable development in the County (CIDP-TT).

1.2 International, Regional and National context

The Intergovernmental Panel on Climate Change (IPCC) has noted that Africa is highly vulnerable to climate change. Impacts of particular concern to Africa are related to water resources, food production, human health, desertification and coastal zones. These impacts are already manifesting in Kenya with shifts in rainfall patterns and extreme weather events expected to have far reaching consequences.

Cognizant of this, the Government has, through the UNFCCC process committed to protect the climate system for the benefit of the present and future generations. Kenya ratified the UNFCCC in 1994 and the Kyoto Protocol in 2005. The country is a key player in the global climate change governance system, and annually participates in the Conference of the Parties to the UNFCCC and Conference of the Parties serving as Meeting of the Parties to the Kyoto Protocol, articulating the national interest and position during international negotiations.

Kenya has also actively participated in regional initiatives to respond to climate change, including the development of the East African Community (EAC) Climate Change Policy, Master Plan, and Strategy, which also inform this National Climate Change Framework Policy. The EAC regional Climate Change Master Plan (2011-2031), indeed, serves as the blueprint to guide regional climate change response measures over the long term.

To enable countries and communities adapt to the impacts of climate change, the Intergovernmental Panel on Climate Change (IPCC) has proposed several adaptation measures (IPCC 2014). While Kenya has ratified and developed several policies/ legislations to implement international agreements on climate change and to outline her climate change adaptation strategies, these policies are to be cascaded at the county level. Yet, with devolution, most of the climate-sensitive sectors such as agriculture, health, forestry and natural resources, have either been fully

or partly devolved. Furthermore, for low-income and natural resource-dependent communities such as those in Taita Taveta county, practical, low-cost and natural resource-based adaptation measures that are tailored to the specific conditions and peculiarities of the county are required (IPCC 2014; CHIESA, 2015).

1.3 Justification and Rationale

The Constitution of Kenya 2010 introduced National and County levels of government. The Taita Taveta County Climate Change Policy aims to establish and maintain an effective and efficient institutional framework to mainstream climate change responses into county government and across all sectors. Mainstreaming climate change involves integrating planning, budgeting, decision-making and implementation of climate change adaptation and mitigation measures at the county levels.

Section 13 of Climate Change Act 2016 provides for the development of National Climate Change Action Plans to prescribe mechanisms and measures to mainstream mitigation and adaptation actions into sector functions of national and county governments.

Counties are required to ensure mainstreaming of UNFCCC, Paris Agreement, Climate Change Act, 2016, The National Climate Policy, 2018, MTPIII (2018-22), and National Climate Change Action Plan (2018-22) into its development planning, decision making, and implementation. The Taita Taveta county government is yet to have a proper institutional framework to implement such actions. It is against this background that the Taita Taveta county climate change policy has been formulated.

1.4 The formulation processes

The formulation of this policy was initiated and spearheaded by the department of water, sanitation, environment, climate change & natural resources. This was done through an all-inclusive consultation process, where various stakeholders county and national governments, community-based associations, civil society organizations, community and private sectors were brought on board for conclusive deliberations. During inception stage a technical consultative meeting on the roadmap to development of Taita Taveta County Climate Change Policy was held. The policy was affirmed and a technical committee that was to be involved in policy formulation was constituted and their Term of Reference (TOR) were developed.

After the situational analysis, the drafting of the zero draft was undertaken after which the following activities will be undertaken

- validation of the zero draft by secretariat
- Preparation for public participation (adverts and meeting leaders at the grassroots levels)
- Public consultation meetings/stakeholder engagement
- Analysis and compilation of feedback from the public
- Drafting of final draft of policy
- Technical validation of final draft
- Presentation of the draft to the CECM
- Presentation of the draft to the cabinet by the CECM for adoption and approval
- Adoption of policy by the County Assembly

CHAPTER 2: SITUATION ANALYSIS OF CLIMATE CHANGE IN TAITA TAVETA COUNTY

2.1 Evidence of Climate Change

Throughout Taita Taveta County, the climate is fairly hot (21-23°C) and moist (1,000-1,750 mm precipitation annually). There is some variation in precipitation throughout the County, with the hills around Wundanyi, among a few other places in the central to northern portions of the country providing cooler and slightly wetter conditions. The temperature is about 1.0 to 1.5 Celsius warmer during the First rainy season (January-June) as compared to the Second season (July-December). Average precipitation is fairly consistent throughout the year, although the First wet season receives much more consistent rain, whereas the Second wet season is much more variable year-to-year.

Climate has already been observed to change slightly in the County. Since 1981, the First wet season - the predominant rains of the year, have experienced a 1.5°C increase in mean temperature. This increase has been associated with a reduction in crop cycle, and a slight (<10%) decrease in precipitation on average. In contrast, the Second wet season experienced little change in climate. The combination of increased temperatures and decreased precipitation make for an increase in drought risk.

Temperature is projected to increase by 0.4oC in the period 2021-2065, with the First wet season projected to experience even greater changes. By that time, precipitation is projected to increase by 0.8 % in the First wet season, and 6 % in the Second. Prolonged moisture stress is projected to occur in the First season of the year, whereas intense precipitation is expected to change little in either season. Consecutive days of moisture stress are projected to increase from 70 to around 85-90

Inter-annual Variability

Figure 1.1 gives examples of the inter-annual rainfall patterns in Taita Taveta County between 1981 -2010 for OND seasons. The figures indicate year to year variability of rainfall at all locations within the County. The recurrences of high and low rainfall amounts are reflective of recurrences of excessive and deficit rainfall often associated with floods and droughts

Climatological map of October November December rainfall season

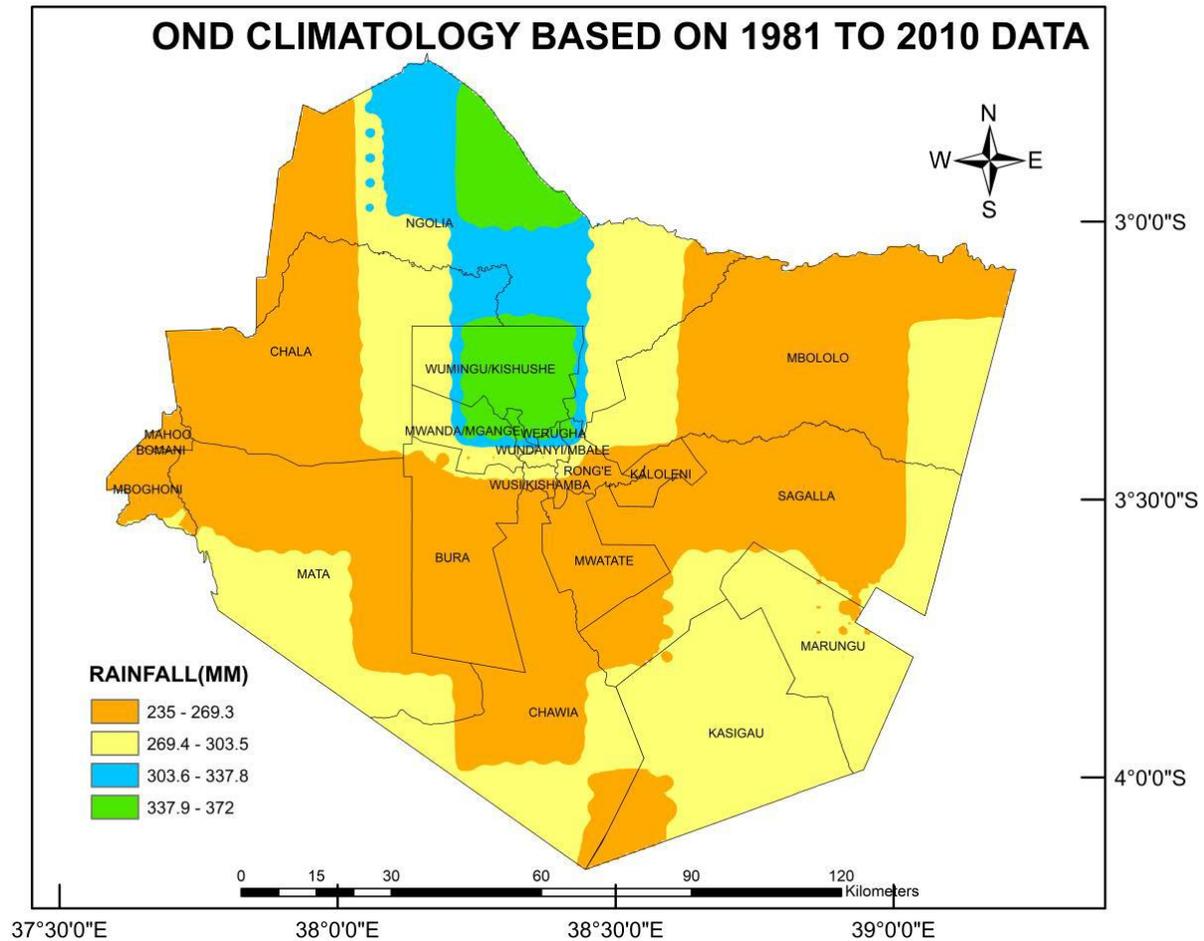


Figure 1. Normal rainfall in millimeters of Taita Taveta County during the short rains season. Average rainfall calculated using rainfall data from 1981 to 2010.

While climate change is a global phenomenon, indicators and impacts are more or less specific to local contexts as it is noted in the case of Taita Taveta County.

2.2 Impacts of Climate Change

Taita Taveta County is already feeling the effects of climate change. Widespread poverty, recurrent droughts, floods, overdependence on rain-fed agriculture, and availability of few coping mechanisms all combine to increase people's vulnerability. For instance, most households in Taita Taveta have little security against extreme climate events (droughts and floods) since they have fewer resource reserves and heavily rely on natural resources for their livelihoods. Major impacts of climate change are felt on crop and livestock production, health, water, forest and land resources. Below are the perceived impacts of climate change in Taita Taveta, by sector.

2.2.1 Agriculture

Agriculture is an important sector in Taita Taveta County. The main livelihood activities as observed during the surveys include crop and livestock production. Both crop and livestock

production are mostly rain fed, yet a large section of the county is water stressed. Agricultural production is heavily affected by climate change, especially the unpredictable weather patterns. There were observed and reported changes in the seasons whereby the rainy seasons have reduced and the onset of the rains delayed. Unpredictability of seasons means changes in planting and harvesting period which in turn affects crop yields and livestock pastures. The rising temperatures and reducing rainfall and its poor distribution have affected the optimal temperatures for crop

production and reproduction. The increased temperatures have especially affected crops that used to thrive in low temperatures. As a result, farmers have experienced reduced crop yields leading to food insecurity, reduced nutrition and livelihoods. For example, yields of maize, which is the most commonly grown crop, has declined from 4-6 to 1-2, 90Kgs bag per acre. Some respondent noted that „Even when farmers plant, there is no guarantee that they will have any harvests“.

Crop failure has been embellished by drying of major rivers. The drying of rivers and springs has meant that there is less water available for irrigation. For instance, it was reported that in 2016, all the 56 springs in the county had dried by November 2016. Many of the respondents also observed that some of the previously permanent rivers and springs have become either dried up completely or become seasonal. A case in point is the Voi River, which used to overflow with water throughout the year but nowadays dry and seasonal. Other rivers that have dried up include Lumi and Tsavo Rivers.

Reduced rainfall, drying of rivers and the resulting frequent and prolonged droughts threaten pasture and feed supplies, resulting in livestock malnutrition due to reduced forage in the ranches. Interviews with officials of the county department of livestock and veterinary services showed that most palatable grass such as *Themeda traidra*, *Entropogon macrostytus*, *Eragrostis superba*, and *Bracharia* species, are disappearing. This has led to starvation and death of many livestock in the county. Further, the genetic pool of Zebus – which is preferred over other traditional indigenous livestock species, has gone down. The East African goat, which is very resistant to water stresses, is also disappearing. The Long-tail Taita sheep was reported to be almost extinct.

The effects of drought in neighbouring counties of North Eastern have resulted in uncontrolled movement of pastoralists in search of pastures, leading to depletion of grasses and other fodder trees in Taita Taveta County. Many of these livestock move into the parks and displace wildlife. In turn, the wildlife moves into settled areas, causing crop and property destruction and predation of livestock. Overall, this leads to livestock-wildlife and human-wildlife conflicts. For instance, interviews with the county department of livestock and veterinary services indicated that there is heavy predation of livestock, and one or two cases of people killed every so often (two weeks). Additionally, movement of animals has led to introduction of new livestock diseases for instance East Coast Fever that never used to be a common problem in lowland areas is nowadays common. A number of invasive species have also emerged, and are becoming a menace. Reported examples include a species of cactus and *Prosopis juliflora* from North Eastern Kenya.

Moreover, rising temperatures have been accompanied with increased prevalence of pests and diseases, which affect productivity both in crops and livestock. For instance, there were reported incidences of pests that never used to be there in the upland e.g. the foul armyworm, and white

flies becoming a threat to crop production. Also reported were new crop diseases in the uplands e.g. blights and mildews. In livestock, respondents reported emergence of new livestock pests and diseases, that cause havoc to livestock keepers.

2.2.2Water

Rising temperatures, changes in precipitation and siltation of water reservoirs continue to affect water quality and quantity. Changes in the water resources in turn affect other sectors including agriculture, health, energy production and ecosystem health. The number of households with access to safe drinking water is 41,390 representing about 58% of the total number of households. Only about a quarter of the population (27.4%) access water from public taps (TTCIDP, 2014). The increasing population in Taita Taveta, like in other counties, continue to put pressure on the shrinking water resources. Climate change was perceived and evidenced to have had impact on the water resources. Major water sources e.g. Rivers Voi and Jipe and springs were reported to have dried up. Respondents also noted that seasonal rivers that used to flow at certain periods during the year are no longer flowing, because of degraded catchments. Also, water sources in the national parks have dried, forcing wildlife moves to human settlements to find water, thereby triggering human-wildlife and livestock-wildlife conflicts.

During extreme rainfall events, the quality and quantity of water changes significantly. There is evidence that rainfall has decreased markedly in the traditional cultivating areas due climate change. This has been exacerbated by the increasing growing population high demand for land leaving communities with no option but encroach into the water catchment areas. On the contrary, during prolonged dry spells, there is water scarcity bringing about human-wildlife conflicts

2.2.2Health

The health sector is also affected by climate change and variability because the rising temperatures provide a conducive environment for malaria vectors to thrive. Extreme weathers – especially prolonged cold (not rainy) seasons exposes more people to respiratory diseases. Climate change impacts also threaten health by affecting food production and water availability, with the population in the more arid and semi-arid areas of Taveta being most vulnerable. The bottom line of health among others is good nutrition. Yet, reduced crop and livestock production and yields attributed to climate variability means poor human nutrition and health.

Additionally, reduced water quality and quantity coupled with forest degradation (see below) have resulted in upsurge of water borne diseases such as reported sporadic cases of diarrhoea and cholera. Also, water quality has reduced and concentration of a big population on same water source results to contamination and water borne diseases. Such disease outbreaks overstretch available health facilities, reduces the amount of labour available of livelihood activities, and exerts a strain of household budgets.

2.2.3Education, Gender and Social services

Floods have disrupted learning by making learning institutions inaccessible. They have increased cases of classes be sub-meagered with water. Drought has caused most of the schools in lower lands to experience a large number of absentees due to lack of food to sustain them in classes.

Women, girls, children, aged and people living with disabilities are most vulnerable to negative effects of climate change. This has seen increased need for provision of social protection services such as; provision of relief food, rehabilitation, primary health care and security to these targeted population as away to mitigate and reduce effect of climate change.

2.2.4 Forests, wildlife and land degradation

The Taita Taveta County total forest cover is about 280 Km², representing 0.51% of the total County area (CIDP-TT, 2014). The county has a total of 78 forest parcels but 52 parcels are yet to be gazetted, an exercise that is to be undertaken by the county government. The gazetted forests cover an area of 1,489.8 Ha whereas the non-gazetted ones cover an area of approximately 9,000 Ha (TTCIDP, 2014). The indigenous forests in the County possess unique biodiversity, being home to varied flora and fauna. Over 20 endemic species of African violets (e.g. *Saintpaulia teitensis*) occur exclusively in Taita Taveta. Also, the Taita Thrush and the Taita Apalis are birds endemic only to the county. The Taita Falcon and the Taita Fiscal were first discovered at the hills but occur elsewhere too. However, climate change seems to have worsened the problems already faced by forests from encroachment for agriculture, over-extraction of timber and non-timber products e.g. charcoal production. The perceived impacts of climate change on forest include:

- i. Loss of wildlife habitats, leading to increase human-wildlife conflict in settled areas. Moreover, due to habitat degradation, wild animals are no longer found where they used to be, thus interfering with traditional wildlife watching points in the Tsavo National Park
- ii. There are increased incidences of fires in the forest occasioned by many trees drying as a result of long dry spell and falling during heavy rains. During prolonged droughts, there are frequent forest fires occurrences as a result of anthropogenic activities that are detrimental to the eco-system. Flooding coupled with siltation in forest areas have resulted to water logging ending up in trees drying.
- iii. Drought for last ten years has led to the massive wildlife mortality of several iconic species including the birds.
- iv. Negative effects of climate change on wildlife and infrastructure has adversely affected our tourism sector.
- v. Increased water runoff leading to collapse of buildings and heavy soil erosion as evidenced by huge gullies which have been caused by forest degradation.
- vi. Increased water abstractions in the upstream and midstream has created conflicts among users of waters in the lower parts of rivers (downstream).
- vii. Crop and livestock yield reduction has pushed part of the population to environment degrading activities such as sand harvesting, brick making, quarry and ballast mining, and charcoal production.
- viii. General change in land use – Vast areas of the county were previously rangelands. However, many areas are being taken over by mining, construction/ settlements, and crop farming. Such new land uses block wildlife corridors, thus creating loss of biodiversity, and escalates human-wildlife and livestock-wildlife conflicts.

2.2.5 Infrastructure and Transport

Public infrastructure such as roads, buildings and power lines have been impacted negatively by extreme climate events. In most cases during heavy rains, roads and other structures built without

climate proofing have been damaged leading to loss of public investments. Destruction of structures like bridges, culverts and drifts during heavy rains have inconvenienced the public a lot to the point of not being able to access markets and health facilities Heavy rains causing landslides have destroyed public buildings, such as schools, disrupting programs and service delivery. It is common for power black-outs/ power surge during heavy rain season due to destruction of electrical poles. This has multiple effects on many activities.

2.2.6 Land and Mining

Mining involves land excavation and tunnel digging. Extreme weather and climate events associated with climate change cause floods and unfavorable working conditions. During dry seasons, strong winds spread dust from the mining sites to human settlements causing respiratory diseases.

2.2.7 Energy

Taita Taveta County is endowed with vast renewable energy (RE) resources including wind, solar, biomass, hydropower for both on-grid and off-grid systems. Despite the potential of renewable energy, the County's grid connection remains very low. The majority of Taita Taveta County's population depends on wood fuel for cooking. With estimates that nearly 90 percent of households use firewood or charcoal for cooking and heating. Population under the grid in the County is 57.5% which translates to 96,256 households. The buffer population to be served by the grid in the County is 18.7% which translates to 62,218 households and off grid population is 23.8% which translates to 39,898 households (*data from off grid solar market assessment brief for 14 underserved counties of Kenya*). Energy, is a key player in the realization of the County's development aspirations. However, the current demand for energy in the County is such that the available supply has been challenged or unable to meet County energy requirements. This has manifested in the slow economic development obtaining.

2.3 Summary of Emissions profile

According to the World Resources Institute Climate Analysis Indicators Tool (WRI CAIT), agriculture was the leading source of GHG emissions in Kenya in 2013. Within agriculture, more than half of the emissions were due to enteric fermentation from livestock and the rest due to manure left on pasture. Agriculture is the main source of livelihood in Taita Taveta County. It contributes about 95% of the household incomes and more than 80% of employment. Energy is the second largest source of emissions, with other fuel combustion and transportation contributing the largest emissions. Industrial processes (IP) and waste however contributed minimally.

It is projected that GHG emissions in the Taita Taveta County is to increase in all sectors except in forestry where emissions are likely to decline due to different low carbon initiatives by different stakeholders for example the REDD+(Reducing emissions from deforestation and forest degradation), the project implemented by Wildlife Works within Kasigau Corridor.

2.4 Status of Climate Change Governance

Clear and appropriately designed legislative, policy and institutional frameworks provides the County's Vision, priority adaptation and mitigation sectoral actions, regulatory and institutional architecture and other vital components which guide implementation of adaptation and mitigation

interventions. The County government of Taita Taveta aims to achieve this. The County government of Taita Taveta will also achieve this through mainstreaming matters concerning climate change through the County Integrated Development County Environment Action Plan (CEAP), Plan (CIDP), and Annual development Plan (ADP).

2.5 Climate Change Opportunities

Though climate change is generally associated with negative impacts, it also presents opportunities to individuals, businesses, communities and government which this policy seeks to exploit. It provides opportunity for mainstreaming climate risk management in planning (County Integrated Development Plan) in all sectors and levels of the economy; individual, community & government. Due to its iterative nature, climate planning calls for participatory approaches. Implementation of climate change management strategies provide opportunities for creation of structures, innovation, research, technological transfer, behavior change, funding and partnership among different actors which this policy strives to address (adaptation and mitigation).

CHAPTER 3: POLICY GOAL, OBJECTIVES AND GUIDING PRINCIPLES

3.1 Overall goal of the Policy

To ensure that climate change is mainstreamed in the economically and socially vulnerable sectors of the economy and to steer Taita Taveta County towards climate resilient, blue economy and green development pathway.

3.2 Policy Objectives

The main objectives of Taita Taveta's climate change policy include:

- To pursue the sustained economic growth by appropriately addressing the challenges of climate change;
- To integrate climate change policy with other related county policies;
- To facilitate and strengthen Kenya's role as a responsible member of the international community in addressing the climate change challenges;
- To focus on pro-poor gender sensitive adaptation while also promoting mitigation to the extent possible in a cost-effective manner;
- To ensure Water Security, Food Security and Energy Security of the county in the face of challenges posed by climate change;
- To minimize the risks arising from expected increase in frequency and intensity of extreme events: floods, droughts, tropical storms etc;
- To strengthen inter-ministerial decision making and coordination mechanism on climate change;
- To facilitate effective use of the opportunities, particularly financial, available both nationally and internationally;
- To foster the development of appropriate economic incentives to encourage public and private sector investment in both adaptation and mitigation measures;
- To enhance the awareness, skill and institutional capacity of relevant stakeholders;
- To promote conservation of natural resources and long-term sustainability.

3.3 Guiding Principles

Taita Taveta County Climate Change Policy shall be implemented in accordance with the following guiding principles:

- **A Right to a Clean and Healthy Environment:** Every person in Kenya has a right to a clean and healthy environment and a duty to safeguard and enhance the environment.
- **A Right to Development:** The right to development will be exercised taking into consideration the economic, social and environmental needs.
- **Ecosystem Approach:** An integrated ecosystem approach to conserving and utilizing environmental resources will be adopted and enhanced to ensure that all ecosystems are managed in an integrated manner while also providing a range of benefits to people.
- **Total Economic Value:** The benefits that ecosystems generate will be integrated into the county accounting system, programmes and projects.
- **The Principle of Sustainable Use:** Environmental resources will be utilized in a manner that does not compromise the quality and value of the resource, or decrease the carrying capacity of supporting ecosystems.

- **Inter- and Intra-Generational Equity and Equality:** The management of the environment and natural resources will be based on long term views where present generations make choices that benefit them without compromising the ability of future generations to meet their own needs.
- **Public Participation and Inclusivity Principle:** A coordinated and participatory approach to environmental protection and management will be enhanced to ensure that the relevant government agencies, county government, private sector, civil society and communities are involved in planning, implementation and decision-making processes.
- **The Principle of Subsidiarity:** The management of the environment and natural resources will be through decentralization and devolution of authority and responsibilities at the lowest level possible.
- **The Precautionary Principle:** Where there are credible threats of serious or irreversible damage to key environmental resources, lack of full scientific certainty will not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
- **The Polluter Pays Principle:** The polluters of environmental and natural resources shall bear the full environmental and social costs of their activities.
- **User pay principle:** whoever uses, pays full cost of services they consume.
- **Inter County Relations and Cooperation:** Cross border environmental agreements and regional instruments will be domesticated and implemented for better environmental management of intra-county shared resources.
- **Good Governance:** rule of law, effective institutions, transparency and accountability, respect for human rights and the meaningful participation of citizens will be integrated in environmental management.
- **Eco- innovation:** New production processes that are likely to prevent risks to the environment.

CHAPTER 4: LOW CARBON CLIMATE RESILIENT DEVELOPMENT

4.1 Enhancing Climate Resilience and Adaptation capacity towards low carbon growth

The Taita Taveta county social, economic and environmental architecture significantly relies on the environment and natural resources. Key economic sectors are particularly susceptible to climate change impacts that threaten to undermine Taita Taveta's recent and impressive development gains. It is important for the county to build and enhance its climate resilience and adaptive capacity. Building climate resilience requires Taita Taveta county governance systems, ecosystems and society to have capability to maintain competent function in the face of climate change and to return to some normal range of function even when faced with adverse impacts of climate change. The adaptive capacity of the county depends on its capability to enhance resilience of its systems.

Adaptive capacity is key to improving socio-economic characteristics of communities, households and industry as it includes adjustments in both behaviour and in resources and technologies. Adaptive capacity is a necessary condition for the design and implementation of effective adaptation strategies so as to reduce the likelihood and magnitude of harmful outcomes resulting from climate change. The ability of Taita Taveta county to enhance adaptive capacity is therefore imperative to enable sectors and institutions to take advantage of opportunities or benefits from climate change. An enhanced understanding of the adaptive capacity of Taita Taveta can be derived from vulnerability assessments. Reducing the vulnerability to climate change of people, ecosystems and the economy is a positive approach to enhancing adaptive capacity, but further research is required to identify specific parameters and indicators of enhanced capacity.

A drastic increase in climate-induced disasters such as droughts, famine and floods, has resulted in significant socio-economic damage and environmental degradation. These climate change impacts have the potential to undermine realization of the county's sustainable development objectives. Enhancing climate resilience and reducing vulnerability to climate change is therefore a key policy priority. Integrating climate change considerations into existing environmental assessment mechanisms, such as strategic environmental assessments, environment impact assessments and environmental audits, can help to ensure that plans and programmes take full account of climate issues within a clear systematic process.

The prevalence of poverty is a major challenge within our county. The resilience and adaptive capacity of poor communities must be strengthened to protect against projected climate change impacts and vulnerability arising from increased food insecurity and escalating public health threats. The sustainable development therefore significantly depends on the design and implementation of mechanisms that trigger and enhance climate change resilience and adaptive capacity.

Policy Statements

The county government shall:

- Encourage growing of traditional crops. This can be done through awareness and sensitization to enhance acceptance and uptake of tradition crops.

- Implement and encourage the practice of climate smart agriculture (CSA) such as mulching, terraces, minimum/ no tillage.
- Sensitize communities on climate change, its impacts and possible adaptation measures.
- Encourage and promote irrigation agriculture, and exploit the irrigation potential of rivers and springs.
- Encourage farmers to have hay pastures. These are pastures that are cut, dried and stored.
- Build capacity of farmers in range and livestock management.
- Encourage and promote runoff water harvesting by building water pans, sand dams and normal dams.
- Rehabilitate and conserve water catchments and riparian lands.
- Restrict farming on riparian areas.
- Encourage and promote on-farm soil and water conservation in catchment areas.
- Promote healthy eating and living habits.
- Promote use of treated mosquito nets to reduce incidences of malaria.
- Procure and enhance distribution of water treatment drugs (e.g. chlorine) to households to improve water quality
- Sensitize communities on hygiene and sanitation, and on the linkage between floods and hygiene/ sanitation.
- Sensitize farmers/ communities on tree planting and provide them with tree seedlings to facilitate on-farm tree planting.
- Promote renewable energy technologies such as solar, biogas, and improved stoves at household level.
- Encourage private residential developers to install roof water harvesting systems to reduce flash floods.
- Ensure proper routing of infrastructure to ensure minimal interference with ecosystems (e.g. avoid wildlife routes) and flood prone areas.
- Set aside 2% county development budget to fund climate change adaptation and mitigation strategies.

4.2 Affected sectors and the associated policy statements

4.2.1 Agriculture

Agriculture is the main livelihood of most residents of Taita Taveta county, especially in the highlands. In the process of cultivating and keeping animals, greenhouse gases (GHGs) are emitted. To maintain a low carbon development in Agriculture, there is need to

Policy Statements

The county government shall:

- Increased investment in the use of renewable energy
- Promoting agroforestry
- Avoiding agricultural expansion in high value ecosystems
- Promote the use of renewable energy in agricultural sector
- Work closely with Kenya meteorological department, embrace and use climate information in planning.

- Improve the extension system and enhance use of media to allow effective and timely communication of climatic predictions and co
- Responding advice to the farming community.
- Promote adoption of sustainable land use management practices.
- Establish, maintain and promote the uptake of climate change related information on agriculture.
- Promote agroforestry practices to increase tree cover and provide domestic energy
- Promote innovative mechanism to fund sustainable agriculture including working with private sectors and development partners
- Promote the use of appropriate crop varieties and livestock breeds
- Conduct climate risk and vulnerability assessments of the agriculture value chain
- Facilitate research work on climate change impact assessment and productivity projection studies.
- Promote the Establishment of strategic animal feed reserves
- Establish livestock disease monitoring and surveillance system.
- Promote water harvesting technologies.
- Promote livelihood diversification and market access.

4.2.2 Land, Mining and Energy

In Taita Taveta county, there three types of mining activities; large scale, small scale and artisanal. Mining activity involves excavation and disturbing of the earth crust which interferes with the stored carbon in the soil. There is need to mitigate the impacts of these activities as mentioned in policy statements. To find solutions to the present energy needs and future energy requirements, a creative and sustainable energy policy framework is necessary that may help increase access to clean and sustainable energy. Towards this end, the County Government of Taita Taveta shall take the following policy measures for mitigating its GHG emissions and enhance energy access.

Policy statements

The county government shall:

- Promote land restoration in abandoned mining sites to increase carbon sinks.
- Create more awareness on issues concerning environmental conservation
- Promote the use alternative source of energy
- Develop legal framework that enhance low carbon emissions. i.e environment and climate change policy.
- Promote tree planting activities by encouraging communities to contribute to the national policy of achieving the 10% forest cover target.

4.2.3 Infrastructure

Increased construction in the county has enhanced dust and noise pollution through blasting of quarries. Floods have increased damage to bridges and roads disrupting movement of people and goods which has increased maintenance cost. Heavy rains have increased cost of construction as more time is taken to complete projects. It has also disrupted County Street lighting programmes when trees fall on overhead cables. Floods have affected living and working conditions of some

people in the county by causing siltation, water contamination, and damaging of houses displacing people from their homes.

Extreme weather conditions have destroyed infrastructure and increased the cost in building due to incorporation of air-conditioning. They have increased cost of materials like sand due to inaccessibility of sand harvesting areas during extreme weather conditions. They have also contributed to insecurity as solar streetlights go off during very low temperatures. There is increased GHG emissions and air pollution due to increase in motor vehicles and diesel-powered generators.

Policy Statements

The county government shall:

- Enhanced use of renewable energy to run buildings' appliances
- Harvest storm water from roadsides, landscaping and embankment.
- Low emission transport by encouraging the construction of walkways and cycling lane
- Establishment of climate led infrastructure.
- Energy efficient buildings, towns and industries e.g. solar lighting, energy saving bulbs, use solar water pumps. Planting trees in the compounds, renewable energy
- Review building codes to incorporate green technology and use of biodegradable construction material.
- Encourage application of solid and liquid waste disposal management
- Provide green spaces (recreational facility) and urban forests
- To create awareness on use and benefits of solar energy in reducing GHGs emissions and shift in use of energy saving appliances
- To capacity build and transfer of knowledge through demonstration
- To enhance sensitization on solid and liquid waste disposal management
- To establish revolving funds to support community members in purchasing solar powered equipment
- Provision of financial assistance through grants, loans and subsidies to assist community members adopt use of renewable energy
- Introduction of construction plans that have water harvesting structures in accordance to provided capacity guidelines
- Promote futuristic buildings design with green technology for self-sufficiency and installation of solid and liquid waste disposal management, in public sector and commercial buildings
- To prepare CSR guidelines and encourage cooperate sector to create CSR fund to cover carbon emission reduction effort in transport and infrastructure sectors
- To introduce carbon or conservation levy on use of fossil fuels in regard to transport and infrastructure
- To ensure all office buildings have green spaces (recreational facility), road embankment trees and establishment of forests in towns

4.2.4 Water, Sanitation, Environment, Natural Resources.

Taita Taveta county government has established water storage facilities for flood control and drought management in some of the Wards in order to improve water management and water conservation, including rainwater harvesting, recycling and reuse of water. Other measures include water conservation awareness campaigns, technology for water conservation in water services and supply, and improved watershed management.

In matters sanitation the County government has put in place exhausters which empty the waste in drying beds as alternative sewer technologies are being advanced. Environment, Natural resources and climate related effects are to be addressed by the following interventions;

Policy Statements

The county government shall:

- Promote the usage of clean energy.
- To identify and promote waste management initiatives that target to reduce, re-use and recycle waste.
- To create awareness on issues concerning environmental conservation.
- Put in place mechanisms to develop and promote clean technologies in all sectors of economic development.
- Reduce deforestation and enhance rehabilitation of the forests
- Protect water catchment areas by developing framework policies
- Embrace water conservation technologies in irrigation.
- Enhance Law enforcement strategies.
- To explore low carbon growth options and incorporate them into the planning processes and functions of the County Government.
- To embrace and promote clean technologies in all sectors of economic development.
- To form a Climate Change unit with an elaborate structure that will steer climate change governance in the County.
- To set at least 2% County development budget to fund Climate Change adaptation and mitigation strategies.
- To enhance monitoring, evaluation, feedback and learning mechanisms on climate change matters in different sectors.
- To adopt strategies to access carbon credits in the County.
- To put in place mechanisms for sustainable utilization of natural resource to enhance climate resilience.
- To support and promote enforcement of relevant regulations and laws related to natural resource management, conservation and utilization.
- To identify and protect unique endangered fragile wildlife ecosystem (Wetlands/water bodies, flora and fauna)
- To fast track gazettement processes of community forests and ranches for enhanced conservation and management efforts.
- To identify and promote cultural values and practices that are relevant to climate change management.

- To promote research and technology for informed decision making on management functions.
- Payment for Ecosystem services.
- Encourage water harvesting techniques.
- Promote alternative livelihoods that are environmentally friendly
- Develop a framework that encourages strict adherence of land use
- Proper solid liquid waste management.
- To promote zero pollution in wildlife areas.

4.2.5 Health Sector

Sensitize Health Staff on use of energy efficient waste disposal practices and Low Carbon Resilient Development Guidelines in the County Health Service Charter. Create health committee to follow up on low carbon resilient initiatives within the Health sector such as strategic partnerships and areas of funding on low carbon resilient programs which are in line with the Health Sector. Adoption of Low Carbon Resilient Development in the Health sectoral plans in the CIDP and ADP.

Policy Statements

The County Government Shall:

- Set aside funds from its Annual Budget for sensitization of health personnel on adoption of energy efficient best practices
- Spearhead Creation of health committee to follow up on low carbon resilient initiatives
- Integrate Adoption of Low Carbon Resilient Development in the Health CIDP and ADP
- Increase public awareness and social mobilization on climate change and impacts on health;
- Design appropriate climate change related interventions for the health sector;

4.2.6Wetland

Natural and artificial wetlands are important resources for the sustenance of livelihoods of riparian and wetland dependent communities (Silvius et al., 2000). Naturally, wetlands are productive, and because of this, these ecosystems can support endemic wildlife and a considerable human population living around them. Natural wetlands provide a variety of ecosystem services to rural communities ranging from papyrus biomass which has multiple and gender-specific uses, to food products such as fish and seasonal crops. They are also important habitats of plant genetic diversity and support large numbers of bird, mammal, reptile, amphibian, fish and invertebrate species. However the increasing human population, coupled with unsustainable exploitation has led to a decline in wetland goods.

Taita Taveta's wetlands play an important role in maintaining and sustaining ecological processes that support globally important biodiversity such as bird migration routes. There has been a dramatic change in the ecosystem of the wetlands in Taita Taveta County in the last decade, affecting its ability to function as a habitat for various flora and fauna. These changes are mainly due to encroachment of wetlands for agriculture and human settlement. To protect, sustain and

enhance the wetlands in Taita Taveta, the County Government in collaboration with the relevant entities shall take on the following policy interventions:

Policy Statements

The County government shall

- Ensure conservation and management of all wetlands in the County;
- Explore possibilities of designing and creating artificial wetlands at appropriate spots of ecological concern;
- Carry out climate change risks and impact assessment for wetland in Taita Taveta;
- Prohibit wetland encroachment;
- Prohibit over-abstraction of water to maintain environmental flow;
- Develop adaptation mechanisms for wetlands and communities dependent on wetlands threatened by climate change;
- Ensure sustainable harvesting of wetlands resources and grazing in the areas;
- Ensure mapping and Gazettement of wetlands;
- Increasing afforestation in catchments areas so as to Control siltation of wetlands;
- Setting up of scientific analysis systems to check water quality of the wetlands;
- Develop regulations to address pollution of wetlands;
- Enforce laws regulating conservation of wetlands;
- Educate the public about the values of wetland resources.

4.2.7 Ecotourism and wildlife

The County continues to lose its wildlife and birdlife resources, its endemic species and biodiversity through increased anthropogenic activities in wildlife areas such as construction of the SGR, demarcation of wildlife ecosystems, modification of key ecosystems, threats to key note species, destruction of key wildlife corridors through land use changes, increased population densities and encroachment on wildlife parks causing increased Human wildlife conflicts, lack of direct benefits to the locals from wildlife resources. Current tourism practices have negative economic, environmental and social impacts. They neither make effective contributions to the conservation of natural and cultural heritage, and the maintenance of the County's diversity, nor have adequate involvement of local people in decision making on matters that affect their lives and livelihoods. Such practices also lack proper experiences for tourists through lack of more meaningful connections with local people, and a greater understanding and sensitivity towards local cultural, social and environmental issues.

Policy Statements

The County government shall

- Identify, develop and protect ecotourism sites including cultural and historic sites, botanical gardens, biodiversity high potential areas and sites with scenic beauty among others;
- Provide clean and healthy atmosphere;

- Building infrastructure to accommodate tourists which include transportation, lodging, food, and activities for travelers;
- Develop low impact housing such as small lodges, bed and breakfast inns, or rooms in village homes is usually preferred by tourists;
- Ensure community involvement through awareness creation and capacity building;
- Identify, develop and protect archeological sites.

CHAPTER FIVE: MAINSTREAMING CLIMATE CHANGE

5.0 Introduction

Climate change and variability directly or indirectly affects all sectors driving the County's economy. This situation is experienced across all Counties in Kenya – including Taita Taveta. It is therefore recommended that Taita Taveta County adopts this approach. The Climate Change Act No. 11 of 2016 has defined climate change mainstreaming as the integration of climate change actions into decision making and implementation of functions by county governments. Mainstreaming climate change in sectoral planning, budgeting and management processes in Taita Taveta County Government will improve climate change co-ordination actions across government functions. The mainstreaming of climate change into the functions of various sectors in county governments is central to implementation of this Policy.

Policy Statements

The County Government shall:

- Establish the institutional framework and build capacity to coordinate and enhance mainstreaming at the sector level.
- Ensure that county planning processes and documents account for climate risk analyses and vulnerability assessments, and identify opportunities to build climate resilience and achieve low carbon development.
- Develop a framework and tools for mainstreaming climate change responses into county government planning and budget procedures.
- Put in place mechanisms linking climate change data and information in the county planning processes.
- Mainstream climate change into County planning processes, including County development policies and plans, County Integrated Development Plans, Performance Contracts, and the short to medium term budget making process.

5.1 Mainstreaming Issues of Gender, Youth and Special Needs Groups in Climate Change Actions

Across Taita Taveta County, the impacts of climate change are felt by women and men differently. Women, youth and special groups are the most affected when it comes to issues of climate change. Although women have the knowledge and understanding of what is needed to adapt to the changing climate and come up with practical solutions, they are largely untapped. Restricted land rights, lack of access to financial resources, training and technology and limited access to political decision-making spheres often prevent them from playing a full role in tackling climate change and other environmental challenges. Extreme weather events such as droughts and floods have greater impacts also on the poor and most vulnerable. Climate change management requires a concerted proactive and holistic response, gender inequality may dramatically limit the resilience and adaptive capacity of women, families and communities in the County.

Policy Statements

The County Government shall:

- Develop climate finance that will be accessible to women, youth, men and people with special needs and designed to generate mutual benefits, not exacerbate patterns of inequality
- Ensure that in natural resource planning and decision-making follow a participatory approach in which all affected parties are included, and in which gender issues are mainstreamed;
- Integrate gender perspectives to climate change in initiatives.
- Ensure that adaptive climate change actions aim to build up the asset base of women, youth, men and people with special needs;
- Incorporate women, youth, men and people with special needs as positive agents of change considering climate change management.
- Invest in participatory, multi stakeholder and multisectoral climate change gender action plan to help the county develop comprehensive actions that integrates gender concerns and builds on women, youth, men and people with special needs unique knowledge and perspectives;
- Undertake a systematic analysis of the various special needs and ensure that planning and climate change responses mainstream participation and protection to persons with special needs;
- Involve youth in response to climate change through their skills in education technology science and law;
- Put in place mechanisms to ensure and enhance the participation of the youth in climate change in governance and position them to take advantage of opportunities.
- Women involvement in sensitization and revolving fund in climate change issues in public works and infrastructural projects
- Special need groups and youth to be trained in new technologies that embrace the use of green energy and to be ambassadors of climate change information and services and even be involved in research activities involving green energy
- Full implementation of A.G.P.O access to government procurement opportunities to give priority to youth, women and special needs in award of tenders and
- Priority to be given to youth, women and special needs group when employment opportunities arises in construction projects
- Appreciate the roles of women, youth and special groups and their vulnerability brought about by climate change impacts.
- Provide equal opportunities in supporting these groups in climate change responses.

CHAPTER SIX: RESEARCH AND TECHNOLOGY

6.0 Introduction

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, research and technology will also play a critical role in determining and implementing optimal and cost-effective climate change adaptation and mitigation strategies and interventions.

Policy Statements

The County Government shall:

- Promote 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;
- Establish infrastructure necessary for promoting innovation at grassroots level, learning institutions including vocational training institutions, polytechnics, universities and research institution;
- Establish of partnerships for technology transfer and development with the following Industries, Higher learning institutions, international research organization and village polytechnics.
- Establish a system for climate monitoring, modelling and early warning systems connected to all the farmers in the county;
- Develop new breeds of crops and livestock which are early maturing and less vulnerable to impacts of climate change;
- 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.
- Conduct further research on safe carbon emission technologies.

CHAPTER SEVEN: EDUCATION AND PUBLIC AWARENESS

7.0 Introduction

Public participation is a core value and principle of governance in the County. Raising and maintaining the awareness of the public on matters of climate change is one way to enhance this participation. Public awareness can inform policymaking because it provides a two-way directional flow of information and feedback. Increasing public awareness on climate change impacts and interventions can help to facilitate the role of the public as a positive agent to reinforce climate change interventions. The county has various mechanisms for public awareness, especially through government, private sector and civil society. Nationally designed and implemented civic education programs and conventional public awareness mechanisms, such as extension services that are prevalent in natural resource management sectors, play an instrumental role in public awareness, albeit on a limited sectoral scale. The media, including local-area radio stations, is an important avenue to provide meteorological and other climate change information.

Public awareness on climate change should integrate knowledge on critical and crosscutting policy issues such as mainstreaming of gender, youth and special needs. This approach is important because public awareness is central to the subsidiarity principle, which requires an active role of the people in governance, at the lowest possible level of public administration, when it is optimal to do so. Climate change interventions, such as those relating to building resilience or enhancing adaptive capacity are closely related to how people understand the impacts of climate change. These interventions can support the transition of people from victims of and contributors to climate change, to positive agents working against climate change. While public awareness normally takes the form of informal education, the formal education mechanisms are equally instrumental.

Policy Statements

The county Government shall:

- Put in place a strategy for identifying, refining and disseminating climate change knowledge to the public and other stakeholders in user-friendly formats.
- Incorporate climate change knowledge into government implemented public awareness initiatives including civic education and extension programmes.
- Collaborate with, and support, private sector and civil society in incorporating climate change knowledge into advocacy and public awareness raising programmes.
- Strengthen the capacity and ensure sufficient resourcing of institutions engaged in climate change public awareness.

CHAPTER EIGHT: KNOWLEDGE MANAGEMENT AND ACCESS TO INFORMATION

8.0 Introduction

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. The County Government is aware of the need to gather and organize already existing data, while generating additional knowledge and information to inform decision-making.

In Kenya, knowledge can exist as undocumented or documented. The process of knowledge management must be cognizant of this, and also that 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. The County Government in line with the Constitution is obliged to protect and enhance this knowledge.

Mainstreaming of gender considerations in knowledge management is important to assure the relevance and applicability of the outputs. The impacts of climate change affect women and men in different ways, just as various women or men maybe impacted differently from other members of the same gender. It is important to mainstream gender analysis and put in place mechanisms for disaggregation of knowledge on how impacts and roles, even within the same gender, affect people based on their contexts and circumstances.

Generation of climate change knowledge and information, combined with effective communication strategies, can enhance public participation and awareness. 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. The County government is obliged to collaborate with office of 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, utilisation and effective communication.

The nature of knowledge is diverse and the stakeholders are extensive. To enhance public participation, climate change knowledge and information management systems must engender community ownership and participation, and provide culturally and contextually relevant information through county meteorological office (CMO), in local languages where possible. Knowledge and information management should utilise appropriate high- and low-tech dissemination technologies to meet the needs of the public. The availability of knowledge and information from CMO at the levels of county government would assist in knowledge management and dissemination.

The utility and relevance of knowledge is dependent on the dissemination mechanisms and accessibility to various interested parties. Access to information from CMO is one tool through which persons can procure knowledge held by public or private parties and apply it for various

purposes. As a basic right, access to information is grounded in the Climate Change Act 2016 and Constitution, and its entitlement is limited only to citizens of Kenya. This right has various elements that are key to its utility on dissemination of climate change knowledge. Information held by a private party can only be accessed if it is necessary in realisation of a specific basic right, while information held by public agencies can be accessed. However, various procedural limitations are likely to be imposed in order to safeguard integrity of certain knowledge, such as that subject to intellectual property rights, proprietary interest or of a confidential nature, or information classified for national security reasons.

The rules on access to information should be interpreted liberally to ensure the widest latitude is given to public access to information, bearing in mind the constitutional origins of the right. Procedural mechanisms on access to information require that an interested party should make a formal request, and likely make a reasonable payment to cover modest administrative costs. Minimisation of these procedures or their elimination with regard to climate change information would expand the scope of accessible knowledge and information. Since it is a constitutional requirement to publicize any important information affecting the nation, the county government should classify climate change information as falling in this category and proactively provide refined information on climate change to the public.

Policy Statements

The County Government shall:

- Facilitate establishment and operation of a county climate change information hub and clearinghouse, including county meteorological office (CMO) to generate, coordinate, collect, collate, store, retrieve and disseminate reliable, high quality and up-to-date data and information.
- Facilitate and support CMO set up a climate change information hub to collect primary information and act as dissemination points for knowledge and information.
- 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.
- Develop a comprehensive communication strategy to enhance dissemination of timely, credible and reliable climate change information and research findings.
- Put in place mechanisms to gather, document and promote application of traditional indigenous knowledge and practices on climate change.
- Mainstream gender analysis into climate change knowledge and information management.
- Implement mechanisms to facilitate and support access to climate change information.

CHAPTER NINE: CLIMATE CHANGE GOVERNANCE

9.1 Enabling Regulatory Framework

Appropriately designed legislative, policy and institutional frameworks provide a regulatory architecture comprising the vital components of climate change governance. This architecture is crucial to achieving effective policy and action plan implementation. Clear and well-defined structures will help to overcome significant obstacles in translating climate change responses from concept to reality.

Just like at national level, Taita Taveta county aims to attain sustainable development, which is captured in the Climate Change Act 2016 as an important component of climate governance. The county government is mandated to make a policy on climate change. Climate change impacts will continue to place significant obstacles in the path of sustainable development mechanisms. Various functions assigned to county governments are integral to fulfilment of actions required to address climate change. In certain instances, there may be concurrent performance of climate change related functions by the two levels of government

The effective implementation of climate change responses requires a review of the overall legislative and institutional arrangements that govern climate change actions. Laws and policies have to be reviewed and designed to accord with powers and functions of a devolved system of government; and uphold distinctiveness, mutual cooperation and consultation across the national and county governments. The principles of cooperative government underpin performance of climate change mandates, respecting that functions can be concurrent and that the principle of subsidiarity may favour implementation through the lowest level of government, when doing so is the most effective approach.

Sectoral laws and policies that will provide the legislative basis for specific actions will need to be analysed for potential amendments that enhance their capability to tackle climate change challenges and exploit emerging opportunities. Legislative and regulatory review will be an ongoing iterative process to ensure that barriers to action are removed and enabling frameworks for implementation are in place based on evolving circumstances.

Climate change is a complex policy issue that impacts both national and county development. The responses and actions to address climate change require horizontal and vertical integration. The achievement of horizontal integration requires a legislative and institutional mechanism that provides high-level guidance. The legislative mechanism is necessary to provide overall content and direction on how climate change responses are structured through mainstreaming. The institutional mechanism is equally critical to provide high-level coordination and political authority to guide mainstreaming of climate change functions in sectoral mandates at all levels of government. Vertical integration is instrumental in determining the roles of various sector institutions and the county government in performing climate change mandates. This integrated approach is an important step to minimise or eliminate instances of regulatory incoherence where no coordination or linkage exists between sectoral climate change mandates.

The effective discharge of Kenya’s international climate change obligations on climate change depends on reports from counties. This calls for comprehensive policy at county level on how to respond to climate change actions.

Policy Statements

The County Government shall:

- Put in place overarching climate change legislation to provide the framework for a coordinated implementation of climate change responses and action plans.
- Put in place a County Climate Change Unit to coordinate the mainstreaming of climate change into county development processes.
- Put in place a technical institutional framework to guide policy and functional implementation of climate change legal obligations of the county governments.
- Put in place a mechanism to regularly review subsidiary legislation as may be necessary to support implementation of various interventions through the national climate change legislation.
- Regularly review relevant sectoral laws and policies in order to integrate climate change policy considerations and implement priority actions in respective sectors.
- Put in place mechanisms for public consultation and participation in climate change governance at all levels of government.
- Strengthen coordination and capacity for the county to contribute to the national position on international climate change negotiations.

9.2 Climate Finance and Other Resources

Because of 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). The County thus, requires a suitable framework to attract and efficiently utilise climate finance. 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. To secure an appropriate share from this initiative, there is need to create an enabling environment, which can facilitate and attract this funding. To benefit from future international financial mechanisms, the County Government of Taita Taveta shall take the following interventions:

Policy Statements

The County Government shall:

- Develop Public, Private and non-state actor’s partnership for financing and implementation of climate change adaptation and mitigation projects;
- Commit at least 2% county budget to climate change activities either directly through climate change department or climate change activities implemented by the other departments;

- Adopt and implement sector specific anti-corruption, transparency, accountability and integrity mechanisms to safeguard prudent management of climate finance.
- Establish guidelines to allow plough backs on interest, profits and proceeds of climate change investment initiatives;
- Explore possible avenues to attract internal and external climate finance, including through foreign direct investment and other multilateral or bilateral funding.
- Put in place a mechanism and criteria for balance in the allocation of mobilised climate finance to adaptation and mitigation actions.
- 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.
- Put in place a framework for coordination and monitoring and tracking sources, application and impacts of climate finance.

9.3 Climate Change Measurement, Reporting and Benefit Measurement

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 Kenya Climate Change Act 2016 requires Taita Taveta county executive to submit annual reports to their 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.

Policy Statements

The County Government shall:

- Establish an integrated MRV framework for performance, outcomes and benefits of mitigation, adaptation and climate finance actions.
- 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.
- Prioritize the integration of climate change parameters, data and information required for MRV into the national statistical management system.
- Ensure that the national MRV system is transparently linked with national sustainable development planning, budgeting and monitoring systems.
- Enhance awareness and build capacities of both national and county entities to participate in the MRV process and systems.

CHAPTER TEN: IMPLEMENTATION FRAMEWORK

10.0 Implementation Framework and Costs

Implementation of climate change policy priorities and other actions will require a coordinating unit, significant planning, including detailing the full cost to determine budgetary and other economic implications. This Policy will be implemented through specifically developed and fully costed Climate Change Action Plans commencing with the County Climate Change Action Plan 2020-2026 and continuing through new and amended action plans developed in at least five-year intervals. To facilitate climate change mainstreaming and realisation of the overall policy objective of climate resilient and low carbon development, current and future Climate Change Action Plans will be fully aligned with and integrated into the regular midterm plans of Vision 2030.

The County Government of Taita Taveta shall:

- Establish a focal climate change unit in the department of water, environment and sanitation that will coordinate all climate change activities in the county.
- Prepare and implement comprehensive, fully costed and periodically reviewed Climate Change Action Plans under the framework of this Policy.
- Ensure that Climate Change Action Plans for implementation of this Policy are aligned with the regular midterm plans of Vision 2030.
- Facilitate continuous consultations and public awareness across all sectors, interest groups and the public.
- Funding required for financing climate change responses under this policy will be mobilised from both internal and external sources.

10.1 Monitoring and Evaluation of Policy Implementation

The Taita Taveta County Government recognizes the importance of tracking implementation of this climate change Policy and evaluating related outcomes. This important task can signal potential weaknesses in design, identify implementation challenges and facilitate policy adjustments. In this context, it is crucial to prioritize rigorous and continuous Monitoring and Evaluation (M&E) of this Policy.

In order to track the implementation of this Policy, it will be essential to record and measure progress and changes, as well as the overall performance of climate change actions. M&E will provide reliable and timely data on progress, results and shortcomings of the Policy implementation to inform decision makers, stakeholders and the public. A highly consultative and participatory M&E system will be adopted to facilitate periodic reviews of this Policy and its contribution to the national economy. Efforts will be made to link this system to the County Integrated Monitoring and Evaluation System (CIMES).

The M&E system will monitor implementation by tracking inputs and actions to mainstream climate change as captured in the county integrated development plan (CIDP). Sectoral plans and Performance contracts provide a useful tool through which targets, inputs and the resultant outputs can be determined and evaluated.

An appropriate climate change M&E system will coordinate inputs from different sources, including various stakeholders, to provide reliable and timely information and data for planning

purposes, and as inputs to county level reports. M&E of this Policy will be synchronized to the five-year CIDP and MTPs of Vision 2030, and will adopt a participatory approach that facilitates active engagement of stakeholders,

Policy Statements

The Taita Taveta County Government shall:

- Put in place mechanisms to utilize actions and sectoral plans, and performance contracts as tools for review and evaluation of inputs and results under this Policy.
- Collaborate with stakeholders/actors in setting up M&E procedures for this climate change policy.
- Incorporate climate change indicators into the County Integrated Monitoring and Evaluation System.
- Set up a coordination mechanism involving relevant stakeholders to undertake M&E of this Policy over five-year intervals in line with the Climate Change Action Plans and the MTPs of Vision 2030.
- Disseminate the outcomes of reviews and evaluations for public and stakeholder discussion, and for county assembly debate and oversight.

10.2 Resource Mobilisation

Funding required for financing climate change responses under this policy will be mobilised 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 mobilising external financing. This Policy underscores the Government's commitment to increase PPP initiatives for actions that help to achieve low carbon climate resilience development.

Policy Statements

The County Government shall:

- Allocate resources for climate change actions in county budgetary processes.
- Build capacity to mobilise and enhance absorption of resources for climate change interventions.
- Mobilise substantial levels of climate finance to fund implementation of this Policy and the associated Climate Change Action Plans from internal and external sources.
- Put in place mechanisms to attract and leverage PPPs as a vehicle to mobilise resources and enhance private sector participation in low carbon climate resilient development activities.

10.3 Collaboration and stakeholder's participation

Stakeholder mapping and analysis in this is the process of identifying and listing current and potential users of climate information and analyzing them to understand the relevance of the information to their activities and decisions. This mapping is done by developing a representation of relationships and interactions among them, and prioritizing them by ranking them according to their relevance and identified issues.

Policy Statements

The County government of Taita Taveta shall:

- Map and identify relevant stakeholders of climate change.
- Coordinate activities relating to climate change among different stakeholders.
- Actively participate in knowledge management among the different stakeholders.
- Partner with different stakeholders in dissemination of information regarding climate change.
- Partner with different stakeholders in resource mobilization in order to implement programs on climate change mitigation and adaptation.