

COUNTY GOVERNMENT OF MARSABIT



MARSABIT COUNTY CLIMATE CHANGE ACTION PLAN 2023 - 2027



Department of Water, Environment, Climate Change, Forestry and Natural Resources
Directorate of Environment and Climate Change



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Foreword

Marsabit County is extremely susceptible to impacts of changing climate. Most livelihoods and economic activities in the County are reliant on climate sensitive sectors namely agriculture, livestock, water, trade, tourism, forestry and wildlife conservation. Dependence on these natural resources means that recurring droughts, erratic rainfall patterns and floods as a result of climate change will continue to negatively impact livelihoods and community asset in the county.

The Marsabit County Climate Change Actions Plan (MCCCAP) is a key milestone towards addressing the County's vulnerability to climate change. The Plan was guided by Participatory Climate Risk Assessment (PCRA) that was conducted by relevant inter-sectoral technical staff drawn from County and National Governments, Non State Actors, Community Based Organization and representatives of community leaders. The adaptation priorities documented in the PCRA reports informed the climate actions in this plan. These actions are geared towards building adaptive capacity of local communities to climate shock.

Indeed, the County Government of Marsabit through the Department of Water, Environment, Climate Change and Natural Resources is committed to implementing the plan guided my Marsabit County Climate Change Policy (2019) and Marsabit County Climate Change Fund Act (2020). We strongly believe in multi-stakeholders approach towards implementing climate change actions in the county. It is my hope that that all partners will mainstream these actions in their planning, implementation and monitoring of climate-related interventions for the benefit of the people of Marsabit.

H.E GOV MOHAMUD MOHAMED ALI



**Governor Marsabit and Chairperson Marsabit County Climate Change Steering Committee
County Government of Marsabit**

Acknowledgement

The MCCCAP is the county's second action plan on climate change adaptation. The plan has been developed within the general framework of the Marsabit County Climate Change Adaptation Policy (2019), Marsabit County Climate Change Fund Act (2020), County Integrated Development Plan (CIDP; 2023-2027), national Climate Change Policy, national Climate Change Act (2016) and the National Climate Change Action Plan (2018-2022) as they relate to the fragile Arid and Semi-Arid Lands (ASALs) including Marsabit County.

The plan was developed by a Technical Working Group (TWG) drawn from relevant sectors at both levels of government. The PCRA was the main guide to coming up with this Plan. The PCRA has allowed involvement of affected communities to identify climate risks, look into current and future trends of climate change and collectively design climate adaptation strategies for the county.

This Plan was developed through intensive consultative processes that involved climate related relevant National and County Government Departments, international organizations, Non-Governmental Organizations and Civil Society Organizations. I wish to thank all those who participated in the development of this Plan. First and foremost, I wish to acknowledge the leadership role of the Governor His Excellency Mohamud Mohamed Ali, County Government of Marsabit for high-level coordination of County Executive and County Assembly adoption processes. I also recognize the invaluable contribution by members of the TWG, Mrs. Janet E. Ahatho (Director Environment and Climate Change) for technical support throughout the development of the action plan and the entire Departmental staff for their support and not forgetting our stakeholders CRS-Nawiri, PACIDA, FH-Kenya Rapid, BOMA, LMC-Mercy Corps, Caritas among others for great partnership.

The department of Water Environment, Climate Change and Natural Resources is committed to facilitate and coordinate the implementation of MCCCAP and therefore would like to invite all stakeholders to join hands in integrating proposed adaptation interventions into their programs for the benefit of our county.

I look forward to seeing a prosperous and climate resilient Marsabit County.

Mr. Adan Kanano



**CECM Water, Environment, Climate Change and Natural Resources
Development
Marsabit County**

Executive Summary

Pastoral and agro-pastoral production forms the dominant livelihood in Marsabit County, involving about 95 percent of its population. Major sources of income within this livelihood include sales of livestock, livestock products and crop production which account for 80 percent of all county in-come.

Climate change is happening now and is projected to worsen in the future. Marsabit County is extremely susceptible to impacts of a changing climate because most livelihoods and economic activities are reliant on climate sensitive sectors including agriculture, livestock, forestry, water resources, health, energy, trade, rangelands, tourism, social infrastructure and human settlements.

In order to cushion key sectors against the impact of climate change, the stakeholders have come up with Marsabit County Climate Change Action Plan (2023-2027). The Plan has identified sectoral adaptation needs and also details specific sectoral actions plans, key implementing partners and indicative costs. This Plan is complementary and consistent with existing strategies at the county, national, regional and international levels as well as development and economic plans, principally Marsabit County Integrated Development Plan (CIDP; 2023-2027).

Among others, proposed adaptation actions include:

- Up scaling production and promotion of drought tolerant, pest resistant as well as early maturing/drought escaping crops varieties; promotion of climate smart agriculture; flood based irrigation and promotion of agro-forestry, livelihood diversifications and public education on climate change;
- Supporting development of water infrastructure through improved water harvesting techniques and rehabilitation of existing ones; water catchment protection and strengthening community capacity to manage water schemes;
- Improving access to clean water and sanitation facilities to limit outbreaks of water-borne diseases;
- Reducing effects of drought and climate change on vulnerable communities for resilience building through strengthening strategies used by communities to adapt to climate variability for reduction and management of risks;
- Reforestation of degraded forests; restoration of forests and woodlands and promotion of suit-able tree species as well as in-situ conservation
- Promotion of energy efficient cook stoves to reduce household and institutional demand on biomass energy and to reduce greenhouse gas emissions

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Acronyms

AU	African Union
ADP	Annual Development Plans
AMCEN	African Ministerial Conference on Environment
ASAL	Arid and Semi-Arid Lands
BMU	Beach Management Unit
CFA	Community Forest Association
CSA	Climate-Smart Agriculture
CLMC	Community Land Management Committee
CIDP	County Integrated Development Plan
CIMES	County Integrated Monitoring and Evaluation System
COP	Conference of Parties
CSA	Climate Smart Agriculture
CSP	County Spatial Plan
LPG	Liquefied Petroleum Gas
LULC	Land Use Land Cover
EAC	Intergovernmental Authority on Development
EMC	Environment Management Committee
EDE	Ending Drought Emergencies
FLLoCA	Financing Locally Led Climate Actions
FFA	Food for Assets
IDDRSI	IGAD Drought Disaster Resilience and Sustainability
IGAD	Intergovernmental Authority on Development
LULC	Land Use Land Cover
MCCCAP	Marsabit County Climate Change Action Plan
M&E	Monitoring and Evaluation
MTP	Medium Term Plan
NCCAP	National Climate Change Action Plan
NDC	Nationally Determined Contributions
NDVI	Normalized Difference Vegetation Index
NIMES	National Integrated Monitoring and Evaluation System
PCRA	Participatory Climate Risk Assessment
PPP	Public-Private Partnerships
PWD	People with Disability
SDG	Sustainable Development Goals
UNFCCC	United Nations Framework Convention on Climate Change
WUA	Water User Association
WRUA	Water Resource User Association

Definition of Terms

Weather refers to atmospheric conditions at a particular time in a particular location, including temperature, humidity, precipitation, cloudiness, wind, and visibility. Weather conditions do not happen in isolation, they have a ripple effect. The weather in one region will eventually affect the weather hundreds or thousands of kilometers away.

Climate is the average of weather patterns in a specific area over a longer period of time, usually 30 or more years, which represents the overall state of the climate system.

Greenhouse gases are gases that trap heat in the atmosphere, causing global warming and climate change. The main greenhouse gases released by human activity are carbon dioxide, methane, and nitrous oxide, as well as fluorinated gases used for cooling and refrigeration.

Global warming is an increase in the Earth's average surface temperature that occurs when the concentration of greenhouse gases in the atmosphere increases. These gases absorb more solar radiation and trap more heat, thus causing the planet to get hotter. Burning fossil fuels, cutting down forests, and farming livestock are some human activities that release greenhouse gases and contribute to global warming.

Climate change refers to the long-term changes in the Earth's climate that are warming the atmosphere, ocean and land. Climate change is affecting the balance of ecosystems that support life and biodiversity, and impacting health. It also causes more extreme weather events, such as more intense and/or frequent hurricanes, floods, heat waves, and droughts, and leads to sea level rise and coastal erosion as a result of ocean warming, melting of glaciers, and loss of ice sheets.

The **climate crisis** refers to the serious problems that are being caused or are likely to be caused by changes in the planet's climate.

Mitigation refers to any action taken by governments, businesses, and people to reduce, sequester, or prevent greenhouse gas emissions. Examples of mitigation include transitioning to renewable energy like wind and solar, investing in carbon-free transportation, promoting sustainable agriculture and land use, planting forests to act as carbon sinks, and changing consumption practices and diet behaviors.

Adaptation refers to actions that help reduce vulnerability to the current or expected impacts of climate change. Examples of adaptation include planting crop varieties that are more resistant to drought or changing conditions,

managing land to reduce wildfire risks, building stronger flood defences, relocating infrastructure from coastal areas affected by sea level rise, and developing insurance mechanisms specific to climate-related threats.

Resilience is the capacity of a community or environment to anticipate and manage dangerous climatic events and recover and transform after the ensuing shock, with minimal damage to societal wellbeing, economic activity, and the environment. Examples of increasing resilience in a community include long-term planning, early warning systems, training for new skills, diversifying the sources of household income, strengthening nature-based solutions, and building robust communal response and recovery capacities.

Climate justice means putting equity and human rights at the core of decision-making and action on climate change.

Nature-based solutions support climate change adaptation and mitigation by using natural systems and processes to restore ecosystems, conserve biodiversity, and enable sustainable livelihoods.

Climate finance refers to financial resources and instruments that are used to support action on climate change. Climate finance is critical to addressing climate change because of the large-scale investments that are needed to transition to a low-carbon global economy and to help societies build resilience and adapt to the impacts of climate change.

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

Vulnerability: Propensity or predisposition to be adversely affected. It encompasses sensitivity or susceptibility to harm, and lack of capacity to cope and adapt.

Hazard: is a potential source of harm. Substances, events, or circumstances can constitute hazards when their nature would allow them, even just theoretically, to cause damage to health, life, property, or any other interest of value

Disaster Risk Reduction: systematic approach to identifying, assessing and reducing the risks of disaster. Aims to reduce socio-economic vulnerabilities to disaster and the environmental and other hazards that trigger them

Disaster: the serious disruption of the functioning of society causing widespread human, material or environmental losses, which exceed the ability of the affected communities to cope using their own resources. Disasters occur when the negative effects of the hazards are not well managed.

Disaster risk reduction: is a framework and a tool that determines the degree of risk and describes measures to increase capacities and reduce hazard impact on the elements at risk so that disaster will be avoided.

Risk: is the potential for negative consequences to something that is valued when the occurrence and degree of a future outcome is uncertain. Risks from climate change impacts arise from the interaction between a hazard (triggered by an event or trend related to climate change), vulnerability (susceptibility to harm) and exposure (people, assets or ecosystems at risk).

Risk assessment: qualitative and/or quantitative scientific estimation of risks.

Risk management: plans, actions, strategies or policies to reduce the likelihood and/or consequences of risks or to respond to consequences.

1.0 Background and Context

1.1 Climate Change in Marsabit County

1.1.1 Geography

Located along the border lines in the furthest of Northern Kenya, Marsabit County has international boundary with Ethiopia to the North, borders Lake Turkana to the West, Samburu County to the South and Wajir and Isiolo Counties to the East. It covers a considerably wider land mass approximated at 70,691km² and therewith making it the largest county in Kenya. The County is divided into four sub-counties namely Saku, North Horr, Moyale and Laisamis. The four administrative zones also serve as political units comprising 4 constituencies and 20 wards. There are also 100 village units—representing the lowest administrative structures under the devolved governance system.

Much of the county's landmass comprises an extensive plains lying between 300m and 900m above sea level, sloping gently towards the southeast. The plains are bordered to the west and north by hills and mountain ranges, occasionally broken by volcanic cones and calderas. The most notable topographical features of the county include Ol Donyo Ranges (2066m above sea level) in the South West; Mt. Marsabit (1865m above sea level) in the Central part of the county; Hurri Hills (1685m above sea level) in the North-Eastern part of the county; Mt. Kulal (2235m above sea level) in North West; and Sololo-Moyale escarpment (up to 1400m above sea level) in the North East.

The distinct physical feature for which the county is famous is the Chalbi Desert. The desert forms a large depression covering an area of 948 Km² and lies between 435m and 500m elevation. The depression is within the Great Rift Valley and is separated from Lake Turkana by a ridge that rises to 700m. There are no permanent rivers in the county, but four drainage systems exist. Chalbi Desert is the largest of these drainage systems. The depression receives run-off from Mt. Marsabit, Hurri Hills, Mt. Kulal and the Ethiopian plateau. The seasonal rivers of Malgis and Merille to the extreme south flow eastward and drain into the Sori Adhi Swamp. Other drainage systems include the Diid Galgallu plains which receive run-off from the eastern slopes of Hurri hills and Lake Turkana into which seasonal rivers from Kulal and Nyiro Mountains drain. There are springs and oasis Korolle, Medate, North Horr, and Maikona. There exists several shallow wells and lakes holding water seasonally around Mt. Marsabit including Haite, Badasa, Sagante, Hulahula, Ilchuta, and Lake Paradise—only permanent Crater Lake in the county.

1.1.2 Administration, Demography and Urbanization

Administratively, the County is divided into four sub-counties namely Saku, North Horr, Moyale and Laisamis. Politically it is divided into four (4) Constituencies of Laisamis, North Horr, Saku and Moyale, 20 Assembly Wards and 100 Village Units.

According to the 2019 Kenya Population and Housing Census, The National population was 47,564,296 persons, with Male population consisting of 23,548,056 and female population consisting of 24,014,716 persons and 1,524 inter-sex, while the County population was 459,785 consisting of 243,548 males, 216,219 females and 18 inter-sex, as indicated in table 1.4. Compared to the national population, the county constitutes 1% of the Total population. The county has a population growth rate of 3.4%, while nationally the growth rate is at 2.2%, with a population projection of 539,101 and 565,091 by the end of the year 2025 and 2027 respectively.

The majority of the population in the county is between 0-24 years. This is an indicator of a young and growing population, which will potentially exert pressure on the county's resources in the future if the trend continues. Major towns in the county include Moyale and Marsabit while the main urban centers are Sololo, Loiyangalani, North Horr, and Laisamis.

1.1.3 Socio-economic characteristics

Economic activities in Marsabit County include agriculture, cottage industries, wholesale and retail trade, quarrying and artisanal mining. Agriculture is the main economic activity in the county including livestock keeping, crop production, bee keeping, fishing and agroforestry. Agricultural production in the county is predominantly livestock-based. Approximately 81, 16, and 3 percent of the population is engaged in pastoralism, agro-pastoralism, and other livelihoods respectively. The livestock types reared in the county include cattle, goats, sheep, camels, donkeys, and poultry. Bee keeping is also practiced, and fishing is mainly done along the shores of Lake Turkana. Crop production is limited to a few areas given the low and erratic rainfall in most parts of the county. The main crops grown include maize, green grams, wheat, teff, beans, millet, vegetables and fruits. Fruit trees are considered as part of agroforestry, a practice limited to areas around Mt. Marsabit and Sessi.

The sale of livestock & livestock products are the main sources of cash income in the Pastoral and Agro Pastoral livelihood zones contributing 82 and 60 percent of cash income respectively. Food crop production contributes 20 percent of cash income in the Agro Pastoral livelihood zone while in the Pastoral livelihood zone; formal waged labour and petty trade contribute 11 percent of cash income. The proportion of population that is below the poverty line was 80 and 69 percent in the Pastoral and Agro Pastoral livelihood zones respectively.

The social landscape of the county is characterized by chronic food shortage, insecurity, high levels of and dependency on food aid and rapidly changing livelihoods owing to climate change. The latest SMART survey conducted in January 2023 indicated an overall critical nutrition situation in Marsabit County that ranged from Alert levels in Saku (8.4percent), Critical levels in Moyale (15.2percent) and North Horr (29.6 percent) and Extremely Critical levels in Laisamis counties at 32.6percent. The monetary poverty rate for Marsabit is 63.2% which is 36-percentage point higher than the national rate of 35.7% with approximately 290,358 people in Marsabit being monetarily poor. Marsabit has a multi-dimensional poverty rate of 85.8%, which is 22-percentage point higher than the monetary poverty rate of 63.2% with a total of 394,561 people being multi-dimensionally poor. Access to water remains low and is often impacted by climate change. For instance, only about 2% of the households have access to improved latrines, 20% pit latrines with the majority of 78% practice open defecation (Kenya National Bureau of Statistics 2010).

1.1.4 Agro-ecological zones

Ecological Zone II - Forest Zones (Sub-Humid): The zone is characterized by high rainfall amounts of up to 1,000mm per annum, low evapotranspiration and high suitability for agricultural activities. The soils are suitable for agricultural production. The zone includes parts of Mt. Marsabit above 1,500m and Mt. Kulal above 1,700m which supports dense evergreen forests. This is an important water catchment area, covering just about one per cent of the county.

Ecological Zone IV - Woodland Zone (Semi-Arid): The zone is semi-arid with medium potential. It has become an area of sedentarized agro-pastoral activities. It constitutes the lower slopes of Mt. Marsabit, the middle slopes of Mt. Kulal and the top of Huri Hills. Areas of Sololo and Moyale are also included in this zone.

Ecological Zone V - Bushland Zone (Arid): This zone includes the lower slopes of volcanic and basement piles lying between 700 and 1,000m. The soils are shallow and stony clay loams with rock outcrops. The flatter areas are covered by grass. The zone consists of the plains of Dida Galgallu, Bure Dera, Milgis and parts of the slope of Mt. Marsabit and Huri Hills. These areas are characterized by steeper slopes which may favor greater surface run-off and hence may experience greater sheet wash erosion.

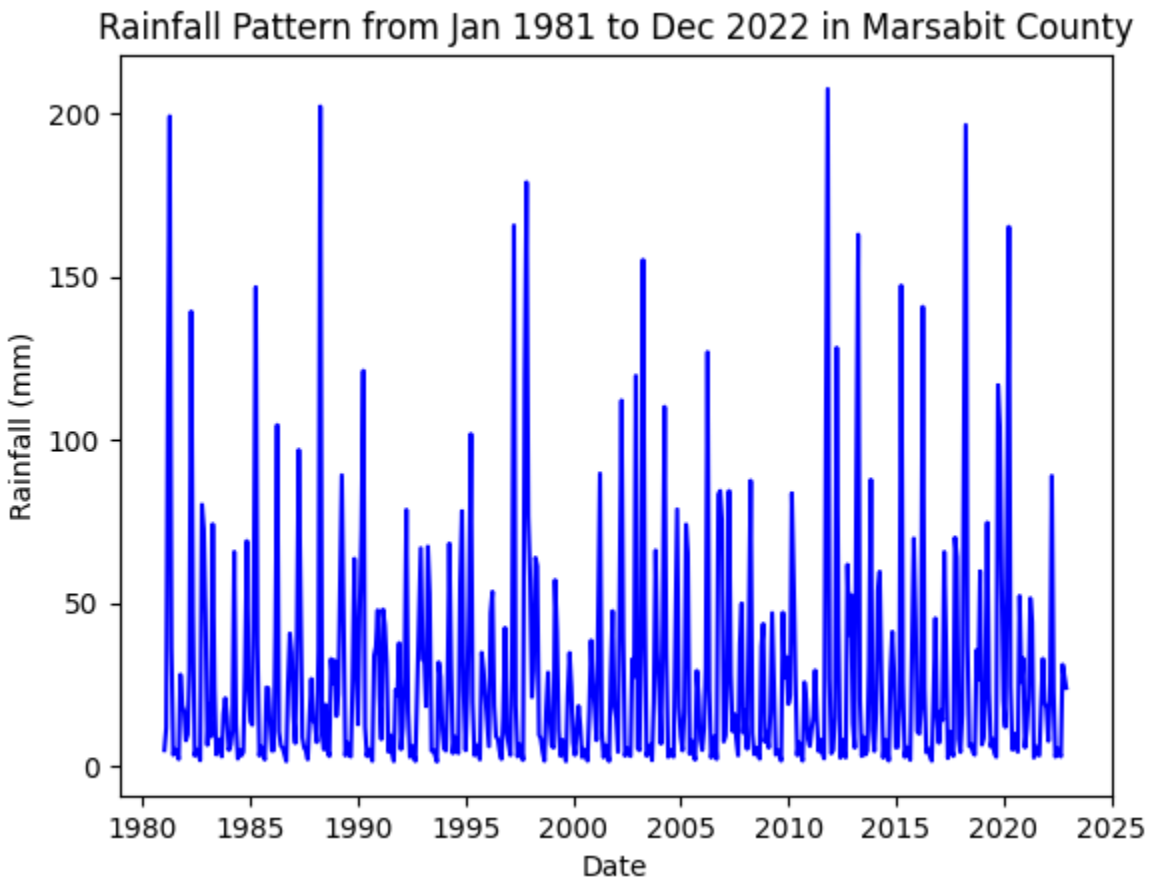
Ecological Zone VI - Dwarf Scrubland Zone (Very Arid): This is the most extensive zone in the county. The typical vegetation is dwarf-shrub grassland or a very dry form of bushed grassland. The extremely dry areas may be properly termed "bushed stone land". The zone includes all the hills and plains below 700m. Grazing season in these areas is extremely short, lasting not more than two

months after the rains. When the rain fails, the only vegetation available in this area is dwarf-shrub, which supports goats and camels, but not cattle.

1.1.6 Climate

Rainfall is erratic and highly variable with high evaporation rates that exceed rainfall more than 10 times. The county experiences tropical climatic conditions with extreme temperatures ranging from a minimum of 15° C to a maximum of 26° C, with an annual average of 20.5° C (World Weather and Climate Information, 2015). Rainfall ranges between 200 mm and 1,000 mm per annum and its duration, amount and reliability increases as altitude rises. The lowest part of the County like North Horr (550 m asl) has a mean annual rainfall of 150 mm while Mt. Marsabit and Moyale receive a mean annual rainfall of 800 mm and 700 mm respectively (CIDP 2013)

Figure 1: Rainfall pattern from Jan 1981 to Dec 2022 in Marsabit County



Source: NDMA

1.1.7 Climate trends and projections

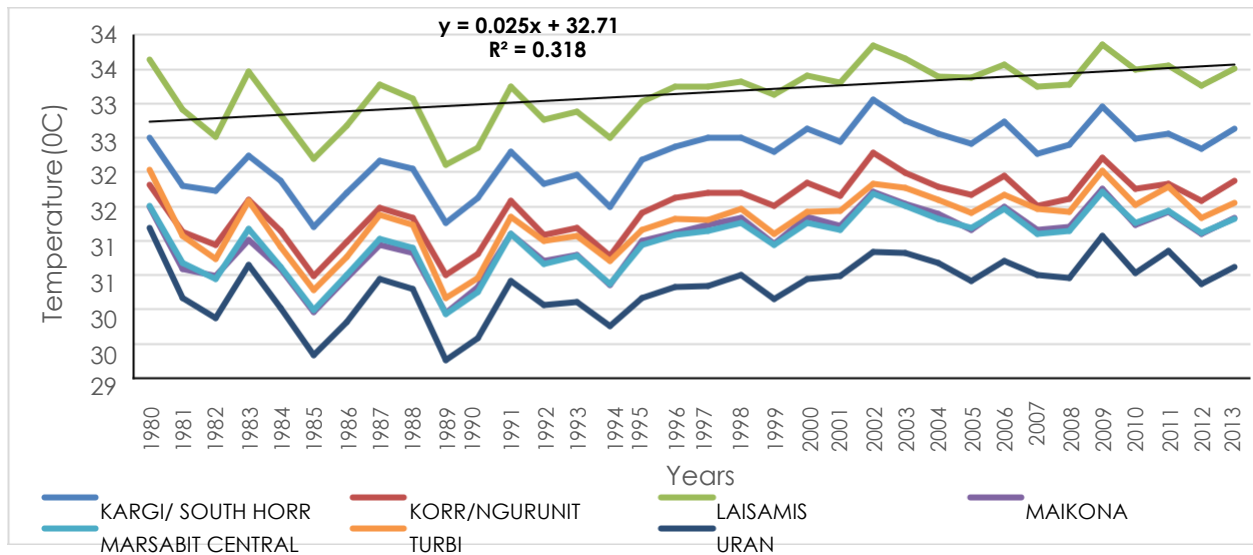
The Intergovernmental Panel on Climate Change (IPCC) 2007, recommended indicators that can be used to detect climate change. Some of these indicators include the “number of nights with temperature below/above certain threshold values”, cold and warm spells indicators, the daily temperature range, extremely wet days, and the number of heavy precipitation days; among others. Several approaches can be used for the analysis of climate change, including statistical and graphical techniques. Modelling is one technique used to simulate climatic variables to generate projections of climatic conditions in the future. However, these projections are based on assumptions and have high uncertainties, to inform responses and address current and future climate-related impacts.

1.1.6.1. Temperature Change Trends and projections

Climate change is expected to cause global average surface temperature to increase some 1 to 2.5 °C by 2030 and it is predicted that during this period, billions of people, particularly those in developing countries will face changes in rainfall patterns and extreme events, such as severe water short-ages, droughts or flooding. These events will increase the risk of land degradation and biodiversity loss. Climate change will also affect the length of growing seasons, and crop and livestock yields, and bring about increased risk of food shortages, insecurity, and pest and disease incidence, putting populations at greater health and livelihood risks.

The mean annual temperature in Kenya has increased by 1.0°C since 1960 and daily temperature observations show a significant upward trend in the frequency of hot days, and an even larger upward trend in the frequency of hot nights. The frequency of cold days has decreased significantly, and the frequency of cold nights has decreased even more rapidly and significantly, in all seasons. It is largely assumed that temperatures will continue to increase. Long term temperature change trends for Marsabit (1980-2014) revealed an increase in average temperatures of about 1.5°C. The trend demonstrates that while temperature is increasing with time, the rainfall does not follow the same trend.

Figure 2: Marsabit County temperature trends maps (1980 – 2014): Source REGAL IR 2016

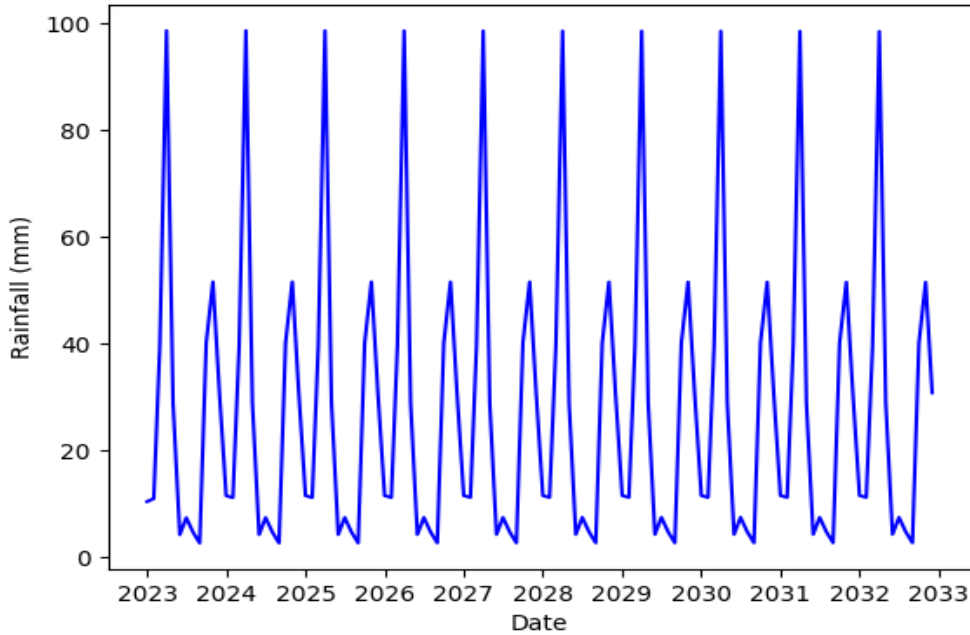


1.6.1.2. Rainfall trends and projections

Rainfall projections for the future in Kenya are inconsistent. A range of models and scenarios suggest both increases and decreases in total precipitation (www.cimatewizard). The large influence of El Niño Southern Oscillation (ENSO), as well as uncertainties, and inaccuracies for county levels in climate models make it very hard to find scientific evidence that the climate is going to change in Marsabit County. It is however, largely taken that temperatures continue to increase, and rainfall will even be more erratic than it already is today.

Figure 3: Forecasted rainfall pattern from Jan 2023 to Dec 2032 in Marsabit County

Forecasted Rainfall Pattern from Jan 2023 to Dec 2032 in Marsabit County_S

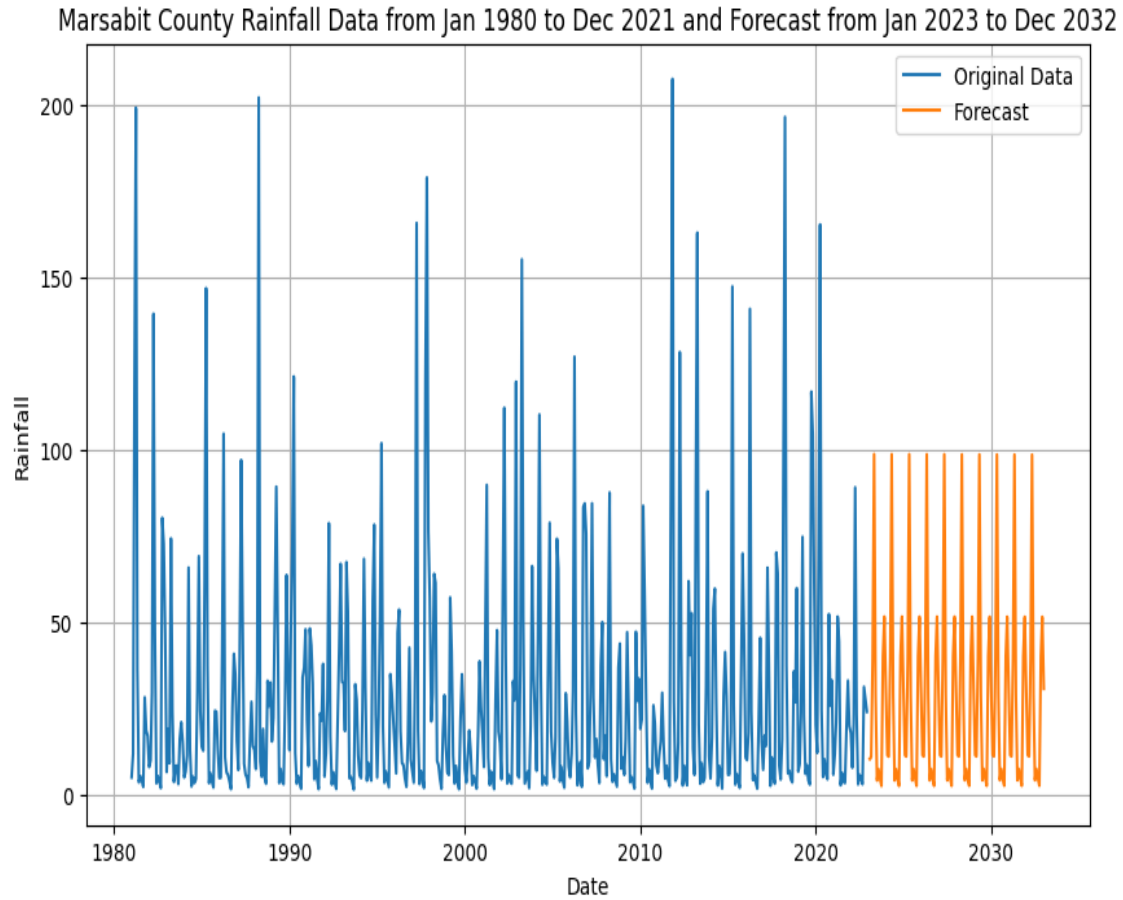


Source: KMD and NDMA

The forecasted rainfall for Marsabit County shows a trend with the highest peak experienced in April followed by November, then October, March, December and finally May. These are the 6 months with notable high rainfall ranging from 30.75mm in Dec to 98.62mm in April. This can be translated to long rains from March, peaking in April with an average of 98.56mm across the decade and ending in May and short rains starting in October, peaking in November at an average of 51.50mm across the years and ending in December.

Subsequently, April and November are the months with the highest rainfall all through the years, whereas September is the month with the least rainfall at an average of 2.58mm over the decade followed by June at 4.16mm.

Figure 4: Marsabit County Rainfall data from Jan 1980 to Dec 2021 and forecast from Jan 2023 to Dec 2032



(Source: KMD and NDMA)

Comparably, the months with the highest rainfall in the previous decade were April, November, October, March, December and May each averaging at 115.28mm, 52.56mm, 44.05mm, 43.74mm, 30.41mm and 28.72mm respectively and across the decade. On the other hand, September and June were also the driest months with 3.11mm and 3.88mm monthly average across the last 10 years. The forecast data gives a similar trend as the most dry and wet months of both decades, mirror.

Table 1: Next Decade and Last Decade Comparison

Next Decade and Last Decade Comparison												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Last Decade	11.34	11.08	39.49	98.56	28.78	4.16	7.65	4.65	2.58	40.09	51.50	30.74
Next Decade	9.68	11.18	43.74	115.28	28.72	3.88	7.68	4.54	3.11	44.05	52.56	30.41

(Source: KMD and NDMA)

In the coming decade, Marsabit County will experience a monthly average rainfall of 27.55mm and a decade sum of 3306.14mm compared to the previous decade that had a decade sum of 3548.23mm and 29.57mm monthly mean rainfall. Taken together, this represents a 6.82% reduction in the amount of rainfall in Marsabit County for the coming decade.

1.6.1.3. Vegetation Cover Changes and productivity trends

Monitoring vegetation productivity is important in assessing threats to environment and to ensure feed and food sustainability to humans and animals. Past studies have estimated vegetation productivity using normalized difference vegetation index (NDVI) which is an indicator of photosynthetic activity in a living plant. NDVI has also been used as an indicator (proxy) for vegetation vigor and vitality. Droughts are caused by precipitation well below normal averages and a major climatic condition which affect vegetation and livelihoods in the ASALs. Among the effects of drought is the low vegetation quality and quantity. Indeed, vegetation productivity during the dry seasons is one of the most limiting factors to pastoral livelihood sustainability in Marsabit County and the entire the ASALs.

A time series vegetation cover studies (1990-2015) by REGAL-IR in 2016 for Marsabit confirmed a shift from forests, woodlands, bushlands and herbaceous cover to grasslands and shrub land marking the beginning of the disappearance of the typical savannah vegetation in Marsabit. In 1979, for instance, shrub land covered an estimated area of 4,076,584.71 Ha followed by grassland at 2,839,840.64 Ha cropland covering an estimated area of 11,469.19 ha with the least dominant LULC type then being a settlement which covered an estimated area of 44.51 Ha. Major changes were recorded in Marsabit between 1979 and 2014 across nearly all LULC types, with a total of 380,001.52 Ha immersed bare land over the 35 years. It is noteworthy to mention that a huge fraction of this change (90.33 percent; 343,260.82 Ha) was gained during the 2010 and 2014 window. Conversely, grassland registered the highest losses within the same period. Again, most (394,867.73 Ha) of this loss occurred between the 2010 and 2014 period. It will be remembered that Kenya has

experienced successive drought episodes beginning late 2009 through 2017, only varying in intensity.

1.2 Underlying Climate Resilience Context

1.2.1 Hazard map

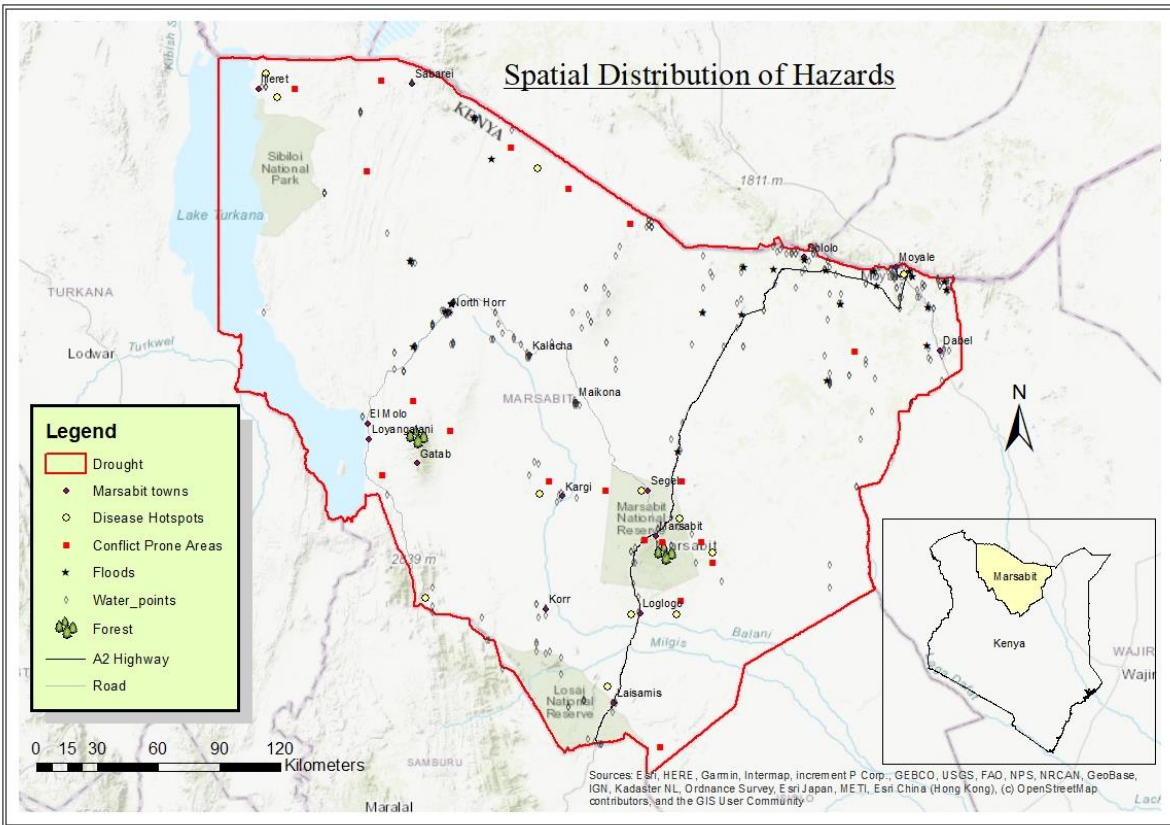


Figure 5: County hazard map

1.2.2 Historical Climate Hazards and trends in the county

YEAR	EVENT/HAZARD	NEGATIVE EFFECTS/IMPACTS	POSITIVE EFFECTS/IMPACTS
1990-1992	Drought	Livestock deaths, human starvation, conflicts and migrations	Active butter trade, for example (Somali Posho) Rendille (goats)
1993-1994	Conflicts	Displacements, loss of life and property	Currently the some areas serves as livestock grazing fallback area, it also falls under national reserve with wildlife i.e. elephants, Lions, Giraffe etc.
1997-1998	El -Nino	Outbreak of livestock diseases, destruction of infrastructure, shortage of food supplies, interrupted communication channels, loss of livestock, human diseases	Upsurge in mudfish, enhanced pasture regeneration and crop production/yields, (maize, Beans, Sorghum)

YEAR	EVENT/HAZARD	NEGATIVE EFFECTS/IMPACTS	POSITIVE EFFECTS/IMPACTS
1999-2000	Human diseases (Cholera outbreak)	Loss of human lives, closure of schools and business enterprises particularly eateries and hotels, markets medicine stock-out at major health facilities	Response from Government with medicines, water treatment chemicals, relief food supplies by NGOs, temporary employment for CHWs to sensitize communities, (the present day CHVs)
2001-2004/5	Drought	Conflicts, migrations, outbreak of diseases, livestock diseases, shortage of food due to loss of livelihoods (Livestock)	Initiation of Government relief programme (EMOP)
2005-2006	Conflict-Turbi Massacre/plane crash	-Massive human deaths, loss of livelihoods/livestock, closure of businesses - All the four-constituency member of parliaments for Marsabit county perished	Initiation of the Kenya Police reservists (KPR) currently National police Reservists (NPR) Peace prevailed among the warring communities, formation of ambassador positions in the region
2008-2011	Drought	Conflicts, migrations, outbreak of diseases, livestock diseases, shortage of food due to loss of livelihoods (Livestock), massive school drop-outs to join bird shooting as a livelihood	Construction of water harvesting infrastructure, livestock market-based and slaughter-based offtake, bird-shooting as a livelihood, establishment of NDMA through a legal notice to manage issues of drought
2009	Human diseases(Cholera)	Loss of human lives, closure of schools and business enterprises particularly eateries and hotels, markets medicine stock-out at major health facilities	Equipment of medical facilities by government
2014-2015	Drought	Conflicts, migrations, outbreak of diseases, livestock diseases, shortage of food due to loss of livelihoods (Livestock), massive school drop-outs to join bird shooting as a livelihood	Development of integrated county drought contingency plan
2019-2020	Covid-19	Closure of businesses, movement restrictions,	Improvement in health centers
2019-2020	Desert locusts, Fall armyworms	Destruction of crops and vegetation cover	-Youth employment to monitor locust
2019-2022	Drought	Massive livestock deaths, estimated at over50% of the total herd	Formation of the national steering committee on drought response bringing together the public and private sectors at the national level
2023	Flood	Destruction of farm land/crops/rangeland. Human and livestock deaths	Productive rangelands, emerging of wild fruits

Table 2: Historical timeline of hazards in Marsabit County

1.2.3 Major Hazards experienced in the county

Drought, ethnic conflict, livestock pest and diseases are the most pressing hazards that are experienced in the agro-pastoral livelihood zone almost every

year in the last 10 years. Besides, crop pest and diseases and flooding are ranked at position 4, 5 and 6 respectively. Other hazards that are experienced every year but are not as important include human wildlife conflict, high variable food prices, and shortage of food in the market, shortage of drinking water among others. These findings were provided by the National Drought Management Authority office in Marsabit and corroborated by community discussions during the PCRA process.

Table 3: Major hazards and Risk experienced in the county

Name of Hazard	Risk	Rank of importance	No of years experienced in last 10 years	Wards
Drought	<ul style="list-style-type: none"> ✓ Scarcity of water ✓ Food insecurity/shortage of food ✓ Animal theft ✓ Human wildlife conflict ✓ Scarcity of pasture ✓ Erratic rainfall ✓ Bush fire during dry spell ✓ Prolong dry spell 	1	4	Township, Hellu Manyatta, Butiye, Golbo, Ubbu, Uran, Sololo, N.horr, Maikona, DuKana, Illeret, Turbi/Bubisa, Laisamis, Logologo/Kamboe, Korr/Ngurunet, Kargi, Loiyangalani/Mt Kulal, Mountain, Sagate/Jaldesa and Karare/Songa
Resources based conflict	<ul style="list-style-type: none"> ✓ Land degradation ✓ Shortage of human and livestock water use ✓ Unclear boundary issues ✓ Ethnicity/tribalism ✓ Political incitement ✓ Competition over scarce resources during dry spell 	2	3	Logolo/Kamboe, Mountain, Karare, Sagante/Jaldesa, Kari, Maikona, Turbi, Uran Dukana, Loiyangalani/Mt Kulal and Illeret
Human and livestock Diseases	<ul style="list-style-type: none"> ✓ Weak livestock body condition during drought ✓ Water borne diseases due to water scarcity ✓ Terminal illness 	3	10	Kargi/S. horr, Sagate/Jaldesa, Logologo/Kamboe, Laisamis, Dukana, Illeret
Flooding	<ul style="list-style-type: none"> ✓ Strong heat and dry condition makes soil loose hence prone to flood ✓ Poor drainage ✓ Destruction of properties ✓ Human and livestock deaths ✓ Increase in water borne diseases ✓ High winds/cyclones 	4	10	Obbu, Sololo, Logologo/Kamboe, Uran, Butiye, Dukana

1.2.4 Spatial Distribution of Climate Hazards in the County

Drought: As shown in the hazard map, drought is experienced in the entire county with its intensity of effect varying according to sub county vulnerability

exposure. Laisamis and North Horr Sub Counties are mostly affected due to their aridity and over-dependence on pastoralism.

Disease outbreaks: With changing climate, some regions have also experienced unique disease outbreaks like Kalaazar (disease caused by sand flies) which has mainly affected herders. The cases of kalaazar have been reported in Laisamis Sub county (Gudas, Logologo, Kargi, Laisamis among other areas), North Horr Sub County (shurr) and Saku Sub County (Kupiqalo and Segel). Marsabit County has been known as a malaria free-zone. However, there have been recent reported cases of malaria in Kargi, causing the deaths of 10 people in a span of two weeks, immediately following the short rains of 2023. Other malaria cases were reported in Dukana, illeret and Saku.

Resource based conflicts: resource-based conflict is another hazard mostly caused by competition for scarce rangeland resources (water and water). Recurring drought and keeping of large number of livestock has led to environment degradation that sustains competition for the scarce resources. Where proper negotiation on utilization those resources has not been met, conflict occurs leading to loss of lives and livelihoods. Climate change is increasing the rate of rangeland degradation and associated conflicts while political incitement and boundary disputes remain other triggers. Conflict hotspots include Saku, Songa Badasa, Shurr, Jaldesa, Gudas, Orender, Yel, Kambimye/Segel, Arapal/Gas, Sarima, Kom, Elebor/Eledimtu, Funanqubi, Forole, Illeret and North Horr among others.

Floods: After a prolonged drought, the County is always visited by flash floods following heavy down pour. The ongoing short rains of 2023 has led to widespread flooding in areas like Moyale Sub County (Dabel, Kinisa, Godoma, Watiti) Sololo (Anona, Watiti, Bori, Antut, Qate, Madowadi, Uran and elebor, Bathanareno, Ambalo), Saku town, Balesa, Milgis and Kargi. This has led to destruction of property, social infrastructure, and loss of livelihoods and disease outbreaks.

1.2.5 Impacts of Climate Hazards in the County

Livestock and Pastoralism: Given the recourse to mobility to manage climate variability, Pastoralism is inherently adaptive cli-mate change (ASAL Policy 2016). However, the increased frequencies of extreme weather events multiply the impact of factors that constrain pastoralists' livelihood. Recurrent droughts and degradation of natural resource base have made local population in the County more vulnerable and dependent on food aid and emergency relief. Scarcity of water, pasture and fodders; incidences of diseases and pests and limited use and access to inputs; increased cases of human/wildlife conflict caused by wild animals attacking livestock as pasture and water in their normal

habitats are reduced, and insecurity play a major role in limiting livestock productivity. .

Agriculture: Over the last 10 years extreme climatic variation coupled with improper land use systems have resulted into farmers reporting successive crop failure thereby increasing the county's food insecurity. The pockets of high potential areas in the county are already experiencing significant crop losses in three out of four consecutive seasons. A number of indirect impacts, such as increased rates of runoff, soil erosion, and increased crop losses from wild-life migration, insects, diseases and invasive weeds, notwithstanding limited crop production inputs could significantly magnify production losses. Decline in agricultural production will be detrimental for food security and human health of small subsistence farmers and their local communities. Increased frequency and intensity of extreme weather events will also lead to loss of productive assets, personal possession and even life. This has been already observed, but will intensify in the future if efforts are not raised to stop global warming.

Fisheries: Lake Turkana, the world's largest permanent desert lake is the main source of fish in Marsabit County. Fishing is an important livelihood activity for several communities namely El-Mollo, Turkana, and Daasanach who live along its shores. Fishing provides direct employment to the fishermen, traders, transporters, and boat builders. Fishing from the lake involves mainly men while women are engaged in processing (gutting) and preservation activities such as drying and salting. Application of appropriate technologies in fish harvesting and preservation is still very low, due to lack of skills and finances. Climate Change will negatively affect plankton abundance and other aquatic life; reduced volumes of water due to evaporation and alteration of chemical composition will affect water quality and aquatic life; temperature changes will most likely result in changes in upwelling patterns of water, affecting fish spawning period and success of larvae thereby altering the entire life cycle and fish population. Fishing in Lake Turkana is also likely to be affected by recurrent droughts that starve the lake of inflowing water and nutrients leading to reduction in water level with consequences of changing water quality and reduction in fish stock. Taken together, this will affect the adaptive capacity of the fisher folks due to lack of alternative livelihood.

Water and Sanitation: There are no permanent rivers in the county, though four main drainage systems exist. Ground water is also on the verge of being over-extracted and in many areas not suitable either for human and livestock consumption or irrigation. Besides quality issues, most of the water sources do not have sufficient water to satisfy human and livestock demand. Over the last 20 years major drainages systems in the region like Ewaso Nyiro River have also experienced severe reduced volumes during droughts while seasonal rivers have dried up completely affecting recharge rates tremendously. Impacts of

climate change on water sources will affect drops in water levels as a result of reduced recharge rates; water catchment degradation; siltation and contaminations of surface waters because of severe erosions by run-off occasioned by degradation of environment; reduced water quality and incidences of water borne diseases; depletion of sub-surface aquifers emanating from haphazard developments of boreholes in the rangelands without regard to environmental compliance; high levels of salinity as a result of changes in water chemical composition, poor recharge rates/ high evaporation and drying up of springs and oasis.

Rangelands and Wildlife Resources: Rangelands are primarily arid and semi-arid lands (ASAL) where other land uses like crop farming are not economically feasible. The rangelands are home to many important plant and wildlife species which contribute greatly to daily sustenance of local communities. Impacts of climate change on the rangeland include changes in water availability, pasture productivity; frequent droughts leading to massive livestock and wildlife deaths; increased human–wildlife conflict due to changes in migration patterns and or dispersal corridors and incidences of vector borne diseases on the tourism industry; increased resource based conflicts between pastoralists as a result of livestock migration and convergence in drought pastures; loss of biological diversity (plants, animal species, bees migration /die out) and reduced aesthetics of landscape as result of degradation; invasive species (encroachment) and over-stocking as result of poor grazing plans leading to pasture depletion.

Tourism: Marsabit County has great tourism potential. It has unique cultural and geographical diversity. The County is regarded as the cradle of mankind and hosts the world famous Koobi Fora Archaeological Site where the fossils of the earliest hominids were discovered. Other unique tourism attraction sites are Chalbi Desert, craters, Lake Paradise on Mt Marsabit, unique natural forest/island in the desert, Desert museum, South Island National Park in Lake Turkana, the Petrified Forest in Sibilo National Park, and Marsabit National Park. Frequent and severe droughts experienced in the rangelands over the last 20 years as result of climate change/global warming are likely to affect and even destroy some of the above unique sites like Mt Marsabit forest/National Park and the rangelands that host the majority of wildlife. Observable change in the forage and vegetation pattern across the County is already forcing the wildlife species to migrate to newer sites, neighboring Counties and or even across international borders, inter communal conflict / human wildlife conflicts are leading to reduced visitation and loss of revenue.

1.2.6 Summary of Differentiated Climate exposure and Vulnerability of key groups

As a society, we have structured our day-to-day lives around historical and current climate conditions. We are accustomed to a normal range of conditions and may be sensitive to extremes that fall outside of this range. Climate change could affect our society through impacts on a number of different social, cultural, and natural resources. Some groups of people will likely face greater challenges than others. Climate change may especially impact people who live in areas that are prone to drought, flood, conflict or people who live in poverty, older adults, and marginalized communities as explained in the sections that follow.

Women: Drought disproportionately affects women and girls in Marsabit County. It is women, who often bear the primary responsibility for household and family care and may face greater challenges accessing quality health services due to shifts in priorities caused by climate change. They may also experience family instability, as men are forced to travel long distances to find grazing land for their livestock. Gender disparities also mean that women often travel long distances in search of water due to drying up of water reservoirs.

Youth: Youth represent a crossover between the present and future generations, yet they are seldom involved in climate change response strategies. Climate change is already contributing to increased youth unemployment in sensitive sectors such as agriculture, manufacturing and tourism. This is particularly problematic for youth in Marsabit County, among whom, 83.3% are multi-dimensionally poor compared to a national average of 48.1% (CIDP; 2023-2027). For youths aged 18-34, the core drivers of multidimensional poverty are housing (79.9%), nutrition (76%), education (74.5%), sanitation (71.4%) and economic activity (55.8%). Limited economic opportunities will likely result in youths dropping out of school, turning to crime like cattle rustling, rural-urban migration and poor performance in school

Elders: For the elderly population in Marsabit County, 91% are multi-dimensionally poor compared to a national average of 55.7%. Among adults aged 35-59, the core drivers of multidimensional poverty are education (90.2%), housing (80.2%), economic activity (80.4%), and sanitation (69.9%). Among the elderly aged 60+, the core drivers of multidimensional poverty are education (95.9%), housing (88.9%), nutrition (88.6%), and sanitation (78.5%). At the same time, climate change risks such as droughts tend to increase elder's vulnerabilities: appropriate foods may be unavailable, their mobility might be reduced and their dependence on others may increase. Droughts also negatively affect the traditional roles of older people, and perhaps more specifically their social

position, as communities and power and support structures are dismantled, leaving older people with less influence and power.

Children: 85.3% of children in Marsabit are multi-dimensionally poor. This is 33-percentage points higher than the national average of 52.5%. Among children aged 0-17, the core drivers of multidimensional poverty are nutrition (87%), housing (83.8%), information (79%) and water (60.4%) census 2019. Children are among the most vulnerable to the climate risk hazard such as drought. Families have been driven to an increased reliance on negative coping mechanisms and strategies, which indirectly or directly affects children. When families are faced with difficult decisions in order to survive, they may be forced to leave their children, including at streets/relatives, so they can search for work or pasture; reduce the mouths they need to feed by engaging their children in forced marriage; or rely on their children for financial support and essential household activities. Negative coping mechanisms and strategies involving children have long-term repercussions, especially as children often do not have the same agency as adults, making them vulnerable to the decisions taken by their caregivers. Extremely high rate of malnutrition has been also recorded among children in the county owing to frequent droughts that impact feeding.

Persons with Disability (PWDs and Minority groups: As the climate continues to change, hundreds of marginalized people in Marsabit County face increasing challenges in terms of extreme events, health effects, food, water, and livelihood security, migration and forced displacement, loss of cultural identity, and other related risks. PWDs are already grappling with discrimination and mobility challenges. Drought and floods often push them to the periphery owing to their mobility challenges. Minority groups in Marsabit County are also impacted by climate change. For instance, climate change is contributing to chemical changes in L. Turkana and the resultant reduction in fish stocks means that the El Mollo people are increasingly finding it difficult to meet their livelihood needs. Assimilation by neighboring communities also threatens the cultural identity of the community. This is particularly of concern to policy makers at both levels of government. In response, the government has initiated plans to develop the El Mollo dictionary to preserve the language—that very few members of the community speak.

1.3 Brief Overview of Climate Change Actions in the County

1.3.1 Mainstreaming of National Climate Change Action Plan in County Actions

The Climate Change Act (2016) provides the regulatory mechanisms to implement climate change resilience and low-carbon actions in both public and private sector development activities and has enshrined the National Climate Change Action Plan (NCCAP) – to be developed in 5-year cycles and

aligned with the Medium Term Expenditure Plans (MTP IV)—as its principal implementation instrument. It requires County governments to domesticate the Act through plans, policies, and programs and finance such programs through the public expenditure management cycle.

The Marsabit County Climate Change Action Plan (2018-2022) identified the most vulnerable sectors negatively impacted by climate change, associated action plans, implementing agencies, and indicative budget. Among others, the plan recommends the following adaptation actions: promoting climate-smart agriculture, livelihood diversifications, and water catchment protection, building the resilience of at-risk communities, rangeland rehabilitation, and stakeholders' awareness on climate change and mainstreaming adaptation actions across all county departments. The second plan (2023-2027) replaces the initial plan and is aligned with the third generation CIDP (2023-2027) for enhanced implementation.

The MCCCAP (2023-2027) identifies specific investments for building resilience to climate change in the county. Following the adoption of this plan, next steps will focus on cross-county/regional bloc planning for climate resilience and integrating the CCCAPs into the national climate change action planning process. This provides a pathway for bottom-up integration of counties' climate resilience priorities into the National Climate Change Action Plan (2023-2027).

1.3.2 Climate Change in the CIDP

The Marsabit County Integrated Development Plan (CIDP; 2023-2027) is the county's 5-year master plan for socio-economic development. The CIDP forms the basis for allocation of resources to County projects. It is one of the primary development blue prints for counties to engage the public and prioritize critical areas of development. Indeed, the County Government Act (2012) and the Public Finance Management Act (2013) provides that no public funds shall be appropriated outside a planning framework developed by the county executive committee and approved by the county assembly. The county planning framework shall integrate economic, physical, social, environmental (climate change) and spatial matters. In fact, the current CIDP provides key indicators for tracking climate change response across all sectors of the county economy. The CIDP also informs the ADP and county annual budget. These shall be based on the annual development priorities and performance targets as provided in the CIDP. As such, the CIDP a critical entry point for the public engagement in the county's planning and development, mainstreaming climate change, tracking progress regarding the implementation of climate actions and contributing towards the national climate targets through Medium Term Plans.

1.3.3 Other key climate actions/strategies in the County

The County Government of Marsabit has developed other frameworks to deepen climate change response in the county. These include among others, Marsabit County Climate Change Mainstreaming Guidelines that provide direction to county policy makers and implementers on how to mainstream climate actions across sensitive sectors including agriculture, water and sanitation, health, emergency response, trade and energy while placing an emphasis on the vulnerable groups. The county has also enacted complimentary policy frameworks on enterprise development, co-operatives development, livestock production, rangeland management, community health, ECDE education, tourism and promotion of cultural heritage. Most importantly, the county is implementing flagship projects with a bearing on climate change adaptation and mitigation in concert with the national government, private sector and development partners. These include, among others, Lake Turkana Wind Power Project, climate smart agriculture projects, mega water and sanitation projects, roads and other communication infrastructure as well as security interventions.

2. Policy Environment

2.1 International Policy Context

The United Nations Framework Convention on Climate Change (UNFCCC) sets an overall framework for intergovernmental response to climate change, recognizing that the climate system can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The UNFCCC was adopted on May 9th, 1992 and opened for signatures at the United Nations Conference on Environment and Development the same year. Among others, the conference also adopted the Agenda 21, the Convention on Biological Diversity and the United Nations Convention to Combat Desertification. It is a non-binding agreement. Currently, there are 197 state parties to the Convention, including Kenya.

Through its Conference of the Parties (COP), the UNFCCC provides a platform for state parties and other key stakeholders to take stock of the status of implementation of climate change actions as well as recommendations necessary to promote the effective implementation of the Convention. Decisions made and agreed to by Parties at the COP are binding to all the UNFCCC Party States, and therefore to sub-national governments under the Party States. This is the relevance of the Convention to Marsabit County for Kenya is a Party to the Convention.

Intergovernmental Panel on Climate Change (IPCC): The UN Environment Programme and the World Meteorological Organization (WMO) jointly established the IPCC in 1989 to provide broad and balanced information about climate change. The IPCC fulfils this role by reviewing and assessing the most recent scientific, technical and socioeconomic information produced worldwide relevant to the understanding of climate change and translating this information into IPCC Assessment Reports and other periodic releases. IPCC's mandate to member states such as Kenya and its sub-national entities such as Marsabit County Government enables provision of scientific, technical and other relevant information that informs climate change actions that entities should adopt. Such information includes projected temperature and rainfall changes and associated spatial and temporal socio-economic impacts.

The Paris Agreement: The Paris Agreement to the UNFCCC, just like the Kyoto Protocol is an instrument of the UNFCCC. The Convention is a consensual, non-binding agreement that must be implemented by politically binding agreements such as the Kyoto Protocol, the Paris Agreement and others that will be agreed to, under the COPs. The Paris Agreement was adopted in Paris, France in 2015 in COP 21 and came into force on November 4th, 2016. To date,

187 Parties of the 197 Parties to the UNFCCC have ratified the Agreement. Kenya ratified it on December 28th, 2016.

The Paris Agreement mandates all Parties to the UNFCCC to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. This is achieved primarily through the Nationally Determined Contributions (NDCs), which are country-specific and owned action plans detailing mitigation, adaptation and other related actions individual countries intend to undertake in order to combat climate change. NDCs are implemented at both national and sub-national levels, and many actions in Kenya's first NDC relate to a number of devolved functions of interest to Marsabit County.

2.2 Regional Policy Context

African Ministerial Conference on Environment: The African Ministerial Conference on Environment (AMCEN) was established in December 1985, following a conference of African ministers of environment held in Cairo, Egypt. AMCEN is a platform that brings together African ministers for environment to deliberate on common environmental and sustainable development issues of the continent. AMCEN has increasingly played a key role in advancing Africa's common positions on climate change, particularly with respect to the COPs and is therefore of relevance to sub-national governments like Marsabit. For instance, issues that inform the common positions that AMCEN advances at the COPs are discussed at both national and county levels. Kenya has particularly been active as well as played a key role in AMCEN given its role as the host of the United Nations Environment Programme (UNEP) that provides secretariat services for the platform.

The East African Community (EAC) Climate Change Policy (2010) guides Partner States on the preparation and implementation of collective measures to address climate change in the region. The African Union's Agenda 2063 commits to climate change action that prioritises adaptation and calls on member countries to implement the Programme on Climate Action in Africa including a climate-resilient agricultural development program. Moreover, AU's Agenda 2063 commits to building climate-resilient economies and communities.

The Intergovernmental Authority on Development (IGAD) has also prepared the **IGAD Drought Disaster Resilience and Sustainability (IDDRS) Strategy**. IGAD Member States, Kenya included, developed Country Programming Papers (CPPs) for the Ending Drought Emergencies (EDE) interventions to be undertaken at the national level, from which the County Governments can now draw on for their drought resilience initiatives. Lastly, the African Union (AU) Policy Framework for Pastoralism in Africa aims to secure, protect and improve the lives, livelihoods, and rights of African pastoralists.

2.3 National Policy Context

The Constitution of Kenya 2010 forms the foundation of the institutional and legal framework for climate change action. Article 10 sets out the National values such as sustainable development. Article 42 provides the right to a clean and healthy environment for every Kenyan. The constitution created 47 devolved County Governments which have a key delivery role in climate response. For instance, the Fourth Schedule to the Constitution mandates counties to intervene on climate-sensitive sectors such as water and sanitation, agriculture, forestry, public works, health, and tourism.

Kenya Vision 2030 and its Medium Term Plans: The Vision 2030 presents opportunities to identify climate-related actions and priorities through its implementation tools; the medium term plans (MTPs). The Fourth MTP (2023-2027) thus has a dedicated section on climate change, in addition to treating the same as a crosscutting theme in all sectors of the economy including governance and the rule of law. This is a key lesson for counties on how to mainstream climate change. The MTP IV identifies actions to address climate change, including implementation of the second National Climate Change Action Plan (NCCAP 2018-2022) and the Green Economy Strategy and Implementation Plan (GESIP 2016-2030) as well as mainstreaming of the Climate Change Act 2016 into sector policies, programs and projects formulation.

Green Economy Strategy and Implementation Plan 2016-2030: The Green Economy Strategy and Implementation Plan (GESIP) 2016-2030 aims at providing guidance to all development actors to adopt pathways with higher green growth, cleaner environment and higher productivity relative to the business as usual growth scenario. It will aid Kenya's transition to a low carbon development path through promotion of economic resilience and resource efficiency, sustainable management of natural resources, development of sustainable infrastructure and providing support for social inclusion. Similar to the other plans, policies and strategies for green growth/climate change response, GESIP recommends for mainstreaming of its proposed actions into development planning at both national and county levels, complemented by sound inter-governmental coordination for creating synergies.

Climate Smart Agriculture Strategy 2017-2026: The Climate Smart Agriculture Strategy 2026 was developed to address the effects of climate change on the agricultural sector, taking cognizance of the importance of the sector to the country's economy. Agriculture being a devolved function, implementation of the strategy largely rests with county governments. The strategy thus recommends that each county develops CSA policies, strategies and plans to guide implementation or integrate County specific strategies into its County Integrated Development Plans (CIDPs) and other plans.

Public Finance Management (Climate Change Fund) Regulations, 2018: The draft Public Finance Management (Climate Change Fund) Regulations, 2018 aim at operationalizing the Climate Change Fund. The Regulations provide for the disbursement of the Fund's resources in the form of loans, grants or equity to eligible implementing agencies including county governments, as provided for in Section 25, for development of innovative actions that benefit climate change responses in Kenya.

The Climate Change Act (2016) provides the regulatory mechanisms to implement climate change resilience and low-carbon actions in both public and private sector development activities and has enshrined the National Climate Change Action Plan (NCCAP) – to be developed in 5-year cycles and aligned with the Medium Term Expenditure Plans (MTP IV)—as its principal implementation instrument. It requires County governments to domesticate the Act. The National Adaptation Plan (2015-2030) aims to integrate climate change into national and county level development planning and budgeting, as well as enhance the resilience of vulnerable populations to climate shocks. Section 19 of the act has given Counties role to integrate and mainstream climate actions into County planning, that, County Integrated Development Plan, Sectoral plans) it also allows Counties to designate CECM in charge of climate actions/affairs to coordinate and submit progress report on County climate actions. It also allows Counties to enact legislation to implement Climate Change Act of 2016

2.4 County Enabling Legal & Policy Framework

The Marsabit County Climate Change Action Plan (2018-2022) identifies the most vulnerable sectors negatively impacted by climate change, associated action plans, implementing agencies, and indicative budget. Among others, the plan recommends the following adaptation actions: promoting climate-smart agriculture, livelihood diversifications, and water catchment protection, building the resilience of at-risk communities, rangeland rehabilitation, and stakeholders' awareness on climate change and mainstreaming adaptation actions across all county departments.

Marsabit County Climate Change Adaptation Policy (2019) is a major milestone in addressing county residents' vulnerability to climate change. The policy's overarching objective is to reduce vulnerability to the impacts of climate change by building adaptive capacity, enhancing climate change resilience and strengthening capacities for disaster risk reduction. The policy also provides a framework for mainstreaming climate change adaptation in county planning and budgeting cycle, promotes climate change awareness, mechanisms for mobilizing climate finance, and mainstreams gender in the county's climate change adaptation and mitigation efforts. The policy also creates a robust

institutional framework for climate change response, recommends the adoption of specific legislation to better implement locally-led climate change response activities in Marsabit County.

Marsabit County Climate Change Fund Act (2020) creates a Fund that will, among others, finance climate change programs in the county, mainstream climate response in the county planning and budgeting cycle, domesticate national climate change policies, support climate change awareness in the county, and create various institutions including community-level structures such as Ward Climate Change Planning Committees. The Act offers guidance on how to access additional finance for climate change interventions, including but not limited to the National Climate Change Fund and mechanisms to leverage Public Private Partnerships (PPPs) as a vehicles for implementing low carbon climate resilient development activities in the county.

Marsabit County Climate Finance Framework (2023-2025). Section 14 of Marsabit County Climate Change Fund Act (2020) mandates the County Government to publish a County Climate Finance framework every three (3) years. Among other objectives, the Framework seeks to unlock financial resources necessary for the implementation of the County Climate Change Policy and County Climate Change Fund Act, establish an optimal mix of policy and financing tools thereby making climate change investments more attractive to private investors, provide assurances that the climate funds are used effectively and guarantee that climate change activities are undertaken as efficiently, mainstream climate change response into county planning and budgeting cycle and promote balanced and fair access to climate funds available so that vulnerable communities have equal access through affirmative action.

3. Priority Climate Change Actions

3.1 Strategic climate actions

3.1.1 Priority actions in the PCRA

Recurring Droughts: Drought is one of the major hazards in Marsabit County and therefore the choice of the right adaptation strategy and its effectiveness is extremely important. Adaptation strategies proposed during the PCRA: Investing in water harvesting and ground water structures, investing in climate smart agriculture and diversification of livelihoods.

Effectiveness of adaptation strategies: Investing in water harvesting and ground water structures has been working well in the drought emergency hotspots within the County. In areas where these interventions have been implemented, return trekking distances to water sources has reduced and waiting time at water sources has also reduced. Water consumption per household per day has increased and the cost of water for a 20 litre jerry can has reduced. While this strategy has been effective, due to the vast geographical coverage of the County, the scope of this work needs to be up-scaled to cover more household and institutions in the far flung areas of the County.

Resource-based Conflicts: Most conflicts within Marsabit County are due to scarce water and pasture resources that are located within communally owned rangelands. Adaptation strategies proposed during the PCRA include: investment in water harvesting and ground water structures, promotion of participatory rangeland management and investing in peace building initiative.

Effectiveness of adaptation strategies: Through rain water harvesting and ground water structure, conflicts over scarce water and pasture can be reduced when more rain water is harvested and utilized through dams and pans, rock catchments, underground tanks and other appropriate rain water harvesting technologies. Rangeland management and investment into peace building activities can reduce conflicts over shared natural resources and improve communal co-existence and harmony. More of such investment needs to be replicated elsewhere in the County as adaptation strategies for reducing natural resource based conflicts. Human and wild life conflicts can also be reduced when investment into water harvesting infrastructures takes into consideration water for wild-life too.

Environmental degradation: Environmental degradation has remained one of the major challenges in Marsabit County. Adaptation strategies proposed during the PCRA include: Proper land management (contours, terraces, bridges,

promotion of participatory rangeland management and Sustainable waste management.

Effectiveness of adaptation strategies: Intervention into soil and water conservation structures can improve soil moisture content, soil water retention potential and this will greatly contribute to improving the vegetation cover of the degraded rangelands.

Livestock and human diseases: Livestock and human diseases affect large population of both the people their livestock in the County. Adaptation strategies proposed during the PCRA include: Control of livestock movement, promotion of participatory rangeland management, mass vaccination of livestock and equipping of health centers with drugs.

Effectiveness of adaptation strategies: Control of livestock movement limits transmission of livestock and human diseases. Participatory range management gives the community the ownership of their land resources and therefore sustainability of rangeland management become a collective responsibility of every local person living within that ecosystem. Through vaccination, immunity of both livestock and young children would be strengthened and deaths reduced.

Flash floods: In addition to other hazards, we also have major flush flood hotspots in the County. Adaptation strategies proposed during the PCRA include: Timely early warning disseminations, Proper land management and capacity building of communities.

Effectiveness of adaptation strategies: Through use of early warning bulletins and advisories provided by Kenya Meteorological Department and National Drought Management Authority to those who are living within flush flood prone areas, lives and livelihood have been saved. Continuous capacity building of the local communities to cope with hazards such as flush floods have increased chances of resilience and building their adaptive capacities during emergencies.

3.1.2 Purpose of the Marsabit County Climate Change Action Plan

Marsabit County's ability to cope with the impacts of climate change is compounded by many factors including poverty, weak institutions, poor infrastructure, lack of information, poor access to financial services and conflicts due to scramble for diminishing environmental resources. It is vital that policies and measures for adaptation to climate change are put in place across all the vulnerable sectors in order to minimize the impending climate change disasters.

The delivery of a participatory Action Plan is important for Marsabit County. If the County is to avoid the worst effects of climate change it will need to put in place a conducive and enabling framework and a concerted program of action to combat impact of climate change. An informed public on climate change and its impact is the first step. A second step is the setting up of an institutional framework for strengthening partnership, planning and implementation of climate related sectors activities in the national and county governments, Non State Actors (International organizations, Non-Governmental Organizations) and private sector, pastoralists, farmers and all vulnerable groups. The third is step is consolidation of adaptation priorities through participatory process. The fourth step involves budgetary allocation and implementation of priority actions. The fifth step involves monitoring, evaluation, learning and adapting the lessons learnt for program improvement.

The MCCAAP's primary focus is ensuring that adaptation and mitigation measures are integrated in the CIDP (2023-2027). This calls for collaborative and joint action with all stakeholders in dealing with impacts of climate change. The emphasis is to prioritize the most vulnerable sectors of the economy namely agriculture/livestock food security, water, forestry, rangelands, health, social infrastructure, trade and education.

3.1.3 Process of developing the Marsabit County Climate Change Action Plan

The first step involved the development of Marsabit County Participatory Climate Change Risk Assessment (PCRA) Report. The PCRA report identified and ranked the major hazards and risk affecting the local residents of Marsabit County and their livelihoods. The Report has also captured proposed climate adaptation actions that the communities felt, if implemented, would help them build their adaptive capacities to climate change risk/shocks.

Relevant reviews of the previous Marsabit County Climate Change Action Plan (2018-2022) was done and lessons on what worked well and what did not work well were captured. This process also benefited from climate change priorities in the CIDP (2023-2027). At this stage, CIDP priorities were merged with climate actions proposed during the PCRA process to aid implementation through the county planning and expenditure framework.

Multi-stakeholder validation workshop took place and feedback from the public was incorporated into the revised plan. The second draft of the plan was presented to the Cabinet for approval. Upon approval by the Cabinet, it was presented to the County Assembly for adoption. The adoption of the plan by the County Assembly would now pave way for the implementation of locally led climate actions as envisaged in Marsabit County Climate Change Fund Act (2020).

Once adopted at the County level, the Marsabit County Climate Change Action Plan (2023-2027) will also feed into the National Climate Change Action Plan (2023-2027), Vision 2030, Sustainable Development Goals (SDGs) and other National and International Climate Change priorities.

Finally, a ceremonial launch of the new Marsabit County Climate Change Action Plan (2023-2027) was done by the Governor and copies of the Document released to the public

3.1.4 Vision, Mission and Objectives

Vision: A prosperous and climate-resilient County

Mission: To strengthen county-wide actions towards adapting to and mitigating against a changing climate by engaging all stakeholders while taking into vulnerable groups.

Objectives: To respond to climate change by:

- Assessing the evidence and impact of climate change in Marsabit County;
- Recommending robust adaptation measures in all priority vulnerable sectors to minimize risks associated with climate change while maximizing opportunities;
- Enhancing understanding of climate change and its impact for stakeholders, relevant climate related departments, non-state actors and local communities;
- Recommending research and technological needs and avenues for transferring existing technologies;
- Providing a conducive and enabling policy, legal and institutional framework to combat climate change; and
- Providing concerted action plan, resources mobilization plan and monitoring and evaluation plan.

3.2 Sectoral Climate Change Action Priorities

The County is extremely susceptible to impacts of a changing climate because most livelihoods and economic activities are reliant on climate sensitive sectors. The most vulnerable sectors impacted on by climate change are Water and Sanitation, Agriculture and Livestock, Fisheries, Environment, Forestry, Education, social infrastructure. Understanding of hazards, causes and risk helped in identifying climate action priorities as per below table

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
Drought					
Water and Sanitation	Increased scarcity of water	Erratic rain Prolong dry spell Water over abstraction Inadequate Environmental destruction (wetlands)	Invest in water development infrastructure Proper water governance Implement water related policies/frameworks Clear rapid response plan during drought Invest in technology in water provision	-Storm water harvesting through construction of 5 mega dams -Investment technologies to reduce water losses and increase revenue into 12 replicable and scalable business models (Water ATMs 12No) -Purchase of 1000 plastic water tanks for each ward in the county; -Promotion of water harvesting, retention and re-charge technologies – check dams/weir construction -Establish 8 strategic and contingency boreholes in rangelands fall back grazing areas; - Strengthen capacity building of 15 water resource user associations / WUJAs -Development of 3 sub catchment management plans -Review and update 1 water & sanitation training manuals to	Sololo, Obbu, Towship, Hellu Manyattta, Golbo, Sololol, Uran, Maikona, Illeret,Dukana, N.horr, Turbi, Laisamis, Korr/ngurunit, Kargi/south horr, Logologo, Loiyangalani

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
				strengthen WUAs/WRUAs	
	Increase of water borne diseases	Prolong dry spell; shortage of water	<p>Provision of water through water structure investment</p> <p>Promotion of hygiene practices; community led total sanitation (CLTs)</p> <p>Support home based and institution water treatments</p>	<p>-Conduct regular/quarterly water quality testing & monitoring based on WRA / NEMA guidelines</p> <p>-Increasing urban & rural domestic water supplies & urban sewage services to help combating water borne diseases, their social & economic impacts by connecting 5000 household to tap water</p> <p>-Conduct 8 Community awareness for promotion of better hygiene campaigns</p>	Sagante, Township, Illeret, Hellu Manyatta,
Agriculture Livestock	<p>Reduction in yield</p> <p>Increase in household food</p> <p>Increase in livestock/human diseases</p> <p>Loss of livestock</p>	<p>Low soil moisture</p> <p>Delayed onset of rain</p> <p>Poor farming techniques</p> <p>Late planting</p> <p>Recurring drought</p> <p>Harvesting losses</p>	<p>Initiate modern and tradition soil erosion/conservation techniques</p> <p>Promotion of climate smart agriculture</p> <p>Invest in early warning systems and infrastructure</p>	<p>-Promotion of community based adaptation strategies, like seed bulking of drought tolerant traditional food crops</p> <p>-Development of canals and harvesting/irrigation accessories to facilitate irrigation in high yielding</p>	Saku, Sagante, Karare, Logologo, Sololo and Uran

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
		<p>Inadequate farming techniques and skills</p> <p>Inadequate livestock markets</p>	<p>Investment in strategic livestock markets</p> <p>Establish markets days</p>	<p>boreholes</p> <ul style="list-style-type: none"> -Promote flood based irrigation in six sites -Promoting Climate Smart Agriculture (CSA) -Promoting improved post-harvest storage and management of crops; and -Supporting weather index-based crop insurance to cushion farmers against crop failure and livestock losses due to drought. -Promotion of 2,500 appropriate water harvesting technology for household level crop production; sack gardens, shade nets, sustainable green houses, Zai Pits; and -Train 80 extension officers on agricultural extension services 	

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
	Loss of livestock	<p>Weak livestock body condition</p> <p>-Environmental degradation</p> <p>Overgrazing</p>	<p>-Strengthen natural resources governance systems</p> <p>-Investment in livestock production</p> <p>-Strengthen disease surveillance</p> <p>-Support livestock market during normal conditions</p>	<p>-Construction of one livestock laboratory and 4 cattle dips</p> <p>- Construction/completion of 1 abattoir</p> <p>-Strengthening of 400 disease reporters</p> <p>-Strengthen disease surveillance and regular vaccination to reduce disease outbreaks;500,000,000 livestock's vaccinated</p> <p>-Support 4 Livestock value chain addition</p> <p>-Management and conservation of drought tolerant livestock breeds suitable for the County ecosystems; 500 herders capacity built</p> <p>-Promotion of economic diversification among pastoral communities (emerging livestock / game farming;220 WCCPC capacity build</p> <p>-Capacity building on livestock / livestock by-products value addition and production system</p>	Laisamis, North Horr, Moyale and Saku

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
				<p>that is orientated to market.</p> <ul style="list-style-type: none"> -Strengthen the strategies (e.g. grazing reserves, communal fodder enclosures) used by communities to adapt to climate variability to reduce and manage the risks of natural disasters; -Strengthen indexed based livestock insurance schemes for 10000 HH against adverse effects of droughts shocks -Support regular livestock marketing systems to cushion pastoralists against drought; -Construction of 4 livestock market -Assess status of strategic infrastructure along major stock routes for rehabilitation -Promote 50 Ha commercial pasture production, seed banks and strategic feed reserves including alternative feed resources as part of 	

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
Environment, Forestry and Land use	Loss of biodiversity Human wildlife conflict Environmental degradation	Delayed onset of rains Overgrazing Water over abstraction Emerging/spread of invasive species Illegal charcoal burning/logging Extreme flooding	Environment conservation awareness Restoration of degraded rangelands Increase County tree cover Storm water management Investment in locally led climate action structures Develop and actualize environment and climate change	contingency planning; -Strengthen grazing management committees, environmental management committees for enforcement of good grazing practices; and -Landscape/rangeland restoration, reseeded, and fodder production -Protect and conserve 4 water catchment areas/watersheds, rivers banks, spring / water ways and flood plains from degradation and contamination; -Establishment of 3 mega nurseries and initiate tree growing campaigns -Promote environment clean up days -Develop Marsabit County Climate Finance Framework -Formation, training and induction of Ward Climate Change Planning Committees all the wards -Develop and implement locally-led climate	Central, Loiyangalani/Mt Kulal, Sololo, Sagante, Karare, Logologo, Uran

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
			<p>related policies/legal frameworks</p> <ul style="list-style-type: none"> -Increase public awareness campaigns on natural resource and ecosystem management for communities in key biodiversity ecologies 	<p>resilience actions</p> <ul style="list-style-type: none"> -Disseminate early warning information by ward to enhance preparedness -Identify and assess pockets of degraded forest areas in county for rehabilitation ; -Restoration of forests/woodlands on the degraded rangelands through planting of suitable tree species and in-situ conservation and regeneration of indigenous tree; and -Promote greening program in schools through establishing 5 trees nurseries and planting over 10,00 seedlings; and -Strengthening capacity of community-based forest management committee/associations (CFAs, EMCs) for the conservation of close canopy forests and woodlands -Support communities of 	

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
Fisheries (Blue economy)	Low fish catch	Over harvesting of fish Fishing from breeding sites Overgrazing of livestock at fish breeding sites Increase in water temperature during pro-long dry spell	Investment in cold chain to increase fish shelf life Provision of fishing gears Protection of breeding sites	interest to gazette 5 fragile ecosystems like springs, forest buffer zones, riverine, watersheds etc. -Support alternative livelihood opportunities to charcoal/firewood as a source of income (distribution of energy saving jikos to 1000 households -Supporting livelihood diversification strategies which add value within the fisheries sector, promotion of formal and informal job creation, self-employment and entrepreneurship relevant to the need of both women and men; -Training of 15 Beach Management Units (BMUs) to carry out fisheries monitoring, control and surveillances; -Identifying and protecting 4 core fish breeding sites to minimize unsustainable fisheries practices and	Illeret and Loiyangalani

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
				habitat destruction; and -Strengthening community participation in fisheries resources management and value addition. -Domesticate National fisheries policies, and regulation -Provision of appropriate fishing technologies -Conduct fisheries resources survey -Develop 5 cold storage and drying facilities to reduce post-harvest losses -Local campaigns on fish utilization and marketing fish products -Training fisher folks on hygiene handling of fish and fish products	
Education	Low school enrollment Pupils move with livestock during migration when looking for pasture and water Water scarcity at school Food availability at school Lack of fees	Investment in mobile schools Support school feeding programs during drought Initiate food for fees programs		-100 Climate-proofed construction of ECDE classrooms -19 Uni-huts installed for mobile ECDE schools to cover pastoralist families moving with their children -40 Energy-saving stoves	

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
		Destruction of schools infrastructure by wind and floods	during hst times	<ul style="list-style-type: none"> and equipment supplied to ECDE schools -24 Plastic/collapsible water tanks installed -Water pipeline extension from the nearest source to 7 ECDE school -Construction of 4 sub-county ECDE food stores for enhanced supply chain management -Capitation of 83,000 ECDE leaners to ease school fees payment on parents -Expansion of ECDE school feeding program to reduce malnutrition in the county 80,000 learners fed on nutritious CSB+ -Expansion of empowerment programs for 470 vulnerable youth 	
Health	<ul style="list-style-type: none"> Increased spread of human and livestock diseases Increase in pest 	<ul style="list-style-type: none"> Food insecurity at household level Loss of livelihood-livestock Poor hygiene practices 	<ul style="list-style-type: none"> Conduct SMART survey to inform the intervention Spray mosquitos breeding ground 	<ul style="list-style-type: none"> -Strengthened capacity of emergency response, early detection, prevention, and treatment of wasting. -Support health facilities to conduct mass 	<ul style="list-style-type: none"> Sololo, Obbu, Township, Hellsu Manyattta, Golbo, Sololol, Uran, Maikona, Illeret,Dukana, N.horr, Turbi,

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
	<p>diseases-Locus</p> <p>Increase in malnutrition rate among under 5, Pregnant and Lactation mothers</p>		<p>Link nutrition to homegrown vegetables/crops-kitchen gardening</p>	<p>screening of malnutrition cases</p> <ul style="list-style-type: none"> -Training of health workers to deliver effective nutrition services -Strengthening evidence-based nutrition planning, information, budgeting and implementation through SMART surveys -High-level nutrition advocacy at the county level to enhance budgetary allocation -Integration of nutrition and climate change concerns in the training and service delivery by CHVs -Enhance surveillance of climate-related diseases and manage outbreaks including the development of Malaria Outbreak Preparedness Plan -Formulate Marsabit County Environmental Health and Sanitation Policy -Train healthcare workers 	<p>Laisamis, Korr/ngurunit, Kargi/south horr, Logologo, Loiyangalani</p>

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
				<p>on malaria case management</p> <ul style="list-style-type: none"> -Procure and distribute mosquito nets (LLiTN) -Trigger villages on the CLTS model as a means of improving sanitation especially in the flood-prone areas 	
Social infrastructures	Infrastructure destruction	<p>Loss of life</p> <p>Transport destructions</p> <p>Increase in food prices</p>	<p>Provide guidelines on standard climate proof infrastructure</p> <p>Construction of climate proof infrastructure</p> <p>Cleaning of drainage before onset of rain</p> <p>Proper solid waste management</p>	<ul style="list-style-type: none"> -Strengthening disaster preparedness through improved public health systems (including personnel, infrastructure, medicine and equipment); -Support spatial planning in urban centers and areas prone to disasters; -Formation and strengthening of resident / committees Units that can respond to emergencies and involving them in key decision making; -Establishment of disaster management response committee in towns and municipalities; -Develop disaster response plans based 	<p>Central, Township, Sololo, Uran Obbu, Loiyngalani, Korr and Laisamis</p>

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
				periodic assessments and surveillance reports -Formulate County Climate-Proofing Strategy to enhance compliance when designing and developing county infrastructure projects	
Resources based conflict					
Water and Sanitation	Water insecurity	-Ethnicity indifferences -Land degradation -Shortage of human and livestock water use -Unclear boundary issues -Ethnicity/tribalism Political incitement	Strengthen water governance systems Map and Equip strategic water structures in conflict zone areas Invest in resources sharing agreement among worrying communities Rehabilitate degraded rangeland	-Promotion of tradition governance system in resource management to reduce conflict -Development of by-laws in resource benefit sharing -Organizing for peace meetings in worrying communities -Investment in water structures to increase water availabilities for livestock and household use -Resolve boundary issues -Fast track of community land registration	
Agriculture and Livestock	Loss of livestock Loss of lives	Competition over scarce water and pasture resources	Initiate grazing patterns	-Develop wet and dry grazing patterns -Facilitate 10 community	Saku, Sagante, Karare, Logologo, Sololo

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
		<p>Unclear boundaries</p> <p>Bad cultural practices</p>	<p>Strengthen tradition governance systems</p> <p>Conduct community resources mapping and clean plan on sustainable utilizations</p>	<p>perception resource maps</p> <p>-Digitalization of 10 community perception resources maps</p> <p>-Initiate reseeded in degraded land and establish pasture farms to have more pasture during drought</p>	and Uran
Environment, Forestry and Land use	Loss of bio-diversity	<p>Over harvesting in few areas to avoid conflict zone areas</p> <p>Illegal charcoal during</p> <p>Increase in climate change immigrant-destruction in resettling</p>	<p>Initiate grazing patterns</p> <p>Environmental conservation awareness</p>	<p>-Develop wet and dry grazing plans</p> <p>-Support natural resources governance system</p> <p>-Environmental awareness programs</p> <p>-Trainings on environmental conservation</p>	Saku, Karare, Sagante, Loiyangalani/Mt Kulal, Sololo, Hurri hills
Education	Loss of live	<p>Increase trauma in learners</p> <p>Destruction of leaning sessions</p> <p>Loss of loves ones</p>	<p>Support peace ambassador</p> <p>Initiate peace talks among learners</p>	<p>-Initiate and support peace ambassador program</p> <p>-Provide security to schools that are affected during hash times</p>	Laisamis, N.horr, Moyale and Saku

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
				-Support food programs	
Human and Livestock Diseases					
Water and Sanitation	Loss of lives	-Water borne diseases through contamination of water from livestock carcass	Water treatment Hygiene promotion Proper solid and liquid waste management	-Support household and institution water treatment -Promote home based water treatment -Carrying of hygiene training and promotion activities –Community led total sanitation	N.horr, Laisamis, Moyale, Saku
Agriculture and Livestock)	Low yield production Livestock mortalities	-Weak livestock body condition -Terminal illness - weak livestock immunity -increased vector population or new/emerging pathogens -crop infestation by pest	-Mass vaccination and strategic treatment -Livestock and crops disease surveillance -Strengthen diseases reporters -institute vector control measures -control of pests in crop field	-Mass vaccination and strategic treatment -livestock and crop disease surveillance	Saku,Sagante, Karare, Logologo, Sololo and Uran
Education	Low turn up in school	-Loss of live	Water treatment Hygiene promotion Proper solid and liquid waste management	-Support water treatment -Installation of hand washing facilities and improve sanitation facilities	Saku, Laisamis, North horr,

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
				-Carrying of hygiene training and promotion activities – Community/school led total sanitation	
Flooding					
Water and Sanitation	-Destruction of water structures -High winds/cyclones	-Soil erosion	-Proper site location to avoid construction of water structure in flood prone areas -Soil erosion control measures	-Construction of dykes and dams to harvest storm water -Practice construction of gabions in water structure at risk of erosion	Sololo, Uran, Korr, Laisamis, Logologo, loiyangalani
Agriculture and Livestock)	Loss of crops/yield Livestock mortality	-Crops washed away by flush floods - livestock being drowned by flooding water -Outbreak of diseases related to flooding e.g. Rift Valley Fever -Increase in population of vectors and other risk factor -Animals getting stuck in mud following flooding episodes	- livestock vaccination against RVF and other flood related diseases' -Adopt flood based irrigation for crop/pasture production in flood hot spot areas -vector control to protect livestock from disease transmission - pastoralists/local community awareness creation on flood and its effects	-Adoption of flood based irrigation system for crop and fodder production - Vaccination of livestock and vector control to prevent outbreak of RVF	Saku, Sagante, Karare, Logologo, Sololo and Uran
Education	Low turn	Destruction of school infrastructure	Diversion of water	Storm water harvesting	

Sector	Risk	Stressor/shock/cause/what is behind the risk	Adaptation strategies	Climate action Priorities	Wards
		Disruption of learning Loss of lives	Proper inclusion of social and environment risk assessment to identify anticipated risk	to reduce intensity Construction of dykes/check dams to divert water	
Social infrastructure		Infrastructural destruction Road transport interference Market destruction	Provide guidelines on construction of climate proof infrastructure	-Construction of dykes and dams to harvest storm water -Practice construction of gabions in high risk erosion site	Sololo, Uran, Korr, Laisamis, Logologo, loiyangalani

4. Delivery Mechanisms for the Action Plan

4.1 Enabling Factors

4.1.1 Enabling Policy and Regulation

County Governments are the “first line of responders” to community challenges including negative impacts of climate change like droughts, floods, sea level rises and resource conflicts. In any case, climate-sensitive sectors such as, agriculture, health, disaster management and water services are now devolved. An enabling policy environment provides counties with an opportunity for effective response to climate change. Article 185 and 186 of the Constitution of Kenya (2010) empowers County Governments to develop policies for better implementation of devolved functions. The national Climate Change Act (2016) also mandates counties to mainstream climate change actions in their policies, plans, and budgets.

The County Government of Marsabit has initiated measures aimed at strengthening its climate governance. These include, among others, mainstreaming climate change in the Marsabit County Integrated Development Plan (CIDP; 2023-2027) and adoption of other climate governance frameworks including the Marsabit County Climate Change Action Plan (2018-2022), Marsabit County Climate Change Policy (2019), Marsabit County Climate Change Fund Act (2020), Marsabit County Climate Change Fund (Rules and Regulations) and Marsabit County Climate Finance Framework (2023-2025). The Act puts in place a framework for facilitating communities to respond effectively to effects of climate change through appropriate adaptation and mitigation measures. The Act also creates an elaborate institutional structure to drive implementation. Most importantly, the Act creates a county-level Climate Change Fund. Among other sources of finance, the Fund will benefit from moneys appropriated annually by the County Assembly, moneys received from the National Climate Change Fund, moneys from international climate finance mechanisms, and donations by development partners.

4.1.2 Mainstreaming in the CIDP

Climate change affects fundamental economic, social and environmental aspects of Marsabit County’s development. Climate change is multi-faceted and impacts all sectors of the County economy. To achieve scale and impact, climate change actions must be integrated in all county programs. For coordinated actions on climate change and to ensure that all sectors significantly contribute to climate change adaptation and mitigation, such actions must be included in all county planning and budgeting processes.

The Marsabit County Integrated Development Plan (CIDP; 2023-2027) is the county's 5-year master plan for socio-economic development. The CIDP forms the basis for allocation of resources to County projects. It is one of the primary development blue prints for Counties to engage the public and prioritize critical areas of development. Indeed, the County Government Act (2012) provides that no public funds shall be appropriated outside a planning framework developed by the county executive committee and approved by the county assembly. The county planning framework shall integrate economic, physical, social, environmental and spatial matters. The CIDP informs the county's budget which shall be based on the annual development priorities and performance targets. CIDP is also a critical entry point for the public engagement in the county's planning and development.

The Annual Development Plan (ADP) contains strategic priorities for the medium term and reflects the county government's plans for the specified year. It is usually derived from the 5-year CIDP and it informs the following: strategic priorities to which the program will contribute; services or goods to be provided; measurable indicators of performance; and allocated budget estimates to the program. The County Executive shall submit the ADP to the County Assembly for approval by 1 September in each year, with a copy to the Commission on Revenue Allocation and National Treasury.

4.1.3 Multi-stakeholder participation processes

Public participation is a thread that runs throughout the Constitution of Kenya (2010) and other enabling legislation, among others, the County Government Act (2012) and the Public Finance Management Act (2013). The climate crisis cannot afford the loss of any allies. Therefore, there is need to involve relevant stakeholders in identifying climate risks, prioritizing climate response actions, implementation of climate change adaptation and mitigation programs, evaluation of program impacts and tweaking response strategies based on lessons learnt. It is particularly important to involve frontline communities affected by climate change for they also have ideas on how to better design and implement government response measures. The following agencies will play the role assigned to them as stated below:

National Government: The role of Government Ministries, Departments and Agencies will be to develop and establish standards and norms for ensuring mainstreaming, prevention and adaptation to climate change and further provide technical support in implementing adaptation and mitigation strategies.

County Governments: The role of the county will be to create a favorable environment for all stakeholders to thrive. County Government will establish, promote and implement set standards and norms, prepare and implement actions plans, facilitate public education on climate change. Within this policy

framework, Governments at the two levels will foster linkages with various development partners to provide financial, material and technical support as well as shape capacity for sustainability. The County government will facilitate research in collaboration with research institutions and academia

Development Partners: Development partners will play a complementary role towards realization of development of the goals and objectives of this policy. In particular, they will assist in leveraging resources and facilitating capacity support for climate change resilience, prevention and adaptation. The role of non-state actors will be to collaborate with Government to mobilize communities and resources, disseminate the policy and participate in capacity building for both for all stakeholders. This support will include awareness in the various aspects of climate change.

Private sector: The private sector has played an important role in helping communities such as small holder farmers adapt to climate change while simultaneously supporting market integration.. This policy prioritizes actions such as climate smart agricultural technologies, value addition, and extension that are of interest to the private sector.

Communities: Public policy is formulated for the protection of communities. Citizens are the main pillars of the policy and have to actively be involved in the implementation of this policy including being actively engaged in monitoring, evaluation and learning. They have a duty to be engaged and be allowed to contribute effectively. Communities are expected to exercise their sovereignty by holding duty bearers and all other agencies to account.

4.1.4 Resource mobilization strategy

Devolution of climate funds remains a major priority for climate financing in Kenya because it ensures that resources reach the neediest. County governments provide a good opportunity to create institutional linkages for devolving funds from the national to local level. Climate finance is also critical in enabling Marsabit County to achieve goals set out in in the third generation County Integrated Development Plan (CIDP 2023-2027), Vision 2030 economic blueprint, Sustainable Development Goals (SDGs), the 2015 Paris Agreement, and the African Union Agenda 2063.

With the onset of climate change, Marsabit and other counties have established local climate change fund through the Climate Change Fund Mechanisms (CCCF). CCCF is a mechanism through which counties can create, access and use climate finance from different sources to build communities resilience and reduce vulnerabilities to a changing climate in a more coordinated way. The county climate finance mechanisms creates the county climate finance committees consisting of the ward planning committees to ensure the following principles are well inculcated in the administration of the funds.

Section 14 of Marsabit County Climate Change Fund Act (2020) mandates the County Government to publish a County Climate Finance framework every three (3) years. Among other objectives, the Marsabit County Climate Finance Framework (2023-2025) seeks to unlock financial resources necessary for the implementation of the County Climate Change Policy and County Climate Change Fund Act, establish an optimal mix of policy and financing tools thereby making climate change investments more attractive to private investors, coordinate the implementation and reporting mechanisms of climate finance in the county through a responsive monitoring and evaluation framework, provide assurances that the climate funds are used effectively and guarantee that climate change activities are undertaken as efficiently, mainstream climate change response into county planning and budgeting cycle and promote balanced and fair access to climate funds available so that vulnerable communities have equal access through affirmative action.

4.1.5 Climate Information Services & Climate Data Access

Kenya Meteorological Department (KMD) has been giving climate information for many years but the uptake has been limited due to a number of reasons including, among others, relevance of the climate information services and channels of communication. This Action Plan recommends the development of Marsabit County Climate Information Services (CIS) Plan. The CIS Plan will collect, consolidate, analyze and disseminate down-scaled weather and climate information which can support ward, sub-county and county-level decision making processes. Most importantly, the CIS Plan will give priority to information that can enable farmers, fisher folks, traders and others make climate-smart decisions well advance of slow-onset disasters like floods and droughts.

This Action Plan is aware that timely communication of climate information helps prevent the economic setbacks and humanitarian disasters that can result from climate extremes and long-term climate change. The CIS Plan will also play a crucial role in development planning—both for managing development opportunities and risks and as well as mitigation and adaptation. Operationalization of the CIS Plan is resource-intensive and requires financial and human resources that are mobilized well beyond the government provisions. This is where collaboration between state and non-state actors in Marsabit comes in.

4.1.6 Resilience Planning Tools

Resilience is a multidimensional issue that is based on human, social, natural, productive, financial and political capital – yet the institutions involved in implementing resilience interventions have their own sector- specific views on which one of these building blocks counts more than others. In such a situation,

a shared understanding of the multi- pronged nature of resilience can help county governments to position different projects as different building blocks of resilience and understand how they fit into the overall picture. There are several resilience planning tools in use by both state and non-state actors. Therefore, this Action Plan will use a mix of these planning tools, albeit within the county planning and budgeting cycle.

Planning and budgeting tools: The CIDP forms the basis for allocation of resources to County projects. It is one of the primary development blue prints for Counties to engage the public and prioritize critical areas of development. The CIDP integrates economic, physical, social, environmental and spatial matters. The CIDP informs the county's budget which shall be based on the annual development priorities and performance targets. The CIDP is also a critical entry point for the public engagement in the county's planning and development. Conversely, the Annual Development Plan (ADP) contains strategic priorities for the medium term and reflects the county government's plans for the specified year. Once the ADP priorities are subjected to budget ceilings, the next step is development of annual budget to resource the implementation of priority actions, including climate change adaptation and mitigation.

The Integrated Food Security Phase Classification (IPC) is an innovative multi-stakeholder initiative to improve analysis and decision-making on food security and nutrition. Using the IPC classification and analytical approach, governments, UN agencies, NGOs, and other stakeholders work together to determine the severity and extent of acute and chronic food insecurity and acute malnutrition situations within countries, according to internationally recognized standards.

Early Warning Bulletins: The National Drought Management Authority Act (2016) mandates the Authority to exercise overall coordination over all matters relating to drought risk management and to establish mechanisms, either on its own or with stakeholders that will end drought emergencies in Kenya. The Government, together with development partners under the Kenya Food Security Steering Group (KFSSG) in collaboration with the respective County Steering Groups (CSGs) routinely carry out the seasonal Long /Short Rains Food and Nutritional Security Assessment. NDMA also publishes Drought Early Warning Bulletin especially focusing on the counties at risk. It is this information that informs the decision to declare "drought a national disaster" by the President following which certain drastic response measures are initiated. NDMA also relies on the IPC data.

Community Managed Disaster Risk reduction (CMDRR) is an empowering process where a community systematically manages its disaster risks for increased resilience. It places community at the center of participatory disaster

risk assessment, planning and implementation. It emphasizes the importance of communities being empowered to prepare and respond to micro level hazards and link their efforts to government processes for sustainability. Contingency plans and development plans generated from the CMDRR process often inform ward-level priorities by the county government or even development partners.

Participatory Climate Risk Assessment (PCRA) Tool: Marsabit County PCRA report informed the priorities in this Action Plan. Climate risk assessment is essential in identifying climate risks, impacts and priority resilience options to build local capacities through locally-led action. The participatory climate risk assessment (PCRA) results in the development of a county climate risk assessment report, which identifies the key climate risks for the county as well as strategic investment areas for climate resilience. Other resilience planning tools include Sustainable Livelihoods Framework, the Coping Strategy Index (CSI), vulnerability assessment and Multidimensional Poverty Assessment Tool.

Marsabit County Climate Finance Framework (2022): The Marsabit County Climate Change Act (2020) mandates the County Government to publish a County Climate Finance framework every three (3) years. Among other objectives, the framework addresses the status of climate change awareness in the county, impact of climate change in the county, human activities in the county that impact climate change, and climate change adaptation and mitigation activities relevant to the county. Therefore, the Climate Finance Framework compliments both the CIDP and Action Plan in coming up with priority actions on climate response.

4.1.7 Measurement, Reporting and Verification

Monitoring and Evaluation System (NIMES) as a mechanism for tracking climate finance implementation under the Medium-Term Plan (MTP IV) of Kenya's Vision 2030. At the county level, results management is undertaken through the County Integrated Monitoring and Evaluation System (CIMES) that is linked to NIMES. However, incomplete policy reform has meant that majority of counties lack dedicated M&E departments and, where they exist, they seldom have adequate capacity to effectively discharge their mandate.

This Action Plan reinforces Kenya's global commitments regarding climate change reporting. Kenya is part of the transparency framework under the Paris Agreement and is expected to provide frequent information (at least biennially) on the support required and needed under Articles 9 (Finance for mitigation and adaptation) and technology development (10) and transfer (11) capacity building. The Public Finance Management Act, 2012 also provides a framework for tracking and reporting on climate finance. Besides, the CIDP allows counties to develop SMART indicators on climate change to help track climate response.

The Financing Locally-Led Climate Actions (FLLoCA) Monitoring and Evaluation Manual also helps program implementers (like Marsabit County), to understand M&E procedures and processes for the program, decide how progress will be monitored to enable any adjustments where necessary and gather the necessary information to be used during various evaluation studies. Taken together, this Action Plan seeks to support a robust monitoring and evaluation system that is linked to CIMES to track the impacts of climate investments in the county. The M&E System will also track the effectiveness of climate actions being implemented, lessons learnt and necessary tweaks based on what is working and what is not working.

4.2 Implementation and Coordination Mechanisms

4.2.1 Coordination structures

Climate risk management strategies in Marsabit County are implemented mainly through the collaboration between various actors, both state and non-state. Government departments mainly provide technical support and policy direction in collaboration with non-state actors provide the research, funding, and implementation for the adaptations. Even though there is a good deal of collaboration among the various stakeholders mentioned, there is lack of an institutionalized framework for structuring and organizing the collaborations between actors. This lack of structured interaction contributes to a lack of accountability on the part of the actors.

Institutional arrangements are critical in implementation and coordination of climate change actions. The cross-cutting nature of climate change requires that all sectors are involved at different levels in implementation. It is drawing from the partners' knowledge, expertise and financial contributions that will make it possible for the county to realize its climate change goals. The implementation of the policy, and the roles assigned to each implementing agency will respect the functional distribution of roles between the two levels of government as provided for in the Fourth Schedule to the Constitution (2010).

As per MCCAP 2019 and MCCFA 2020 Climate Change actions are being spearheaded by climate change unit which work closely with County Climate Change Steering committee (CCCSC) who comprise of Governor, sector CECMs, representation of non-stake actors, County Climate Change Planning Committee (CCCPC) which comprise of climate sensitive directors and Ward Climate Change Planning Committee (WCCPC) which comprise of community representative, ward administrators who is secretary and environmental/climate change officers and ward manager who provide technical support. The structure has embraced locally led actions where climate intervention are implemented once the WCCPC has submitted their priorities.

4.2.1.1 County Climate Change Steering Committee

This is higher level structure that provides leadership and support to county climate change actions. Some of their functions as per the act are

- Approve and oversee implementation of the Climate Finance framework in the County;
- Approve the Fund Eligibility Criteria developed by the County Planning Committee;
- Approve the Climate Change Awareness Strategy developed by the County Planning Committee;
- Approve the climate change projects and programs list compiled by the Fund Administrator;
- Ensure that projects approved for funding conform to the Climate Finance Framework;
- Approve and oversee execution of the County Climate Finance Budget in compliance with the Public Finance Management principles under article 201 of the Constitution of Kenya;
- Oversee the coordination of research and development for climate finance in the County;
- Approve the list of pre-qualified research consultants for Climate Finance research in the County;
- Approve the curriculum for capacity building and climate change awareness in the County;
- Mobilize additional funding for projects, programs and activities listed in the Climate Finance Framework;
- Provide the essential linkages between the County Executive Committee and the County Assembly with regard to management of the Fund;
- Approve a Strategic Plan and Service Charter for the Fund developed by the County Planning Committee;

Approve the ward and county-wide disbursement proposals by the Fund Administrator

4.2.1.2 County Climate Change Planning Committee

This comprise of sectoral County and National Directors to provide technical support. Some of their functions as per the Act are

- Develop a Climate Finance Framework for the County;
- Develop, consultatively, Eligibility Criteria for selecting and prioritizing climate change projects and programs for approval by the Steering Committee;
- Evaluate, validate and recommend climate change proposals developed by the Ward Planning Committee and submit to the Steering Committee for approval;

- Oversight to the project evaluation process by the Ward Planning Committee and prepare appropriate reports to the Climate Change Fund Steering Committee;
- Facilitate and monitor the implementation of projects and programs financed by the Fund in the County;
- Develop a Climate Finance research priority needs for the county;
- Develop a Climate Awareness Strategy for the County;
- Develop a Strategic Plan and Service Charter for the Fund;
- Assign and coordinate technical assistance from County departments to projects funded under this Act;
- Facilitate the coordination of Climate Finance projects and programs with other programs in the County

4.2.1.3 Ward Climate Change Planning Committee

This is locally led structure to spear head locally led climate actions at ward level. The Act has given more provision for ward participation in sustainable climate change adaptation and mitigation by participating in climate risk/hazard assessment, look into historical timeline, trend and future climate projection and from well informed perspective prioritize climate change adaptation to build local adaptive capacity. Some of their functions as per the act are

- Consult with the community on the relevant Climate Finance activities at the Ward level;
- Facilitate public participation at the Ward level to develop and prioritise proposals for investments in public goods that promote climate change mitigation and adaptation;
- Receive project proposals from the community at the Ward level and develop technical components of the project proposals;
- Monitor project implementation at the Ward level;
- Prepare the Climate Finance Budget at the ward level;
- Ensure compliance with the provisions in this Act and regulations made hereunder;
- Prepare ward level project reports

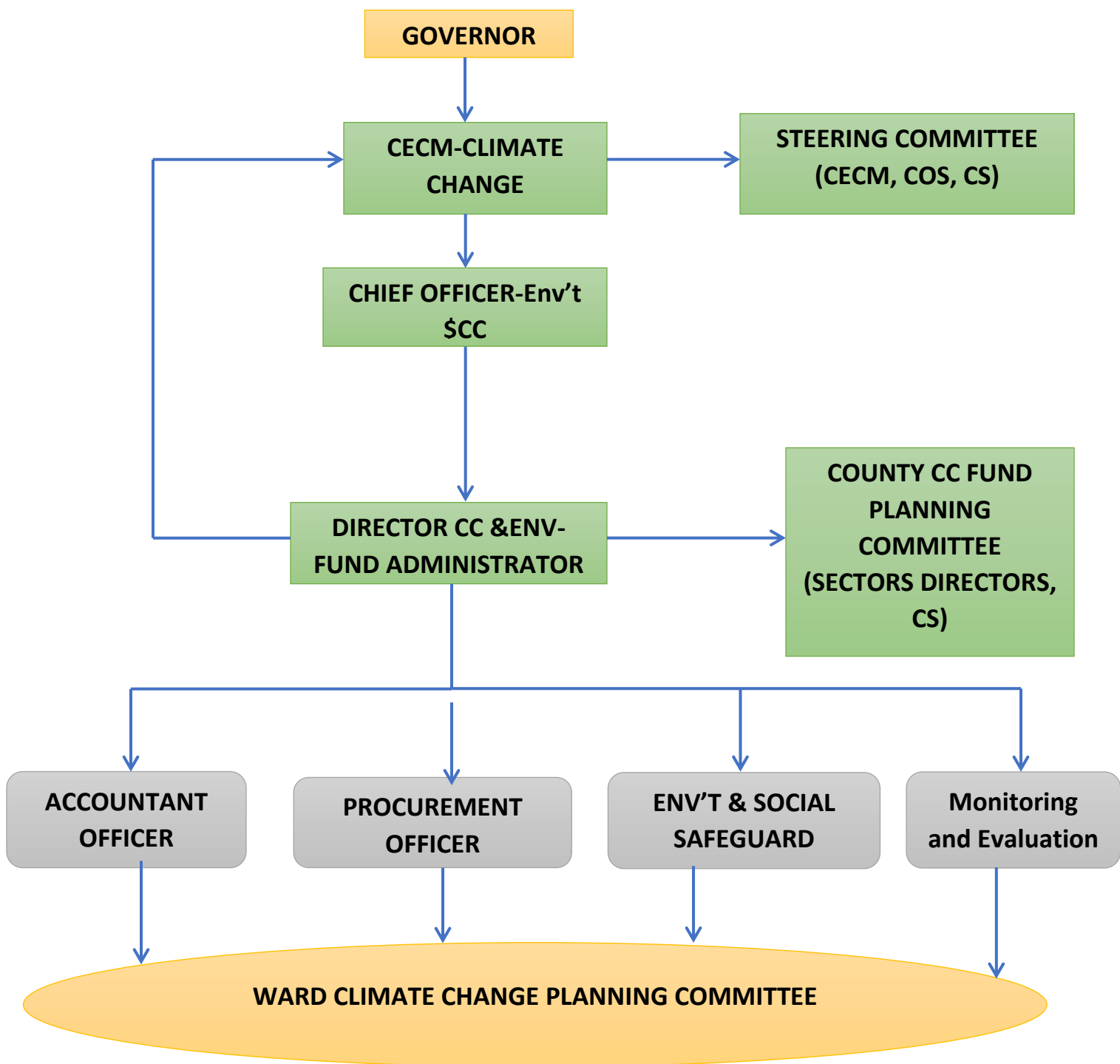


Figure 6: Marsabit County Climate governance structure

4.3 Implementation Matrix

Table 4: Implementation Matrix

Sector		Water and Sanitation												
Objective		To enhance water availability and access for people, irrigation and livestock												
Outcome		County economy enhanced through provision portable water												
Action Priority	Output	Key performance Indicator	Planned target and indicative budget in Millions (Ksh)											
			Year 1		Year 2		Year 3		Year 4		Total Budget	Source Funds		
			Target	Cost	Target	Cost	Target	Cost	Target	Cost			Target	Cost
Investment into 12 replicable and scalable business models (Water ATMs for revenue collection and water governance system strengthening)	Water meters purchased	No of water kiosks installed with water ATMs	2	1.2	4	2.4	3	1.8	3	1.8	3	1.8	7.2	CCCC NCCF FLLoCA Development partners Private sector
Purchase of 1000 plastic water tanks for each ward in the county	Plastic tanks purchased	No of plastic to be purchased	250	12.5	250	12.5	250	12.5	250	12.5	250	12.5	50	
Promotion of water harvesting, retention and re-charge technologies through construction of various water harvesting structures	Dams dams/check dams constructed	No of sand dams/check dams constructed	2	5	3	7.5	1	2.5	4	10	25			
Storm water harvesting through construction of 3 medium size pans	3 medium size dams constructed	No of medium size dams constructed	2	60	1	30	2	60	0	0	150			
Establish 8 strategic and contingency boreholes in rangelands fall back grazing areas;	8 strategic boreholes drilled/equipped	No of boreholes equipped/drilled	2	9.6	2	9.6	2	9.6	2	9.6	2	38.4		
Protect and conserve 4 water catchment areas/watersheds, rivers	4 water catchment	No of degraded water	2	3	1	1.5	1	1.5	0	0	6			

banks, spring / water ways and flood plains from degradation and contamination;																									
Conduct regular/quality water quality testing & monitoring based on WRA / NEMA guidelines	6	2.2	4	0.8	4	0.8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.8	4.6	
Strengthen capacity building of water resource user associations / WUAs on water harvesting, storage, conservation measures and maintenance and operations;	5	1	3	0.6	3	0.6	4															4	0.8	3	
Review and update water & sanitation training manuals to strengthen WUAs/WRUAs	1	5.5	0	0	0	0	0															0	0	5.5	
Increasing urban & rural domestic water supplies & urban sewage services to help combating water borne diseases, their social & economic impacts by connecting 5000 household to tap water	1000	15	2000	30	1000	15	1000															15	15	75	
Conduct 8 Community awareness for promotion of better hygiene;	2	4.8	2	4.8	2	4.8	2															2	4.8	19.2	
Heightened surveillances of new disease outbreaks with subsequent rapid responses to control	1	2.5	1	1.8	1	1.8	1															1	1.8	7.9	

epidemics:																									
Develop Marsabit County Climate Finance Framework	MCCFF developed	MCCFF developed	0	0	3.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.8
Formation, training and induction of Ward Climate Change Planning Committees	220 WCCPC trained	No of climate change related trainings conducted	50	7.5	60	9	80	12	30	4.5	33														
Develop and implement locally-led climate resilience actions	Locally led climate action initiated	No of locally led climate action I initiated and sustained	5	35	3	20	3	20	3	20	95														
Disseminate early warning information by ward to enhance preparedness	EWI disseminated	No of localized early warning information platform created No of meetings conducted to disseminate EWIs	1	2.8	1	2.8	0	0	0	0	5.6														
Total				176	1	133	0	142	0	81.	525.4														

Agriculture and Livestock

To enhance food availability at household level

Objective	Own food production enhanced																									
Promotion of 4 community based adaptation strategies, like seed bulking of drought tolerant traditional food crops with greater adaptations to extreme temperatures and rainfall events;	4 community based adaptation strategies adopted	Kgs of seed bulk harvested and reseeded	0	0	2	5.5	2	5.5	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	CCCFC NCCFC FLLoCA Development ent partners Private sector
Development of canals and water	Irrigation	Km of pipeline	5k	6.5	5	6.5	5	6.5	5	6.5	5	6.5	5	6.5	5	6.5	5	6.5	5	6.5	5	6.5	5	6.5	26	

harvesting/irrigation accessories to facilitate irrigation in high yielding boreholes	schemes/canals established	extension done	m																	
Provision of financial and technical assistance to expand area under high value traditional drought tolerant crops (DTC) and drought escaping crops;	Financial and technical assistance provided to 5 groups	Increase of household food basket No of meals taken per day	2	3	1	1.5	2	3	0	0	7.5									
Support to 2 demonstration and on-farm trials on pest and disease resistant varieties;	2 demonstration farms established	Areas of land under cultivation No of groups supported	0	0	0	0	2	3	2	3	6									
Promoting Climate Smart Agriculture (CSA) through agro-forestry to increase rainwater infiltration, reduced soil floods, reduced soil erosion, improve soil quality, fast growing perennial tree crops;	CSA technologies adopted	No of demonstration farms constructed No of CSA technologies promoted	0	0	2	5	3	7.5	2	5	17.5									
Promoting improved post-harvest storage and management of crops; and	Post harvesting storage and management of crops improved	No of improved storage crops facilities constructed	0	0	2	6	0	0	1	3	18									
Supporting weather index-based crop insurance to cushion farmers against crop failure due to drought.	Weather index-based crop farming systems adopted	No of household enrolled in weather index-based crop farming systems	100	2.5	200	5	500	12.5	100	2.5	22.5									
Promotion of flood based farming systems in four areas e.g. use of	4 flood based irrigation established	No of flood based irrigation installed and	1	5	1	5	1	5	1	5	20									

mega dams for micro irrigation projects for crop production; on farm small water harvesting structures																			
Promotion of conservation measures like soil bunds, stone bunds, grass strips, contour leveling terracing, tie ridges for increased water infiltrations;	Erosion control measures adopted	2	0.8	2	0.8	1	0.4	0	0	0	2								
Promotion of appropriate water harvesting technology for 2,500 household level crop production; sack gardens, shade nets, sustainable green houses, Zai Pits; and	2,500 household adopted appropriated water harvesting technology for irrigation	50	7.5	25	3.75	25	3.75	0	0	0	15								
Livelihood diversification through value addition to agriculture products and provision of credit facilities to 20,000 households	20,000 household adopted alternative livelihoods	5000	25	5000	25	5000	25	5000	25	5000	100								
Train 80 extension officers on agricultural extension services to mainstream climate change information and technologies into the farming system;	80 extension officer trained on agricultural extension services	20	1.5	20	1.5	20	1.5	20	1.5	20	6								
Conduct 60 Community trainings on climate change adaptation;	60 trainings conducted on climate change	20	1.5	20	1.5	10	0.75	10	0.75	10	4.5								

20ha Landscape/rangeland restoration, reseeded, and fodder production	Degraded land restored	Ha of rangeland restored, reseeded, and fodder produced	5	4	5	4	5	4	4	5	4	4	5	4	16
Promotion of economic diversification among pastoral communities	Capacity of WCCPC enhanced	No of WCCPC capacity built	100	20	120	25	0	0	0	0	0	0	0	0	45
Management and conservation of drought tolerant livestock breeds suitable for the County ecosystems; 500 herders capacity built	Herders capacity enhanced	No of herders capacity built on management & conservation of drought tolerant livestock breed.	300	30	0	0	200	20	0	0	0	0	0	0	50
Strengthen the strategies (e.g. grazing reserves, communal fodder enclosures) used by communities to adapt to climate variability to reduce and manage the risks of natural disasters;	Grazing plans developed	No of community members strengthened to adapt to climate variability	4	2.5	4	2.5	4	2.5	4	2.5	4	2.5	4	2.5	10
Strengthen indexed based livestock insurance schemes for 10000 HH against adverse effects of droughts shocks;	Household enrolled to indexed based livestock insurance	No of HH supported with livestock insurance scheme	200	10	200	10	200	10	200	10	200	10	200	10	40
Support regular livestock marketing systems to cushion pastoralists against drought;	Livestock market system supported	No of existing livestock markets supported	6	10	6	10	6	10	6	10	6	10	6	10	40
Construction of 4 livestock market	Livestock market constructed	No of livestock market constructed	2	60	0	0	1	30	1	30	1	30	1	30	120

Strengthen disease surveillance and regular vaccination to reduce disease outbreaks; 1m livestock vaccinated	Vaccination conducted	No of livestock vaccinated to reduce disease outbreak	250,000	20	250,000	20	250,000	20	250,000	20	20	80
Promote 50 Ha commercial pasture production, seed banks and strategic feed reserves including alternative feed resources as part of contingency planning;	Pasture/grass farms established	Ha of land under commercial pasture production, seed banks & strategic feed reserves.	12.5	10	12.5	10	12.5	10	12.5	10	10	40
Total			251.8	274.55	204.9	262.25	1001.5					

EDUCATION

OBJECTIVE

OUTCOME

100 Climate-proofed construction of ECDE classrooms	ECDC class room constructed	No of ECDC classrooms constructed	25	42.5	25	42.5	25	42.5	25	42.5	170	CCCF NCCF FLLoCA Development partners Private sector
19 Uni-huts installed for mobile ECDE schools to cover pastoralist families moving with their children	Unit huts installed	No of uni huts constructed	5	5	5	5	5	5	4	4	19	
40 Energy-saving stoves and equipment supplied to ECDE schools	Energy saving jikos purchased and distributed	No of energy saving stoves and equipment supplied to ECDE centers	10	3	10	3	10	3	10	3	12	
24 Plastic/collapsible	Plastic tanks	No of	6	1	6	1	6	1	6	1	4	

water tanks installed	purchased	Plastic/collapsible water tanks installed																		
Water pipeline extension from the nearest source to 7 ECDE school	Pipeline extended	No of ECD centers connected to pipeline	3	2	2	2	2	2	0	0	7									
Construction of 4 sub-county ECDE food stores for enhanced supply chain management	Food store constructed	No of ECDE food stores constructed	1	1	3	1	3	1	3	12										
Capitation of 83,000 ECDE learners to ease school fees payment on parents Expansion of ECDE school feeding program to reduce malnutrition in the county 80,000 learners fed on nutritious CSB+	Vulnerable pupils/student identified	No of ECDE learners on capitation	22,000	22,000	60	60	21,000	63	22,000	249										
Expansion of empowerment programs for 470 vulnerable youth	Vulnerable groups identified	No of vulnerable youths empowered	100	120	21	150	27	200	36	102										
Total			135.5	137.5	146.5	155.5	575													
Fisheries																				
Objectives																				
Outcome																				
Supporting livelihood diversification strategies which add value within the fisheries sector, promotion of formal and informal job creation, self-employment and entrepreneurship	100 entrepreneurs trained on fish value addition	No of entrepreneurs trained	20	20	1.2	20	1.2	20	1.2	40	2.4	6	CCCFC	NCCF	FLoCA	Developm	ent	partners	Private	sector

relevant to the need of both women and men;																			
Training of 15 Beach Management Units (BMUs) to carry out fisheries monitoring, control and surveillances;	BMUs trained	No of BMUs trained	5	1.5	5	1.5	5	1.5	5	1.5	5	1.5	0	0	0	4.5			
Identifying and protecting 4 core fish breeding sites to minimize unsustainable fisheries practices and habitat destruction; and	Core fish breeding sites identified	No of core fish breeding sites identified	1	1.2	1	1.2	1	1.2	1	1.2	1	1.2	1	1.2	1	4.8			
Domesticate National fisheries policies, and regulation	National fisheries policies, and regulation domesticated	No of policies and laws domesticated	0	0	2	5	1	2.5	0	0	7.5								
Provision of appropriate fishing technologies	100 appropriate fishing technologies purchased	No of appropriate fishing technologies purchased and distributed	50	3.5	50	3.5	0	0	0	0	7								
Conduct fisheries resources survey	Fisheries resource survey conducted	Clear baseline data established	0	0	1	1.5	1	1.5	1	1.5	4.5								
Develop 5 cold storage and drying facilities to reduce post-harvest losses	Cold storage and drying facilities developed	No of cold storage and drying facilities developed	2	10	1	5	1	5	1	5	25								
Local campaigns on fish utilization and marketing fish products	Local campaigns conducted	No of local campaigns conducted	3	1.5	3	1.5	3	1.5	3	1.5	6								
Training fisher folks on hygiene handling of fish and fish products	200 fisher folks trained	No of fisher folks trained No of fisher forks	50	1.5	50	1.5	50	1.5	50	1.5	6								

through establishing 5 trees nurseries and planting over 10,00 seedlings; and	school	established No of pupils/students sensitized on important of environment protection and conservation, solid waste management among others																			
Strengthen early warning systems in reduction of fire outbreaks (fire towers, fire drills).	EWI disseminated	Frequency of disseminating EWI yearly	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2	3.5	2
Strengthening capacity of community-based forest management committee/associations (CFAs, EMCs, WCCPCs) for the conservation of close canopy forests and woodlands	CFAs/EMCs/WCC PC trained on forest conservation and management	No of CFAs/EMCs/WCC PC trained on forest conservation and managements	2	10	2	10	2	10	2	10	2	10	2	10	2	10	2	10	2	10	2
Support communities of interest to gazette 5 fragile ecosystems like springs, forest buffer zones, riverine, watersheds etc.	5 fragile ecosystem gazetted	On of fragile ecosystem gazette	2	100	2	100	2	100	2	100	2	100	2	100	2	100	2	100	2	100	2
Support alternative livelihood opportunities to charcoal/firewood as a source of income (distribution of energy saving jikos to 1000 households;	1000 households benefited from energy saving jikos program	No of improved energy saving jikos purchase and distributed	500	3.5	500	3.5	500	3.5	500	3.5	500	3.5	500	3.5	500	3.5	500	3.5	500	3.5	500

Sub TOTAL		155	139	20.8	29.4	344.2
SOCIAL INFRASTRUCTURE						
OBJECTIVE To promote infrastructure that are climate proof						
OUTCOME Well design climate proof infrastructure						
Strengthening disaster preparedness through improved public health systems (including personnel, infrastructure, medicine and equipment);	Incidences of disaster occurrence reduced	0	1	5	0	10
Support spatial planning in urban centers and areas prone to disasters;	Spatial plan developed	0	1	50	0	100
Develop climate proof infrastructure guide	A guide developed	1	0	0	0	6.4
Establishment of disaster management response committee in towns and municipalities;	4 committees established	5	5	5	5	10
Sub Total		11.4	50	5	55	121.4
Energy						
Objective To increase use of clean, affordable and efficient energy						
Outcome Sustainable clean energy enhanced						
Solarization of 50 boreholes to reduce in utilization of diesel powered generators for water pumping ;	50 boreholes installed with solar for water pumping	20	125	25	10	275
Enhance solar electrification program to meet public institutions and rural households' energy	10 public institution installed with solar and 500	5	12.5	0	0	25
	No of boreholes installed with solar % in reduction in number of pumping system using diesel powered engine	125	20	125	25	275
	No of public institution installed with solar	12.5	5	12.5	0	25
						CCCCF NCCF FLLoCA Development partners Private sector

demand;	household distributed with solar kit for lighting	No of household receiving solar kit for lighting																			
Promotion of energy efficient cook stoves to reduce demand on biomass energy as well as to reduce greenhouse gas emission for households in rural areas and linkages to carbon financing/credit including awareness on improved cooking practices in 1000 households and institution;	1000 efficient cooling stove purchased	No of efficient cooling stove purchased	500	2	0	0	0	500	2	0	0	0	0	0	0	0	0	0	0	0	4
Develop green energy (wind and solar) through private public sector investment;	Private energy sector investment developed	No of private energy investors in the County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investments in renewable biomass energy bio-fuels (briquettes, bio-gas);	Bio gas/briquettes adopted	Reduction in energy expenses Improvement in health	2	2.5	2	2.5	2	2	2.5	2	2.5	2	2.5	2	2.5	2	2.5	2	2.5	2	7.5
Investments in efficient and sustainable charcoal production from invasive tree species (<i>Prosopis Juliflora</i>)		Ha of land under invasive species (<i>Prosopis Juliflora</i>) cleared	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	4
Lobby for change over power from generators to National Grid e.g., from Ethiopia's power transmission and Lake Turkana Wind Power; and	Lobby meeting conducted	No of lobby meetings conducted	4	1.5	4	1.5	4	4	1.5	4	1.5	4	4	1.5	4	1.5	4	4	1.5	4	6

Support enactment policies/bills that support natural resources conservation measures.	Policies /bills supporting natural resources conservation formulated and approved/enacted	No of Policies /bills supporting natural resources conservation formulated and approved/enacted	2	4.5	0	0	0	0	0	0	0	4.5		
Sub Total				148		14.4	31	1.5	326					
HEALTH														
OBJECTIVE														
To promote healthy residence in the face of climate shocks														
OUTCOME														
Health care provision services improved														
Strengthening evidence-based nutrition planning, information, budgeting and implementation through 8 SMART surveys	Nutrition survey and surveillance conducted	No of nutrition surveys & surveillance conducted.	3	26	1	10	1	10	1	10	3	26	72	CCCF NCCF FLLoC A Development partners Private sector
Enhance surveillance of climate-related diseases and manage outbreaks including the development of Malaria Outbreak Preparedness Plan	Disease outbreak cases managed	Number of outbreak preparedness plan developed	1	2	1	2	1	2	1	2	1	2	8	
Mental health care supported provided for those affected by climate shocks	Mental health improved	No of health mental care clinics conducted	2	1.5	2	1.5	2	1.5	2	1.5	2	1.5	6	
Integration of nutrition and climate change concerns in the training and service delivery by CHVs		No of trainings conducted	5	1.5	5	1.5	5	1.5	5	1.5	5	1.5	6	

Formulate Marsabit County Environmental Health and Sanitation Policy	Policy developed	Environmental Health and Sanitation Policy formulated.	1	5	0	5	0	0	0	0	0	10
Train 100 healthcare workers on malaria case management	Health workers trained	No of healthcare workers trained on malaria case management	25	2	25	2	25	2	25	2	2	8
Procure and distribute mosquito nets (LLiTN)	Mosquito nets purchased and distributed	No of mosquito nets procured	20,000	4	20,000	4	20,000	4	20,000	4	4	16
Trigger villages on the CLiTS model as a means of improving sanitation especially in the flood-prone areas	Villages triggered	No of villages triggered No of sanitation facilities developed	100	3	100	3	100	3	100	3	3	6
Sub Total			45	29	24	24	40	132	611.15	2712.2		
Grand total			723.4	691.45	687.2	611.15	2712.2					

Annexes

Annex 1: List of Participants

List of Participants											
Moyale Sub County											
No	Township Ward	Name	Position	Mobile No	Gender		PLWD		Age Bracket		
					M	F	Yes	NO	18-35	35-60	>60
1		Abdo Ala	Sub-county Admin	0721712636	M						
2		Boru Qalla	WCCPC	0769985573	M				✓		
3		Ibrahim Adan	WPCCPC	0724405950	M				✓		
4		Sadam Adan Hassan	EMC	0727891144	M				✓		
5		Abdirahman Amin	EMC	0710368320	M				✓		
6		Hussein Tarry	Peace committees	0726270397	M				✓		
7		Ibrahim Tacho	WCCPC chair	0718337535	M						
8		Ismail Alinoor		07116022492	M				✓		
9		Zamzam Adan	Women rep	0700530050		F			✓		
10		Nura Sharif	Elder	0719751117	M						
11		Aisha Hussein	Women rep	0720888439	F	F			✓		
12		Hassan Ibrahim	Youth	0724445522	M						
13		Habiba Haro	Women rep	0724720186		F					
14		Halima Huka	WCCPC	0721257635		F					
15		Hassan Mohamed	Youth	0720888830	M						
16		Ismail Alinur	Youth	0792733399	M				✓		
17		Amin Mohamed	CHVs	0705601118	M				✓		
18		Mohamed Issack	Ward manager	0722731615	M				✓		
19		Ismail Ibrahim	Elder	0722437804	M						✓
20		Abdikarim Abdirahman	Environmental activist	0727641036	M				✓		
21		Boru Abdirahman	EMC	0706167267	M				✓		
22		Mohamed Guyo	CGM	0726614293	M					✓	
23		Mohamed Abdikadir	Ward manager	0727523018	M					✓	
Sololo											
1		Mathew Lechipan	Dep. Sub-county admin	0719677119	M					✓	
2		Bonaya Guyo Digo	Elder	0724958052	M						✓
3		Hussein Dima Huga	Youth	0714926381	M				✓		
4		Dido Charfi Roba	WCCPC	0725477683	M				✓		
5		Galma Dabaso	Peace committee	0728852596	M						✓
6		Abdi Halkano	Youth	0720166410	M					✓	
7		Wario Salla Galgallo	EMC	0712322679	M				✓		
8		Abkul Wario	WCCPC	0715011848	M						✓
9		Guyo Jillo	WUA	0726452284	M				✓		

10	Abdirahman Bonaya	Youth	0729932252	M					✓	
11	Shama Alio	Elder	0710419261	M					✓	
12	Diba Bidu	Elder	0707802188	M						✓
13	Ibrahim Abduba	EMC	0712342046	M						✓
14	Qabale Guyo	Qabale Guyo	0717403288		F				✓	
15	Rukia Hussein	WCCPC	0727514746		F				✓	
16	Asli Dera	WCCPC	0111250036		F					✓
17	Hussein Galgallo	EMC	0723666434	M					✓	
18	Buke Kuno	CGM	0705503671		F				✓	
19	Diramu Abduba	Women rep	0720090561		F				✓	
20	Dida .T. Wario	Youth	0727792816	M						✓
Uran										
1	Mustafa Jarso	WCCPC	0713561510	M					✓	
2	Qalicha Guyo	Elder	0718024359	M					✓	
3	John Boru Jirimo	Elder	0799980671	M					✓	
4	Galgallo Guyo	EMC	0722723327	M					✓	
5	Roba Tacho	Youth	0723712831	M					✓	
6	Buke Jillo	EMC	07075558596		F				✓	
7	Said Jarso	WCCPC	0727078084	M					✓	
8	Halakhe Dabaso	Youth	0758927251	M					✓	
9	Henry Halkano	Chief	0716654539	M					✓	
10	Darmi M. Dabasa	Women rep	0708660181		F				✓	
11	Ware Boru	DRR	0700830802		F				✓	
12	Liban Waqo Fora	Youth	0706929525	M					✓	
13	Diba H. Huga	Chair EMC	0791736522	M					✓	
14	Osman Jillo	Clerk	0113366287	M					✓	
15	Kula Galgallo	Women rep	0768640387		F				✓	
16	Wario A Halakhe	Office of ward Admin	0743607393	M					✓	
17	Bonaya G Dido	Elder	0796613370	M					✓	
18	Guyo Khina	PWDs	0725030357	M					✓	
19	Diba C Alio	Ward manager	0723899978	M					✓	
20	Qalla J karayu	Youth	0718090684	M					✓	
21	Hassan J Kotote	Chief	0720579570	M					✓	
22	Lokho Jarso	WPCCPC	0705179605		F				✓	
Butiye										
1	Tume Doti	Ward Admin	0720463970		F				✓	
2	Habiba Arero	WCCPC	0720564923		F				✓	
3	Abdikadir Doyo	Elder	0726933294	M					✓	
4	Halakhe Galma	Elder	0721707181	M					✓	
5	Rukia Gulam	WCCPC	0723296272		F				✓	
6	Ali Apulo	Chairman WCCPC	0724408795	M					✓	
7	Abdirahman Ibrahim	Youth	0114425055	M					✓	
8	Adan Guyo	Opinion leader	0741213678	M					✓	
9	Ibrahim Guyo	Opinion leader	0720497139	M					✓	
10	Adan Tadicha	Ward manager	0745412906	M					✓	
11	Morme Konsole	PPI	0790410158		F				✓	
12	Jillo Haro	WCCPC	0712230618		F				✓	
13	Adannur Abdu	WCCPC	0714450379	M					✓	
14	Hassan Halakhe	WPCCP	0723416817	M					✓	

15	Aisha Ibrahim	Women rep	0718968790		F					✓
16	Lokho Sora	Youth	0753137863		F				✓	
17	Abdi Gonjobe	Elder	0721970718	M						✓
Hellu/Manyatta										
1	Kadra Mohamed	Chair WCCPC	0727876480		F				✓	✓
2	Abdikadir Galgallo	WCCPC	0725321771	M						✓
3	Issack Tulicha	WCCPC	0727642121	M						✓
4	Hawo Ibrahim	WCCPC	0708492176		F				✓	
5	Hassan Maalim	WCCPC	0723943619	M						✓
6	Hadija Tulicha	WCCPC	0720235312		F					✓
7	Mohamed Galma	WCCPC	0720814875	M						✓
8	Kache Buno	WCCPC	0720799706	M						✓
9	Abdulkadir Hassan	WCCPC	0726622504	M						✓
10	Mohamed Bayana	Elder	0727352431	M					✓	
11	Hassan Adan	Grazing committee	0722326472	M						✓
12	Borayo Duba	EMC	0743737299		F				✓	
13	Jama Ngafia	Elder	0723555004	M						✓
14	Mamud Hassan	Youth	0792194611	M						✓
15	Sara Guyatu	Women rep	0725592563		F				✓	
16	Sahara Golicha	Women rep	0720709008		F					✓
Obbu Ward										
1	Lydia Learamo	Ward Administrator	0768059969							✓
2	Emurensiana Lepajat	Woman	0717710945							✓
3	Angelo Leurare	Youth Representative	0710236723							✓
4	Daniel Ekai	Elder	07288428475							✓
5	Lydia Learamo	Ward Administrator	0768059969							✓
6	Emurensiana Lepajat	Woman	0717710945							✓
7	Angelo Leurare	Youth Representative	0710236723							✓
8	Garbich Boru Arero	WCCPC	0713381228							✓
9	Abdinassir Boru	Ward Admin								✓
Golbo										
1	Hassan Ali Dido	Chairman WCCPC	0729371922							✓
2	Abdi Abular Kura	WCCPC Member	07077257874						✓	
3	Nuria Adan Dararo	Youth Member	0718154564							✓
4	Mohammed Boru Sabare	WCCPC	0700386142							✓
5	Bagaja Guyo Ade	EMC	0707130203						✓	
6	Sora Ali Duba	WCCPC	071773562							✓
7	Hassan Borbor	EMC-Youth	0721989439							✓
8	Hassan Kalich Golicha	WCCPC	0722727329						✓	
9	Hassan Aliow Galgallo	Elder	0712767834							✓
10	Jaldes Wako Jarso	Elder	0711687515							✓
11	Tadich Chukri	WCCPC	0705790098							✓

12	Chuli Dika Hindi	Woman	0112706038							✓
13	Halima D	WUA	0700376442							✓
14	Makai Abdullahi	Woman	0701449953							✓
Dukana Ward										
1	Tuye Katelo	Area Chief	0726713704							✓
2	Ali Edema	Elder	0718815774							✓
3	Yara Mola	WCCPC	0792677223							✓
4	Ali Musa	WRUAS	0712232917							✓
5	Gumato Guracha	WCCPC	0704825793							✓
6	Simpire Ali	Youth Rep	0726230408							✓
7	Yara Sharamo	Traditional elder	0701715437							✓
8	Denge Wario	Minority representative.	0706056297							✓
9	Diba Wario	Youth representative.	0715720722							✓
10	Ali Guyo Huka	EMC	0723628387							✓
11	Guyo Adhi Barako	PLWD representative	0728653032							✓
12	Buqato Shama	Chair WCCPC	0794154323							✓
13	Bone Ibrae	Women representative.	0701715474							✓
14	Gumato Wario	Ward manager.	0700929786							✓
Northorr										
1	Ibrae Damocha	Chief	0713865223							✓
2	Chuluke Duba	PLWD	0712829624							✓
3	Guyo Gonjoba Godana	Ward manager	0741726266							✓
4	Abdi Wario Jillo	Minority representative	0727528027							✓
5	Guyo Diba Bili	Youth	0799788330							✓
6	Boya Mamo	EMC representative	0728994137							✓
7	Ahmed Rakaw	WCCPC	0710771638							✓
8	Jacinta Jillo Diba	Women representative	0700458413							✓
9	Alexander Diba	Grazing committee	0714341422							✓
10	Denge Galgallo	EMC	0712476789							✓
11	Yattane Sori	Youth representative	0110172767							✓
12	Abudo Sharamo	Conservancy Representative	0720370024							✓
13	Sallo Buri	WCCPC	0722809355							✓
14	Abdub Ukur	WRUAS	0740726912							✓
Illeret Ward										
1	Ambrose Oita	PWD member	0769123150							✓
2	Michael Moroto	Youth EMC	0746740766							✓
3	Abara Ajiko	Grazing committee	0725171412							✓
4	Gila Ariswe	EMC	0795147973							✓
5	Nicanor Nyiria	BMU	0757919449							✓
6	Joseph Naliye	Ward manager	0799151554							✓

7	Boniface Yierar	Assistant chief	0717184754						✓	
8	Nashere Lomabok	Women	0718684032							✓
9	Koriye.M. Koriye	Ward administrator	0714478858							✓
10	Arthur Wanyoike	ACC	0715046046							✓
11	Samuel Siyel	Chief	0723088392							✓
12	Gosh kwanyang	WCCPC	0745586561							✓
13	Iyayo siroro	Youth	0714526604							
14	Abraham konibok	Community health volunteer	0795725775							
15	Goosh Claudia	Youth	0791254079							
16	Michael moroto	Chair WCCPC	0712871968							✓
TURBI WARD										
1	Guyo Roba	WRUAS	0705231403							✓
2	Roba Bonaya	Chair – WCCPC	0110278813							✓
3	Abdub Galiye	Chief	0720914645							✓
4	William Damballa	Chair-EMC	0728729226							✓
5	Pius Roba	Elder/opinion leader	0712671543							✓
6	Roba Kampure	WRUAS	0717020469							✓
7	Mohamed Wario	Grazing committee	0700074267							✓
8	Ali Omar	EMC	0702151570							✓
9	Qallo Ibrahim	WCCPC	0791077216							✓
10	Adan Sharamo	Chair-PWD	0713630549	□			□			
11	Boru Malicha	EMC	0700517219	□						□
13	Yattani Boru	PWD	0728211376	□			□			
14	Katelo Diba	Peace committee	0724058539							✓
15	Diko Barako	Women	0708599797							✓
16	Elema Denge	Youth	0715631224							
17	Saituna Osmail	Community health volunteer.	0716465272							
Maikona										
1.	Ali Katello	20275677	0724948470	✓						✓
2.	Katelo Demo	8151852	0703813480	✓						✓
3.	Gumato Jarso	24041938	0726678352		✓			✓		
4.	Hadija Molu	29392221	0719294391		✓			✓		
5.	William Diba Doti	26089055	0758959548	✓				✓		
6.	Barile Duba	21573282	0710948152	✓				✓		
7.	Abudo Nurr	35335532	0740866135	✓				✓		
8.	Bati Diba	26509016	0712990129		✓			✓		
9.	Orge Dido	21739929	0711656324		✓			✓		
10.	Tume Adano	0592694	0728440314		✓					
11.	Salo Tuye	20803584	0723059215		✓			✓		
12.	Roba Dima	21571637	0717326279	✓				✓		
13.	Molu Wato	0594701	0713606952	✓				✓		
14.	Qaballe Qalla	24416390	0717820175		✓			✓		
15.	Bone Gonche	09560628	0716771034		✓			✓		
Loiyangalani										

1	Sebastian Leparas	Ward chair WCCPC	0714877843						✓
2	John Orbora	Area Chief	0723746534						✓
3	Lucy Kentho	WCCPC Member	0796228771`						✓
4	Alexander Lenadir	Fisheries Cooperatives	07264700021						✓
5	Stephen Leborkwe	EMC	0710236622						✓
6	Singilan Lepalo	WRUA	0729534179						
7	Esterina Boniface	WCCPC	0715237805						✓
8	Arupe Lucy	WCCPC	0790007805						✓
9	Rosa Mirkalkona	FBO-Youth	0791153370						✓
10	Maria Lekapana	CBO-	0711311604						✓
11	Lydia Learamo	Ward Administrator	0768059969						✓
12	Emurensiana Lepajat	Woman	0717710945						✓
13	Angelo Leurare	Youth Representative	0710236723						✓
14	Daniel Ekai	Elder	07288428475						✓
	Kargi/South-horr								
1	Alkoro Galsaracho	03646108	0716698168	✓		✓			✓
2	Umuro Borano	20641619	0726248244	✓		✓		✓	
3	Matahwen Gobanai	09847457	0710101429	✓		✓		✓	
4	Mbore Mifo	0631595	0706587789	✓		✓		✓	
5	Safi Mifo	24984131	0791279478		✓	✓	✓		
6	Fatuma isandap	37482033	0746080883		✓	✓	✓		
7	Sabthiyo Matacho	24075999	0717463164		✓	✓	✓		
8	Gisewa Obeile	24076307	0745735748	✓		✓	✓		
9	Mohamud Arbelle	20641425	0720178624	✓		✓		✓	
10	David T Wambille	3421037	0710519533	✓		✓			
11	Bulyaar J Bayo	12754400	0703816932	✓		✓			
12	Gabriel Galmato	37169899	0707225283	✓		✓			
13	Simion Swari	30008983	0746262061	✓		✓			
14	Francis Kirinya	23319430	0727257614	✓		✓			
15	Samuel Dokle	21508358	0706776002	✓		✓			
16	Solomon Sahado	26822380	0725549160	✓		✓			
	Korr/Ngurunit								
1	Obeddy eydimole	Chair youth	0703628753						✓
2	Simon L. Arabolya	Chief	0703814819						✓
3	Fabiano Wamile	Catholic faith	0741315866						✓
4	Mohamed Isandap	Islam faith	0727666624						✓
5	Lmeriwan Kochale	Community elder	0721738420						✓
6	Pius W. Lokuru	Ward Manager	0712729538						✓
7	Joseph Ltajaran	Minority	0714865941						✓
8	Emmanuel Erot	youth	0745343643						
9	Thomas Harugura	youth	0792398620						✓
10	Ntoison Amiyo	Women rep	0728028594						
11	Ali OChe	PWD	0717079750						✓
12	Abdulai GUmathi	Youth	0716122255						✓

13	Moses MAro	WCCPC	0797127603						✓
14	Daniel Dokhe	Ward Administrator	0729323696						✓
15	Zulekha Harun	WCCPC	0720133181						
16	Hambue Chupale	AD Conservation	0706173166						✓
18	Bakari Mwachakure	AD NDMA	0720071070				V		
Logologo /Kamboe									
1.	Mohammed Adisomo	Wccpc chairman	0722875137	V					V
2	Job Marleni	Elder	0725482423	V					V
3	Annet Bagajo	Women rep	0715070062		V				V
4	Ltodowa Learapo	Wccpc	0705347400	V					
5	Sabdiyo Salgiyo	Women rep	0748502631		V				V
6	Marleni Bichowlo	Wccpc	0729441177	V					
7	Jacomino Kalaile	elder	0723394518	V				V	
8	Samuel Moga	CBO representative	0741901973	V					V V
9	Peter Lepakajo	Conservancy representative	0708969446	V					V
10	Somo Abdulai	Marginalized group	0768162863	V				V	
11	Fabiano Lepati	WCCPC	0726257667	V				V	
12	Daniel Lekapina	Ward Manager	0701356261	V					V
13	Andrew Korole	Chief	0725860207	V					V
14	Jonathan Eysimirdana	Youth	0701270604	V				VV	
15.	Susan Aleya	Wccpc	0725002893		V				V
16	Francis Kiriri	AD Agriculture							16
17	Hambule chupale	AD conservation							17
18	Yattani Tura	Program coordinator Boma							18
19	Bakari Mwachakore	AD NDMA							19
Laisamis									
1.	Peter Galwersi	9559530	0717423142	√			√		√
2.	Joseph leseuloi	11386086	0721585005	√		√			√
3.	Samuel Basele	33319989	0705702062	√			√	√	
4.	Francisca Ntesekwa	21658453	0704805825		√		√	√	
5.	Nasaru Alyoro	12752855	0712851341		√		√		√
6.	Shadrack lebuliar	38188152	0759005022	√			√		√
7.	Emmanuel Leupare	29158543	0726602019	√				√	
8.	Kaltuma hassan	12439270	0725658261		√		√		√
9.	James Basele	11386074	0705702062	√		√			√
10.	Elius Kanapal	30192102	0727371097	√		√		√	
11.	John Lemerkech	36060169	0757614255	√				√	
12.	Paul Machan	20474529	0726262958	√					√
13.	Augustine Lsuper	20097626	0724116612	√					√
14.	Antonino Adurai	2311540	0727963028	√					√

	Kaldale									
15.	Paul Machan	20474529	0726262958	√					√	
	Sagante/Jaldesa Ward									
1.	Guyo Katelo	Ward Administrator	0713615874	x			x	x		
2.	Fatuma Wario WCCPC	Women Group chair person	0717314525		x		x		x	
3.	Jillo Molu	Member	0729660931		x		x		x	
4.	Bokayo Malicha	Water committee	0720533667		x		x		x	
5.	Guyo Somo Ali	Chairperson-Indigenous group	0721306593	x			x		x	
6.	John Waqo	CFA- Chairperson	0704719245	x			x		x	
7.	Mohamed Halakhe	Water Committee	0728808966		x		x		x	
8.	Dub Halakhe	Community member	0724666513	x			x		x	
9.	Amina Guyo	WCCPC member	0758803950		x		x	x		
10.	Rob Dida	Youth	0796506492	x			x	x		
11.	Boru Wario	WCCPC member	0727962734	x			x		x	
12.	Jillo Roba	Community member	0718355832		x		x		x	
13.	Guyo Halakhe	Chairperson-WCCPC	0705438393	x			x		x	
14.	Wato Shalu	Peace Committee	0703487730		x		x			x
15.	Dalach Halakhe	Peace Committee	0715256700	x			x			x
16.	Sofia Golicha	Women Group	0728808833		x		x		x	
	Central Ward									
1.	Diqa Halakhe	WCCPC member	0725003134	x			x		x	
2.	Dida Rigatu	Peace, Council of Elder, rangeland committee	0727687264	x			x		x	
3.	Mikelina Nashagai	WCCPC member	0718274695		x		x		x	
4.	Hussein Bagajo	Water Committee	0715853161	x			x	x		
5.	Roba Wario	Youth	0742630036	x		x		x		
6.	Hussein Mohammed	Farmer and conservationist	0787842406	x			x		x	
7.	Jillo fugicha	CEO- Inua Dada Initiatives- CBO	0798798596		x		x	x		
8.	Abdikarim Liban	Youth leader	0797767839	x			x	x		
9.	Jillo Waqo	Chairperson-WCCPC	0727962729	x			x		x	
10.	Halkano Hallo	Ward Administrator	0725914707	x			x		x	

11.	Arbe Umuro	WCCPC member	0712316615		x		x	x		
Karare Ward										
1.	Douglas Daudi	Ward Manager	0725756749	x			x		x	
2.	Tony Ngurusi	Songa Conservancy, rangeland coordinator	0716352601	x			x	x		
3.	Rosylin Defardai	Women Group	0740688870		x		x	x		
4.	Mike Neepe	Water committee	0713550151	x			x		x	
5.	Mathew Neepe	Ward Administrator	0727689681	x			x	x		
6.	Geofrey Basele	Community member	0799905714	x			x		x	
7.	Amitha Pokopou	Women group chairperson	0741810359		x		x	x		
8.	James Asogu	WCCPC member	0729693471	x			x	x		
9.	James Marleni	WCCPC member	0799905714	x			x		x	
10.	James Lengoya	WCCPC member	0796506492	x			x	x		
Uran Ward										
1	Mustafa Jarso	WCCPC	0713561510	M					✓	
2	Qalicha Guyo	Elder	0718024359	M						✓
3	John Boru Jirimo	Elder	0799980671	M						✓
4	Galgallo Guyo	EMC	0722723327	M						✓
5	Roba Tacho	Youth	0723712831	M					✓	
6	Buke Jillo	EMC	07075558596		F					✓
7	Said Jarso	WCCPC	0727078084	M						✓
8	Halakhe Dabaso	Youth	0758927251	M						✓
9	Henry Halkano	Chief	0716654539	M						✓
10	Darmi M. Dabasa	Women rep	0708660181		F				✓	
11	Ware Boru	DRR	0700830802		F					✓
12	Liban Waqo Fora	Youth	0706929525	M					✓	
13	Diba H. Huqa	Chair EMC	0791736522	M						✓
14	Osman Jillo	Clerk	0113366287	M					✓	
15	Kula Galgallo	Women rep	0768640387		F				✓	
16	Wario A Halakhe	Office of ward Admin	0743607393	M					✓	✓
17	Bonaya G Dido	Elder	0796613370	M						✓
18	Guyo Khina	PWDs	0725030357	M			✓			✓
19	Diba C Alio	Ward manager	0723899978	M					✓	
20	Qalla J karayu	Youth	0718090684	M					✓	
21	Hassan J Kotote	Chief	0720579570	M						✓
22	Lokho Jarso	WPCCPC	0705179605		F				✓	
	Butiye									
1	Tume Doti	Ward Admin	0720463970		F		✓			✓
2	Habiba Arero	WCCPC	0720564923		F		✓			✓
3	Abdikadir Doyo	Elder	0726933294	M						✓
4	Halakhe Galma	Elder	0721707181	M						✓
5	Rukia Gulam	WCCPC	0723296272		F					✓

6	Ali Apulo	Chairman WCCPC	0724408795	M					✓
7	Abdirahman Ibrahim	Youth	0114425055	M				✓	
8	Adan Guyo	Opinion leader	0741213678	M				✓	
9	Ibrahim Guyo	Opinion leader	0720497139	M				✓	
10	Adan Tadicha	Ward manager	0745412906	M				✓	
11	Morme Konsole	PPI	0790410158		F			✓	
12	Jillo Haro	WCCPC	0712230618		F			✓	
13	Adannur Abdu	WCCPC	0714450379	M				✓	
14	Hassan Halakhe	WPCCP	0723416817	M				✓	
15	Aisha Ibrahim	Women rep	0718968790		F			✓	
16	Lokho Sora	Youth	0753137863		F			✓	
17	Abdi Gonjobe	Elder	0721970718	M				✓	
Hellu Manyatta									
	Kadra Mohamed	Chair WCCPC	0727876480		F			✓	✓
	Abdikadir Galgallo	WCCPC	0725321771	M				✓	
	Issack Tulicha	WCCPC	0727642121	M				✓	
	Hawo Ibrahim	WCCPC	0708492176		F			✓	
	Hassan Maalim	WCCPC	0723943619	M				✓	
	Hadija Tulicha	WCCPC	0720235312		F			✓	
	Mohamed Galma	WCCPC	0720814875	M				✓	
	Kache Buno	WCCPC	0720799706	M				✓	
	Abdulkadir Hassan	WCCPC	0726622504	M				✓	
	Mohamed Bayana	Elder	0727352431	M				✓	
	Hassan Adan	Grazing committee	0722326472	M				✓	
	Borayo Duba	EMC	0743737299		F			✓	
Laisamis									
16.	Peter Galwersi	959530	0717423142	✓			✓	✓	
17.	Joseph Iseuloi	11386086	0721585005	✓		✓		✓	
18.	Samuel Basele	33319989	0705702062	✓			✓	✓	
19.	Francisca Ntesekwa	21658453	0704805825		✓		✓	✓	
20.	Nasaru Alyoro	12752855	0712851341		✓		✓	✓	
21.	Shadrack Iebuliar	38188152	0759005022	✓			✓	✓	
22.	Emmanuel Leupare	29158543	0726602019	✓				✓	
23.	Kaltuma hassan	12439270	0725658261		✓		✓	✓	
24.	James Basele	11386074	0705702062	✓		✓		✓	
Korr/Ngurunit									
1	Obeddy eydimole	Chair youth	0703628753					✓	
2	Simon L. Arabolya	Chief	0703814819					✓	
3	Fabiano Wamile	Catholic faith	0741315866					✓	
4	Mohamed Isandap	Islam faith	0727666624					✓	
5	Lmeriwan Kochale	Community elder	0721738420					✓	
6	Pius W. Lokuru	Ward Manager	0712729538					✓	
7	Joseph Ltajaran	Minority	0714865941					✓	
8	Emmanuel Erot	Youth	0745343643					✓	
9	Thomas Harugura	Youth	0792398620					✓	
10	Ntoison Amiyo	Women rep	0728028594					✓	

11	Ali OChe	PWD	0717079750						
12	Abdulai GUmathi	Youth	0716122255						
13	Moses MAro	WCCPC	0797127603						✓
14	Daniel Dokhe	Ward Administrator	0729323696						✓
15	Zulekha Harun	WCCPC	0720133181						
16	Hambue Chupale	AD Conservation	0706173166						✓
17	Francis Kiriri	AD Agriculture	0722892214				✓		
18	Yattani Tura	Program coordinator	0715888686				✓		
19	Bakari Mwachakure	AD NDMA	0720071070				✓		
	Logologo/Kamboe								
1.	Mohammed Adisomo	Wccpc chairman	0722875137	✓					✓
2	Job Marleni	Elder	0725482423	✓					✓
3	Annet Bagajo	Women rep	0715070062		✓				✓
4	Ltodowa Learapo	Wccpc	0705347400	✓					
5	Sabdiyo Salgiyo	Women rep	0748502631		✓				✓
6	Marleni Bichowlo	Wccpc	0729441177	✓					
7	Jacomino Kalaile	Elder	0723394518	✓			✓		
8	Samuel Moga	CBO representative	0741901973	✓					✓ ✓
9	Peter Lepakajo	Conservancy representative	0708969446	✓					✓
10	Somo Abdulai	Marginalized group	0768162863	✓			✓		
11	Fabiano Lepati	WCCPC	0726257667	✓			✓		
12	Daniel Lekapina	Ward Manager	0701356261	✓					✓
13	Andrew Korole	Chief	0725860207	✓					✓
14	Jonathan Eysimirdana	Youth	0701270604	✓					
15.	Susan Aleya	Wccpc	0725002893		✓				✓

Annex 2: Ward Adaptation Priorities

Table 5: Ward adaptation priorities

No	Ward Adaptation Priorities	Location
Moyale Sub-County		
Butiye Ward		
1	Water piping from Mansile to Butiye	Butiye ward
2	Mega dam at Antut and Somare	Butiye ward
3	Tree planting at Holale, Arosa, Somare, Bori at Individual homestead	Butiye ward
4	Water piping from Mansile to Butiye	Butiye ward
5	Storm water harvesting; Mega dam at Antut and Somare	Butiye ward
Hellu Ward		
1	Desilting and fencing of Arbol dam	Hellu/Manyatta
2	Piping of water from Mansile to Hellu/Manyatta	Hellu/Manyatta
3	Purchase and supply of 1000 plastic water tanks for vulnerable household in the ward to harvest rain water	Hellu/Manyatta
Uran ward		
1	Drilling of borehole at Uran Goda to provide water for farm irrigation	Uran
2	Rehabilitation of irrigation farm at Walda	Uran
3	Repair of major water pans for recharge	Uran
4	Construction of borehole for irrigation	Uran
Township ward		
1	Piping of water from Mansile borehole to Moyale town	Township
2	Purchase and supply of 1000 plastic water tanks for vulnerable household in the ward to harvest rain water	Township
3	Tree planting in public places including streets and homestead	Township
4	Community empowerment project like business grants for vulnerable households	Township
Sololo ward		
1	Mega dam between Ramole and Aria; between Anona and Aria	Sololo
2	Tree planting on Borelo mountain and individual farms	Sololo
3	Restocking	Sololo
4	Beekeeping (purchase of 1000 beehives)	Sololo
Golbo Ward		
1	Purchase of plastic tanks for vulnerable households	Golbo Ward
2	Establishment of Irrigation scheme	Odda, Dabel, Godoma and Nana
3	Investment grants to women, youth and person living with disability	Golbo Ward
4	Capacity development for climate risk adaptation	Golbo Ward
5	Purchase of hybrid cattle and goats that can endure harsh climate conditions to selected residents of Golbo ward	Golbo Ward
Obbu Ward		
1	Construction of new water pan and irrigation system at Sololo Makutano	Sololo Makutano
2	Provision of 400(10,000) litres plastic tanks at Dambala Fachana	Dambala Fachana
3	Investment grants to women, youth and person living with disability	Obbu
4	Desalinization of Amballo borehole and piping	Anballo
North-Horr Sub-County		
North Horr Ward		
1	Facilitate movement of people to permanent water points instead of water trucking	North Horr
2	Storm water harvesting at Burra, Lag Massa and Horr Dika for Large scale pasture and fodder production	North Horr

3	System strengthening of community livestock disease reporters	North Horr
4	All stakeholder sensitization, awareness creation on conflict resolution mechanism between waring communities	North Horr
5	Facilitate movement of people to permanent water points instead of water trucking	North Horr
Maikona Ward		
1	Fodder production in Maikona	Maikona
2	Establishment of Desalination plant at Maikona, Kalacha and Elgathe	Maikona
3	Investment grants for youth, Women group and small scale business people	Maikona
4	Alternative source of livelihood such as poultry and bee keeping	Maikona
5	Strengthen and support Community Livestock Disease Reporters, surveillance and roll out routine yearly mass livestock vaccination programmes	Maikona
Illeret Ward		
1	Investment into desalination plant using water from Lake Turkana in collaboration with Turkana Basins Institute and other Partners so permanently solve perennial lack of clean water shortage	Illeret
2	Construction of storage tanks and piping to settlements and institutions	Illeret
3	Sensitize leadership on the need to create harmony and co-existence by spearheading this process and cascade it to the lower levels mitigate ever evolving resource based conflicts	Illeret
4	Train and strengthen grazing committees for Dassnach, Turkana and Hamarkoke to build worrying communities trust and initiate peace building initiative talks	Illeret
5	Strengthen and support Community Livestock Disease Reporters, surveillance and roll out routine yearly mass livestock vaccination programmes	Illeret
Dukana Ward		
1	Drilling and equipping of a new borehole in Dukana Trading Centre for large scale crop, pasture production	Dukana
2	Automation of all major water supplies in Dukana Ward and revenues collected to support food security and institutional support during drought emergencies	Dukana
3	Wide stakeholder sensitization on peace building and conflict resolution mechanism between waring communities	Dukana
4	Wide stakeholder sensitization on peace building and conflict resolution mechanism between waring communities	Dukana
Turbi-Bubisa Ward		
1	Storm water harvesting for large scale food, pasture production	Turbi
2	Governance and system strengthening of all major water supplies in the ward through innovation and technologies	Turbi
3	Wide multi-sectoral engagement targeting all stakeholders in all major conflict prone areas of Borana and Gabbra	Turbi
4	Strengthening of community livestock disease reporters	Turib
Laisamis Sub County		
Korr-Ngurunit		
1	To initiate alternative livelihoods by capacity building programs on climate change adaptability through training and provision seed money for projects like; Poultry keeping, bee keeping,	Korr, Ngurunit, Ilaut, Balah
2	Establish water harvesting for livestock and irrigation by building dam/pans Kuyea.	Korr, Ngurunit
3	Start a conservancy to operationalize	Korr, Ngurunit, Ilaut ,

	grazing patterns and implementations by strengthening the EMC and creating effective by-laws. This can be supported and well s implemented by starting a Korr/Ngurunit conservancy,	Namarey
4	Stock control/destocking by improving market and road infrastructure	Korr, Ngurunit,Namarey,Ilaut
5	Conduct capacity building training on livestock management	
Loglogo Ward		Location
1	Alternative livelihoods	Loglogo, Kaboye
2	Establishment of livestock market	loglogo
3	Establishment of Loglogo unit conservancy	Loglogo,
4	Grazing pattern management.	Loglogo ,kamboe,
5	Improved livestock breeds.	loglogo
Laisamis Ward Adaptation Priority		
1	Introduction of alternative livelihood i.e. poultry keeping, camel keeping, kitchen gardening, bee keeping, gum and resins, beadwork and other programmes i.e. ujuzi manyattani	Laisamis, lontolio,koya ,merille
2	Grazing pattern strengthened and destocking	Laisamis, lontolio,koya ,merille
3	Milk-shed/Milk value chain enhancement (camel milk joint marketing through formation of cooperatives, storage facilities and market linkages)	Laisamis,lontolio,koya Merille
4	Construction/rehabilitation/revival of the Laisamis abattoir	Laisamis
5	Water harvesting for vegetable production at Merille, Sakardala and Nairibi Merille,koya,laisamis	Merille, Nairibi, Lontolio
Loiyangalani Ward		
1	Improved health facilities	Loiyangalani Ward
2	Investment grant for specific small scale business groups	Loiyangalani Ward
3	Establishment of livestock Market and Fodder production/irrigation	Gatab Location
4	Construction of Fish store(cold store) further away from the lake due to concern of rising water level	Loiyangalani town
5	Distribution of pipeline scheme to villages in loiyangalani	Loiyangalani town
Kargi Ward		
1	Investment in conflict resolution mechanisms especially at the hotspot areas	Kambinye, Yel
2	Alternative livelihood options such as kitchen gardening, poultry	Kargi Ward
3	Establishment of flood control structures at	Halam,Bohisi Guthan,Kambinye and Dakhane
4	Regular deworming and vaccination	Kargi Ward
5	Collection centers for solid waste across the town centres	Town centers9Kargi and South Horr)
Maikona Ward		
1	Cash transfer programme for children headed ,PWDs and old age households	Maikona Ward
2	Vegetable production	Maikona Ward
3	Fodder production	Maikona Ward
4	Restocking programme for hybrid	Maikona Ward
5	Establishment of Desalinization plant	Maikona, Kalacha, El gade
6	Investment grants for youth, Women group and small scale business	Maikona Ward

	people	
7	Alternative source of livelihood such as poultry and bee keeping, Fish farming	Maikona Ward
8	Utilization of Prosopis for animal feeds and charcoal	Maikona, Elgade
Saku Sub- County		
Sagante-Jaldesa		
1	Construction of two mega dam at Mado chubicha and Malka Lakole; and establishment of irrigation scheme in Kupi Qallo, Jaldesa, Dololo Dokatu, and Badassa	Qilta, Jaldesa, Sagante, Dirib
2	Undertake community land registration and promotion participatory rangeland management; range restoration, rehabilitation, and tree nurse per location	Qilta, Jaldesa, Sagante, Dirib
3	Promoting alternative livelihood (Bee keeping, kitchen gradening and alternative source of energy- LFG gas, improved Jiko, and Solar	Qilta, Jaldesa, Sagante, Dirib
4.	Establishment of livestock laboratory and cattle dip within the ward.	Dirib
Central Ward		
1	Damming of Gotu Gardi to harvest storm water for the purpose of irrigation and domestic water supply.	Jirime
2	Livelihood diversification	Dakabaricha, Mountain, Jirime, Nagayo
3	Infrastructural development- Road and bridges; Jirime, Harobota, Haro Gumi, shrine, Manyatta Ote, Manyatta Ginda, Manyatta Gar mata Arba, Wako Keyate, Manyatta Duriye, Ajaa Tisa, Nyayo road	Dakabaricha, Mountain, Jirime, Nagayo
4	Range land/ landscape restoration and rehabilitation- tree nursery establishment for all locations; Rangeland restoration/reseeding- Jirime	Jirime, Dakabricha, Nagayo, Mountain
Karare Ward		
1	Drilling of a borehole at Hula-hula Center and Kituruni location for livestock, domestic and irrigation.	Songa, Hula Hula
2	Rangeland restoration and reseeding	Karare, Songa, and Hula Hula
3	Establishment of tree nurseries close to water points in Kituruni, Songa, and Leyai	Songa
4	Purchase of 80pcs 10,000 Litre and underground tank for Parkishon, Lekartinya, and Hula Hula community	Hula Hula and Karare

Annex 3; List of Stakeholders

No	Name of CSO	Contact details	Location	Founding Objective	Vulnerability Disaggregation	Operational scope
1	PACIDA (Pastoralist Community Initiative Development and Assistant	+0202656947 pacida@pacida.org	Marsabit Central	-To build community resilience through water project, trainings, livelihoods, climate justice and education program -To support in Policy framework development and dialogue	Women, Men, Youth, herders	Across the entire County
2	Caritas Marsabit	caritasmarsabit.org; info@caritas-dom.org +254113458289	Marsabit Central	-To build resilience of the most poorest through charitable service, water, programs, health, livelihood, peace and justice, Disaster risk reduction among other programs	Women, Youth, Children , elderly	Entire County
3	CRS-Nawiri; Marsabit	www.crs.org +25470241698	Marsabit Central, Laisamis, north horr sub counties	-To reduce malnutrition by supporting food systems/production through sustainable livelihoods	Children under 5, pregnant and lactation mothers, women groups, youth among others	Northorr, Saku, Laisamis
4	FHI-Kenya, Kenya Rapid	+2542027310023; +254714932605 www.fh.org	Marsabit central	To reduce hunger through provision of sustainable livelihood	Women and youth groups, children herders among others	Entire County
5	WFP	www.wfp.org +254800722446 +254727524893	Marsabit Central	-To promote food system to achieve suitable food production to address climate resilience -To address malnutrition To build County capacity to address sustainable good systems	Farmers, women, men, herders, children, men	Entire County
6	Wealth Hunger Hilfe (WHH)	www.welthungerhilfe.de +254721977837	Marsabit Central	To support local organization through funding to support	Women, youth	

		PhilipEwoton@welt hungerhilfe.de		sustainable livelihood by funding water, school programs, agriculture, livelihoods among others		
7	NDMA	www.ndma.go.ke john.ougo@ndma +254712888749		To manage drought through disaster risk reduction programs and also to share EWI for ear actions to reduce loses		Entire County
8	IREMO-Indigenous Resource Management Organization	+254725808541	Marsabit Central	To work with women to manage and developed natural resources for economic benefits	Women and youth	Kargi, Maikona, Saku
9	Mercy Corps-LMS	+254203864454 +254722168426	Marsabit Central	To increase community resilience through implementing sustainable livelihoods projects	Women, youth, farmers, herders among other	Entire County
10	Kenya Forest Services	+254726611234	Marsabit central	To manage and increase tree cover	Men, women, youth,	Mt Marsabit gazetted forest
11	Kenya water towers	+254723805913		To manage and protect water towers	Women and youth	Mt Marsabit, Mt Kulal, Hurri hills , Northhorr,
12	National Environmental Management Authority	+254723956270	Marsabit central	To safeguard environment through enforcements	All	Entire County
13	Kenya Metrological Department	+254723996886 +254(069)2102028	Marsabit central	To provide/generate climate data for planning		Entire County
14	Center for research Development in Dryland	+254721839306; info@crdd- kenya.org	Marsabit Central	To work on the research gaps in areas of resilience building, sustainable livelihoods and rangelands	Herders, farmers, education institutions among others	Entire County
15	Kenya red cross - Marsabit	+254-692102065	Marsabit Central	To build capacity of local communities to any anticipated hazards, Disaster risk reduction To respond to emergencies to affected farm land incase disaster strikes	Women, children, youth, elderly	Entire County
16	USAID Kuza	+254721992254	Marsabit Central	To strengthen County/institutions in	Women, Youth,	Entire County

				<p>policy/legislation development To equip groups with finances † start sustainable livelihood To support private/local institution access grants/soft loans to involve sustainable livelihood</p>	children	
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Photo; Members of Stakeholders during Validation of MCCCAP



County Government of Marsabit
Department of Water, Environment, Climate Change, Forestry and Natural Resources
Directorate of Environment and Climate Change
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