WEST POKOT COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT REPORT

2023 – 2027

WORLD BANK GROUP

DANIDA

Sweden
Sverige

german cooperation

KFW

Kingdom of the Netherlands

Copyright page

For bibliographic purposes this document should be cited as follows:
Participatory Climate Risk Assessment Report (2023), County Government of West Pokot

All correspondence should be addressed to:
The County Secretary,
County Government of West Pokot
P. O. Box 222-30600, **KAPENGURIA**
Tel. +254 053-201-4000
Email: info@westpokot.go.ke
Website: www.westpokot.go.ke

Table of Contents

Contents

Copyright page **2**

Table of Contents **3**

List of Tables **5**

List of figures **vi**

List of Tables **viii**

DEFINITION OF TERMS **viii**

ACRONYMS **xi**

EXECUTIVE SUMMARY **xiv**

CHAPTER ONE: CONTEXT OF THE PARTICIPATORY CLIMATE RISK ASSESSMENT (PCRA) **15**

1.1 Background..... 15

1.2 Policy Context..... 15

1.3 Purpose of the PCRA Report..... 16

1.3.1 7

1.3.2 8

1.4 Key steps in the county's PCRA process..... 3

CHAPTER TWO: WEST POKOT COUNTY CLIMATE HAZARD PROFILE **7**

2.1 Current and Historical Climate Hazards and Trends..... 7

2.1.1 7

2.1.2 7

2.1.3 9

2.1.4 10

2.1.2 Historical Climate hazard and trends..... 20

2.1.4 Temperature:..... 24

2.2 25

2.3 25

2.4 28

CHAPTER THREE: FUTURE CLIMATE SCENARIOS FOR WEST POKOT COUNTY **30**

3.1 National and downscaled climate change projections..... 30

3.2 County future climate scenarios..... 32

CHAPTER FOUR: ANALYSIS OF EXISTING RESILIENCE/ADAPTATION STRATEGIES TO CURRENT AND FUTURE CLIMATE RISKS 34

4.1 Overview of existing adaptation/resilience strategies and their effectiveness to current climate risks....34

4.1.1 West Pokot Communities Climate Change Adaptation Strategies....34

4.2 Effectiveness of adaptation/resilience strategies to future climate risks....34

CHAPTER FIVE: WEST POKOT COUNTY CLIMATE STRATEGIC ADAPTATION INVESTMENT/ACTION PRIORITIES 38

5.1 Forestry....38

5.2 Agriculture and pastoral Economy....38

5.3 Water....38

5.4 Infrastructure....38

5.5 Disaster Management....38

5.6 Climate Information Dissemination....38

CHAPTER SIX: CONCLUSION 39

ANNEXES 39

Annex 1: List of PCRA Technical Working Group....39

Annex 2: Photo of PCRA Technical team Drafting PCRA Report....41

Annex 3: PCRA Participants....41

Annex 4: West Pokot County Drought Hazard Map May 2023....44

Annex 5: West Pokot County Zoonotic Pests and Diseases Hazard Map May 2023....45

Annex 6: West Pokot County Heavy and Erratic Rainfall Hazard Map May 2023....46

Annex 7: West Pokot County Floods Hazard Map May 2023....47

List of Tables

Table 1: The West Pokot County PCRA Process/Road Map Undertaken 3
Table 2: Phase III – 3 Steps Integration of CCCAP into NCAAP 5
Table 3: West Pokot Climate Hazards /Seasonal Calendar 8
Table 4: Spatial Distribution of Risks in the Wards 28
Table 5: Effectives of the strategies to vulnerable groups on climate risks 35
Table 6: Climate Hazard, Livelihood System Affected, Proposed Resilience Strategies, Stakeholders Involved, and gender Inclusion Measures 35

List of figures

Figure 1: County Climate Hazard Map 9
Figure 2: Alale Ward Climate Hazard Map 10
Figure 3: Kiwawa Ward Climate Hazard Map 10
Figure 4: Kasei Ward Climate Hazard Map 11
Figure 5: Kapchok Ward Climate Hazard Map 11
Figure 6: Kodich Ward Climate Hazard Map 12
Figure 7: Suam Ward Climate Hazard Map 12
Figure 8: Batei Ward Climate Hazard Map 13
Figure 9: Tapach Ward Climate Hazard Map 13
Figure 10: Lelan Ward Climate Hazard Map 14
Figure 11: Chepareria Ward Climate Hazard Map 14
Figure 12: Riwo Ward Climate Hazard Map 15
Figure 13: Siyoi Ward Climate Hazard Map 15
Figure 14: Mnagei Ward Climate Hazard Map 16
Figure 15: Kapenguria Ward Climate Hazard Map 16
Figure 16: Sook Ward Climate Hazard Map 17
Figure 17: Endugh Ward Climate Hazard Map 17
Figure 18: Weiwei Ward Climate Hazard Map 18
Figure 19: Sook Ward Climate Hazard Map 18
Figure 20: Masol Ward Climate Hazard Map 19
Figure 21: Lomut Ward Climate Hazard Map 19
Figure 22: Tri-modal rainfall since 1983 to 2018 in West Pokot County 20
Figure 23: MAM Rainfall Anomalies since 1984 to 2020 in West Pokot County 21
Figure 24: MAM Rainfall trends since 1984 to 2020 -West Pokot County 21
Figure 25: Rainfall in the mid-year season of JJA 22
Figure 26: JJA Rainfall trends 22
Figure 27: Rainfall in October, November & December (OND) 23
Figure 28: OND Rainfall trends 23
Figure 29: Monthly maximum temperature in West Pokot County since 1981 to 2010 24

List of Tables

Table 1: The West Pokot County PCRA Process/Road Map Undertaken 3
Table 2: Phase III – 3 Steps Integration of CCCAP into NCAAP 5
Table 3: West Pokot Climate Hazards /Seasonal Calendar 9
Table 4: Spatial Distribution of Risks in the Wards 29
Table 5: Effectives of the strategies to vulnerable groups on climate risks 37
Table 6: Climate Hazard, Livelihood System Affected, Proposed Resilience Strategies,Stakeholders Involved, and gender Inclusion Measures 37

DEFINITION OF TERMS

Climate: The average weather. The mean and variability of temperature, rainfall, wind etc. over a relatively long period of time (typically 30 years). One popular phrase can help distinguish weather from climate: "Climate is what you expect. Weather is what you get." (Source: IFRC 2007)

Climate change: State of Continuous change in climate over time. In principle, climate change can be due to natural processes or a result of human activity. The media often refers to "global warming" (an increase in the average temperature of our planet), which is actually the initial manifestation of an increasing greenhouse gas effect. Warmer temperatures lead to further climatic changes, such as changes in rainfall patterns and in the frequency or intensity of extreme weather events. In the context of the United Nations Framework Convention on Climate Change (UNFCCC), the term is linked to climate change that is caused by human activities that alter the composition of the atmosphere, particularly greenhouse-gas emissions due to burning of fossil fuels. (Source: modified from IFRC 2007)

Climate change Adaptation: Adjustments in response to actual or expected climate change, to reduce negative impacts or take advantage of opportunities. (Source: IFRC 2007)

The official definition from the Intergovernmental Panel on Climate Change (IPCC) is "the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities." In practical terms, adaptation refers to the changes people and institutions make to adjust to observed or projected changes in climate. It is an ongoing process that aims to reduce vulnerability to climate change. Adaptation can also occur in natural systems, where it is the process of adjustment to actual climate and its effects, sometimes facilitated by human intervention. (Source: CARE 2019, IPCC 2018)

Disaster: A situation in which the impact of a hazard (such as a storm or other extreme weather event) negatively affects vulnerable individuals or communities to a degree that their lives are directly threatened or sufficient harm is done to economic and social structures to undermine their ability to survive or recover. (Source: IFRC 2007)

Hazard: A potentially damaging physical event that may cause loss of life or injury, property damage, social and economic disruption or environmental degradation. (Source IFRC 2007) Risk: The probability of harmful consequences due to interaction between hazards and vulnerable conditions. (Source: IFRC 2007)

Vulnerability: The degree to which someone or something can be affected by a particular hazard (from sudden events such as a storm to long-term climate change). Vulnerability depends on

physical, social, economic and environmental factors and processes. It is related, for instance, to the places where people live, the strength of their houses, the extent to which their crops can survive adverse weather, or whether they have organized evacuation routes and shelters.

Physical vulnerability relates to the built environment and may be described as "exposure"

Social vulnerability is caused by such things as levels of family ties and social networks literacy and education, health infrastructure, the state of peace and security.

Economic vulnerability is suffered by people of less privileged class or caste, ethnic minorities, the very young and old etc. They suffer proportionally larger losses in disasters and have limited capacity to recover. Similarly, an economy lacking a diverse productive base is less likely to recover from disaster impact which may also lead to forced migration.

Environmental vulnerability refers to the extent of natural resource degradation, such as deforestation, depletion of fish stocks, soil degradation and water scarcity that threaten food security and health. (Source: IFRC 2007)

ACRONYMS

CO	Chief Officer
CCCAP	County Climate Change Action Plan
CCD	Climate Change Directorate
CCU	County Climate Change Unit
CECM	County Executive Committee Member
COG	Council of Governors
CSOs	Civil Society Organizations
FLLOCA	Financing Locally-Led Climate Action
IFRC	The International Federation of Red Cross and Red Crescent Societies
IPCC	Intergovernmental Panel on Climate Change
MCA	Member of County Assembly
NCCAP	National climate Change Action Plan
NDC	Nationally determined Contribution
NOREB	North Rift Economic Block
PCRA	Participatory Climate Risk Assessment
PIU	Programme Implementation Unit -National Treasury
TNT	The National Treasury of Kenya
TWG	Technical Working Group
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
WCCPCs	Ward Climate Change Planning Committees

FOREWORD

This Participatory Climate Risk Assessment (PCRA) Report was achieved through several steps involving key stakeholders who are formally responsible for climate action and building resilience, involved in climate action and responses to climate impacts, who have knowledge and expertise relevant to climate action and building resilience, including knowledge on the climate system and climate risks and those impacted by climate change.

The involvement of all the twenty wards of West Pokot County was integral to the success of the exercise. This PCRA report clearly shows all the climate hazards affecting West Pokot County namely; droughts, floods, lightning, pests and diseases, erratic rains just to mention but a few. These hazards have provided for action planning to cope up with the hazards as well as mitigate them focusing on Forestry, Water, Agriculture and Disaster Risk Reduction.

As the CECM in charge of Climate Change, I wish to assure the stakeholders and the county citizens at large that my department will do all within its mandate to implement this report to ensure our collective wellbeing to adaptation, resilience, and mitigation of climate change impacts facing our County. This report serves as a valuable resource that can inform more informed decision-making and creating new opportunities for sustainable growth and development.

I call upon all stakeholders and individuals to join hands with my department and The County Government of West Pokot to take steps towards better climate risk management, adaptation and mitigation efforts. Let's take the findings of this report seriously and make positive changes for our future.

CECM MINISTRY OF WATER, ENVIRONMENT, NATURAL RESOURCES & CLIMATE CHANGE
26 MAY 2023
COUNTY GOVERNMENT OF WEST POKOT
P.O. Box 49 - 30600, KAPENGURIA

Hon. Lucky Lemutai Litole

CECM-Water, Environment, Natural Resources and Climate Change

ACKNOWLEDGEMENT

On behalf of the County Government of West Pokot and department of Water, Environment, Natural Resources and Climate Change, I would like to express my deepest appreciation to all those who contributed their time and to the preparation of this Participatory Climate Risk Assessment Report, more so to Dr. Maurce Pedo (National Treasury), Mr. Julius Barno (National Treasury) , Molu Huqa (National Treasury), Anne Tek (Platform for Climate Governance), Muthoka Brian (Council of Governors) for their immense support and capacity building on FLLoCA PCRA.

I sincerely thank H.E. The Governor Simon Kachapin for immense support and availing resources to the Climate Change Unit and FLLoCA PCRA Exercise.

I appreciate the support and guidance provided by the County Executive Committee Member for Water, Environment, Natural Resources and Climate Change throughout the process.

I extend sincere gratitude to the experts, stakeholders and Ward Climate Change Planning Committees who gave generously their time and resources to collect and analyze data on climate hazards, assess vulnerabilities, and identify community resources and assets to mitigate risks hence the production of this PCRA Report.

Lastly, I would like to extend special appreciation to the Participatory Climate Change Risk assessment technical working team for their commitment and dedication to the PCRA and County Climate Action Planning.

CHIEF OFFICER
DEPARTMENT OF WATER,
ENVIRONMENT, NATURAL RESOURCES AND CLIMATE CHANGE
26 MAY 2023
COUNTY GOVERNMENT OF WEST POKOT
P.O. BOX 49-30600, KAPENGURIA

Mr. Leonard Kamsait

Chief Officer - Water, Environment, Natural Resources And Climate Change

EXECUTIVE SUMMARY

This West Pokot County Participatory Climate Risk Assessment (PCRA) Report covers the following:

1. Background: In this section, a brief introduction to the PCRA report, its purpose, and the context in which it was conducted is covered. PCRA is a World Bank tool that was used by the Twenty Ward Climate Change Planning Committees and West Pokot County PCRA Technical Working Team to identify climate hazard, risks and prioritization of the hazards and their impacts. The tool was used by the community to priority climate change resilience, adaptation and mitigation measures.

2. Policy context: Various national and county climate policies and laws have been covered such as county climate change fund act of 2021, county climate change policies, and national climate change action plan 2022-2027, among others.

3. Purpose of PCRA: PCRA is a way of identifying and prioritizing climate hazards, its impacts and adaptation strategies to guide the county in prioritizing actions to mitigate climate risks.

4. Key steps in the county's PCRA process: This section provides an overview of the key steps involved in conducting the PCRA in the county.

5. County's climate change hazards: This section provides an overview of the specific hazards that the county is prone to, the vulnerabilities and impacts that these hazards pose to its people, infrastructure, environment, and livelihoods. Also covered, is the spatial distribution of these hazards and their current and projected future impacts.

6. Current and future climate scenarios: In this section, the current and projected future climate scenarios that the county is expected to experience is covered.

7. Analysis of adaptive strategies: In this section, a summary of the different adaptive strategies that were explored or recommended in the PCRA report and their effectiveness, feasibility, and sustainability of these strategies and how they can be implemented in the county is covered.

CHAPTER ONE: CONTEXT OF THE PARTICIPATORY CLIMATE RISK ASSESSMENT (PCRA)

1.1 Background

Climate change is becoming one of the most serious challenges to West Pokot County in trying to achieve its development goals as described in the County integrated development Plan. The county is already extremely susceptible to climate-related events, and projections indicate that the impacts are likely to affect the county even more in the future.

The county is mostly impacted by droughts, floods, heat stress, pests and diseases. In many parts of the county, extreme weather and variability are now the norm. Rainfall is irregular and unpredictable; some wards experience frequent droughts while other wards experience severe floods, landslides and gully erosion during the long and short rains. The arid and semi-arid areas are particularly hard hit by these climate hazards thereby putting the lives of millions of households and their social and economic activities at risk.

The most vulnerable sectors impacted by climate change in the county includes; forestry and energy, water, agriculture, fisheries and pastoral economy, health, wildlife, transport and infrastructure.

People have experienced significant climatic change impacts on food supply and security, water availability, infrastructure and agriculture income. Human, Social, Natural, Physical and Economic assets of sustainable livelihood are threatened by the effect of climate change, and the future predictions are much ominous.

The county economy depends on agriculture where 76% of the population practice agriculture. The increasing changes in climate change has led to loss of lives, reduced crop and livestock production and damaged infrastructure.

The frequent Droughts in the county have destroyed livelihoods, triggering local conflicts over scarce resources, and eroding the ability of the communities to cope together. The economic impacts of floods and landslides in 2019 and 2020 which occurred in Parua, Tapach, Nyarkulian, Muino, Sebit, Kerelwa, Ortum, Seker, Endugh and Chesegon were devastating where it claimed over 53 lives, displaced more than 20,118 people with 3,353 households 6 primary schools and 1 secondary school, 1 dispensary and 11 churches were affected. Roads and infrastructure were destroyed where 6 Kapenguria Lodwar highway bridges were swept, and several feeder roads were cut off. Crops across farms were destroyed and livestock drowned.

Specific focus is needed to adapt and mitigate climate risks facing Kenya and in so doing, the Government of Kenya has partnered with World Bank, and other international financial institutions and agencies to implement the Financing Locally Led Climate Action Program which is aimed at building resilience and mitigating climate change shocks at the community level.

To Plan and implement appropriate climate change actions at the community level, World Bank through Financing Locally-Led Climate Actions has ensured that a Participatory Climate Risk Assessment is done by the local communities.

West Pokot County undertook Participatory Climate Risk Assessment between 15th and 23rd May

2023 in its 20 Wards (Masol, Lomut, Weiwei, Sekerr, Tapach, Lelan. Batei , Chepareria Alale, Kiwawa, Kapchok, Kasei, Suam, Kodich, Riwo, Mnagei, Kapenguria, Siyoi, Sook, & Endugh) whereby men, women, youths, people with disabilities, minority groups, and the elderly attended the exercise.

1.2 Policy and Legal Context -Internationally, Nationally, and County level (West Pokot)

Climate change is a global problem that demands a global solution. 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 is an active player in international efforts. 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.

Kenya has a robust regulatory framework comprising laws, policies, plans and institutions have been established at the National and County levels including West Pokot County 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**; the principal legislation is the Climate Change Amendment Act of 1st September, 2023 that are guiding Kenya's climate change response through mainstreaming climate change into sector functions, and are the legal foundations of the NCCAP and County Climate Change Action Plans.

The Kenya National Climate Change Response Strategy (NCCRS), 2010

The NCCRS is to respond to climate change by enhancing understanding of the global climate change negotiations process, international agreements, policies and processes and most importantly the positions Kenya needs to take in order to maximize beneficial effects, assessing the evidence and impacts of climate change in Kenya, recommending robust adaptation and mitigation measures needed to minimize risks associated with climate change while maximizing opportunities, enhancing understanding of climate change and its impacts nationally and in local regions, recommending vulnerability assessment, impacts monitoring and capacity building framework needs, recommending research and technological needs and avenues for transferring existing technologies, providing a conducive and enabling policy, legal and institutional framework to combat climate change, and providing a concerted action plan, resource mobilization plan and robust monitoring and evaluation plan

Kenya Climate Smart Agriculture Strategy 2017 – 2026 is Kenya's approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. This strategy also wants an assessment of evidence and impacts of climate change in Kenya and the appropriate climate change response measures both nationally and local level so as to understand climate challenges.

National Adaptation Plan (NAP 2015-2030), aims to address the country's vulnerability and resilience to climate change.

The first NCCAP (2013-2017), took action of implementation, providing the analysis and enabling mechanisms of the Kenya Constitution 2010 and the attainment of Vision 2030; It encouraged people-centred development, ensuring that climate change actions help the country move toward its long-term development goals. The NCCAP set out a vision for a low carbon climate resilient development pathway; and summarised analysis of mitigation and adaptation options and recommended actions; recommends an enabling policy and regulatory framework; and sets out next

steps for knowledge management and capacity development, technology requirements, a financial mechanism, and a national performance and benefit measurement system (NPBM).

Second NCCAP 2018-2022,

The **National Climate Change Action Plan (NCCAP) 2018-2022** is a **5-year nationwide sectoral plan** that guides Kenya's climate change actions, including the reduction of greenhouse gas emissions. The plan is built on the progress achieved during the implementation of NCCAP 2013-2017 and sets out initiatives that foster movement towards the achievement of **Kenya's Nationally Determined Contribution (NDC),** under the Paris Agreement, aiming at:

a) greenhouse gas emission reductions of 30% by 2030;

b) mainstreaming of climate change adaptation into the Government's planning processes; and

c) implementation of adaptation actions, and the plan identifies seven priority areas of intervention, which are:

i) reduce disaster risk that result from climate-related (floods and drought) management;

ii) increase food and nutrition security;

iii) water and the Blue Economy (enhance the resilience of the water sector)

iv) forestry (increase forest cover to 10% of total land area), wildlife, and tourism;

v) health, sanitation, and human settlements (reduce incidences of malaria and other diseases that are projected to increase because of climate change

vi) manufacturing (improve energy and resource efficiency in the manufacturing sector,

vii) energy and transport (promotion of renewable energy development, increase the uptake of clean cooking solutions, develop sustainable transport systems, among others

3rd NCCAP 2023-2027,

NCCAP 2023-2027 seeks to further Kenya's development goals by providing mechanisms and measures to achieve low carbon climate resilient development, in a manner that prioritises adaptation. The goals of the NCCAP 2023-2027 are to:

- Align climate change actions in the country with the Government's development agenda, including Kenya Vision 2030 and the Bottom-Up Economic Transformation Agenda (BETA); and

- Strengthen the participation in climate change action by the private sector, civil society, women, youth, children, and vulnerable groups within society, including older members of society, persons with disabilities, members of minority or marginalised communities, and indigenous peoples.

The Plan helps to further Kenya's development aspirations by providing a framework for:

- Delivering Kenya's NDC and NAP during the 2023-2027 period;
- Mainstreaming climate change adaptation and mitigation into sector functions at the National and County levels; and
- Scaling up finance for climate change actions, including participation in global carbon markets, and improved access to climate finance.

National Climate Change Policy Sessional Paper No. 3 of (2016)

This Policy's focus is on the interlinkages between sustainable national development and climate change. Climate change adversely impacts key sectors that are important to the economy and society: Environment, Water and Forestry; Agriculture, Livestock and Fisheries; Trade; Extractive industries; Energy; Physical Infrastructure; Tourism; and Health. This Policy therefore elaborates intervention measures that can help to achieve the goal of low carbon climate resilient development.

At the County level, West Pokot County have put in place the following policies, legislative frameworks and plans all geared towards providing mechanisms of addressing impacts of climate change that adversely affected West Pokot County through implementation of appropriate adaptation and mitigation measures.

1. **West Pokot County Climate Change Policy Sessional Paper No.2 December, 2020**

Through this policy, West Pokot County intends to enhance adaptive capacity and resilience to climate change, and promote low carbon development for sustainable development in West Pokot County and the specific objectives being:

i. Facilitate establishment of policies, legal and regulatory frameworks for climate change adaptation and mitigation actions.

ii. Establish and maintain an effective and efficient institutional framework to mainstream climate change responses across relevant sectors and into integrated planning, budgeting, decision-making and implementation.
iii. Reduce vulnerability to the impacts of climate change by building adaptive capacity, enhancing climate change resilience and strengthening capacities for disaster risk reduction in the county.
iv. Facilitate widespread public awareness, participation, ownership and oversight of west pokot county climate change response efforts and action plans.
v. Incentivize private sector involvement in building climate change resilience and engaging in low carbon development opportunities.

2. **West Pokot County Climate Change Financing Policy Sessional Paper No.3 February, 2021**

This policy intends to:

i. establish West Pokot County Climate Change Fund
ii. mobilize external climate finance
iii. establish institutional frameworks to oversee and implement climate change actions to improve resilience and adaptation of the community to impacts of climate change in the county

3. **West Pokot County Climate Change Fund Act, 2021**

This is an ACT for West Pokot County Assembly that has established West Pokot County Climate Change Fund , institutional frameworks (County climate Change Coordination/Steering Committee (CCCCC), Climate Change Unit (CCU) and Ward Climate Change Planning Committee (WCCPC) to oversee and implement climate change actions funded by the fund as a means of responding effectively to climate change through appropriate adaptation and mitigation actions and for sustainable development in the county and for connected purposes

4. **West Pokot County Climate Change Fund Regulations, 2022**

This regulations was made by the CECM in charge of climate change and was passed into law by the County Assembly of West Pokot to operationalize the West Pokot County Climate Change Fund Act, 2021. The regulations is now in use in the management of the West Pokot County Climate Change Fund and other funds received by the county intended for addressing climate change actions by the County Climate Change Unit.

5. **West Pokot County Disaster Risk Management Act, 2016**

Provides Measures By The County Government For Disaster Management

6. **West Pokot County Solid Waste Management Policy, 2019**

Provides mechanisms on management of solid waste in west Pokot county

7. **The West Pokot County Urban Planning Act, 2016**

AN ACT of the West Pokot County Assembly to give effect to Article 184 of the Constitution; to provide for the classification, governance and management of urban areas; to provide for the criteria of establishing urban areas, to provide for the principle of governance and participation of residents and for connected purposes

8. **West Pokot County Integrated Development Plan 2023-2027**

A comprehensive five year plan that for all the county departments. Climate change actions has been mainstreamed in it.

Climate Change interventions have been mainstreamed by all the ten departments in this third-generation county integrated development plan.

These departments are:

(i) Water, Environment, Natural Resources and Climate Change -Water, Forestry, Sanitation, Enforce Environmental Safeguards mechanisms, dissemination of climate information, research and innovation

(ii) Finance & Economic Planning- handles budget allocation on climate change actions and investments

(iii) Roads, Public Works and Transport-Climate proofing of roads and infrastructure

(iv) Health - Incineration of medical wastes, prevention and treatment of climate change related illnesses, Occupational Health Measures

(v) Education and Technical Training-Climate proofing of institutional infrastructure

(vi) Lands, Housing & Physical Planning- Solid waste management, Sanitation

(vii) Tourism, Culture, Gender and Social Development -Tourism and Wildlife management, Social Safeguards mechanisms

(viii) Trade, Industrialization, Energy, Investment and Cooperative Development- promotion of renewable and clean energy solutions in the county, Manufacturing / Industry

(ix) Agriculture, Livestock, Irrigation and Fisheries-Climate Smart Agriculture, Drought Resistant Crops, High yielding crop varieties, drought resilient and diseases resistant livestock, water harvesting, soil conservation among others

(x) Public Service Management, Devolved Units, Administration and ICT- Disaster Risk Management **a**nd Ending Drought Emergencies

These West Pokot County Legislative Frameworks were domesticated from National legislative frameworks and plans hence are linked to the Constitution of Kenya 2010, National Climate Change Response Strategy (2010), National Climate Change Framework Policy (2016), Climate change Act 2016, Kenya Vision 2030, National Adaptation Plan 2015-2030, priorities provided in the National Climate Change Action Plan (NCCAP, 2018–2022) among others. The County legislative frameworks address matters climate change at all levels and by all entities in the county of West Pokot.

1.3 Purpose of the PCRA Report

1.3.1 Purpose

West Pokot County PCRA exercise was done so as to enable the community understand climate change, Climate Change Hazards and Risks, Vulnerability to Climate Change Hazards, and hence identify Climate Change Hazards and Risks affecting them and then propose the local responses as well as the County Government and other Partner interventions geared towards resilience, adaptation and mitigation of the impacts at the grassroot level.

This PCRA Report is a guide to the County government of West Pokot, Community Members and other development partners when planning and prioritizing climate change adaptation, resilience and mitigation measures targeting those most vulnerable by climate change impacts in the county.

This PCRA Report and Action Plan is therefore part of the National PCRA Report and Climate Change Action Plan 2023-2027

1.3.2 The PCRA Objectives

These are the PCRA objectives:

i. To understand how climate risks affects lives and livelihood resources.

ii. To learn how local people currently respond to these hazards.

iii. To identify adaptation strategies to strengthen the threatened livelihood resources and enhance people's resilience.

iv. To include gender considerations throughout the assessment of climate and disaster risks.

1.4 Key steps in the county's PCRA process

West Pokot County undertook Participatory Climate Risk Assessment Report and Action Planning through the following process as shown in the table 1 below:

Table 1: The West Pokot County PCRA Process/Road Map Undertaken

PCRA PHASE I STEPS	KEY PERFORMANCE INDICATORS	STAKEHOLDER(S) ENGAGED	VENUE	DATE
Inception Meeting for Cabinet, MCAs and CCU	Cabinet, MCAs and CCU members Sensitized on Climate Change Road Map and FLLoCA	County Executive (Cabinet), County Assembly Members Media, ICT, & CCU	Aturkan Hotel Kitale	20th March, 2023
Inception Meeting at Sub- County Level for Sub- County Admins, Ward Admins, Ward Managers, ACCs, Partners	Sub-county Admins, Ward Admins, Ward Managers, ACCs and Partners sensitized on County Climate Change Road Map and formation of WCCPcs and FLLoCA Programme	20 Ward Administrators, 20 Ward Managers, 20 Ward Managers, 6 Divisional County Commissioners, Media, ICT, CCU, Partners were sensitized on	Horizon Hotel Kapenguria	23rd March, 2023
Formation of Ward Climate Change Planning Committees (WCCPCs) for Twenty (20) Wards	Ward Climate Change Planning Committees (WCCPCS) were formed in all 20 Wards Ward CCPCs formed	CCU, PSM departments, Chiefs Assistant Chiefs, Ward Managers, NGOs (Partners), Ward Citizens	Held at each Ward	27th -31st March, 2023
Formation of cross-sectoral technical working group to lead participatory county climate risk assessment process	Constituted and sensitized PCRA Technical Working Group	CECMs-Climate Change, Finance, PSM, Agriculture, Cos, Climate Change, Finance, PSM, Agriculture, CCU Technical officers, County ICT, County GIS, Disaster Risk, County M&E, NEMA,	Hill Moon Hotel	6th April, 2023

		Management, Media NR Radio, NDMA, KWS, KMD, Youth Bunge, RedCross, SIKOM, PACEP, World Vision-IMARA, International Alert,		
Exchange Visit to Vihiga and Kisumu Counties on PCRA	Visited Vihiga on experience sharing on PCRA Process	CCU Team	Vihiga / Kisumu County	2nd May,2023
Training of the PCRA Technical working Group (PCRA TWG)	PCRA TWG Trained	CECM-Climate Change, , CO, Climate Change, CCU Technical officers, County ICT, County GIS, County Disaster Risk, County M&E, Management, Media NR Radio, NEMA, NDMA, KMD, SIKOM, RedCross, World Vision-IMARA, International Alert, Support Team (PIU, CCD, COG, CSOs, World Bank Consultant)	Aturkan Hotel Kitale	10th-11th May 2023
PCRA Technical Working Group Planning Meeting	The PCRA TWG planned well the PCRA exercises and came up with six clusters for the exercise	CCU Team and PCRA Team	CCU Office	12th May 2023
Secondary and Primary data Collection	PCRA TWG Prepare Workshop requirements	CCU, PCRA TWG, WCCPCs, Other Stakeholders	County, Ward Level,	12tt and 15th May, 2023
PCRA Workshop at WARD / Subcounty by PCRA TWG	Multi-stakeholder workshop done	CCU, PCRA TWG, WCCPCs, Other Stakeholders	Sub-county / Ward Level	15th – 17th May 2023
Climate risk assessment report by Lead Facilitators and Team	PCRA Report	CCU & PCRA TWG	Sirwo Hotel	19th-23rd May, 2023

Phase II: (CCCAP)- Steps				
1: Review of Key Documents	Key documents reviewed-	CCU Support Team (PIU, CCD, COG, CSOs, World Bank Consultant)	CCU Office	20th -21st May 2023
2: Collecting Public Input - Workshops at Ward Level	Public Views collected	CCU, Ward Admins & Managers, CCU, Support Team (PIU, CCD, COG,	Ward Office	22nd May, 2023
3: Drafting the County Climate Change Action Plan	Draft CCCAP	CSOs, World Bank Consultant), CCU, TWG	CCU	23rd May 2023
4: Validation Workshop for the CCCAP	Validated Draft CCCAP	CCU, Ward Admins & Managers, CCU	CCU	24th May 2023
5: Public Feedback	Evidence of public feedback on CCCAP	Community, Stakeholders	Ward Level	24th May 2023
6: Development of Second (or Final) Draft of CCCAP	Second or Final CCCAP	CCU	CCU Office	25th May 2023
7: Presentation of CCCAP to County Executive Committee in Charge of Climate Change and Cabinet	CCCAP Presented to Cabinet	CECM-Climate Change	GVN Residence	26th May 2023
8: Presentation of CCCAP to County Assembly by H:E The Governor	CCCAP Presented to County Assembly for Adoption	CA Sectoral Chair	County Assembly	27th May 2023
9 Ceremonial Approval OF County PCRA/Action Plan by H: E Governor	Approval of CCCAP by H.E. Governor	H.E CBS, EGH Governor Simon Kachapin Kitalei	Mtelo Hall	29th May 2023
10: Submission of West Pokot County PCRA Report and County Climate Change Action PLAN 20232023 to National Treasury	West Pokot County PCRA Report Submitted to TNT	CECM -in charge of Climate Change	TNT-PIU Office	31st May 2023

West Pokot County is yet to complete the following processes of the PCRA and Climate Action Planning

Table 2: Phase III – 3 Steps Integration of CCCAP into NCAAP

Phase III: Integration of CCCAP into NCCAP	Key Performance Indicators	Targeted Stakeholder(s)	Venue	Date
1. NOREB intercounty consultations and joint planning workshop	NOREB Counties CCAP consultations Workshop for NCCAP	NOREB CCUs, National Task Force on NCCAP or Support Team (PIU, CCD, COG, CSOs, World Bank Consultant)	Eldoret or any other city	
2. NOREB consultative Meetings on NCCAP development	NOREB Counties NCCAP Consultation Workshop	NOREB CCUs, National Task Force on NCCAP or Support Team (PIU, CCD, COG, CSOs, World Bank Consultant)	Eldoret or any other city	
3. Workshop for review, Updating and NCCAP	Updated NOREB Counties NCCAP	CCUs, National Task Force on NCCAP or Support Team (PIU, CCD, COG, CSOs, World Bank Consultant)	Eldoret or any other city	

CHAPTER TWO: WEST POKOT COUNTY CLIMATE HAZARD PROFILE

2.1 Current and Historical Climate Hazards and Trends

2.1.1 West Pokot County Seasonal Calendar and Objectives

Objectives

a) To analyze seasonal changes in activities and periods of stress or scarcity.
b) To identify important livelihood activities and events.
c) To document community observations of changing trends in seasonal patterns of the events and risks

2.1.2 West Pokot Climate Hazard Seasonal Calendar:

The community identified climate hazards in West Pokot County as; Drought and prolonged dry spell, Erratic and heavy rainstorms, Lightning Strikes, Floods, Landslides, Zoonotic Pests and Diseases, High Temperatures and Heat stress.

Table 3: West Pokot Climate Hazards /Seasonal Calendar

Climate Hazard		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Drought and prolonged dry spell	Current												
	Historical												
Floods	Current												
	Historical												
Erratic and heavy rainstorms	Current												
	Historical												
Zoonotic Pests and Diseases	Current												
	Historical												
Landslides	Current												
	Historical												
Lightning Strikes	Current												
	Historical												
High Temperatures and Heat stress	Current												
	Historical												

Key

historical

current

West Pokot County climate Hazard Seasonal Calendar shows that west Pokot County is harshly effectuated by climate change impacts; Drought and prolonged dry spell, Erratic and heavy rainstorms, Lightning Strikes, Floods, Landslides, Zoonotic Pests and Diseases, High Temperatures and Heat stress.

2.1.3 West Pokot County and Ward Climate Hazard Maps

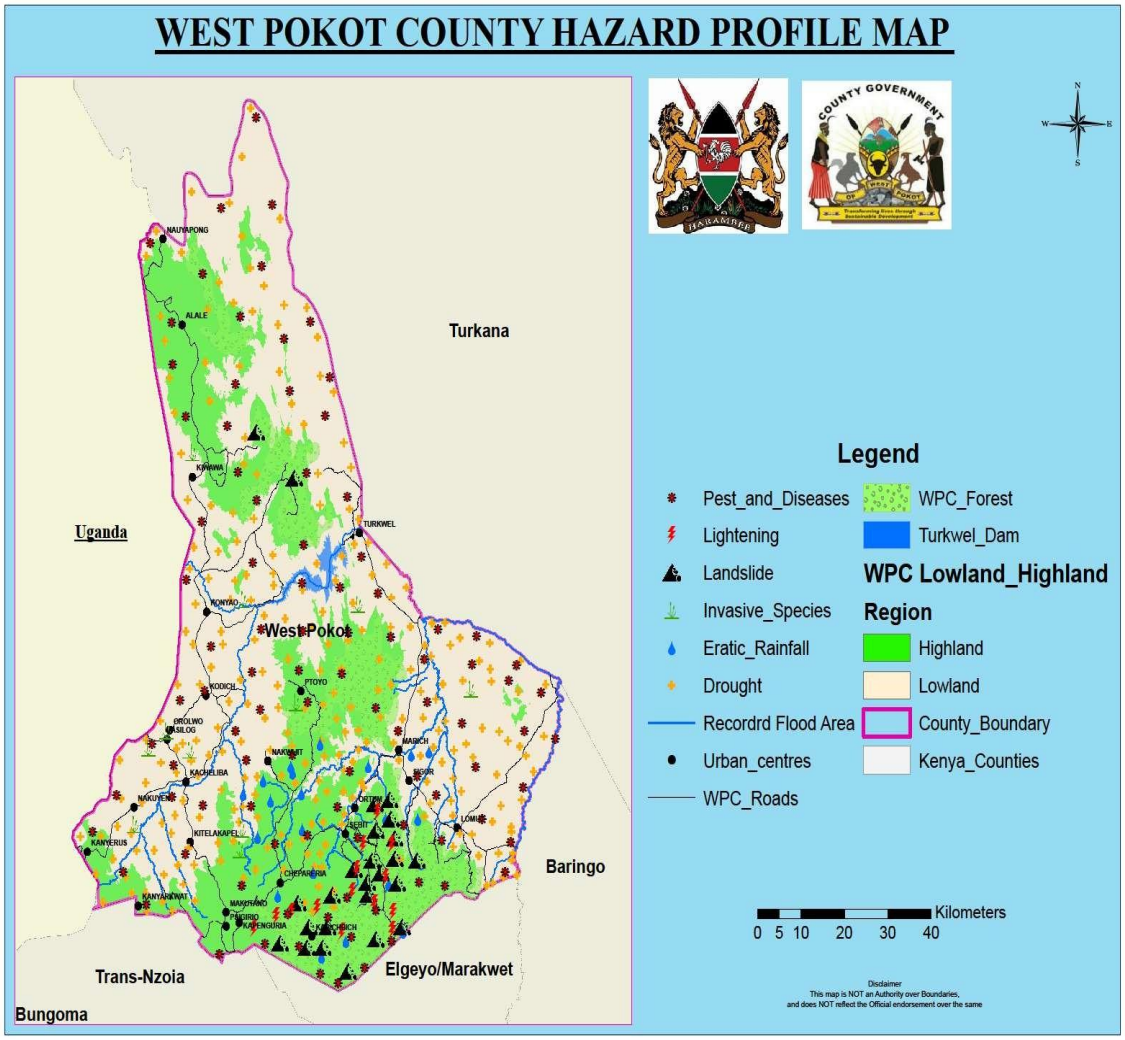


Figure 1: County Climate Hazard Map

Ranking of the Wards to Climate Risks

Table 4: West Pokot Climate Hazards /Seasonal Calendar

	High Risk	**Medium Risk to**	**Low Risk to**
Alale	Yes		
Kiwawa	Yes		
Kasei	Yes		
Kapchok	Yes		
Kodich	Yes		
Suam	Yes		

Batei		Yes	
Tapach		Yes	
Lelan		Yes	
Chepareria		Yes	
Riwo	Yes		
Siyoi		Yes	
Mnagei		Yes	
Kapenguria		Yes	
Sook		Yes	
Endugh	Yes		
Weiwei	Yes		
Sekerr	Yes		
Masool	Yes		
Lomut	Yes		

2.1.4 West Pokot County Ward/Community Climate Hazard Maps

i. Alale Ward Climate Hazard Map

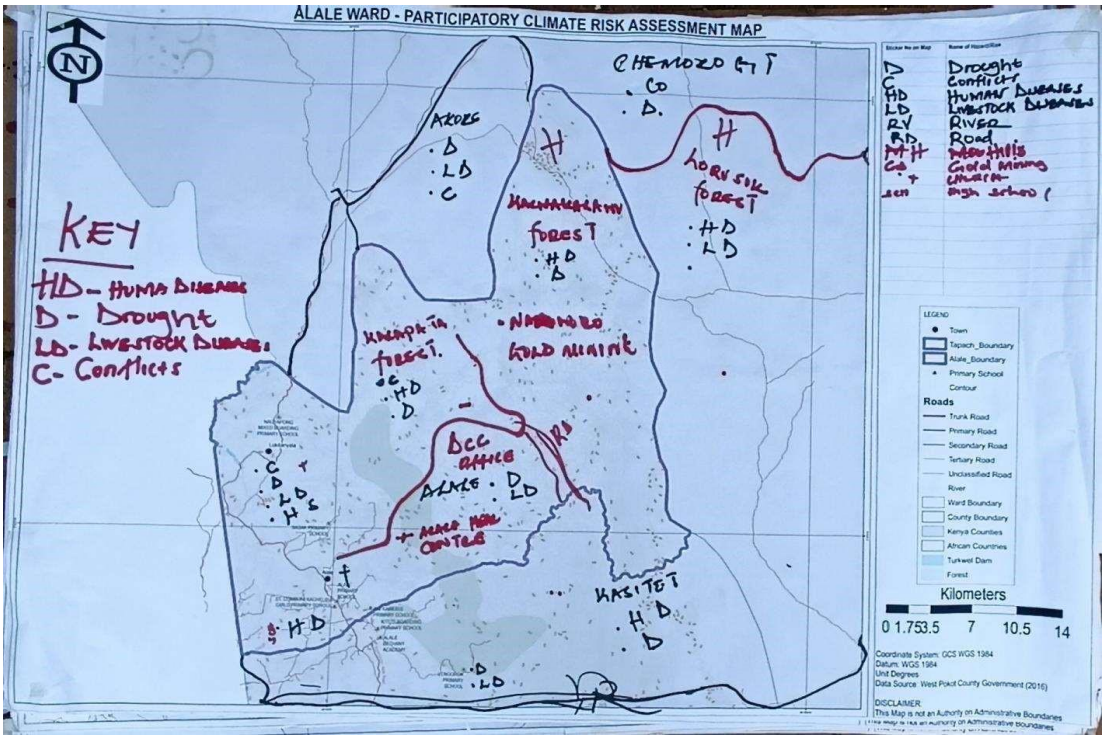


Figure 2: Alale Ward Climate Hazard Map

ii. Kiwawa Ward Climate Hazard Map

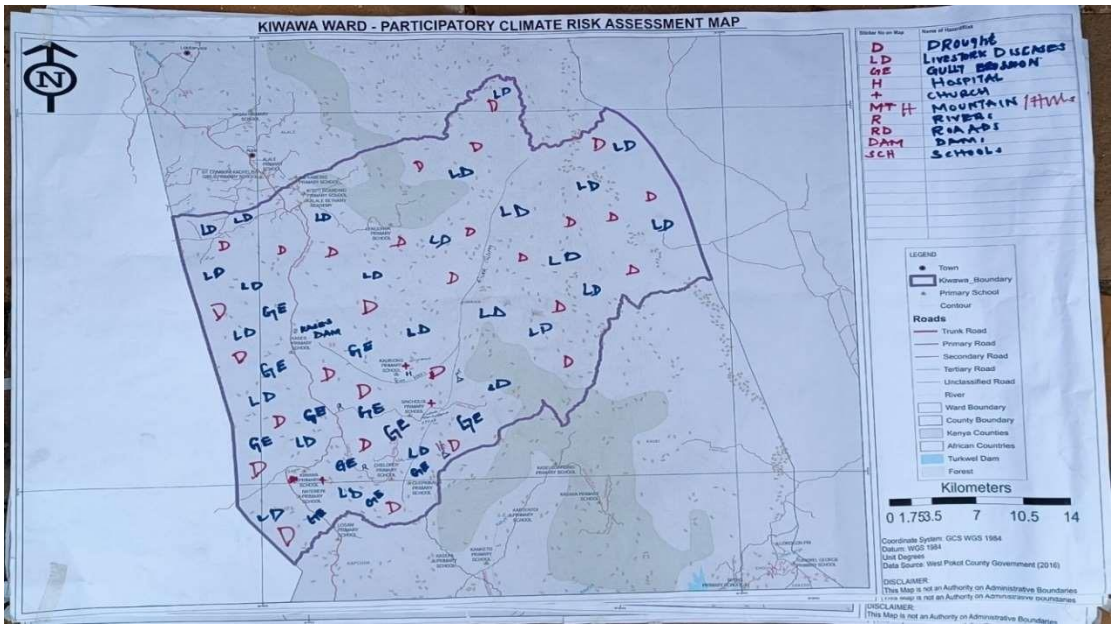


Figure 3: Kiwawa Ward Climate Hazard Map

iii. Kasei Ward Climate Hazard Map

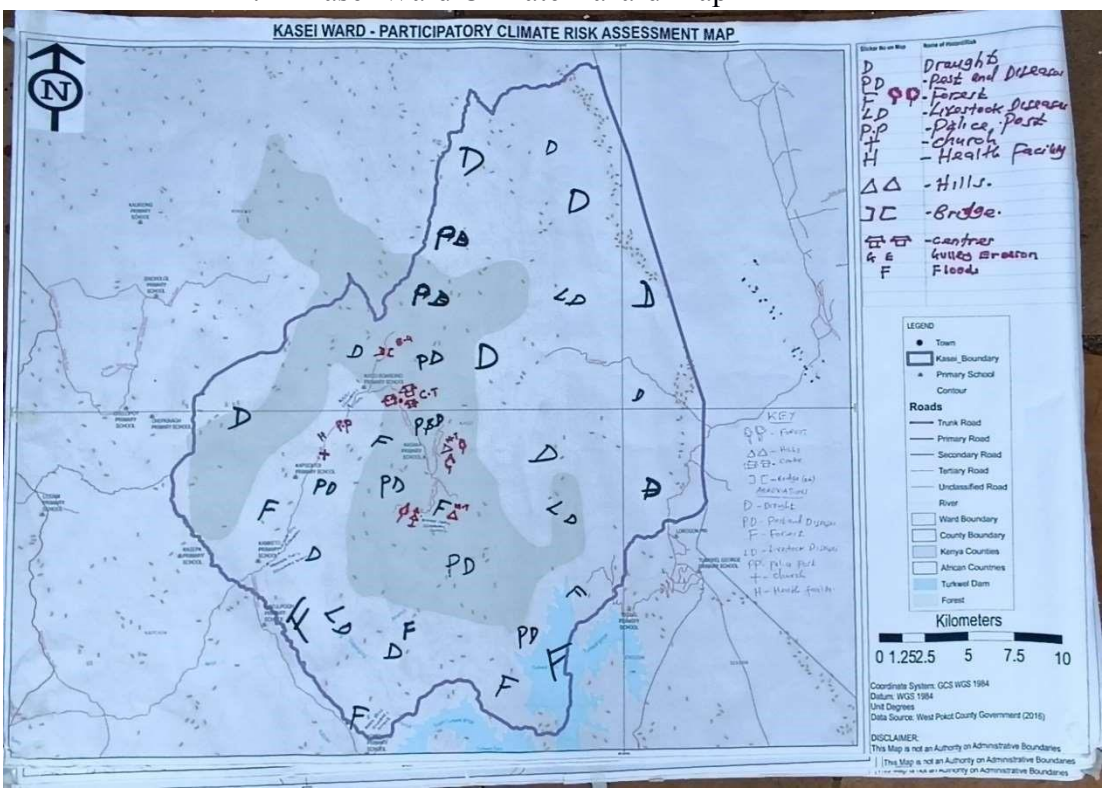


Figure 4: Kasei Ward Climate Hazard Map

iv. Kapchok Ward Climate Hazard Map

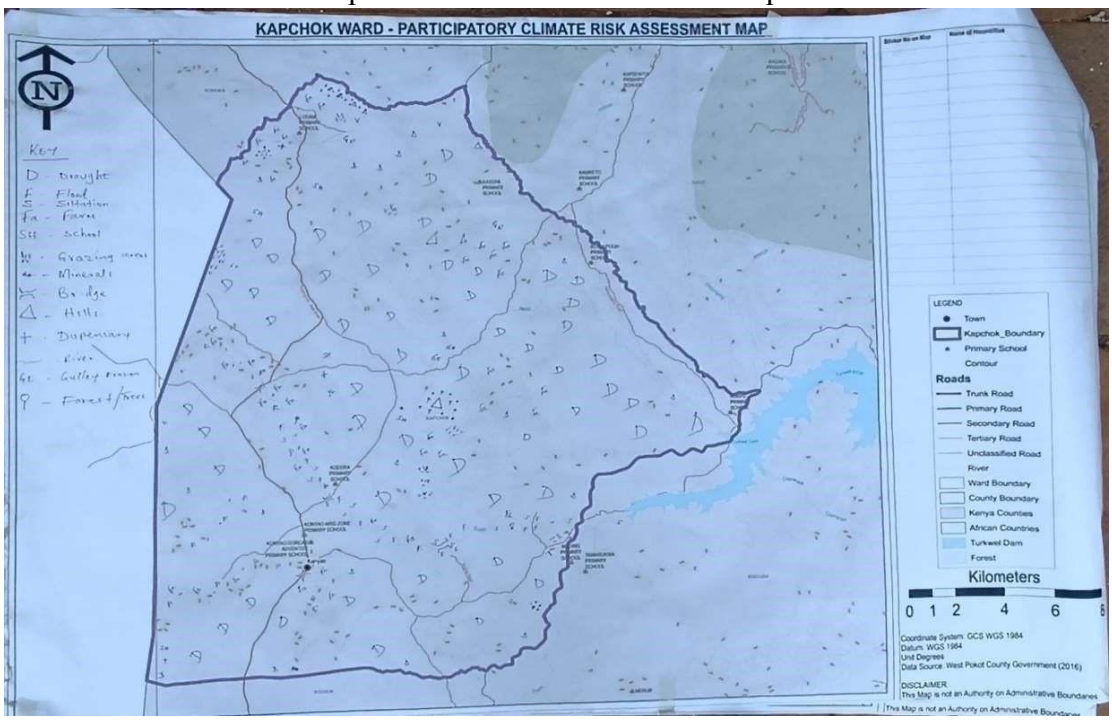


Figure 5: Kapchok Ward Climate Hazard Map

v. Kodich Ward Map

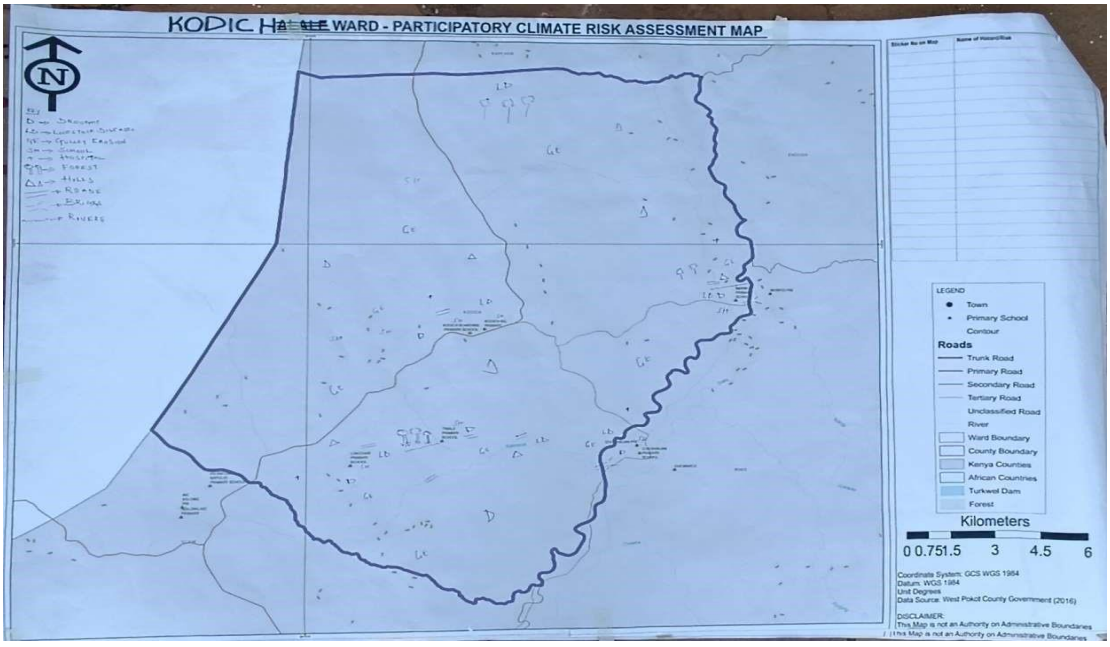


Figure 6: Kodich Ward Climate Hazard Map

vi. Suam Ward Map

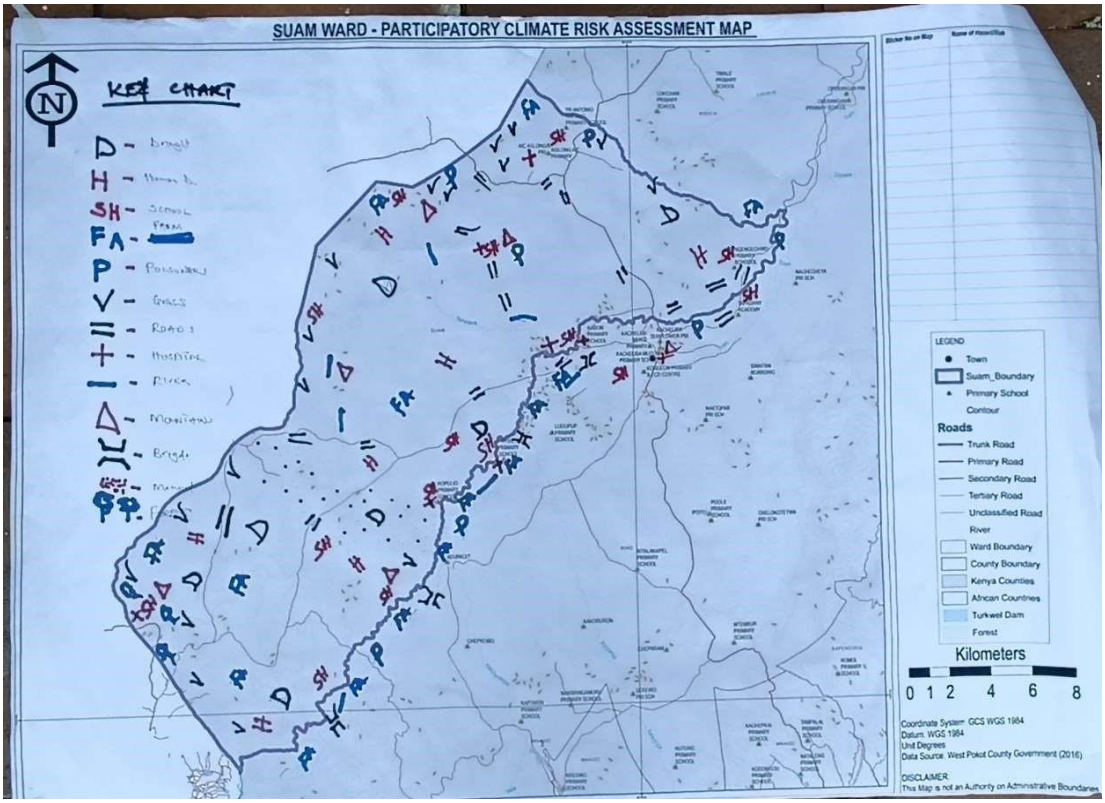


Figure 7: Suam Ward Climate Hazard Map

vii. Batei Ward Map

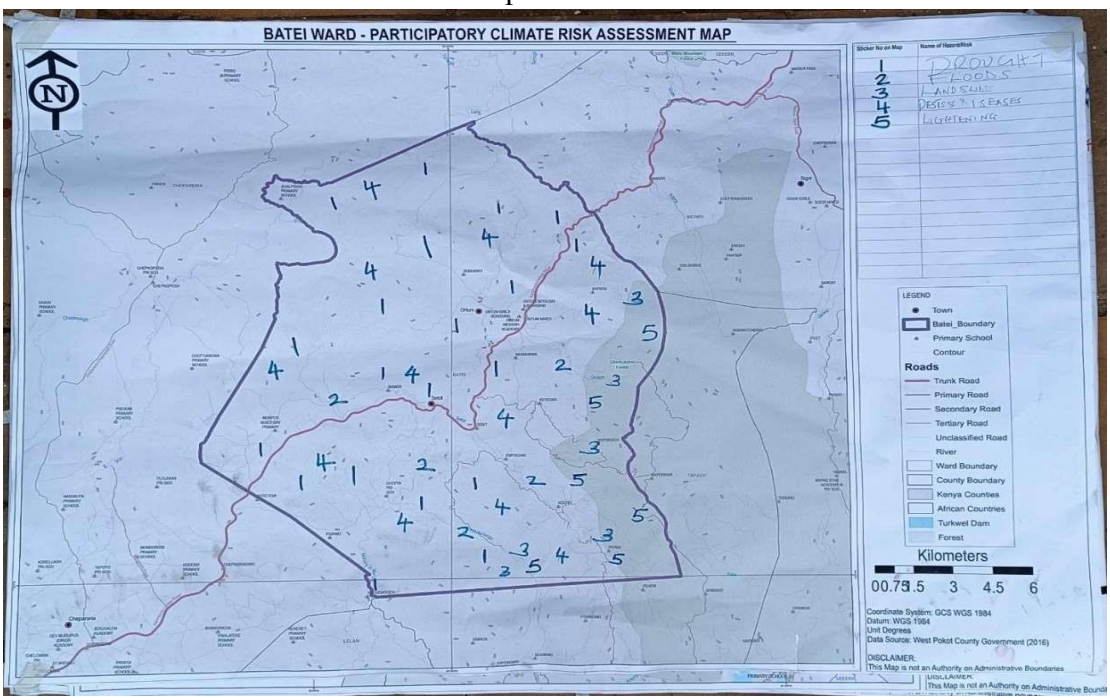


Figure 8: Batei Ward Climate Hazard Map

viii. Tapach Ward Map

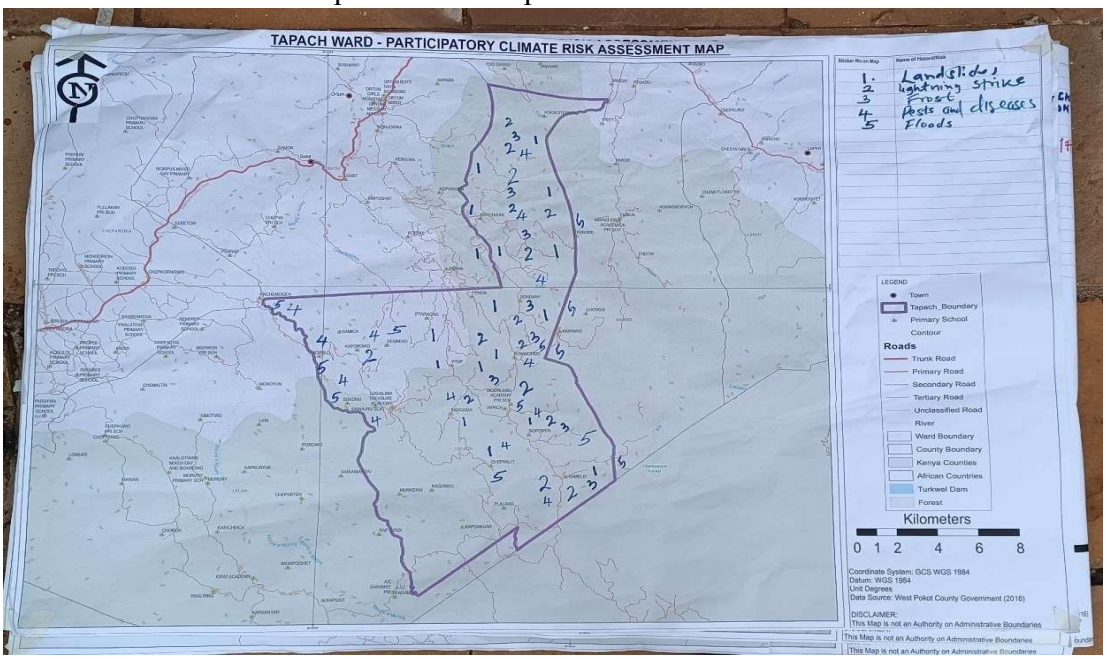


Figure 9: Tapach Ward Climate Hazard Map

ix. Lelan Ward Map

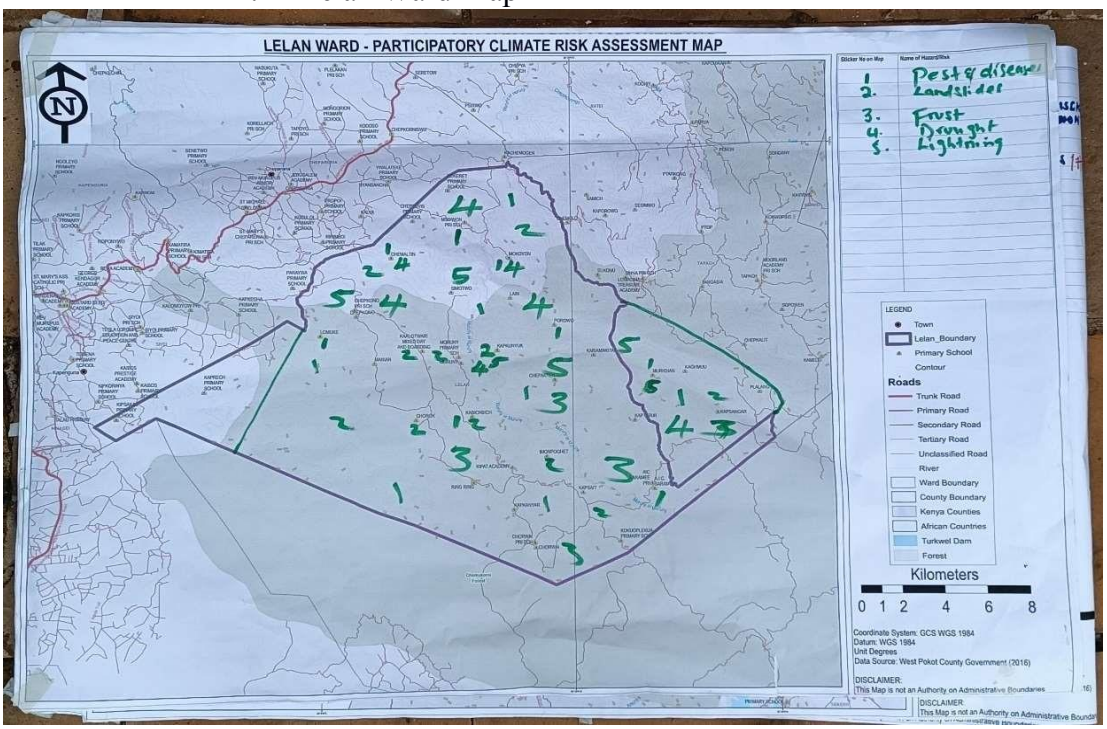


Figure 10: Lelan Ward Climate Hazard Map

x. Chepareria Ward Map

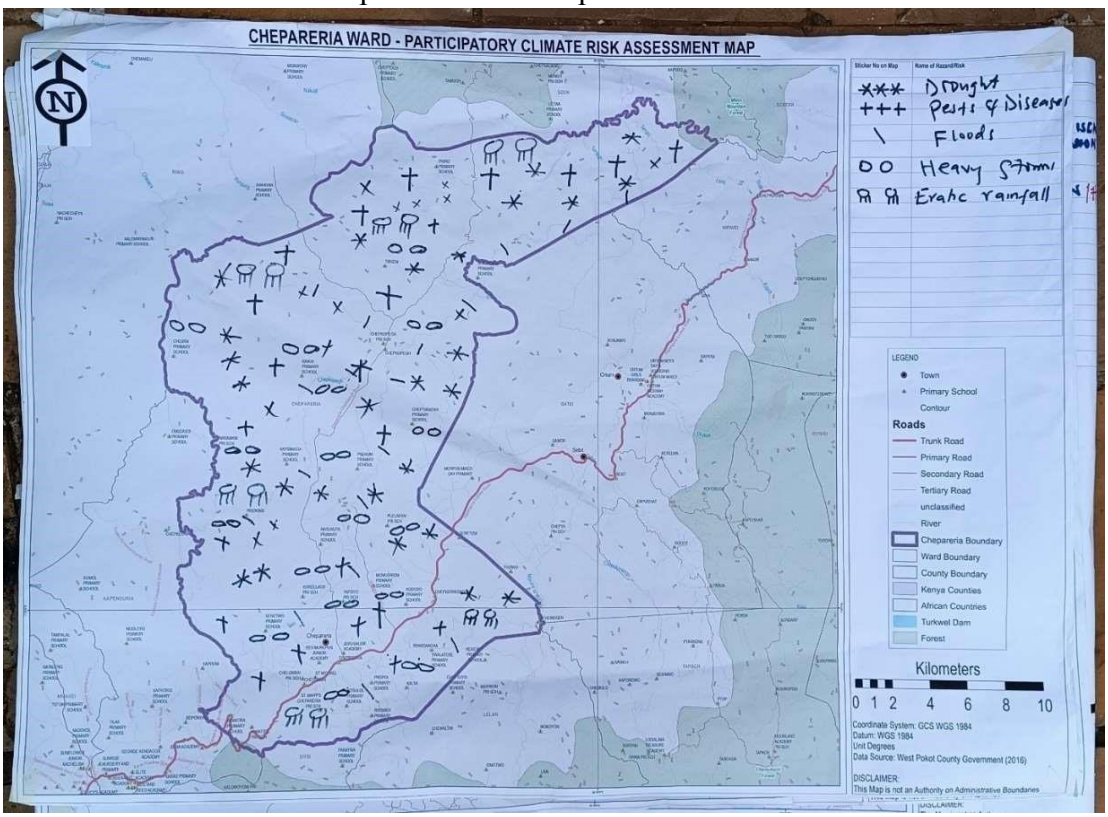


Figure 11: Chepareria Ward Climate Hazard Map

xi. Riwo Ward Map

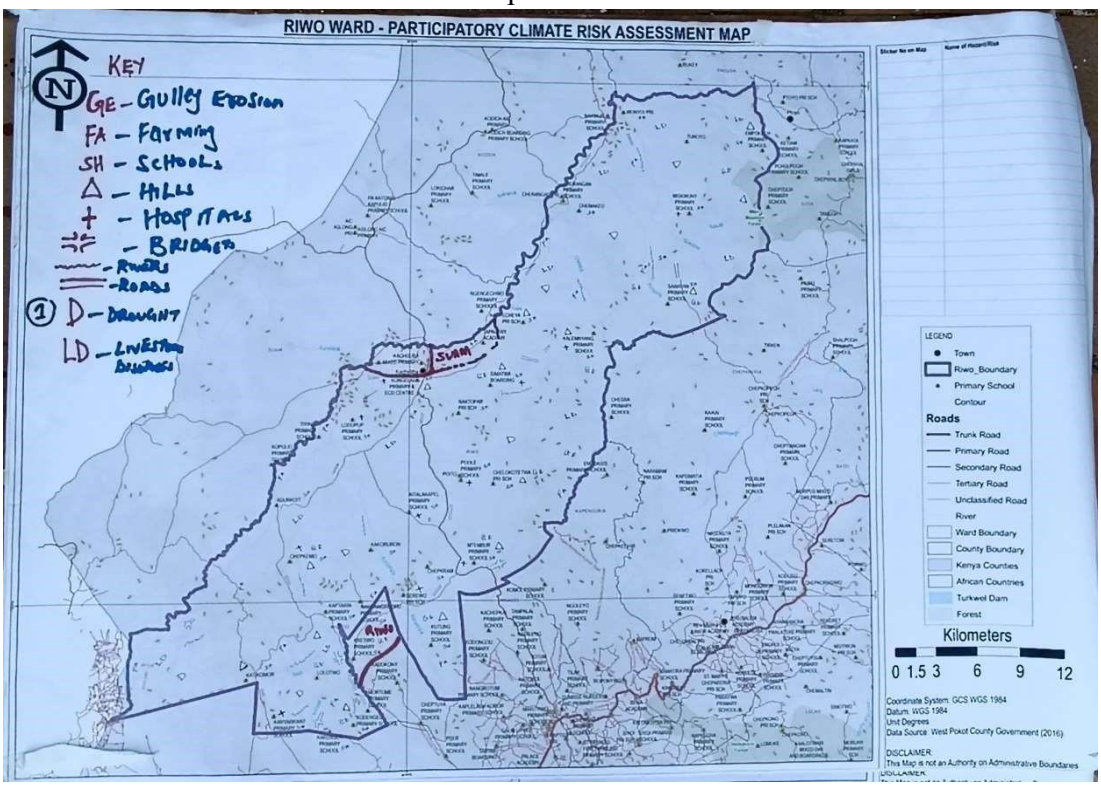


Figure 12: Riwo Ward Climate Hazard Map

i. Siyoi Ward Map

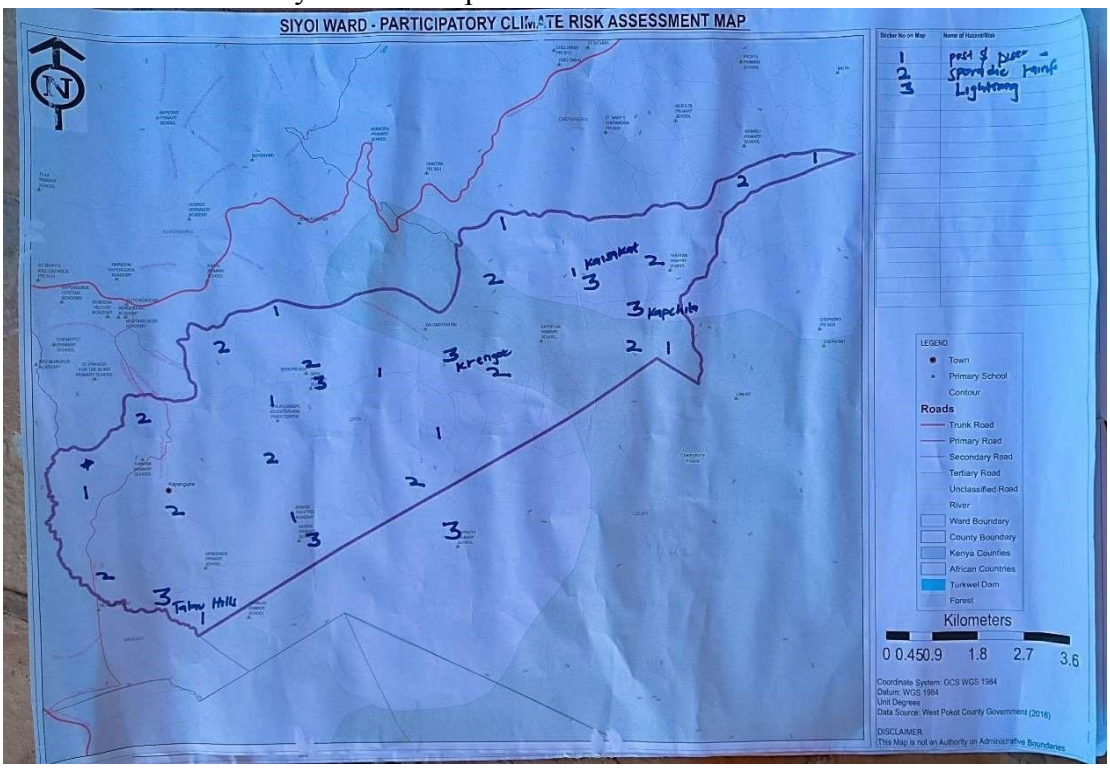


Figure 13: Siyoi Ward Climate Hazard Map

xii. Mnagei Ward Map

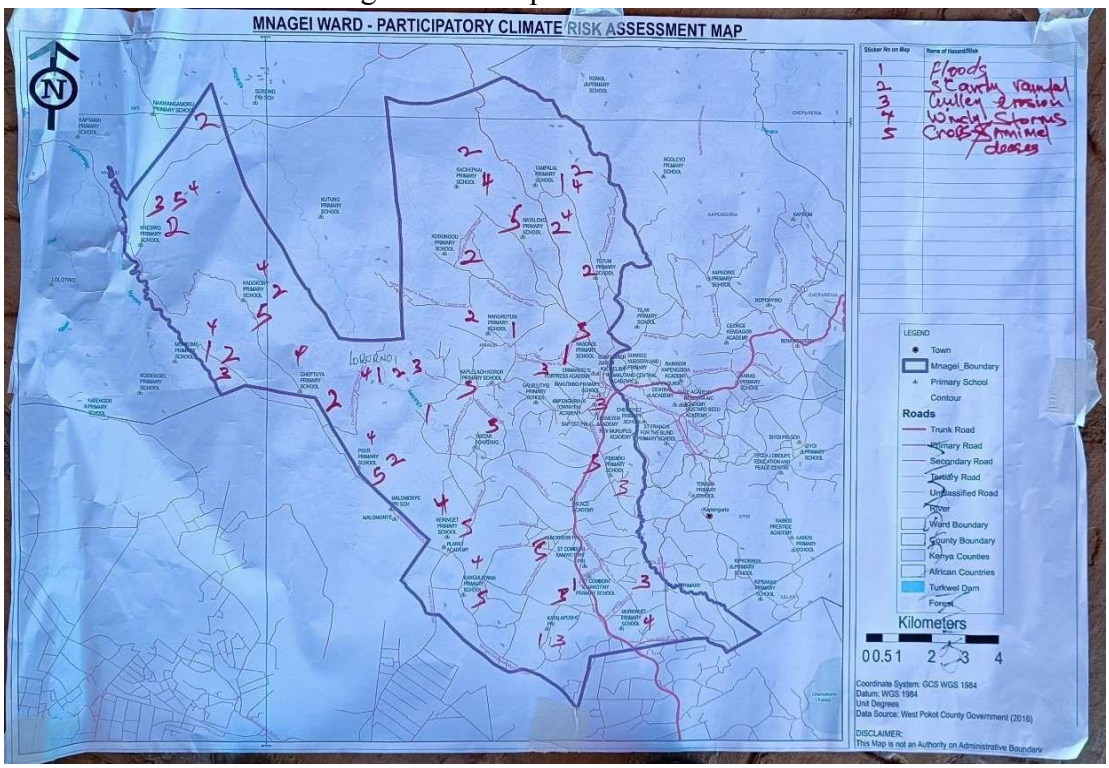


Figure 14: Mnagei Ward Climate Hazard Map

xiii. Kapenguria Ward Map

Figure 15: Kapenguria Ward Climate Hazard Map

xiv. Sook Ward Map

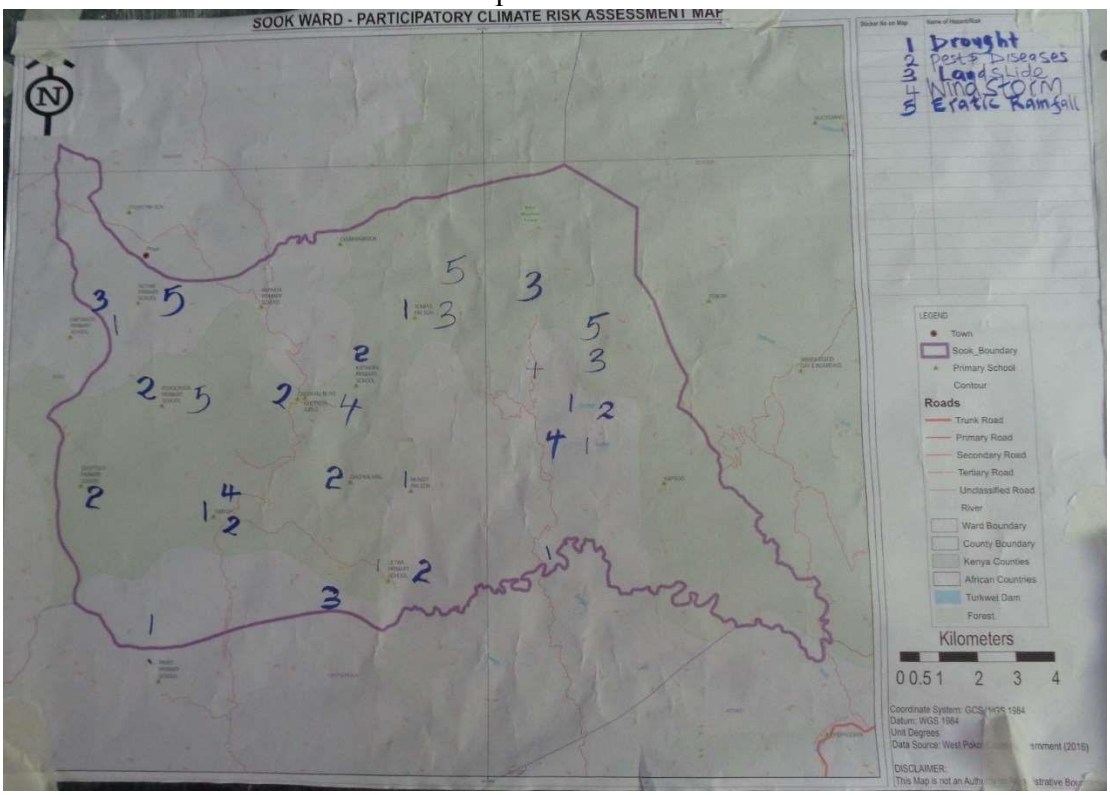


Figure 16: Sook Ward Climate Hazard Map

xv. Endugh Ward Map

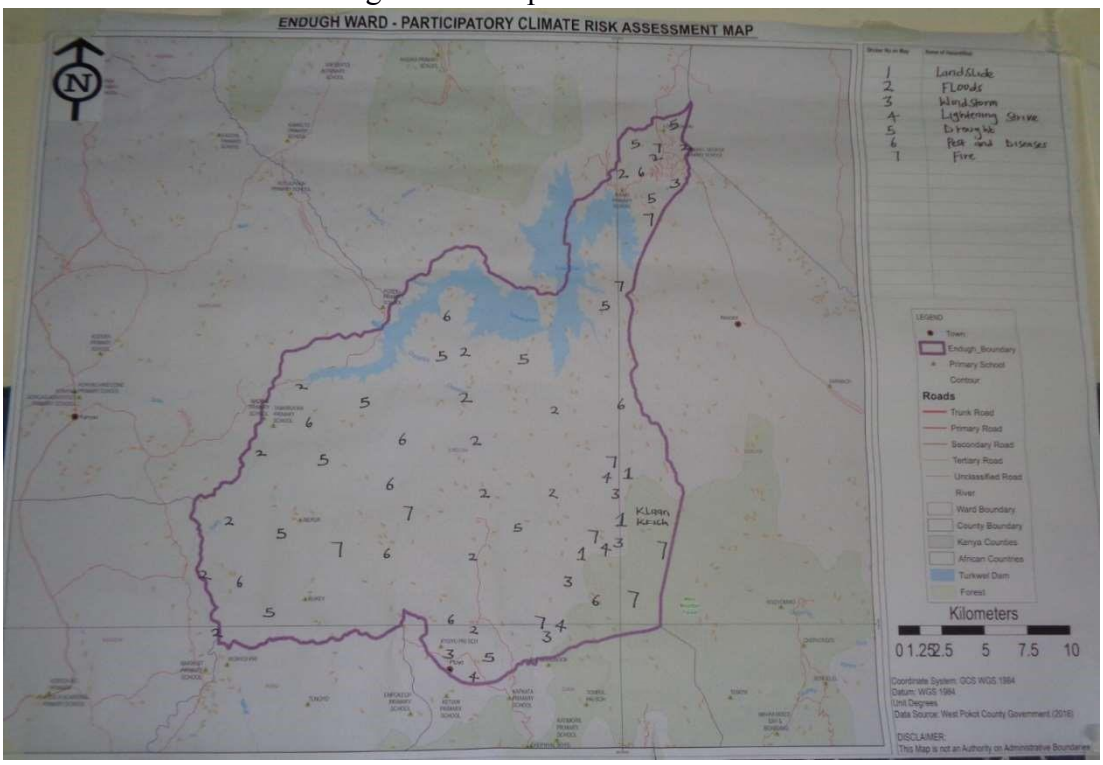


Figure 17: Endugh Ward Climate Hazard Map

xvi. Weiwei Ward Map

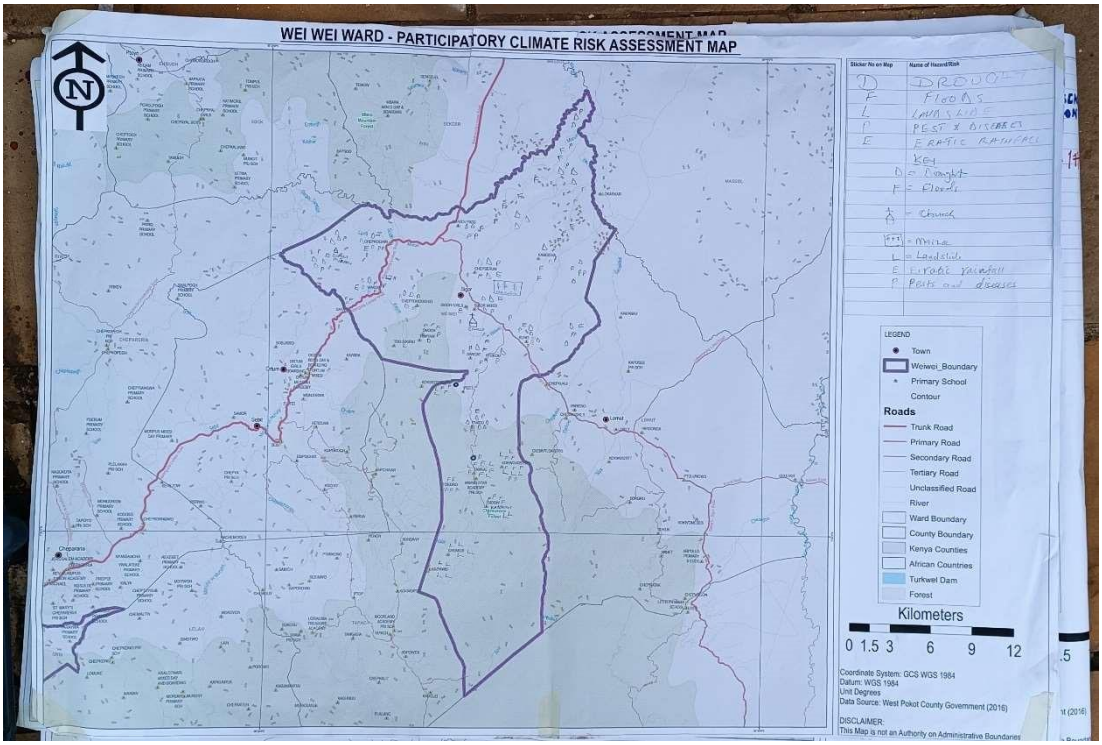


Figure 18: Weiwei Ward Climate Hazard Map

xvii. Sekerr Ward Map

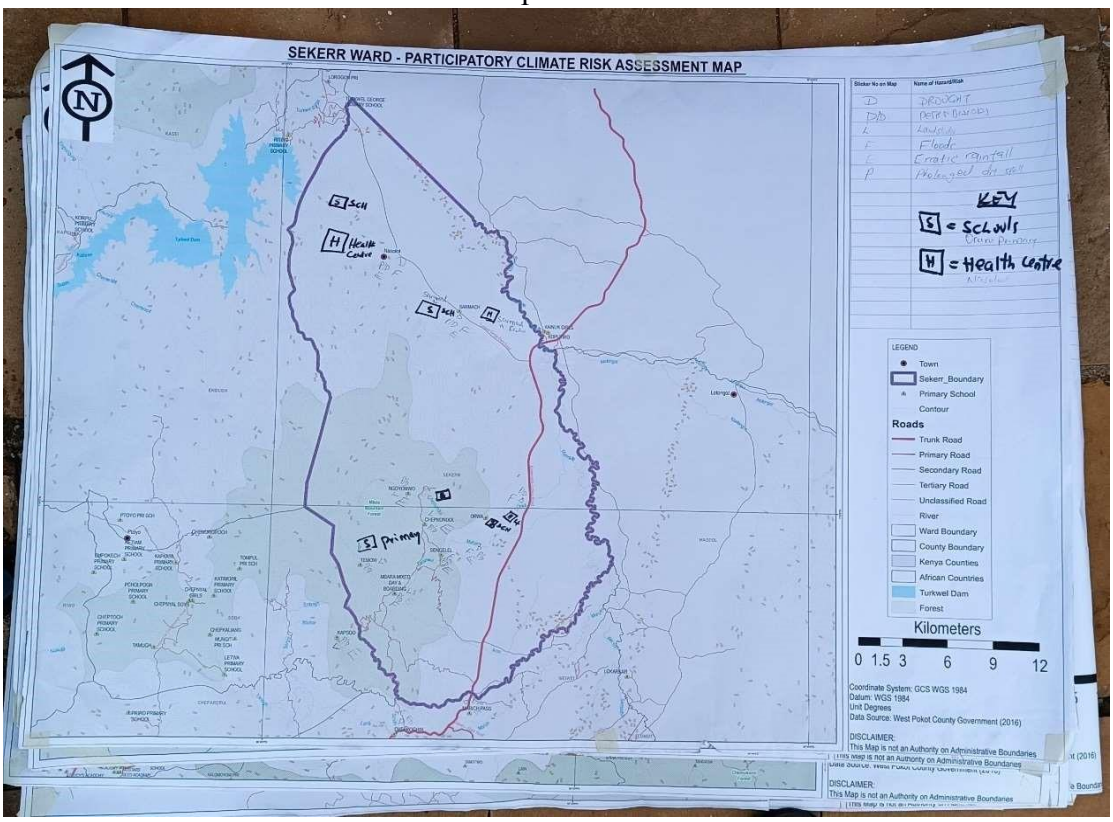


Figure 19: Sook Ward Climate Hazard Map

xviii. Masool Ward Map

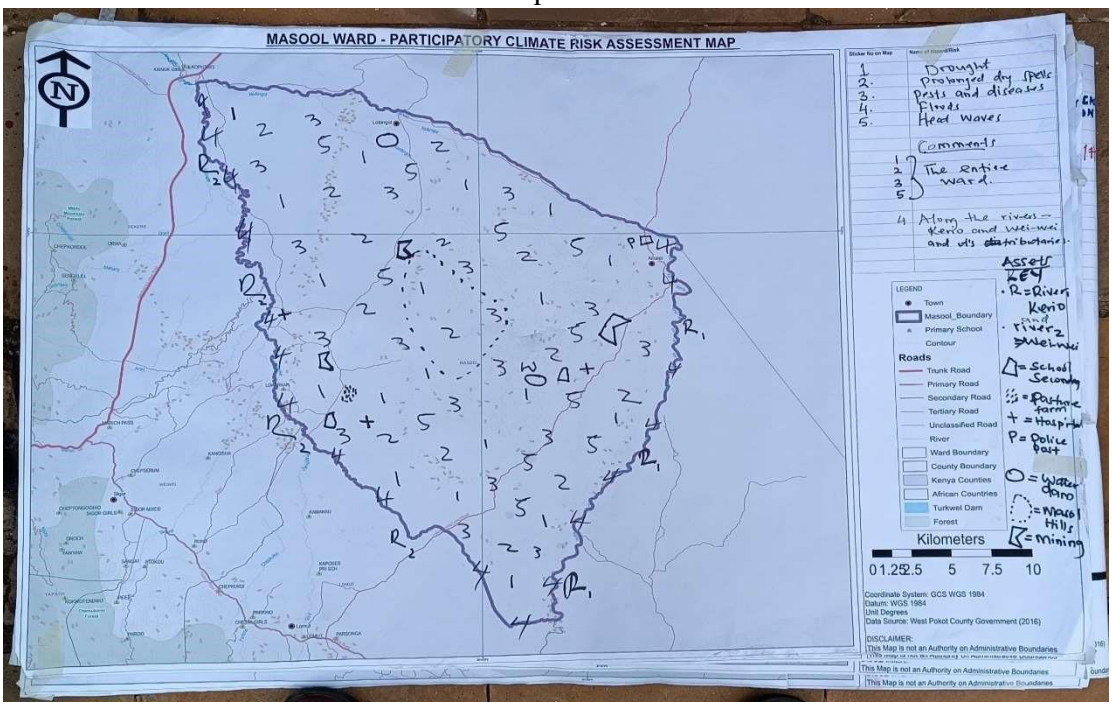


Figure 20: Masol Ward Climate Hazard Map

xix. Lomut Ward Map

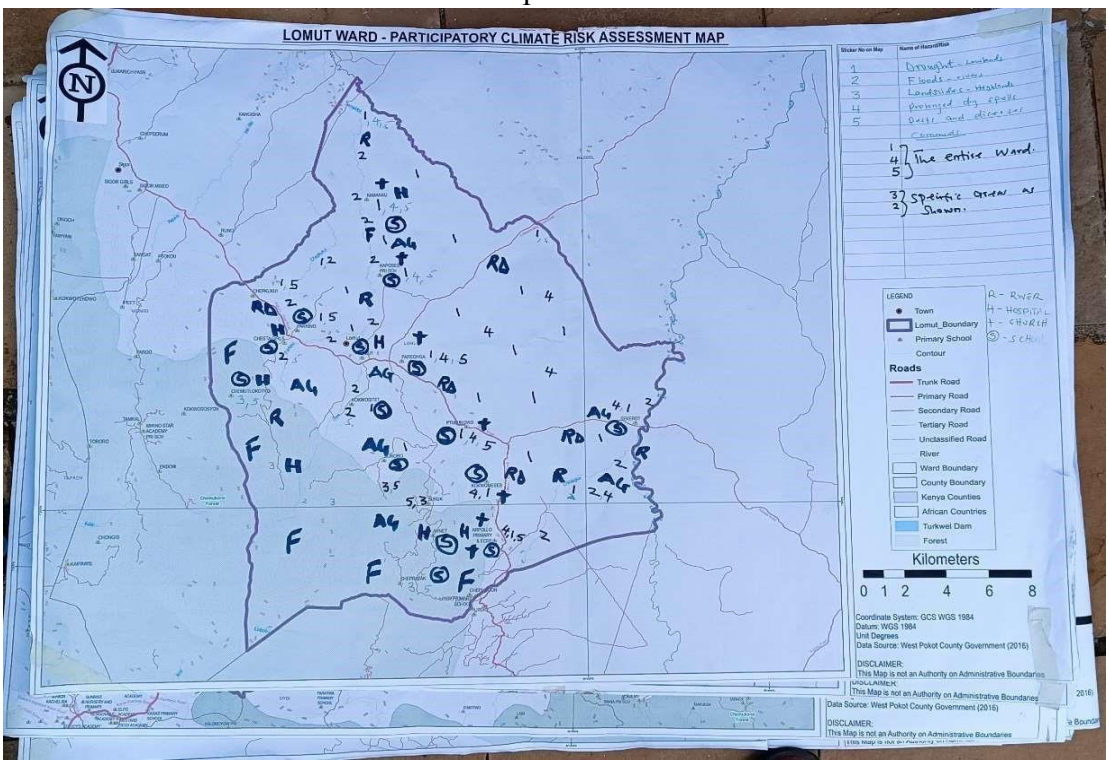


Figure 21: Lomut Ward Climate Hazard Map

2.1.2 Historical Climate hazard and trends.

During the PCRA meetings that was held recently, ward climate change planning communities came out strongly that about 90% of all wards faces serious impacts of drought and prolonged dry spell, and most livelihoods are threatened by this hazard. Zoonotic Pests and Diseases, drought and prolonged dry spell, Erratic and heavy rainstorms, Floods, landslides followed in that order. The frequency and severity of these hazards are increasing in each season. The causative factors that can easily be quantified are temperature and rainfall. Drought in West Pokot County is a slow onset being dictated by raising temperatures and deficiency of rainfall. Too much rains results in flooding and thus landslides. The seasonal calendar tells it all when these weather and climate events occurs.

2.1.3.1 Rainfall

March to May; floods, landslides, erratic rainfall, prolonged dry spells are likely to occur. June to September; erratic rainfall. October to December, floods, landslides, erratic rainfall and prolonged dry spells. West Pokot County experiences tri-modal type of rainfall; long rains occur between March to May, mid-year season, June to August and Short rains of October to December. The figure below illustrates our monthly rainfall climatology (the normal).

Tri-modal rainfall since 1983 to 2018 in West Pokot County

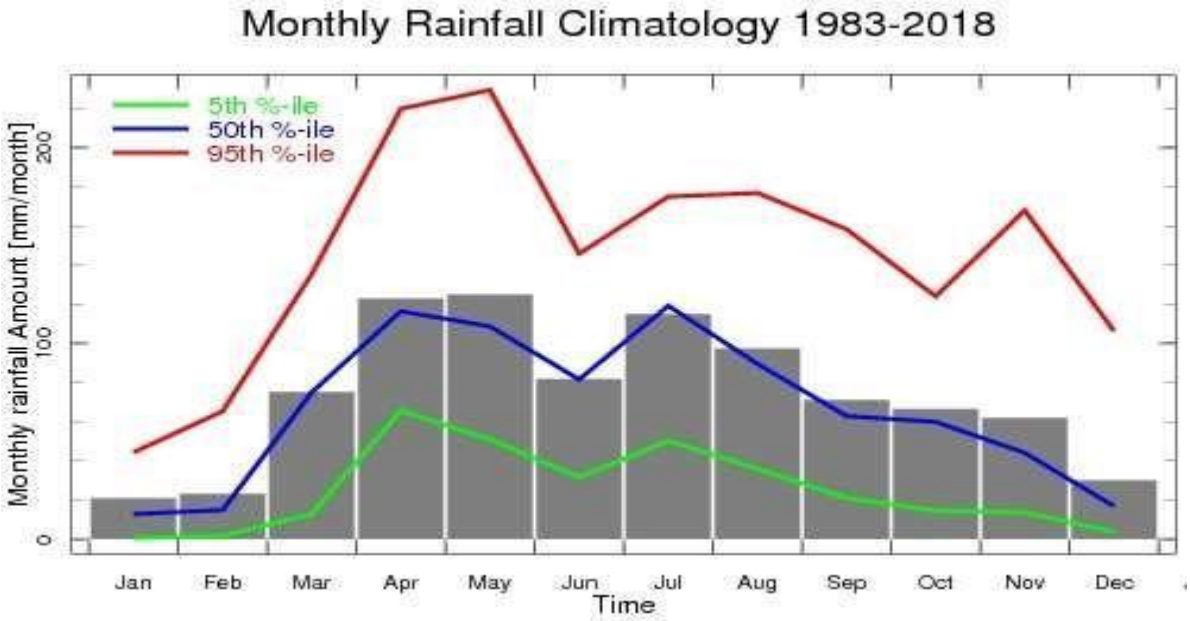


Figure 22: Tri-modal rainfall since 1983 to 2018 in West Pokot County

2.1.3.2 Rainfall in March, April, and May (MAM)

MAM Rainfall Anomalies since 1984 to 2020 in West Pokot County

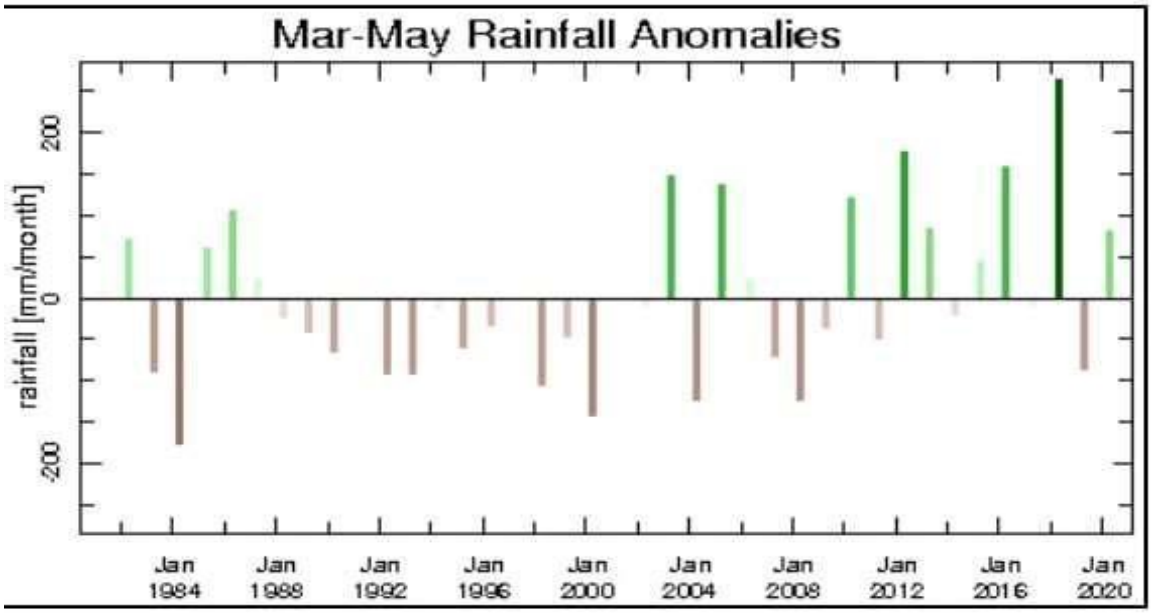


Figure 23: MAM Rainfall Anomalies since 1984 to 2020 in West Pokot County

Long rains of March to May is very important season to farmers and pastoralists in West Pokot County. Rainfall anomalies and trends shows also how hazards evolve over time.

MAM Rainfall trends since 1984 to 2020 -West Pokot County

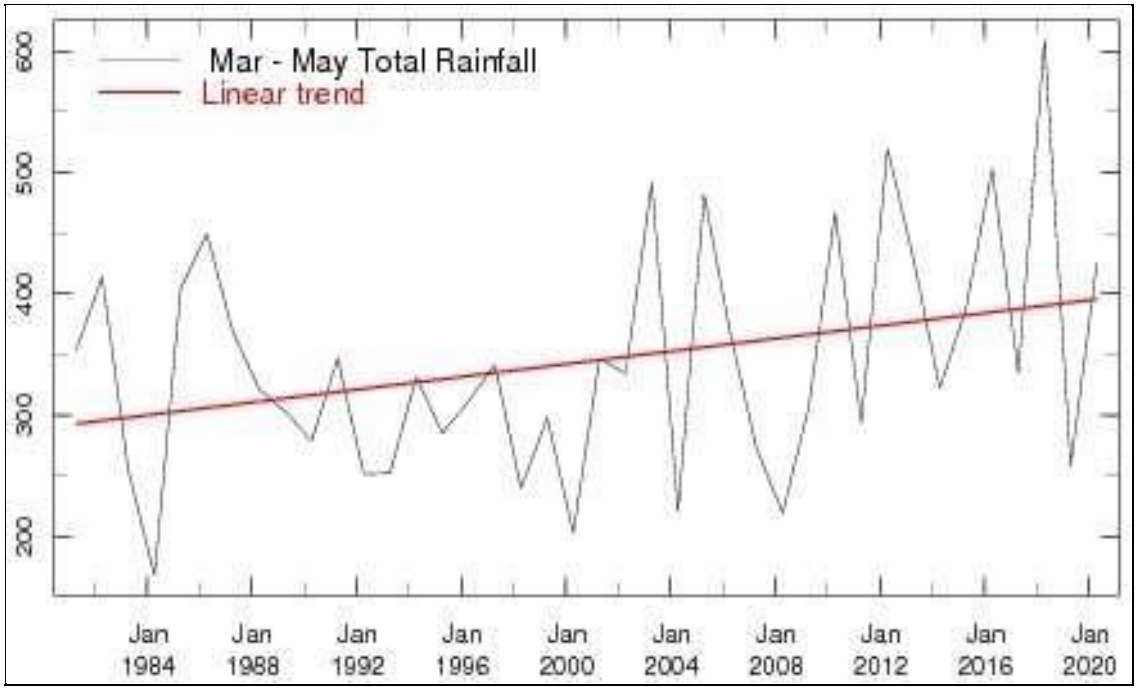


Figure 24: MAM Rainfall trends since 1984 to 2020 -West Pokot County

Figure 24 depicts how rainfall anomalies increased as on 2008 till 2020 and figure shows increasing rainfall trends during the same period. High rainfall variability was noticed in figure

2.1.3.3 Rainfall in the mid-year season of June, July August (JJA)

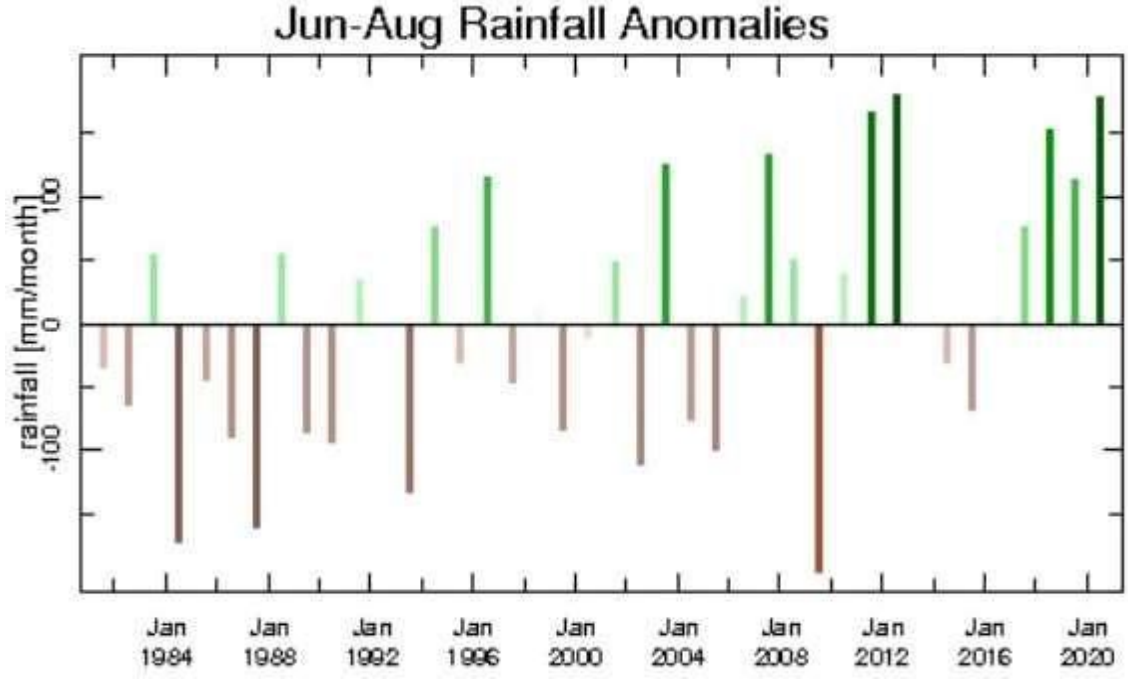


Figure 25: Rainfall in the mid-year season of JJA

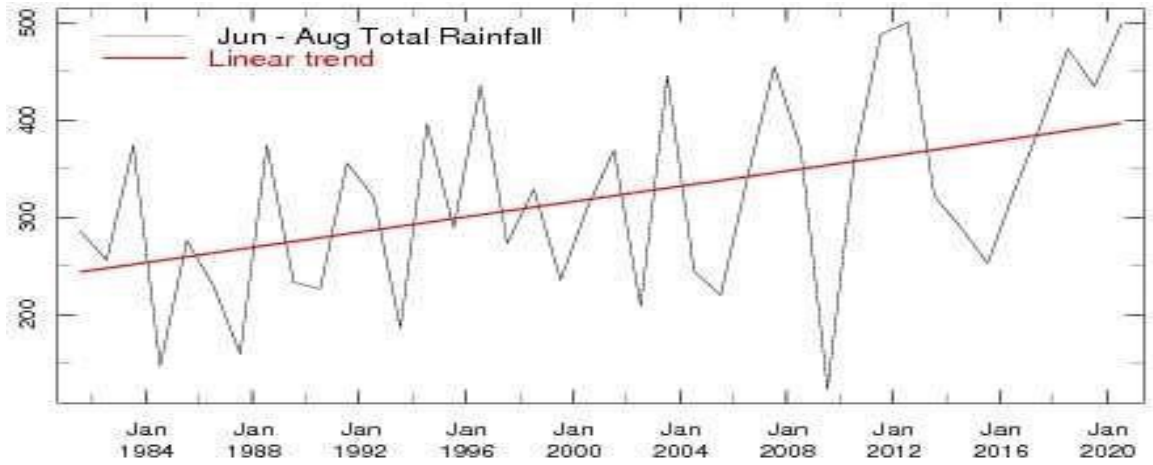


Figure 26: JJA Rainfall trends

Analysis of figures 25 and 26 It shows increasing anomalies and trends.

2.1.3.4 Rainfall Anomalies in October, November & December (OND)

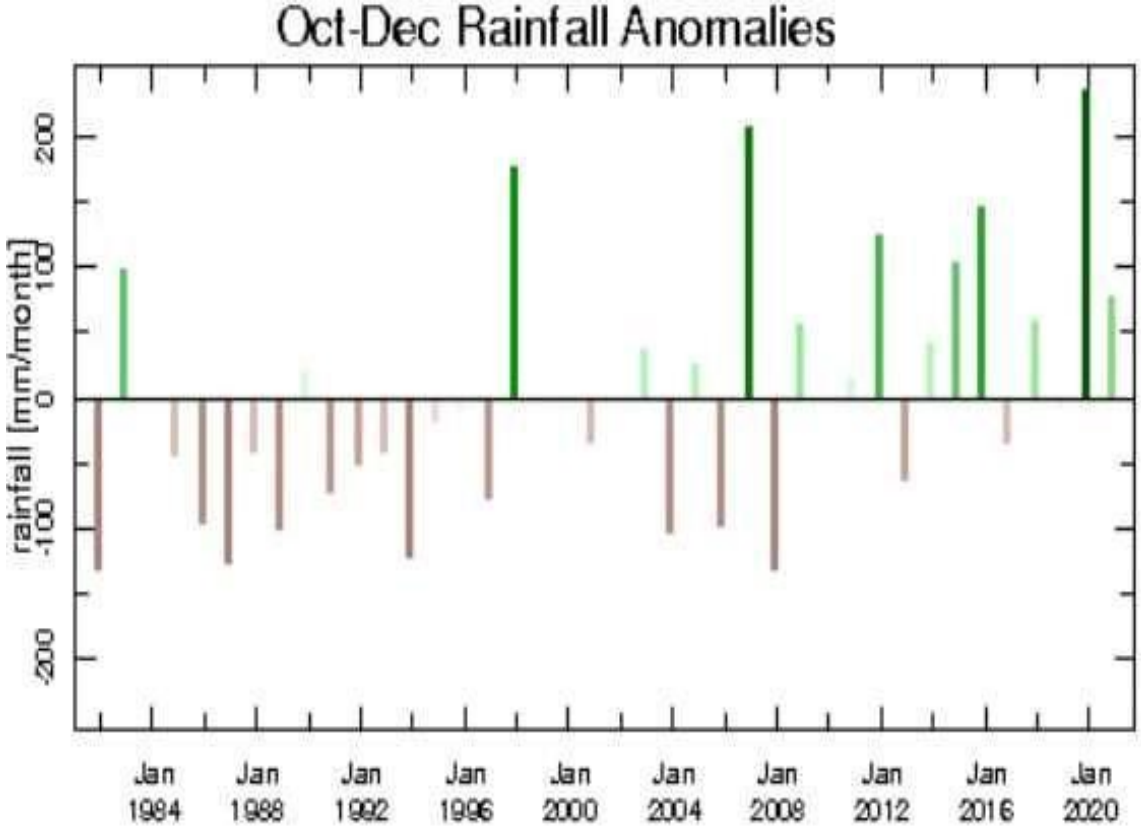


Figure 27: Rainfall in October, November & December (OND)

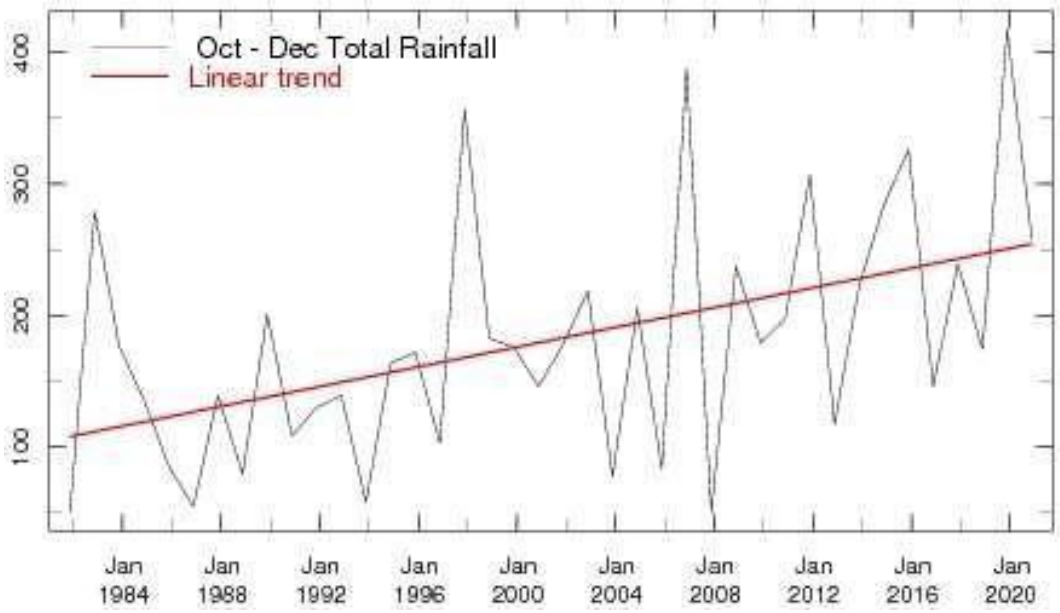


Figure 28: OND Rainfall trends

Analysis of Figures 27 and 28 shows that there is increasing rainfall anomalies and trends during the short rain season in west Pokot County.

2.1.4 Temperature:

West Pokot County experiences hot, warm and cold temperatures which follows land gradients, where southern parts experience a moderate mean day temperature of 16^0c and mean night temperature of 10^0c. The driest month is January and hottest month is February to early March. While the coldest month is July. Whereas in the transitional zones to the lowlands it has warm-day mean temperatures of 27^0c and night mean temperatures of 13^0c (Source AWS's). The transitional zones of Pokot South and West Pokot Sub-counties support crop farming and whereas in the lowlands with high temperatures, erratic rainfall coupled with long dry spells largely support pastoralism to certain degree. But at times climate extremes like prolonged drought compel pastoralists to migrate to neighboring counties and Country -Trans-Nzoia, Elgeyo Marakwet, Turkana, and Uganda in search of pasture and water. This migration has created historical resource based conflict and cattle rustling.

Figure 29: Monthly maximum temperature in West Pokot County since 1981 to 2010

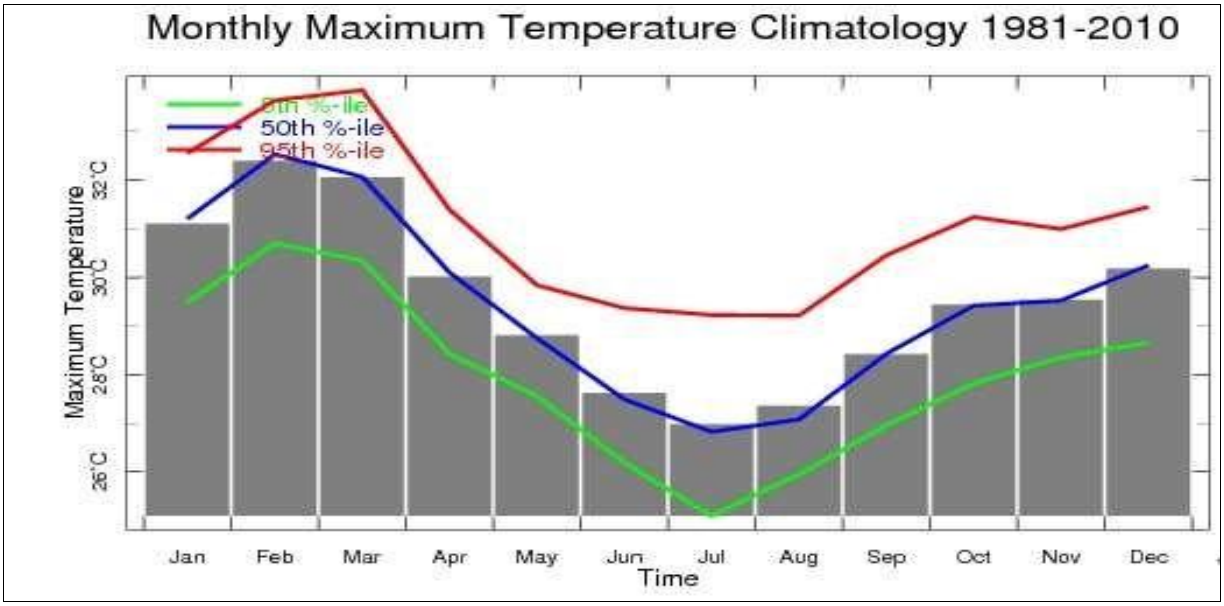


Figure 29: Monthly maximum temperature in West Pokot County since 1981 to 2010

2.2 Exposure and vulnerability profiles of the county

From the Participatory Climate Risk Assessment conducted in all 20 wards of West Pokot County between 15th and 23rd May 2023 the county is exposed and vulnerable to the following climate hazards; Drought and prolonged dry spell, Erratic and heavy rainstorms. Lightning Strikes, Floods, Landslides, Zoonotic Pests and Diseases, High Temperatures and Heat stress.

From the PCRA conducted in all the twenty wards of waste pokot county , the county citizens (People living wit Disabilities, Women, Children, elderly) are highly affected by climate change hazards. Livelihood systems-Forestry, Agriculture, Water, Tourism, infrastructure are seriously affected.

2.3 Differentiated impacts of climate trends and risks

The increase in frequency and severity of identified and prioritized hazards were clearly listed as droughts, floods, heat stress, pests and diseases by majority of ward level farmers, stakeholders and Ward climate change planning Committees during the climate risk assessments exercise. These hazards have highest impacts that need to be tackled by all stakeholders now and into the future.

Drought affects all livelihoods sources in the county thus food insecurity, with high incidences of malnutrition cases among under-fives and lactating mothers, causes migration of pastoralists with their livestock in search of pasture and water.

Floods oftenly takes livestock and human lives, destroys crops , damages infrastructure, displace thousands populations.

Heat stress affect livestock and increases livestock pests and diseases reduce in animal production and general health of human beings. The exposure and vulnerability of the key groups to these climate scenarios were explained below:

Livestock keepers: Pasture and water availability are two major natural resources that sustains livestock and they are more depleted during periods of drought. Drought and heat stress conditions are the main causative factors on decline of milk productions, increased livestock mortalities and cropping up of opportunistic diseases like (FMD, PPR, CBPP, ECF, CCPP, New castle). During times of drought and heat stress, livestock keepers find it hard on high costs of operations and maintenance. Livestock losses impoverishes households and in turn increase domestic feuds. Livestock farmers who keep camels, goats and donkeys are much better during times of drought, since these livestock can withstand climate conditions for a longer period of time. Fish farmers find it hard to sustain their enterprises during periods of droughts, when water sources are low and contaminated. This may lead to deaths and losses. Bee keepers too are more affected during periods of drought since nectar availability is low and water sources are dry or limited.

Crop Farmers: Vulnerable members of the society with less capital to till their lands with high costs of land inputs (increased seed prices especially fast and drought tolerant varieties and fertilizers), are likely to be more affected by drought impacts. Compounded by highly rainfall variability in terms of dry spells and erratic rainfall, lowlands farmers constantly live on relief food, probability of crop failure is high. Increased flash floods and landslides in the highlands too are expected to cause soil erosion, formation of gullies on farms, water logging and continuous loss of top soils will exacerbate the already poor yields. Poor land use management will also accelerate the effects of climate change and thus farmland productions shall become a challenge. Pests and diseases affects productions at all levels, threatening nutrition status. Reduced water for irrigation in rivers and dams leading to conflicts on water usage example is low productions of onion farmers in Ortum during times of drought.

Women and Girls: Women and girls experience the greatest impacts of climate change, which amplifies existing gender inequalities and poses unique threats to their livelihoods, health, and safety. Women and girls are likely to be affected more due to the socio-cultural roles placed

upon them. They may face difficulties looking for water and other alternative sources of livelihoods. Because of cultural practices placed upon them such as ownership of land and livestock were prohibited and preserved for men. Then women may not be able to have access to sale or manage these vital resources hence high cost of living. Similarly, because of the projected weather extremes, pregnant women may highly be exposed to human diseases since their immune system is weak. It has been said women eat last during times of drought and men with thorax eat first and this may jeopardize their eating habits and general health when food is insufficient.

Elderly: Aging and some medications can change the body's ability to respond to heat. Climate warming may put older adults more at risk for heat illnesses and death. Similarly, there may be high incidences of human diseases especially malaria and water borne diseases due to their reduced immune system. Many older adults have limited mobility, increasing their risks before, during, and after an extreme weather event.

People living with disabilities: Because of their vulnerabilities and extend of impacts of climate change, this group are limited to financial resources to counter or adapt to it. Their copying capacities are low during landslides, floods and droughts periods.

Children: Droughts may lead to food insecurity and malnutrition, which has a bearing on school enrolments since majority of rural and slams children stay at home while their parents are on such food. Day school children find it hard to cross swollen rivers and destroyed bridges as a result of floods and thus high absenteeism and school drop outs. Drought impacts may escalate inter and intra community conflicts and school going children are highly affected.

Drought was expected to affect all livelihoods and thus food insecurity, with high incidences of malnutrition cases among under-fives and lactating mothers. Floods were expected to affect crops, lives, infrastructure and displacements of populations. Heat stress was expected to affect livestock. Pests and diseases were expected to reduce in productivity and general health of human beings. The exposure and vulnerability of the key groups to these climate scenarios were explained below;

Business communities: During times of floods, infrastructure are cut off and this may hinder goods and services reaching markets. So small scale traders and customers will find it hard to sell and buy at right prices since farm produce are perishable. This translates to low incomes and losses.

Human Health: Weather related diseases may intensify and new health threats may emerge. There may be increased risk of vector and water borne diseases such malaria, typhoid and cholera. These diseases will lower capacities of people to perform well and at times may cause deaths.

2.4 Spatial Distribution of Risks

Table 5: Spatial Distribution of Risks in the Wards

	Ward	**Climate Risks Prioritized**									
		Drought and prolonged dry spell, High Temperatures and Heat stress	**Resource Base Conflicts**	Zoonotic Pests and Diseases	Floods,	**Gully Erosion**	Lands lides,	**Poisonous /Invasive Plants**	Lightning Strikes	**Frosts**	Erratic and heavy rainstorms,
1	Alale	+++	++	+					, ,.		
2	Kiwawa	+++		++		+					
3	Kasei	+++		++	+						
4	Kapchok	+++			+	++					
5	Kodich	+++		++		+					
6	Suam	+++		+				++			
7	Batei	+++			++		+				
8	Tapach						+++		+	++	
9	Lelan			+++			++		+		
10	Chepareria	+++			++		+				
11	Riwo	+++		+		++					
12	Siyoi			+					++		+++
13	Mnagei				+++	+					++
14	Kapenguria	++		+	+++						
15	Sook	+++		++			+				
16	Endugh	+++		++	+						

17	Weiwei	+++			++		+				
18	Sekerr	+++		++			+				
19	Masool	+++			+						++
20	Lomut	+++			++		+				
	TOTAL SCORE	47	2	20	18	7	11	2	4	2	7
	Highest Hazard	1	8	2	3	6	4	10	7	9	5

Key:

+++ Climate Risk prioritized in every ward as the most threatening to economic sectors (highest ranked with 3 plus)

++ Climate Risk prioritized in every ward as the meduim threat to economic sectors (highest ranked with 2 plus)

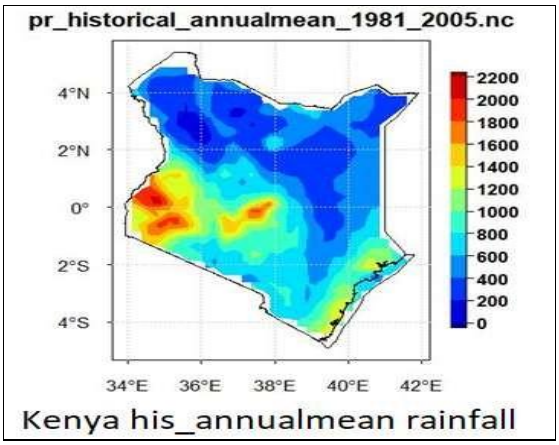
+ Climate Risk prioritized in every ward as the least in threat to economic sectors (highest ranked with 1 plus)

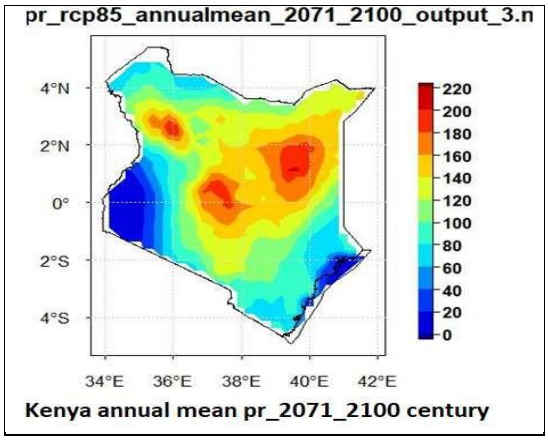
The table 4 above shows the climate risks prioritized in every ward of West Pokot County and that the livelihood and economic sectors mostly threatened being Forestry, Water, Agriculture and Pastoral Economy, Disaster Risk Management, Health, Infrastructure and Energy.

CHAPTER THREE: FUTURE CLIMATE SCENARIOS FOR WEST POKOT COUNTY

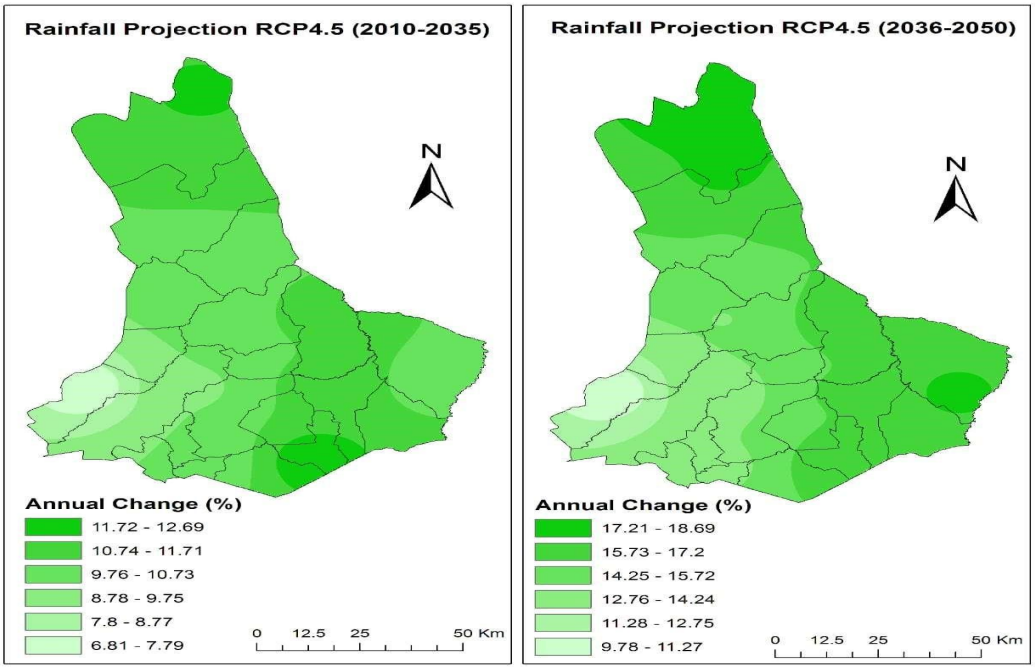
3.1 National and downscaled climate change projections

The National projections paints a picture where rainfall is likely to increase tremendously as the year's progresses. This may lead more catastrophes in terms of severe floods and sometimes prolonged droughts as the two figures illustrates Nationally.





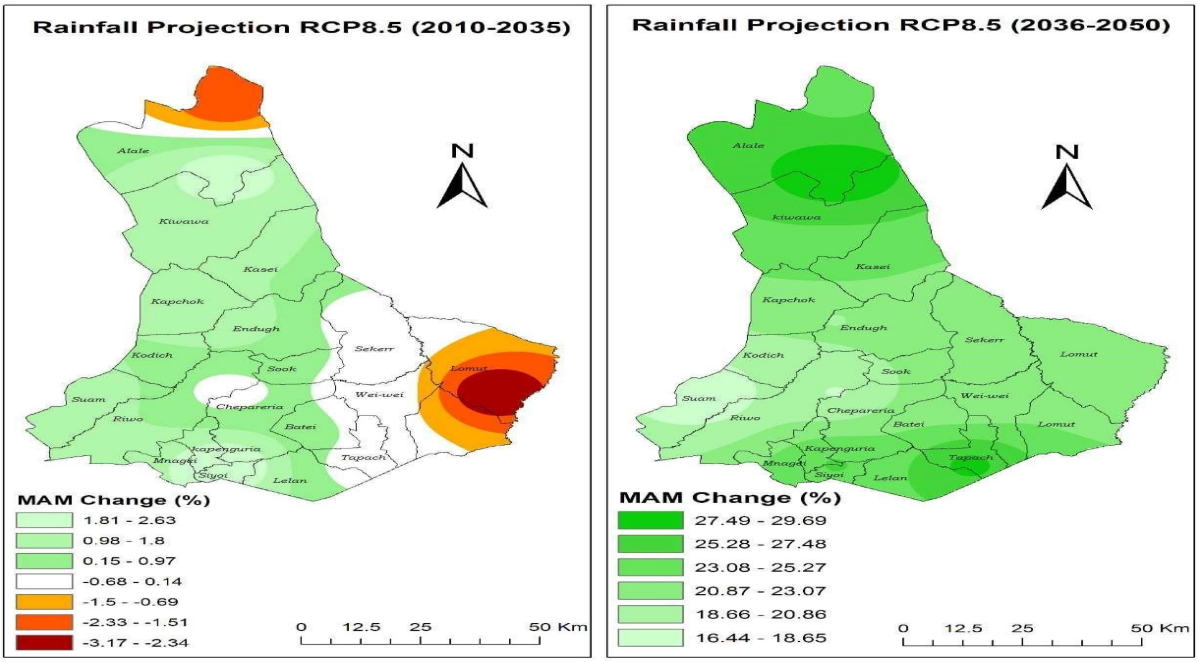
West Pokot Rainfall projections up to 2035 were policies and plans are available.



West Pokot annual rainfall RCP4.5 (2010-20350) and RCP4.5 (2036-2050) projections

West Pokot County projected annual rainfall at RCP4.5 (2010-2035), is that more rains are likely to be experienced in wards such as Lelan, Sekerr, Batei, Alale, Tapach parts of Masol

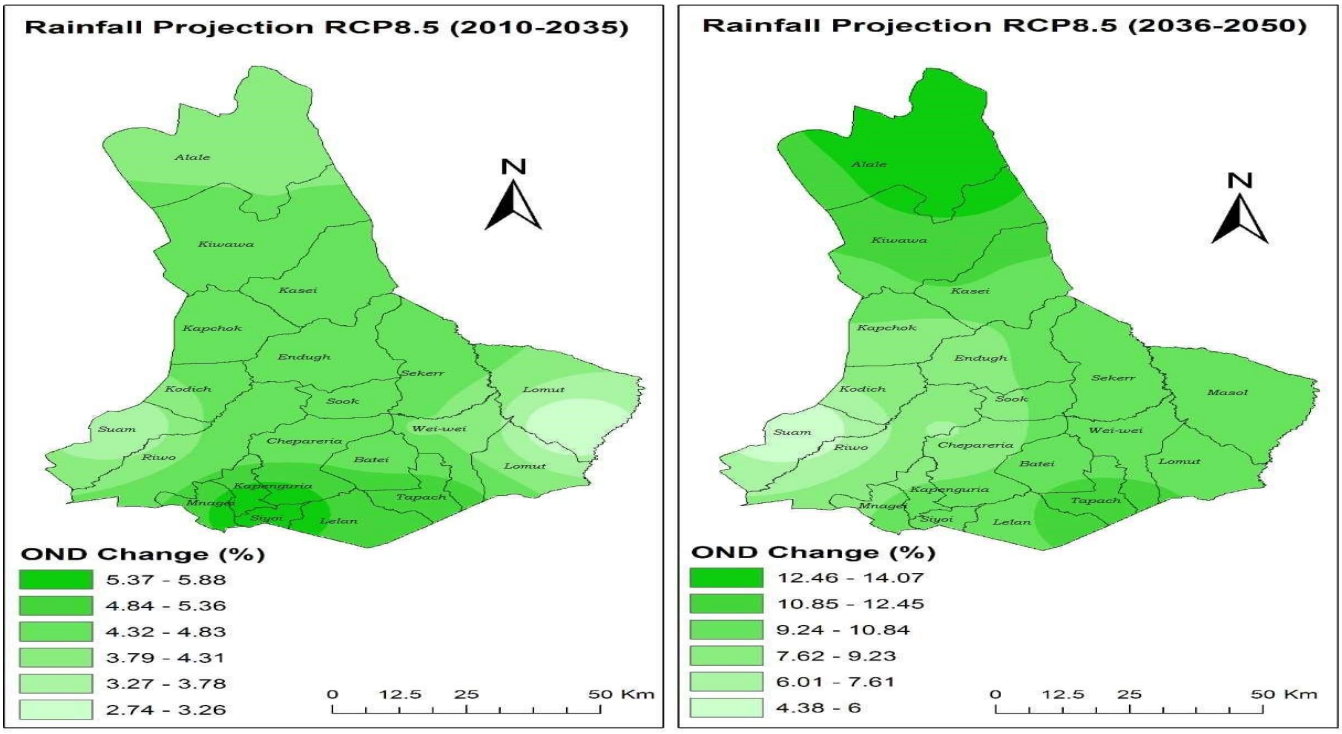
and Weiwei. What it portends is that more floods, lightning strikes and landslides are most probable during those periods and therefore most livelihoods are likely to be affected. People's lives are at risk too. Pests and diseases are likely to increase. More resources are required for adaptations and strengthening of environmental conservations. Likewise, rainfall at RCP4.5(2036-2050); Suam ward, Kodich, Riwo, Mnagei, Kapenguria, Siyoi, Chepareria and their neighboring wards are likely to experience severe droughts, heat waves and therefore there is need to enhance adaptation strategies and policies be put in place before then.



rainfall projections at RCP8.5 (2010-2035) and RCP 8.5(2036-2050)

In this scenario plans and policies aren't yet developed (it is an assumption that there no policies). So there is need to have long term projections policies and plans to manage and mitigate its impacts, even beyond 2035. During March to May by 2035, Masol, Sekerr, Wei-wei, Tapach and Alale wards likely to be hardest hit by prolonged droughts and it portents that livestock deaths and people are highly probable. Natural, economic and social assets are likely to be depleted further.

So proper planning is required now.



Rainfall projections RCP8.5 (2010-2035) and RCP8.5 (2036-2050)

It indicates increased rains in the highlands of Pokot South, Kapenguria and its environs as per RCP8.5(2010-2035), but by 2050, short rains is likely to be worsen in terms of heavy rains and thus flooding.

3.2 County future climate scenarios

Climate change projections are scenarios of future climate based on a hierarchy of models, ranging from more complex to less complex models e.g Earth system models-Complex General Circulation Models (GCMs)-Earth-system Models of Intermediate Complexity (EMICs) and less Complex-Conceptual Models which provide range of how climate hazards might evolve in time. Climate projections provides an overview on how planning and budgeting to immediate and projected adaptations are planned beforehand. It is projected that global temperature are likely to increase to 1.5^{o}c in the 21st century (source ICPCC report). In the period 2011 and 2020 global surface temperature rose roughly to 1.09^{0}c higher compared to 1850-1900. Kenya projected temperature is likely to increase to 1.7^{0}c by 2050 and 3.5^{o}c by the end of 21st century (Kenya Climate Risk profile). The number of hot days and warm nights shall increase by 2050 and thus reducing the number of cold nights and days. High temperatures are expected to increase

evaporation over water bodies and this leads to too much moisture build up resulting into heavy storms and flooding.

The most probable future climate scenarios are:

a. Long rains are likely to experience either heavy storms or prolonged dry spells or delayed onsets.
b. Short rains to experience heavy storms and thus flooding and landslides
c. Increase of temperatures (drought and heat waves, pests and diseases)
d. Lightning strikes are likely to increase

Its impacts are far reaching and catastrophic in nature. Some probable impacts are on:

Crops: Soils are likely to be water logged as a result of flash floods and low agricultural productions are highly anticipated. This may lead to food insecurity. Crop pests are likely to increase and concerted efforts are required to contain them.

Livestock: Floods may kill livestock and submerge available pastures. Destruction of river banks and infrastructure damages hindering accessibility to water sources. Though pasture may regenerate and livestock body conditions may improve, but it is localized in some areas. Heat waves may interfere with milk production. Water sources and pasture may be depleted a s result of prolonged drought and erratic rainfall.

Soil Erosion: Since our soils are fragile; leaching and washing away of rich top tropical soils, shall increase tremendously because of anticipated enhanced rainfall. This has a bearing on incomes and food security.

Human diseases: Opportunities diseases like water and vector born are likely to increase. Disease surveillance and control shall be employed.

Land degradation: Landslides, flash floods and prolonged droughts may degrade land and its ecosystems.

Fishing Industry: Contamination of water and drying up of water sources may interfere with breeding of fish and lives.

Impacts of future climates to all categories of people such as the elderly, mothers and children, people living with disabilities are likely to be affected more, since their copying strategies are low. Plans are therefore required now to minimize any impacts and to enhance their copying strategies.

CHAPTER FOUR: ANALYSIS OF EXISTING RESILIENCE/ADAPTATION STRATEGIES TO CURRENT AND FUTURE CLIMATE RISKS

4.1 Overview of existing adaptation/resilience strategies and their effectiveness to current climate risks

4.1.1 West Pokot Communities Climate Change Adaptation Strategies

The Pokot Community used the following climate hard resilience and adaptation strategies:

a) Drying of Meat and vegetables
b) Fermentation of Milk
c) Migration in search of Pasture and water for livestock
d) Growing of drought resistant crops (Sorghum, Millet, Cassavas, Bananas, Sweet Potatoes, e) Eating one mill per day
f) Mixing blood and blood
g) Harvesting and storage of wild fruits to be used as food during dry season.
h) Harvesting and storage of honey

The county prioritizes resilience, adaptation and climate change mitigation measures in all its 20 wards targeting those most impacted by climate change on the following areas:

i) Tree planting through distribution of tree and fruit seedlings to famers and institutions
j) Drilling of boreholes, construction of water pans, and sub-surface dams,
k) Upgrading of livestock
l) Growing of pasture
m) Growing of drought resistant crops
n) Climate proofing of infrastructure
o) Installation of energy saving jikos in households
p) Disaster risk reduction strategies
q) awareness creation at the grassroot level so a lot of training and capacity building is planned by County Climate change Unit at ward / grassroot level.

4.2 Effectiveness of adaptation/resilience strategies to future climate risks

The local climate change adaptation/resilience strategies to the impacts of climate change have been effective and in addition modern to modern strategies the community would be more resilient to increasing impacts of climate change.

Tree planting, distribution of tree and fruit seedlings to famers, Drilling of boreholes, construction of water pans, and sub-surface dams, upgrading and treatment of zoonotic

pests and diseases, growing of pasture, growing of drought resistant crops, climate proofing of infrastructure, Installation of energy saving ikos in households, disaster risk reduction measures are sustainable measures on resilience/adaptation and mitigation of climate change impacts. Availability of climate information is critical to the county citizens for informed decision making.

Table 6: Effectives of the strategies to vulnerable groups on climate risks

Adaptation/Resilience Strategy	Importance
Tree Planting/Growing	Soil Conservation, restoration and increase Flora Diversity, increases carbon sinking density, Source of Fuel for households, Amelioration of Temperature, reduces lightning strikes to humans and livestock
Reservation of Water	Easy access to water for Women, children, elderly, PLWDs, livestock
Treatment of Zoonotic diseases	Livestock and Human beings become healthy and productive
Growing of drought resistant crops	Food become available for both humas and livestock
Climate proofing of infrastructure	Reduces frequent and high costs of infrastructure repairs, damages,
Installation of Energy saving jikos	Reduces cutting of trees, emission of carbon dioxide and monoxide to the atmosphere, improves health of women and children
Climate information dissemination	Helps everybody make informed resilience/adaptation and Climate mitigation measures

Table 7: Climate Hazard, Livelihood System Affected, Proposed Resilience Strategies, Stakeholders Involved, and gender Inclusion Measures

Risk/Hazard	Livelihood /Economic System Affected	Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion Measures
Drought and prolonged dry spell, **(3+)**	Forestry	Tree Planting to achieve at least 10% of County land size forested	Ng, CG, farmers,	Purchase tree seedlings from Women, youth and individual farmers and distribute tree seedlings to them to plant.
	Water	Development of water harvesting assets/structures	Local community, CG, GOK, NGOs and UN agencies	Identification of water harvesting structures with the local community

	Agriculture	Adoption of drought tolerant crops, and promotion of value chain approaches	Local community, CG, GOK, NGOs and UN agencies	Local and indigenous communities will participate through a community level consultative process
		Irrigation schemes	Local community, CG, GOK, NGOs and UN agencies	Construct irrigation schemes for crop production with community members
	Hydroelectric Production-Turkwel Dam	Tree Planting	KVDA, Kengen, CG,	Women And Youth be engaged n Tree Planting from Mt Elgon along River Suam all The Way to Turkwel Dam
	Health	Zoonotic Diseases prevention and treatment	Medics, Veterinary Officers	Sensitization of Women, Youth, PLWDs Zoonotic diseases prevention and treatment measures
	Pastoral Economy	Develop new feeds and strategic livestock-based food reserves	Local community, CG, GOK, NGOs and UN agencies	Community involvement in animal needs (Feeds and Water)
	Disaster Risk Management	Drought early warning systems	Local community, CG, GOK, NGOs and UN agencies	Participatory scenario planning on weather focus
Zoonotic Pests and Diseases **(2+)**	Nutrition and Health	Vaccinations	CG, GOK, NGOs and UN agencies	Enhancing pastoral economy on disease livestock diseases vaccination and treatment
		Enhance community routine dipping/spraying	Local community	Promote local community capacity on disease control
		Indigenous knowledge, early warning systems, livestock management and breeding.	Local community, CG, GOK, NGOs and UN agencies	The county climate change unit will facilitate integrated early warning system and diversification of livestock breeds and oftenly disseminate to the community
		Diversified alternative livelihood sources	CG, GOK, NGOs and UN agencies	Men, Women, Youth, Minority, Marginalized groups will be engaged by the county climate change unit

	Health, Agriculture and Pastoral Economy	Crop diversification	CG, GOK, NGOs and UN agencies	Training of community on seed varieties
		Promote rational farming	CG, GOK, NGOs and UN agencies	Training community on pest control measures
		Alternation in sowing dates of crops	CG, GOK, NGOs and UN agencies	Training community on timely planting season
		Rescheduling of crop calendars	Local community, CG, GOK, NGOs and UN agencies	Timely dissemination of climate information to county citizens
		GIS based risk mapping of crop pests	CG, GOK, NGOs and UN agencies	Training community on hazard mapping and anticipatory action
		Application of indigenous knowledge like spreading of ashes to affected plants ,pepper and Mexican marigold	CG, GOK, NGOs and UN agencies	Train community integrated control strategies for pest and diseases
Floods and Landslides **(1+)**	Infrastructure	Tree Planting Climate proofing of Infrastructure	Local community, CG, GOK, NGOs and UN agencies	Purchase tree seedlings from Women, youth and individual farmers and distribute tree seedlings to them to plant.
	Agriculture	Early warning system and flood control structures	Local community, CG, GOK, NGOs and UN agencies	The climate change unit will support participatory scenario planning on weather focus
	Forestry	Afforestation and reforestation	Local community, CG, GOK, NGOs and UN agencies	Support environmental conservation and management
		Land restoration and reclamation	Local community, CG, GOK, NGOs and UN agencies	Support environmental management
	Environmental Health	Lightning Arresters at village level in	Local community, CG, GOK, NGOs and UN agencies	Support lightning strike mitigation measures
		Special campaigns to eradicate myths at rural area	Local community, CG, GOK, NGOs and UN agencies	Training community lightning strike control measures

CHAPTER FIVE. WEST POKOT COUNTY CLIMATE STRATEGIC ADAPTATION INVESTMENT/ACTION PRIORITIES

The following priorities have been recommended for Climate Change adaptation:

5.1 Forestry

Carrying out community training on importance of forestry economy, implement tree planting activities, promote dryland agroforestry and fruit trees growing, support community tree nurseries establishment of nity tree nurseries, establish and support Establish Trees nurseries to increase the provision of seedlings, Protection of water catchments and springs, swamps and fragile lands, protection of water towers and river banks

5.2 Agriculture and pastoral Economy

Growing of drought resistant crops 9Cassavas, Millet, Sorghum, bee keeping, proper management of agricultural waste e.g. using organic manure instead of inorganic and promotion of agroforestry especially tree-based intercropping, Breeding of animals that adapt well to climate vagaries, regular vaccination campaigns.

5.3 Water

Drilling and Solarization of boreholes with smart taps, construction of dams, water pans, subsurface dams, water treatment

5.4 Infrastructure

Ensuring that the infrastructure is climate-proofed over its lifespan, which includes the construction of culverts, factoring a maintenance component into all infrastructural development funds and designing infrastructure that can withstand the prevailing climate conditions

5.5 Disaster Management

Strengthening disaster preparedness; proper planning of urban settlements, which takes into consideration the expected high growth rate of urban population due to climate-induced migration from rural areas to urban centres

5.6 Climate Information Dissemination

Regular sensitization on climate change and dissemination of weather information and install weather stations across the county

CHAPTER SIX: CONCLUSION

The main objective of the participatory climate risk assessment is to empower communities to understand the climate risks they face and assess their ability to manage these risks as the basis for identifying and undertaking concrete local climate actions.

Citizen engagement that included youthful and elderly women and men, people living with disabilities, youth, minorities, among other key grassroot individuals made the PCRA exercise successful and fruitful. This PCRA exercise shall support the county, national and international agenda of tackling climate change.

Through the engagement of Wards Climate Change Planning Committees and Stakeholders in the PCRA process, the PCRA report has documented the following climate change risks in order of priority negatively impacting the county of West Pokot:

1. Drought and prolonged dry spell and High Temperatures and Heat stress.
2. Zoonotic Pests and Diseases,
3. Floods,
4. Landslides,
5. Erratic and heavy rainstorms
6. Gully Erosion
7. Lightning Strikes,
8. **Resource Base Conflicts**
9. **Frosts**
10. Invasive and Poisonous Plants

The local adaptation strategies are in line with the three key climate hazards identified and prioritized in each ward. The adaptation strategies in from three key sectors namely:

1. Water
2. Environmnet and Forestry and
3. Agriculture and Livestock

The local adaptation actions for each ward have been provided in the County Climate Change Action Plan 2023-2027

The County Government of West Pokot Greatly thank the Kenya National treasury, and International Agencies, notably World Bank and others who have spearheaded the agenda of climate change actions at the grassroot level of West Pokot

The county shall continue addressing issues of climate change as part of National and international agenda.

The Annexes that follow shows participants of the PCRA process mainly the Ward Climate Change Planning Committees that comprise of youthful and elderly women and men, people living with disabilities, youth, minorities, and green champions among other local leaders.

The annexes also include County Drought Hazard Map May 2023, County Zoonotic Pests and Diseases Map May 2023, County Heavy and Erratic Rainfall Hazard Map May 2023, County Floods Hazard Map May 2023 and County Climate Change Hazards Map May 2023

The PCRA and CCAP Process was very costly to undertake

Huge funding is needed to address climate actions

Continuous training of CCU staff is needed for effective implementation of the climate agenda.

ANNEXES

Annex 1: List of PCRA Technical Working Group

	PCRA Team	Designation
1.	Hon. Lucky J. Litole	CECM -climate Change
2.	Mr. Leonard Kamsait	CO-Climate Change
3.	Mr. Kennedy Pkew	Director Climate Change
4.	Mr. Isaac Ritakou	Directo Economic Planning & Budget
5.	Mr.Raphael Magal	Ass. Director Environment
6.	Mr.Wilson Lonyangole	Director Kenya Meteorological Department
7.	Mr.Cliff Barkacth	Director NEMA
8.	Mr.Joseph Lolemtum	SIKOM-NGO
9.	Mr.Pascalia Kaguara	Assistant Director NDMA
10.	Mr.Daniel Pkieny	CCU Accountant
11.	Ms.Rufina Chelimo	CCU Procurement Officer
12.	Mr.Julius Kiriam	Pokot North Sub-county Admin
13.	Mr.Nicholas Mukeyara	Pokot South Sub-county Admin
14.	Mr.Daniel Akudoki	Kacheliba Sub-county Admin
15.	Mr.Joseph Longorok	West Pokot Sub-county Admin
16.	Mr.Wilson Chemngoris	Kipkomo Sub-county Admin
17.	Ms.Christine Kalikamur	Pokot Central Sub-county Admin
19	Mr.Hamiltone Bett	GIS Officer
20	Mr.Geofrey Wafula	GIS Officer
21	Ms.Egline Rotich	GIS Officer
22	Ms.Getrude Longolol	Administrative Secretary
23	Ms.Faith Cherop	Administrative Secretary

24	Ms.Roseline Omusugu	Administrative Secretary
25	Mr.Denis Kokita	Driver
26	Mr.Tarcisio Loshalima	Driver-CCU
27	Mr.Philip Plimo	Driver-Econ Planning

Annex 2: Photo of PCRA Technical team Drafting PCRA Report

Annex 3: PCRA Participants

a) Pokot Central Sub- County

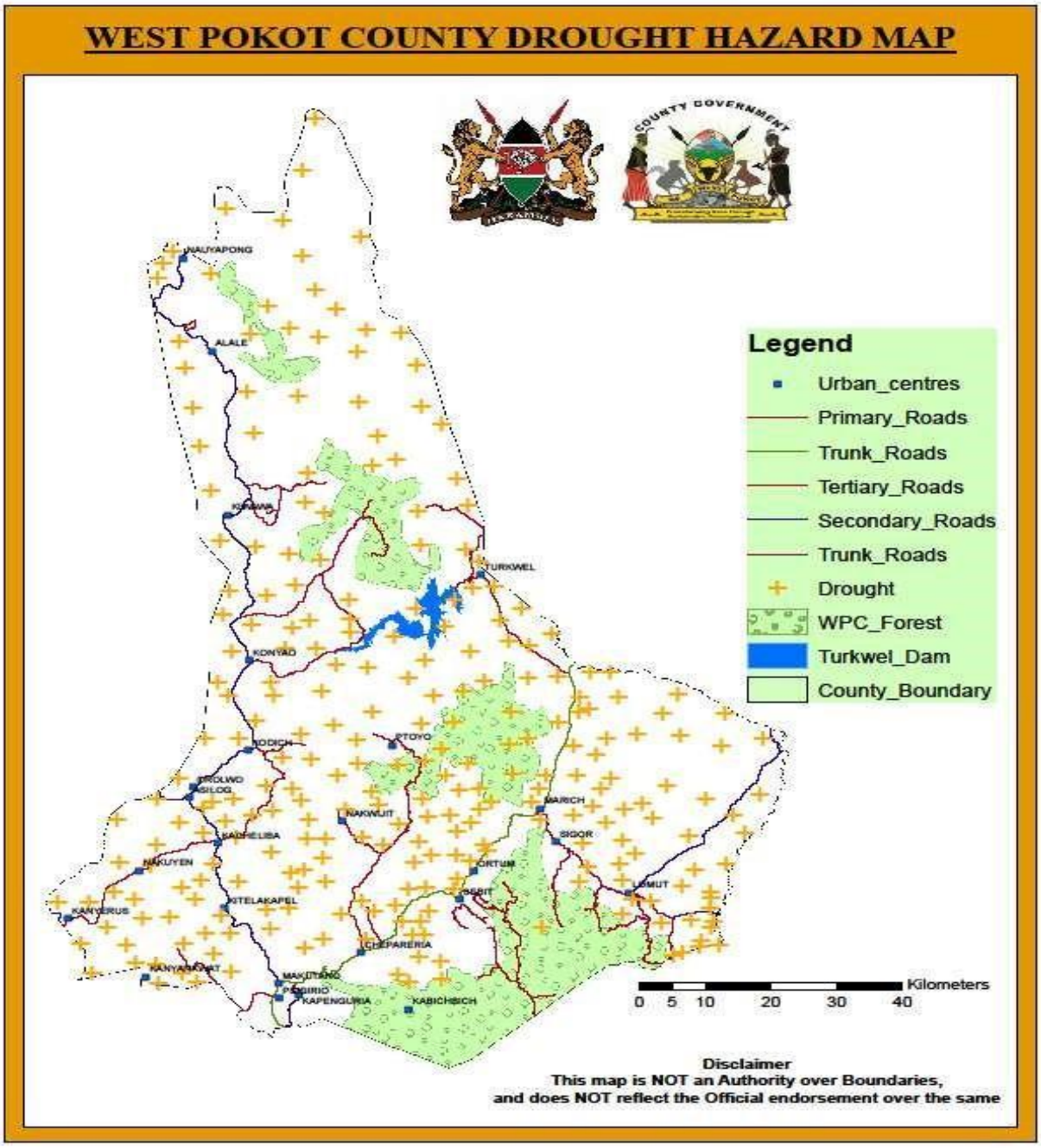
b) West Pokot Sub- County Sook and Endugh Wards

c) PCRA Participants West Pokot Sub-county -Mnagei, Siyoi and Kapenguria Wards

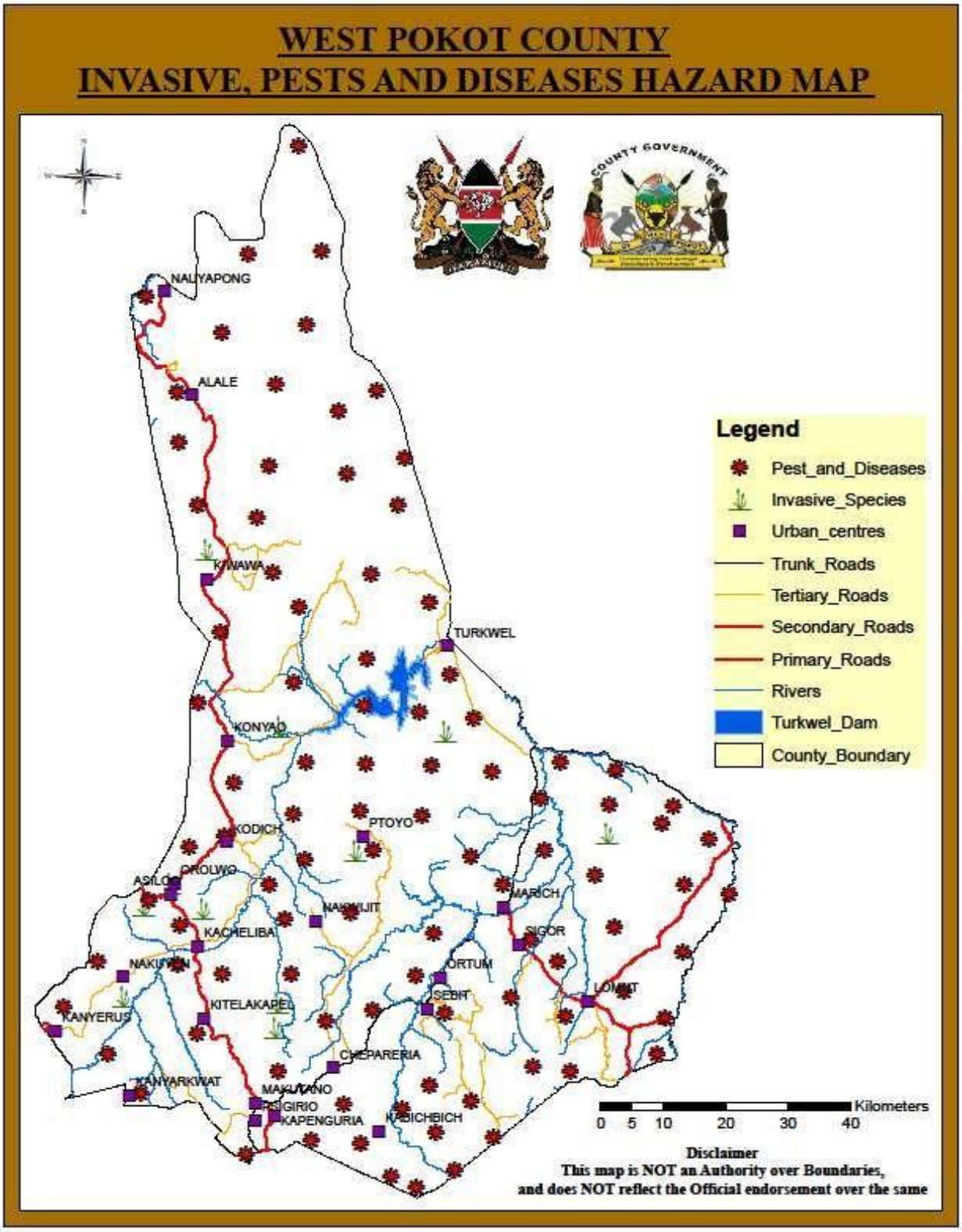
d) Pokot North Sub-county

e) Kacheliba South Sub-county

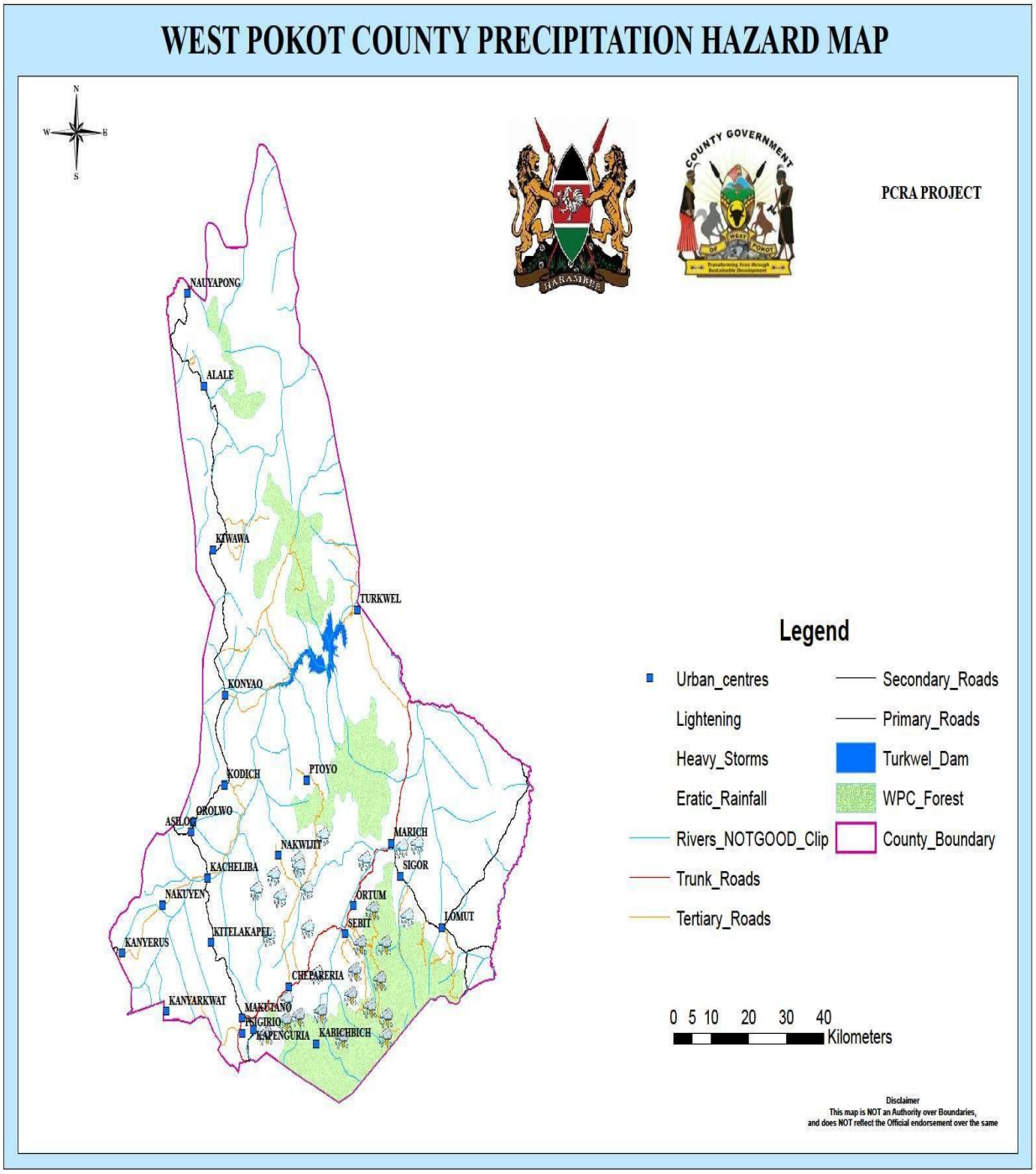
Annex 4: West Pokot County Drought Hazard Map May 2023



Annex 5: West Pokot County Zoonotic Pests and Diseases Hazard Map May 2023



Annex 6: West Pokot County Heavy and Erratic Rainfall Hazard Map May 2023



Annex 7: West Pokot County Floods Hazard Map May 2023