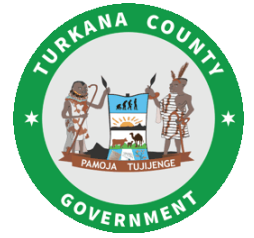




REPUBLIC OF KENYA
MINISTRY OF TOURISM, CULTURE, NATURAL
RESOURCES, AND CLIMATE CHANGE



COUNTY GOVERNMENT OF TURKANA SUB-COUNTY CLIMATE CHANGE ADAPTATION ACTION PLAN (CCAAP)

TURKANA NORTH AND KIBISH SUB-COUNTY

2023-2027



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The Action Plan is framed under a joint programme “Addressing Drivers and Facilitating Safe, Orderly and Regular Migration in the Contexts of Disasters and Climate Change in the IGAD Region”.

The Joint Programme is a partnership between IOM, the International Organization for Migration; ILO, the International Labour Organization; PDD, the Platform on Disaster Displacement (hosted under United Nations Office for Project Services (UNOPS)); UNHCR, the United Nations High Commissioner for Refugees; IGAD Secretariat, the Intergovernmental Authority on Development; ICPAC, the IGAD Climate Prediction and Application Centre; and the IGAD Member states Djibouti, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda.

The overall objective of this joint programme is to contribute to facilitating pathways for regular migration in the IGAD region and minimizing displacement risk in the context of climate change, environmental degradation, and disasters in line with the vision and guiding principles of the Global Compact for Safe, Orderly, and Regular Migration (GCM). The programme supports the implementation of the GCM; Sustainable Development Goals; 2015 Paris Agreement; Sendai Framework for Disaster Risk Reduction 2015-2030; and the Protocol on Free Movement of Persons in the IGAD region, adopted in June 2021.

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FOREWORD

Climate change has threatened development and further increased the burdens on the poorest people in the world by disproportionately affecting them through climate related disasters, yet they have contributed the least to the problem of global warming. Climate change variabilities in Kenyan arid regions have become more frequent with devastating impacts on social, economic, and livelihood systems. In order to address these climate change impacts and ensure improved adaptive capacity and resilience, the national government and county governments have set up various funding mechanisms in place to address climate change impacts.

For Turkana County, climate change events have become frequent with very devastating impacts on social, economic, and livelihood systems thus greater need for enhancing the adaptive capacity of the social, economic, and institutional systems. Rising temperatures and changing rainfall patterns, resulting in increased frequency and intensity of extreme weather events such as droughts and flooding, threaten the sustainability of the County's development. Due to changing socioeconomic and demographic growth, traditional coping strategies are increasingly becoming insufficient. Further, the increased frequency of extreme events is not allowing the local communities' time to recuperate after such shocks. The County Government of Turkana has developed Climate Change Policy, Turkana County Climate Change Act, 2021 and Turkana County Climate Change Fund Regulation, 2021 to provide a clear and concise articulation of overall response priorities to climate variability and change.

The Turkana people predominantly secure their livelihood from pastoralism. However, this has come under pressure due to inter-related issues including population growth, the impacts of climate change, increased drought and continued environmental degradation. Subsequently, natural resources are limited and often prompt conflict among neighbouring lands. Climate change has significant implications on livelihoods, particularly pastoral and agro-pastoral systems in Turkana County. The County is progressively recognizing the need to increase budget allocations for climate actions given the far-reaching adverse effects of climate change on livelihoods and development fronts. This process of financing climate change activities has been substantially supported by the county government and various partners to ensure effective financing of climate change initiatives that will help improve the adaptive capacity of the local community members in the region.

This Sub-County Climate Change Action Plan for Turkana North and Kibish Sub-County will help in prioritization of important adaptation initiatives and operations which are linked to the wards, county, national, regional, and global development priorities through the various development blueprints such as the Turkana County Integrated Development Plan (CIDP) thus ensuring that climate change adaptation funds serve the purpose of integrated climate-compatible development and are aligned to local priorities, and embrace strong participatory planning and locally-driven actions through the use of community resource mapping and participatory vulnerability resilience assessments, as well as community monitoring systems. This Turkana North and Kibish Sub-County Climate Change Action Plan will ensure that the sub-county climate change funds embrace social inclusion and public accountability, and its implementation is driven by the local communities through the Ward County Climate Planning Committees (WCCPCs).

Hon. Iris Mariaio

CECM - Ministry of Tourism, Culture, Natural Resources and Climate Change

The County Government of Turkana

ACKNOWLEDGMENT

Climate change has increased the frequency and magnitude of extreme weather events in Turkana, causing loss of lives, diminished livelihoods, reduced crop and livestock production, and damaged infrastructure, among other adverse impacts. This situation requires integrated and inclusive engagement with community members in developing Sub-County/ Ward Climate Change Action Plans that will help mitigate the impacts and further improve the adaptive capacity of the local communities. The County Government of Turkana, through the Ministry of Tourism, Culture, Natural Resources and Climate Change is very grateful for the technical staff that participated in the development process of the Ward Climate Change Action Plans spearheaded by LOKADO through the support of the International Organization for Migration – UN Migration Agency (IOM) through the programme “*Addressing Drivers and Facilitating Safe, Orderly and Regular Migration in the Contexts of Disasters and Climate Change in the IGAD Region*”. Through the project, IOM has been profoundly providing support towards incorporating human mobility into climate change and disaster risk reduction policies, as well as livelihood support to prevent displacement of drought affected population in Turkana County. We are grateful to the IOM team who specifically assisted in the development of the plan, ensuring that it was evidence based and that the process was inclusive. We appreciate the technical expertise provided by Dennis Ong’ech from the University of Nairobi.

We, especially, wish to recognize the work of all the stakeholders who participated and provided valuable input at various stages of the policymaking process. The list includes the communities that provided critical information that informed the plan, the civil society and other development partners implementing climate change-related projects in the county, county executive members, technical officers, and the county assembly committees.

Special acknowledgement is extended to the County Executive Committee member in-charge of Climate change matters, Mr. Iris Mariaio, Mr. Clement Nadio, Director of Environment, for their leadership, support, and cooperation throughout the planning process.

The process of formulating this Sub-County Climate Change Action Plan was inclusive and consultative as it involved the participation of different stakeholders, national government institutions, sister departments in the County. A wide range of individuals and institutions participated in its formulation. We take this early opportunity to recognize their efforts. We also acknowledge the support of County Assembly in providing leadership and the County Executive Committee for approval.

Mr. Benedict Mukoo,

Ag. County Chief Officer,,

Ministry of Tourism, Culture, Natural Resources and Climate Change,

EXECUTIVE SUMMARY

Climate change is imposing an increasing burden on the national and county governments in their efforts to protect vulnerable populations and realize human rights. Extreme drought events can have negative direct and indirect impacts on health and contribute to desertification, food insecurity, migration and increased conflict. Indigenous populations, poor and socially marginalized individuals, women, and people with disabilities, are often most affected.

Turkana North and Kibish Sub-County is one of the sub-counties worst affected by climate change in Turkana County. It is evident that droughts have become more frequent with devastating implications on social, economic and livelihood systems. Due to extreme climate change events, the sub-county experiences conflicts over access and utilization of increasingly degraded resources, rising malnutrition, high morbidity, increased vulnerability and loss of biodiversity. Turkana North experiences human mobility shaped by climate change related disasters and environmental degradation. This situation calls for the need to develop comprehensive Ward Climate Change Action Plans to improve the communities' adaptive capacity to climate change and environmental degradation.

The process of development of this climate change action plan was participatory in nature and involved stakeholders from national and county government, International Non-Governmental Organizations (INGOs), Non-Governmental Organizations (NGOs,) Faith Based Organizations (FBOs), Civil Society Organizations (CSOs), state agencies, and community representatives. Key stakeholders engaged at the community level included area chiefs, members of the ward planning committees, community elders, women leaders, youth leaders, herders, and religious leaders, people living with disability among others.

Chapter 1: Background: This chapter highlights the sub-county location, topography, climate, administrative and political units: locations, sub-locations, village units, population, and economic activities.

Chapter 2: Methodology: This chapter covers the assessment area, sampling, data collection, data analysis, data validity and reliability, fieldwork challenges and solutions, and stakeholder feedback workshop.

Chapter 3: Summary of Findings: This chapter summarizes and highlights findings from the discussions held with the various stakeholders.

Chapter 4: Strategic Focus: This chapter explains the importance of ward climate change action plan, strategic vision, mission and objectives, vision, mission, and the strategic objectives.

Chapter 5: Climate Change Trends and Projection: This chapter points out the temperature change trends and projections, current vulnerability to climate change and hazards, rainfall trends and projections, vegetation cover changes and productivity trends, key sectors impacted by climate change, existing gaps in understanding and addressing climate change impacts, data and knowledge gap, climate change governance, and capacity in addressing climate change.

Chapter 6: Climate Change, Human Mobility, Conflict Sensitivity and Food Security: This chapter looks into the nexus of climate change and human mobility by looking into migrations along transhumance routes and pastoral groups identities in relation to climate shocks. It also touches on the best climate emergency adaptation strategies to promote in the area. The chapter further addresses issues on the nexus of conflict sensitivity and food security by looking into lessons learnt from strengthening food and nutrition security while addressing drivers of conflict and enhancing the capacity of communities to adapt to climate change.

Chapter 7: Climate Change Adaptation Strategies: This chapter provides insights into Climate Risk and Vulnerability and gender and vulnerabilities evidence and further discusses Impacts of Climate Change in the sub-counties and wards. It highlights ways through which adaptation can be improved in the sub-county.

Chapter 8: Climate Change Mitigation Strategies: This chapter highlights various mitigation strategies that will ensure Turkana achieves a low carbon development pathway.

Chapter 9: Enabling Legislative and Institutional Framework: This chapter looks into the existing county, sub-county, and ward legislative context, climate change governance and institutional resources and capacity, status of climate change governance in the sub-county, institutional set-up, functions and mandates of partners, international organizations existing in the region, public benefit organizations, financial institutions, private sector, and coordination mechanisms.



Photo showing community members from Kaaleng/ Kaikor ward participating in a discussion on Climate Change Adaptation Planning. *Photo by Dennis Ong'ech*

ACRONYMS

UNFCCC	United Nations Framework Convention on Climate Change
IOM	International Organization for Migration
CIDP	County Integrated Development Plan
INGOs	International Non-Governmental Organizations
NGOs	Non-Governmental Organizations
FBOs	Faith Based Organizations
CSOs	Civil Society Organizations
CCCPC	County Climate Change Planning Committee
EAP	Early Action Protocol
CADP	County Annual Development Plan
CEC	County Executive Committee
CCAP	County Climate Change Action Plan

DEFINITION OF TERMS

Absentees are residents of the sub-location who have left their settlement because of the drought (death of animals, lack of food, lack of water, search for services), resource-based conflict, ethnic tensions or conflict, and flash floods or seasonal floods (IOM, 2022a).

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

Adaptive capacity refers to the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.

Arrivals are persons (Kenyan Nationals) who have left their place of origin (internal or external) and arrived at the sub-location assessed because of the drought (death of animals, lack of food, lack of water, search for services), resource-based conflict, ethnic tensions or conflicts, and flash floods or seasonal floods (IOM, 2022a).

Carbon credits are generated by projects that deliver measurable reductions in GHG emissions.

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

Foreign Nationals are non-Kenyan nationals who arrived in the assessed sub-location because of the drought (death of animals, lack of food, lack of water, search for services), resource-based, ethnic tensions or conflicts, flash floods or seasonal floods (IOM, 2022a).

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

Hazard refers to the potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources (IPCC, 2018).

Human Mobility is a generic term covering all the different forms of movements of persons.

Migration refers to the movement of persons away from their place of usual residence, either across an international border or within a State.

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

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

Returnees are the people (Kenyan Nationals) that had left the sub-location because of the drought (death of animals, lack of food, lack of water, search for services), resource-based conflict, ethnic tensions or conflict, flash floods or seasonal floods, and settled at a temporary site (in Kenya or in a foreign land) but came back because they have not found assistance, needed to rejoin the family, and/or have returned with assistance (IOM, 2022a).

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 ton of carbon dioxide equivalent from the atmosphere.

Vulnerability refers to the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.

CHAPTER 1: BACKGROUND

1.1 Sub-County, Wards, Location and Topography: Map

Turkana North Sub-County covers a land area of 17,478.30 km², and has six wards including Kibish, Kaeris, Kaaleng/ Kairor, Nakalale, Lake Zone, and Lapur (CIDP, 2018). The sub-county has 34 Villages (TCG, 2018). Turkana North is located in the Northern part of Kenya and borders South Sudan and Ethiopia to the north and northeast respectively (Figure 1). Internally, it borders Marsabit County to the east.

Map of Turkana North and Kibish Sub-Counties

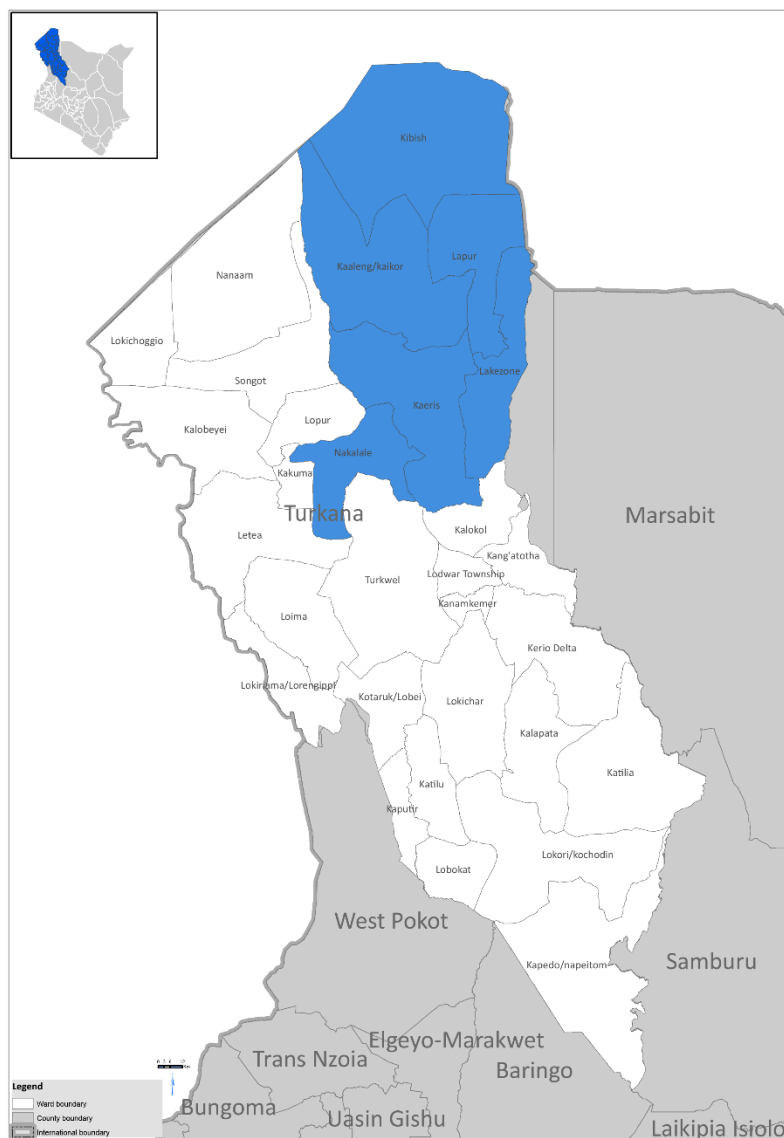


Figure 1: Map showing Turkana North and Kibish Sub-County (Source: IOM)

1.2 Ward Climate

Turkana North and Kibish Sub-County is an arid and semi-arid region characterized by warm and hot temperatures. The temperatures range between 20°C and 41°C with a mean of 30.5°C while the rainfall pattern and distribution are erratic and unreliable (CIDP, 2018). There are two rainfall seasons. The long rains (akiporo) usually occur between April and July and the short rains between October and November and ranges between 52 mm and 480 mm annually with a mean of 200 mm (CIDP, 2018). The driest periods (akamu) are January, February and September. The Sub-County falls

within Eco-climatic VI of the moisture availability zonings in Kenya. Zone VI are the arid areas which are mostly in Turkana North and Kibish Sub-County (TCG, 2021).

1.3 Administrative and Political Units

Turkana North and Kibish Sub-County is administratively divided into 6 wards and 34 villages as scheduled in the gazetted Turkana County Village and Administration Bill 2018. The wards include: Kibish, Kaeris, Kaaleng/ Kaikor, Nakalale, Lake Zone, and Lapur (TCG, 2018).

Sub-County	Ward Name and Code	NAME OF VILLAGE UNIT	NO. OF VILLAGES
Turkana North and Kibish	Kibish - 0615	Natapar/Kaemothia, Lokamarinyang/Natodomeri, Kibish, Naita/Koyasa, Kaitede/ Karach I, Napak/Lobulono	6
	Kaeris - 0611	Kaeris, Kanukurudio, Kangakipur, Nadunga, Nakapelewoi	5
	Kaaleng/ Kaikor -0614	Kaikor, Kaaleng, Kakelae, Loruth, Nalita, Kotome	6
	Nakalale - 0613	Lolupe, Losajait, Naduat, Lokore, Kaenyangaluk	5
	Lake Zone - 0612	Todonyang, Kataboi, Lowarengak, Riokomor/Kokuselei, Nachukui, Katiko/Lomekwi	6
	Lapur - 0613	Natoo, Nakalale, Kachoda, Karebur, Kokuro, Meyan	6

Table 1: Table showing Various Wards and Villages in Turkana North and Kibish

1.4 Population and Demographics

Turkana North and Kibish Sub-County is home to 101,987 people (according to the 2019 National Census), which consists of 51,461 males, 50,525 females, and one (1) inter-sex (KPHC, 2019). The sub-county has 18,924 households, with an average household size being 5.6 and an average population density of 14 persons per Sq. Km (KPHC, 2019). As a result of its geographic location and the climatic conditions, the population of Turkana North and Kibish Sub-Counties experience continued conflicts over pasture and water especially along the border points of Sudan and Ethiopia. The impacts of recurrent droughts upon pastoralist communities have resulted into increased immigration activities in this region in search of grassland for pasture and water for humans and livestock.

1.5 Economic Activities

Turkana North and Kibish Sub-County is made up of the Turkana people who are mainly pastoralists who focus on nomadic cattle herding. The sub-county also hosts communities relying on fishing as their livelihood. Over the past 30 years, the ability of communities living in this sub-county to have a good livelihood from pastoralism has been challenged by the extreme climate change variabilities. Communities here depend on livestock sales, self-employment (charcoal, mats, baskets, brewing, building poles), safety nets, fish sales, fishing-related casual labour, petty trade, and livestock sales.

In Lake Zone Ward, fishing is the main economic activity for the community members despite the populations' pastoral background. As such, the most valuable productive assets are fishing equipment (boats, nets, lines, and hooks). Differences in access to markets and to fishing grounds have resulted in a degree of specialization along the lake. Fish is sold fresh, dried, salted, and smoked depending on the distance to the market. The main fish trading centres include Lowarengak and some are transported to Lodwar.

Given that the pastoral community depends largely on the existing natural resources, extreme climate change events have undermined the ability of many households to make their livelihood from nomadic pastoralism. In recent years,

many households have lost livestock due to climate variabilities such as droughts and floods. Fewer people in Turkana North and Kibish Sub-County are able to make a living from livestock keeping alone, and are now forced to source the majority of their food from market purchase rather than from livestock products (Save the Children 2016). Unfortunately, the arid environment in the sub-county enables very few viable livelihood alternatives to nomadic pastoralism, resulting in high levels of poverty and food insecurity among the population.

Poverty, food insecurity, and the difficulty of making a livelihood from pastoralism are causing many Turkana to adopt alternative livelihoods (Opiyo et al 2015). In particular, women, who are more traditionally linked to small-scale manufacturing and petty trade, and youth who do not have access to livestock assets, demonstrate aspirations to engage in alternative livelihoods. Examples include crop production (particularly using irrigation), charcoal production and sale, manufacture, and sale of handicrafts (especially baskets), petty trade (especially of household goods and small livestock), honey production, the sale of other nature-based products, and casual labour (Watson, 2008; Save the Children 2016).

Market access in this sub-county is poor. Distances between commercial centres and villages are vast and the road network is in poor condition. In addition to the long distances there is a lack of reliable transportation. Insecurity is a problem in the region due to its proximity to the border areas and conflicts with neighbouring tribes from South Sudan and Ethiopia. This not only affects access to markets but also to grazing areas, water sources, and wild foods.



Photo showing Manyattas belonging to Nawokojom community in Turkana North. *Photo by Dennis Ong'ech*

CHAPTER 2: METHODOLOGY

Assessments for the development of this sub-county/ ward climate change adaptation plan were guided by the National Framework for Climate Change Vulnerability Risk Assessment. Before identifying appropriate climate change adaptation actions, there is a need to understand the local risks and vulnerabilities including the most vulnerable economic sectors, social groups and communities for efficient and effective planning to improve adaptive capacity of the communities. Through participatory climate change vulnerability risk assessment, the climate change risks, hazards and exposures were identified, measured (quantified), and analysed. Through a participatory climate change action planning process, findings from climate change vulnerability risk assessment were used to guide the development of the Ward and County Climate Change Action Plan 2023-2027. The plan identifies sectoral adaptation needs and details specific sectoral actions plans, key implementing partners and indicative costs. The plan is complementary and consistent with existing strategies of the National Climate Change Response Strategy 2010 (NCCRS), National Climate Change Action Plan 2018-2022, as well as county development and economic plans, principally the Turkana County Integrated Development Plan (CIDP) 2018-2022, County Climate Change Policy 2021, Act 2021, Financial Regulation, and the County Annual Development Plans 2021. Data was collected using key informant interviews (KIIs), and focus group discussion (FGDs) in each Ward, and review of relevant literature that include reports, policies, legislations, articles and books.

2.1 Assessment Area

The assessment was carried out within the geographical boundaries of Turkana North and Kibish Sub-County. The wards visited included: Kibish, Kaeris, Kaaleng/ Kaikor, Nakalale, Lake Zone, and Lapur.

2.2 Sampling

The assessments were carried out in two stages. The first assessment was carried out in September 2022 in the 6 wards of Turkana North and Kibish wards including; Napak, Lokitung, Lakezone, Kaleng, Nakalale, and Kaeris wards, to gather public views from community members on some of the climate change issues risks and vulnerabilities affecting the respective wards and how the community members feel they can be addressed. In December 2022, the second assessment was a validation process by the public and participants included community members, county officers, sub county climate change officers, sub-county environmental officers, and selected ward climate change committee members, institutions implementing activities in the wards, and key actor. All these engagements were participatory in nature and highly integrated public participation factors were considered to ensure comprehensive involvement of all community members and stakeholders.

2.3 Data Collection

Data collection for the development of this plan was carried out using key informant interviews (KIIs), focus group discussions (FGDs) and desktop review of relevant literature that included reports, policies, legislations, articles, and books. Key Informants were people holding formal or informal leadership within the community and had a good knowledge of climate change and its impacts in the region. These included people like area chief, elders, ward climate change committee members, and those working in various organizations implementing projects in the area. The focus group discussions involved men and women, youth, elders, and people living with disabilities. To ensure data quality, discussions were held in the local language and translations was done by a local who is very conversant with the local language. Further, during the meetings, participants were allowed to contribute freely. The discussion period was moderated to ensure the participants did not suffer fatigue during the interview.

2.4 Data Analysis

Primary data generated from this assessment was mainly qualitative. For the qualitative data, the audio-recorded interviews were translated, transcribed, and then thematically analysed.

2.5 Data Validity and Reliability

To ensure that the data collected was valid and comprehensive for the development of this ward climate change action plan, various stakeholders and community members were included in the assessment to gather their views and opinions. Further, the assessment was carried out in two stages, first stage involving the general public, and community members while the second phase providing an opportunity to engage the key community members, informants and further validate the information provided in the first engagement. Validation will be done at sub-county level, county level and with Members of County Assembly (MCAs). Discussions were carried out in local language and translation done in English by the ward administrators and environmental officers to ensure the community members understood the questions and gave the correct answers. Given the length of the questionnaire, questions were prioritized in line with climate change vulnerability risk assessment guide to ensure collection of the right information for planning. Further, the assessment guide was co-developed by the research team and the actors involved including the County Government of Turkana, IOM team, LOKADO team, ensuring it comprehensively captured details highlighted in the framework for climate change vulnerability risk assessment. Issues around human mobility and its nexus to climate change were covered by the study guide given this region experiences various migration issues especially near the borderlines where there are constant conflicts over natural resources.

2.6 Fieldwork Challenges and Solutions

Distance between the wards was very long. The study team came up with a navigation plan to ensure all the wards were visited.

High temperatures and dust were a challenge. The meetings were well coordinated and planning involved the county government, ward administrators, elders, and chiefs. Meetings were held at the ward administrators' offices.

2.7 Stakeholder Feedback Workshop

A feedback meeting will be undertaken to validate the plans by stakeholders who participated the assessment and members of the public. This activity is critical for the credibility, legitimacy, ownership, and acceptability of the plan.



Group photo showing community members from Lakezone Ward. Photo by Dennis Ong'ech

CHAPTER 3: SUMMARY OF FINDINGS

This section summarizes and highlights findings from the discussions held with the various stakeholders based in Turkana North and Kibish Sub-County ward.

SUB-COUNTY	WARD NAME AND CODE	CLIMATE CHANGE CONCERNS, IMPACTS, ADAPTATION MECHANISMS
Turkana North and Kibish	Kibish - 0615 Kaeris - 0611 Kaaleng/ Kaikor -0614 Nakalale - 0613 Lake Zone - 0612 Lapur - 0613	<p>Turkana North and Kibish Sub-County wards suffer from climate effects emanating from prolonged drought characterized by starvation of both livestock and human being. Livestock suffer due to lack of pastures, diminished water sources, and drying of vegetation. As a result of diminished grassland, coupled with presence of invasive species such as <i>Prosopis Juliflora</i> pastoralists are forced to migrate internally to safer wards or to the international borders (Ethiopia or S. Sudan) in search of pasture and water. Fisher folks are forced to move to other areas near the lake seasonally in order to increase their fish catch due to reduced catch in Lake-Zone area.</p> <p>Impacts of climate change</p> <p>Extinction of indigenous species, emergence of invasive species, emergence of vulnerable groups, colonization by alien invasive species in <i>Prosopis Juli Flora</i>, resource based conflict & insecurity, hiking of prices for some basic food commodities, high dependency rate, diminish land fertility, soil erosion, rural–urban migration, rampant deforestation as a result of dependence in wood for fuel, emergence of endo and ecto parasite in the livestock, deforestation due high dependence on wood fuel, habitat distortion ,loss of biodiversity, poor health facilities, poor road network, increased human mobility-immigration rates, and high influx to refugee camp.</p> <p>Adaptation mechanisms</p> <p>Sending children to school, livestock off-take, change of diet and consumption of traditional food, cash transfers to vulnerable people, strategic livestock feed reserves, development of water sources, insurance schemes, livestock tracking devices, loaning, marrying out the livestock, small scale gold mining, dependence on relief aid from NGO, rural – urban areas movement, livestock trade natural resources exploration, training on livestock health, diversification of herds, livestock off-take, encouraging community involvement in adaptation projects, barter trade and sale of livestock products such as livestock pelt, and milk. The pastoralists need to be encouraged to diversify their livelihood.</p> <p>High at-risk communities: Nawokojom Community in Kaikor Ward. Entire community including men, children, youth, women, elders displaced were displaced from Lokwanamur East ranges and Lorionoton due to drought. They lost all livestock between 2021 and 2022.</p> <p>Nawokojom community are pure pastoralists community that move with their livestock from one place to another and entirely depend on livestock as their main livelihood. Other camps of Nawokojom pastoralists are in: Kaegolemungi in Kaikor; Lokitelakwan in Nalita; Lobulonia in Kibish; Napak in Kibish; and Lokomarinyang in Kibish</p>

Table 2: Table showing a summary of climate change concerns, impacts, adaptation mechanisms

CHAPTER 4: STRATEGIC FOCUS

4.1 Importance of Ward Climate Change Action Plan

Aligned to the national and county climate change policies and action plans, the Turkana North and Kibish Sub-County Climate Change Action Plan aims to “provide mechanisms and measures to achieve low carbon climate resilient development in a manner that prioritizes adaptation in Turkana North and Kibish”. The climate change action plan will steer sub-county/ ward’s climate change actions.

Through this Sub-County/ Wards Climate Change Action Plan 2023-2027, respective sub-county offices, the private sector, International Non-Governmental Organizations (INGOs), Non-Governmental Organizations (NGOs) Faith Based Organizations (FBOs), Civil Society Organizations (CSOs), and other actors will adopt low carbon climate resilient development pathways that will improve resilience and adaptive capacity of the local communities in Turkana North and Kibish regions.

4.2 Strategic Vision, Mission and Objectives

4.2.1 Vision

This plan sets out a vision for a low carbon climate resilient development pathway that will improve resilience and adaptive capacity of the local communities in Turkana North and Kibish regions.

4.2.2 Mission

To ensure sustainable and improved livelihoods in Turkana North and Kibish regions

4.2.3 Strategic Objectives

To improve the adaptive capacity of communities through a participatory approach

4.2.4 Specific Objectives

- To enhance the institutional capacity of the wards in climate change adaptation and mitigation
- To reduce climate change risk and vulnerabilities to the local community and infrastructure
- To enhance the capacity of the local community in food and nutrition security
- To improve water, food and nutrition security in the wards
- To reduce environmental degradation and pollution in the wards
- To mainstream climate change in sectoral development within the wards

CHAPTER 5: CLIMATE CHANGE TRENDS AND PROJECTION

5.1 Temperature Change Trends and Projections

Temperature is projected to increase in Turkana County, including Turkana North and Kibish Sub-County. Turkana North Sub-County is an arid and semi-arid region characterized by warm and hot climate. The temperatures range between 20°C and 41°C with a mean of 30.5°C (TCG, 2021). The increase in temperature patterns in the region will certainly have further impacts on local livelihoods, particularly among households that derive most of their livelihoods from weather dependent production systems such as pastoralism and fisheries.

5.2 Current vulnerability to climate change and hazards

The main hazards in Turkana North and Kibish Sub-County are inadequate and erratic rainfall, livestock disease, insecurity, and conflict. Climate risks pose serious threats to the attainment of UN's Sustainable Development Goals (SDGs) within this sub-county. The sub-county's livelihood which is pastoralism is largely dependent on natural resources, which are susceptible to climate variability and change and extreme weather events. Increasing interseasonal variability and declining rainfall in the main rainy season have impacted livestock keeping in the area, resulting to increased human immigration into the bordering countries in search of pasture and water. Recurrent droughts likely to be exacerbated by increasing temperatures, lead to severe crop and livestock losses, famine and displacement.

Turkana North and Kibish Sub-County mainly host pastoral communities who are dependent on livestock. For this community, adequate rainfall is vital to sustaining their livelihoods. The result of inadequate and erratic rain affects households over a number of seasons. Herds heavily depend on sufficient water and pasture/browse to reproduce and to produce milk, both of which are important sources of food and cash for all community members. Failed seasons negatively affect food and cash sources. A failed season can significantly affect livestock health due to insufficient food and water during the droughts which in turn results in higher livestock mortality.

The sub-county is very susceptible to climate change related conflicts and insecurity. There are usually armed skirmishes between the Turkana and their neighbours along the border areas over natural resources such as pasture and water and livestock theft. Such insecurity incidences disrupt access to markets, pasture, and water sources. Due to the loss of productive household members resulting from violent clashes, some households have been left with fewer cash-earning members, exposing them to poverty.

5.3 Rainfall Trends and Projections

The performance of rainy season directly impacts livelihoods in this sub-county given their pastoral livelihood system. The long rains (akiporo) usually occur between April and July and the short rains between October and November and ranges between 52 mm and 480 mm annually with a mean of 200 mm (TCG, 2021). The driest periods (akamu) are January, February and September. Amounts of rainfall in this sub-county have significantly reduced and there have been increased number of failed seasons.

Rainfall amounts are projected to decline in this region as a result of extreme climate change and this will further lead to a dramatic drop in surface drainage. Rainfall will directly result into unavailability and inaccessibility of water and pasture resources for livestock thus increasing the risk of resource-based conflicts within and across pastoral communities. The effects of the projected rainfall variations will be compounded by expected temperature rise resulting to more compromising effects on water and pasture resources which are the most important resources for livestock production and other forage resources and pastoral practices.

5.4 Vegetation Cover Changes and Productivity Trends

Most of the vegetation covering this zone's terrain is characterized as bush land, covered in woody plants and shrubs. This region falls within agro-climatic zone VI which is an arid environment (Stöber et al., 2017; TCG, 2021). These are

typical rangelands dominated by *Commiphora* and *Acacia* woodlands. The exotic invasive *Prosopis Juliflora* has increasingly become a threat. The increasing colonization of the grazing lands by *Prosopis Juliflora* needs to be addressed and managed well otherwise it constitutes an ecological and socioeconomic threat.

5.5 Key Sectors Impacted by Climate Change.

Climate change has resulted into increased temperature, causing significant environmental and economic disruption. For Turkana North and Kibish Sub-County, heat, and drought are impacting the local communities and human health is increasingly at risk. Given the pastoral livelihood system and fisher folk livelihood system in Turkana North and Kibish Sub-County, the local economy is very dependent on climate-sensitive sectors such as agriculture, water, and health, which increase vulnerability. The increasing intensity and magnitude of weather-related hazards in the sub-county aggravates conflicts, mostly over natural resources, and contributes to security threats.

Summary of climate change impacts by sector in Turkana North and Kibish Sub-County

Sector	Likely Climate Change Impacts
Agriculture/ Crops	<ul style="list-style-type: none"> • Greater food insecurity • Decline in overall crop yields in the sub-county • Very low crop production in the sub-county • Reliance on irrigation farming due to low precipitation
Livestock	<ul style="list-style-type: none"> • Livestock deaths caused by drought • Decline in animal production due to lack of pasture, reduced access to water, and heat stress • Expected changes in livestock disease patterns
Fisheries	<ul style="list-style-type: none"> • Thinning of fish species and biomass abundance owing to the effects of temperature increase on nesting and feeding grounds • Negative impact on economic benefits of fisheries investments, including declining fisheries, damage to lake ecosystems and, and damage to the development around the lake due to rise in water levels in the lake • Declines in fisheries and livelihoods
Drought and Flood Management	<ul style="list-style-type: none"> • Increased frequency and intensity of droughts in the drylands decrease ability to cope • Increased frequency and intensity of flooding at the lake zone decrease ability to cope • Increased number of food insecure and malnourished people • Increased number of people without access to water • Declines in school attendance and rising dropout rates
Energy	<ul style="list-style-type: none"> • Decline in forest productivity restricts availability of fuel wood
Water	<ul style="list-style-type: none"> • Reduced availability of surface water for activities such as irrigation, livestock production, and household use • Increased water loss from reservoirs due to evaporation • High salinity levels • Borehole drawdowns due to prolonged drought • Ground water pollution as a result of floods • Low borehole productivity due to drought
Environment	<ul style="list-style-type: none"> • Increased likelihood of contestation and conflict over diminishing natural resources • Increases new pests, and diseases

	<ul style="list-style-type: none"> • Air pollution by dust
Forestry	<ul style="list-style-type: none"> • Increased exposure to invasive species - <i>Prosopis juliflora</i> • Reduced provision of environmental resources and economic activity
Health	<ul style="list-style-type: none"> • Increase in the incidence of malnutrition • Increase in water-borne diseases such as cholera and typhoid
Housing and Buildings	<ul style="list-style-type: none"> • Shortage of Manyatta construction materials • High cost of construction materials • Increase in risk of collapse, declining health of buildings, and loss of value as a result of flooding and water encroachment
Security	<ul style="list-style-type: none"> • Increased likelihood of conflicts at the border points between the migrating pastoralists and pastoralists from neighboring countries such as Sudan and Ethiopia. • Political instability • Financial instability • Increased risks of doing business
Tourism and Wildlife	<ul style="list-style-type: none"> • Tourist activities such as cultural festivals affected by lack of access due to damage to roads and infrastructure • Adverse impacts on ecologically sensitive tourist destinations • Potential for species extinction
Transport	<ul style="list-style-type: none"> • Damage to infrastructure including roads and bridges • Interruptions to road networks because of flooding and heavy rainfall events • Disruption of access to work, markets, education and healthcare facilities, due to damaged infrastructure and transport services.

Table 3: Climate change impacts by sector

5.6 Existing Gaps in Understanding and Addressing Climate Change Impacts

Adaptation programmes are substantially expensive investments that need significant financing even though the level of adaptation financing in developing nations such as Kenya remains relatively low. This is attributable to the fact that Kenya still lacks rapid comprehensive climate policy instruments and frameworks to support resource mobilization for adaptation funds. For instance, even with the existence of domestic and multilateral financing mechanisms, many counties in Kenya still have limited access to domestic adaptation funding and little or no access to multilateral funding because the counties lack institutional and legal structure on climate financing that can effectively coordinate and facilitate access and utilization of the finances (Odhengo, 2019; Trocaire, 2020).

Furthermore, there are data gaps on climate change issues therefore generating evidence to inform decisions and prioritization for climate financing is a great challenge. Most programmes on climate change are scattered given the lack of synergies and harmonization of efforts across various private and public institutions working on adaptation programmes in various counties in Kenya due to lack of a coordination mechanism. Climate change funding gaps and governance of the funds have remained an issue which can be addressed with the help of private players, especially global financial institutions (Odhengo, 2019). In this regard, exploring all available choices of suitable channels is also very imperative. Other challenges include lack of reliable data on private flows of climate change funds to the County, Sub-Counties, wards, and villages.

5.7 Data and Knowledge Gap

There is inadequate local information on how climate change elements such as temperature rise, change in precipitation, extreme weather events and other seasonal shifts will affect phenomena such as floods, droughts, water shortages, human health risks, habitat loss etc. Limited information regarding the county's vulnerability to climate change impacts is a major gap given lack of comprehensive climate change risk and vulnerability assessment. This is also true regarding the knowledge level of greenhouse gas (GHG) emissions and mitigation capacity (carbon-dioxide sequestration capacity) of key natural resources such as rangelands. The level of understanding of climate change and its impacts is quite low in the county. This calls for a focused awareness campaign that simplifies the science and impacts of climate change in a language that is more understandable to the pastoralists and others living in rural areas in Turkana North and Kibish Sub- County and Turkana County in general. There is also inadequate data on the current and future climate change risks and as such it is insufficient to draw conclusions for climate change analysis and acts as an impediment in developing and implementing proper adaptation measures.

5.8 Climate Change Governance

At national level, climate change is well stipulated in the Climate Change Act 2016. In Turkana County, climate change is domiciled in the Ministry of Tourism, Culture, Natural Resources and Climate Change under the Directorate of Climate Change. The county government has established the Turkana County Climate Change Policy, Act and Financial Regulation (2021) that guide implementation of climate change activities. Further, the county government has established climate change committees at the ward levels to support in planning, implementation and sourcing of funds for climate change activities.

Climate governance determines success of climate actions and a key component of climate financing. Effective climate change governance requires strong political leadership, technical knowledge, policy coherence and stakeholder engagement. Turkana county development plans highlight key climate action areas including: public sensitization on climate change adaptation and mitigation, building climate resilience among the community members, training technical staff on fundraising, mainstreaming stakeholders' engagement in climate actions, establishing early warning committees and formulating legal frameworks on climate change.

There are a number of people and institutions involved in the implementation of the Climate Change Policy. Coordination between various partners and institutions is very important for higher adaptive capacity. Poor coordination and management can increase vulnerability and stakeholders can't work in isolation as climate change is cross-cutting. Some of the stakeholders leading climate change governance at the sub-county level include:

- ▶ **Office of the governor** – The governor chairs the County Climate Change Steering Committee whose functions are to assist in mainstreaming of the county climate change matters into county planning and development matters.
- ▶ **The County Climate Change Steering Committee** – Works hand in hand with the Governor to ensure promulgated laws, regulations, policies, or guidelines are well achieved so that climate change matters are well addressed. Constitutes of the Governor, Deputy Governor, Executive committee members in charge of county treasury, CEC, representative from county assembly, representatives from various sensitive climate sensitive areas.
- ▶ **Climate Change Directorate** – Ensures that the policies adopted by the steering committee and laws passed by the assembly on climate change are well implemented. This team is within the department where climate change is domiciled.
- ▶ **County Climate Change Planning Committee (CCCPC)** – This committee is responsible for the formulation and implementation of climate change response projects within the county. The committee links

ward climate change planning committee, steering committee, climate change directorate. This committee is comprised representatives from ward committee, NGOs and Community Based Organizations.

- ▶ **Ward Climate Change Planning Committees** – These committees are tasked with implementation of the proposed climate change response projects as advised by the County Climate Change Planning Committee. They present proposals for activities or plans relevant to the wards to CCCPC for escalation to the steering committee for approval and funding.
- ▶ **Other stakeholders** – Media for education and public awareness; INGOS, NGOs, Community Based Organizations, FBOs, CSOs, the local community members.

Functions of ward planning committees

1. Coordinate and mobilize communities and other stakeholders in the ward to design and implement climate change response activities
2. Hold consultative meetings with communities and relevant government sectors, planners, agencies and local organizations
3. Participate in livelihood and resilience assessment to enable different community groups identify challenges arising from increasing climate variability
4. Facilitate research and knowledge management at the ward level on climate change issues
5. Facilitate public education, awareness, and capacity building
6. Prepare project proposals and submit them to the county planning committee for consideration and approval
7. Participate in county planning and budgeting processes to ensure climate change is mainstreamed
8. Facilitate public participation in climate change governance, implementation of activities and monitoring of activities

5.9 Capacity in Addressing Climate Change

Communities from Turkana North and Kibish Sub-County have been applying their indigenous strategies to help them adapt to climate variability. However, their resilience to climate change variabilities have severely been affected by climatic and other human-made stresses leaving the communities very vulnerable to climate change. Many traditional adaptive knowledge and livelihood strategies are no longer sufficient or are inefficient. Efforts to reduce the vulnerability of the local communities must therefore reinforce their risk management and coping capacities by augmenting existing adaptation mechanisms and supplementing them with new options that are tailored to the unique local contexts. Building climate resilience requires that the county and sub-county systems of governance, ecosystems and society to maintain competent functions in the face of climate change. Adaptive capacity is important for improving socioeconomic characteristics of communities, households and industry as it includes adjustments in behaviour, resources and technologies, and is a necessary condition for design and implementation of effective adaptation strategies. The sub-county and wards adaptive capacity depends on the resilience of its systems and people.

CHAPTER 6: CLIMATE CHANGE, HUMAN MOBILITY, CONFLICT SENSITIVITY AND FOOD SECURITY

6.1 Nexus of Climate Change and Human Mobility

Climate change has been a threat to livelihoods in Kenya and led to the declaration of drought emergency in the country in 2021. A report by IOM on mobility tracking and multi-sectoral location assessment in Turkana County highlights that as a result of extreme drought, 99 per cent of the sub-locations have reported pastoralist drop-outs accounting to 65,868 households (IOM, 2022a). Climate change influences human mobility by magnifying vulnerabilities and the report indicates that 2876 households in this sub-county reported absentees in 2022. These households left their settlements because of the drought (death of animals, lack of food, lack of water, search for services), resource-based conflict, ethnic tensions or conflict, and flash floods or seasonal floods (IOM, 2022a). The report further highlights that in the same year, the Sub-County had 3,702 arrivals (households), 5,214 returnee (households), and 37 foreign nationals (households) (IOM, 2022a).

The increasing impacts of climate change are threatening the viability of rural agricultural livelihoods, posing unprecedented challenges and disrupting migration patterns. Addressing the climate change hazards arising from human mobility require effective, evidence-based policy measures that will ensure effective mitigation and improved adaptive capacity by the local communities. Pastoralists should be able to successfully respond and adapt to evolving challenges as well as emerging opportunities. Pastoralists from Turkana North and Kibish sub-county who move into other regions to get pasture and water find themselves in vulnerable situation given the cross-border fragility in terms of insecurity along the border lines. This makes them unable to effectively enjoy their human rights, and is at increased risk of violations and abuse.

The nexus between human mobility, environment and climate change is highly complex. When people migrate to a region, population increases and that can put pressure on natural resources. Further, migration is also affected by environment and climate change and these can be through social, political or economic drivers. Through interaction with the drivers, climate change acts as an accelerator or a multiplier depending on how sensitive the drivers are to climate change resulting to environmental migration. Migration impacted by climate change is commonly referred to as environmental migration. The complexity and diversity of environmental migration is highly influenced by individual and household characteristics, which influence migration outcomes in the sub-county.

Turkana North and Kibish Sub-County experiences various forms of human mobility patterns shaped by climate change related disasters and environmental degradation. Many pastoralists from the region have either been displaced due to the extreme drought incidences. Fisher folks in the sub county equally seasonally move along the lake in search for better fishing grounds where they can get a lot of fish. Some of the pastoralists find themselves unable to move safely due to poverty, environmental vulnerability, or armed conflict, and are among the most vulnerable to the effects of climate change. Due to prolonged droughts resulting from climate change, pastoralists from Turkana North and Kibish are increasingly finding their livelihoods and traditional livelihoods disrupted. Some pastoralists from some wards impacted by climate have resorted to temporary and/or seasonal labour migration to diversify livelihood opportunities.

An extensive array of international, regional, national and county frameworks attests to the urgency of addressing climate change and human mobility together. The frameworks provided a starting point to act on human mobility in contexts of climate change. For Turkana North and Kibish Sub-County, there is need for very strategic actions and cross-cutting approaches that will ensure sustainable solutions for people to move to enable safe and regular migration; for people on the move to minimize and better address loss and damage, including displacement; and solutions for people to stay to ensure disaster risk reduction and in situ adaptation to avert and minimize displacement (IOM, 2021).

6.2 Nexus of Conflict sensitivity and food security

Ending hunger and extreme food insecurity features among the UN's Sustainable Development Goals was adopted in 2015. Conflict can cause food shortages and the severe disruption of economic activities, threatening the means of survival of entire populations. Additionally, conflicts commonly trigger the displacement of people, cutting them off from their food supplies and livelihoods. For purposes of effective planning for Turkana North and Kibish to ensure the Wards Climate Change Adaptation Action Plans address food insecurity sustainably, there is need for actors to understand the context and dynamics around conflict sensitivity. It enables various organizations and institutions to understand the conflict dynamics, interventions needed, and how to minimize negative impacts and maximize positive impacts.

Fragile contexts such as Turkana North and Kibish Sub-County need humanitarian aid, but increasingly, one or both parties in a conflict may block relief operations from reaching starving populations. By being conflict sensitive organizations and their activities become a part of the context in which they are operating. This helps in improving cohesion and relationship relationships among people, communities. Food security projects whether simple or complex, will affect the relationships among groups of people living in that context. When organizations bring resources into contexts of scarcity, they interact with authorities, and they select or target project participants based on specific criteria. Each of these programmatic choices has the potential to exacerbate existing conflict dynamics. They also have the potential to build upon positive and connecting factors in society, which can strengthen existing points of cooperation and collaboration among those groups and mitigate conflict. These effects, negative or positive, affect a project's ability to achieve its food security aims and play a critical role in influencing conflict dynamics in a given context. A commitment to a conflict sensitive approach can help organizations and institutions better plan for how their projects will interact with conflict dynamics to ensure that food assistance activities do not exacerbate underlying grievances, but instead support improvement of adaptive capacity.

The role of County Government of Turkana remains fundamentally important in establishing lasting solutions to resource-based conflicts within and at cross border levels. Recognizing the fact that conflicts are largely driven by the impacts of land management, drought incidence, increasing competition for limited grazing lands and diminishing water resources, the county government has been leading various conflict resolution actions across the county that involves community dialogues, cross border consultations and monitoring of conflicts in the sub-county. The county government has embraced integrated approaches in addressing conflict, with particular attention to rehabilitate degraded of natural resources, enhancing soil and water management, promoting sustainable grazing lands management and food security planning. Further, the county government has developed the county peace policy and strategy.

6.3 Humanitarian crisis and development

Humanitarian crisis and emergencies remain the biggest development challenges of the 21st century. The initial focus of sustainable development efforts was primarily on long-term programmes that aim to tackle poverty, social inequalities and environmental decline. On the other hand, humanitarian interventions in conflict situations and areas affected by environmental catastrophes tend to prioritize saving lives, alleviating stress and providing relief materials (Schafer 2002; Shehu, 2020).

Various institutions and actors working on sustainable development and humanitarian crisis response recognize the importance of linking development interventions with humanitarian crises in volatile regions and areas affected by natural disasters. Vulnerability, poverty and suffering that follow natural disasters have significant implications for development policy and activities. Humanitarian crisis increase poverty and reverse development when people lose lives and livelihoods. Poverty deprives people of food, health, education and other resources (Shehu, 2020). Lack of financial resources further contributes to vulnerability and increases the risk of suffering (injury, death and loss of livelihoods) in the face of health hazards, natural disasters and violence. Policy response to emergencies need to involve long-term development interventions aimed at enhancing economic and social development, reducing poverty, rebuilding sustainable livelihoods and strengthening the resilience of populations to future shocks. The sub-county systems need

to include in their plans early warning information systems that will inform Early Action Protocol (EAP) interventions and post crisis/recovery mechanisms.

Extreme climate change variabilities in Turkana North and Kibish Sub-Counties have resulted to conflicts over natural resources in the dryland causing development challenges in the region. Competition for the depleting resources in northern Turkana has heightened the likelihood of conflict and insecurity. There have been conflicts over water points and pasture in areas such Kibish, and Ethiopian and Southern Sudan borders. This situation has severely impacted development in the region as the investors and donors have been scared over insecurity resulting from conflicts.

CHAPTER 7: CLIMATE CHANGE ADAPTATION STRATEGIES

7.1 Climate Risk and Vulnerability

Turkana North and Kibish Sub-County constitutes of Border Pastoral Livelihood Zone and Lake Turkana Fishing Livelihood Zone. The area has six wards including Kibish, Kaeris, Kaaleng/ Kaikor, Nakalale, Lake Zone, and Lapur. The communities in this region rely on pastoralism and fishing as their main livelihood system. This makes them more vulnerable to climate change and variability. The effects of climate change in the sub-county include unpredictable rainfall, frequent and prolonged dry spells, and increased daytime temperatures. Climate change risks and hazards that have been observed in the county include drought, floods around the lake zone. These hazards pose a growing threat to the agricultural sector. Drought and heat stress are major threats to the sub-county that often result in loss of pasture, starving livestock, drying water sources, and conflict among pastoralists over resources. For the fishing community members based at the Lake Zone region, the fish catch has reduced significantly as a result of climate change impacts that have reduced the fish population. Some fishermen have had to seasonally migrate southwards of the lake to Kalokol/ Eliye regions to improve their catch.

7.2 Gender and vulnerabilities evidence and Impacts of Climate Change in the ward

Gender is a determining factor in the vulnerabilities of climate change and its impacts. Vulnerability in this context is also determined by wealth, education and age. The gender roles in the Turkana community are divided between men and women. Men are most of the cases the head of the households; protecting, making decisions, supervising and providing for the family and taking care of the large animals in their livestock. On the other hand, women are tasked with household chores. Women are expected to take care of the children, the household and smaller animals such as goats and sheep. They are also involved in building and maintaining the family houses and the animal sheds.

The gender roles among the Turkana are such that men and women experience the impacts of extreme climate events differently. For instance, during severe droughts, men are forced to migrate further than usual in search for water and pasture for their livestock while women are left behind to take care of the family by providing food and water and protecting the children. In the aftermath of the climatic events, the vulnerabilities continue to manifest in different ways. Some lose their lives due to climate-induced conflict. Women are susceptible to increased domestic violence in the aftermath of disasters and children are forced to leave school in order to help at home (Brody et al., 2008). Women take on being the head of the households with limited resources and increased responsibilities. Traditionally, women among the Turkana do not own large animals, therefore they have a limited access to productive assets which in turn reduces their capacity to deal with the impacts of climatic events.

It is clearly understood that women's vulnerability to climate risks is attributed to the gender differentiation between women and men, which is affected by availability of natural resources, access to assets and legal policy frameworks. Women pastoralists in Turkana County are vulnerable due to a number of factors: cultural restrictions, poverty, conflicts, and unfavourable national legal frameworks. This implies that understanding gender differentiation in adaptation to climate change is very important. Prioritizing gender issues therefore involves focusing on the inequalities between women and men as well as youth. Applying a gender lens contributes to a better understanding of the different experiences of disasters between women and men, and different groups in terms of ethnicity, race and age. There is a need to mainstream gender climate change policies as women and men have different roles in the community and climate-induced conflict impacts on women and men differently.



Figure 2: Photo showing women in Turkana North carrying firewood

Photo by Dennis Ong'ech

CHAPTER 8: CLIMATE CHANGE MITIGATION STRATEGIES

8.1 Mitigation Actions

In the Updated Nationally Determined Contribution Kenya commits to abate its GHG emissions by 32 per cent by 2030 relative to the Business As Usual (BAU) scenario of 143 MtCO₂eq¹ in line with her sustainable development agenda (Government of Kenya, 2018). Turkana County is obliged to play its role in adopting a low carbon development pathway. To ensure low carbon development, the county, sub-county and wards will take steps outlined in this plan by implementing regulatory measures that mainstream low carbon growth options into the planning processes and functions of the county government. Areas that will improve mitigation for Turkana North and Kibish Sub-County include: managing drylands for carbon sequestration; improve spatial planning to ensure sustainable resource use; improve transport to increase efficiency; and develop clean energy technologies to reduce the use of firewood.

¹ MtCO₂ eq or MtCO₂ e is an abbreviation for million tonnes of carbon dioxide equivalent. It is the amount of GHG emissions expressed as an equivalent of concentrations of carbon dioxide.

CHAPTER 9: ENABLING LEGISLATIVE AND INSTITUTIONAL FRAMEWORK

9.1 Sub-County and Ward Contexts

A robust regulatory framework comprising laws, policies, plans and institutions have been established at the National and County levels to address climate change. Constitution of Kenya (2010) is the foundation of the institutional and legal framework for climate change actions. Kenya has developed the National Climate Change Response Strategy (2010), first NCCAP (2013-2017), National Adaptation Plan (NAP 2015- 2030), Kenya Climate-Smart Agriculture Strategy (2017-2026), Climate Risk 16 Management Framework (2017), National Climate Change Policy (2018) and National Climate Finance Policy (2018), among other sector plans and policies that address aspects of climate change. NCCAP 2018-2022 aims to provide mechanisms and measures to achieve low carbon climate-resilient development in a manner that prioritizes adaptation.

Through the County Government of Turkana, Turkana North and Kibish Sub-County requires appropriately designed climate change action plans and frameworks that guide climate change governance. It is imperative to ensure compliance with the constitutional framework of public administration, especially the devolved system of government. Various sectoral laws and policies such as Turkana County Climate Change Policy, Act and County Regulation have been developed by the County Government of Turkana to provide the legislative basis for specific actions to enhance the sub-county capability to address climate change challenges and exploit emerging opportunities. This complex undertaking forms a foundation for the attainment of low carbon climate-resilient development, and sets the basis for climate change mainstreaming at ward levels.

It, therefore, requires the sub-county through the County Government of Turkana to undertake various core interventions, to ensure coordinated implementation of climate change responses and action plans. The establishment and training of ward and county climate change committees helps in having institutional coordination mechanism with strategic convening power to enhance the inter-sectoral response to climate change. The planning process highlights technical and institutional frameworks that guide climate change action plans and functional implementation of climate change legal obligations of the national, county governments and the sub-county offices. These plans observe the requirements for gender equality mandated by the 2010 constitution. The adoption of a gender mainstreaming approach involves assessing the implications for children, youth, women and men and vulnerable groups within the County to achieve gender equality.

9.2 Climate change Governance and Institutional Resources and Capacity

Climate governance determines success of climate actions and is a key component of climate financing (Odhengo et al., 2019). Effective climate change governance in the context of climate financing requires strong political leadership, technical knowledge, policy coherence and stakeholder engagement (Worker, 2017). The current Turkana County Annual Development Plan (CADP) 2020/2021 outlines key climate action areas including: public sensitization on climate change adaptation and mitigation, building climate resilience among the community members, training technical staff on fundraising, mainstreaming stakeholders' engagement in climate actions, establishing early warning committees and formulating legal frameworks on climate change.

Climate change governance at the county, sub-county and the wards is well stipulated in the various sectoral laws and policies such as Turkana County Climate Change Policy, Act and Regulation. In Turkana County, climate change is domiciled in the Ministry of Tourism, Culture, Natural Resources and Climate Change under the directorate of the Climate Change. The County Government of Turkana has established county climate change committees the ward climate change committees at the village level under the name of ward climate change adaptation committee. Other relevant policies include Turkana County Water, Sanitation Services Sector Strategic Plan 2017-2021; The Turkana County Water and Sewerage Services Sector Policy, 2016; Turkana County Disaster Risk Management Policy, 2017;

Turkana County Integrated Development Plan (CIDP) II, 2018-2022 and County Annual Development Plan (CADP) 2020/2021, Sector Plans and County Coordination Development Policy.

9.3 Status of Climate Change Governance in the ward

The County Government of Turkana has established the ward climate change planning committees tasked with implementation of the proposed climate change response projects as advised by the county climate change planning committee. They (ward climate change planning committees) present proposals for activities or plans relevant to the wards to county climate change planning committee for escalation to the steering committee for approval and funding. Climate change governance in Turkana North and Kibish Sub-County ward is being led by the ward administrators who chair the ward climate change committees at the ward levels.

9.4 County Government Institutions Set-up

In regard to implementation of climate change actions and implementation of the climate change action plans, the county government is responsible for integrating and mainstreaming climate change into CIDPs, designating a County Executive Committee (CEC) member to coordinate climate change affairs, and reporting on the implementation of climate change on an annual basis. County governments are expected to establish Climate Change Units, led by the CEC member responsible for climate change that will oversee the implementation of climate change actions stipulated in the 2023-2027 CIDPs.

9.5 Functions and Mandates of Stakeholders

Various stakeholders have roles in implementing the ward climate change action plans and addressing climate change, including:

9.5.1 Public: The public play a role in the planning, implementation, and monitoring of climate change interventions, with an emphasis on enhancing adaptive capacity and improving ability to withstand climate shocks.

9.5.2 Private sector: The private sector needs to focus on building resilience and adapting to climate change, while identifying and acting on both risks and opportunities. Strengthened engagement with the government will enable the private sector to help with the implementation of the ward climate change action plan. The private sector can help to improve adaptive capacity by ensuring that businesses activities in the region are resilient to climate change impacts. The existing local private sectors and individual partners should be linked with key private sector entities to partner in ward climate change adaption investments particularly in the beef, agricultural, water, irrigation, trade, and tourism sectors. This will contribute to increased public-private partnership for improved economic growth and resilience to climate change.

9.5.3 Public Benefit Organizations: This includes INGOs, NGOs, CSOs, FBOs, amongst others. They have been involved in climate change activities in the county and sub-county and play important roles in the areas of adaptation activities, education, training and public awareness related to climate change, public awareness creation, policy research and analysis, and advocacy on key socio-economic issues including climate change. Specifically, they support capacity building of pastoralists in project identification, design, implementation and management, assist in provision of material and financial support to pastoralists and those in environmental conservation; provide forestry and farm inputs and train members on new technologies and innovation, savings, credit, and marketing.

9.5.4 Vulnerable groups within society: This group includes women, older members of society, persons with disabilities, children, youth, migrants, refugees, and members of minority or marginalized communities. They are engaged through an inclusive approach to climate change action. Due to inequities and disparities, these groups face disproportionate climate impacts. Climate change actions will be delivered in a way that accounts for the unique needs of these groups.

Women: Gender equality is a critical component of the Sub-County/ Ward Climate Change Action Plan and women will be engaged through planning, implementation, and monitoring of climate change interventions.

Youth: Engagement of youth will be encouraged through schools, post-secondary institutions, and youth-focused organizations. Youth are agents of change and have influence on the broader community through their families. They need to be engaged through climate change actions, and the development and implementation of plans.

Pastoralists and fisher communities: These groups are a critical and are marginalized communities for whom efforts must be put in place to ensure they participate in the planned activities. The livelihoods of these communities are at risk because of climate change thus the need to involve them in adaptation actions.

Migrants and refugees: These groups are very vulnerable to climate change impacts. They face challenges accessing basic needs such as food and water which are impacted on by climate change. Their involvement in climate change committees is very important in enhancing Addressing climate change effects.

9.5.5 Academia and research institutions: Researchers help to provide the evidence and science for knowledge-based decision making by the stakeholders through research on different aspects of climate change. Some research institutions in Turkana include: the University of Nairobi and Oxford University REACH Programme, currently leading research in Climate change, the Turkana University, and colleges.

9.5.6 Media: The media provides vital information at times of emergency and will play a critical role in early warning and dissemination of climate information. Accurate, timely, and relevant information is a critical component of resilience and appropriate climate change action.

9.5.7 State Parastatals: State Parastatals such as National Drought Management Authority (NDMA), Kenya Meteorological Department (KMD), Kenya Wildlife Services (KWS), National Environment Management Authority (NEMA), and Kenya Forest Services (KFS) play very significant roles in addressing climate change impacts. These institutions will support the county Government of Turkana in addressing some of the climate change issues highlighted in the WCCAP.

9.5.8 Financial Institutions: Climate actions are substantially expensive investments that demand significant financing. Banks, Savings and Credit Cooperative Societies and Mobile Banking Services will provide financial support to pastoralists and help them save their money and access credit. Financial institutions in Turkana County include Kenya Commercial Bank (KCB), Cooperative Bank, Equity bank, Post Bank, farmer SACCOs and cooperatives such as Ukulima, and Safaricom (Mpesa) outlets. These financial institutions act as channels for accessing money in support of the vulnerable people. SACCOs and Cooperatives enhance income-generating opportunities by enabling the poor to save and establish a buffer against shocks, thus reducing vulnerability and poverty.

The County Government of Turkana has established Turkana Climate Change Fund for financing climate change actions and has committed a minimum of 2 percent of the county annual budget to the Fund climate change adaptation and mitigation. A wide scope of national and multilateral climate financing facilities exists for Turkana County to explore to support Turkana North and Kibish Sub-County; including the Green Climate Fund (GCF), Adaptation Fund (AF), and Special Climate Change Fund (SCCF) for Financing Environmental Solutions among others. Currently, the County is a beneficiary of Government Financing Locally-Led Climate Action Program (G-FLLoCA) derived from the National Climate Change Action Plan (NCCAP) with a strong county lens, looking at both enabling environment activities and a system of incentives for local climate action. The objective of the G-FLLoCA is to strengthen local resilience to the

impact of climate change, natural hazards, and other shocks/stressors by building the country's capacity to plan, implement, and monitor resilience investments in partnership with county governments and communities.

Linkages with institutions funding climate change is highly important. Some of these institutions include, not limited to: IOM, UNDP, UNEP, GEF, USAID, WFP, GIZ, FAO, Mercy Corps, Practical Action, TROCAIRE, global adaptation fund, climate justice and resilient funds, World Bank, African Development Bank, International Monetary Fund, and Green Climate Fund.

9.6 Coordination Mechanisms

The role of Turkana County Government Ministry of Tourism, Culture, Natural Resources through the:

9.6.1 County Climate Change Directorate (CCCD)

The CCCD is responsible for the overall coordination of the implementation of this Sub-County/ Wards Climate Change Action Plan 2023-2027, including coordination and reporting on implementation of actions by partners. Section 2(13) of the Turkana County Climate Change Act, 2021, provides guidance on the role of the CCCD, described below:

- 1 Advising the County Executive Committee on policy and strategic planning and all matters related to climate change in the County
- 2 Receiving and forwarding climate change projects to the County Executive Committee Member to present the same before the Steering Committee for purposes of approval
- 3 Coordinating, mainstreaming and integrating climate change programmes into the sectoral strategic plans
- 4 Supporting the preparation for adaptation to the adverse effects of climate change by developing elaborate, appropriate and integrated plans for water resources and agriculture and for rehabilitation of areas affected by drought, desertification and floods
- 5 Providing analytical support on climate change to the Steering Committee
- 6 Creating an environment that promotes broader multistakeholder participation and public participation in addressing climate change and its adverse effects and developing adequate responses
- 7 assessing the performance of climate change projects towards contribution to sustainable development
- 8 Initiating programmes for effective implementation of climate change actions
- 9 Carrying out climate risk assessments and studying human systems so as to identify options for mitigation and adaptation to climate change
- 10 Formulating a framework strategy on climate change to serve as the basis for a program for climate change planning, research and development, extension and monitoring of activities on climate change
- 11 Providing technical and financial assistance for climate change adaptation for vulnerable communities and areas
- 12 Ensuring gender mainstreaming and social inclusion have been factored in the plans
- 13 Providing local communities with technical assistance, enforcement and information management in support of Climate Change Action Plans

9.6.2 County Climate Change Planning Committee (CCCPC)

1. Establish guidelines to be used by Ward Planning Committees in formulating climate change response projects for funding by the County Climate Change Fund
2. Support Ward Planning Committees in development and implementation of climate change response projects
3. Review, prioritize and sequence projects submitted by Ward Planning Committees based on the set criteria
4. Organize inter-ward meetings to review, refine and collate proposals from wards into a list of prospective proposals for funding
5. Approve project proposals from the Ward Planning Committees and forward the approved project proposals to the Steering Committee for further consideration
6. Advise the Steering Committee on strategies, priority programmes, projects and activities for climate change response in the County
7. Formulate and implement strategic actions to foster climate change education, awareness creation and capacity development

8. Coordinate research and knowledge management on climate change, its impacts and strategies for responding thereto
9. Prepare and disseminate an annual report on climate change response activities
10. Forward the approved project proposals to the Steering Committee through the Fund Administrator for funding

9.6.3 Functions of ward planning committees

1. Coordinate and mobilize communities and other stakeholders in the ward to design and implement climate change response activities
2. Hold consultative meetings with communities and relevant government sectors, planners, agencies and local organizations
3. Participate in livelihood and resilience assessment to enable different community groups identify challenges arising from increasing climate variability
4. Facilitate research and knowledge management at the ward level on climate change issues
5. Facilitate public education, awareness, and capacity building
6. Prepare project proposals and submit them to the county planning committee for consideration and approval
7. Participate in county planning and budgeting processes to ensure climate change is mainstreamed
8. Facilitate public participation in climate change governance, implementation of activities and monitoring of activities

9.7 Monitoring and Evaluation (M&E) of the WCCAP

The County Climate Change Directorate (CCCD) is responsible for M&E of WCCAP 2022-2027. Through the Turkana County Climate Change Act, 2021 and Turkana County Climate Change Fund Regulation 2021, the CCCD is responsible for assessing the performance of climate change projects towards contribution to sustainable development. The directorate plays a role in formulating a framework strategy on climate change to serve as the basis for monitoring and evaluation of activities on climate change. The directorates' review will utilize reports from county government departments, 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.

The M&E process linked to Measuring, Reporting and Verification (MRV) system will focus on demonstrating that investment in adaptation and mitigation actions leads to real climate results and development benefits. The M&E process will further track implementation and results of WCCAP 2022-2027, and climate finance raised to deliver on the plan. This will provide the evidence base for planning and implementing future actions, seeking support for funding.

ANNEX 1: LIST OF WARD CLIMATE CHANGE COMMITTEES

Kibish Ward.

Name	Gender	Role in the Committee	Mobile no.
Emmanuel Achuka	M	Chairperson	0702022211
Moitan Fredrick	M	Secretary	0717711432
Akiru Akolom	F	Women rep	0799931975
David Akolom	M	Chief	0715126897
Nauko Ewoton	M	Elder	0793018575
Lopua Ekaale	M	Pwd	0718710102
Abdi Ali	M	youth	0725996868
Joseph Ewoi	M	Village Admin	0726135822

Kaeris Ward

Name	Gender	Role in the committee	Contact
Peter Lotesiro	M	Chief	0716930547
Fridah Ejem	F	Youth Rep	0704240419
Jeremiah Esekon	M	Elders' rep	0790375141
Selina Erait	F	Women rep	0795547960
Lobur Ekadel		PWD	0796289129
David Epeta	M	Secretary	0710352224
Barnabbas	M	Village Admin	0769195194
Mark Loupe	M	Chairperson	0710514833

Lapur Ward

Name	Gender	Role in the committee	Contact
Benjamin Ewoi	M	Chairperson	072906941
Emmanuel Lojao	M	Village Admin	0702822878

Godfrey Ekodi	M	Youth Rep	0704668491
Isaiah Nayoye	M	Member	0705388172
Asto Mary	F	Member	0797135295
Charles Ekamais	M	Chief	0768593819
Annah Aremon	F	Women rep	0708590059
David Epeta	M	Secretary	

Lakezone

Name	Gender	Role in the committee	Contact
Nangole Alfred	M	Chairperson	0703470788
David Epeta	M	Secretary	0710352224
Gabriel Topos	M	Village admin	0703720523
Francis Naseki	M	Assistant Chief	0746080853
Charles Kale Paul	M	Elder rep	0704108473
Dickson Lomurodo	M	Youth rep	0728703138
Miriam Atabo	F	Women rep	0718668583
Christopher Ekal	M	PWD	0791352302

Kaaleng/Kaikor Ward

Name	Gender	Role in the committee	Contact
Emuria N. Kaleng	M	Youth	0705059900
Ikai Napeyok Sylvia	F	Chief	0740916674
Moitan Fredrick	M	Secretary	0717711432
Lawrence Ekaale	M	Chairperson	0711845528
Albert Mio	M		0701148083
Onesmas Ekaal	M	PWD	0796972265
Ewoi Natong	M	Elder	0702390284

Margret Ezira	F	Women rep	0708480625
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Nakalale Ward

Name	Gender	Role in the Committee	Contact
David Epeta	M	Secretary	0710352224
Koloi Simon	M	Chairperson	0750543150

ANNEX 2: STAKEHOLDERS RESPONSIBLE FOR CLIMATE CHANGE ADAPTATION

SECTOR	INSTITUTIONS/ PLATFORMS	ROLES AND ACTIVITIES
Agriculture & food security	Ministry of Agriculture	<ul style="list-style-type: none"> • Provides extension services, inputs such as seed, trainings, vaccination of livestock, dissemination of appropriate technologies • Cross-border vaccination along the migratory routes • Promotion of pasture production and improved range management. • plays the role of coordinating the various stakeholders at the county level • Promotes climate-smart technologies such as solar powered irrigation • Dissemination of the Early Warning System (EWS) information in collaboration with KMD, NDMA, and the community
Climate Change Information Services	Kenya Meteorological Department (KMD)	<ul style="list-style-type: none"> • Provision of climate information to the agriculture sector to enable scenario planning and early warning • Installation of rain gauges and rainfall, temperatures wind data collection • Early warning of impending disasters droughts, heavy rains & flooding • Integration of traditional and scientific weather forecasts
Water, Health and Sanitation Sector	Water Resource Authority (WRA)	<ul style="list-style-type: none"> • Management and regulation e.g., to avoid over abstraction upstream • Issuing of water abstraction permits and collecting water use fees. • Capacity building of Water Resource User Associations
	Water Resources User Associations (WRUA) include customary association	<ul style="list-style-type: none"> • Community based associations for collective management of water resources and resolution of conflicts concerning the use of water resources along the migratory routes. • Roles include: Protection of catchment areas; Capacity building of water users; Provision of water and sewerage in rural area; Management and maintenance of water and sewerage systems in rural area; Sensitization and awareness to users
	Rural Water Services Provider	<ul style="list-style-type: none"> • Water Service Providers (WSPs) is under the responsibility of county governments who have the mandate to provide water services. • WSPs are responsible for provision of water services within the area specified in their licenses and development of county assets.
	County Water Department	<ul style="list-style-type: none"> • County water department mandated to lead policy development & legislation • Oversight of water service delivery • Sector leadership • Financing water projects • Provision & maintenance of water & sewerage services in urban centres

		<ul style="list-style-type: none"> • Infrastructural development • Capacity building Water Service Providers (WSPs)
	Ministry of Health and Sanitation	<ul style="list-style-type: none"> • Coordination of WASH programmes in the county • Capacity building of communities in water and sanitation
	Water Users Associations	<ul style="list-style-type: none"> • Payment for Water Services • Public Participation in policy and legislative development, implementation, Monitoring and evaluation • Catchment management • Monitoring water resources
Environment	NEMA	<ul style="list-style-type: none"> • Environmental compliance enforcement • Tasked with guiding and overseeing enforcement of the legislation on the environment such distance allowed from a water body for settlement or cultivation
	NDMA	<ul style="list-style-type: none"> • Promotes measures to conserve soil and water especially in riparian areas • Enhance environmental education and public awareness • Finances implementation of climate change action plans
	County Environment Committee	<ul style="list-style-type: none"> • Proper management of the environment within the county for which it is appointed; • Develop a county strategic environmental action plan every five years; • Oversight role in environmental management activities being undertaken by the lead agencies • Ensure environmental monitoring / compliance
	KFS	<ul style="list-style-type: none"> • Facilitates implementation of government policy, • mandated to develop, manage and protects Gazetted forests • Protect the forests and promote tree planting in collaboration with other stakeholders. • Promotes agro-forestry and providing technical advice on conservation matters.
	KEFRI	<ul style="list-style-type: none"> • Conduct research in forestry and allied natural resources • Disseminate research findings and technologies • Establish partnerships and cooperate with other research organizations and institutions of higher learning in joint research and training.
	KWS	<ul style="list-style-type: none"> • KWS is involved in management of wildlife and conducting trainings on the importance of conserving wildlife • Deals with human wildlife conflict migration

		<ul style="list-style-type: none"> • Compensate for human, livestock and crop damages
Infrastructure	Lands, Physical Planning, Urban Areas Management, Housing and Energy, Ministry of Energy (Renewable Energy) KFS, NSA, MoAPEF	<ul style="list-style-type: none"> • Encourage climate mitigation by of renewable energy sources like solar, wind power • Promotion of fuel-efficient cook stoves for rural households and institutions
Coordination	CSG-Led by NDMA	<ul style="list-style-type: none"> • Planning and coordination stakeholders; • Identification tasks; • Forum for resource mobilization; • Information sharing; • Technical working groups, • Regulation, supervision and monitoring, internal audits
International Organizations	KfW, WFP, ILRI, CCAP-GIZ, DRP2- GIZ, FAO, World Bank, Mercy Corp, Practical Action, TROCAIRE, UNHCR, UNICEF	<ul style="list-style-type: none"> • Provide financial resources, technical assistance, training and transfer of international experience • Complement government funding through various programmes that improve food security and community resilience building – through climate sensitive interventions e.g. water infrastructure improvement to enhance livestock and agriculture productivity • Support relevant county departments, and local non-governmental organizations (NGOs) to implement climate change related programmes. • Advocate for proper management systems for all the water infrastructure in the county for sustainability • Food for Asset (for water conservation measures for improved productivity) • Support to climate smart agriculture
	IOM UN Migration Agency	<ul style="list-style-type: none"> • Train Turkana County Government officials on climate change mitigation and adaptation. • Introduce Migration Environment and Climate Change (MECC) thematic idea to Turkana County Government officials. • Support Turkana County Government on humanitarian border management. • Support Turkana County Government to incorporate human mobility aspects into climate change and disaster risk reduction policies. <p>Support Turkana County Government on strengthening programmes to prevent climate induced displacement such as: prevention and mitigation of natural resource-based conflicts, livelihood support to climate affected communities and emergency response for migrants displaced by climate change.</p>
Local NGOs	LOKADO	<ul style="list-style-type: none"> • Support Community based organizations (CBOs) to implement climate change related programs. • Support the Turkana County government in maintaining peace across the borders.

		<ul style="list-style-type: none"> • Support in capacity building the community on climate change adaptations and mitigation related actions.
Financial Institutions	Kenya Commercial bank, Equity Bank, Cooperative Bank and Mpesa Transfer Systems	<ul style="list-style-type: none"> • Financial institutions act as channels for issuing government money for the vulnerable people.
Private sector	Davis and Shirtliff, Solar Power and water equipment suppliers, Agrovets	<ul style="list-style-type: none"> • The Private Sector acts as a source of agricultural and livestock inputs, • Provides extension services and market to farmers. • Other suppliers of inputs are general dealer shops that are mostly found in urban areas.

ANNEX 3: PRIORITY ADAPTATION AND MITIGATION ACTIONS

1. Kaeris Ward Priority Adaptation and Mitigation Actions

Sector	Actions Prioritized by Sector	Adaptation measures/ Mitigation	Area of Focus	Partners	Budget (KSh)
Agriculture/ Food and Nutrition Security	<p>Improved food security and strengthening communities' livelihoods</p> <ul style="list-style-type: none"> • Introduction of agricultural activities • Strengthen the capacity of smallholder farmers to undertake commercialized agriculture in the county • Promotion of agricultural extension, research and development to improve farmer's knowledge on crop production • Farm input subsidy and support to improve farmers' resource capacity for improved crop production • Enhance horticultural crop diversification and farmers resilience through promotion of fruit trees and vegetables • Pest control and management to reduced pre-harvest loss through integrated pest management practices. • Establishment of restocking initiatives • Animals Take off • Introduction of and propagation of irrigation • Propagation of Farming activities • Kitchen gardening <p>Irrigation and Land reclamation</p> <ul style="list-style-type: none"> • Enhanced water use efficiency, increased crop and productivity through repair and improvement of irrigation technologies • Increase of land for crop and pasture production through mapping of potential areas, survey and design and construction of spate irrigation schemes. 		All the village Units in the Ward	TCG GOK Partners Community	7, 000, 000
Human Mobility	<ul style="list-style-type: none"> • Establish community land and natural resource management committees for the ward • Initiate a programme for livestock feed supplements especially during droughts • Develop jointly with neighbouring countries, policies which facilitate and recognize the contribution of cross-border trade and facilitate the cross-border movement of livestock for food security • Establish and capacity build grazing committees to guide and control grazing patterns • Train local-level public servants on human mobility and migrants' rights • Capacity building activities and other technical support to local and national government officials on human mobility issues • Establish sub-county platforms/ forums on human mobility for the pastoralists to discuss their livelihood challenges • Provide alternative livelihood project to the high at-risk communities, including indigenous communities and socially marginalized groups • National ID card registration, through massive registration programme in collaboration with Huduma Center Provide Transhumance Certificates pastoralist when crossing IGAD member states borders (Ethiopia, South-Sudan) • Provide access to social protection and insurance mechanisms against main climate hazards • Rehabilitate degraded rangelands to improve the penetration and storage of rainwater and enhance biomass production • Formulation of cross-border integrated development plans addressing peace, security and socio-economic challenges facing community members 		All the village Units in the Ward	TCG GOK Partners Community	10,000,000

	<p>For people to move</p> <ul style="list-style-type: none"> • Develop/update frameworks for planned relocation in a rights-based and participatory manner as a last resort option • Develop and implement plans that allow people to move across borders • Support to people who cannot return to the areas/ villages of origin • Develop regular migration pathways from climate vulnerable communities and disaster-prone areas • Develop and roll out targeted skills training in climate change-affected communities to support better migration outcomes • Integrate human mobility in CIDP, disaster risk reduction and development <p>For people on the move</p> <ul style="list-style-type: none"> • Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions • Factor in current disaster risk and future climate change impacts in human mobility programming for emergency preparedness, disaster risk reduction and climate change adaptation • Promote and roll out durable solutions for disaster displacement <p>For people to stay</p> <ul style="list-style-type: none"> • Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions • Facilitate the reintegration of returning migrants via “green reintegration” packages for climate change adaptation and mitigation • Develop climate resilient infrastructure in the face of natural hazards • Develop sustainable climate resilient livelihoods for populations at risk to support adaptation 				
Disaster Management	<ul style="list-style-type: none"> • Preparedness and Early Warning Programmes through EVWS gathering, analysis and dissemination and community sensitization on EVWS • Mitigation and Prevention Programmes through training, sensitization, vulnerability analysis, building codes, zoning and land use management, preventive health care and exposures • Response and emergency initiatives: Relief food and disaster assessments, Shelter materials, search and rescue • Recovery and Rehabilitation by supporting rehabilitation and reconstruction of livelihoods, infrastructure et 		All the village Units in the Ward	TCG GOK Partners Community	15,000,000
Livestock	<ul style="list-style-type: none"> • Cross border livestock vaccination program • Proper management of pasture lands / controlled grazing • Introduce fodder banks • Promote adoption of climate-resilient animal breeds • Promote diversification of herd composition • New animal husbandry techniques • Livestock insurance • Development and improvement of livestock feeds through: <ul style="list-style-type: none"> ○ pasture reseeding along migratory routes. ○ strategic livestock feed stores ○ purchase of supplementary livestock feeds • Livestock diversification and breed improvement • Livestock risk management (restocking, off-take, response, water trucking, livestock insurance) • Rangeland management, pasture reseeding, seed bulking, hay production, resource conservation and mapping of wet and dry zones and migratory routes. • Establishment and Capacity building of grazing committees • Increase extension officers • Provision of animals feeds 		All the village Units in the Ward	TCG GOK Partners Community	10, 000,000

	<ul style="list-style-type: none"> Development of livestock value chain, market access, linkages and bench making/exposure for increased food, income and skills development Livestock production extension services through sharing of technical information between professionals and end users <p>Vet Services</p> <ul style="list-style-type: none"> Establishment of Mass vaccination calendar of animals programmes Vaccination and treatment and response to disease emergencies Veterinary public health services through Improved control of zoonotic diseases 				
Drought and Flood Management	<ul style="list-style-type: none"> Establishment of early warning systems Livelihoods diversification Flood water harvesting Food and nutritional supplements (such as school feeding programmes) Provision of relief services Provision of loans and grants as a capital Establishment of Livestock markets calendar and facilitate implementation Establishment of Livestock insurance schemes Introduction of agricultural activities 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Energy	<p>Renewable Energy Development</p> <ul style="list-style-type: none"> Installation of solar PV in public institutions Maintenance of solar PV in public institutions <p>Energy Efficiency, Conservation and Stakeholders Engagement</p> <ul style="list-style-type: none"> Improved cook stoves for households Capacity built the communities across the ward on the various sources of green Energy 		All the village Units in the Ward	TCG GOK Partners Community	2,500, 000
Water	<p>Water supply and storage</p> <ul style="list-style-type: none"> Establishment of water points along the migratory routes Design and establishment of new and rehabilitation, expansion and maintenance of ward water supply systems Drilling and equipping of boreholes along the migratory routes Maintenance of community water points along the migratory routes Design, construction and maintenance of infrastructure for surface water harvesting and storage and ground water recharge including water pans, sand dams for rural and livestock water supply Rehabilitation of livestock existing water points Supplying communities with water through water trucking in times of drought. Setting up of water storage facilities within strategic grazing routes Installing boreholes with real time underground monitoring tools Desilting silted water pans Rehabilitation of broken water pans Water reticulation Construction of elevated still tanks <p>Water Resources management</p> <ul style="list-style-type: none"> Conduct activities in water catchment management between the county government, community and Partners Demarcation, rehabilitation and protection of riparian and degraded catchment areas Enhancing Community participation in management of water resources through Community sensitization on knowledge and Management of water resources and catchments Empowerment of women to participate in water resource management Training of Water Resource Users Associations Water interventions to reduce cross border conflict 		All the village Units in the Ward	TCG GOK Partners Community	10, 000, 000
Environment	<p>Environmental Governance and compliance</p> <ul style="list-style-type: none"> Develop and implement ward environment action plan <p>Environmental protection and conservation</p> <ul style="list-style-type: none"> Protect and conserve environment through 		All the village Units in the Ward	TCG GOK Partners Community	2, 000, 000

	<ul style="list-style-type: none"> ○ conservation of soil and water ○ Rehabilitation of degraded areas ○ Protection of fragile environment <p>Climate change and adaptation</p> <ul style="list-style-type: none"> ● Early warning on weather patterns to reduce community vulnerability to adverse climate effects ● Environmental education on climate change ● Climate proof communities to climate change ● Promote climate smart farming <p>Supporting ward climate change committee on rangeland rehabilitation by acacia reseeded, protection and management of environment</p>				
Forestry	<ul style="list-style-type: none"> ● Introduction of Agro forestry activities ● Increase tree cover, and promote sustainable management of forests and tree resources ● Increasing tree cover in private, community and county lands (Tree Planting) ● Identification and setting a part of land for forest reservation, development and creation of ward forests ● Development of nature-based enterprises within ward forests. ● Forestation and rehabilitation of fragile and degraded ecosystem/forest in community lands. <p>Forestry Management, Conservation and Public Participation</p> <ul style="list-style-type: none"> ● Develop manpower and promote ecotourism, community-based enterprises and diversification of revenue streams from forest products for community and county ● Establish and capacity build CFAs to ensure Forestry Protection ● Prosopis management through development of forests products from the invasive species 		All the village Units in the Ward	TCG GOK Partners Community	2,500,000
Health	<ul style="list-style-type: none"> ● Improved household sanitation through development of WASH system <ul style="list-style-type: none"> ○ Sensitization of households on the need of latrines ○ Training of households on hygiene promotion ○ Purification of drinking water ● Construction of dispensaries ● Provide enough drugs ● Vaccination / immunization campaigns ● Disease surveillance and reporting ● Promotion of family planning 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Education	<ul style="list-style-type: none"> ● Enhance community awareness ● Increase accessibility to learning materials and tools ● Improve network reception ● Synchronize school calendar with weather-related events 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000
Economy	<ul style="list-style-type: none"> ● Manufacture and sale of handicrafts (especially baskets), petty trade (especially of household goods and small livestock), honey production, the sale of other nature-based products ● Construction, improvement and maintenance of markets and livestock sell yards ● Provision of loans and credit facilities ● Increase access to cash transfer programmes 			TCG GOK Partners Community	5,000,000
Housing and Buildings	<ul style="list-style-type: none"> ● Encourage use of environmentally friendly materials ● Encourage use of invasive species such as Prosopis 		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Security	<ul style="list-style-type: none"> ● Strengthening of conflict resolution mechanisms ● Establish and capacity build peace committees ● Strengthen cross-border peace engagements 		All the village Units in the Ward	TCG GOK Partners Community	3,000,000

Tourism and Wildlife	<ul style="list-style-type: none"> Public awareness on eco-tourism Map out environmental resources that can attract tourism 		All the village Units in the Ward	TCG GOK Partners Community	500,000
Transport and Infrastructure	<ul style="list-style-type: none"> Maintenance of roads linking the ward Climate proof infrastructure- bridges and roads Encourage climate mitigation by of renewable energy sources like solar, wind power Upgrading of roads 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Information	<ul style="list-style-type: none"> Provide gender-sensitive early warning and alerts of extreme weather and climate events; such as droughts and floods, for the safety of life and optimization of weather and climate dependent natural resources Climate information sharing EWS through conventional and indigenous technologies Participation in Participatory scenario planning for seasons 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000

2. Kibish Ward Priority Adaptation and Mitigation Actions

Sector	Actions Prioritized by Sector	Adaptation measures/ Mitigation	Area of Focus	Partners	Budget (KSh)
Agriculture/ Food and Nutrition Security	<p>Improved food security and strengthening communities' livelihoods</p> <ul style="list-style-type: none"> Introduction of agricultural activities Strengthen the capacity of smallholder farmers to undertake commercialized agriculture in the county Promotion of agricultural extension, research and development to improve farmer's knowledge on crop production Farm input subsidy and support to improve farmers' resource capacity for improved crop production Enhance horticultural crop diversification and farmers resilience through promotion of fruit trees and vegetables Pest control and management to reduced pre-harvest loss through integrated pest management practices. Establishment of restocking initiatives Animals Take off Introduction of and propagation of irrigation Propagation of Farming activities Kitchen gardening <p>Irrigation and Land reclamation</p> <ul style="list-style-type: none"> Enhanced water use efficiency, increased crop and productivity through repair and improvement of irrigation technologies Increase of land for crop and pasture production through mapping of potential areas, survey and design and construction of spate irrigation schemes. 		All the village Units in the Ward	TCG GOK Partners Community	7, 000, 000
Human Mobility	<ul style="list-style-type: none"> Establish community land and natural resource management committees for the ward Establish and capacity build grazing committees to guide and control grazing patterns Formulation of cross-border integrated development plans addressing peace, security and socio-economic challenges facing community members Develop jointly with neighbouring countries, policies which facilitate and recognize the contribution of cross-border trade and facilitate the cross-border movement of livestock for food security 		All the village Units in the Ward	TCG GOK Partners Community	10,000,000

	<ul style="list-style-type: none"> • Rehabilitate degraded rangelands to improve the penetration and storage of rainwater and enhance biomass production • Train local-level public servants on human mobility and migrants' rights • Encourage diversification of livelihood activities without destroying environment • Map and offer support to the high at-risk communities, including indigenous communities and socially marginalized groups • Identity registration for pastoralists • Establish sub-county platforms/ forums on human mobility for the pastoralists to discuss their livelihood challenges • Provide alternative livelihood project to the high at-risk communities, including indigenous communities and socially marginalized groups • National ID card registration, through massive registration programme in collaboration with Huduma Center Provide Transhumance Certificates pastoralist when crossing IGAD member states borders (Ethiopia, South-Sudan) • Peace building committees to initiate cross border corporations among communities living on either side of a common border <p>For people to move</p> <ul style="list-style-type: none"> • Develop/update frameworks for planned relocation in a rights-based and participatory manner as a last resort option • Develop and implement plans that allow people to move across borders • Support to people who cannot return to the areas/ villages of origin • Develop regular migration pathways from climate vulnerable communities and disaster-prone areas • Develop and roll out targeted skills training in climate change-affected communities to support better migration outcomes • Integrate human mobility in CIDP, disaster risk reduction and development <p>For people on the move</p> <ul style="list-style-type: none"> • Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions • Factor in current disaster risk and future climate change impacts in human mobility programming for emergency preparedness, disaster risk reduction and climate change adaptation • Promote and roll out durable solutions for disaster displacement <p>For people to stay</p> <ul style="list-style-type: none"> • Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions • Facilitate the reintegration of returning migrants via "green reintegration" packages for climate change adaptation and mitigation • Develop climate resilient infrastructure in the face of natural hazards • Develop sustainable climate resilient livelihoods for populations at risk to support adaptation 				
Disaster Management	<ul style="list-style-type: none"> • Preparedness and Early Warning Programmes through EVWS gathering, analysis and dissemination and community sensitization on EVWS • Mitigation and Prevention Programmes through training, sensitization, vulnerability analysis, building codes, zoning and land use management, preventive health care and exposures • Response and emergency initiatives: Relief food and disaster assessments, Shelter materials, search and rescue • Recovery and Rehabilitation by supporting rehabilitation and reconstruction of livelihoods, infrastructure et 		All the village Units in the Ward	TCG GOK Partners Community	15,000,000
Livestock	<ul style="list-style-type: none"> • Proper management of pasture lands / controlled grazing • Introduce fodder banks 		All the village Units in the Ward	TCG GOK Partners	10, 000,000

	<ul style="list-style-type: none"> • Drought-resistant breeds • New animal husbandry techniques • Livestock insurance • Development and improvement of livestock feeds through: <ul style="list-style-type: none"> ○ pasture reseeding along migratory routes ○ strategic livestock feed stores ○ purchase of supplementary livestock feeds • Livestock diversification and breed improvement • Livestock risk management (restocking, off-take, response, water trucking, livestock insurance) • Rangeland management, pasture reseeding, seed bulking, hay production, resource conservation and mapping of wet and dry zones and migratory routes. • Establishment and Capacity building of grazing committees • Increase extension officers • Provision of animals' feeds • Development of livestock value chain, market access, linkages and bench making/exposure for increased food, income and skills development • Livestock production extension services through sharing of technical information between professionals and end users <p>Vet Services</p> <ul style="list-style-type: none"> • Establishment of Mass vaccination calendar of animals programmes • vaccination and treatment and response to disease emergencies • Veterinary public health services through Improved control of zoonotic diseases 			Community	
Drought and Flood Management	<ul style="list-style-type: none"> • Establishment of early warning systems • Livelihoods diversification • Flood water harvesting • Food and nutritional supplements (such as school feeding programmes) • Provision of relief services • Provision of loans and grants as a capital • Establishment of Livestock markets calendar and facilitate implementation • Establishment of Livestock insurance schemes • Introduction of agricultural activities 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Energy	<p>Renewable Energy Development</p> <ul style="list-style-type: none"> • Installation of solar PV in public institutions • Maintenance of solar PV in public institutions <p>Energy Efficiency, Conservation and Stakeholders Engagement</p> <ul style="list-style-type: none"> • Improved cook stoves for households • Capacity built the communities across the ward on the various sources of green Energy 		All the village Units in the Ward	TCG GOK Partners Community	2,500, 000
Water	<p>Water supply and storage</p> <ul style="list-style-type: none"> • Establishment of water points along the migratory routs • Design and establishment of new and rehabilitation, expansion and maintenance of ward water supply systems • Drilling and equipping of boreholes along the migratory routs • maintenance of community water points along the migratory routs • • Design, construction and maintenance of infrastructure for surface water harvesting and storage and ground water recharge including water pans, sand dams for rural and livestock water supply • Rehabilitation of livestock existing water points • Supplying communities with water through water trucking in times of drought. • Setting up of water storage facilities within strategic grazing routes • Installing boreholes with real time underground monitoring tools • Desilting silted water pans 		All the village Units in the Ward	TCG GOK Partners Community	10, 000, 000

	<ul style="list-style-type: none"> Rehabilitation of broken water pans Water reticulation Construction of elevated still tanks <p>Water Resources management</p> <ul style="list-style-type: none"> Conduct activities in water catchment management between the county government, community and Partners Demarcation, rehabilitation and protection of riparian and degraded catchment areas Enhancing Community participation in management of water resources through Community sensitization on knowledge and Management of water resources and catchments Empowerment of women to participate in water resource management Training of Water Resource Users Associations Water interventions to reduce cross border conflict 				
Environment	<p>Environmental Governance and compliance</p> <ul style="list-style-type: none"> Develop and implement ward environment action plan <p>Environmental protection and conservation</p> <ul style="list-style-type: none"> Protect and conserve environment through <ul style="list-style-type: none"> conservation of soil and water Rehabilitation of degraded areas Protection of fragile environment <p>Climate change and adaptation</p> <ul style="list-style-type: none"> Early warning on weather patterns to reduce community vulnerability to adverse climate effects Environmental education on climate change Climate proof communities to climate change Promote climate smart farming <p>Supporting ward climate change committee on rangeland rehabilitation by acacia reseeded, protection and management of environment</p>		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Forestry	<ul style="list-style-type: none"> Introduction of Agro forestry activities Increase tree cover, and promote sustainable management of forests and tree resources Increasing tree cover in private, community and county lands (Tree Planting) Identification and setting a part of land for forest reservation, development and creation of ward forests Development of nature based enterprises within ward forests. Forestation and rehabilitation of fragile and degraded ecosystem/forest in community lands. <p>Forestry Management, Conservation and Public Participation</p> <ul style="list-style-type: none"> Develop manpower and promote ecotourism, community based enterprises and diversification of revenue streams from forest products for community and county Establish and capacity build CFAs to ensure Forestry Protection Prosopis management through development of forests products from the invasive species 		All the village Units in the Ward	TCG GOK Partners Community	2,500,000
Health	<ul style="list-style-type: none"> Improved household sanitation through development of WASH system <ul style="list-style-type: none"> Sensitization of households on the need of latrines Training of households on hygiene promotion Purification of drinking water Construction of dispensaries Provide enough drugs Vaccination / immunization campaigns Disease surveillance and reporting Promotion of family planning 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Education	<ul style="list-style-type: none"> Enhance community awareness Increase accessibility to learning materials and tools 		All the village Units in the Ward	TCG GOK	1,000,000

	<ul style="list-style-type: none"> Improve network reception Synchronize school calendar with weather-related events 			Partners Community	
Economy	<ul style="list-style-type: none"> Manufacture and sale of handicrafts (especially baskets), petty trade (especially of household goods and small livestock), honey production, the sale of other nature-based products Construction, improvement and maintenance of markets and livestock sell yards Provision of loans and credit facilities Increase access to cash transfer programmes 			TCG GOK Partners Community	5,000,000
Housing and Buildings	<ul style="list-style-type: none"> Encourage use of environmentally friendly materials Encourage use of invasive species such as Prosopis 		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Security	<ul style="list-style-type: none"> Strengthening of conflict resolution mechanisms Establish and capacity build peace committees Strengthen cross-border peace engagements 		All the village Units in the Ward	TCG GOK Partners Community	3,000,000
Tourism and Wildlife	<ul style="list-style-type: none"> Public awareness on eco-tourism Map out environmental resources that can attract tourism 		All the village Units in the Ward	TCG GOK Partners Community	500,000
Transport and Infrastructure	<ul style="list-style-type: none"> Maintenance of roads linking the ward Climate proof infrastructure- bridges and roads Encourage climate mitigation by of renewable energy sources like solar, wind power Upgrading of roads 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Information	<ul style="list-style-type: none"> Provide gender-sensitive early warning and alerts of extreme weather and climate events; such as droughts and floods, for the safety of life and optimization of weather and climate dependent natural resources Climate information sharing EWS through conventional and indigenous technologies Participation in Participatory scenario planning for seasons 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000

3. Kaaleng/ Kaikor Ward Priority Adaptation and Mitigation Actions

Sector	Actions Prioritized by Sector	Adaptation measures/ Mitigation	Area of Focus	Partners	Budget (KSh)
Agriculture/ Food and Nutrition Security	Improved food security and strengthening communities' livelihoods <ul style="list-style-type: none"> Introduction of agricultural activities Strengthen the capacity of smallholder farmers to undertake commercialized agriculture in the county Promotion of agricultural extension, research and development to improve farmer's knowledge on crop production Farm input subsidy and support to improve farmers' resource capacity for improved crop production Enhance horticultural crop diversification and farmers resilience through promotion of fruit trees and vegetables Pest control and management to reduced pre-harvest loss through integrated pest management practices. 		All the village Units in the Ward	TCG GOK Partners Community	7,000,000

	<ul style="list-style-type: none"> Establishment of restocking initiatives Animals Take off to reduce loss of livestock due to drought Introduction of and propagation of irrigation Propagation of Farming activities Kitchen gardening <p>Irrigation and Land reclamation</p> <ul style="list-style-type: none"> Enhanced water use efficiency, increased crop and productivity through repair and improvement of irrigation technologies Increase of land for crop and pasture production through mapping of potential areas, survey and design and construction of spate irrigation schemes. 				
Human Mobility	<ul style="list-style-type: none"> Establish community land and natural resource management committees for the ward Establish and capacity build grazing committees to guide and control grazing patterns Train local-level public servants on human mobility and migrants' rights Establish platforms on human mobility Establish and capacity build peace committees to guide community members on peace and security along the migratory routes Cross-border peacebuilding, conflict prevention, management and resolution Map and offer support to the high at-risk communities, including indigenous communities and socially marginalized groups Identity registration for pastoralists Establish sub-county platforms/ forums on human mobility for the pastoralists to discuss their livelihood challenges Provide alternative livelihood project to the high at-risk communities, including indigenous communities and socially marginalized groups National ID card registration, through massive registration programme in collaboration with Huduma Center Provide Transhumance Certificates pastoralist when crossing IGAD member states borders (Ethiopia, South-Sudan) <p>For people to move</p> <ul style="list-style-type: none"> Develop/update frameworks for planned relocation in a rights-based and participatory manner as a last resort option Develop and implement plans that allow people to move across borders Support to people who cannot return to the areas/ villages of origin Develop regular migration pathways from climate vulnerable communities and disaster-prone areas Develop and roll out targeted skills training in climate change-affected communities to support better migration outcomes Integrate human mobility in CIDP, disaster risk reduction and development <p>For people on the move</p> <ul style="list-style-type: none"> Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions Factor in current disaster risk and future climate change impacts in human mobility programming for emergency preparedness, disaster risk reduction and climate change adaptation Promote and roll out durable solutions for disaster displacement <p>For people to stay</p> <ul style="list-style-type: none"> Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions Facilitate the reintegration of returning migrants via "green reintegration" packages for climate change adaptation and mitigation Develop climate resilient infrastructure in the face of natural hazards Develop sustainable climate resilient livelihoods for populations at risk to support adaptation 		All the village Units in the Ward	TCG GOK Partners Community	10,000,000

Disaster Management	<ul style="list-style-type: none"> Preparedness and Early Warning Programmes through EVWS gathering, analysis and dissemination and community sensitization on EVWS Mitigation and Prevention Programmes through training, sensitization, vulnerability analysis, building codes, zoning and land use management, preventive health care and exposures Response and emergency initiatives: Relief food and disaster assessments, Shelter materials, search and rescue Recovery and Rehabilitation by supporting rehabilitation and reconstruction of livelihoods, infrastructure et 		All the village Units in the Ward	TCG GOK Partners Community	15,000,000
Livestock	<ul style="list-style-type: none"> Proper management of pasture lands / controlled grazing Introduce fodder banks Drought-resistant breeds New animal husbandry techniques Livestock insurance Development and improvement of livestock feeds through: <ul style="list-style-type: none"> pasture reseeding strategic livestock feed stores purchase of supplementary livestock feeds Livestock diversification and breed improvement Livestock risk management (restocking, off-take, response, water trucking, livestock insurance) Improve condition of Kaikor Livestock Sell yard to accommodate more pastoralists during market days. Rangeland management, pasture reseeding, seed bulking, hay production, resource conservation and mapping of wet and dry zones and migratory routes. Establishment and Capacity building of grazing committees Increase extension officers Provision of animals feeds Development of livestock value chain, market access, linkages and bench making/exposure for increased food, income and skills development Livestock production extension services through sharing of technical information between professionals and end users <p>Vet Services</p> <ul style="list-style-type: none"> Establishment of Mass vaccination calendar of animals programmes vaccination and treatment and response to disease emergencies Veterinary public health services through Improved control of zoonotic diseases 		All the village Units in the Ward	TCG GOK Partners Community	10, 000,000
Drought and Flood Management	<ul style="list-style-type: none"> Establishment of early warning systems Livelihoods diversification Flood water harvesting Food and nutritional supplements (such as school feeding programmes) Provision of relief services Provision of loans and grants as a capital Establishment of Livestock markets calendar and facilitate implementation Establishment of Livestock insurance schemes Introduction of agricultural activities 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Energy	<p>Renewable Energy Development</p> <ul style="list-style-type: none"> Installation of solar PV in public institutions Maintenance of solar PV in public institutions <p>Energy Efficiency, Conservation and Stakeholders Engagement</p> <ul style="list-style-type: none"> Improved cook stoves for households Capacity built the communities across the ward on the various sources of green Energy 		All the village Units in the Ward	TCG GOK Partners Community	2,500, 000
Water	<p>Water supply and storage</p> <ul style="list-style-type: none"> Establishment of water points along the migratory routs 		All the village Units in the Ward	TCG GOK Partners	10, 000, 000

	<ul style="list-style-type: none"> Design and establishment of new and rehabilitation, expansion and maintenance of ward water supply systems Drilling and equipping of boreholes along the migratory routs Maintenance of community water points along the migratory routs Design, construction and maintenance of infrastructure for surface water harvesting and storage and ground water recharge including water pans, sand dams for rural and livestock water supply Rehabilitation of livestock existing water points Supplying communities with water through water trucking in times of drought. Setting up of water storage facilities within strategic grazing routes Installing boreholes with real time underground monitoring tools Desilting silted water pans Rehabilitation of broken water pans Water reticulation Construction of elevated still tanks <p>Water Resources management</p> <ul style="list-style-type: none"> Conduct activities in water catchment management between the county government, community and Partners Demarcation, rehabilitation and protection of riparian and degraded catchment areas Enhancing Community participation in management of water resources through Community sensitization on knowledge and Management of water resources and catchments Empowerment of women to participate in water resource management Training of Water Resource Users Associations Water interventions to reduce cross border conflict 			Community	
Environment	<p>Environmental Governance and compliance</p> <ul style="list-style-type: none"> Develop and implement ward environment action plan <p>Environmental protection and conservation</p> <ul style="list-style-type: none"> Protect and conserve environment through <ul style="list-style-type: none"> conservation of soil and water Rehabilitation of degraded areas Protection of fragile environment <p>Climate change and adaptation</p> <ul style="list-style-type: none"> Early warning on weather patterns to reduce community vulnerability to adverse climate effects Environmental education on climate change Climate proof communities to climate change Promote climate smart farming <p>Supporting ward climate change committee on rangeland rehabilitation by acacia reseeded, protection and management of environment</p>		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Forestry	<ul style="list-style-type: none"> Introduction of Agro forestry activities Increase tree cover, and promote sustainable management of forests and tree resources Increasing tree cover in private, community and county lands (Tree Planting) Identification and setting a part of land for forest reservation, development and creation of ward forests Development of nature-based enterprises within ward forests. Forestation and rehabilitation of fragile and degraded ecosystem/forest in community lands. <p>Forestry Management, Conservation and Public Participation</p> <ul style="list-style-type: none"> Develop manpower and promote ecotourism, community-based enterprises and diversification of revenue streams from forest products for community and county 		All the village Units in the Ward	TCG GOK Partners Community	2,500,000

	<ul style="list-style-type: none"> Establish and capacity build CFAs to ensure Forestry Protection Prosopis management through development of forests products from the invasive species 				
Health	<ul style="list-style-type: none"> Improved household sanitation through development of WASH system <ul style="list-style-type: none"> Sensitization of households on the need of latrines Training of households on hygiene promotion Purification of drinking water Construction of dispensaries Provide enough drugs Vaccination / immunization campaigns Disease surveillance and reporting Promotion of family planning 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Education	<ul style="list-style-type: none"> Enhance community awareness Increase accessibility to learning materials and tools Improve network reception Synchronize school calendar with weather-related events 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000
Economy	<ul style="list-style-type: none"> Manufacture and sale of handicrafts (especially baskets), petty trade (especially of household goods and small livestock), honey production, the sale of other nature-based products Construction, improvement and maintenance of markets and livestock sell yards Provision of loans and credit facilities Increase access to cash transfer programmes 			TCG GOK Partners Community	5,000,000
Housing and Buildings	<ul style="list-style-type: none"> Encourage use of environmentally friendly materials Encourage use of invasive species such as Prosopis 		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Security	<ul style="list-style-type: none"> Strengthening of conflict resolution mechanisms Establish and capacity build peace committees Strengthen cross-border peace engagements 		All the village Units in the Ward	TCG GOK Partners Community	3,000,000
Tourism and Wildlife	<ul style="list-style-type: none"> Public awareness on eco-tourism Map out environmental resources that can attract tourism 		All the village Units in the Ward	TCG GOK Partners Community	500,000
Transport and Infrastructure	<ul style="list-style-type: none"> Maintenance of roads linking the ward Climate proof infrastructure- bridges and roads Encourage climate mitigation by of renewable energy sources like solar, wind power Upgrading of roads 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Information	<ul style="list-style-type: none"> Climate information sharing EWS through conventional and indigenous technologies Participation in Participatory scenario planning for seasons 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000

4. Nakalale Ward Priority Adaptation and Mitigation Actions

Sector	Actions Prioritized by Sector	Adaptation measures/ Mitigation	Area of Focus	Partners	Budget (KSh)
Agriculture/ Food and Nutrition Security	<p>Improved food security and strengthening communities' livelihoods</p> <ul style="list-style-type: none"> • Introduction of agricultural activities • Strengthen the capacity of smallholder farmers to undertake commercialized agriculture in the county • Promotion of agricultural extension, research and development to improve farmer's knowledge on crop production • Farm input subsidy and support to improve farmers' resource capacity for improved crop production • Enhance horticultural crop diversification and farmers resilience through promotion of fruit trees and vegetables • Pest control and management to reduced pre-harvest loss through integrated pest management practices. • Establishment of restocking initiatives • Animals Take off • Introduction of and propagation of irrigation • Propagation of Farming activities • Kitchen gardening <p>Irrigation and Land reclamation</p> <ul style="list-style-type: none"> • Enhanced water use efficiency, increased crop and productivity through repair and improvement of irrigation technologies • Increase of land for crop and pasture production through mapping of potential areas, survey and design and construction of spate irrigation schemes. 		All the village Units in the Ward	TCG GOK Partners Community	7,000,000
Human Mobility	<ul style="list-style-type: none"> • Establish community land and natural resource management committees for the ward • Establish and capacity build grazing committees to guide and control grazing patterns • Train local-level public servants on human mobility and migrants' rights • Cross-border cooperation and harmonization of policies and programmes for peace and security • Establish platforms on human mobility • Map and offer support to the high at-risk communities, including indigenous communities and socially marginalized groups • Identity registration for pastoralists • Establish sub-county platforms/ forums on human mobility for the pastoralists to discuss their livelihood challenges • Provide alternative livelihood project to the high at-risk communities, including indigenous communities and socially marginalized groups • National ID card registration, through massive registration programme in collaboration with Huduma Center Provide Transhumance Certificates pastoralist when crossing IGAD member states borders (Ethiopia, South-Sudan) • Enhanced investments and access to social services with a focus on children, youth, women, and special groups. <p>For people to move</p> <ul style="list-style-type: none"> • Develop/update frameworks for planned relocation in a rights-based and participatory manner as a last resort option • Develop and implement plans that allow people to move across borders • Support to people who cannot return to the areas/ villages of origin 		All the village Units in the Ward	TCG GOK Partners Community	10,000,000

	<ul style="list-style-type: none"> Develop regular migration pathways from climate vulnerable communities and disaster-prone areas Develop and roll out targeted skills training in climate change-affected communities to support better migration outcomes Integrate human mobility in CIDP, disaster risk reduction and development <p>For people on the move</p> <ul style="list-style-type: none"> Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions Factor in current disaster risk and future climate change impacts in human mobility programming for emergency preparedness, disaster risk reduction and climate change adaptation Promote and roll out durable solutions for disaster displacement <p>For people to stay</p> <ul style="list-style-type: none"> Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions Facilitate the reintegration of returning migrants via “green reintegration” packages for climate change adaptation and mitigation Develop climate resilient infrastructure in the face of natural hazards Develop sustainable climate resilient livelihoods for populations at risk to support adaptation 				
Disaster Management	<ul style="list-style-type: none"> Preparedness and Early Warning Programmes through EVWS gathering, analysis and dissemination and community sensitization on EVWS Mitigation and Prevention Programmes through training, sensitization, vulnerability analysis, building codes, zoning and land use management, preventive health care and exposures Response and emergency initiatives: Relief food and disaster assessments, Shelter materials, search and rescue Recovery and Rehabilitation by supporting rehabilitation and reconstruction of livelihoods, infrastructure et 		All the village Units in the Ward	TCG GOK Partners Community	15,000,000
Livestock	<ul style="list-style-type: none"> Proper management of pasture lands / controlled grazing Introduce fodder banks Drought-resistant breeds New animal husbandry techniques Livestock insurance Development and improvement of livestock feeds through: <ul style="list-style-type: none"> pasture reseeding along migratory routes strategic livestock feed stores purchase of supplementary livestock feeds Livestock diversification and breed improvement Livestock risk management (restocking, off-take, response, water trucking, livestock insurance) Rangeland management, pasture reseeding, seed bulking, hay production, resource conservation and mapping of wet and dry zones and migratory routes. Establishment and Capacity building of grazing committees Increase extension officers Provision of animals feeds Development of livestock value chain, market access, linkages and bench making/exposure for increased food, income and skills development Livestock production extension services through sharing of technical information between professionals and end users <p>Vet Services</p> <ul style="list-style-type: none"> Establishment of Mass vaccination calendar of animals programmes vaccination and treatment and response to disease emergencies Veterinary public health services through Improved control of zoonotic diseases 		All the village Units in the Ward	TCG GOK Partners Community	10, 000,000

Drought and Flood Management	<ul style="list-style-type: none"> • Establishment of early warning systems • Livelihoods diversification • Flood water harvesting • Food and nutritional supplements (such as school feeding programmes) • Provision of relief services • Provision of loans and grants as a capital • Establishment of Livestock markets calendar and facilitate implementation • Establishment of Livestock insurance schemes • Introduction of agricultural activities 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Energy	<p>Renewable Energy Development</p> <ul style="list-style-type: none"> • Installation of solar PV in public institutions • Maintenance of solar PV in public institutions <p>Energy Efficiency, Conservation and Stakeholders Engagement</p> <ul style="list-style-type: none"> • Improved cook stoves for households • Capacity built the communities across the ward on the various sources of green Energy 		All the village Units in the Ward	TCG GOK Partners Community	2,500, 000
Water	<p>Water supply and storage</p> <ul style="list-style-type: none"> • Establishment of water points along the migratory routes • Design and establishment of new and rehabilitation, expansion and maintenance of ward water supply systems • Drilling and equipping of boreholes along the migratory routes • Maintenance of community water points along the migratory routes • Design, construction and maintenance of infrastructure for surface water harvesting and storage and ground water recharge including water pans, sand dams for rural and livestock water supply • Rehabilitation of livestock existing water points • Supplying communities with water through water trucking in times of drought. • Setting up of water storage facilities within strategic grazing routes • Installing boreholes with real time underground monitoring tools • Desilting silted water pans • Rehabilitation of broken water pans • Water reticulation • Construction of elevated still tanks <p>Water Resources management</p> <ul style="list-style-type: none"> • Conduct activities in water catchment management between the county government, community and Partners • Demarcation, rehabilitation and protection of riparian and degraded catchment areas • Enhancing Community participation in management of water resources through Community sensitization on knowledge and Management of water resources and catchments • Empowerment of women to participate in water resource management • Training of Water Resource Users Associations • Water interventions to reduce cross border conflict 		All the village Units in the Ward	TCG GOK Partners Community	10, 000, 000
Environment	<p>Environmental Governance and compliance</p> <ul style="list-style-type: none"> • Develop and implement ward environment action plan <p>Environmental protection and conservation</p> <ul style="list-style-type: none"> • Protect and conserve environment through <ul style="list-style-type: none"> ○ conservation of soil and water ○ Rehabilitation of degraded areas ○ Protection of fragile environment <p>Climate change and adaptation</p>		All the village Units in the Ward	TCG GOK Partners Community	2, 000, 000

	<ul style="list-style-type: none"> • Early warning on weather patterns to reduce community vulnerability to adverse climate effects • Environmental education on climate change • Climate proof communities to climate change • Promote climate smart farming <p>Supporting ward climate change committee on rangeland rehabilitation by acacia reseedling, protection and management of environment</p>				
Forestry	<ul style="list-style-type: none"> • Introduction of Agro forestry activities • Increase tree cover, and promote sustainable management of forests and tree resources • Increasing tree cover in private, community and county lands (Tree Planting) • Identification and setting a part of land for forest reservation, development and creation of ward forests • Development of nature-based enterprises within ward forests. • Forestation and rehabilitation of fragile and degraded ecosystem/forest in community lands. <p>Forestry Management, Conservation and Public Participation</p> <ul style="list-style-type: none"> • Develop manpower and promote ecotourism, community-based enterprises and diversification of revenue streams from forest products for community and county • Establish and capacity build CFAs to ensure Forestry Protection • Prosopis management through development of forests products from the invasive species 		All the village Units in the Ward	TCG GOK Partners Community	2,500,000
Health	<ul style="list-style-type: none"> • Improved household sanitation through development of WASH system <ul style="list-style-type: none"> ○ Sensitization of households on the need of latrines ○ Training of households on hygiene promotion ○ Purification of drinking water • Construction of dispensaries • Provide enough drugs • Vaccination / immunization campaigns • Disease surveillance and reporting • Promotion of family planning 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Education	<ul style="list-style-type: none"> • Enhance community awareness • Increase accessibility to learning materials and tools • Improve network reception • Synchronize school calendar with weather-related events 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000
Economy	<ul style="list-style-type: none"> • Manufacture and sale of handicrafts (especially baskets), petty trade (especially of household goods and small livestock), honey production, the sale of other nature-based products • Construction, improvement and maintenance of markets and livestock sell yards • Provision of loans and credit facilities • Increase access to cash transfer programmes 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Housing and Buildings	<ul style="list-style-type: none"> • Encourage use of environmentally friendly materials • Encourage use of invasive species such as Prosopis 		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Security	<ul style="list-style-type: none"> • Strengthening of conflict resolution mechanisms • Establish and capacity build peace committees • Strengthen cross-border peace engagements 		All the village Units in the Ward	TCG GOK Partners Community	3,000,000
Tourism and Wildlife	<ul style="list-style-type: none"> • Public awareness on eco-tourism • Map out environmental resources that can attract tourism 		All the village Units in the Ward	TCG GOK	500,000

				Partners Community	
Transport and Infrastructure	<ul style="list-style-type: none"> Maintenance of roads linking the ward Climate proof infrastructure- bridges and roads Encourage climate mitigation by of renewable energy sources like solar, wind power Upgrading of roads 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Information	<ul style="list-style-type: none"> Climate information sharing EWS through conventional and indigenous technologies Participation in Participatory scenario planning for seasons 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000

5. Lapur Ward Priority Adaptation and Mitigation Actions

Sector	Actions Prioritized by Sector	Adaptation measures/ Mitigation	Area of Focus	Partners	Budget (KSh)
Agriculture/ Food and Nutrition Security	<p>Improved food security and strengthening communities' livelihoods</p> <ul style="list-style-type: none"> Introduction of agricultural activities Strengthen the capacity of smallholder farmers to undertake commercialized agriculture in the county Promotion of agricultural extension, research and development to improve farmer's knowledge on crop production Farm input subsidy and support to improve farmers' resource capacity for improved crop production Enhance horticultural crop diversification and farmers resilience through promotion of fruit trees and vegetables Pest control and management to reduced pre-harvest loss through integrated pest management practices. Establishment of restocking initiatives Animals Take off Introduction of and propagation of irrigation Propagation of Farming activities Kitchen gardening <p>Irrigation and Land reclamation</p> <ul style="list-style-type: none"> Enhanced water use efficiency, increased crop and productivity through repair and improvement of irrigation technologies Increase of land for crop and pasture production through mapping of potential areas, survey and design and construction of spate irrigation schemes. 		All the villages Units in the Ward	TCG GOK Partners Community	7, 000, 000
Human Mobility	<ul style="list-style-type: none"> Establish community land and natural resource management committees for the ward Establish and capacity build grazing committees to guide and control grazing patterns Train local-level public servants on human mobility and migrants' rights Establish sub-county platforms/ forums on human mobility for the pastoralists to discuss their livelihood challenges Provide alternative livelihood project to the high at-risk communities, including indigenous communities and socially marginalized groups National ID card registration, through massive registration programme in collaboration with Huduma Center Provide Transhumance Certificates pastoralist when crossing IGAD member states borders (Ethiopia, South-Sudan) <p>For people to move</p> <ul style="list-style-type: none"> Develop/update frameworks for planned relocation in a rights-based and participatory manner as a last resort option 		All the village Units in the Ward	TCG GOK Partners Community	10,000,000

	<ul style="list-style-type: none"> Develop and implement plans that allow people to move across borders Support to people who cannot return to the areas/ villages of origin Develop regular migration pathways from climate vulnerable communities and disaster-prone areas Develop and roll out targeted skills training in climate change-affected communities to support better migration outcomes Integrate human mobility in CIDP, disaster risk reduction and development <p>For people on the move</p> <ul style="list-style-type: none"> Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions Factor in current disaster risk and future climate change impacts in human mobility programming for emergency preparedness, disaster risk reduction and climate change adaptation Promote and roll out durable solutions for disaster displacement <p>For people to stay</p> <ul style="list-style-type: none"> Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions Facilitate the reintegration of returning migrants via “green reintegration” packages for climate change adaptation and mitigation Develop climate resilient infrastructure in the face of natural hazards Develop sustainable climate resilient livelihoods for populations at risk to support adaptation 				
Disaster Management	<ul style="list-style-type: none"> Preparedness and Early Warning Programmes through EVWS gathering, analysis and dissemination and community sensitization on EVWS Mitigation and Prevention Programmes through training, sensitization, vulnerability analysis, building codes, zoning and land use management, preventive health care and exposures Response and emergency initiatives: Relief food and disaster assessments, Shelter materials, search and rescue Recovery and Rehabilitation by supporting rehabilitation and reconstruction of livelihoods, infrastructure et 		All the village Units in the Ward	TCG GOK Partners Community	15,000,000
Livestock	<ul style="list-style-type: none"> Proper management of pasture lands / controlled grazing Introduce fodder banks Promote adoption of climate-resilient animal breeds New animal husbandry techniques Livestock insurance Development and improvement of livestock feeds through: <ul style="list-style-type: none"> pasture reseeding along migratory routes strategic livestock feed stores purchase of supplementary livestock feeds Livestock diversification and breed improvement Livestock risk management (restocking, off-take, response, water trucking, livestock insurance) Rangeland management, pasture reseeding, seed bulking, hay production, resource conservation and mapping of wet and dry zones and migratory routes. Establishment and Capacity building of grazing committees Increase extension officers Provision of animals' feeds Development of livestock value chain, market access, linkages and bench making/exposure for increased food, income and skills development Livestock production extension services through sharing of technical information between professionals and end users <p>Vet Services</p> <ul style="list-style-type: none"> Establishment of Mass vaccination calendar of animals' programmes 		All the village Units in the Ward	TCG GOK Partners Community	10, 000,000

	<ul style="list-style-type: none"> vaccination and treatment and response to disease emergencies Veterinary public health services through Improved control of zoonotic diseases 				
Drought and Flood Management	<ul style="list-style-type: none"> Establishment of early warning systems Livelihoods diversification Flood water harvesting Food and nutritional supplements (such as school feeding programmes) Provision of relief services Provision of loans and grants as a capital Establishment of Livestock markets calendar and facilitate implementation Establishment of Livestock insurance schemes Introduction of agricultural activities 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Energy	<p>Renewable Energy Development</p> <ul style="list-style-type: none"> Installation of solar PV in public institutions Maintenance of solar PV in public institutions <p>Energy Efficiency, Conservation and Stakeholders Engagement</p> <ul style="list-style-type: none"> Improved cook stoves for households Capacity built the communities across the ward on the various sources of green Energy 		All the village Units in the Ward	TCG GOK Partners Community	2,500, 000
Water	<p>Water supply and storage</p> <ul style="list-style-type: none"> Establishment of water points along the migratory routs Design and establishment of new and rehabilitation, expansion and maintenance of ward water supply systems Drilling and equipping of boreholes along the migratory routs Maintenance of community water points along the migratory routs Design, construction and maintenance of infrastructure for surface water harvesting and storage and ground water recharge including water pans, sand dams for rural and livestock water supply Rehabilitation of livestock existing water points Supplying communities with water through water trucking in times of drought. Setting up of water storage facilities within strategic grazing routes Installing boreholes with real time underground monitoring tools Desilting silted water pans Rehabilitation of broken water pans Water reticulation Construction of elevated still tanks <p>Water Resources management</p> <ul style="list-style-type: none"> Conduct activities in water catchment management between the county government, community and Partners Demarcation, rehabilitation and protection of riparian and degraded catchment areas Enhancing Community participation in management of water resources though Community sensitization on knowledge and Management of water resources and catchments Empowerment of women to participate in water resource management Training of Water Resource Users Associations Water interventions to reduce cross border conflict 		All the village Units in the Ward	TCG GOK Partners Community	10, 000, 000
Environment	<p>Environmental Governance and compliance</p> <ul style="list-style-type: none"> Develop and implement ward environment action plan <p>Environmental protection and conservation</p> <ul style="list-style-type: none"> Protect and conserve environment through <ul style="list-style-type: none"> conservation of soil and water Rehabilitation of degraded areas Protection of fragile environment 		All the village Units in the Ward	TCG GOK Partners Community	2, 000, 000

	<p>Climate change and adaptation</p> <ul style="list-style-type: none"> • Early warning on weather patterns to reduce community vulnerability to adverse climate effects • Environmental education on climate change • Climate proof communities to climate change • Promote climate smart farming <p>Supporting ward climate change committee on rangeland rehabilitation by acacia reseeded, protection and management of environment</p>				
Forestry	<ul style="list-style-type: none"> • Introduction of Agro forestry activities • Increase tree cover, and promote sustainable management of forests and tree resources • Increasing tree cover in private, community and county lands (Tree Planting) • Identification and setting a part of land for forest reservation, development and creation of ward forests • Development of nature-based enterprises within ward forests. • Forestation and rehabilitation of fragile and degraded ecosystem/forest in community lands. <p>Forestry Management, Conservation and Public Participation</p> <ul style="list-style-type: none"> • Develop manpower and promote ecotourism, community-based enterprises and diversification of revenue streams from forest products for community and county • Establish and capacity build CFAs to ensure Forestry Protection • Prosopis management through development of forests products from the invasive species 		All the village Units in the Ward	TCG GOK Partners Community	2,500,000
Health	<ul style="list-style-type: none"> • Improved household sanitation through development of WASH system <ul style="list-style-type: none"> ○ Sensitization of households on the need of latrines ○ Training of households on hygiene promotion ○ Purification of drinking water • Construction of dispensaries • Provide enough drugs • Vaccination / immunization campaigns • Disease surveillance and reporting • Promotion of family planning 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Education	<ul style="list-style-type: none"> • Enhance community awareness • Increase accessibility to learning materials and tools • Improve network reception • Synchronize school calendar with weather-related events 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000
Economy	<ul style="list-style-type: none"> • Manufacture and sale of handicrafts (especially baskets), petty trade (especially of household goods and small livestock), honey production, the sale of other nature-based products • Construction, improvement and maintenance of markets and livestock sell yards • Provision of loans and credit facilities • Increase access to cash transfer programmes 			TCG GOK Partners Community	5,000,000
Housing and Buildings	<ul style="list-style-type: none"> • Encourage use of environmentally friendly materials • Encourage use of invasive species such as Prosopis 		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Security	<ul style="list-style-type: none"> • Strengthening of conflict resolution mechanisms • Establish and capacity build peace committees • Strengthen cross-border peace engagements 		All the village Units in the Ward	TCG GOK Partners Community	3,000,000

Tourism and Wildlife	<ul style="list-style-type: none"> Public awareness on eco-tourism Map out environmental resources that can attract tourism 		All the village Units in the Ward	TCG GOK Partners Community	500,000
Transport and Infrastructure	<ul style="list-style-type: none"> Maintenance of roads linking the ward Climate proof infrastructure- bridges and roads Encourage climate mitigation by of renewable energy sources like solar, wind power Upgrading of roads 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Information	<ul style="list-style-type: none"> Climate information sharing EWS through conventional and indigenous technologies Participation in Participatory scenario planning for seasons 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000

6. Lake Zone Ward Priority Adaptation and Mitigation Actions

Sector	Actions Prioritized by Sector	Adaptation measures/ Mitigation	Area of Focus	Partners	Budget (KSh)
Agriculture/ Food and Nutrition Security	<p>Improved food security and strengthening communities' livelihoods</p> <ul style="list-style-type: none"> Introduction of agricultural activities Strengthen the capacity of smallholder farmers to undertake commercialized agriculture in the county Promotion of agricultural extension, research and development to improve farmer's knowledge on crop production Farm input subsidy and support to improve farmers' resource capacity for improved crop production Enhance horticultural crop diversification and farmers resilience through promotion of fruit trees and vegetables Pest control and management to reduced pre-harvest loss through integrated pest management practices. Establishment of restocking initiatives Animals Take off Introduction of and propagation of irrigation Propagation of Farming activities Kitchen gardening <p>Irrigation and Land reclamation</p> <ul style="list-style-type: none"> Enhanced water use efficiency, increased crop and productivity through repair and improvement of irrigation technologies Increase of land for crop and pasture production through mapping of potential areas, survey and design and construction of spate irrigation schemes. 		All the village Units in the Ward	TCG GOK Partners Community	7,000,000
Human Mobility	<ul style="list-style-type: none"> Establish community land and natural resource management committees for the ward Establish and capacity build grazing committees to guide and control grazing patterns Train local-level public servants on human mobility and migrants' rights Establish platforms on human mobility Set up peace and security committees to support in peace building along the border areas and small towns Enhance offtake programmes Map and offer support to the high at-risk communities, including indigenous communities and socially marginalized groups 		All the village Units in the Ward	TCG GOK Partners Community	10,000,000

	<ul style="list-style-type: none"> • Increase the number of vet officers to manage migrating community membersIdentity registration for pastoralists • Support Migrating fisher folks • Establish sub-county platforms/ forums on human mobility for the pastoralists to discuss their livelihood challenges • Provide alternative livelihood project to the high at-risk communities, including indigenous communities and socially marginalized groups • National ID card registration, through massive registration programme in collaboration with Huduma Center Provide Transhumance Certificates pastoralist when crossing IGAD member states borders (Ethiopia, South-Sudan) • Drill water along the border areas and small towns • <p>For people to move</p> <ul style="list-style-type: none"> • Develop/update frameworks for planned relocation in a rights-based and participatory manner as a last resort option • Develop and implement plans that allow people to move across borders • Support to people who cannot return to the areas/ villages of origin • Develop regular migration pathways from climate vulnerable communities and disaster-prone areas • Develop and roll out targeted skills training in climate change-affected communities to support better migration outcomes • Integrate human mobility in CIDP, disaster risk reduction and development <p>For people on the move</p> <ul style="list-style-type: none"> • Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions • Factor in current disaster risk and future climate change impacts in human mobility programming for emergency preparedness, disaster risk reduction and climate change adaptation • Promote and roll out durable solutions for disaster displacement <p>For people to stay</p> <ul style="list-style-type: none"> • Facilitate the participation of migrants, displaced persons, and communities, especially the most vulnerable, in all climate actions • Facilitate the reintegration of returning migrants via “green reintegration” packages for climate change adaptation and mitigation • Develop climate resilient infrastructure in the face of natural hazards • Develop sustainable climate resilient livelihoods for populations at risk to support adaptation 				
Disaster Management	<ul style="list-style-type: none"> • Preparedness and Early Warning Programmes through EVWS gathering, analysis and dissemination and community sensitization on EVWS • Mitigation and Prevention Programmes through training, sensitization, vulnerability analysis, building codes, zoning and land use management, preventive health care and exposures • Response and emergency initiatives: Relief food and disaster assessments, Shelter materials, search and rescue • Recovery and Rehabilitation by supporting rehabilitation and reconstruction of livelihoods, infrastructure et 		All the village Units in the Ward	TCG GOK Partners Community	15,000,000
Livestock	<ul style="list-style-type: none"> • Proper management of pasture lands / controlled grazing • Introduce fodder banks • Drought-resistant breeds • New animal husbandry techniques • Livestock insurance • Development and improvement of livestock feeds through: <ul style="list-style-type: none"> ○ pasture reseeding along migratory routes ○ strategic livestock feed stores 		All the village Units in the Ward	TCG GOK Partners Community	10, 000,000

	<ul style="list-style-type: none"> ○ purchase of supplementary livestock feeds • Livestock diversification and breed improvement • Livestock risk management (restocking, off-take, response, water trucking, livestock insurance) • Rangeland management, pasture reseeding, seed bulking, hay production, resource conservation and mapping of wet and dry zones and migratory routes. • Establishment and Capacity building of grazing committees • Increase extension officers • Provision of animals' feeds • Development of livestock value chain, market access, linkages and bench making/exposure for increased food, income and skills development • Livestock production extension services through sharing of technical information between professionals and end users <p>Vet Services</p> <ul style="list-style-type: none"> • Establishment of Mass vaccination calendar of animals' programmes • vaccination and treatment and response to disease emergencies • Veterinary public health services through Improved control of zoonotic diseases 				
Fisheries	<ul style="list-style-type: none"> • Support value addition in fish and livestock products • Development of fisheries value chain, market access and linkages for increased food, incomes and skill development • Fisheries information, extension services, training facilities and skill development • Development of fish infrastructure: Improve fish quality, hygiene and safety, establish an ice plant and cold storage facility to reduce post-harvest losses • Fisheries resources management/ monitoring control and surveillance to enhance sustainable exploitation of fish resources • Establish more Beach Management Units (BMUs) and enhance value addition on fish products to increase market thus income for the local community members. • Support acquisition of modern fishing boats • Support the purchase of modern fish cooling and preservation equipment including solar driers • Support establishment of fish marketing cooperatives to bargain for best prices in the market • Develop and support linkages to external markets • 		All the village Units in the Ward	TCG GOK Partners Community	3,000,000
Drought and Flood Management	<ul style="list-style-type: none"> • Establishment of early warning systems • Livelihoods diversification • Flood water harvesting • Food and nutritional supplements (such as school feeding programmes) • Provision of relief services • Provision of loans and grants as a capital • Establishment of Livestock markets calendar and facilitate implementation • Establishment of Livestock insurance schemes • Introduction of agricultural activities 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Energy	<p>Renewable Energy Development</p> <ul style="list-style-type: none"> • Installation of solar PV in public institutions • Maintenance of solar PV in public institutions <p>Energy Efficiency, Conservation and Stakeholders Engagement</p> <ul style="list-style-type: none"> • Improved cook stoves for households • Capacity built the communities across the ward on the various sources of green Energy 		All the village Units in the Ward	TCG GOK Partners Community	2,500, 000
Water	<p>Water supply and storage</p> <ul style="list-style-type: none"> • Establishment of water points along the migratory routs • Design and establishment of new and rehabilitation, expansion and maintenance of ward water supply systems 		All the village Units in the Ward	TCG GOK Partners Community	10, 000, 000

	<ul style="list-style-type: none"> • Drilling and equipping of boreholes along the migratory routs • • Maintenance of community water points along the migratory routs • • Design, construction and maintenance of infrastructure for surface water harvesting and storage and ground water recharge including water pans, sand dams for rural and livestock water supply • Rehabilitation of livestock existing water points • Supplying communities with water through water trucking in times of drought. • Setting up of water storage facilities within strategic grazing routes • Installing boreholes with real time underground monitoring tools • Desilting silted water pans • Rehabilitation of broken water pans • Water reticulation • Construction of elevated still tanks <p>Water Resources management</p> <ul style="list-style-type: none"> • Conduct activities in water catchment management between the county government, community and Partners • Demarcation, rehabilitation and protection of riparian and degraded catchment areas • Enhancing Community participation in management of water resources through Community sensitization on knowledge and Management of water resources and catchments • Empowerment of women to participate in water resource management • Training of Water Resource Users Associations • Water interventions to reduce cross border conflict 				
Environment	<p>Environmental Governance and compliance</p> <ul style="list-style-type: none"> • Develop and implement ward environment action plan <p>Environmental protection and conservation</p> <ul style="list-style-type: none"> • Protect and conserve environment through <ul style="list-style-type: none"> ○ conservation of soil and water ○ Rehabilitation of degraded areas ○ Protection of fragile environment <p>Climate change and adaptation</p> <ul style="list-style-type: none"> • Early warning on weather patterns to reduce community vulnerability to adverse climate effects • Environmental education on climate change • Climate proof communities to climate change • Promote climate smart farming <p>Supporting ward climate change committee on rangeland rehabilitation by acacia reseeded, protection and management of environment</p>		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Forestry	<ul style="list-style-type: none"> • Introduction of Agro forestry activities • Increase tree cover, and promote sustainable management of forests and tree resources • Increasing tree cover in private, community and county lands (Tree Planting) • Identification and setting a part of land for forest reservation, development and creation of ward forests • Development of nature-based enterprises within ward forests. • Forestation and rehabilitation of fragile and degraded ecosystem/forest in community lands. <p>Forestry Management, Conservation and Public Participation</p> <ul style="list-style-type: none"> • Develop manpower and promote ecotourism, community-based enterprises and diversification of revenue streams from forest products for community and county • Establish and capacity build CFAs to ensure Forestry Protection 		All the village Units in the Ward	TCG GOK Partners Community	2,500,000

	<ul style="list-style-type: none"> • Prosopis management through development of forests products from the invasive species 				
Health	<ul style="list-style-type: none"> • Improved household sanitation through development of WASH system <ul style="list-style-type: none"> ○ Sensitization of households on the need of latrines ○ Training of households on hygiene promotion ○ Purification of drinking water • Construction of dispensaries • Provide enough drugs • Vaccination / immunization campaigns • Disease surveillance and reporting • Promotion of family planning 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Education	<ul style="list-style-type: none"> • Enhance community awareness • Increase accessibility to learning materials and tools • Improve network reception • Synchronize school calendar with weather-related events 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000
Economy	<ul style="list-style-type: none"> • Manufacture and sale of handicrafts (especially baskets), petty trade (especially of household goods and small livestock), honey production, the sale of other nature-based products • Construction, improvement and maintenance of markets and livestock sell yards • Provision of loans and credit facilities • Increase access to cash transfer programmes 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Housing and Buildings	<ul style="list-style-type: none"> • Encourage use of environmentally friendly materials • Encourage use of invasive species such as Prosopis 		All the village Units in the Ward	TCG GOK Partners Community	2,000,000
Security	<ul style="list-style-type: none"> • Strengthening of conflict resolution mechanisms • Establish and capacity build peace committees • Strengthen cross-border peace engagements 		All the village Units in the Ward	TCG GOK Partners Community	3,000,000
Tourism and Wildlife	<ul style="list-style-type: none"> • Public awareness on eco-tourism • Map out environmental resources that can attract tourism 		All the village Units in the Ward	TCG GOK Partners Community	500,000
Transport and Infrastructure	<ul style="list-style-type: none"> • Maintenance of roads linking the ward • Climate proof infrastructure- bridges and roads • Encourage climate mitigation by of renewable energy sources like solar, wind power • Upgrading of roads 		All the village Units in the Ward	TCG GOK Partners Community	5,000,000
Information	<ul style="list-style-type: none"> • Climate information sharing • EWS through conventional and indigenous technologies • Participation in Participatory scenario planning for seasons 		All the village Units in the Ward	TCG GOK Partners Community	1,000,000

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