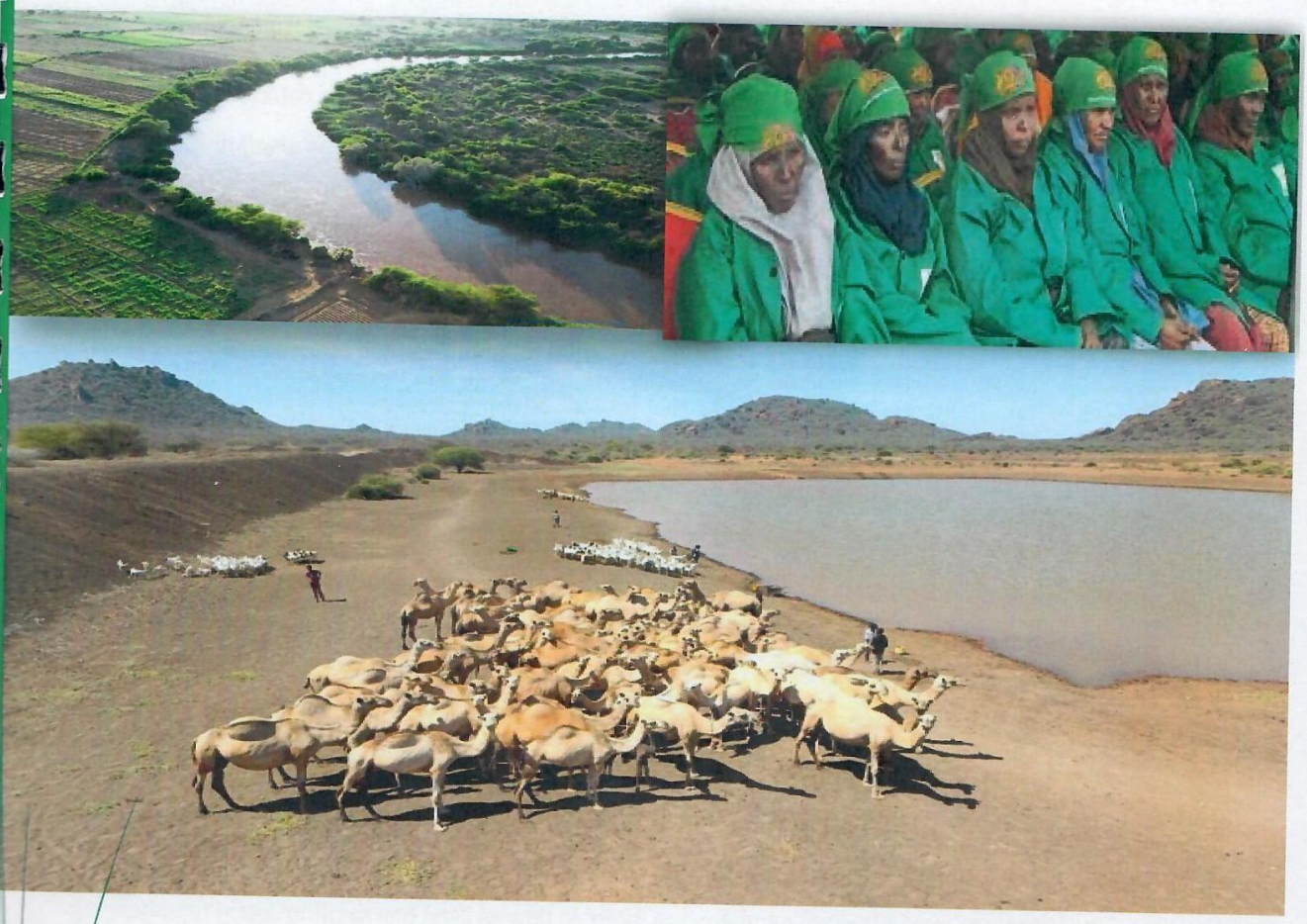
MANDERA COUNTY GOVERNMENT



Mandera County Climate Change Action Plan

2023- 2027

THE WORLD BANK
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FOREWORD

As the global community grapples with the challenges posed by climate change it has equally fueled disaster in Africa. In our community, it is a risk multiplier. Climate related extreme weather events such as increased temperatures, erratic rainfall patterns, droughts, floods, and the associated impacts on agriculture, water resources, infrastructure, and human health.

Climate change has a potential to reverse all the efforts made by the government of Kenya to mitigate impacts of climate change. As such every stakeholder has a part to play to increase and build synergy in fights against changes in our climate system. In view of this, the international community has realized the need to unite in its efforts to combat predicted effects.

At the national level, Kenya has expended significant efforts to forge a comprehensive framework to address climate issues responding to the development of the international climate change regime since the 1990s. The Ministry of Environment Forestry and Climate Change has developed a national climate change framework policy and had a National Climate Change Action Plan (NCCAP) 2018 – 2022.

At the county level, County Government has made a lot effort in measures to aid in increasing adaptive capacity for her citizens. the urgency of addressing climate change and has led in the development of an Action Plan that guides the efforts in this critical endeavor These measures are not limited to development and strengthening of physical structures but also in our county's development plans, policies and laws as well as serve as a roadmap for building climate resilience and sustainable development in Mandera County. By development of this action plan, the county government endeavors to harness emerging opportunities and foster sustainable livelihoods for the benefits of the people of Mandera County.

Every effort taken today will shape the climate-resilient Mandera County of tomorrow.

H.E Mohamed Adan Khalif

Governor

Mandera County

ACKNOWLEDGEMENT

I would like to acknowledge the efforts of the Mandera County Government in taking proactive steps towards addressing climate change. As the County Executive Committee member in charge of climate change issues in the county, I am grateful for the collaboration and dedication of all individuals and organizations involved in the development of the Mandera County Climate Change Action Plan.

Climate change poses significant challenges to our county, impacting various sectors including agriculture, water resources, infrastructure, and health. Recognizing the urgency of the situation, our team worked tirelessly to formulate a comprehensive plan that addresses both mitigation and adaptation strategies.

I would like to express my gratitude to the technical team for their diligent work in conducting community consultations, research and data analysis, enabling us to identify the key climate change issues specific to Mandera County. This information served as the foundation for developing strategies that are tailored to our unique context.

I extend my appreciation to the stakeholders who actively participated in the consultative meetings and provided valuable insights. Your contributions have helped shape this action plan, ensuring it reflects the needs and aspirations of our community.

I would also like to acknowledge the financial support provided by various partners, enabling us to conduct community engagements, engage experts, and organize workshops. Your commitment to addressing climate change in Mandera County is commendable and has been crucial in the development of this action plan.

Lastly, I would like to thank His Excellency the Governor for his unwavering support and commitment to prioritizing climate change mitigation and adaptation actions. Your guidance has been instrumental in driving this initiative forward and ensuring its successful implementation.

Together, we have laid a strong foundation for climate action in Mandera County. However, the real work begins now, as we embark on the implementation phase of this action plan. I am confident that with the continued support and collaboration of all stakeholders, we will be able to mitigate the impacts of climate change and build a resilient and sustainable future for our county.

Mohamed A. Omar

CECM – Water, Energy, Environment, Natural resources and Climate Change

MANDERA COUNTY GOVERNMENT
CECM WATER, ENERGY,
ENVIRONMENT
AND CLIMATE CHANGE

CCCAP TECHNICAL WORKING GROUP

	NAME	DESIGNATION
1.	Issack A. Ali	County Director Climate Change (Technical Coordinator)
2.	Basra Hussein	County Director of Energy, Environment and Natural Resources
3.	Abdirahman Maalim Hussein	Principal Environment officer
4.	Siyad Ahmed Maalim	Chief Environment Officer
5.	Adan Ahmed Omar	Senior Economist
6.	Samson Mulandi	Irrigation Engineer
7.	Mohamedweli Alinur	Assistant Director, Efficiency and Monitoring Unit
8.	Mustafa Sheikh Osman	Assistant director Devolved Unit
9.	Irshad Hussein Haji	Senior Supertident Engineer
10.	Abdimalik Bishar Maalim	Special Programmes Officer
11.	Alio Hassan Kala	Agricultural extension officer
12.	Saadia Adan Mohamed	Assistant director, Department of Youth affairs
13.	Adan Ismail Sheikh	Veterinary Officer
14.	Ismail Mukhtar Adan	Forester, Kenya Forest Services
15.	Abdi Mohamed Haji	Program officer, Danish Refugee Council
16.	Sulekha Adow	Sub-County health Administrator

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LIST OF ACRONYMS

ADR	Alternative Dispute Resolution
ASALs	Arid and Semi-Arid Lands
AU	African Union
CBO	Community Based Organisation
CCCAP	County Climate Change Action Plan
CCF	County Climate Change Fund
CCU	Climate Change Unit
CECM	County Executive Committee Member
CIDP	County Integrated Development Plan
CSO	Civil Society Organizations
DNMP	Division of National Malaria Programme
DRC	Danish Refugee Council
DRR	Disaster Risk Reduction
EAC	East African Community
EMCA	Environmental Management and Coordination Act
FBO	Faith Based Organisation
FLLoCA	Financing Locally-Led Climate Action
GHGs	Green House Gases
GIS	Geographical Information Systems
IPM	Integrated Pest Management
KFS	Kenya Forest Service
KIHBS	Kenya Integrated Household Budget Survey 2015-2016
KMD	Kenya Meteorological Department
KWS	Kenya Wildlife Services
MOALIF	Ministry Of Agriculture,Livestock,Irrigation and Fisheries
NCCAP	National Climate Change Action Plan
NCCRS	National Climate Change Response Strategy
NDC	Nationaly Determined Contributions
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organisations
PCRA	Participatory Climate Risk Assessment
PLWDs	Persons Living with Disability

RACIDA	Rural Agency for Community Development and Assistance
SDGs	Sustainable Development Goals
TVET	Technical and Vocational Training Colleges
TWG	Technical Working Group
WPCCC	Ward Planning Climate Change Committee
WRA	Water Resources Authority
WRUAs	Water Resource Users Association

DEFINITION OF TERMS

Adaptation	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects which moderates harm or exploits beneficial opportunities.
Adaptive Capacity	The ability or potential of a system to respond successfully to climate variability and change and includes adjustments in both behavior and in resources and technologies**.**
Capacity building	In the context of climate change, the process of developing the technical skills and institutional capability, particularly among vulnerable communities and emerging economies and sectors to enable them to effectively address the causes and impacts of climate change**.**
Climate	The average pattern for weather conditions occurs over a long-time period (over 30 yrs.). Weather refers to the atmospheric conditions at a specific place at a specific point in time. Climate has always varied because of natural causes. Increasingly, however, human increases in GHG emissions causing changes in climate as well.
Climate Change	A change in the climate system which is caused by significant changes in the concentration of greenhouse gases as a consequence of human activities and which is in addition to natural climate change that has been observed during a considerable period.
Climate Finance	Monies available for or mobilized by government or non-government entities to finance climate change mitigation and adaptation actions and interventions.
Climate Resilience	Adaptive capacity for a socio-ecological system to absorb stresses and maintain functions in the face of external stresses imposed upon it by climate change.
Conference of the Parties	The supreme governing body of an international convention. It comprises representatives of all State Parties and accredited observers. Scope of the COP is to review the implementation of Convention and any other legal instruments that the COP adopts and take decisions necessary to promote the effective implementation of the Convention. In this context refers to United Nation Framework Convention on Climate Change (UNFCCC).

Deforestation	The decrease in forest areas across the world that are lost for other uses such as agricultural croplands, urbanization, or mining activities
Disaster	A disaster is the tragedy of a natural or human made hazard (a hazard is a situation which poses a level of threat to life, health, property, or environment). It is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.
Ecosystem	The interactive system formed from all living organisms and their abiotic (physical) and can comprise the entire globe.
Emission	In relation to a greenhouse gas, means emissions of that gas into the atmosphere where the emissions are attributable to human activity.
Erosion	The process of removal and transport of soil and rock by weathering, mass wasting, and the action of streams, glaciers, winds, and underground water
Intergovernmental Panel on Climate Change (IPCC)	Established in 1988 by the World Meteorological Organization and the UN Environment Programme, the IPCC surveys worldwide scientific and technical literature and publishes assessment reports that are widely recognized as the most credible existing sources of information on climate change. The IPCC also works on methodologies and responds to specific requests from the UNFCCC's subsidiary bodies. The IPCC is independent of the UNFCCC.
Low Carbon Development Pathway	A development plan or strategy that encompasses low-emission economic growth. Transitioning to this pathway means taking actions, where possible, to encourage GHG emissions that are lower than business-as-usual practice; and reducing the human causes of emissions by moving toward a resource efficient economy that is as low-carbon as possible and enhancing carbon sinks.
Mitigation	Efforts that seek to prevent or slow down the increase of atmospheric greenhouse gas concentrations by limiting current or future emissions and enhancing potential sinks for greenhouse gases;
National Adaptation Plan	A document prepared by developing countries that identifies urgent and immediate needs for adapting to climate change.
National Climate Change Action Plans	National plans of action, prepared at five-year intervals, that set out in detail the requirements and costs for the design and implementation of the various climate change interventions

	required for Kenya to attain low carbon climate resilient development.
Sustainable development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Technology Transfer	A broad set of processes covering the flows of expertise, experience and equipment for mitigating and adapting to climate change among different stakeholders.
United Framework Convention on Climate Change (UNFCCC)	An international treaty signed by 195 countries that entered into force in 1994. The objective of the Convention is "…stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system
Vulnerability	The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude and rate of climate variation to which a system is exposed, its sensitivity and its adaptive capacity.
Ward	has the meaning assigned to it under Article 89 of the Constitution;
Ward Climate Change Fund Planning Committee	The ward climate change fund Committee established under section 18 (1) of Mandera County Climate Change Fund Act 2021
County Climate Change Steering Committee	The County Climate Change Steering Committee established under section 14(1) of Mandera County Climate Change Fund Act 2021
County Climate Change Planning Committee	The County Climate Change Planning Committee established under section 7 (1) of Mandera County Climate Change Fund Act 2021

EXECUTIVE SUMMARY

The Mandera County Climate Change Action Plan presents a comprehensive and strategic framework for addressing the challenges and opportunities arising from climate change in the county. This plan outlines key actions, goals, and targets to build resilience, reduce greenhouse gas emissions, and promote sustainable development across various sectors. By implementing this action plan, Mandera County aims to safeguard the well-being of its communities, protect its natural resources, and create a sustainable future.

1. **Background and Context**

This section provides a concise overview of the Mandera County Climate Change Action Plan, highlighting the importance of addressing climate change in the County. It emphasizes the need for collaborative efforts between the government, stakeholders, and communities to effectively mitigate and adapt to climate change impacts.

This section also provides a brief assessment of the current climate change scenario in Mandera County, including the observed and projected impacts. It highlights the vulnerability of the county to climate change, such as increased frequency of droughts, erratic rainfall patterns, and rising temperatures. The section emphasizes the urgency for action and the need for proactive measures

2. **Policy Environment**

This chapter aims to provide an overview of the policies, regulations, and institutional frameworks relevant to climate change adaptation and mitigation within the county. This chapter identifies the existing policies and strategies that support climate action and highlights the gaps and challenges that need to be addressed for effective implementation of climate change initiatives.

3. **Priority Actions**

The plan outlines priority actions to be undertaken to achieve the set goals and objectives. These actions include but are not limited to:

- Enhancing water resource management through improved infrastructure, rainwater harvesting, and water conservation measures.
- Promoting climate-smart agriculture practices to enhance food security, such as sustainable land management, crop diversification, and improved irrigation systems.
- Strengthening disaster preparedness and response mechanisms to mitigate the impacts of climate-related hazards, including early warning systems, community-based disaster risk reduction, and emergency response planning.

- Promoting renewable energy and energy efficiency measures to reduce greenhouse gas emissions, improve energy access, and create sustainable livelihood opportunities.
- Incorporating climate change considerations into urban planning and infrastructure development, including sustainable transportation, green buildings, and waste management.
- Enhancing climate change education, awareness, and capacity building at all levels, including training programs, workshops, and community outreach initiatives.

4. **Delivery Mechanisms**

The action plan highlights the importance of effective implementation, coordination, and monitoring mechanisms. It emphasizes the need for stakeholder engagement, institutional coordination, and regular progress assessments to ensure the successful implementation of the identified actions. It also recognizes the importance of resource mobilization and partnerships to support the implementation process.

The Mandera County Climate Change Action Plan is a critical step towards building resilience and ensuring sustainable development in the face of climate change. By implementing the priority actions outlined in this plan, the county will enhance its capacity to adapt to changing climatic conditions, reduce vulnerability, and foster a sustainable and prosperous future for its residents.

CHAPTER 1: BACKGROUND AND CONTEXT

1.0 Background of Mandera County

Climate change is one of the most pressing challenges facing humanity in the 21st century. Its far-reaching impacts are felt globally, affecting ecosystems, economies, and the well-being of communities.

Mandera County is located in the arid and semi-arid lands (ASALs) of Kenya, covering an area of approximately 25,991.5 square kilometers. It shares borders with Ethiopia to the north and Somalia to the east. The county is characterized by a harsh climate, with high temperatures, low and erratic rainfall, and frequent droughts. The geographical location and climatic conditions make it highly susceptible to the impacts of climate change, exacerbating existing challenges such as food insecurity, water scarcity, and poverty.

Over the past few decades, Mandera County has experienced a noticeable increase in temperatures, with more frequent and prolonged heatwaves. This rise in temperature has adverse effects on agriculture, livestock, and human health, as it leads to reduced crop yields, increased water evaporation, and the spread of vector-borne diseases.

Rainfall patterns in Mandera County have become increasingly unpredictable, with longer dry spells and reduced annual precipitation. This unpredictability makes rain-fed agriculture and pastoralism challenging, leading to crop failures and livestock losses, exacerbating food insecurity in the county.

The county has faced recurrent droughts, affecting the availability of clean water for both human consumption and livestock. Water scarcity has become a critical issue, with communities often forced to travel long distances in search of water sources.

The effects of climate change in Mandera County are compounded by existing socioeconomic vulnerabilities. The majority of the population relies on subsistence farming and pastoralism for their livelihoods. Poverty rates are high, access to basic services is limited, and the county faces challenges related to education, healthcare, and infrastructure development.

The changing climate has also had severe consequences for the local environment. Erosion, desertification, and deforestation are increasing due to changing rainfall patterns and unsustainable land use practices. Biodiversity loss and habitat degradation are further concerns.

Recognizing the urgent need for action, Mandera County has initiated the development of a Climate Change Action Plan. This plan aims to address the climate-related challenges faced by the county and build resilience within its communities. By taking proactive measures, Mandera

County seeks to mitigate the impacts of climate change, reduce vulnerabilities, and promote sustainable development that is both climate-resilient and environmentally responsible.

The development of this action plan was preceded by a locally led countywide participatory climate risk assessment (PCRA) where communities were consulted at ward level which involved identification of the key climatic hazards, their impacts and the key sectors affected. During Consultations the Community members identified priority interventions to address the impacts of the key identified hazards for the development of ward-level Climate Change Action Plans which then informed the formulation of the County Climate Change Action Plan.

The CCCAP was developed through a participatory process which started with review of key documents, gathering of community inputs then coming up with the first draft report. This was followed by Validation through a multi-Workshop in which county departments, National Government agencies, NGOs, CBOs, VMGs and other stakeholder participated. The views of the participants were then incorporated into the draft before the final CCAP was developed, presented to the County Executive Committee for approval.

1.1 Purpose

The Mandera County Climate Change Action Plan (2023-2027) is a five-year action plan, which identifies county and ward-level investments for building community resilience to climate risks and shocks. The purpose of the action plan is to address the challenges posed by climate change and develop strategies to mitigate its impacts and adapt to the changing climate conditions. The plan aims to promote sustainable development, protect the environment, and enhance the resilience of communities, ecosystems, and the economy in the County

The plan focuses on building resilience and adaptive capacities of the local communities to cope with the impacts of climate change by incorporating the prioritized strategies recommended in the Participatory climate risk report (PCRA) into actionable interventions with bias towards the three key sectors of Water, Agriculture and livestock and Environment.

These actions will among others include enhancing investments in water harvesting structures,

early warning systems, climate-smart agricultural practices, enhanced livestock diversification and improving disaster preparedness and response.

1.2 Process of the CCCAP

The County Climate Change Action Plan underwent the following steps before it was finalized and adopted.

Step 1: Review of Key Documents

The objective of this step was to review all available information necessary for effective action planning. The technical Working Group convened a two-day meeting to review all key documents available. The county climate risk assessment report (developed in Phase 1) was the critical resource as it provided a holistic, cross-sectoral county risk profile together with locally relevant recommendations for priority areas for action. Other important documents that were reviewed included the third generation draft Mandera County Integrated Development Plan 2023-27, the National Climate Change Action Plan and other sectoral plans in the county and nationally.

Step 2: Collecting Public Input

The objective of this step was to provide stakeholders and community representatives with an opportunity to actively review and respond to the findings of the county climate risk analysis by validating the broad thematic priority areas and suggesting concrete actions/investments consistent with them. Public sensitization was carried out through radio talk shows for two days using local radio stations to ensure that a large proportion of the population, including those groups often marginalized from formal processes, are informed of the participatory county climate change action planning process and the results of the climate risk assessment process.

During these consultations, consideration was given to Ward climate investment priorities as identified during risk identification exercise.

Step 3: Drafting the County Climate Change Action Plan

The objective of this step was to develop the first draft of the CCCAP based on the material put together and analysis in steps 1 and 2. The technical Working Group convened a three-day workshop to synthesis all the information obtained in the first two steps and come up with a draft climate change action plan. The CCCAP includes key parameters such as timing, actors responsible for various actions, sub-actions, budget, and key performance indicators. In addition, the CCCAP reflects the principles for locally led climate action, and explicitly address the climate resilience needs and priorities of women, youth, ethnic minorities, people living with disabilities and other marginalized and vulnerable groups.

Step 4: Validation Workshop for the CCCAP

The Objective was to present the draft CCCAP to key stakeholders for analysis and validation to ensure quality control by addressing gaps in the plan and refining proposed actions based on realistic situational assessment by diverse stakeholders. The validation workshop was held at

county level and involved experts from the different county departments and National Government agencies and a representation of the various stakeholder groups. The Participants reflected a strong gender and social inclusion with 50% of participants from women, youth, ethnic minorities, people living with disabilities and other marginalized and vulnerable groups. The workshop combined plenary presentations and focus group discussions where participants were able to carry out in-depth review of allocated parts of the documents. Outputs from the validation were then presented in full plenary in form of feedback which was then captured by the Technical Working Group for improvement of the document.

Step 5: Public Feedback

The Objective was to present the validated CCCAP draft to different stakeholders for further analysis and provision of comments and inputs. This involved circulation of the draft plan to a list of identified stakeholders, including CSOs, community representatives, ward climate change planning committees and other public interest groups, for them to make comments into the document. In addition, this step involved the use of community radios to seek input through feedback/discussion sessions.

Step 6: Development of Second (or Final) Draft of CCCAP

The Objective of this stage was to develop the final draft of the CCCAP. The technical working group convened a meeting to finalize drafting of the document. During this process the team also developed an implementation framework and summary budget projections for delivering the plan. This step was done through a two-day meeting and the output was a finalized CCCAP ready for review and approval by the county government executive committee.

Step 7: Presentation of the CCCAP to the County Executive Committee

The Objective of this step was to present the draft CCCAP to the executive for discussion and approval as a county plan during a cabinet meeting before submission to the County Assembly for adoption.

Step 8: Presentation of the CCCAP to the County Assembly

The Objective of this step was to present the draft CCCAP to the county assembly for discussion and adoption through the water, energy, Environment and climate change committee of the house. The county executive committee member shared the CCCAP with the sector committee of the county assembly for their review and then scheduled a half day meeting to discuss the plan with the committee. The chair of the committee then presented the plan to the full county assembly for adoption. The output of this stage was a finalized and adopted CCCAP.

1.3 Underlying Climate Resilience Context

1.3.1 Impacts of Climate Hazards in the County

Residents of Mandera County face significant challenges due to climate hazards such as drought, floods, pest infestations, and diseases. Drought is a recurring issue, resulting in water scarcity, crop failures, and livestock losses. It disrupts the livelihoods of the predominantly pastoralist communities in the region, leading to food insecurity and increased competition for dwindling resources. Furthermore, prolonged droughts have a severe impact on public health, as access to clean water becomes limited, and malnutrition rates rise. The economic consequences are also substantial, as agriculture, which is a key source of income, is heavily dependent on rainfed farming.

Conversely, when heavy rains and floods occur in Mandera County, they are usually devastating. Flash floods destroy homes, infrastructure, and crops, displacing communities and causing loss of life. The resulting soil erosion further degrades the already fragile ecosystem. Additionally, floods increase the risk of waterborne diseases due to contamination of water sources.

Pest infestations and diseases add another layer of complexity to the county's challenges. Pests like locusts decimate crops, exacerbating food insecurity, while diseases like malaria and cholera become more prevalent during extreme weather events, straining the already limited healthcare infrastructure. The spread of animal diseases has also led to substantial livestock losses, which are a crucial source of income and sustenance for the local population.

Communities in Mandera rely on livestock rearing as their primary livelihood. Climate change has disrupted grazing patterns and the availability of water for their animals, degraded rangelands leading to loss of livestock, reduced milk production, and increased conflicts over scarce resources.

Mandera County is home to various indigenous communities with rich cultural heritage and traditional knowledge. Climate change has affected their way of life, including changes in the availability of medicinal plants, disruption of traditional farming practices, and degradation of rangelands. These impacts have eroded the cultural fabric and resilience of these communities.

Women and children often bear the brunt of climate change impacts. Women are primarily responsible for household chores, including water collection and food preparation. Water scarcity and decreased livestock productivity has increased their workload and limited their access to economic opportunities. Moreover, climate-related disasters have disproportionately affected children, with increased risks to their health, education, and overall well-being.

Climate change has exacerbated existing vulnerabilities against Vulnerable and Marginalized Groups (VMGs). Vulnerable groups, such as the elderly, disabled individuals, and those living in

poverty face heightened risks from extreme weather events and limited resources to recover from their consequences.

1.3.2 County Climate Hazard Map

The Mandera County Hazard Map identifies different types of climate-related hazards that Mandera County is prone to. These include droughts, floods, conflicts, land degradation, pest and diseases, and other relevant hazards specific to the county. The map also provides information about the intensity or severity of each hazard which is represented through different symbols to depict the varying levels of risk or impact associated with each hazard. The map also displays the spatial distribution of different hazards across Mandera County. It indicates the areas that are more susceptible to specific hazards, highlighting hotspots or areas with higher vulnerability.

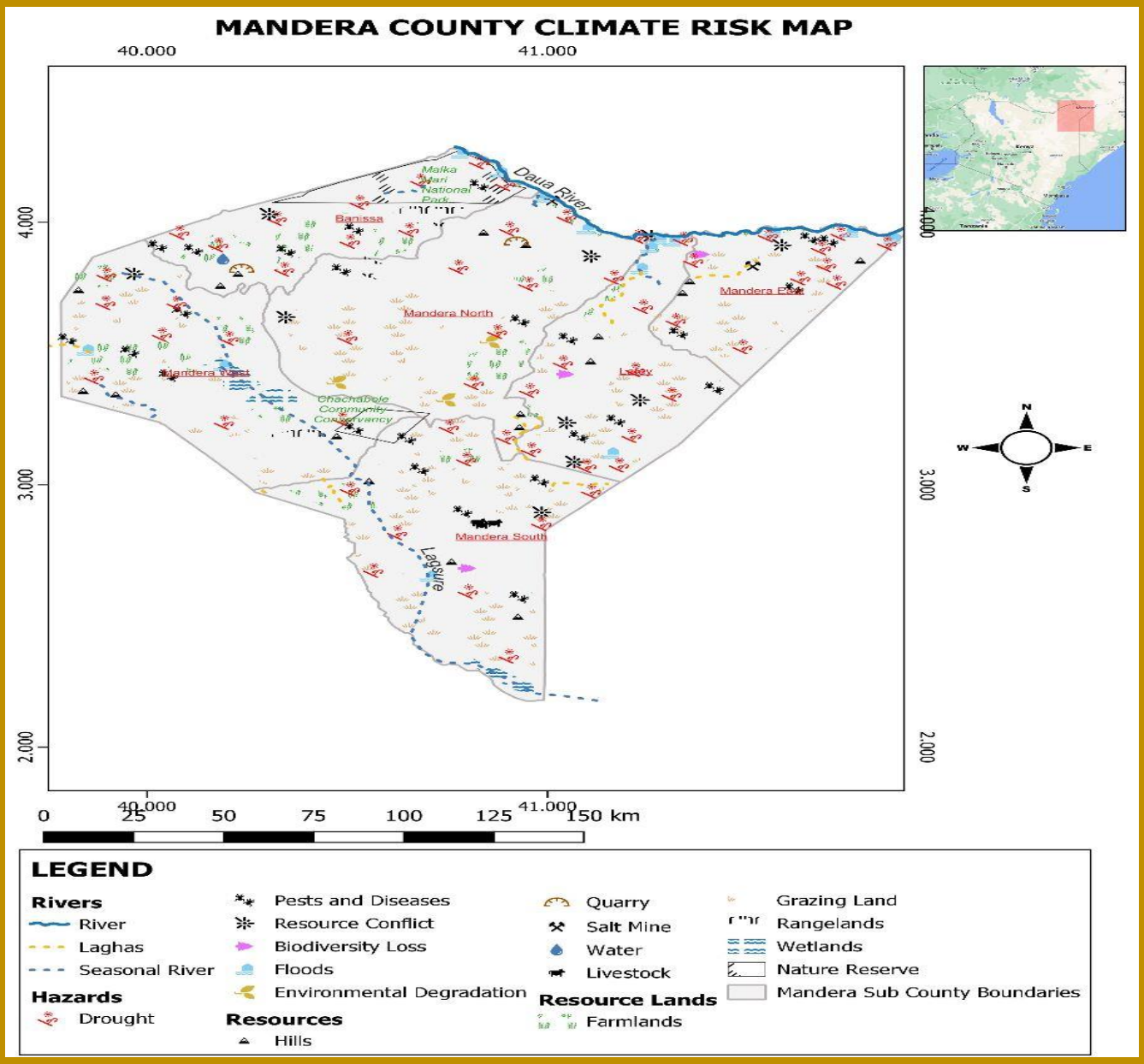

Figure 1: Mandera County Climate Risk Map

1.3.3 Summary of Differentiated Climate exposure and Vulnerability of key groups and livelihoods in the County

The impacts of climate change in Mandera County are often interconnected, and the vulnerabilities of different groups, such as farmers, pastoralists, Elderly, Women and marginalized communities vary differently.

Many communities in Mandera rely on livestock rearing as their primary livelihood. Climate change has disrupted grazing patterns and the availability of water for their animals, degraded rangelands leading to loss of livestock, reduced milk production, and increased conflicts over scarce resources.

Farmers in Mandera face challenges in growing their crops due to changing rainfall patterns, increased frequency of droughts, and rising temperatures. This has led to water scarcity and reduced crop yields.

Mandera County is home to various indigenous communities with rich cultural heritage and traditional knowledge. Climate change has affected their way of life, including changes in the availability of medicinal plants, disruption of traditional farming practices, and loss of biodiversity. These impacts have eroded the cultural fabric and resilience of indigenous communities.

Women and children often bear the brunt of climate change impacts. Women are primarily responsible for household chores, including water collection and food preparation. Water scarcity and decreased livestock productivity has increased their workload and limited their access to economic opportunities. Moreover, climate-related disasters have disproportionately affected children, with increased risks to their health, education, and overall well-being.

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1.4 Brief Overview of Climate Change Actions in the County

1.4.1 Mainstreaming of NCCAP in County Actions

The Climate Change Act, 2016 sets out institutional structures and responsibilities that guide the oversight and management of NCCCAP 2023-2027. The National Climate Change Council, chaired by His Excellency the President of the Republic of Kenya and co-chaired by the Deputy President, is responsible for overall coordination of climate change affairs, including guiding the implementation of NCCAP 2023-2027.

The Cabinet Secretary responsible for climate change affairs submits the action plan to the

Council for approval, and reports to the Council and Parliament on the status of the implementation of the NCCAP. The Climate Change Directorate, established in the ministry responsible for climate change affairs, coordinates the implementation of NCCAP 2023-2027, including related monitoring and reporting.

State departments and national public entities are required to establish climate change units to integrate NCCAP 2023-2027 into strategies and implementation plans, and to report to the Council on an annual basis on performance and implementation.

County Governments are responsible for integrating and mainstreaming climate change actions into their County Integrated Development Plans (CIDP), designating a County Executive Committee member to coordinate climate change affairs, and reporting annually to the County Assemblies on the implementation of climate change interventions. County governments are expected to establish climate change units that will oversee the implementation of climate actions.

Mandera County climate change action plan(2023-2027) is aligned with the National Climate Change Action Plan (2023-2027) to ensure effective coordination and synergy in addressing climate change challenges at both county and national levels. The County plan incorporates the overarching goals and strategies outlined in the NCCAP. This includes aligning the county objectives with the national climate targets and priorities, such as reducing greenhouse gas emissions, enhancing climate resilience, and promoting sustainable development. By doing so, Mandera County contributes to the achievement of Kenya's broader climate goals, ensuring that local efforts are coherent with national strategies.

Mandera County's climate action plan also focuses on localized adaptation and mitigation measures that are specifically tailored to the unique climate challenges and vulnerabilities within the county. This was done through conducting a thorough community led climate risk assessment and vulnerability analysis to identify priority areas for intervention. Furthermore, the county seeks to engage in collaborative efforts with relevant national government agencies, research institutions, and non-governmental organizations to access resources, expertise, and funding available at the national level.

Effective coordination between the county and national government will enhance the overall impact of climate change initiatives, promote knowledge sharing, and ensure that Mandera County's efforts align with the broader national vision for climate resilience and sustainability. Therefore, the alignment of Mandera County's climate change action plan with the National Climate Change Action Plan (NCCAP 2023-2027) is essential for effective climate action that addresses both local and national priorities, fosters cooperation, and maximizes the impact of climate resilience and mitigation efforts.

1.4.2 Climate Change in CIDP

Mandera County Integrated development 2023-2027 advocates for Climate Change mainstreaming in all the county programs with a target to Increase the number of policies, programmes and projects that have been climate change screened from 10 to 37 by the end of CIDP term. The CIDP requires the County department of Environment and Climate Change to spearhead programmes on Community sensitization and awareness creation on Climate change ,Integration of climate change adaptation into county public sector reforms, mainstreaming of Climate Change issues into departmental plans and programmes, Proper coordination of climate change related interventions and information sharing across the sectors and undertaking Participatory climate risk and vulnerability assessments at sub county, ward and villages levels.

1.4.3 Other key climate actions/strategies in the County

To enhance climate resilience, several strategies have been implemented, focusing on different livelihood and producer systems, stakeholder groups, as well as economic and social sectors.

On Livestock-based livelihood, strategies being applied include Promoting sustainable livestock management techniques, including proper feeding, vaccination, and disease control, to enhance livestock health and productivity in the face of climate variability. Livestock keepers are also encouraged to diversify their animal species to reduce the risk of complete herd loss during extreme climate events by promoting the rearing of more resilient and adaptive livestock breeds. Sustainable rangeland management practices, such as rotational grazing systems and controlled grazing, to prevent overgrazing and land degradation, which contributes to the resilience of pastoral livelihoods are promoted.

Adaptation strategies for farming include Introducing water-efficient irrigation techniques, such as drip irrigation or micro-sprinklers, to mitigate water scarcity and support agricultural production especially for farmers along river Daua. The farmers are also encouraged to diversify their crop choices by promoting climate-resilient and drought-tolerant varieties. This helps to reduce vulnerability to climate shocks and maintain food security. They are also sensitized on sustainable farming practices, such as minimal soil disturbance, crop rotation, and mulching, to enhance soil health, water retention, and overall resilience to climate variability.

On Water resource management, strategies used include developing water infrastructure, such as boreholes and water pans, to ensure reliable access to water for both livestock and human consumption.

Formation of community-based organizations (CBOs) that focus on climate resilience and disaster risk reduction are encouraged. These organizations facilitate knowledge sharing, training, and the implementation of community-led initiatives to increase understanding and knowledge

of climate change impacts, adaptation strategies, and sustainable practices across different stakeholder groups.

Promotion of renewable energy sources, such as clean cooking solutions and solar powered systems (solarization of boreholes, standalone streetlights and solar Mini-grids), to reduce reliance on fossil fuels and improve energy access in remote areas. This is mainly done by the county department of energy and natural resources and non-governmental organizations in the county like Islamic relief, Danish Refugee Council (DRC), Care international and RACIDA.

The County department of special programs, Kenya Red Cross and World Food Program implement social protection programs such as relief food distribution and social safety nets that provide support to vulnerable populations during climate-related emergencies, ensuring their access to basic needs and resources.

CHAPTER 2: POLICY ENVIRONMENT

2.1 National Policy Context

2.1.1 The National Perspective

Kenya is an equatorial county in East Africa with a complex and variable climate ranging from warm and humid in the coastal regions to arid and very arid in the interior. The central and western highlands, bisected by the Rift Valley, have a temperate climate with medium to high rainfall and are the productive zones with high to medium agricultural potential (about 18% of Kenya's land area). Low and unevenly distributed rainfall over much of the country means about 82% of Kenya receives less than 700 mm of rain per year. Twenty-three of Kenya's 47 Counties are considered as arid or semi-arid lands (ASALs). ASALs frequently affected by weather-related disasters, particularly droughts, which have a profound impact on the economy and people's well-being.

Kenya's climate is already changing. Surface temperatures across Africa have increased by 0.5-2°C over the past 100 years, and from 1950 onward climate change has changed the magnitude and frequency of extreme weather events. The frequency of cold days, cold nights and frost has decreased; while the frequency of hot days, hot nights and heat waves has increased. Temperature increase has been observed across all seasons, but particularly from March to May. Rainfall patterns have also changed. The long rainy season has become shorter and drier, and the short rainy season has become longer and wetter, while overall annual rainfall remains low. The long rains have been declining continuously in recent decades, and droughts have become longer and more intense and tend to continue across rainy seasons. The frequency of rainfall events causing floods has increased in East Africa from an average of less than three events per year in the 1980s to over seven events per year in the 1990s and 10 events per year from 2000 to 2006, with a particular increase in floods. Droughts and heavy rainfall have become more frequent in the last 30 years. The current trend of rising annual temperatures is expected to continue in Kenya in all seasons. The precipitation projections are more uncertain and suggest that by the end of the 21st century East Africa will have a wetter climate with more intense wet seasons and less severe droughts. The proportion of rainfall that occurs in heavy events is expected to increase.

Heat, drought and floods are impacting Kenyans, and human health is increasingly at risk. Kenya's economy is very dependent on climate-sensitive sectors such as agriculture, water, energy, tourism, wildlife, and health. The increasing intensity and magnitude of weather-related disasters in Kenya aggravates conflicts, mostly over natural resources, and contributes to security threats.

2.1.2 1National Legal and Policy Framework

Climate change is a global problem that demands a global solution, and Kenya is an active player in international efforts. The international response to climate change is founded upon the United Nations Framework Convention on Climate Change. The Paris Agreement under the UNFCCC aims to strengthen the global response to the threat of climate change by keeping global temperature rise this century well below 2°C above pre-industrial levels. Kenya's NDC sets out the country's actions to contribute to achieving the global goal set out in the Paris Agreement, and includes mitigation and adaptation contributions.

The Paris Agreement entered into force for Kenya on 27th January 2017, and as set out in Article 2(6) of the Constitution of Kenya (2010), the Paris Agreement now forms part of the law of Kenya. At the domestic level, a robust regulatory framework comprising laws, policies, plans and institutions is being progressively established at the National and County levels to address climate change. The foundation of the institutional and legal framework for climate change action is the Constitution of Kenya (2010). Article 10 sets out national values and principles of governance, such as sustainable development, devolution of government, and public participation, that are mandatory when making or implementing any law or public policy decisions, including climate change. Article 42 provides for the right to a clean and healthy environment for every Kenyan, which includes the right to have the environment protected for the benefit of present and future generations.

The Climate Change Act, 2016 is the main legislation guiding Kenya's climate change response through mainstreaming climate change into sector functions, and it is the legal foundation of the NCCAP. In addition, Kenya has developed the National Climate Change Response Strategy (2010), NCCAP (2023-2027), National Adaptation Plan (NAP 2015- 2030), Kenya Climate Smart Agriculture Strategy (2017-2026), Climate Risk Management Framework (2017), National Climate Change Policy (2018) and National Climate Finance Policy (2018), among other sector plans and policies that address aspects of climate change.

Kenya has assented to several international and regional instruments governing diverse aspects of climate change, which are currently being implemented. The United Nations Framework Convention on Climate Change (UNFCCC) of 1997 (Kyoto Protocol, 1997), seeks to address climate change through periodic and successive binding global agreements (such as the Kyoto protocol and presently the Paris Agreement) that detail, among others, adaption measures to respond to both current and future impacts of climate change.

Further, the Sustainable Development Goals (SDGs) are a set of development goals that aim at fostering sustainable development across diverse sectors of world economy. Those SDGs of

particular interest to Mandera County include SDGs 1 (No poverty), 2 (zero hunger), 3 (good health and well-being), 6 (Water and sanitation), 7 (Affordable and clean energy), 8 (Decent work and economic growth), 13 (Climate Action), 15 (Life on Land) and 17 (partnership for the goals).

The Constitution of Kenya, 2010

The Constitution of Kenya, 2010 asserts the aspiration of all Kenyans for a governance based on the essential values of, among others, human rights, equality, and social justice. These aspirations particularly resonate well with pastoralists, agro-pastoralists and agriculturalists in Mandera County. The constitution creates an Equalization Fund whose provisions are buttressed by objects of which include, among others, to protect the marginalized, including pastoralists and to ensure equitable sharing of national resources throughout Kenya. Most importantly, the Constitution devolved units, the counties, which are tasked with the implementation of crop and livestock production, water and sanitation services, disaster management (concurrent function), soil and water conservation, and many other functions; all of which contribute to climate Change Mitigation and Adaptation in Mandera County.

The National Climate Change Response Strategy (NCCRS, 2010)

The National Climate Change Response Strategy (NCCRS, 2010) was key in Kenya's history, which laid the foundation for strengthening nationwide actions towards climate change adaptation and mitigation of greenhouse gas (GHG) emissions. The strategy provides key guidelines, principles, and strategies for climate change mitigation and adaptation, which informs and aligns with Mandera County's specific climate action goals. By adhering to the NCCRS, Mandera County can ensure consistency with national objectives, access potential funding and technical support, and contribute to a coordinated and integrated approach to combating climate change that transcends boundaries, ultimately enhancing the county's resilience and sustainability in the face of climate-related challenges.

The Climate Change Act (2016)

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 (Council, 2010) – to be developed in 5-year cycles and aligned with the MTPs – as its principal implementation instrument. The latest NCCAP, covering the period 2023–2027, identifies a series of actions for government and other stakeholders, with a particular focus on adaptation. The National Policy on Climate Finance (2018) provides a clear direction on mechanism for enhanced mobilization of climate finance from all sources: private, public, multi-lateral Agencies, bilateral, philanthropic, among others to finance Kenya's updated National Determined Contribution (NDC) and NCCAPs. The policy

recommended the development of green fiscal incentive policy to catalyze the private sector to finance transition to a low carbon- climate resilient-green development path. It requires the County governments to integrate the provisions of the Act.

The National Adaptation Plan (2015-2030)

The National Adaptation Plan provides a comprehensive framework for addressing the impacts of climate change at the national level in Kenya. Mandera County faces numerous climate-related challenges such as prolonged droughts, erratic rainfall patterns, and increasing temperatures, which threaten food security, water resources, and overall livelihoods. By aligning the county's climate change action plan with the national adaptation plan, the County can access resources, technical support, and guidance to develop effective strategies that are consistent with the broader national objectives. This synchronization ensures a more cohesive and coordinated approach to climate adaptation efforts, facilitating better resilience and sustainable development within the county while contributing to Kenya's overall climate resilience goals.

The County Government Act (2012)

The County Government Act 2012 (Government of Kenya, 2012) empowers county governments in Kenya to formulate and implement policies, plans, and strategies related to environmental conservation and sustainable development, including climate change mitigation and adaptation efforts. Moreover, the Act allocates resources and responsibilities to county governments, enabling them to prioritize climate resilience and sustainability in their development agendas, which is essential for Mandera County as it seeks to mitigate the impacts of climate change and protect its vulnerable communities and ecosystems.

The National Land Policy (2009)

The National Land Policy 2009 provides for guiding principles that resonate with sustainable rangeland management including, among others, equitable access to land; conservation of ecologically sensitive areas, elimination of gender discrimination in land relations; and encouragement of traditional dispute resolution mechanisms. To secure community rights to land, the policy mandates the Government to enact legislation which shall inter alia, provide a framework for the recognition and registration of community rights to land and resources found thereon. Pending which, any unregistered community land shall be held in trust by the County Government for the community in question.

The Community Land Act (2016)

The Community Land Act (Kenya Law) 2016 sets a framework for ownership, protection, management, utilization, rights, benefits sharing, disputes resolutions, and penalties regarding community land. Furthermore, communities have powers to set rules for administration and

management of communal land, establish measures to protect critical ecosystems and habitats, and facilitate access, public participation and co-management of resources by communities. The Environment and Land Court Act 2011 mandates the court to mainstream Alternative Dispute Resolution (ADR) in its proceedings.

The Environmental Management and Coordination Act (EMCA) of 1999

The Environmental Management and Coordination Act (EMCA) of 1999 (amended in 2015 to align with the Kenya constitution, 2010) provides the legal framework and regulatory guidance necessary for the effective management and mitigation of environmental issues, including climate change, within the county. EMCA establishes the institutional and procedural mechanisms for environmental protection and sustainability, enabling Mandera County Government to develop and implement a comprehensive Climate Change Action Plan in alignment with national environmental objectives and standards. The act facilitates the coordination of efforts among various stakeholders, including government agencies, local communities, and private sector entities, to address climate change challenges, promote sustainable development, and safeguard the fragile ecosystems and natural resources crucial for the well-being of Mandera County's residents and the broader environment. Further the act establishes county environment committees and mandates them to coordinate climate action initiatives.

The Water Act, 2016

The Water Act, 2016 provides a legal framework for the sustainable management and conservation of water resources, a critical aspect of climate change mitigation and adaptation. The Act empowers local authorities, including Mandera County, to develop comprehensive water management strategies, promote efficient water use, and protect water sources, all of which are essential components of addressing the water scarcity challenges exacerbated by climate change in the region. By aligning with the Water Act, Mandera County can better plan and implement initiatives to enhance water availability, resilience, and sustainability, thereby contributing significantly to their climate change adaptation and mitigation efforts.

The Wildlife Conservation and Management Act, 2013

The Wildlife Conservation and Management Act, 2013 is crucial for the action plan as it enables the county to address the impact of climate change on its unique ecosystems and biodiversity. By conserving and effectively managing wildlife populations and their habitats in line with this act, Mandera County can mitigate the adverse effects of climate change, such as habitat loss and disruptions in local ecosystems, while also promoting resilience in the face of environmental challenges, ensuring the long-term sustainability of both its wildlife and the communities dependent on these resources.

2.2 County Enabling Legal & Policy Framework

The county government has put in place relevant laws necessary for protection and management of environmental and climate change issues. These include the Mandera County Environmental Management and Coordination Act 2021, Mandera County Climate Change Fund Act 2021 and County Climate Change Adaptation Policy 2021.

i. Mandera County Climate Change Fund Act, 2021

The Mandera County Government has enacted Mandera County Climate Change Fund Act, 2021 that establishes Mandera County Climate Change Fund and various climate change committees such as the County Climate change steering committee, County Climate change planning committee and Ward climate change planning committees for management and coordination of climate change issues in the county.

The Act requires the County Government to allocate 2% of its development budget to the County Climate Change Fund (CCCF) for implementation and coordination of climate change programs and projects hence the climate change risk assessment will form a basis for evidence-based climate response.

Through this Act, the county has further established climate change institutions at the county and ward level for management and coordination of climate change related issues and interventions in the county. These include the County Climate Change Unit, County Climate Change Steering Committee, County Climate Change Planning Committee and Ward Climate Change Planning Committees.

ii. Mandera County Climate Change Adaptation Policy, 2021

The main goal of the Policy is to ensure that climate change is mainstreamed in the economically and socially vulnerable sectors and to steer Mandera County towards climate resilience and green development pathway. This will be achieved through: Pursuing sustained economic growth by appropriately addressing the challenges of climate change; Integrating the climate change policy into other related county policies and the CIDP; Facilitating and strengthening Kenya's role as a responsible member of the international community in addressing climate change challenges; Focusing on pro-poor and gender sensitive adaptation while promoting mitigation to the highest extent possible in a cost-effective manner; Ensuring water, food and energy security of the county in the face of challenges posed by climate change; Minimizing the risks arising from expected increase in frequency and intensity of extreme events: flash floods, droughts etc.; Strengthening inter-departmental, inter-agency decision making and coordination mechanisms on climate change; Facilitating effective mobilization and utilization

of natural, human, technical and financial resources available both nationally and internationally; Development of appropriate economic incentives to encourage public and private sector investment in both adaptation and mitigation measures; Enhancing the awareness, skills and institutional capacity of relevant stakeholders in implementing climate change adaptation and mitigation measures and promoting conservation of natural resources and long-term sustainability.

The Mandera County Climate Change Adaptation policy envisages that the county government shall undertake Climate Change Action Planning, Risk Assessment, Vulnerability Assessment and Adaptation planning for effective implementation of climate actions.

iii. The Mandera County Environmental Management and Coordination Act 2021

This Act serves as the legal framework through which the county can effectively manage and coordinate its environmental initiatives, aligning them with climate change goals. By establishing mechanisms for sustainable resource management, pollution control, and climate resilience strategies, the Act provides the necessary legal authority and structure to implement and enforce policies, projects, and initiatives outlined in the Climate Change Action Plan. In essence, it ensures that the county's efforts to mitigate and adapt to climate change are not only guided by a comprehensive plan but also have the legal backing required for successful execution and accountability.

CHAPTER 3: PRIORITY CLIMATE CHANGE ACTIONS

3.1 : Identification of strategic climate action priorities in the PCRA

During community consultation forums and the County Level Multi-stakeholder workshop, the climate hazards in the county prioritized at ward level were presented in the view of the current and projected climate outlook. This was followed by sector-wise identification and prioritization of the response actions for the identified climate risks. The prioritized strategies for addressing climate risks and their impacts were captured in four priority areas namely water, agriculture, and environment and disaster management.

3.1 Priority County Climate Change Actions

Table 1: County Priority climate strategies under the respective thematic sectors

Drought				
Sector	**Risk**	**Stressor/shock/cause/what is behind the risk**	**Adaptation strategies**	**Wards**
Water	Reduced water availability Depletion of groundwater resources Water scarcity for human and livestock consumption	Decreased rainfall, prolonged dry seasons	• Construction of water harvesting and storage structures. • Drilling and rehabilitation of strategic boreholes • Desilting and expansion of major water pans. • Water treatment, • desalination of borehole water and distribution/ supply network to households • Construction of more community water storage tanks. • Community education and awareness creation on water harvesting, conservation and sustainable consumption of water.	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Guticha, Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri, Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Warankara.
Agriculture	Crop failure and reduced yields Livestock deaths due to lack of food and water Soil erosion and desertification	Insufficient water for irrigation, soil erosion	• Ecosystem conservation, restoration and protection of water catchment through afforestation, reseeding of indigenous tree species.	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Guticha, Morothile, Ashabito, Banisa, Guba, Derkale, , Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south,

			• Support community policing on environmental management and conservation. • Integrating Indigenous and scientific knowledge on climate information systems. • Adoption of renewable energy as an alternative to fuel wood to curb deforestation. • Awareness creation on the importance of afforestation through public barazas, environmental clubs, community dialogue and community groups • Restriction of haphazard (mushrooming)settlement on rangeland through involving political leaders that deprives rangeland from its tree resources • Supporting community rangeland resource user groups i.e gum and resin, beekeeping, through registration and providing working materials.	Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Warankara

Environment	Loss of biodiversity Deforestation and land degradation Displacement of wildlife	Desertification, loss of biodiversity	• Increasing fodder farming such as Napier and Sudan grass. • Provision of farming inputs le.g., certified drought-resistant crop seeds, farm tools & equipment. • Enhanced agricultural productivity through investment in climate smart Agriculture. • Upscaling of livestock off-take program. • Large Scale production and storage of hay and feed supplements. • Construction of feedlot. • Crop Diversification. • Promotion of small-scale Irrigation system. • Diversification of livelihoods • Livestock insurance and compensation for loss of livestock. • Restocking with improved livestock breeds. • Construction of mega-dam for irrigation • Pre-position adequate veterinary drugs and vaccine	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Guticha, Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri, Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Warankara
Disaster Management	Increased competition for resources leading to conflicts Human displacement and	Decreased rainfall, prolonged dry seasons	• Up-scaling emergency food assistance/ cash transfers.	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Banisa, Guba,

	migration Strain on relief resources		• Capacity building (financial support/ empowerment) of women, youth, VMGs, and PLWDs. • Enhancing collaboration among state and non-state actors. • Establishment disaster response committees at sub-county/Ward Level	Derkale, Kiliweheri, Malkamari, Gither Dandu, Takaba town, Lagsure, Takaba south, Elwak South, Wargudud, Alungu, Lafey, fino, Warankara
Floods				
Water	Contamination of water sources Water Infrastructure damage Disruption of water supply system	Pollution from flooding, sewage overflow	• Construction, expansion and desilting of water pans. • Enhancing water harvesting and storage technologies. • Channeling of surface runoff waters to water point-dams. • Conservation of water catchment areas.	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Banisa, Guba, Derkale, Kiliweheri, Malkamari, Gither Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Warankara.
Agriculture	Crop damage and loss Soil erosion and nutrient depletion Livestock fatalities	Soil erosion, waterlogging, seed destruction	• Construction of flood control structures e.g. dykes and gabions along lagas.and the river • Planting of cover crops and Promotion of Agro forestry. • Regulation of farming system by enforcing 30-meter riparian rule. • Crop insurance	Neboi, Township, Khalalio, Libehiya, sala, Rhamu, Rhamu dimtu, Banisa, Kiliweheri, Malkamari, Dandu, Takaba , Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Warankara
Environment	Habitat destruction and loss of biodiversity	Loss of wildlife habitats, disruption of ecosystems	• Soil erosion control techniques such as tree planting, gabions,	Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Guticha,

	Pollution from agricultural runoff Displacement of wildlife		terracing, diversion to main laggas and valleys. • Demarcation of riparian land and conservation through planting of tree spp such as bamboo vetiver grass, and other local bank conservation spp. • Public awareness to communities on the dangers of floods (i.e moving to higher grounds, unblocking of all water courses, restriction on encroachment to the water flood prone areas) • Proper solid waste management	Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri, Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Wargudud, Alungu, Lafey, fino, Warankara
Disaster Management	Flood-related injuries and casualties Damage to homes and infrastructure Displacement of communities	Roads, bridges, and buildings destruction	• Provision of Early warning systems for information dissemination. • Improve drainage systems in urban areas. • Proper maintenance of roads, drifts, bridges. • Provision of non-food items to affected communities. • Capacity enhancement of communities on flood control techniques. • Develop framework for sharing disaster risk information up to community level.	Township, Takaba, Takaba south, Lagsure, Kutulo, Neboi, Khalalio, Libehiya, Arabia, Fino, Dandu, Rhamu, Rhamu Dimtu,

			• Dissemination of disaster risk information through local media. • Establishment of County GIS Lab and GIS unit to provide data on flood risky areas.	
• **Pests**				
Agriculture	Crop destruction reduced yields Livestock diseases Deaths Economic losses.	Pest infestation, destruction of crops	• Construction of flood control structures e.g., dykes and gabions along lagas and the river. • Planting of cover crops and Promotion of Agro-forestry • Regulation of farming system by enforcing 30-meter riparian rule. • Crop insurance • Establishment of livestock disease-free zone areas • Vaccination drives/ mobile clinics for veterinary services. • Adoption of disease resistant crop and livestock varieties. • Enhancing livestock extension service • Establishing and implementation of Integrated Pest Management System (IPM). • Establishment of Agro-veterinary drug stores.	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Guticha, Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri, Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Warankara

			• Developing and implementing of early warning systems for disease outbreaks. • Diversification of crops and livestock. • Strengthening disease surveillance and monitoring systems. • Capacity building of local communities, healthcare workers, and veterinary professionals on disease identification, prevention and control measures. • Provision of farm inputs including agro-chemicals, certified seeds, supplemental feeds. • Construction of slaughterhouse, dumpsite, and provision of exhauster services. • Provision of mineral supplements to manage deficiencies. • Equipping and operationalization of veterinary diagnostic lab in Mandera East.	
Environment	Disruption of natural ecosystems Imbalance in predator-prey	Pesticides affecting non-target organisms	• Sensitization and awareness creation to communities on the dangers of pest and diseases to	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Guticha, Morothile, Ashabito, Banisa,

	relationships. Loss of native plant species		human and animal lives as well as vegetation and agriculture. • Growing of pest and disease resistant crops. • Practice good garden hygiene and draining of stagnant waters	Guba, Derkale, Kiliweheri, Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma
Disaster Management	Increased demand for pest control measures. Economic strain on agricultural sectors. Food security concerns	Reduced agricultural revenue. increased expenses	• Provision of water treatment inputs. • Provide emergency pest control measures. • Increase the number of community health workers	Khalalio, Libehiya, Arabia, sala, Rhamu dimtu, Guticha, Morothile, Ashabito, Guba, Derkale, Kiliweheri, Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma
Heatwaves				
Water	Increased evaporation rates Reduction in water quality. Stress on aquatic ecosystems	Increased evaporation, reduced water sources	• Enhance Water Conservation, • Upgrade Water Supply Infrastructure, • Implement Water-Efficient Technologies	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Guticha, Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri, Malkamari, Gither Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Warankara
Agriculture	Crop wilting and reduced yields Increased irrigation demands. Livestock heat stress and decreased productivity	Heat stress on crops, insufficient water supply	• Develop Heat-Resistant Crop Varieties, • Improve Irrigation Efficiency, • Adopt Agroforestry Practices	
Environment	Loss of biodiversity in sensitive ecosystems Changes in migration patterns.	Heat stress on humans, plants and animals, habitat loss.	• Promote afforestation & Conservation programmes, • Create Shaded Areas for Wildlife. Reduce Urban Heat Islands.	

Disaster Management	Health impacts (heat-related illnesses. Strain on healthcare systems. Energy demand for cooling systems	Increased heat-related illnesses, strain on healthcare	• Carry Public Health Campaigns. • Establish Heat-Resilient. Infrastructure. • Early Warning Systems. • Adoption of renewable energy.	

CHAPTER 4: DELIVERY MECHANISMS FOR CCCAP

4.1 Enabling Factors

4.1.1 Enabling Policy and Regulation

There is an enabling Policy and Regulation Framework in Mandera.

The Mandera County Climate Change Fund Act, 2021 which creates a fund in the County for the purpose of reliable financing mechanism priority Climate Change actions. Section 5(1) of the act allocates 2% of the county development budget for Climate Change Mitigation and Adaptation measure.

The Mandera County Climate Change Policy, 2021 offers a clear roadmap for integrating climate change considerations into county development activities, ensuring that climate resilience and mitigation efforts are harmonized with local priorities. This policy acts as a unifying document that fosters collaboration among various stakeholders, including government agencies, communities, and NGOs, to align their efforts towards climate adaptation and sustainability goals.

4.1.2 Mainstreaming in the CIDP

The Mandera County government will implement this Action Plan by integrating it seamlessly into the County Integrated Development Plan (CIDP 2023-2027). This will be done through incorporating climate change mitigation and adaptation strategies across various sectors such as agriculture, water resources, Energy and Natural resources, Infrastructure, and health, ensuring that they align with the county's long-term development goals. Through extensive stakeholder engagement, data analysis, and resource allocation, the county government will prioritize climate-resilient initiatives, enhance sustainable land use practices, promote renewable energy sources, and build community capacity to respond to climate-related challenges. By mainstreaming climate action within the CIDP, Mandera County strives to foster a holistic approach to development that not only addresses immediate needs but also ensures resilience in the face of climate change impacts for a sustainable and prosperous future.

4.1.3 Multi-stakeholder participation processes

The Climate Change Unit undertook a couple of multi-stakeholder workshops towards acquiring additional inputs and validation of the draft County Climate Change Action Plan drafted from the comprehensive ward-level community consultations.

Stakeholders in the workshops were drawn from key County sectoral departments of Water, Agriculture, Climate Change, Livestock Environment, Public Health, Veterinary, Special

Program, Economic Planning, Gender and Social Services, Trade, and Cooperative who actively took part in the discussions.

In addition, representatives of National Government agencies, NGOs, CBOs, FBOs, and representatives of various social groups such as youth, women, PWDs, and marginalized communities were part of the workshop.

4.1.4 Finance - County Climate Change Fund

Section 4 (1) of the Mandera County Climate Change Fund Act 2021 establishes Mandera County Climate Change Fund for financing climate change related projects and interventions to address the impacts of climate change affecting the local communities. Section 5 (1) of the act requires the Mandera County Assembly to appropriate 2% of the County development budget to the Climate Change Fund. This is to ensure adequate funding of the climate change interventions in the county.

Varius climate change institutions such as County Climate Change Steering Committee County Climate Change Planning Committee and Ward Climate Change Planning Committees have been established and operationalized to ensure proper implementation of the climate change interventions in collaboration with the local communities and other stakeholders. This is aimed at enhancing community engagement in the identification prioritization and implementation of appropriate climate actions in a sustainable manner to build community residence.

4.1.5 Governance – Mandera County Government Structures

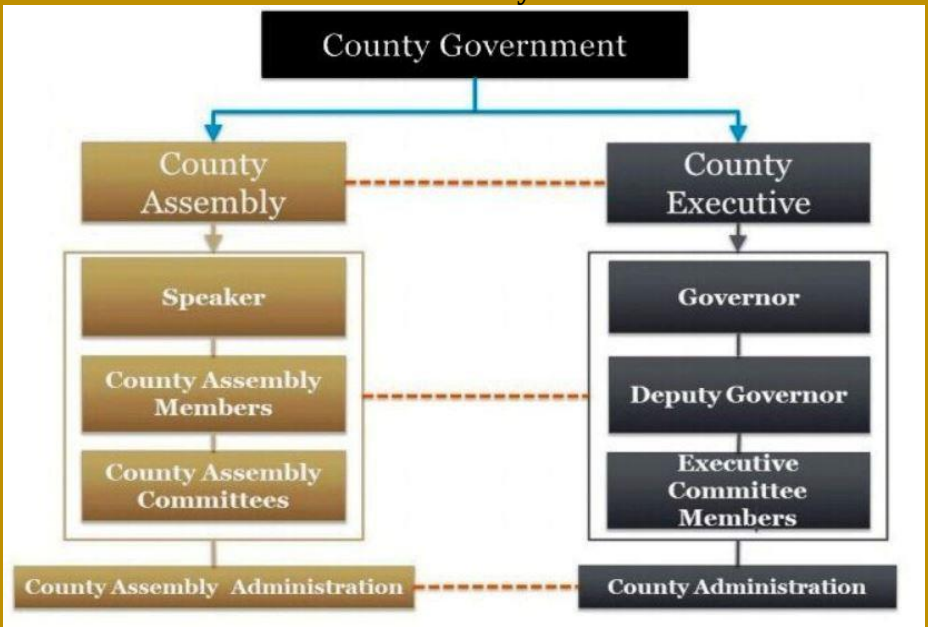

Figure 2: Mandera County Administration Structure

4.1.6 Governance - Climate Change Planning Committees

The Mandera County Climate Change Act, 2021 requires that Governor to designate a member of the County Executive Committee to coordinate climate change affairs. This is consistent with

the approach that all departments and agencies will mainstream climate change actions and only require coordination. The County Executive Committee Member (CECM) responsible for coordinating climate change affairs is also responsible for coordinating the implementation of this action plan. In addition, the CEM liaises with the County multi-sectoral Disaster Preparedness Unit, Development Partners and Civil Society, among others.

The Mandera County Climate Change Fund Act, 2021 establishes the County Climate Change Steering Committee (CCCSC) outlining its functions and composition. The Governor chairs the Committee, while the Executive Committee Member (CECM) in-charge of climate change matters is the Secretary to the Committee.

The Act further establishes Mandera County Climate Change Planning Committee as well as Ward Climate Change Fund Planning Committees in all the wards in the county for planning and coordination of climate change programs.

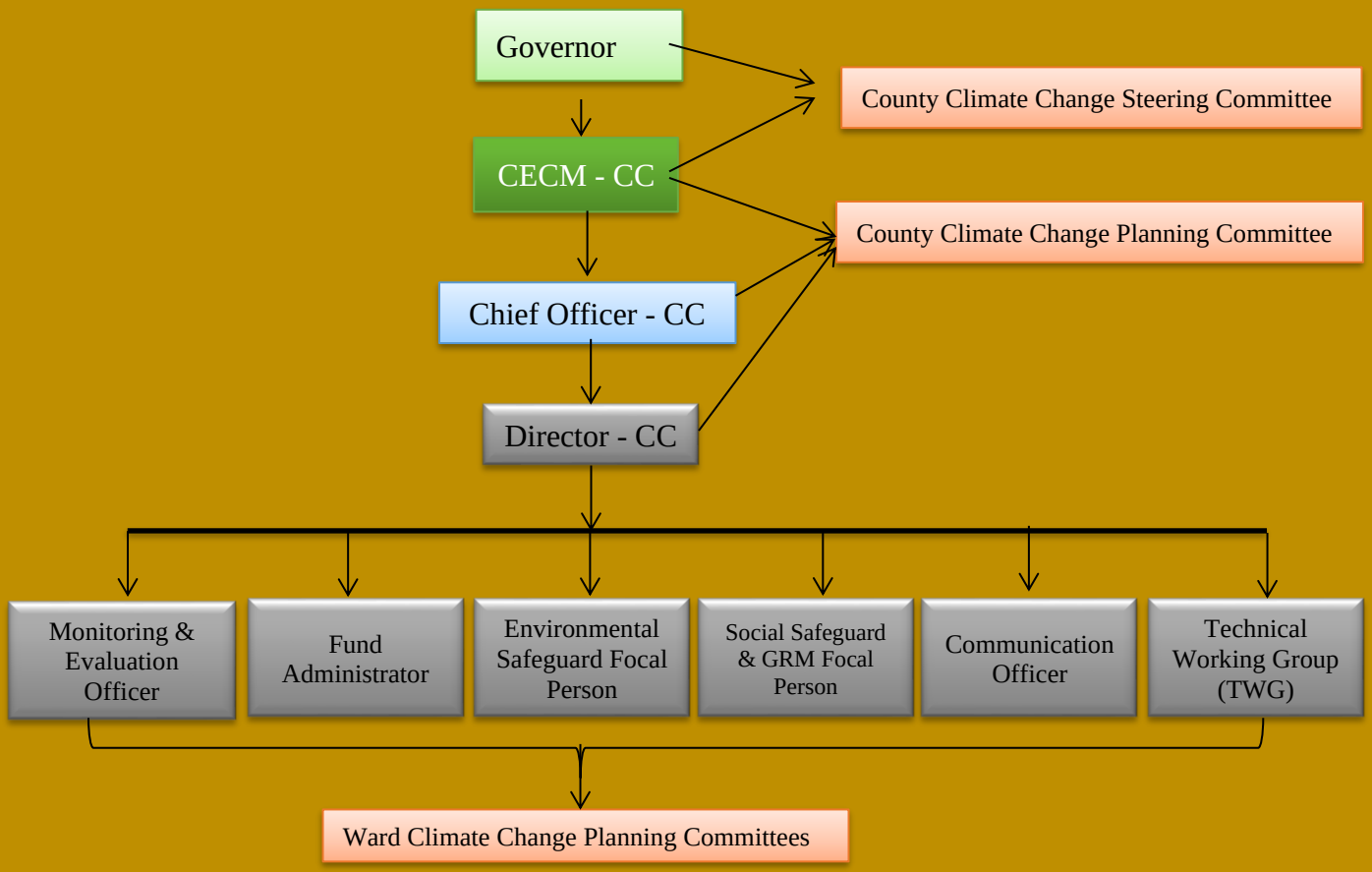

Figure 3: Mandera County Climate Institutional Coordination Structure

4.1.7 Climate Information Services & Climate Data Access

Climate Information Services (CIS) and Climate Data Access play crucial roles in supporting climate adaptation and resilience efforts in Mandera. These services provide valuable information

and data to help individuals, communities, and institutions make informed decisions to mitigate the impacts of climate change.

Climate information services (CIS) and climate data access is essential components of climate change adaptation and mitigation strategies. They involve the provision and accessibility of accurate, reliable, and timely climate information and data to individuals, communities, organizations, and policymakers. These services and data are crucial for understanding climate patterns, projecting future climate scenarios, and making informed decisions to address climate-related challenge.

Kenya Meteorological Department (KMD) and The National Drought Management Authority (NDMA) are the custodians of climate information and provide climate information services and early warning systems in the county. The climate change Unit in collaboration with KMD and NDMA will develop a comprehensive county climate information system to provide the necessary data and climate information for informed decision making with regards to planning for and implementation of Climate change mitigation and adaptation interventions.

4.1.8 Resilience tools

Resilience planning tools play a crucial role in facilitating public participation by communities in climate risk assessments and action planning. Hazard maps are instrumental in raising community awareness about potential risks, such as floods, droughts, or disease outbreaks. By involving local residents in the creation and interpretation of these maps, communities gain a deeper understanding of their vulnerabilities and can actively engage in discussions about risk reduction strategies. This participatory approach not only empowers residents to take ownership of their safety but also allows them to provide valuable insights based on their lived experiences, helping planners create more effective and locally relevant resilience strategies.

Seasonal calendars are essential tools for community involvement as they enable residents to document and share their traditional knowledge about local weather patterns, agricultural practices, and resource availability. By incorporating this indigenous knowledge into resilience planning, communities can develop adaptive strategies that are context-specific and aligned with their cultural practices. Vulnerability matrices further enhance public participation by quantifying and visualizing the various dimensions of vulnerability within the community, enabling residents to identify the most pressing issues and prioritize actions accordingly. Local response and adaptation goals, established collaboratively with community input, provide a clear roadmap for resilience planning and implementation, ensuring that the strategies are both locally relevant and community-driven.

Hazard map

A hazard map was a key component for the participatory climate change risk assessment (PCRA) and climate action planning exercises during the ward-level community consultations. It is a spatial representation of the potential hazards and risks associated with climate change in a particular ward. It provides a visual representation of the data collected during the assessment and can be used to identify areas of high risk and vulnerability. Below is Community Hazard Map for Sala Ward.

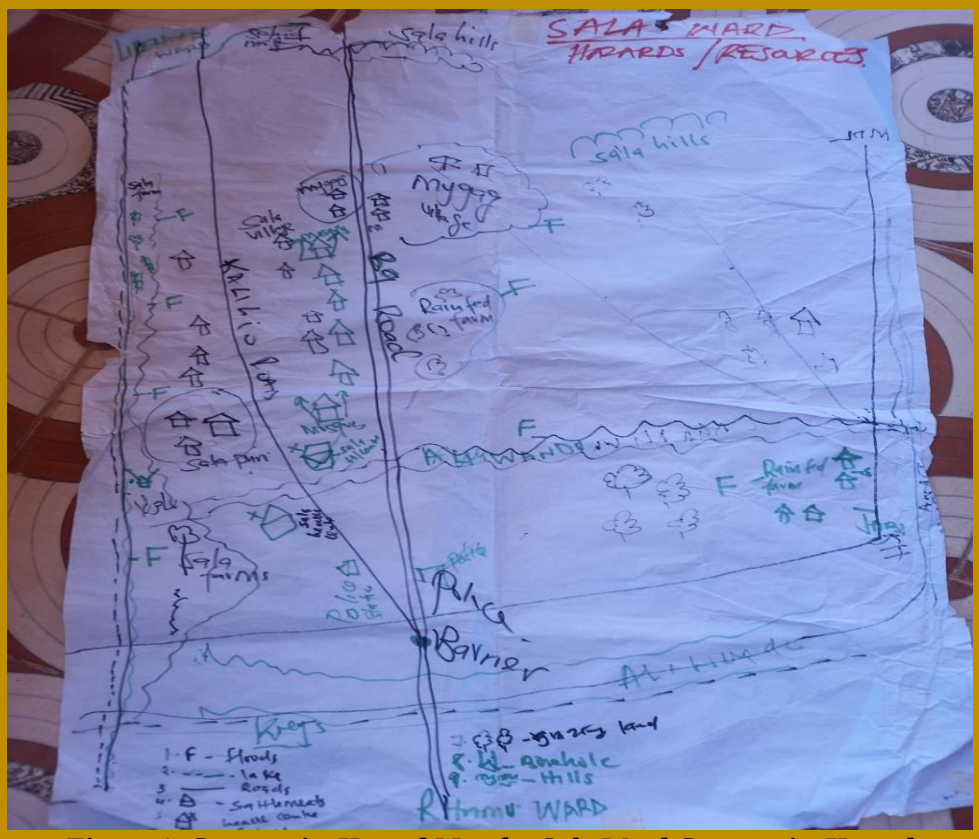

Figure 4: Community Hazard Map for Sala Ward Community Hazard map

b) Seasonal Calendar.

A seasonal calendar is a visual tool that is used to help communities and stakeholders understand the timing and severity of climate-related hazards and vulnerabilities throughout the year. It is a graphical representation of the seasonal patterns of climate-related events, also it can be used to identify the most vulnerable times of the year and develop appropriate strategies to address those vulnerabilities.

Seasonal Calendar: Sala Ward												
Events	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
1. Drought												

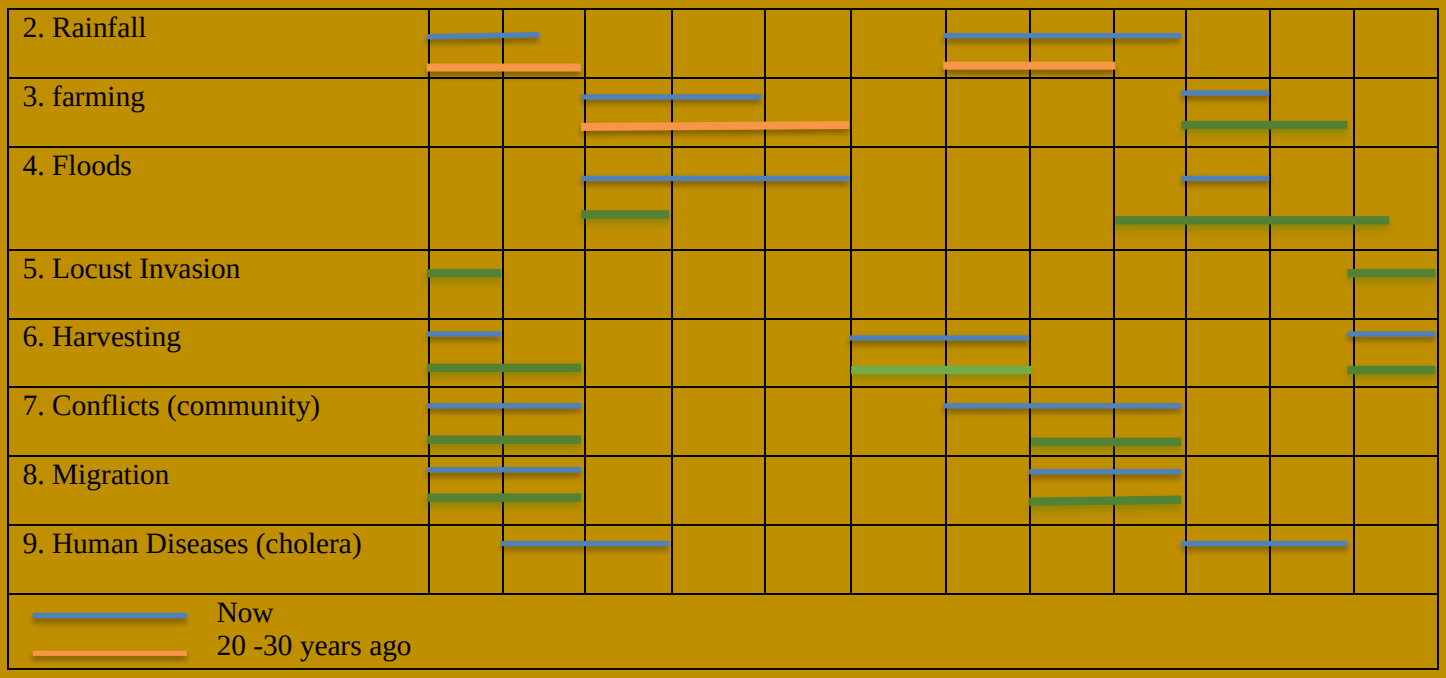

Figure 5: seasonal Calendar.

Hazard Prioritization.

The participants agreed that the severity, frequency and magnitude of each hazard are scored and ranked as the table below.

Table 2: Community Hazard Prioritization

Hazard	**Score**	**Rank**
Drought	87	1
Floods	69	2
Human and Livestock diseases	40	4
Conflict	47	3
Invasive tree species such as *prosopis Juliflora* (Mathenge)	32	5

Vulnerability matrix

Purpose of this Vulnerability assessment is:

- To enable participants'; identify the assets and resources most important to people's livelihoods.
- They then use a matrix to determine which of the community's livelihood assets and resources are most vulnerable to the main hazards in the community (3main prioritized hazards).
- Participants then evaluate the level of impact of the hazards.

Effect Scale: 3-High, 2- Moderate, 1 – Low, 0 – No effect

Table 3: Resources Vulnerability matrix

Livelihood Resource	Resources	Hazard 1 Drought	Hazard 2 Floods	Hazard 3 Conflict	Total
Natural	Laghas	2	3	0	5
	River	2	3	2	7
	Farmland	3	0	0	3
	Grazing land	3	1	3	7
	Livestock	3	1	2	6
	Salty lake	0	3	2	5
Physical	Water pans	3	3	2	8
	Shallow wells	3	2	1	6
	Roads	1	3	0	4
Social	Schools	2	1	2	5
	Hospital	3	2	2	7
	Madarasa	2	1	2	5
Economic	Market	3	3	2	8
	Quarry	0	0	1	1
	Farming	2	3	2	7
Human	Casual Laborer	3	2	1	6
TOTAL		**35**	**31**	**24**	

Local Response

This step reviews and evaluates the effectiveness and sustainability of local responses to the impacts resulting from current climate and disaster hazards and summarizes and interprets the results.

Ranking of the response on effectiveness and sustainability use:

+++ = Very high

++ = High

+ = Medium

0 = Not effective or not sustainable

Table 4: Community Local Response

Hazard/ Risk	Impact	Local Response	Effectiveness	Sustainability	What Could Make Them Effective	Government Support
drought	Loss of pasture	-Provision of hay and feed supplements -migration -destocking	Effective Effective effective	Not sustainable Not sustainable Sustainable	Ability to sustain life for the duration under the diet -migration move	Provisioning of feed Subsidizing supplementary feeds Conflict resolution over grazing

					animals to fodder rich areas Destocking helps to handle manageable number	lands Funds for destocking Restocking of livestock
	Water scarcity	Water tracking using water boozers	effective	Not sustainable	Access to remote areas	Drilling of more bore holes Piping water in location settlement Rehabilitation of existing boreholes
	malnutrition	Moving elderly people and children to town	effective	Not sustainable	Access to nutritious food	Supply of nutrition supplement foods for the vulnerable groups
diseases	Loss of life	Access drugs and vaccines	effective	Sustainable	Suppress infections and pain	6 Veterinary officer in the ward and 1 drug store
	Low fertility	Supplementary feeding	effective	Not sustainable		Concentrating into bigger settlement for formal and informal job creation As well as feeding programmes
	Infant mortality	Access to health care and following clinical advises	effective	Sustainable	Proper reliable advices that are more productive	Access to health care and
Floods	displacement	Migration to safe grounds	effective	Not sustainable		Contraction of gabions Diversion of water ways Assisting the displaced families
	inflation	Reducing cost	effective	Sustainable		Improving

		of living or changing to alternative goods		infrastructure Control of market prices Subsidies of some goods
	Destruction of assets	Repair of assets or diversion of water ways	effective Not sustainable	

Community adaptation goals

Adaptation efforts are focused on the county's energy, infrastructure, land use and environment, health, water, irrigation and agriculture sectors.

On-going sample adaptation strategies:

- Climate policies
- Afforestation and reforestation,
- Renewable energy production and other clean energy development,
- Climate smart agriculture

Table 5: Community Adaptation Goals

Hazard	Impact	Adaption strategy	Adaption goals	
			Short term	Long term
Drought	Loss of pasture	-Provision of hay and feed supplement -awareness creation -provisioning of new variety fast growing pasture seeds i.e. Sudan grass -farming and supporting pasture and fodder growing	Reduced loss of livestock Improved hey availability Availability of enough hey stores Subsidized feed pellets Improved pasture harvest	Enhanced availability of pasture for livestock Enhanced pasture productivity Enhanced fodder storage Improved livelihoods
	Water scarcity	Construction of elevated water tanks Construction of water pans Channeling of surface runoff waters to water point-dams Installation of pipes with in the location centers Provisioning of new water pumps for the boreholes and dams Fencing of the dams	Improved access to water supply sustainable Timely water supply improved hygiene around water sources	Sustainable supply of Clean and safe water for drinking Sustainable water supply reduced loss of livestock, conflict and others calamities like diseases that would have occurred through migration free of water related diseases

	Hunger	Cash transfers Food distribution Support farming through access to farm inputs Employment creation	Enhanced access to basic needs Food security Enhanced farming Improved livelihoods	Improved livelihoods improved fertility food security better life
Pest and diseases	Loss of human and animal life Disability Infant mortality Still birth	provisioning of drugs deployment of health officers to the ward provision of vaccines mobile dispensary community outreaches establishment of livestock drug store in the ward	Enhanced access to drugs Enhanced access to health facility for advice and counseling Enhanced access to remote patients Reduced infant mortality Improved infant mortality And still births	Improved access to health care and improvement in health generally in the ward Enhanced awareness about diseases Reduced risk of contracting diseases Reduced human and animal death Reduced cost of treatment due to reduced distance for sourcing
Flood	Soil erosion Loss of crop and farms Infrastructure destruction and disruption of transport Displacement Poor sanitation	Tree conservation and Planting more trees construction of gabions Diverting water to dams (water harvesting) Construction of more dams to harvest more water for farming Improve drainage systems in the settlements Developing early warning systems	Reduced soil erosion Reduced crop damage Improved infrastructure Enhanced tree cover Enhanced water supply Enhanced awareness	Sustainable yield Improved food security Sustainable water supply Healthy ecosystem
conflict	Migration Death Loss of life and property	Arbitration and reconciliation Awareness creation Reduced new settlement Enacting rangeland policy	Peaceful coexistence Sharing of resources Reduced cutting down of trees	Reduced loss of life and property

4.2 Implementation and Coordination Mechanisms

4.2.1 County Department of Environment Climate Change

The County Department of Environment and Climate Change will play a crucial role in the Implementation and Coordination of the Mandera County Climate Change Action Plan by spearheading the execution of climate mitigation and adaptation strategies outlined in the plan. This will involve collaborating with relevant government agencies, local communities, and stakeholders to ensure the plan's objectives are met. The department will oversee the allocation of resources, monitoring of progress, and regular reporting on climate action initiatives. Furthermore, it will engage in public awareness campaigns, capacity-building programs, and fostering partnerships to enhance climate resilience and sustainable development in Mandera

County, thus contributing to the plan's successful implementation and overall climate resilience of the county.

4.2.2 County Climate Change Planning Committee

The County Climate Change Planning Committee (CCCCPC) will serve as the primary coordinating body responsible for overseeing the plan's execution. The committee will facilitate collaboration among various stakeholders, including government agencies, local communities, NGOs, and private sector entities, to ensure effective execution of climate mitigation and adaptation initiatives outlined in the action plan. Additionally, the CCCCPC will monitor progress and make necessary adjustments to address emerging challenges, thus promoting sustainable climate resilience and environmental conservation within Mandera County.

4.2.3 County Climate Change Steering Committee

County Climate Change Steering Committee will a central nexus for organizing, overseeing, and harmonizing climate-related initiatives and efforts within the county. This committee, comprised of the senior most county leadership and key stakeholders from various sectors and agencies, will facilitate the seamless execution of the action plan by ensuring that resources, information, and activities are strategically aligned, monitoring progress, identifying synergies, and addressing potential challenges. Through its collaborative and coordinating functions, the committee will foster a cohesive approach to climate change mitigation and adaptation, ultimately driving the successful realization of the county's climate resilience objectives.

4.2.4 County Climate Change Unit.

The County Climate Change Unit will serve as the nucleus of expertise and oversight. The unit will be responsible for providing technical guidance and support, conducting research and data analysis, facilitating stakeholder engagement, and monitoring the progress of climate-related initiatives within the county. By acting as the central hub for climate change knowledge and strategy, it will ensure seamless coordination among various government departments, agencies, and community stakeholders, ultimately fostering effective and sustainable climate resilience and mitigation efforts across Mandera County.

4.2.5 Ward Climate Change Planning Committee

The Ward Climate Change Planning Committee will play a vital role in the Implementation and Coordination of the Mandera County Climate Change Action Plan by serving as a local grassroots entity responsible for translating and executing the broader county-level climate action strategies within their specific ward. This committee will facilitate the integration of climate resilience measures at the community level, engage with local stakeholders, mobilize resources, and ensure

the effective execution of climate change initiatives tailored to the unique challenges and opportunities within the ward, thus contributing significantly to the overall success and holistic implementation of the county's climate change action plan.

4.3: Monitoring and Evaluation Framework

Monitoring and evaluation (M&E) are essential components of any program that aims to continuously improve and provide better outputs and outcomes. Progress of implementation of County Climate Change Action Plan requires a systematic approach to assess the program's effectiveness and impact in addressing climate-related challenges at the local level.

Mandera County Government through the department of climate change has developed a comprehensive Monitoring and Evaluation framework to undertake monitoring and evaluating the implementation of priority interventions in the climate change action plan and ensure mitigation, adaptation, and resilience-building efforts in the county are aligned to the national priority objectives as contained in the NCCAP 2023-2027.

4.3.1: Climate Change Action Plan Implementation Assessment

In order to assess the implementation of this climate change action plan, constant and progressive monitoring and periodic evaluation will be carried out. The monitoring and evaluation system adopted is designed to provide feedback and to ensure accountability and transparency in the implementation of the climate change action plan activities.

Mandera county climate change unit will continuously collect data on various aspects of the intervention in the Action plan and data could include information on climate adaptation and mitigation activities, financial allocations, community engagement, social and environmental impact to ensure accountability and transparency in the implementation of the climate change action plan activities using key performance indicators (KPIs) that reflect progress and success in addressing climate issues at the county and ward level. Thereafter, develop a reporting system to capture data at defined intervals (e.g., monthly, quarterly, or annually). This reporting will include financial data, project updates, and indicators tracking and offers recommendations on areas of improvement aimed towards achievements of the goals for action plan.

Mandera County climate change unit is determined to effectively do monitoring and evaluation of county climate change action plan. The Monitoring and Evaluation activities will be undertaken jointly with other various stakeholders and climate change institutions in the county such as local communities, sector specific departments, County Climate Change

Steering Committee, County Climate Change Planning Committee, Ward Climate Change Planning Committees and non-state actors.

The Mentoring and Evaluation process will further provide a learning and feedback loop where stakeholders will provide their insights, concerns and suggestions regarding the implementation of climate change interventions, thus ensuring the actions taken align with the needs and expectations of the beneficiary communities. This plays crucial role in decision-making enabling the stakeholders to adapt strategies and make informed choices about resources allocation and project adjustments based on the observed results.

Table 6: Implementation and monitoring and matrix

Sector	Objectives	Strategies	Key Outputs	Key Performance Indicators	Target for five years	Estimated cost for five years ksh. M	Target and Cost per year ksh.M										Location	Data source	Frequency of monitoring	Responsible agency	Reporting agency
							Y1 target	Cost	Y2 target	Cost	Y3 target	Cost	Y4 target	Cost	Y5 target	Cost					
Water	**To increase the proportion of households with access to sufficient, safe & sustainable Water.**	Construction of water harvesting and storage structures.i.e medium size earth pan	water harvesting and storage structures eg. medium size earth pan constructed	No of water harvesting and storage structures eg. medium size earth pan constructed	7	238	1	34	1	34	1	34	1	34	1	34	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu,	CCO water	Quarterly progress report	CCU	CCU
		Drilling and rehabilitation of strategic boreholes	strategic boreholes Drilled and rehabilitated	No of strategic boreholes Drilled and rehabilitated	15	225	3	15	3	15	3	15	3	15	3	15	Rhamu dimtu, Gutticha, Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri, Malk	CCO water	Quarterly progress report	CCU	CCU
		Desilting and expansion of major water pans.	water pans distilled and expanded	No of water pans distilled and expanded	10	90	2	18	2	18	2	18	2	18	2	18		CCO water	Quarterly progress report	CCU	CCU
		Water treatment	Water treatme	No of Water	10	50	2	10	2	10	2	10	2	10	2	10		CCO water	Quarterly	CCU	CCU

		, desalination of borehole water and distribution/ supply network to households	nt, desalination of borehole water and distribution/ supply network to households	treatment, desalination of borehole water and distribution/ supply network to households												amari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Waranka.		progress report		
		Community education and awareness creation on water harvesting, conservation and sustainable consumption of water.	Community awareness on water harvesting created	No of training for the Community awareness on water harvesting created	20 Trainings	5	4	1	4	1	4	1	4	1	4	1		CCO water	Quarterly progress report	CCU	CCU
		Solarisation and rehabilitation of boreholes	Boreholes rehabilitated and solarized	No of Boreholes rehabilitated and solarized	50 bore holes	150	10	30	10	30	10	30	10	30	10	30		CCO water	Quarterly progress report	CCU	CCU
		Enhancing climate	climate proof	No of climate	3	300	1	100	1	100	1	100						CCO water	Quarterly	CCU	CCU

		proof water harvesting and storage infrastructure to improve flood control eg 200000 M3 Earth	water harvesting and storage infrastructure to improve flood control eg 200000 M3 Earth enhanced	proof water harvesting and storage infrastructure to improve flood control eg 200000 M3 Earth enhanced															progress report		
		Provision of water treatment inputs	Household water treatment inputs Provided	No of household water treatment inputs Provided	5000	2	1000	0.4	1000	0.4	1000	0.4	1000	0.4	1000	0.4		CCO Special program	Quarterly progress report	CCU	CCU
Agriculture	**To increase the proportion of agriculture and livestock**	Establishment of 500ha of fodder farming such as Napier and Sudan grass	Acreage of folder and Napier grass established	Acreage of folder and Napier grass established	500ha	50	100	10	100	10	100	10	100	10	100	10	Neboi, Township, Khalalio, Libehiya, Arabia,	CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU

	production	Provision of farming inputs e.g., certified drought-resistant crop seeds, farm tools & equipment	Tones of certified drought-resistant crop seeds, farm tools & equipment	Tones of certified drought-resistant crop seeds, farm tools & equipment	200 tones	20	40	5	40	5	40	5	40	5	40	5	sala, Rhamu, Rhamu dimtu, Gutticha, Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri, Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak	CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Up-scaling of livestock off-take program	livestock off-take program up scaled	No of livestock off-take program up scaled	5	30	1	6	1	6	1	6	1	6	1	6		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Support Large Scale production and storage of hay and feed supplements.	Farm acreage under Large Scale Production Hay	Acreage of farms under Large Scale Production of Hay.	300ha	60	60	12	60	12	60	12	60	12	60	12		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Construction of feedlots.	Feedlot constructed	No of Feedlot constructed	5	30	1	6	1	6	1	6	1	6	1	6		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Increase acreage under	acreage under Irrigatio	acreage under Irrigatio	500ha	100	100	20	100	20	100	20	100	20	100	20		CCO Agriculture	Quarterly progr	CCU	CCU

		Irrigation to improve crop production.	n to improve crop production . increased	n to improve crop production . increased													North , Elwak South , Wargudud, Alungu, Lafey , fino, Waranka.	and Livestock	ess report		
		Enhancing Livestock insurance.	Livestock insurance enhanced	No of Livestock insured	4000	200	800	40	800	40	800	40	800	40	800	40		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Restocking with improved livestock breeds	livestock breeds improved	livestock breeds improved	1000	100	200	5	200	5	200	5	200	5	200	5		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Construction of earth pan for irrigation	Earth pan for irrigation constructed	No of Earth pan for irrigation constructed	6	300	2	100	1	50	1	50	1	50	1	50		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Pre-position adequate veterinary drugs and vaccine	veterinary drugs and vaccine Pre-positioned	Tones veterinary drugs and vaccine Pre-positioned	4 drives	8	1	2	1	2	1	2	1	2				CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Construction of flood control structures e.g.	flood control structures e.g. dykes and	flood control structures e.g. dykes and	10km	30	2	6	2	6	2	6	2	6	2	6		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU

		dykes and gabions along lagas. And the river.	gabions along lagas. And the river Constructed	gabions along lagas. And the river Constructed																
		Construction of irrigation canals for farmers along the riverine.	Km of irrigation canals for farmers along the riverine Constructed	No of Km of irrigation canals for farmers along the riverine Constructed	6km	60	2	20	1	10	1	10	1	10	1	10		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Establishment of livestock disease-free zone areas	livestock disease-free zone areas established	No of livestock disease-free zone areas established	2	30	1	15			1	15						CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Vaccination drives/ mobile clinics for veterinary services	Vaccination drives/ mobile clinics for veterinary services	No of Vaccination drives/ mobile clinics for veterinary services	5	10	1	2	1	2	1	2	1	2	1	2		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Establishing and implementation of	Integrated Pest Management System	No of Integrated Pest Management	2	2	1	1	1	1								CCO Agriculture and Livest	Quarterly progress report	CCU	CCU

		Integrated Pest Management System (IPM).	(IPM) of Established and implemented	System (IPM) of Established and implemented														ock			
		Establishment of Agro-veterinary drug stores.	Agro-veterinary drug stores Established	No of Agro-veterinary drug stores Established	6	24	2	12	1	6	1	6	1	6	1	6		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Developing and implementing of early warning systems for disease outbreaks.	early warning systems for disease outbreaks developed and implemented	early warning systems for disease outbreaks developed and implemented	4times in a year	16	1	4	1	4	1	4	1	4				CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Strengthening disease surveillance and monitoring systems	disease surveillance and monitoring systems strengthened	No of disease surveillance and monitoring systems strengthened	4	4	1	1	1	1	1	1	1	1				CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Capacity building of local communities, healthcare	local communities, healthcare workers, and	No of local communities, healthcare workers	100	40	20	8	20	8	20	8	20	8	20	8		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU

		workers, and veterinary professionals on disease identification, prevention and control measures.	veterinary professionals on disease identification, prevention and control measures capacity built	, and veterinary professionals on disease identification, prevention and control measures capacity built																
		Provision of farm inputs including agro-chemicals, certified seeds, supplemental feeds.	farm inputs including agro-chemicals, certified seeds, supplemental feeds provided	Tonnes farm inputs including agro-chemicals, certified seeds, supplemental feeds provided	5tonnes	15	1	3	1	3	1	3	1	3	1	3		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Equipping and operationalization of veterinary diagnostic lab in Mandera East.	veterinary diagnostic lab in Mandera East equipped and operationalized	No of veterinary diagnostic lab in Mandera East equipped and operationalized	1	4	1	4										CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU

Environment and climate change	**To reduce the acreage of degraded land through Ecosystem restoration and conservation.**	Afforestation through tree planting	Trees planed	Number of trees planted	1000000	200	200000	40	200000	40	200000	40	200000	40	200000	40	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Gutticha, Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri, Malkamari, Gither, Dandu, Takaba, Lagsure, Taka	CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Formation and capacity building of Rangeland management committees.	Rangeland management committees. Formed and capacity built	No of Rangeland management committees. Formed and capacity built	30 committee of each 7 -10 members	15	6	3	6	3	6	3	6	3	6	3		CCO Agriculture and Livestock	Quarterly progress report	CCU	CCU
		Ecosystem conservation, restoration and protection of water catchment through reseeding of indigenous tree species.	reseeding of indigenous tree species for Ecosystem conservation, restoration and protection of water catchment	No of indigenous tree species for Ecosystem conservation, restoration and protection of water catchment	5000 trees	50	1000	10	1000	10	1000	10	1000	10	1000	10		CCO Environment and Climate change	Quarterly progress report	CCU	CCU
		Promote the transition to clean cooking with alternative clean	clean biomass cook stoves in rural areas distributed	No of clean biomass cook stoves in rural areas distribu	15000	60	3000	12	3000	12	3000	12	3000	12	3000	12		CCO Environment and Climate change	Quarterly progress report	CCU	CCU

		fuel renewable energy i.e. distribution of clean biomass cook stoves in rural areas.		ted												ba south, Shimbir Fatuma, Kutulo, Elwak North,				
		Training and capacity building of Ward climate change planning committees on the dangers of biodiversity loss	Ward climate change planning committees s trained and capacity building on the dangers of biodiversity loss	No of Ward climate change planning committees s trained and capacity building on the dangers of biodiversity loss	180	3	180	3								Elwak South, Wargudud, Alungu, Lafey, fino, Waranka.	CCO Special program	Quarterly progress report	CCU	CCU
		Awareness creation on the importance of afforestation through public	Awareness on the importance of afforestation through public barazas,	No of Awareness on the importance of afforestation through public	30	30	6	6	6	6	6	6	6	6	6	6	CCO Environment and Climate change	Quarterly progress report	CCU	CCU

		barazas, environmental clubs, community dialogue and community groups	environmental clubs, community dialogue and community groups created	barazas, environmental clubs, community dialogue and community groups created																
		Developing of county environmental action plan	county environmental action plan Developed	county environmental action plan Developed	1	4			1	4							CCO Environment and Climate change	Quarterly progress report	CCU	CCU
		Demarcation of riparian land and planting of tree species such as bamboo vetiver grass, and other local bank conservation species.	Acreage of demarcated riparian land and planting of tree species such as bamboo vetiver grass,	Acreage of demarcated riparian land under bamboo vetiver grass,	100ha	10	20	2	20	2	20	2	20	2	20	2	CCO Environment and Climate change	Quarterly progress report	CCU	CCU
		Enforcement of Mandera County Environ	Wards in which Mandera	No of Wards in which Mander	30	15	6	3	6	3	6	3	6	3	6	3	CCO Environment and Climat	Quarterly progress report	CCU	CCU

		mental Management Act at ward level	County Environmental Management and coordination Act enforced	a County Environmental Management and coordination Act enforced														e change			
Disaster management	**To reduce the proportion of vulnerable citizwens impacted by climate-related disasters.**	Up-scaling social safety-net programs.	social safety-net programs up scaled	No of beneficiaries in safety-net programs up scaled	20000	100	4000	20	4000	20	4000	20	4000	20	4000	20	Neboi, Township, Khalalio, Libehiya, Arabia, sala, Rhamu, Rhamu dimtu, Gutticha, Morothile, Ashabito, Banisa, Guba, Derkale, Kiliweheri,	CCO Special program	Quarterly progress report	CCU	CCU
		Empowerment of women, youth, VMGs, and PLWDs	women, youth, VMGs, and PLWDs empowered	No of women, youth, VMGs, and PLWDs empowered	1000	50	200	10	200	10	200	10	200	10	200	10		CCO Special program	Quarterly progress report	CCU	CCU
		Installation of fire extinguisher ,ware storage tank, fire drill hose pipes in the market	Fire extinguishers ,water storage tank and fire drill horse pipe installed	No of market Fire extinguishers ,water storage tank and fire drill horse pipe installed	5	10	1	2	1	2	1	2	1	2	1	2					

		Establishment of disaster response committees at sub-county/ Ward Level	response committees at sub-county/ Ward Level established	No of response committees at sub-county/ Ward Level establish	35	10	7	2	7	2	7	2	7	2	7	2	Malkamari, Gither, Dandu, Takaba, Lagsure, Takaba south, Shimbir Fatuma, Kutulo, Elwak North, Elwak South, Wargudud, Alungu, Lafey, fino, Waranka.	CCO Special program	Quarterly progress report	CCU	CCU

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9. The Mandera County Climate Change Fund Act 2021
10. The Mandera County Climate Change Adaptation Policy, 2021

ANNEXES

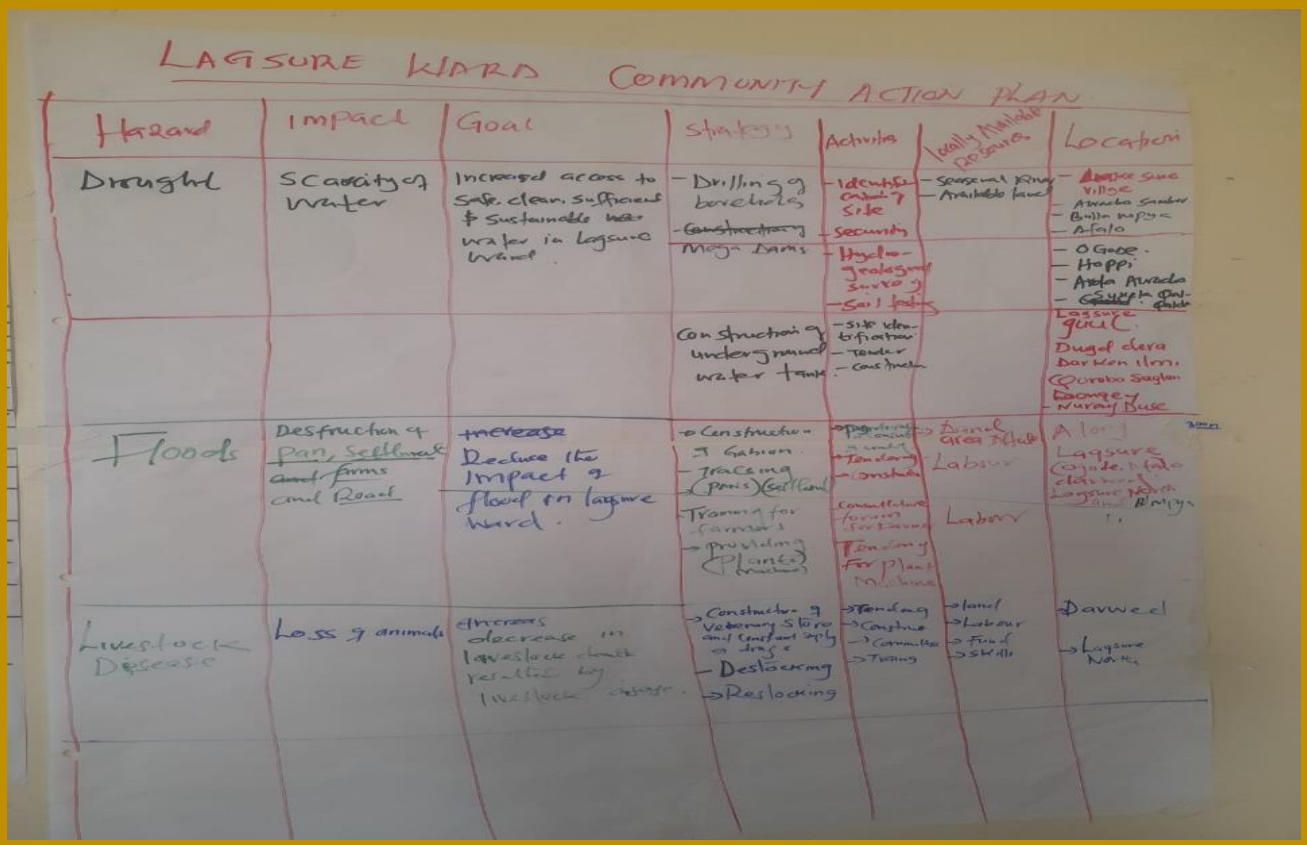
PCRA and CCCAP Ward-Level engagement photos







Sample ward-level Hazard Map and Community Action Plan



Mandera County PCRA and CCCAP Road map

MANDERA COUNTY PCRA AND CCCAP ROADMAP															
PHASE 1 PCRA	**ACTIVITIES**	Week 1 Mar 6-Mar 12	Week 2 Mar 13-Mar 19	Week 1 Mar 20-Mar26	Week 2 Mar 27-Apr 2	Week 3 Apr3-Apr 9	Week 4 Apr 10-Apr 16	Week 5 Apr 17-Apr23	Week 6 Apr 24-Apr 30	Week 7 May 1-May 7	Week 8 May 8-May 14	Week 9 May 15-May 21	Week 10 May 22-May 28	Week 12 May 29-June 4	Remarks
	Consultative meeting with directors of technical departments and County Coordinators of Relevant National Government Agencies														Completed
	Formation of County Climate Change Technical Coordination Committee														Completed
	Formation of cross-sectoral county Technical Working Group.														Completed
	Training of TWGs on Participatory Climate risk Assessments (PCRA)														Completed
	Stakeholder analysis and identification meeting														Completed
	Preparation for Ward-level community engagement and data collection for PCRA														Completed
	Ward-level community engagement and data collection for PCRA														Completed
	Consolidation of ward-based PCRA reports into sub-county														Completed
	Consolidation of Sub-County PCRA reports into County PCRA Draft Report														Completed
	Multi-stakeholder Engagement workshop on participatory Climate Risk Assessment.														Completed
	Preparation of the final PCRA Report														Completed
	Publication of PCRA Report														Completed
Phase 2 Development of CCCAP	Review of Key Documents and Collecting Public input														Completed
	Preparation of draft County Climate Change Action Plan														Completed
	Conducting CCCAP public participation														Completed
	Development of 2nd CCCAP Draft														Completed
	CCCAP validation workshop														Completed
	Development of final CCCAP														Completed
	Presentation of CCCAP to county executive committee and County Assembly for adoption														Completed
	Publishing and Launching of the CCCAP														Completed

Multi-stakeholder workshop attendance list

REPUBLIC OF KENYA

Financing Locally-Led Climate Action (FLLoCA) Program

MANDERA COUNTY GOVERNMENT
MINISTRY OF WATER, ENERGY, ENVIRONMENT, NATURAL RESOURCES & CLIMATE CHANGE
DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE

ACTIVITY: MANDERA COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT REPORT AND COUNTY CLIMATE CHANGE ACTION PLAN VALIDATION MULTI-STAKEHOLDER WORKSHOP

VENUE GRANADA HOTEL DATE 27TH MAY 2023

S/No	Name	ID	Mobile number	Gender		People living with disability (yes/ no)		Age 18-35 35-60 Above 60	signature
				Male	Female	Yes	No		
1.	Abdisalam mohamed Nurow	29462332	0700246009	✓			✓	18-35	[illegible]
2.	Abdirahman Moalim Hussein	33208386	0728363732	✓			✓	18-35	[illegible]
3.	Mohamed Abubakar	25094470	0714627295	✓			✓	35-60	[illegible]
4.	Basra Hussein Issack	28975521	0711794205		✓		✓	18-35	[illegible]
5.	Tajudin Abdikadir	28016054	0725590222	✓			✓	18-35	[illegible]
6.	Saadia Adan Mohamed	25313 86	0728589926		✓		✓	35-60	[illegible]
7.	ISSACK M. NJOROGE	10671829	0721834105	✓		[illegible]	✓	50+	[illegible]
8.	HUSSEIN MADEY ADAN	2113903	0724675849	✓			✓	35-60	[illegible]
9.	Barack Omondi Ogiek	10152103	0728566849	✓			✓	35-60	[illegible]
10.	Hassan H. Somo	11193754	0720619614	✓			✓	35-60	[illegible]
11.	Ismail Mugow Adaw	27909247	0721330734	✓			✓	18-35	[illegible]
12.	ADAN AHMED	33547888	0720738257	✓			✓	18-35	[illegible]
13.	Idris Yussuf Hassan	25549125	0727777923	✓			✓	18-35	[illegible]
14.	Issack Abdi Ali	26295446	0720433200	✓			✓	15-35	[illegible]
15.	Hawa Ibrahim	26258866	0758312253		✓		✓	18-35	[illegible]
16.	HALIMA HILLOW HASSAN	30614979	0746669727		✓			18-35	H
17.	Ayan Abdullahi Adan	36645605	0758583669		✓			18-35	[illegible]
18.	Mohamed Ali Olu	7626741	0722857104	✓			✓	35-60	[illegible]
19.	Abdirizack Ibrahim Hassan	24737426	0722166545	✓			✓	35-60	[illegible]
20.	Halima Diriye Nurow	6357143	0727331738		✓			35-60	[illegible]
21.	SIYAD AHMED MAALIM	32069536	0725009237	✓			✓	18-35	[illegible]
22.	Abdia Hussein Mohamed	13003795	07252366 47		✓		✓	35-60	[illegible]
23.	Khaira Adan Nur	25297741	0725726607		✓			35-60	Kh
24.	Meymuna Adan Issack	26972577	0725726697		✓		✓	35-60	[illegible]
25.	Halima Hillow Hassan	30514979	0746667707		✓			35-60	[illegible]
26.	Fatuma Abdullah Abdinoor	30[illegible]548	0711936857		✓	✓		35-60	[illegible]
27.	Khadija Ibrahim Moh	0019008	0703[illegible]684		✓			60+	[illegible]
28.	Hibo Hassan Kale	23308813	0727799088		✓	✓		35-60	[illegible]

LAFEY WARD

MANDERA COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT
COMMUNITY ENGAGEMENT TOOL.

Perspectives and experiences of past and current local weather and climate

- What have been the main threats/hazards facing the community in the last 20-30 years?
- Have you noticed changes in the climate over the last 10, 20-30 years? Explain.
- Have you noticed changes in frequency and intensity in the identified climate hazards over the last 10, 20-30 years? Explain (Seasonal calendar).
- How do these climate hazards affect you?
- Who in your community is most affected by these changes in climate and other hazards? What makes them especially vulnerable?
- Which assets or resources are most affected, and which are not affected? Explain.
- Where and how has the vulnerability of the community increased in recent years?

Adaptation and resilience strategies/ priorities

- How do members of the community traditionally deal with these problems?
- Do you think these responses are still effective? What would make them more effective? What can the government do to support these?
- Are any government programs helping the community to become more resilient to climate change? Which, why and how could they be improved?
- What actions would be needed to reach short term and long term resilience of communities against the identified priority Hazards/risks?
- What do you think would be the best strategies for building the resilience of local people to climate change? What is needed? What would be some of your priorities.

MANDERA COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT
COMMUNITY ENGAGEMENT TOOL.

1. Climate change Hazard Analysis and Vulnerability Assessment

A. Information

Date:	County			Ward:
Facilitator:				Note taker:
Name (Participants)	Gender	Age		Institution/organization
		Below 35	Above 35	
1. Sharifa Abdi Guliye	F		✓	WCCPC member.
2. Abdi mohamud osman	M		✓	VMG
3. Abdirahim Birik M.	M	✓		Ward admin
4. Abdullahi Mohamed	M	✓		village admin
5. Kaltra Abdi Ibrahim	F	✓		village admin
6. Shagban Mohamud Muhumed	M	✓		Religious leader
7. Noor Mohamud Adan	M		✓	VMG
8. Abdiwzack Mohamud Shire	M		✓	PWD
9. Mohamed A. Saney	M		✓	Assistant chief.
10. Rukia muhumed honye	F		✓	Women Group
11. Adoy Ahmed Hassan	F		✓	Women Group.
12. Muhamed Jelle Ahmed	M	✓		YOUTH
13. Abdilcadir Mohamed Issacic	M		✓	Elderly
14. Ahad Adan Muhumed	M		✓	YOUTH
15. Ali mohamed Ali	M		✓	Elderly
16. Abdullahi Hussein	M		✓	Sub-county Livestock office
17. Kalbabi Sheikh Ahmed	M		✓	[illegible]
18. Hassan Yunis Ali	M	✓		YOUTH
19. Abdirahman Suban Sheikh	M		✓	YOUTH
20.				

B. Main Findings of the exercise

- Have you noticed changes in the climate over the last 10,20-30 years? Explain.

Yes

- long dry Periods
- high temperatures
- Scanty and erratic rainfall
- increased floods
- increased Conflict over scarce resources
- low yield
- [illegible]
- [illegible]

MANDERA COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT
COMMUNITY ENGAGEMENT TOOL.

- What have been the main threats/hazards facing the community in the last 10,20,30 years?

(1) Drought
(2) floods
(3) Diseases
(4) Conflict

- Have you noticed changes in frequency and intensity in the identified climate risks/hazards over the last 10,20-30 years? Explain (Using Seasonal calendar).

→ frequency and intensity of the droughts has been increasing over the past years.
→ rainfall periods have reduced with intense and forward flooding
→ Increase diseases with high record of different types that is financially difficult to treat.

- Which are the 3 main/most threatening hazards affecting your region/Community? (Participants vote using the hazards identified to list 3 main hazards)

Prioritization

HAZARDS	SCORE	RANK
Drought	30	1
floods	11	3
Diseases	13	2
Conflict	6	4

- What have been the most important impacts of those hazards on the lives and livelihoods in your region?

(1) loss of life, disability, still births/infant mortality and low fertility
(2) displacement, destruction infrastructure, inflation Poor sanitation
(3) human and animal conflict, loss of property; reduced grazing land as movements is restricted during conflict.

- Who in your community is most affected by these changes in climate and other hazards? What makes them especially vulnerable

- children
- lactating, breast feeding and expectant mothers
- old age persons.
- lacks of support (financial & Physical Support) especially widows and orphan children.
→ being weakest in the community setup
→ lack of aid or minimal aid from the govt hypos as the govt mostly forgets unemployed youth.

MANDERA COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT
COMMUNITY ENGAGEMENT TOOL.

2. Vulnerability Assessment

- Which assets or resources are most affected, and which are not affected? Explain (Using Vulnerability Matrix).

Resources: livestock, hills, grazing land, water are the most affected as they are directly impacted by the hazards i.e intense drought leading to loss of trees & fodder as well as water which leads to loss of livelihood in general

Assets: Schools and market are the assets affected by the hazards since market rely on resources and schools are affected when livelihood is lost.

- Why are some hazards more harmful to our resources than others? Explain. (Using vulnerability Matrix)

→ They are beyond human control

→ Drought clears everything that life relies on. including water, crops, pasture, livestock, and in the most severe cases takes human life

- Where and how has the vulnerability of the community increased in recent years?

Over the past 30 years the vulnerability of the community has increased. Due to prolonged droughts happening more frequently and increased heat waves. The community has experienced water scarcity and loss of their livestock. increased hunger and malnutrition.

3. Community local response and Adaptation goals

C. Main findings of the exercise

- What have been the most important impacts of those risks/hazards on the lives and livelihoods in your region? (using local response: Direct impacts)

→ loss of pasture and water
→ loss of vegetation covers some trees dye due to drought the rest are destructed for livelihood support.
→ displacement from farms & homestead due to floods as well as increased breeding of mosquitos that results to increased sickness

- How do members of the community traditionally deal with the negative impacts of the prioritized hazards?

Hazard Risk	Impact	Local response	Effectiveness	sustainability
Drought	loss of pasture	provision of hay & feed suppliment	effective	not sustainable
		Migration	effective	not sustainable
		destocking	effect	sustainable.
	water scarcity	water trucking	effective	not sustainable
		migration	effective	not sustainable
	malnutrition	moving children & elderly people to towns	effective	not sustainable
Disease	loss of lives	access to drugs & medicine	effective	sustainable
	low fertility	suplimentary feeding	effective	not sustainable
	infant mortality	access to health care and following clinical advice,	effective	sustainable
Floods	displacement	migration to safe grounds	effective	not sustainable
	inflation	reducing cost of living or changing to alternative goods	effective	sustainable
	destruction of assets	repair of assets or diverting waterways	effective	not sustainable

- Which of these local responses do you think is most effective and sustainable to the impacts of the hazards? And what would make them most effective? What? What can the government do to support these?

Effective local response	What makes them more effective	What can the gov't do to supports
~~[illegible]~~	→ availability of water bowzers for hire	→ construct more dams and bore holes
⇒ water trucking	→ ability to sustain livestock for quite sometimes	construction of hay stores
→ provision of hay & feed suppliment	— they are cheaper to acquire	→ subsidize feed supliment
→ reducing cost of living, changing to alternative that are cheaper.		→ ~~[illegible]~~ food distribution
		→ access to drought funds

MANDERA COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT
COMMUNITY ENGAGEMENT TOOL.

Hazard/Risk	Impact	Local response	Effectiveness	Sustainability	What would make them effective	Government Support
Drought	Water scarcity	Water trucking	Effective	not Sustainable	availability to sustain life by access remote areas using water bowsers & cards	- drilling of more bore holes in the ward. - piping for major centers - creation of more access roads
	loss of livestock	Provision of hay & feed supplement	effective	not sustainable	ability to sustain life	→ subsidies on feed supplement → construction of hay sh
	Inflation	reducing cost of living by changing to alternative goods	effect	sustainable	→ cheaper alternative goods → still can sustain life	→ access to drought fund → elderly fund → orphan funds → livestock funds

- Are there government programs or other institutions in your region helping the community to become more resilient to climate change? Which ones are they? and how could they be improved?

Yes

- CaCoP — Cash transfer.
- RED Cross — food distribution
- — other emergency response.
- County Govern → Relief food
- National Govt → Relief food.

- What actions would be needed to reach short term and long term resilience of communities against the identified priority Hazards/risks?

(1) Construction of dam around & drilling of bore holes in the major centers in the ward.

(2) feed & fooder Provision and subsidies of the same

(3) restocking of livestocks.

(4) attaching more Medical officers at the health facilities

(5) Planting & more indigenous trees through creation of tree nurseries in the ward.

MANDERA COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT
COMMUNITY ENGAGEMENT TOOL.

- What do you think would be the best strategies for building the resilience of local people to climate change? What is needed internally and externally? What would be some of your priorities? (Action Plan)

  - Establishment of water supply & distribution networks
  - Enhancing water harvesting structure i.e medium size dams to provide water irrigation
  - Ecosystem restoration through afforestation
  - Livelihood diversification
  - Establishment of veterinary drug-store
  - Enhancement resilience to pest and diseases
  - Improvement of transport infrastructure

Locations
- Lafey South
- Bulla Aluy
- Lafey
- Kaso
- Kamor a Elban
- Damasa location

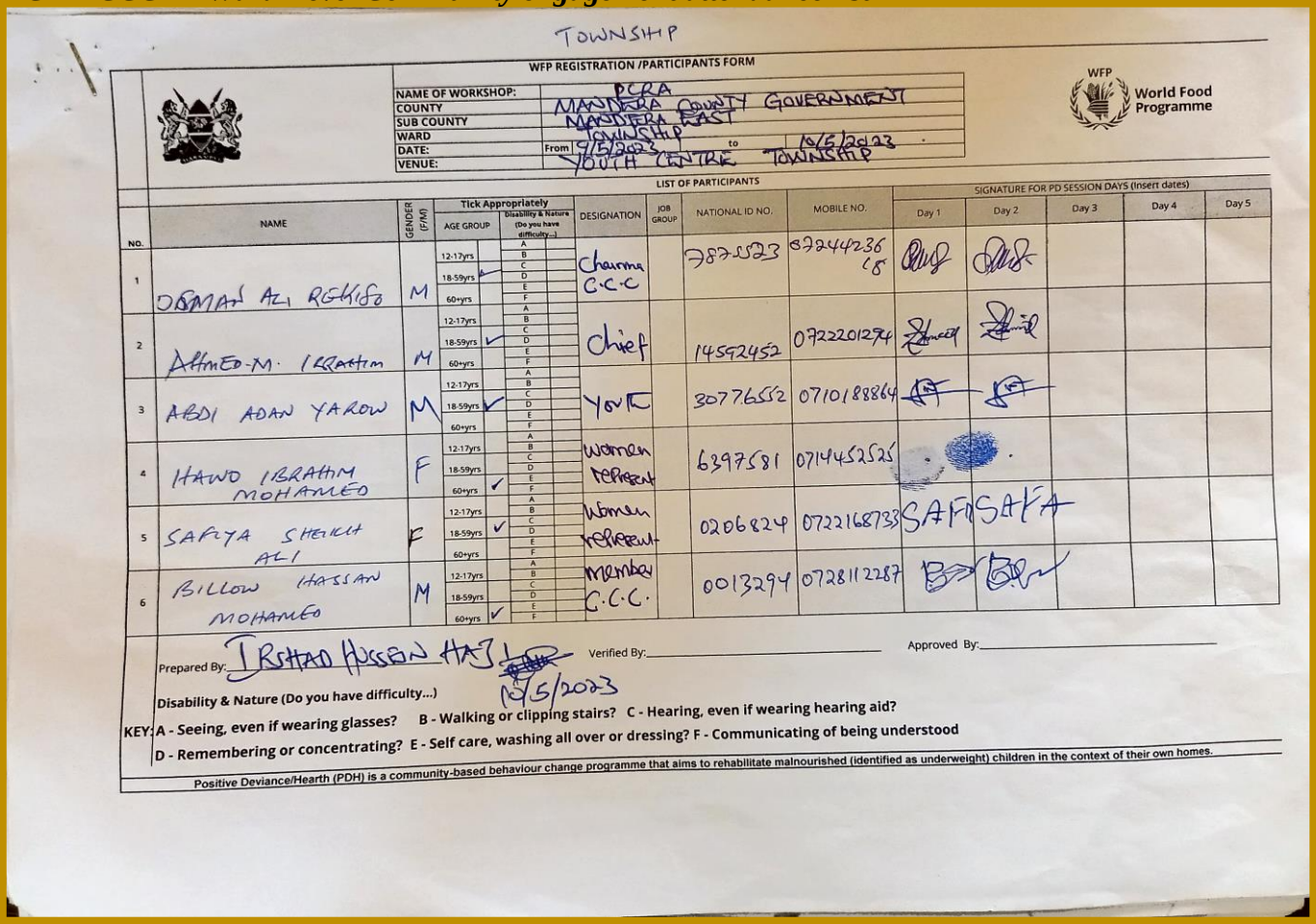
⊛ Deforestation: due - Grabbing of lands from neighboring the border Communities
- wild life - Killing animals Poachers

* Disappearance of Plant - Galatoren
- Grass - Deermaa

People used to it: Trees - Habag
- Mareer - "deekaan"
- Laka - "Garas"

* Water pans — lafey town, Damasa, Kamor lisan, Kaso,
* Indigenous trees was feed on the animals & humans feed on them

PCRA-CCCAP Ward-Level Community engagement attendance list



TOWNSHIP

WFP REGISTRATION /PARTICIPANTS FORM

NAME OF WORKSHOP:	PCRA
COUNTY	MANDERA COUNTY GOVERNMENT
SUB COUNTY	MANDERA EAST
WARD	TOWNSHIP
DATE:	From 9/5/2023 to 10/5/2023
VENUE:	YOUTH CENTRE TOWNSHIP

WFP World Food Programme

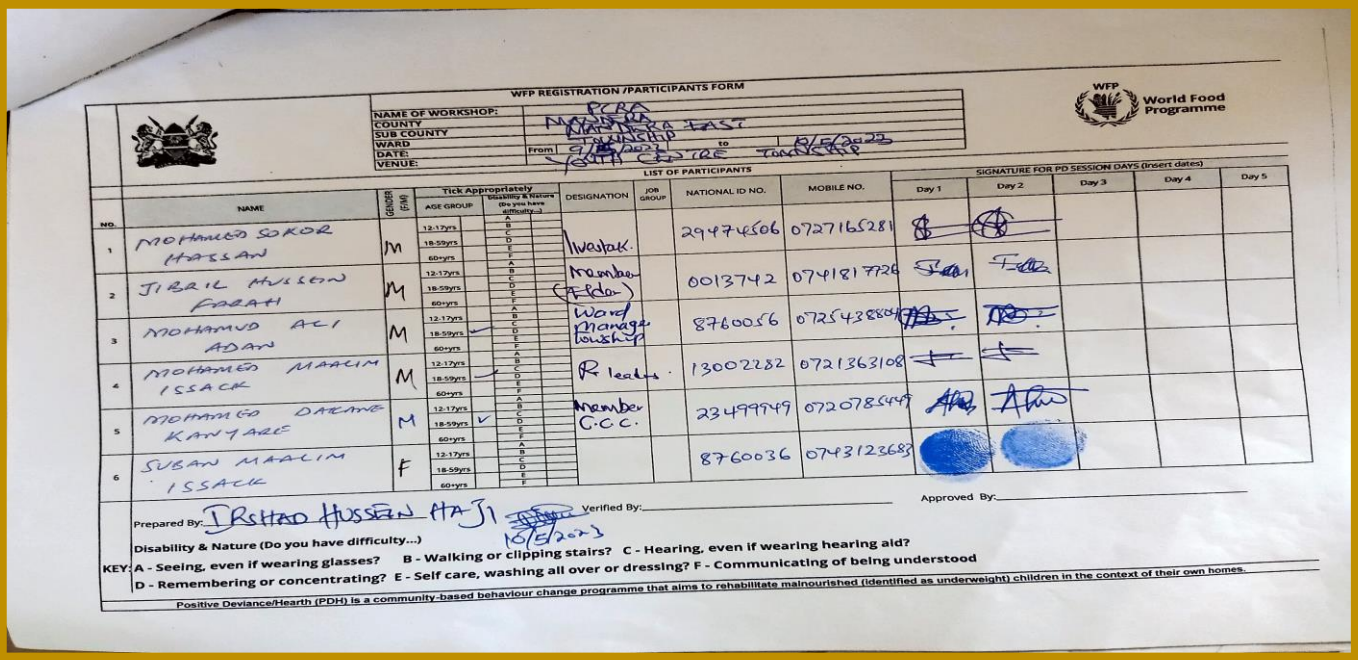
LIST OF PARTICIPANTS

NO.	NAME	GENDER (F/M)	Tick Appropriately: AGE GROUP	Disability & Nature (Do you have difficulty...)	DESIGNATION	JOB GROUP	NATIONAL ID NO.	MOBILE NO.	SIGNATURE FOR PD SESSION DAYS (Insert dates): Day 1	Day 2	Day 3	Day 4	Day 5
1	OSMAN ALI RGHISO	M	18-59yrs ✓		Chairma C.C.C		7875523	0724423668					
2	AHMED-M. IBRAHIM	M	18-59yrs ✓		Chief		14592452	0722201274					
3	ABDI ADAN YAROW	M	18-59yrs ✓		Youth		30776552	0710188864					
4	HAWO IBRAHIM MOHAMED	F	60+yrs ✓		Women Represent		6397581	0714452525					
5	SAFIYA SHEIKH ALI	F	18-59yrs ✓		Women Represent		0206824	0722168733	SAFI	SAFI			
6	BILLOW HASSAN MOHAMED	M	18-59yrs ✓		Member C.C.C.		0013294	0728112287					

Prepared By: IRSHAD HUSSEIN HAJI 10/5/2023 Verified By: _____ Approved By: _____

KEY: **Disability & Nature (Do you have difficulty...)**
A - Seeing, even if wearing glasses? B - Walking or clipping stairs? C - Hearing, even if wearing hearing aid?
D - Remembering or concentrating? E - Self care, washing all over or dressing? F - Communicating of being understood

Positive Deviance/Hearth (PDH) is a community-based behaviour change programme that aims to rehabilitate malnourished (identified as underweight) children in the context of their own homes.



WFP REGISTRATION /PARTICIPANTS FORM

WFP World Food Programme

NAME OF WORKSHOP: PCHA
COUNTY: MANDERA EAST
SUB COUNTY: MANDERA EAST
WARD: TOWNSHIP
DATE: From 9/5/2023 to 10/5/2023
VENUE: YOUTH CENTRE TOWNSHIP

LIST OF PARTICIPANTS

NO.	NAME	GENDER (F/M)	Tick Appropriately: AGE GROUP	Disability & Nature (Do you have difficulty...)	DESIGNATION	JOB GROUP	NATIONAL ID NO.	MOBILE NO.	SIGNATURE FOR PD SESSION DAYS (Insert dates): Day 1	Day 2	Day 3	Day 4	Day 5
1	MOHAMED SOKOR HASSAN	M	18-59yrs		Livestock		29474506	0727165281					
2	JIBRIL HUSSEIN FARAH	M	18-59yrs		Member (Elder)		0013742	0741817726					
3	MOHAMUD ALI ADAN	M	18-59yrs		Ward Manager Township		8760056	0725438804					
4	MOHAMED MAALIM ISSACK	M	18-59yrs		R leader		13002282	0721363108					
5	MOHAMED DAHAR KANYARE	M	18-59yrs		Member C.C.C.		23499949	0720785449					
6	SUBAN MAALIM ISSACK	F	18-59yrs				8760036	0743123685					

Prepared By: IRSHAD HUSSEIN HAJI 10/5/2023 Verified By: Approved By:

Disability & Nature (Do you have difficulty...)

KEY: A - Seeing, even if wearing glasses? B - Walking or climbing stairs? C - Hearing, even if wearing hearing aid?
D - Remembering or concentrating? E - Self care, washing all over or dressing? F - Communicating of being understood

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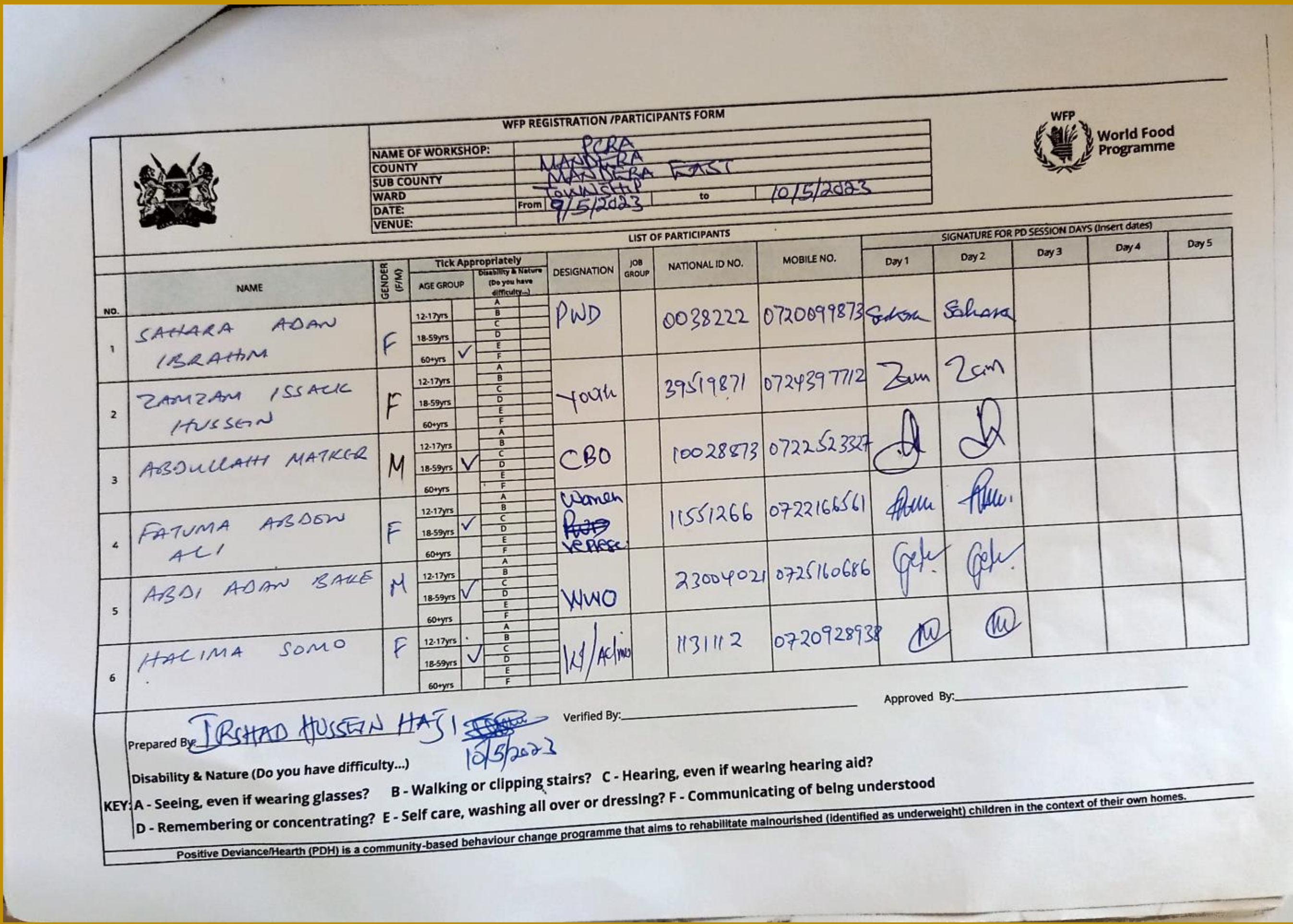

WFP REGISTRATION /PARTICIPANTS FORM

World Food Programme

NAME OF WORKSHOP:	PCRA
COUNTY	MANDERA
SUB COUNTY	MANDERA EAST
WARD	TOWNSHIP
DATE:	From 9/5/2023 to 10/5/2023
VENUE:	

LIST OF PARTICIPANTS

NO.	NAME	GENDER (F/M)	AGE GROUP 12-17yrs	AGE GROUP 18-59yrs	AGE GROUP 60+yrs	Disability & Nature (Do you have difficulty...)	DESIGNATION	JOB GROUP	NATIONAL ID NO.	MOBILE NO.	Day 1	Day 2	Day 3	Day 4	Day 5
1	SAHARA ADAN IBRAHIM	F			✓		PWD		0038222	0720099873	[signature]	[signature]			
2	ZAMZAM ISSACK HUSSEIN	F					Youth		39519871	0724397712	[signature]	[signature]			
3	ABDULLAHI MATKER	M		✓			CBO		10028873	0722523327	[signature]	[signature]			
4	FATUMA ABDOW ALI	F		✓			Women Rep		11551266	0722166561	[signature]	[signature]			
5	ABDI ADAN BAKE	M		✓			WMO		23004021	0725160686	[signature]	[signature]			
6	HALIMA SOMO	F		✓			Ward Admin		1131112	0720928938	[signature]	[signature]			

Prepared By: IRSHAD HUSSEIN HAJI 10/5/2023 Verified By: Approved By:

Disability & Nature (Do you have difficulty...)

KEY: A - Seeing, even if wearing glasses? B - Walking or clipping stairs? C - Hearing, even if wearing hearing aid?
D - Remembering or concentrating? E - Self care, washing all over or dressing? F - Communicating of being understood

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