COUNTY GOVERNMENT OF WAJIR

DEPARTMENT OF ENVIRONMENT, ENERGY AND CLIMATE CHANGE

County Participatory Climate Risk Assessment Report

(In Partnership with the National Treasury under the FLLoCA Program)

Cover Pictures:

TABLE OF CONTENTS

List of figures

c

List of tables

Definition of Terms

Climate Change	Change in the climate system that is caused by significant changes in the concentration of greenhouse gases due to human activities, and which is in addition to the natural Climate Change that has been observed during a considerable period.
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	Ability of systems, institutions, humans, and other organisms to adjust to potential damage, take advantage of opportunities, or respond to consequences.
Global warming	Observed or projected gradual increase in global surface temperature. It is one of the consequences of Climate Change.
Greenhouse gases	Gases that absorb and emit radiant energy within the thermal infrared range. The main GHGs measured in a GHG inventory are, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), per-fluorocarbons (PFCs), hydro-fluorocarbons(HFCs), sculpture hexafluoride (SF6) and nitrogen tri-fluoride (NF3).
Mitigation	Human interventions to prevent or slow down atmospheric GHG concentrations by limiting current or future emissions, and/or enhancing potential sinks for greenhouse gases.
Resilience	Capacity of social, economic and environmental systems to cope with a hazardous event, trend, or disturbance.
Vulnerability	Propensity or predisposition to be adversely affected. It encompasses sensitivity or susceptibility to harm, and lack of capacity to cope and adapt.

List of Acronyms and Abbreviations

ADSW	Anglican Development Services Western
CCAP	Climate Change Action Plan
CCF	County Climate Change Fund
CFA	Community Forest Association
CIDP	County Integrated Development Plan
CSO	Civil Society Organizations
ECDE	Early Childhood Development Education
GIS	Geographical Information Systems
KCB	Kenya Commercial Bank
KFS	Kenya Forest Service
KIHBS	Kenya Integrated Household Budget Survey 2015-2016
DNMP	Division of National Malaria Programme
KMD	Kenya Meteorological Department
KWS	Kenya Wildlife Services
MD	Managing Director
NEMA	National Environment Management Authority
PCRA	Participatory Climate Risk Assessment
PWD	Persons with Disability
TVET	Technical and Vocational Training Colleges
WG	Working Group
WRA	Water Resources Authority
WRUAs	Water Resource Users Association

Foreword

Climate change is one of the most serious global challenges of our time. The scientific evidence on effects of climate change is overwhelming, both at the global and local levels. Given the dependency of the communities to environmental and natural resources, economic growth and livelihoodincomes of both urban and rural populations are highly vulnerable to climatic variability and change (EACCCP, 2011). Major indications of climate change effects in Wajir County have been temperature increases, rainfall irregularity and intensification, reduced food production, disruption of natural ecosystems and subsequent change and loss of habitats and species. This calls for the need to establish a functional planning and implementation framework for optimal response for resilience building

In Wajir, the effects of climate change are manifested through delayed onset of the rains, erratic rainfall patterns, prolonged dry spells (droughts) and occasional flash floods. These affects lives of local communities and their livestock which underpins their livelihoods. The impacts of climate change in the county are compounded by human activities such as land degradation through deforestation indigenous drought tolerant trees and unsustainable cultural practices such as nomadic pastoralism, among others.

For the county to efficiently address the impacts of climate change, a coordinated approach anchored within a legal framework has to be embraced. In line with Kenya's Climate Change Act, 2016 and the national Climate Change Action Plan,2018-2022, Wajir enacted its County Climate Change Fund Act in 2016 that dedicates 2% of the County development budget for climate change adaptation and mitigation response.

For participatory, locally-led climate risk assessments and action, Wajir rides on the robust existing climate change governance structures at ward and county level. These include: The Wajir County climate change steering committee comprising of the County Chief officers of relevant departments and other stakeholders, chaired by the County Executive Committee Member (CECM) in charge of Environment, Energy and Climate Change that is constituted to provide strategic leadership to county's climate response. In addition, Wajir County Climate Change Planning Committee - a technical committee mainly comprising of county directors of line departments, climate oriented National Government Agencies and Civil Society Organizations are established to plan and supervise implementation of climate change programs. Ward Climate Change Planning Committees in all the 30 wards are established and trained to facilitate community- centered climate action planning and implementation of climate smart public good investments. All these climate governance structures are coordinated by the Directorate of Climate Change Unit that is domiciled

at the Department of Environment, Energy and Climate Change to optimize seamlessimplementation of the county's climate change response programs and projects.

The Participatory Climate Change Risk Assessment (PCRA) is an approach that enables communities to identify the climate change hazards, their impacts and propose practical solutions for evidence-based county Climate Change Action Planning and response. The approach provides information regarding historical, current and future climatic scenarios and evaluates their implication to people's lives and livelihood systems while examining the existing drivers of their vulnerability and change. This approach aims to inform the planners and implementors, the most effective sector-specific strategies to strengthen the community's resilience against the identified climate risks and hazards. This process is supported by the World Food Program (WFP) and the National Treasury through the Financing Locally Led Climate Action (FLLoCA) Program and is one of the requirements to access the County Climate Resilience Investment (CCRI) Grants under FLLoCA project funded by the World Bank.

Based on the findings of the PCRA process, the County Government of Wajir shall prioritize strengthening climate change governance framework, mainstreaming of climate change across all sectors and strengthening capacity to monitor and report climate action across the sectors at the county and ward level. Furthermore, enhancing climate information services in accordance to the Wajir County Climate Information Strategy Plan and early warning systems shall be prioritized to reduce the impacts of climate change shocks among the communities.

Our County also prioritize to upscale implementation of climate resilience projects with emphasis on restoration of degraded ecosystems, strengthening livelihoods through climate smart agriculture as alternative livelihood, utilization of solar energy, conservation of environment and other natural resources, among others. A Climate Change Action plan shall be developed, guided by this PCRA report to give specific guidance on the response to the identified climate risks and impacts. Through collaborative and coordinated climate action, Wajir county seeks to achieve Sustainable Development Goals to contribute towards attainment of Kenya's Vision 2030 and foster socio-economic development for improved livelihoods of Communities in Wajir County.

Hon. Khalif Abdi Ali
County Executive Committee Member (CECM)
Environment, Energy and Climate Change
Wajir County.

Acknowledgement

The Participatory Climate Risk Assessment process (PCRA) was conducted by the County Government of Wajir, Department of Environment and Climate Change and its partners with the financial support of the World Bank through the National Treasury under the Financing Locally Led Climate Action (FLLoCA) program. The success of this PCRA was enabled by the goodwill and guidance of the Wajir County Governor, H.E FCBA Hon Ahmed Abdullahi. The Chief Officer, Department of Environment and Climate Change and the Wajir County Directorate of Climate Change Unit (DCCU), that provided the coordination which enabled the successful implementation of the process.

The Directorate of Climate Change Unit and the entire Department of Environment, Energy and Climate Change appreciate the support of World Food Program (WFP) in financing the training of technical working group, the actual data collection from the ward level and recognizes it as true partner in addressing Climate Change issues in the County.

I highly appreciate the PCRA Technical working group, which included representation from the County Departments of Environment, Energy and Climate Change, Agriculture, Livestock and Fisheries, Decentralized Unit, Water Services, Finance and Economic Planning, Lands and Information Communication Technologies (ICT) and others all under the leadership and coordination of the Wajir County Directorate of Climate Change. We also appreciate the participation and inputs of the National Government Agencies such as Kenya Forest Services (KFS), National Drought Management Authority (NDMA) and Kenya Metrological Department (KMD) and Civil Society Organizations such as Mercy Corps for their participation and input in the community engagements process.

Lastly, acknowledges the contribution of the communities for their active participation in the identification and prioritization of Climate Change issues in their wards which informed the preparation of this report.

Dakane Shimoy Dugow
County Chief Officer (CCO)
Environment and Climate Change
Wajir County.

Executive Summary

With the passage of Climate Change Fund Act, formation of Ward-based Climate Change Adaptation Committee and establishment of the independent directorate of County Climate Change Unit; we believe that numerous benefits will be achieved as a result of these new synergies.

We do envisage that global and local partners also have a role to play in filling the resource gaps and offering technical support and guidance. Sharing experience and capacity building of technical working groups was vital and worthy of the course.

We applaud the World Food Program for their kind gesture in supporting the PCRA exercise where the county technical team was able to dissect a number of tools that will help guide the community to digest the relationship between climate change, biodiversity and human interactions.

We believe that the knowledge on PCRA will go a long way in helping the County Government of Wajir to deliberately fund and support resilience projects and programs so as to reduce climate change risks and vulnerabilities thus informing its decisions in budgets, policies and plans.

Informing the residents about Climate Change hostilities with timely weather forecasts and related climate information services is a fundamental means of preparing the community for future eventualities and improve agricultural productivity hence increasing their resilience.
In Wajir County, where agriculture is mostly rain fed and yield gaps are very high, livestock rearing in the hash terrain is not promising, climate risk assessment will be instrumental in addressing the vulnerability question. This will go a long way in enabling the small scale farmers and herders to cope with and manage risks more effectively.

In addition to climate information systems, the Participatory Climate Risk Assessment (PCRA) as a tool guides and informs the community on the way out of climate change related shocks through the development Community Action Plans for use. Here, a number of adaptation goals and strategies were formulated by the local community themselves through the participatory engagements and activities born out of it.

With committed leadership, increased government funding and established structures and guidelines, stakeholders operating in Wajir County have the golden opportunity to take part in Climate Change resilience programs and projects. Through the intensive PCRA community engagements, a baseline data on Climate Change hazards for future reference and dissemination has been developed.

Furthermore, the PCRA Tool will provide a rich literature not only to Wajir residents but also to the institutions and policy makers in an interdisciplinary and practical approach.
Finally, this assessment report attests to the peculiarities of Climate Change and intends to evaluate and monitor the level of risks and vulnerabilities with the sole purpose of informing the relevant actors especially the County Leadership, CCU, NEMA, NDMA, KMD, Economic Planning Department, County GIS and CRM, DRM among others to take deliberate efforts in mitigating risks related to climate change at policy formation, funding and implementation levels.

Hon. Khalif Abdi Ali
County Executive Committee Member (CECM)
Environment, Energy and Climate Change
Wajir County.

CHAPTER ONE: BACKGROUND AND CONTEXT

1.1 Background of Wajir County

1.1.1 Position and Size of Wajir County

Wajir County is located in the North Eastern Region of Kenya. The county lies between latitudes 3ºN 60'N and 0º20'N and Longitudes 39ºE and 41ºE and covers an area of 56,685.9 $Km^{2.}$ (Wajir CIDP, 2018). It borders Marsabit to the North West, Isiolo to the South West, Mandera to the West, Somalia to the East and Garissa to the South. The County has a population of 781, 263 with 415, 374 males, 365,840 females and 49 Intersex (KNBS, 2019). The county is dominantly inhabited by the Kenyan of Somali ethnic origin and some few non-indigenous residents that have come for employment and business purposes and mainly reside at the headquarter(Wajir East).

1.1.2 Administrative Subdivision (sub-counties, wards, villages)

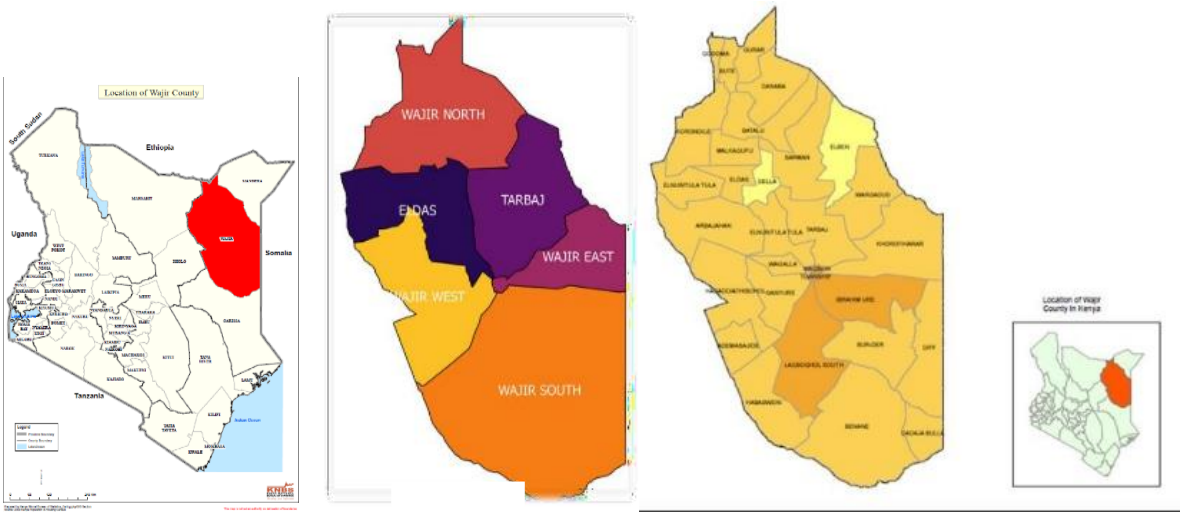


Figure 1:Map of Wajir County showing the six sub Counties and thirty wards.

The County Government of Wajir has administratively six constituencies and thirty ward which it uses to effectively deliver its services to the community. Critical services such as health, revenue, public works, roads, and water have offices and officers deployed and stationed at the sub-counties. (CIDP 2023-2027)

1.1 Location and Size

Wajir County is located in the North Eastern region of Kenya. The county lies between latitudes 3º N 60'N and 0º 20'N and Longitudes 39º E and 41º E and covers an area of 56,685.9 $Km^{2.}$ It borders Somalia to the East, Ethiopia to the North, Mandera County to the Northeast, Isiolo County to the South West, Marsabit County to the West and Garissa County to the South. The map below shows the location of Wajir County in the country.

Map 1 shows the location of Wajir County in the map of Kenya.

Map 1: Location of the County in Kenya

Source: Kenya National Bureau of Statistics, 2019

1.2 Physiographic and natural conditions

1.2.1 Physical and Topographic Features

Wajir County is a featureless plain and lies between 150 metres and 460 metres above sea level and along latitude 1°45'N and longitude 40°4'E. Its Altitude is 244 m (801 ft.). The plain rises gently from the south and east towards the north rising to 200 metres at Buna and 460 metres at Bute and Gurar at the foothills of Ethiopian highlands.

There is the highly seasonal Ewaso Nyiro River and Lake Yahud. The county is prone to seasonal flooding during the rainy seasons which makes roads impassable. The county has seasonal swamps which together with drainage lines serve as grazing zones during dry season and for cultivation during the rainy seasons. The seasonal swamps are in Lagboghol area and in the western and southern part of Habaswein area. The county is generally covered with young sedimentary rocks with loamy soils in the north bordering the Ethiopian highlands. The county has considerable deposits of Limestone and sand which are used in the local building industry.

1.2.2 Ecological Conditions

Wajir County is a semi-arid area falling in the ecological zone V-VI. Zone V receives rainfall between 300-600mm annually, has low trees, grass and shrubs. On the other hand zone VI receives an annual rainfall of 200-400mm. The county receives an average of 240 mm of rainfall per year. The rainfall is usually erratic and short making it unfavourable for vegetation growth. There are two rainy seasons' i.e. short and long rains. The short rains are experienced between October to December and the long rains from March to May each year. Crop activity is carried out in the Lorian swamp and along the drainage lines in Bute. The crops grown in the area are sorghum, beans and vegetables.

1.2.3 Climatic Conditions

The county experiences annual average relative humidity of 61.8 per cent which ranges from 56 per cent in February to 68 per cent in June. The county does not experience frost conditions.

The county receives an average of 240 mm precipitation annually or 20 mm each month. There are 24 days annually in which greater than 0.1 mm of precipitation (rain, sleet, snow or hail). June is the driest month with an average of 1 mm of rain across zero days while April is the wettest month with an average of 68 mm of rain, sleet, hail or snow across 6 days. The higher areas of Bute and Gurar receive higher rainfall of between 500mm and 700mm.

The average temperature is 27.9 °C. The range of average monthly temperatures is 3.5 °C. The warmest months are February & March with an average of 36°C while the coolest months are June, July, August & September with an average low of 21 °C.

1.3 Administrative units

1.3.1 Administrative sub divisions (Sub county, divisions, locations)

Administratively, the county comprises of eight sub-counties namely Wajir East, Tarbaj, Wajir West, Eldas, Wajir North, Buna, Habaswein and Wajir South. It's further divided into 29 divisions, 142 locations and 172 sub-locations as indicated in table below.

Table 1: Area of the County by Sub-County and Divisions

Sub - County	Division	Area(Km^2)	No. of Locations	No. of Sub-locations
Wajir East	Central	139.3	6	10

	Wajir-Bor	2,043.4	3	5
	KhorofHarar	1,825.1	1	4
	Total	4,007.8	**10**	**19**
Tarbaj	Tarbaj	1,175.1	4	6
	Sarman	1,561	3	4
	Kotulo	3,389.7	5	9
	Mansa	3,313.6	3	4
	Total	**9,439.4**	**15**	**23**
Eldas	Della	413.9	2	3
	Eldas	2,059.4	8	6
	Elnur	277.6	3	4
	Anole	294.1	5	4
	Total	**3,045**	**18**	**17**
Wajir West	Griftu	3,336.4	11	10
	Arbajahan	2,345.3	2	4
	Lagbogol	373.3	2	3
	Hadado	2,480.1	4	4
	Ademasajida	1,017.3	6	3
	Wagalla	491.2	5	8
	Total	**10,043.6**	**30**	**32**
Habaswein	Habaswein	4,351.5	14	14
	Sebule	2,680.2	5	10
	Banane	4,534.9	4	4
	Dadajabulla	1,064.2	5	2
	Total	**12,630.8**	**28**	**29**
Wajir South	Diif	5,446.8	5	3
	Wajir-Bor	1,224.4	5	5
	Kulaaley	2,293.7	7	7
	Burder		3	5
	Total	**8,964.9**	**20**	**20**

Wajir North	Gurar	2,797.9	8	10
	Bute	791.8	4	5
	Total	**3,589.7**	**12**	**15**
Buna	Buna	3,764.7	4	8
	Korondille	1,200.1	5	8
	Total	**4,964.8**	**9**	**16**
	County Total	**56,685.9**	**142**	**172**

Source: County Commissioner's Office, Wajir, 2019

1.6 Political Units

The county has 6 constituencies namely Wajir East, Tarbaj, Wajir west, Eldas, Wajir South and Wajir North and has 30 electoral wards. Wajir North and Wajir South constituencies have the largest number of wards at 7, and the rest have 4 each as shown in Table 7.

Table 7: Political Units by Constituency

Constituency	Wards	Area (sq. Km)	No. of Wards
Wajir East	Wagberi Township Barwaqo Khorof Harar	4,007.8	4
Tarbaj	Elben Sarman Tarbaj Wargadud	9,439.4	4
Wajir West	Arbajahan Hadado/Athibohol Adamasajide Ganyure/Wagalla	9,010.7	4
Eldas	Eldas Della Lakoley south/Basir Elnur	4,077.8	4
Wajir South	Benane Burder Dadajabula Habaswein Lagbogol south Ibrahim Ure Diff	21,595.7	7

Wajir North	Gurar Bute Korondille Malkagufu Batalu Danaba Godoma	8,554.5	7
	Total	**56,685.9**	**30**

Source: Independent Electoral and Boundaries, 2019

1.7 Infrastructure and Access

1.7.1 Road, Rail Network, Ports and Airports, Airstrips and Jetties

The county has a total of 440 Km gravelled roads, out of 5,280 Km road network. The rest of the roads are earthen and unclassified. The county has no tarmac road or rail network. However, the county has an international airport in Wajir and 7 airstrips (Habaswein, Khorof Harar, Wagalla, Buna, Bute, Tarbaj, and Diff).

1.7.2 Posts and Telecommunications: Post offices, mobile telephony, landline etc There are three mobile service providers namely Safaricom, Airtel and Orange. However, the mobile network connection is 20 per cent which is mainly limited to main settlement areas. The county has two post offices at Wajir and Habaswein and 1 sub-post office at Griftu. There are also two private courier services.

The county has various cyber cafes which facilitates communication with the rest o the country. In addition, the Wajir community radio station has been put up.

1.8 Land and land use

1.8.1 Mean holding size

The mean land holding size for the county is 7.8 Ha. Majority of the people practice nomadic pastoralism where the large portion of the land is used as grazing zones. There are however few farmers who are practising small scale farming.

1.8.2 Percentage of land with title deeds

The entire county is categorized as trust land apart from a small percentage of the total area occupied by townships. The land is mostly used communally for nomadic pastoralism. However some small areas are exclusively under small scale agriculture by individuals or groups.

1.8.3 Incidence of landlessness

Land in the county is communally owned except in urban areas where plots are allocated to individuals by the county council. There are very few cases of landlessness.

1.9 Forestry and Agro forestry

1.9.1 Main Forest types and size of forests

The county has one gazetted forest which covers 19718Ha in Wajir North neighboring Ethiopia in the North west and mandera county in north east. Most of the forest cover is comprised of woody trees and shrubs used for grazing camels, goats and wildlife. The dominant species is acacia trees.

1.9.2 Main Forest Products

The main forest products include gum and resin, charcoal, firewood, posts, barks, honey, wood carvings and wild fruits. Firewood is harvested for individual household use and for sale to households living around town and food kiosks.

1.9.3 Promotion of agro forestry and green economy for:

a) Income generating activities

The activities include selling of charcoal, firewood, herbs, resins and gum. Most of the charcoal burning takes place in Wajir South constituency due to the proximity to the refugee camps in Dadaab constituency in Garissa County and the high demand of wood fuel from the high population of refugees which is estimated to be over 400,000.

b) Protection of water catchment areas

The main source of water in the county is underground water which does not require catchment protection. Otherwise there are no significant forestry activities in the water points with only scattered forestry activities in the few water points with fencing mostly undertaken by the department of environment through the afforestation programme.

c) Prevention of soil erosion

The county experiences soil erosion through strong winds as well as floods though not frequent. Trees play a big role in preventing erosion by breaking the strong winds experienced in the county.

d) Provision of wood fuel and generation of energy for industries

Trees provide the major fuel for households which accounts for 96.5 per cent for domestic use. In addition, hotels use wood fuel for cooking.

e) Improvement of soil fertility by growing fertilizer tree

In order to improve soil fertility, there is need to plant legume plants like lenceana lecosphala and preserve acacia which is a nitrogen fixing plant and grows naturally in the county.

f) Growing of fruit trees for improved nutrition

Growing of fruit trees is encouraged by planting different species which include zijam, kei apple and vitex doniana which aid in improving the nutrition of the people within the county.

g) Provision of carbon sinks e.g. carbon trading

This is done through mass tree planting and campaigns to protect and preserve existing ones. The progressive increase in tree cover may assist the county to claim carbon credits and thus earn more revenue.

h) Animal feeds production ventures

There are currently no animal feeds production ventures in the county. However, there are plans to train pastoralists on feed production and storage county-wide with hay stores being constructed at every sub-county.

i) **Growing and processing for medicinal purposes/ value plants and products** Acacia resin is commonly used for traditional medicinal purposes. There is no processing and value addition for the products. It may be useful to explore ways in which the county may add value and reap more from the acacia resin.

1.10.0 Environment and climate change

The county is susceptible to disasters such as floods, droughts, soil erosion and conflicts. There is a great danger of desertification contributed by overgrazing and sporadic settlement. This greatly affects the livelihood of the community and the sustainability of pastoralism/nomadism.

Major Contributors to environmental degradation in the County

Some of the causes of rapid environmental degradation have been felling of trees for wood fuel and charcoal, unplanned settlements, indiscriminate grazing, unplanned water points, nomadic lifestyle, quarrying of lime and bush fires. About 96.5 per cent of households use firewood as source of energy and another 3.3 per cent use charcoal which is directly related to the degradation attributed to tree cutting. Only 1.2 per cent of the waste is collected by the local authority. The rest is disposed at public heaps or burned within homesteads and institutions. The lack of proper solid waste and sewerage management systems has been major contributors to environmental degradation.

Effects of environmental degradation

Environmental degradation has resulted in the loss of grazing land and shrinking of water resources. Other effects include loss of biodiversity, desertification, human to human conflicts and human-wildlife conflicts, floods during the rains. These have seriously challenged the sustainability of the prevalent nomadic way of life.

Climate Change and its Effects in the county

The effects of climate change are evident in a number of ways; the amount of rainfall is unpredictable, frequent and prolonged drought and unpredictable floods. These have resulted in outbreak of water borne diseases among human and animals. The county has also begun to experience extreme weather variations.

Climate change mitigation measures and adaptations strategies

To manage and lessen the effects of climate change, the county must step up efforts towards adoption of renewable and alternative sources of energy. Other measures include water harvesting techniques through roof catchment‘s and collection of run offs. Afforestation and increase in forest cover will also enhance proper environmental management.

1.11.0 Mining

On-going activities

Limestone rocks and quarrying are the major on-going activities in the county. There is oil prospecting in the North East part along the Somalia border as well as oil exploitation on the eastern part of the county.

Mining Potentials

The county has abundant limestone deposits for cement production. A feasibility study is required to establish the viability of setting up a cement factory in the county. At present, traditional methods are used to break down limestone into whitewash which is used as a substitute for cement. At the moment there are between 2,000 and 3,000 people employed in quarry activities. The picture below shows a sample of limestone deposits found in the county.

A sample of limestone deposits in Wajir East Constituency

1.12.0 Tourism

1.12.1 Main tourist attractions, National Parks/Game reserves

The county has rich culture, wildlife and landscape features that include Lake Yahud among others. The sector is also boosted by Wajir International Airport. There are no game reserves or game parks in the county. However, the KWS is ensuring safety and protection of the wildlife in their current habitation outside any protected area. In addition other tourist attraction features include Wajir museum, Wagalla massacre site, Orahey wells, British & Italian war bunkers and old court house.

1.12.2 Main Wildlife

The county is endowed with various game species like Ostrich, Hyenas, Gazelles; Lions, Zebras, Giraffes, Warthog and Birds. Full exploitation of wildlife resources is hampered by frequent human-wildlife conflict. The wildlife is found all over the vast county hence conservation and management has been a challenge. The picture below show some of the wildlife found in the county.

A giraffe walks freely through the shrubs and Ostrich in the neighbourhood

1.12.3 Tourist class hotels/restaurants, bed occupancy

The county has no classified hotels but there are seven unclassified hotels and restaurants. The county is however advantaged to have Wajir International Airport hence potential for tourism industry.

1.1.2 PCRA Background

Wajir is a county located in North Eastern Kenya, known for its arid and semi-arid climate. The region is prone to various climate-related risks, including droughts, floods, and desertification. In recent years, the impacts of climate change have exacerbated these risks, leading to increased vulnerability for the local communities.

The need for a Participatory Climate Risk Assessment (PCRA) in Wajir arises from the recognition that climate change poses significant challenges to the county's development, livelihoods, and well-being of its residents. The PCRA process is designed to enhance understanding and awareness of climate risks, identify adaptation strategies, and empower local communities to actively participate in decision-making processes related to climate change resilience.

The PCRA process involved a collaborative effort between government agencies, non-governmental organizations, community members, and other stakeholders. It aims to incorporate local knowledge, experiences, and perspectives into the assessment of climate risks and the development of adaptation plans. The process is participatory in nature, ensuring that the voices and needs of the local communities are considered and integrated into decision-making.

The PCRA process in Wajir involves various stages, such as data collection and analysis, community consultations and workshops, vulnerability and risk assessments, mapping of climate-related hazards, identification of adaptation options, and the formulation of an action plan. The process may also include capacity-building activities to strengthen the knowledge and skills of local communities in responding to climate change challenges.

By conducting a PCRA, the aim is to develop a comprehensive understanding of the climate risks faced by the county and to identify appropriate strategies and interventions to build resilience. The process helps to empower vulnerable members of the communities, women, youth, minorities and marginalized, PWLDs and local communities, enabling them to take ownership of adaptation measures and contribute to sustainable development in the face of climate change.

1.1.3 Objective of the PCRA

1. The main objective of the PCRA process is to help communities raise awareness, assess their climate change and disaster risks and to develop adaptation strategies.
2. Increase the understanding of local climate risks: By involving local communities in the assessment process, it is possible to gather valuable information on how climate change is affecting their area, what the specific risks and vulnerabilities are, and how they are already coping with these risks.
3. Development of community climate action plans for respective communities so as to aid in planning and building resilience.

1.2 Policy Context

The Paris Agreement was adopted in 2015 with aim to strengthen the global response to climate change by keeping the global temperature rise this century below 2 degrees Celsius above the pre-industrial levels. The agreement provides the policy framework at global scale within which countries are expected to address climate change through facilitating climate finance, technology transfer and collaborations for capacity exchange. The Agreement requires countries to set and periodically report their Nationally Determined Contributions for effective tracking of climate action at global scale.

At the national level, the Climate Change Act, 2016 and the National Climate Change Framework Policy (2018) guides climate response actions in the country. The Act provides for establishment of climate change governance structures to coordinate implementation of activities at national and sub-national levels. Section 19 of the Climate Change Act, requires counties to mainstream climate change in their programs and functions; undertake climate change action planning as well as establish a climate change governance framework for financing and executing climate change response activities

The County Government of Wajir enacted the Climate Change Fund Act in 2016 and amended in 2019, upon which this climate change risk assessment process is anchored. The policy envisages that the county government of Wajir shall undertake Climate Change Action Planning, Climate Risk and Vulnerability Assessment and Adaptation planning for effective implementation of climate actions in the county. Furthermore, Wajir County Climate Change Fund Act, 2016 (Amended 2019) was enacted to guide planning and budgeting climate change governance in the county. The Act dedicates 2% of the County Development Budget into a fund, specifically for climate change programs coordination and implementation hence the climate change risk assessment will form a basis for evidence-based climate response.

This PCRA report identifies climate risks and hazards with their associated impacts within Wajir County for evidence-based climate change action planning, budgeting and implementation.

1.3 Purpose of the PCRA Report

The purpose of the Participatory Climate Risk Assessment (PCRA) report is to document the findings, outcomes, and recommendations resulting from the assessment process. The report serves multiple important purposes:

1. The PCRA report provides a comprehensive understanding of the climate risks faced by a particular region or community. It documents the vulnerabilities, hazards, and potential impacts associated with climate change. This understanding helps stakeholders, policymakers, and communities make informed decisions and prioritize appropriate adaptation measures.

2. The PCRA process emphasizes the participation of local communities and their knowledge in assessing climate risks. The report captures the perspectives, concerns, and priorities of community members. By documenting their voices and experiences, the report empowers local communities, enabling them to actively engage in climate change adaptation and decision-making processes.

3. The findings and recommendations in the PCRA report provide crucial information for policymakers, government agencies, and planners. It helps them integrate climate change considerations into policies, strategies, and development plans. The report can guide the allocation of resources, implementation of climate resilience projects, and the formulation of adaptation strategies at various levels, from local to national.

4. The PCRA report presents data, analysis, and scientific evidence related to climate risks. It enhances the credibility of the assessment process and provides a solid foundation for evidence-based decision-making. Policymakers, stakeholders, and practitioners can rely on the report's information to make well-informed choices regarding climate change adaptation and risk reduction measures.

5. The PCRA report can serve as an advocacy tool to raise awareness about the urgency and significance of climate change risks. It highlights the potential impacts on communities, ecosystems, and socio-economic sectors. The report can be shared with the wider public, stakeholders, and media to generate support, mobilize resources, and foster a broader understanding of the need for climate resilience actions.

Overall, the PCRA report plays a vital role in consolidating and communicating the outcomes of the assessment process. It helps stakeholders understand climate risks, engage communities, inform policy and planning, facilitate evidence-based decision-making, and promote climate change awareness and action.

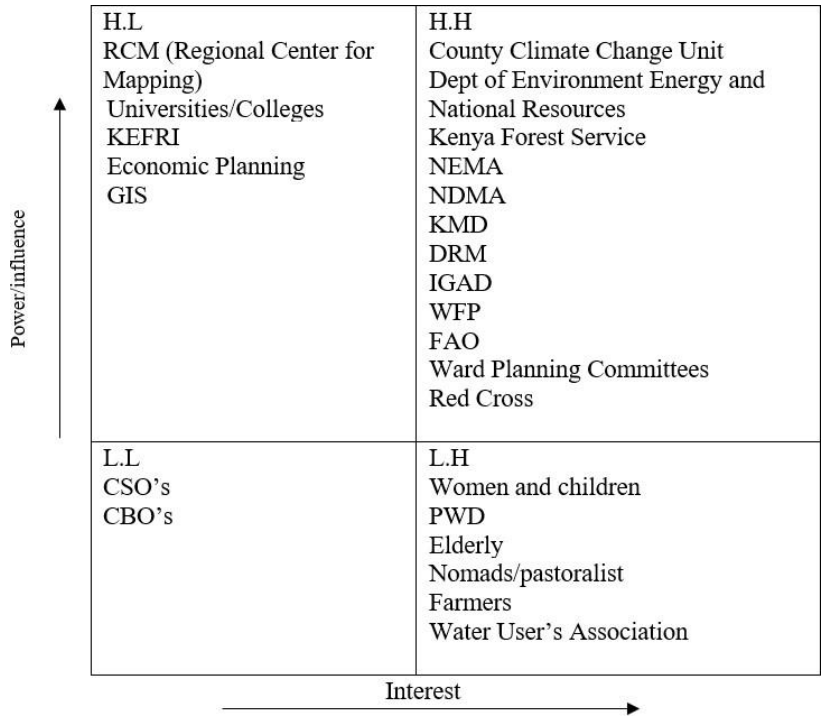
1.4 Key steps in the county’s PCRA Report

A technical working group was constituted in February 2022. Considerations for appointment to the technical working group were: representation of climate change relevant sectors such as environment, water, agriculture and gender, special programs and county leadership; commitment to create time for the exercise, knowledge, skills and experience relevant to the task among others.

The Technical Working Group had a week long training on the PCRA process. The training involved understanding of the process, its relevance in development planning and implementation and how each step of the PCRA process should be conducted as described in the PCRA guidance templates.

The stakeholders were identified by the Technical Working Group during the training session broadly categorized to represent: Individuals/organizations formally responsible for climate action and building resilience; involved in climate action and responses to climate impacts; those with knowledge and expertise relevant to climate adaptation and building resilience and community representatives and those impacted by climate change.

Table 1: Stakeholder mapping and analysis summary



H.L RCM (Regional Center for Mapping) Universities/Colleges KEFRI Economic Planning GIS	H.H County Climate Change Unit Dept of Environment Energy and National Resources Kenya Forest Service NEMA NDMA KMD DRM IGAD WFP FAO Ward Planning Committees Red Cross
L.L CSO's CBO's	L.H Women and children PWD Elderly Nomads/pastoralist Farmers Water User's Association

H.H (High, High), H.L(High, Low), L.L (Low, Low) L.H(Low, High)

The Climate Change Unit sensitized the citizens through barazas of the upcoming climate change risk assessment exercise and mobilized participants with the support of Ward Administrators. Due to the vastness of the county, the Technical WG adopted a process where each ward group was engaged for two days each giving consideration to locals with common climate change knowledge and the most vulnerable. The identified community participants were mobilized through the office of the respective ward administrators and the respective ward climate change planning committees. Programs,

engagement tools and other materials relevant to the community engagements were prepared in advance. These materials include: the program, community guiding questions and the note takers feedback forms.

An average of 15 participants were mobilized from each wards in line with the mobilization criteria stated above. The participants mobilized consisted of different livelihoods groups such as livestock herders, small scale business owners, marginalized, youth and PWDs in addition to the members of the Ward Climate Change Planning Committees. Other participants included ward agriculture officers, ward administrators, foresters and other technical officers with ward level mandate.

The data from the wards was summarized into reports. The reports were consolidated from ward reports to sub-county reports and further to county level PCRA report. This was followed by one-day meeting of technical committee to develop the workshop program and share responsibilities among team members as well as agree on the workshop execution strategy. PCRA draft 1 was validated through multi stakeholder engagement and subsequently submitted to the cabinet for approval. The report will further be submitted to the County Assembly for deliberation and approval. Below is the summary of the process.

Table 2:Summary of the PCRA Process

Step	**Activity**	**Duration in Days**
Step 1:	Constitution of the Technical Working Group	2
Step 2:	Training of the Technical WG	7
Step 3:	Stakeholder Mapping	1
Step 4:	Preparation for Community Engagements	1
Step 5:	Ward Based engagements on PCRA	17
Step 6:	Data Analysis and Preparation for County Level Workshop on PCRA	10
Step 7:	County Level Multi Stakeholder Validation Workshop on PCRA	2
Step 8:	PCRA Report	14

CHAPTER TWO: WAJIR COUNTY CLIMATE HAZARD PROFILE

2.1 Current and Historical Climate Hazards and Trends

Wajir County is located in northeastern Kenya and experiences an arid climate characterized by hot and dry weather conditions for most of the years. The area is disposed to various climate hazards and has witnessed certain trends in recent years. The current and historical climate hazards and trends are Drought where it is a recurrent climate hazard and it is frequently experiences extended periods of little to no rainfall, leading to water scarcity, crop failures, and livestock losses, severe socio-economic impacts, affecting livelihoods and exacerbating food insecurity in the county.

Erratic rainfall has witnessed changes in rainfall patterns over time. Rainfall tends to be highly variable, both in terms of timing and amount. In recent years, there has been an observed shift in rainfall distribution across the county, with irregular and unpredictable patterns. This variability makes agricultural planning and water resource management challenging.

Also we have Desertification as a hazard in the county and this is the expansion of arid and semi-arid landscapes, characterized by the encroachment of desert conditions that poses a significant environmental challenge. This includes **overgrazing, deforestation**, and **soil erosion**. While drought is a common occurrence, the County is also prone to occasional flash floods in some parts, especially during heavy rainfall events. The arid landscape has low absorption capacity, leading to rapid runoff and the potential for flooding. Flash floods can cause damage to infrastructure, displacement of communities, and loss of life. Other climatic hazards are livestock disease and conflict (Resource base conflicts).

Rising temperatures: Like many other regions globally, Wajir County has experienced a warming trend over the years. Rising temperatures exacerbate the aridity of the area, leading to increased evaporation rates, higher water demand, and heat-related health risks. High temperatures also impact agriculture and livestock rearing.

Decreasing water availability: Wajir County faces challenges in accessing reliable water sources due to its arid nature and limited water infrastructure. The combination of low rainfall and high evaporation rates contributes to reduced water availability. This scarcity affects both human and livestock populations and requires innovative water management strategies. Land degradation: Overgrazing, deforestation, and unsustainable la nd management practices have led to land degradation in Wajir County. Soil erosion and degradation further contribute to reduced agricultural productivity and exacerbate the effects of drought. Several initiatives and efforts were made to address these climate hazards and trends at various levels, including community-based adaptation initiatives, water conservation measures, and sustainable land management practices. The Kenyan government, along with local and international organizations, is working to promote climate resilience and adaptation strategies in Wajir County and other vulnerable regions of the country.

1. **Droughts**: Wajir County frequently experiences severe droughts, which have adverse effects on water and pasture availability. This poses significant challenges for the predominantly pastoralist community, affecting their livestock and livelihoods.
2. **Extreme Temperatures**: The region witnesses high temperatures, especially during the dry seasons. These extreme temperatures can lead to heat stress, water scarcity, and can exacerbate the effects of drought.
3. **Flash Floods**: Although the region is predominantly dry, it occasionally experiences heavy rains that can lead to flash floods. These floods can damage infrastructure, displace communities, and lead to loss of life, especially in areas where there's poor drainage.

4. **Desert Locust Invasion**: In recent times, East Africa, including areas like Wajir County, has seen invasions by swarms of desert locusts, which can decimate crops and pastures in a short period, leading to food insecurity.
5. **Windstorms**: Dust storms and strong winds can sometimes occur, especially during the onset or the end of a rainy season. These can impact visibility, health (due to airborne particulate matter), and even infrastructure.
6. **Water Scarcity**: Linked to droughts and high temperatures, water scarcity is a persistent challenge in the region. This can result in conflict over limited resources, impact hygiene, and health, and lead to challenges in accessing drinking water.
7. **Disease Outbreaks**: Due to the changing climatic conditions, the region might witness an increase in vector-borne diseases. For instance, periods after rains might see a rise in mosquito populations, increasing the risk of diseases like malaria.

To combat these challenges, both the county and national governments, along with international partners, have undertaken various mitigation and adaptation measures. These include establishing early warning systems, constructing water pans and dams, promoting climate-smart agricultural practices, and engaging in afforestation and reforestation activities.

2.2 Exposure and vulnerability profiles of the county

Wajir County is located in the Northeastern region of Kenya between latitudes 3° N 60‘N and 0 20‘N and Longitudes 39° E and 41° E and covers an area of 56,685.9 Km^2. It borders Somalia to the East, Ethiopia to the North, Mandera County to the North-East, Isiolo County to the South-West, Marsabit County to the West and Garissa County to the South. The county is home to various communities, including the Somali’s and is predominantly Arid, with limited access to water and characterized by a nomadic pastoralist lifestyle. exposure and vulnerability profiles can be analyzed in relation to several key factors: Climate Change and Environmental Factors where the county is highly susceptible to climate change impacts, including erratic rainfall patterns, prolonged droughts, desertification, conflict(Resource base conflicts) and livestock diseases. Limited water resources and recurring droughts making communities vulnerable to water scarcity, food insecurity, and malnutrition. Environmental degradation, such as deforestation and land degradation, exacerbates the vulnerability of communities.

The main Livelihood and Economy in the county is Pastoralism, with majorly communities relying on livestock for their sustenance and income. Fluctuations in rainfall patterns and prolonged droughts directly affect the availability of pasture and water, leading to livestock deaths, loss of income, and increased vulnerability.

2.3 Differentiated impacts of climate trends and risks

The past and current climate trends and risks in Wajir County have had differentiated impacts on various key interest groups, particularly women, youth, ethnic minorities, people living with disabilities, and other marginalized and vulnerable groups. This specific challenges and vulnerabilities on key interest groups are.

Women in Wajir County often bear the primary responsibility for household tasks, including water and food provision. Climate change exacerbates their burden as water scarcity and droughts increase. Limited access to education and economic opportunities restricts women's ability to adapt to changing conditions, hindering their resilience.

Gender inequalities, such as limited decision-making power and control over resources, reduce women's capacity to cope with climate risks and contribute to their vulnerability.

Youth: Unemployment and limited economic prospects for youth in Wajir County exacerbate their vulnerability to climate change impacts. As traditional livelihoods, like pastoralism, become less viable due to climate-related challenges, youth face reduced opportunities for income generation. Lack of access to quality education and skills training further limits their ability to adapt and find alternative livelihood options.

People Living with Disabilities: People living with disabilities often face additional barriers in adapting to climate change impacts and this includes. Limited mobility, communication challenges, and reduced access to information and services can hinder their ability to cope with disasters and access support during emergencies. Inadequate infrastructure and facilities, including inclusive evacuation centers, can pose significant challenges for their safety and well-being.

Other Marginalized and Vulnerable Groups such as the elderly, internally displaced persons (IDPs), and those living in poverty, face compounding risks associated with climate change. Limited access to basic services, including healthcare, water, and sanitation, is further constrained by climate-related challenges. Inadequate social protection measures and weak governance structures may exacerbate the vulnerability of these groups.

Addressing the differentiated impacts on these key interest groups requires targeted interventions and policies that prioritize their unique needs and perspectives. Ensuring the participation and inclusion of these groups in decision-making processes, promoting access to education and skills training, strengthening social safety nets, and implementing climate-resilient infrastructure are vital for building their resilience and reducing vulnerability in Wajir County.

2.4 Spatial Distribution of Risks

The county is divided into six constituencies, namely: Wajir North, Wajir South, Wajir West, Wajir East, Tarbaj and Eldas. The main livelihood zones are Agro-Pastoral, Pastoral and Formal/Informal Employment. Various proportions where Livestock production contributes 70 percent of household income in Pastoral and Agro-Pastoral Livelihood Zones. Crop production contributes 30 percent of household income in Agro Pastoral and 15 percent in other livelihood zones.

The climate risk projections can be spatially broken down into smaller geographical planning units known as Wards. Linking these projections to the main livelihood and economic sectors in each respective Ward where it can provide valuable insights for targeted county climate change action planning and this wards are spatially distributed according to topography, population density, land use practices, and governance structures their population and size. Some of the risks are:

- Drought and Water Scarcity that is prone to frequent droughts and water scarcity due to its arid and semi-arid climate. The entire county faces the risk of limited water availability, although the severity may vary across different regions.
- Food Insecurity: The arid conditions in Wajir County pose significant challenges to agricultural activities. Crop failures and limited grazing lands contribute to food insecurity. Vulnerability to food insecurity is spread throughout the county, with some regions facing more severe challenges due to poorer soil quality and limited access to irrigation facilities.
- Livestock Diseases: Wajir County heavily relies on livestock rearing for livelihoods. However, the region is susceptible to outbreaks of livestock diseases, such as contagious bovine pleuropneumonia (CBPP), foot and mouth disease, and tick-borne diseases. The risk of livestock diseases is present across the county, but areas with high livestock densities may experience more significant impacts.
- Intercommunal Conflict: Wajir County has experienced intercommunal conflicts, primarily driven by competition over resources such as grazing land and water points. The spatial distribution of this risk is localized in areas where different communities coexist and compete for scarce resources. Specific regions with historical tensions or border disputes may be more prone to intercommunal conflicts.
- Inadequate Infrastructure: Wajir County faces challenges in terms of inadequate infrastructure, including roads, schools, healthcare facilities, and water and sanitation systems. The spatial distribution of this risk can vary, with more remote and marginalized areas often having limited access to basic infrastructure services.

Poverty and Socioeconomic Disparities: Wajir County has high levels of poverty and socioeconomic disparities. Vulnerability to poverty is widespread across the county, with some areas experiencing more acute poverty rate

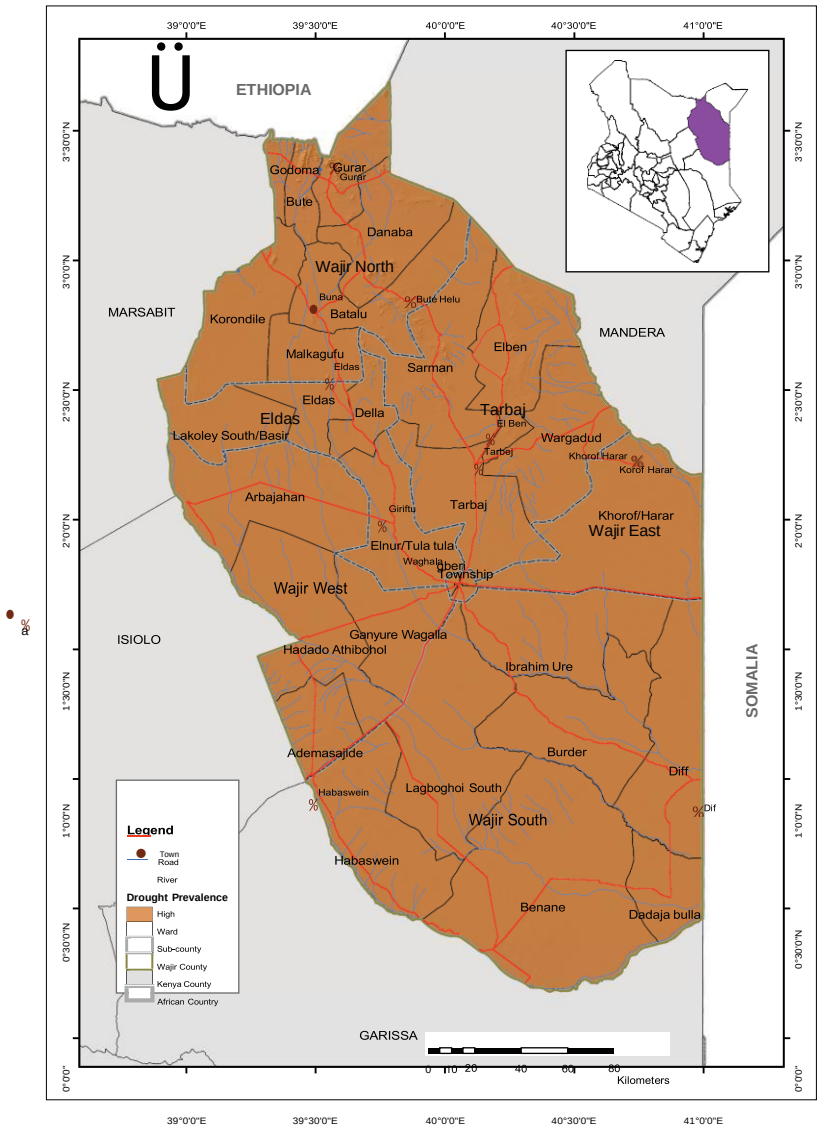


Figure 2: Map showing drought prevalence in Sub-Counties (Wajir County Hazard Atlas)

Table 3: Spatial Distribution of climate hazards and Risks in Wajir county

HAZARD	***RISK***	***WARD***
DROUGHT	Biodiversity loss Environmental Degradation	*ARBAJAHAN, HADADO HABSWINE KHOROFHARAR*
	Food and Water Insecurity	*WAGBERI TOWNSHIP*

		BARWAQO
	Reduce Livelihoods	*DIIF* *IBRAHIM URE* *ELBAN* *TARBAJ* *BUNA*
	Increase Migration:	*TARBAJ* *BUTE* *ELDAS* *KHOROF HARAR* *HADADO* *ARBAJAN* *BANANE*
	Increase Health Risks:	*ARBAJAHAN,* *HADADO* *HABSWINE* *KHOROFHARAR* *DIIF* *IBRAHIM URE* *ELBAN* *TARBAJ* *BUNA*
	Increase Conflict Over Resources	*BASIR LAKOLE* *ARBAJAHAN* *DIIF* *WARGADUD* *LAQBOQOL* *IBRAHIM URE*
	Reduce Economic activities/income	*ACROSS 30 WARDS*
	Increase Dependency on Aid	*TARBAJ* *BUTE* *ELDAS* *KHOROF HARAR* *HADADO* *ARBAJAN* *BANANE*
	Increase water scarcity	*BARWQO* *TONSHIP* *WAGBERI* *BUTE* *BURDER*
EXTREME TEMPRETURE	*Reduce human activity*	*ALL THE 30 WARDS*
	Increase in vector born diseases/skin diseases	*ALL THE 30 WARDS*

DESERT LOCUST INVASION	*Reduce pasture*	*ALL THE 30 WARDS*
	Reduce crop /livestock yields	*ALL 30 WARDS*
WIND STORMS	*Reduce visibility*	*ARBAJAHAN HADADO*
	Increase respiratory related diseases	*ARBAJAHAN HADADO WAGALLA*
DISEASE OUTBREAK	*Reduce livestock yield*	*ALL 30 WARDS*
	Increase livestock death	*ALL 30 WARDS*
FLASH FLOODS	*Reduce soil fertility*	*ALL 30 WARDS*
	Increase soil erosion	*ALL 30 WARDS*
	Increase habitat loss/displacement	*ALL 30 WARDS*

2.5 Current and Historical Climate Hazards and Trends

Wajir County is located in northeastern Kenya and experiences an arid climate characterized by hot and dry weather conditions for most of the years. The area is disposed to various climate hazards and has witnessed certain trends in recent years. The current and historical climate hazards is Drought where it is a recurrent climate hazard and it is frequently experienced over an extended periods of very little rainfall, leading to water scarcity, crop failures, and livestock losses, severe socio-economic impacts, affecting livelihoods and exacerbating food insecurity in the county.
Erratic rainfall has witnessed changes in rainfall patterns over time. Rainfall tends to be highly variable. In recent years, there has been an observed shift in rainfall distribution across the county, with

unpredictable patterns. This variability makes agricultural planning and water resource management challenging.

Also we have Desertification as a hazard in the county and this is the expansion of arid and semi-arid landscapes, characterized by the encroachment of desert conditions that poses a significant environmental challenge. This includes overgrazing, deforestation, and soil erosion. While drought is a common occurrence, the County is also prone to occasional flash floods in some parts, especially during heavy rainfall events. The arid landscape has low absorption capacity, leading to rapid runoff and the potential for flooding. Flash floods can cause damage to infrastructure, displacement of communities, and loss of life. Other climatic hazards are livestock disease and conflict (Resource base conflicts).

Rising temperatures: Like many other regions globally, Wajir County has experienced a warming trend over the years. Rising temperatures exacerbate the aridity of the area, leading to increased evaporation rates, higher water demand, and heat-related health risks. High temperatures also impact agriculture and livestock rearing.

Decreasing water availability: Wajir County faces challenges in accessing reliable water sources due to its arid nature and limited water infrastructure. The combination of low rainfall and high temperature contribute to reduced water availability. This scarcity affects both human and livestock populations and requires innovative water management strategies.

Land degradation: Overgrazing, deforestation, and unsustainable land management practices have led to land degradation in Wajir County. Reduced agricultural productivity exacerbates the effects of drought. Several initiatives and efforts were made to address these climate hazards and trends at various levels, including community-based adaptation initiatives, water conservation measures, and sustainable land management practices. The Kenyan government, along with local and international organizations, is working to promote climate resilience and adaptation strategies in Wajir County and other vulnerable regions of the country.

2.5.1 National Current and Historical Climate Trends

This presents Kenya's climate context for the current climatology, 1980-2015, derived from observed historical data. Information should be used to build a strong understanding of current climate conditions to appreciate future climate scenarios and projected change. You can visualize data for the current climatology through time series trends and patterns in the seasonal cycle. The analysis is available for both annual and seasonal data.

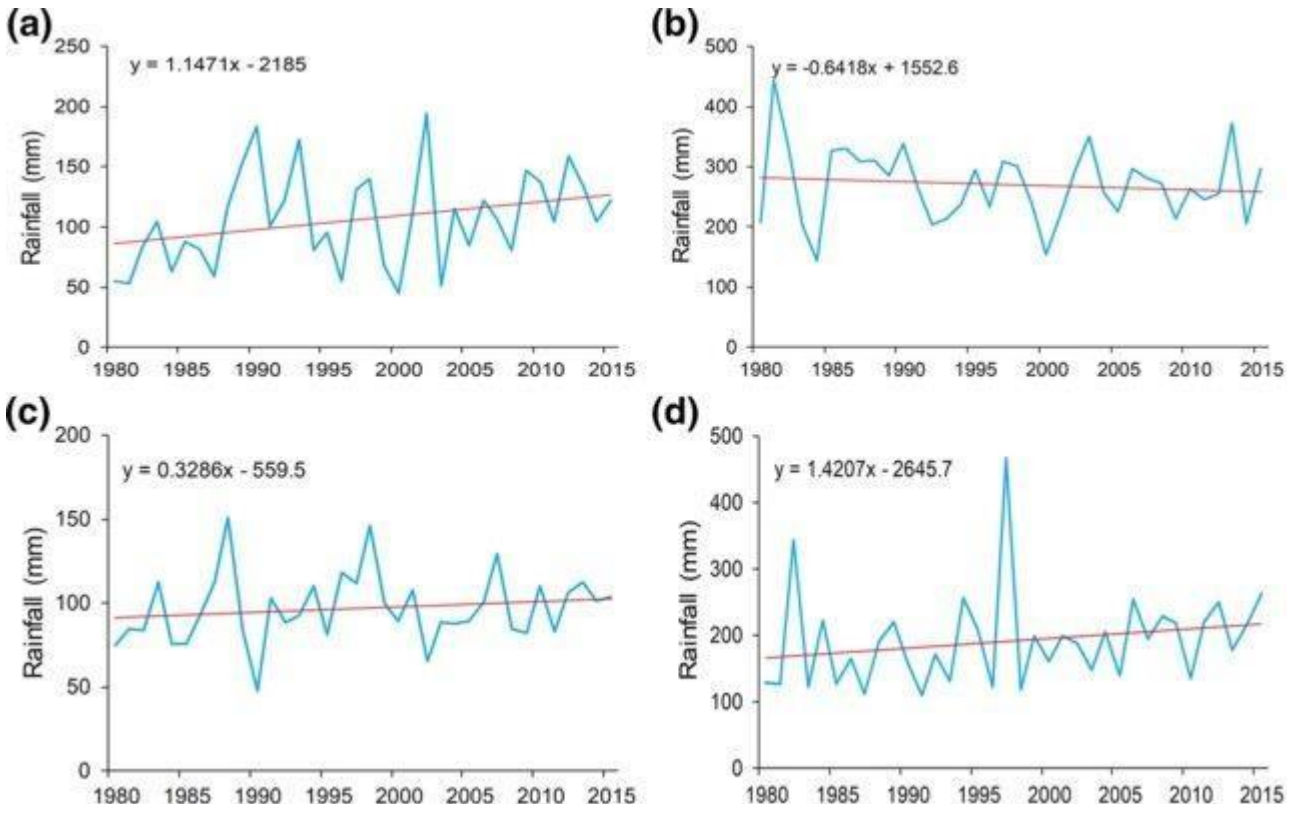


Figure 3: Kenya Time series of rainfall trends and patterns in the four standard seasons:

a) December–January–February.
b) March–April–May.
c) June–July–August; and
d) September–October–November. Source of data: (**KMD)**

2.5.2 County Current and Historical Climate Trends

This presents Wajir County's climate context for the current climatology, 1981-2020, derived from observed historical data. Information should be used to build a strong understanding of current county climate conditions to appreciate future climate scenarios and projected change. You can visualize data for the current climatology through a time series, the seasonal cycle, or as a monthly means. The analysis is available for both annual and seasonal data.

Wajir County Annual Total Rainfall Trend

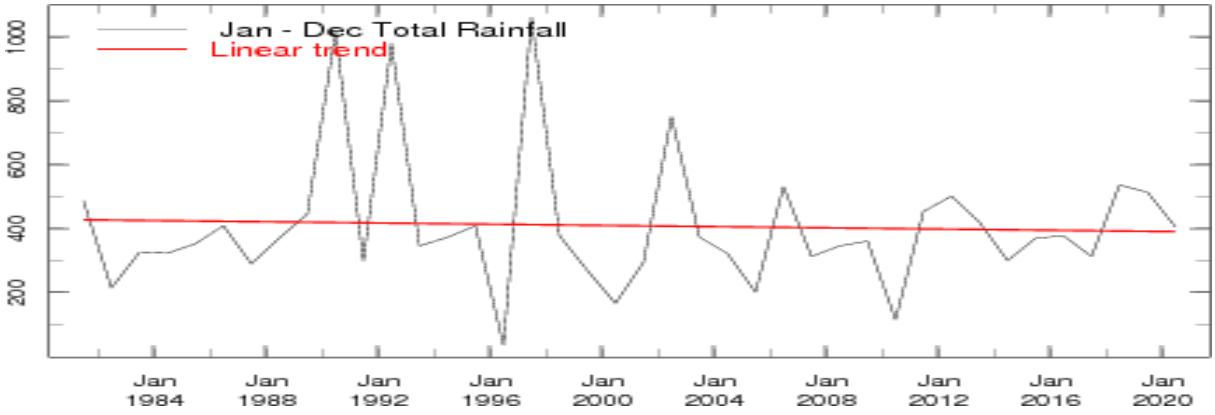


Figure 4: Wajir County Annual Total Rainfall Trend (KMD)

Wajir Mean Monthly Rainfall and Maximum Temperature

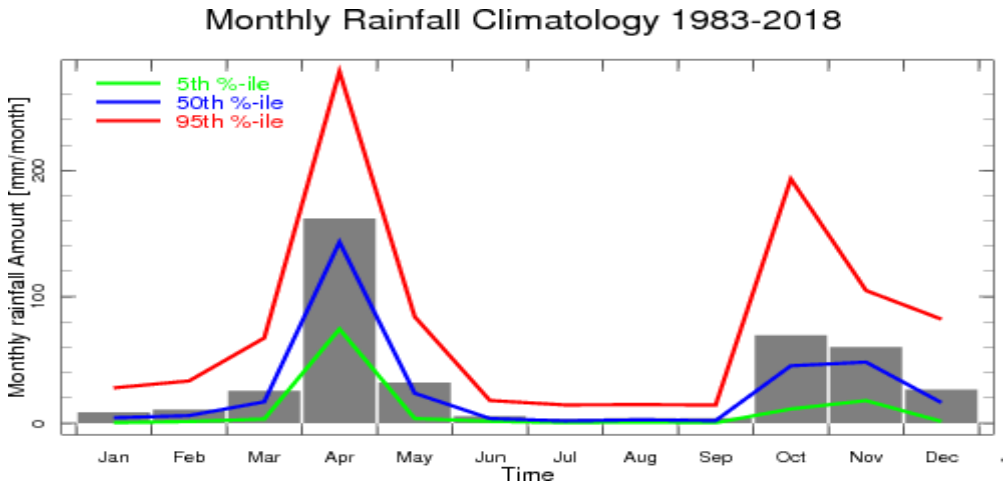


Figure 5: Wajir Mean Monthly Rainfall (KMD)

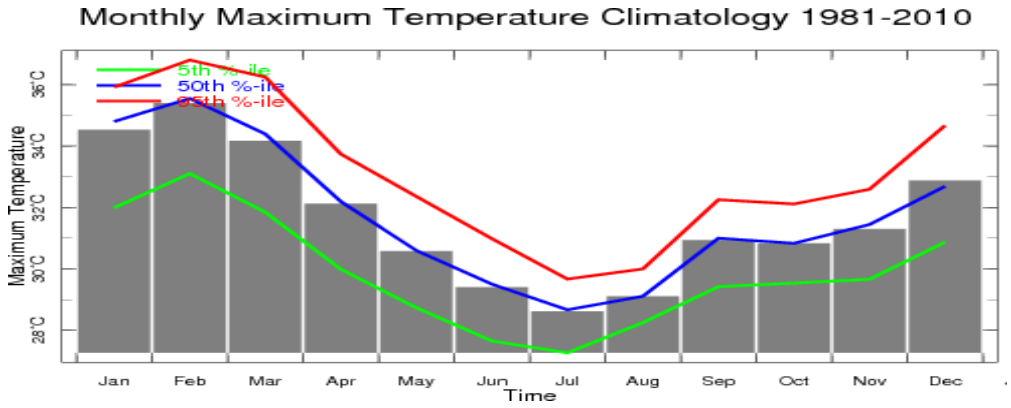


Figure 6: Wajir Mean Monthly Maximum Temperature (KMD)

Wajir County Seasonal Total Rainfall Trends

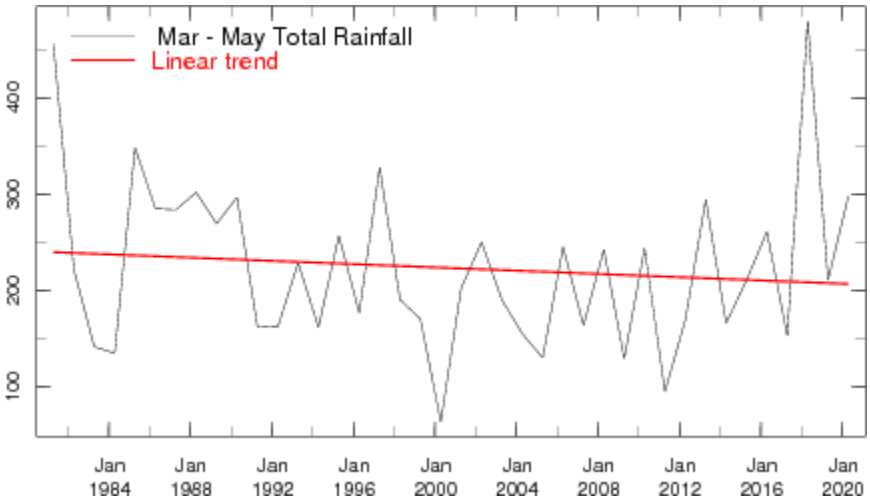


Figure 7: Wajir Count MAM Rainfall Trend (KMD)

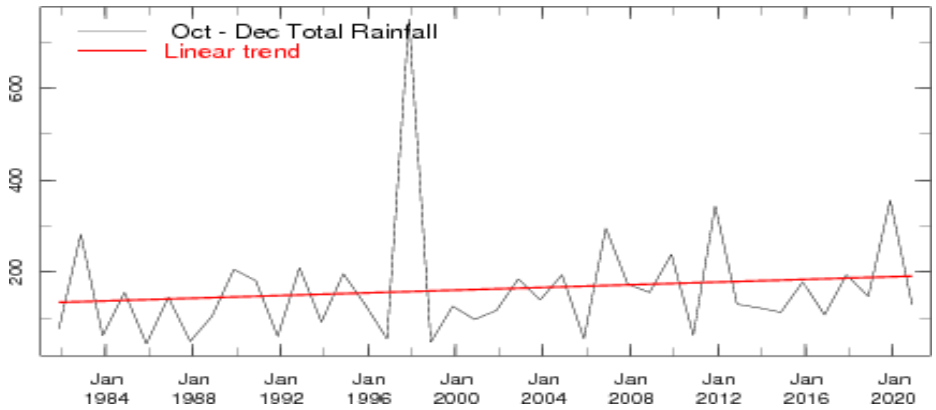


Figure 8: Wajir County OND Rainfall Trend (KMD)

2.6 Exposure and vulnerability profiles of the county

Wajir County is located in the Northeastern region of Kenya between latitudes 3° N 60‘N and 0 20‘N and Longitudes 39° E and 41° E and covers an area of 56,685.9 Km2. It borders Somalia to the East,

Ethiopia to the North, Mandera County to the North-East, Isiolo County to the South-West, Marsabit County to the West and Garissa County to the South. The county is home to various communities,

including the Somali's and is predominantly Arid, with limited access to water and characterized by a nomadic pastoralist lifestyle. Exposure and vulnerability profiles can be analyzed in relation to several key factors: Climate Change and Environmental Factors where the county is highly susceptible to climate change impacts, including erratic rainfall patterns, prolonged droughts, desertification, conflict(Resource base conflicts) and livestock diseases. Limited water resources and recurring droughts making communities vulnerable to water scarcity, food insecurity, and malnutrition. Environmental degradation, such as deforestation and land degradation, exacerbates the vulnerability of communities.

The main Livelihood and Economy in the county is Pastoralism, with majorly communities relying on livestock for their sustenance and income. Fluctuations in rainfall patterns and prolonged droughts directly affect the availability of pasture and water, leading to livestock deaths, loss of income, and increased vulnerability.

2.7 Differentiated impacts of climate trends and risks

The past and current climate trends and risks in Wajir County have had differentiated impacts on various key interest groups, particularly women, youth, ethnic minorities, people living with disabilities, and other marginalized and vulnerable groups. These specific challenges and vulnerabilities on key interest groups are.

Women in Wajir County often bear the primary responsibility for household tasks, including water and food provision. Climate change exacerbates their burden as water scarcity and droughts increase. Limited access to education and economic opportunities restricts women's ability to adapt to changing conditions, hindering their resilience.

Gender inequalities, such as limited decision-making power and control over resources, reduce women's capacity to cope with climate risks and contribute to their vulnerability.

Youth: Unemployment and limited economic prospects for youth in Wajir County exacerbate their vulnerability to climate change impacts. As traditional livelihoods, like pastoralism, become less viable due to climate-related challenges, youth face reduced opportunities for income generation. Lack of access to quality education and skills training further limits their ability to adapt and find alternative livelihood options.

People Living with Disabilities: People living with disabilities often face additional barriers in adapting to climate change impacts and this includes. Limited mobility, communication challenges, and reduced access to information and services can hinder their ability to cope with disasters and access support during emergencies. Inadequate infrastructure and facilities, including inclusive evacuation centers, can pose significant challenges for their safety and well-being.

Other Marginalized and Vulnerable Groups such as the elderly, internally displaced persons (IDPs), and those living in poverty, face compounding risks associated with climate change. Limited access to basic services, including healthcare, water, and sanitation, is further constrained by climate-related challenges. Inadequate social protection measures and weak governance structures may exacerbate the vulnerability of these groups.

Addressing the differentiated impacts on these key interest groups requires targeted interventions and policies that prioritize their unique needs and perspectives. Ensuring the participation and inclusion of these groups in decision-making processes, promoting access to education and skills training, strengthening social safety nets, and implementing climate-resilient infrastructure are vital for building their resilience and reducing vulnerability in Wajir County.

CHAPTER THREE: FUTURE CLIMATE SCENARIOS FOR WAJIR COUNTY

3.1 National and downscaled climate change projections

Wajir County experiences a tropical semi-desert climate with historical monthly temperatures ranging from 29-39°C while the annual average temperature falls between 31°C and 36°C. The annual average precipitation in the county is between 290 mm and 350 mm, distributed in two rainy seasons: "long rains" from March to May; and "short rains" from October to December. The driest and hottest months are January, February, and March. Due to its vastness, the county experiences a spatial variation in precipitation and temperature, especially in the north. This climate supports a variety of crops, such as sorghum, watermelon, and …….as well as the rearing of livestock. Impacts of climate change have been felt in the county as high temperatures are experienced with heavy and erratic rainfall and long dry spell that interfere with pastoral life and crop productivity.

The projection indicates that Rainfall is expected to increase slightly by 2050, especially for the 'short rains' between October and December. Precipitation will remain highly variable and uncertain, with extreme rainfall events likely to increase in frequency, duration, and intensity. The period between heavy rainfall events is likely to increase, as well as the proportion of rainfall that occurs in extreme rainfall events

3.2 County future climate scenarios

There is the likelihood of warming, with average temperatures expected to continue rising. The annual mean temperature trends show an increase in temperature for both seasons in the past and in the future. The average rainfall is expected to increase slightly by 2050, especially for the 'Short Rains'. The total annual rainfall trends showed a decrease in precipitation in the past which will continue in the future (2020-2040) for the long rainy season (Figure xx). During the short rainy season, the rainfall will increase. In both cases, projections show an increase in rainfall for the period 2024-2050 (Figure xx). The precipitation will remain highly variable, with extreme rainfall events likely to increase in frequency, intensity, and duration.

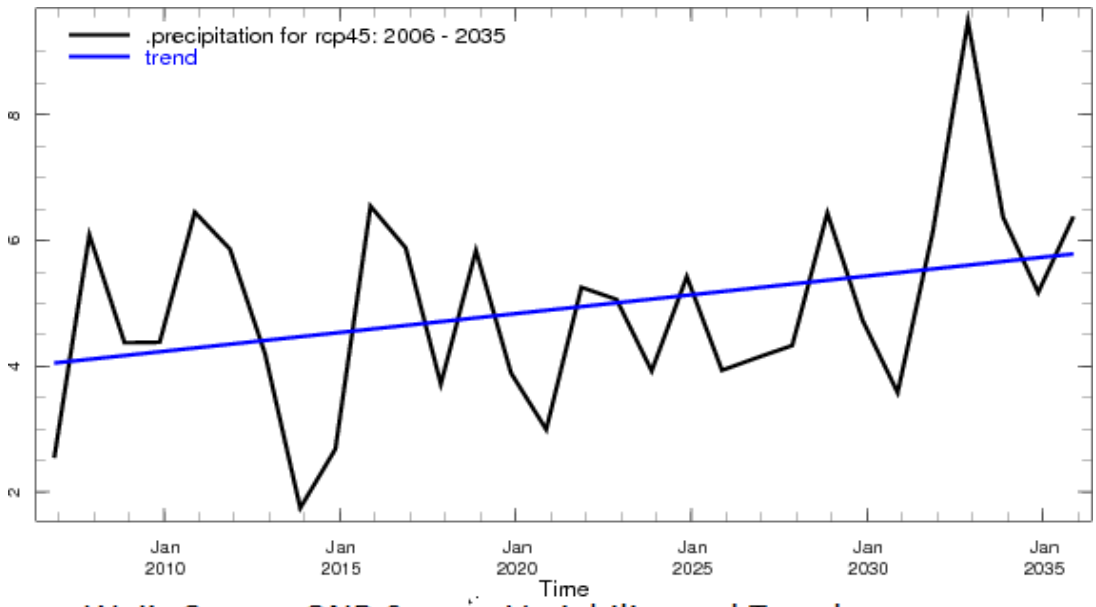


Figure 9:Wajir County Oct-Dec rainfall season current and future variability and trend

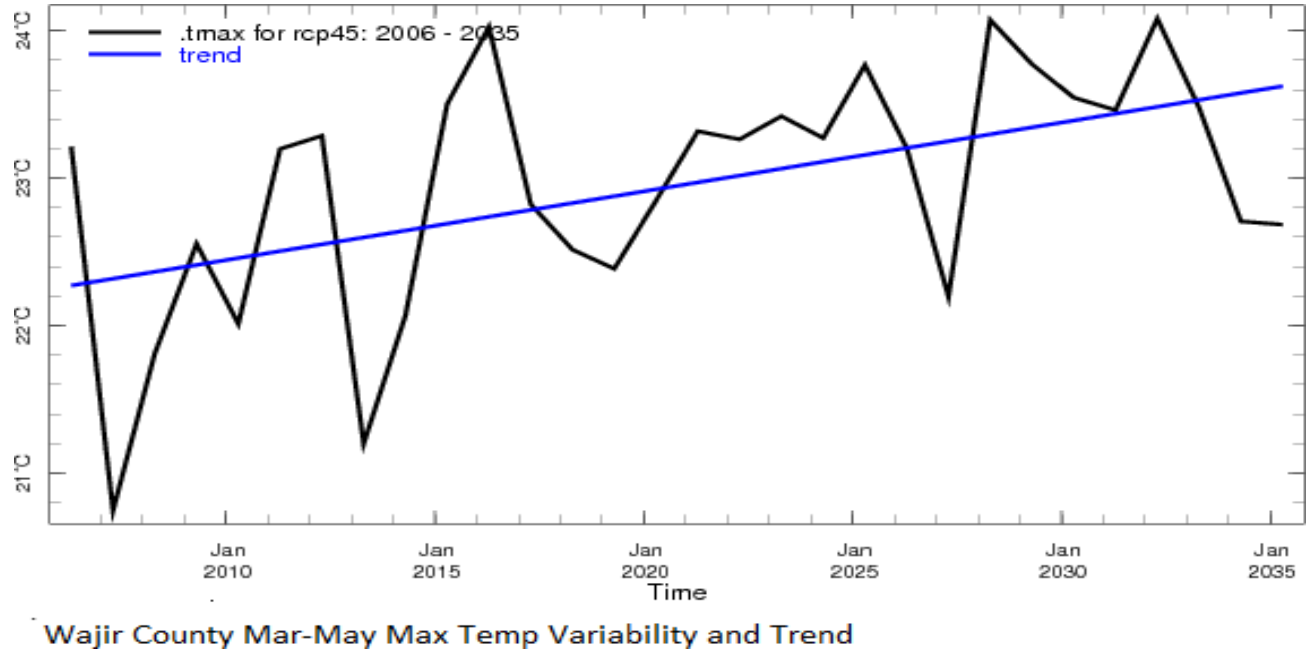


Figure 10:Wajir County maximum temperature current and future variability and trend

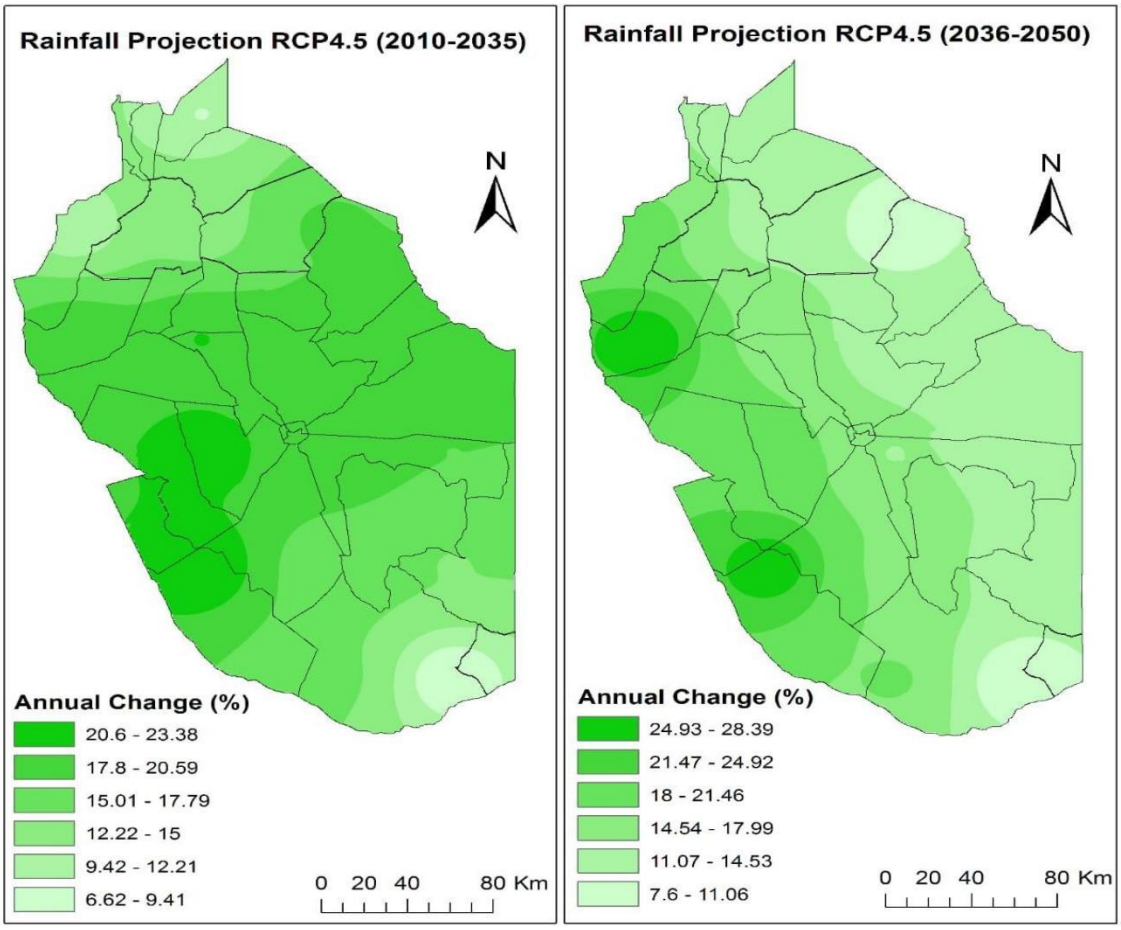


Figure 11:Current 2010-2023 and future 2024-2050 RCP 4.5 rainfall percentage change

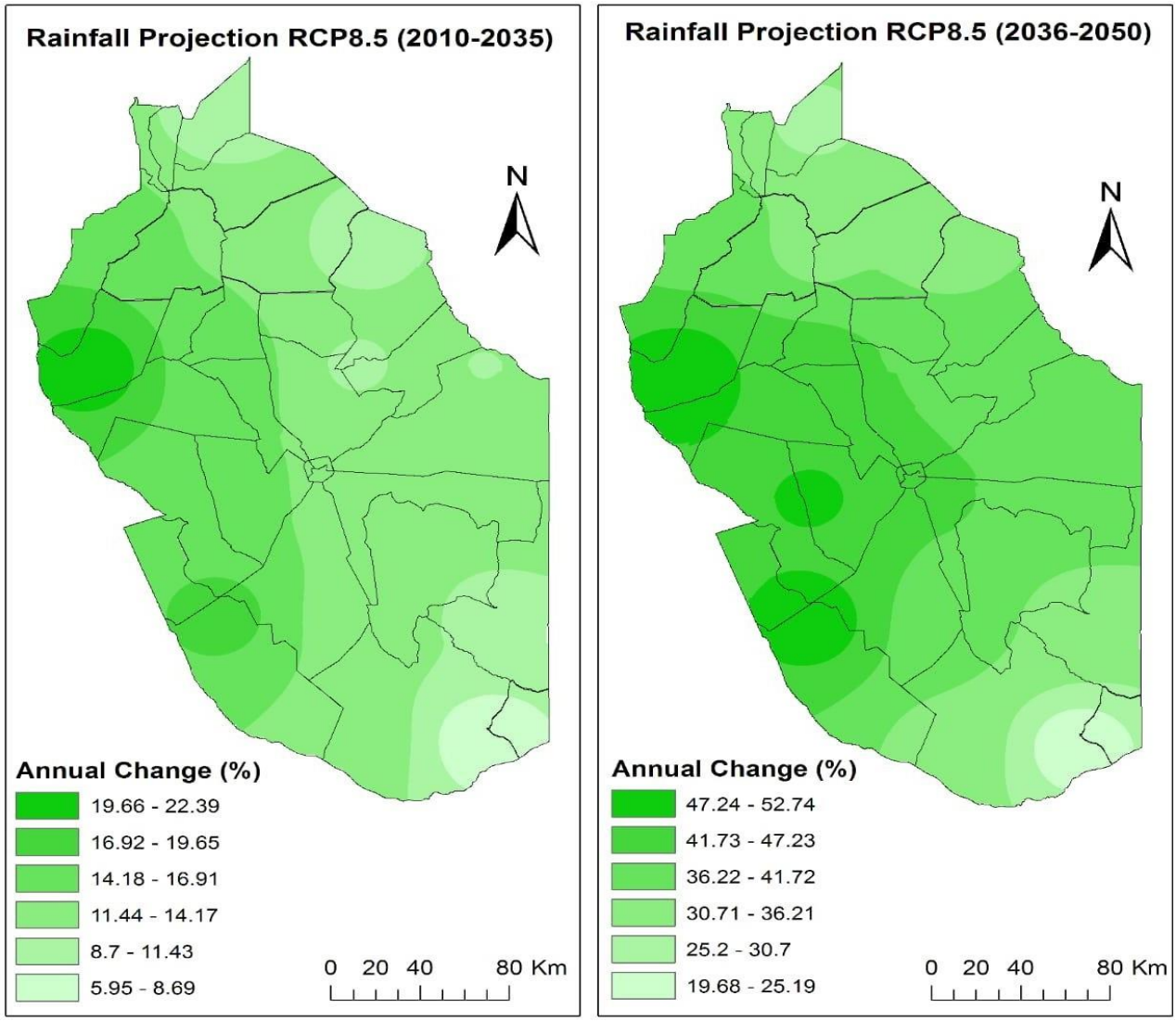


Figure 12:Current 2010-2023 and future 2024-2050 RCP 8.5 annual rainfall percentage change

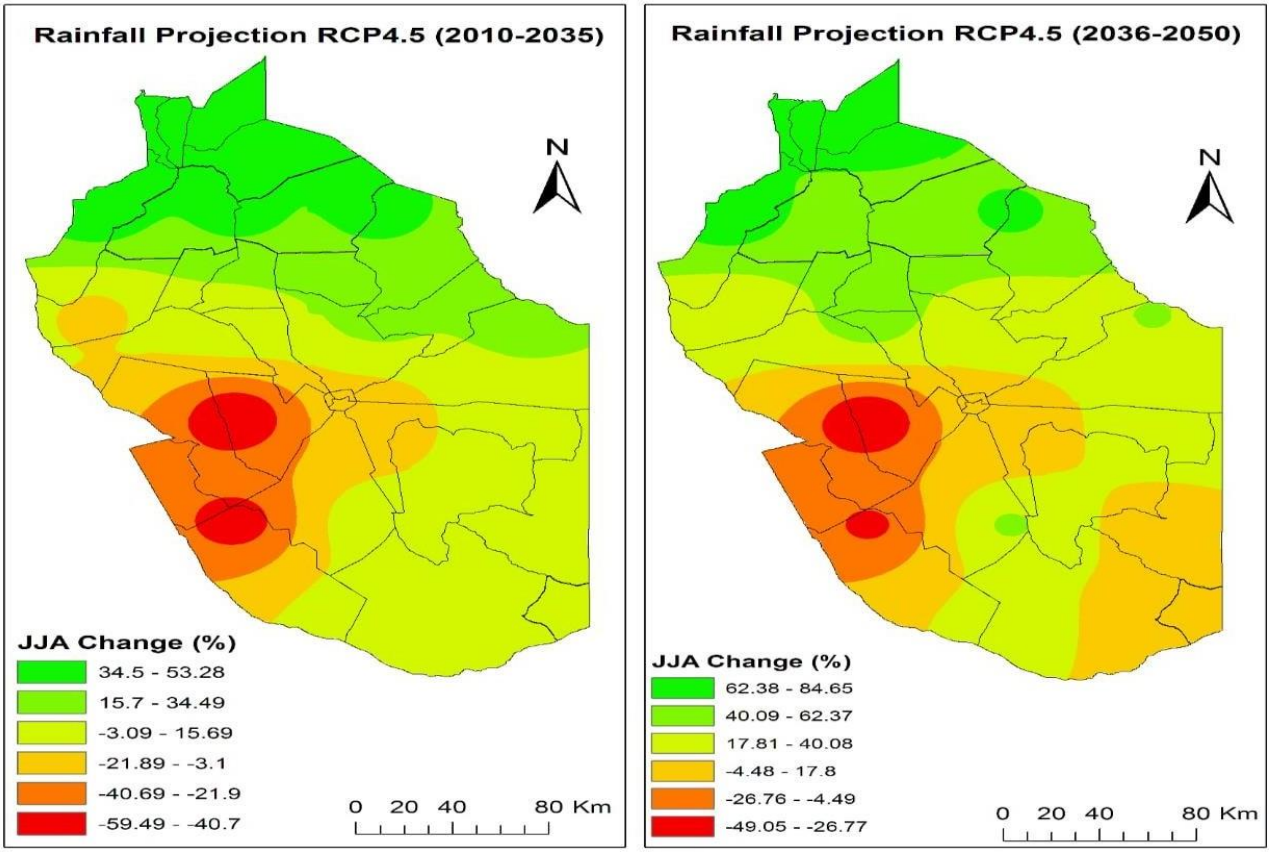


Figure 13:Current 2010-2023 and future 2024-2050 RCP 4.5 JJA rainfall percentage change

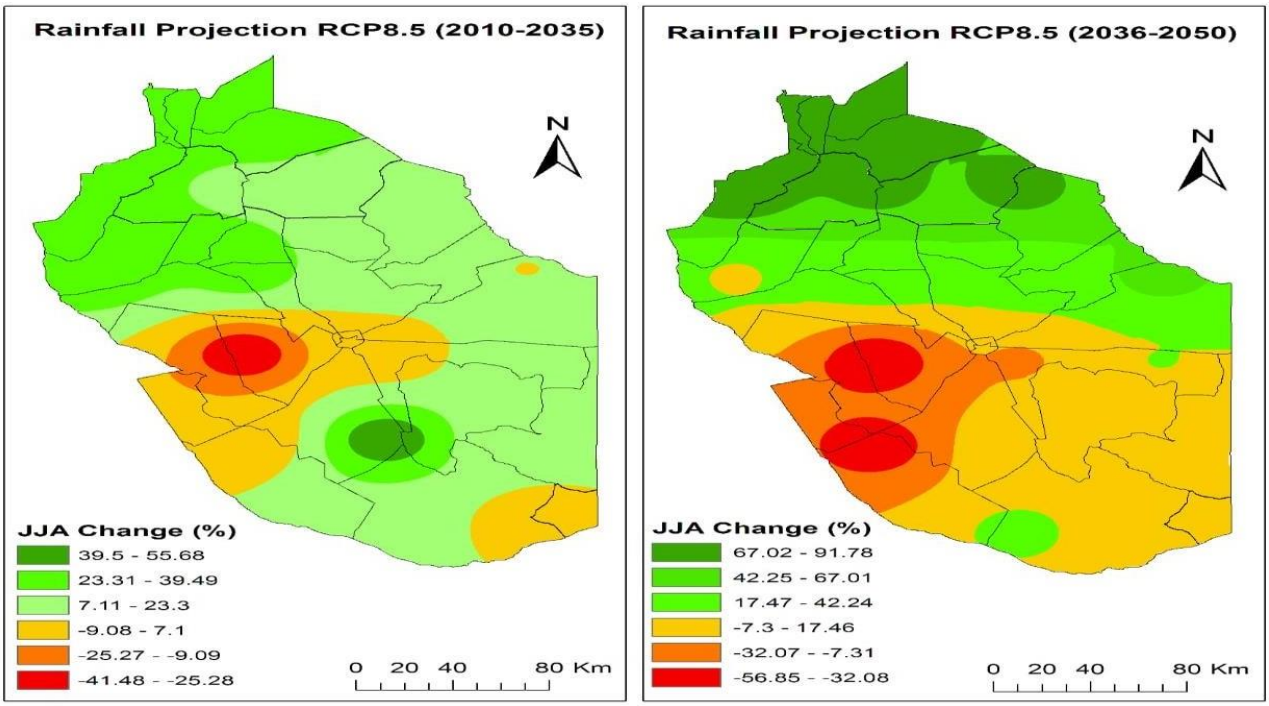


Figure 14:Current 2010-2023 and future 2024-2050 RCP 8.5 JJA rainfall percentage change

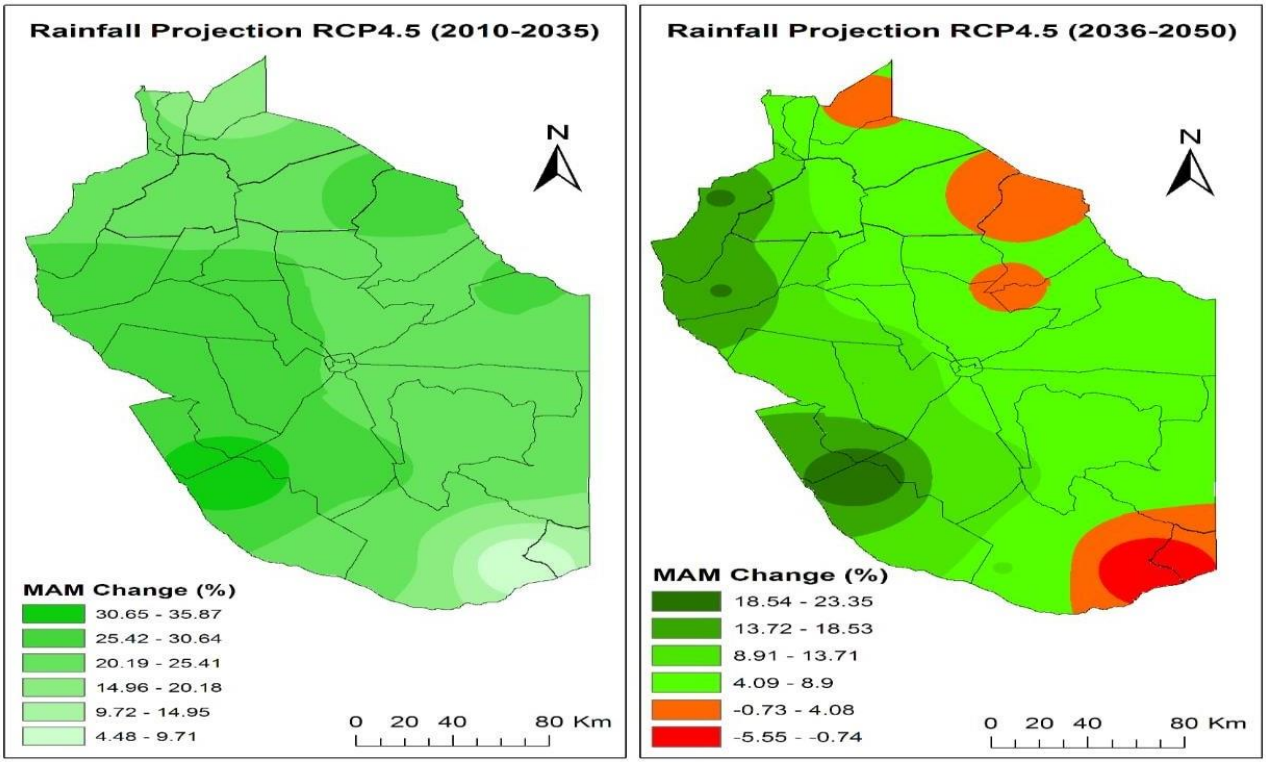


Figure 15:Current 2010-2023 and future 2024-2050 RCP 4.5 MAM rainfall percentage change

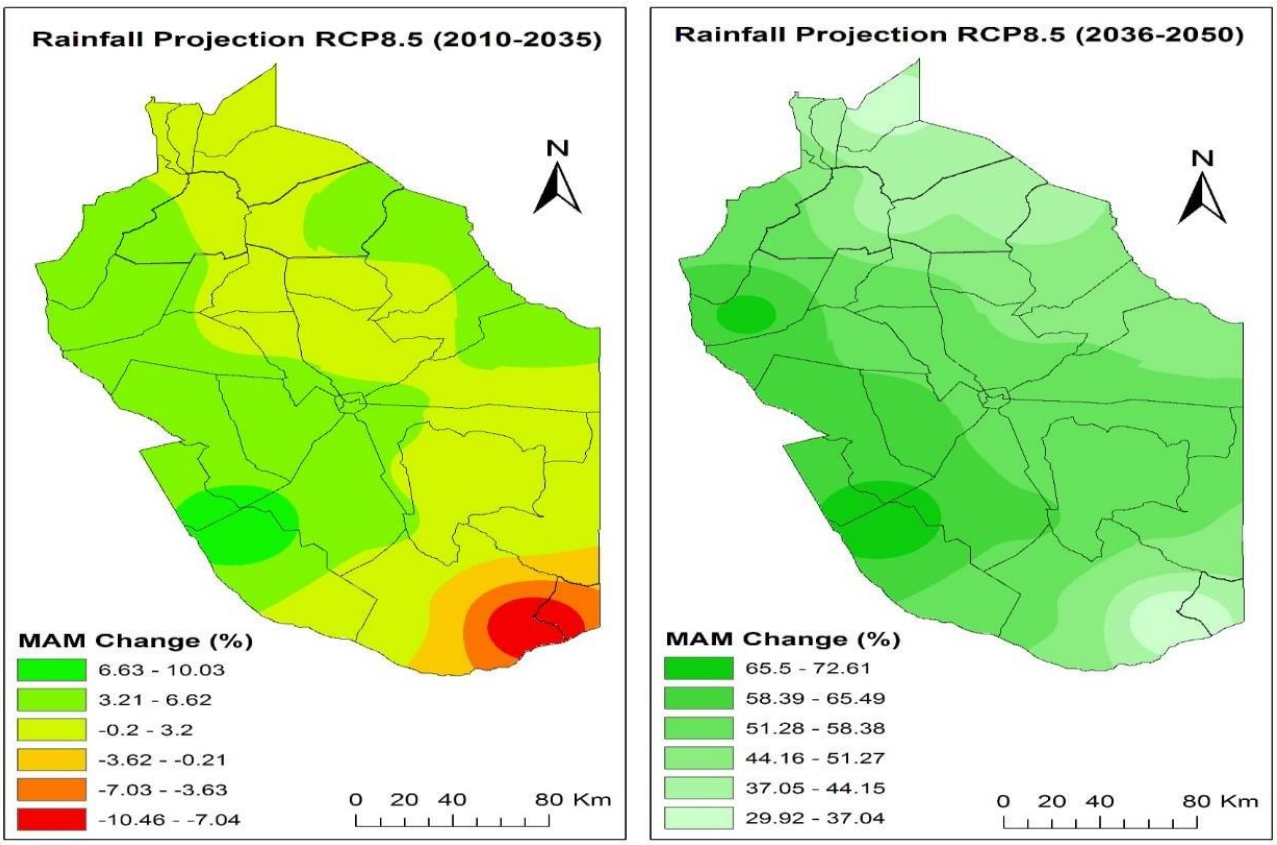


Figure 16:Current 2010-2023 and future 2024-2050 RCP 8.5 MAM rainfall percentage change

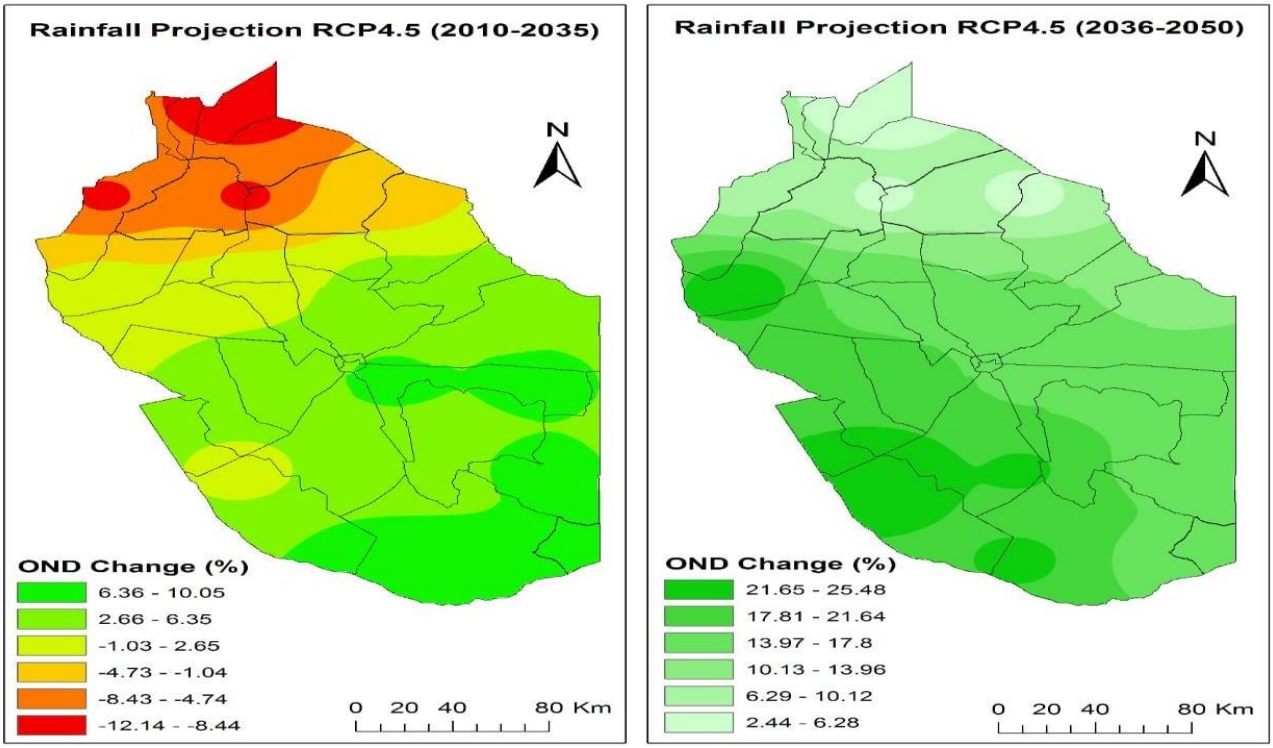


Figure 17:Current 2010-2023 and future 2024-2050 RCP 4.5 OND rainfall percentage change

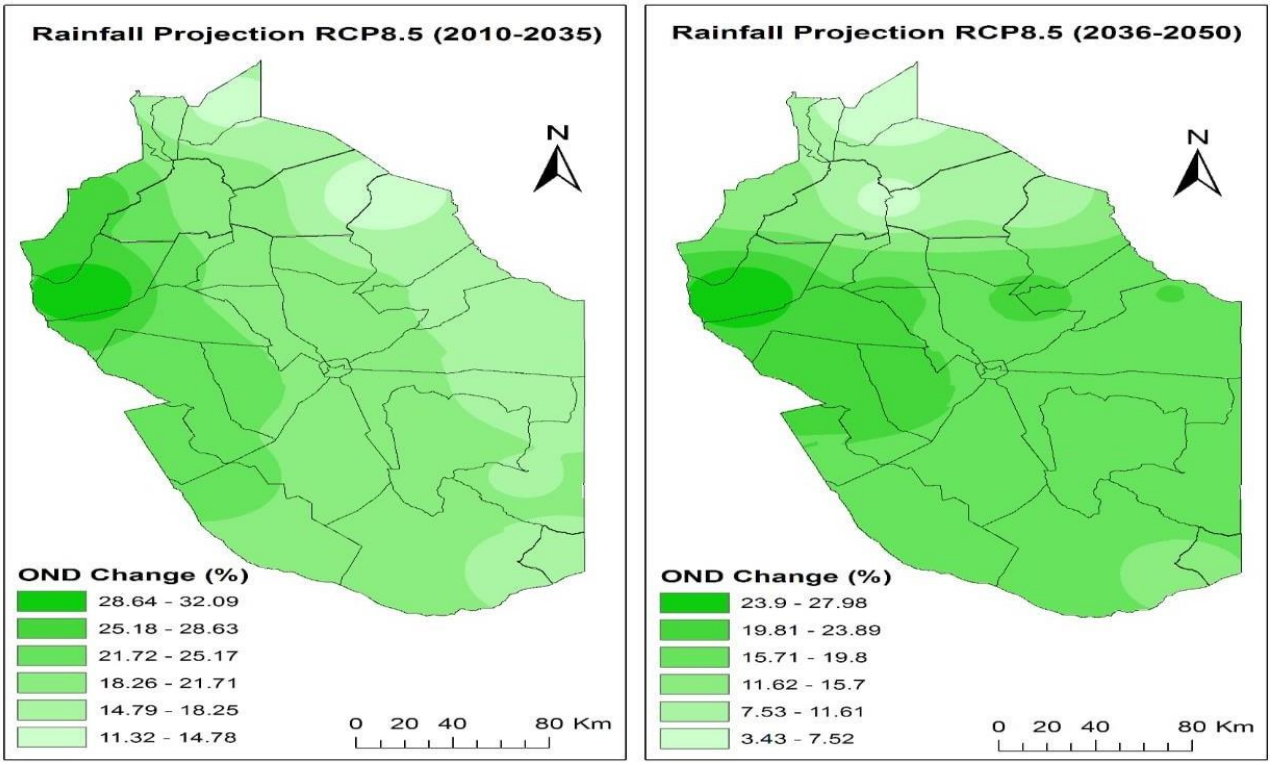


Figure 18:Current 2010-2023 and future 2024-2050 RCP 8.5 OND rainfall percentage change

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

4.0 : Introduction

This section presents the strategies that various actors are currently implementing within the county to address climate related risks and hazards. Various actors including the County Government and other partners have been implementing various actions to deal with the impacts of climate change. These strategies are aimed to build resilience, enhance adaptive capacity, and reduce vulnerabilities to climate-related hazards. Examples of these strategies include; Designing and establishing infrastructure to withstand climate-related hazards such as droughts, developing adaptive water management strategies to cope with changing precipitation patterns and ensure water availability for various sectors, Establishing financial mechanisms, such as climate funds, to support adaptation efforts, especially in vulnerable regions, Promoting public awareness, participation, and education to empower communities to adapt to climate change, developing climate related legislations.

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

Adaptation strategy offers the opportunity of bringing different perspective that otherwise may be missed by traditional local responses. This concept can be particularly useful in identifying critical resilience projects with consideration to long-term resilience projects.

Adaptive strategies include:

Drought

To counter the menace of drought which has great impact on livestock, crop production, availability of water, school retention, health and food security, the community has embraced innovative practices such as; increasing water sources through drilling boreholes, deepening shallow wells, rain water harvesting, increasing water storage facilities, recycling water and minimizing water wastage.

The county Government and partners encouraged farmers to adopt planning of drought-resistant crops such as maize, sorghum, millet, beans and vegetables. The community also adapted pasture production and conservation to feed their livestock during the dry period.

Food insecurity is intervened through provision of relief food, cash transfer programs and destocking by the Government and partners.

To address scarcity of water the government and partners engaged in; drilling boreholes, water trucking and provision of subsidized fuel. The community were also engaged in deepening boreholes.

Environmental Degradation

Some of the key forms of environmental degradation in Wajir County include: Uncontrolled cutting down of trees for fuelwood, construction and fencing of large private farms, Unsustainable land management practices, such as overgrazing and improper farming techniques contribute to soil erosion in Wajir County, destruction of water sources, Inadequate solid waste management systems and improper disposal of solid waste contribute to pollution in Wajir County.

The community has implemented measures to counter these forms of degradation such as Sustainable Land Management, Establishment of grazing area, establishment of rangeland bill, catchment conservation and improved infrastructure and technology e.g irrigation systems as well as strengthened environmental organizations.

Pest and diseases

As a result of climate change the county is vulnerable to a number of diseases as a result of climate change include water born diseases. The diseases are currently mitigated through provision of adept health services in hospitals, accessibility to clean water and sanitary facilities to limit the outbreak of waterborne diseases, heightened surveillance for new outbreaks, and outreach programs to reach nomads living in far areas.

To combat tropical diseases such as malaria and dengue fever, the community has adopted preventive measures such as the use of mosquito nets.

To compact pests', the community embraced use of pesticides and Planting of pest tolerant crops.

Human- Wildlife Conflict

Forest are habitats for wildlife, degradation of forest led to destruction of wildlife habitats and degradation of natural resources which led to invasion of wildlife in farmland in search for pasture thus human wildlife conflict.

The community has devised ways to mitigate human-wildlife conflict, such as community sensitizations, erecting physical barriers, thorny fences. Livelihood diversification by the communities adjacent to forests, early warning systems and rapid response teams by wildlife rangers.

Resource based conflicts

Wajir County faces resource based conflicts primarily related to water and pasture resources. Adapting to these conflicts requires a holistic approach that addresses the underlying causes and promotes sustainable resource management. potential adaptation strategies for resource-based conflicts in Wajir County include:

Strengthening local conflict resolution mechanisms, promoting dialogue, and fostering peaceful coexistence among different resource (Maslax system).

Improving infrastructure such as increasing water sources and road networks.

Encouraging diversification of livelihoods and Reducing dependency on a single resource, such as livestock

Adapting Community-based natural resource management by engaging local communities in decision-making processes related to resource management to foster ownership and cooperation.

4.2 Effectiveness of adaptation/resilience strategies to future climate risks

The adaptation strategies provided are mixture of ongoing and planned strategies that are intended to inform and assist communities in identifying potential alternatives in order to address current and future climate threats. These strategies have a varying level of effectiveness as assessed during Ward PCRA process.

Strategies that were found to be highly effective in addressing future climate scenarios include: Climate smart Agriculture, adoption of drought-resistant crops, Water harvesting through high yield mega dams, strengthening of irrigation, food diversification, preservation and storage to address prolonged droughts, livestock vaccination, pest monitoring and surveillance to address wide-spread pests and diseases, use of wind breakers and early warning systems. Diversification of livelihoods, and community awareness were found to be the most effective adaptation/ resilience strategies in addressing future scenarios in the county.

Action points identified to be crucial in enhancing effectiveness of current strategies in addressing future scenarios include: funding, strengthening of institutional capacity, research and innovations, improvement of market systems, simplified early warning systems that are accessible to vulnerable groups, utilization of media for widespread community awareness, exploration of alternative practices, development and implementation of regulatory frameworks that govern best practices in climate change matters.

Table 3:Adaptation Strategies in Wajir County

Risk/Hazard	Livelihood/Economic System	Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information
Drought	• Water	• Increasing water sources through drilling of boreholes, excavation of mega water pans, desilting of existing pipes. • Water harvesting. • Use of renewable energy in boreholes and water pans to reduce running cost as well enhance efficiency • Use of water efficient irrigation practices such as drip irrigation • Capacity building of water user associations. •	• CGW • KCSAP • WFP • Mercy Corps • ELRP • NDMA • RPLRP • Save the Children • KRCS	Rain water harvesting mostly done by youth and women Management committees of the WUA are gender compliant

Risk/Hazard	Livelihood/Economic System	Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information
	Agriculture	• Provision of extension service to farmers • Utilization of Pastoral field Schools to enhance the uptake of TIMPs • Use of early maturing and drought tolerant seeds. • Promotion of drought resilient varieties of crops • Use of farm inputs such as fertilizers and pesticides • Investment in soil and Land Management practices • Integrated crop pests and disease management. • Increase investment in Pest and disease control measures	• CGW • KCSAP • WFP • RPLRP	Youth headed HHs used TIMPs in their farms as compared to adults
	Food insecurity	• Promotion of alternative livelihoods • Promotion of kitchen garden technologies • Nutritional outreaches to target vulnerable groups • Cash transfer programs to target vulnerable HHs • School meal programs • Provision of relief food	• CGW • WFP • KCSAP • SAVE THE CHILDREN	Women are more prominent in Poultry production CTP programs usually target the elderly and PLWD

Risk/Hazard	Livelihood/Economic System	Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information
Disease	• Health	• Improved health infrastructure • Employment of technical staffs • Capacity building of technical staff. • Provision of clean and safe water • Promotion of hygiene and sanitation programs • Improve disease surveillance and diagnosis	• CGW • SAVE THE CHILDREN • WFP • UNICEF • WARDA	Programs targets all vulnerable groups (men, youth, women and PWDs)
Environmental Degradation (Deforestation , soil erosion and ,	Environment	• Employment and deployment of forest rangers • Adoption of alternative source of energy • Practice agroforestry. • Community sensitization on climate change • Increase forest cover through afforestation • Practice sustainable land management	• KFS • CGW • WFP	Program engages all genders

Risk/Hazard	Livelihood/Economic System	Climate Resilience Strategies	Stakeholder Group Applying the Strategy	Gender and Social Inclusion information
Waste menace	• Environment • Health	• Use of septic tanks • Dump sites • Provision of cleaning agents and disinfectants • Use of private trucks in garbage collection	• CGW • Private scetor	Mainly youth are engaged in garbage collection
Flash floods	Agriculture Trade Health	• Dissemination of early warning messages • Infrastructure development eg bridges and culverts • Creation of public awareness on the risk of flash floods	• CGW • KRCS • NDMA	All gender inclusive
Resource based conflict		• Strengthening of peace committees • Strengthening local conflict resolution mechanisms • Increasing water sources • Adopting community-based resource management	• CGW • COMMUNITY • NG	Males dominate
Human wildlife conflict		• Erecting of physical barriers and thorny fences • Rapid response team by wildlife rangers • Community sensitization on wildlife importance	• KENYA WILDLIFE • CGW	Across genders
Disease causing vectors (Mosquitoes)	• Health	• Control of mosquito breeding grounds • Community sensitization	• CGW • NG • Mentor	Across genders

CHAPTER FIVE: WAJIR COUNTY CLIMATE STRATEGIC ADAPTATION INVESTMENT/ACTION PRIORITIES

As discussed in the previous chapter, the major climate risks and hazards identified by stakeholders across the six sub-counties in Wajir include drought, diseases and pests, solid waste management, strong winds, floods, deforestation, mosquito infestations, high temperatures, and the spread of invasive species, specifically the mathenge plant.

While these risks are experienced throughout the county, their prevalence may vary in different localities within the county. The prioritization of climate hazards in Wajir County was determined by successful community engagement forums at the ward level, as well as Sub-county and County Level Multi-stakeholder workshops. These prioritizations were based on the current and projected climate outlook. Subsequently, sector-specific response actions for the identified climate risks were identified and prioritized.

The Wajir County Participatory Climate Risk Assessment (PCRA) process, which led to the development of these strategic adaptation investment priorities, was inclusive and involved various stakeholders, such as youths, women, persons with disabilities (PLWD's), local partners, professional bodies, county government institutions, and leadership. The process was facilitated by a well-coordinated technical working group and culminated into a comprehensive Wajir County PCRA Report.

By prioritizing these strategic adaptation investments and actions, the County aims to enhance resilience, mitigate climate risks, and ensure sustainable development in the face of ever-changing climate conditions. These priorities are aligned with the County's Integrated Development Plans (CIDP) commitment to enhancing water access and security, promoting self-reliance in food production, and preserving its natural resources, while safeguarding the well-being and livelihoods of its residents.

This chapter presents prioritized strategies for addressing climate risks and their impacts in four priority sectors: water, agriculture, environment, and disaster management. These strategies are summarized in Table 5.

Table 4:Strategic Priority Areas Summary

Hazard/Risk	**Priority Areas of Investment**			
Drought	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Management of water systems through identification, mapping, protection of water sources, monitoring and promoting water conservation practices. Capacity development in water sector and engagement of communities Exploration of underground water reserves Promote renewable energy use (solar) in water extraction and supply Protection & conservation of water catchment area, reservoirs and other important areas Resource mobilization	Establishment of Rangelands Management Initiatives Diversification of livelihoods through mixed farming, entrepreneurship, skills development and value addition chains. Embrace innovative and sustainable farming through adoptive technology, provision of drought tolerant crops and breeds. Enhance production, conservation and marketing of pasture and fodder. Employ agricultural research activities on soil profile, pests-disease and suitable varieties.	Reduce and curb environmental degradation Reduce overstocking and overgrazing through policy directives Afforestation and reforestation schemes to manage raising temperatures and attracting rain.	Dissemination of early warning messages and information Access to accurate climate information systems Monitoring and risk assessment Emergency fund allocation

	for rain water harvesting			
Hazard/Risk	**Priority Areas of Investment**			
Pests & Diseases	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Protection of water sources. Treatment of water. Waste management and control.	Enhance animal health management systems Enhancement of pest and disease control Destocking and rearing of resistance breeds Increase availability of essential drugs and vaccines Enhance forage production for livestock Enhance extension services	Solid and toxic waste management and control.	Promote disease surveillance Enhance use of early warning system
Hazard/Risk	**Priority Areas of Investment**			
Solid Waste Management	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Establish proper sewerage	Promotion and development of renewable biogas energy.	Community Sensitization on proper solid waste management.	Development and implementation of Solid Waste

	systems and recycling plant.	Sustainable waste management practice through production of organic fertilizer from waste products.	Encourage waste recycling & proper disposal mechanisms	Management Framework
Hazard/Risk	**Priority Areas of Investment**			
Strong Winds	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Promote ways of reducing evaporation rate in open water sources.	Increase vegetation cover and restoring soil profile	Afforestation/ agroforestry. Harvesting wind energy.	Access to Climate Information System
Hazard/Risk	**Priority Areas of Investment**			
Deforestation	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Harvesting and water reticulation systems to increase water availability for afforestation.	Promote agroforestry. Enhance seedling production of drought tolerant plants and crops. To foster the development of non-wood forest products value chains and marketing Establish soil testing and profiling mechanisms and disseminating this knowledge to farmers	Promote alternative sources of renewable energy Increase tree and forest cover. Conservation and management of forests. Enhance natural regeneration for sustainable production of non-wood forest products	Creating awareness and community sensitization on importance of tree. Enforcement of policies and laws. Intensive research and introduction of adoptive technology.

Hazard/Risk	Priority Areas of Investment			
Flash Floods	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Harvesting of surface run-off water and establishment of proper storage mechanisms to minimize flash floods	Reclaiming of wetlands for agricultural use. Planting of cover crops. Creation of alternative water flow paths to reduce crop destruction	Protection of ecological set ups Geospatial planning and mapping of wetlands Incorporate land use planning strategies that consider the impacts of floods.	Emergency fund allocation and activation of Disaster Response Team(s) Public Civic engagement on implications of floods Strengthening Early Warning System Monitoring and risk assessment Proper engineering and design for infrastructural develop
Hazard/Risk	**Priority Areas of Investment**			
Mosquito Infestations	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Mosquito Habitat Management. Promote water treatment.	Application of insecticides and larvicides to control mosquito population. Biological Control to control mosquito population	Enhance efforts in controlling breeding grounds and improve spraying mechanisms.	Implementing and creating awareness on Integrated Pest Management (IPM)
Hazard/Risk	**Priority Areas of Investment**			
Insecurity	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Mapping of water-based conflict zone Establishing contingency	Eradicate rustling and livestock theft Outlaw burning of farms/crops	Initiation of inter county integration policy Borderline settlements to	Activation of peace committee Implementation and strengthening of

	water sources in the far flanged areas under county management	during conflicts and provide rapid fire response mechanisms Application of vector control mechanisms to protect crops and livestock. Responsive vaccination programs	have established security posts	alternative conflict resolution mechanism Migration policy Promotion of Intra and Inter county peace initiatives and community tolerance.
Hazard/Risk	**Priority Areas of Investment**			
Invasive Species	**Water**	**Agriculture**	**Environment**	**Disaster management**
	Water conservation practices to reduce spread of invasive species. Protect water catchment areas from invasive species.	Agroforestry and replacement of invasive species with indigenous/fruit trees.	Establish management plan/policy for control of invasive species i.e. *Prosopis juliflora*	Research and Monitoring Public awareness and education

CHAPTER SIX: CONCLUSION

Wajir is located in a semi-arid region, making it highly susceptible to the adverse effects of climate change, particularly recurrent droughts. Erratic rainfall patterns, prolonged dry seasons, and water scarcity pose significant challenges to agriculture, livestock rearing, and overall livelihoods in the area. These conditions lead to food insecurity, loss of livestock, and increased vulnerability of communities, exacerbating poverty and limiting economic opportunities. Climate change is likely to increase in severity of impacts in the coming decades unless we do something now.

Thorough vulnerability assessment will enable the identification of priority areas and vulnerable populations that require immediate attention and targeted interventions. The most vulnerable groups identified in Wajir included women, children, the elderly and pastoralist who mainly rely on livestock production. Implementing adaptive strategies that address identified vulnerabilities and promote resilience which include a range of measures such as access to clean water, infrastructure upgrades, land-use planning, natural resource management, and public awareness campaigns, will ensure that these strategies are context-specific, inclusive, and equitable.

Investing in capacity-building programs to empower community members with the knowledge and skills necessary to understand and respond to climate change impacts should be considered. Providing training on climate adaptation, sustainable practices, disaster preparedness, and early warning systems will Foster partnerships with the community to support these climate change mitigation and adaptation efforts.

An efficient monitoring and evaluation framework ought to be put in place to track the progress of the climate action plan. Regular assessment of the effectiveness of implemented measures, gaps or challenges should be done and necessary adjustments implemented. Feedback from stakeholders and community members will allow for continuous improvement of the plan and ensure its relevance and responsiveness.

By implementing these recommendations, communities can strengthen their resilience, reduce vulnerability to climate change impacts, and create a more sustainable and adaptive future.
The success of the PCRA relies on capacity-building, community sensitization and monitoring to ensure that actions are adapted and updated as needed. Ultimately, by empowering individuals and communities to take action, we can collectively tackle climate change and build a brighter future for generations to come.

<u>Recommendations</u>

REFERENCES

RCMRD -Wajir County Hazard Atlas, June 2022

Wajir County Climate Change Profile,

County Integrated Development Plan 2018-2022

County Annual Development Plan 2021-2022

Wajir CIS Plan November 2016

Wajir County Climate Change Act 2016

Wajir County Disaster Management Act 2014

Climate Risk Profile for Wajir County, Kenya Climate Changes Risk Profile Series- Ministry of Agriculture, Livestock and Fisheries Kenya 2018.

Kenya Metrological Department

Mid-term plan MTP4 2017-2022

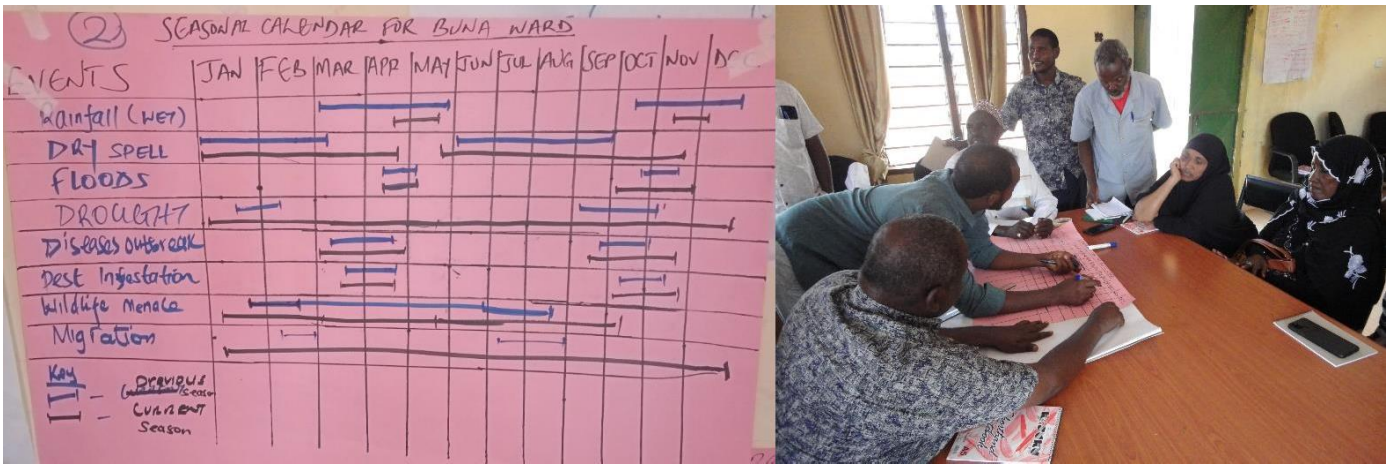
Kenya National Adaptation Plan 2015-2030

Karienye, D& Warfa P.O. (2020). Dynamics of clan based conflicts in Wajir County, Kenya Budapest International Research and Critics Institute journal humanities and socials sciences 3,(2), 692-702

Green Fiscal Incentive Policy Framework

ANNEXES

A) Participatory Climate Risk Assessment Photos



Buna/Batalu Ward & Community members draw the seasonal calendar

Community members in Korondille ward(left) and Godoma ward (right) prioritize hazards through proportional pilling

Community members of Dela Ward prioritize hazards through proportional pilling

Community members prepare the Action plan for Buna/Batalu Ward

Buna/Batalu Ward Community members and the PCRA team participate in a group photo

Sarman Ward Community members and the PCRA team participate in a group photo

Lagboghol Ward Community members and the PCRA team participate in a group photo

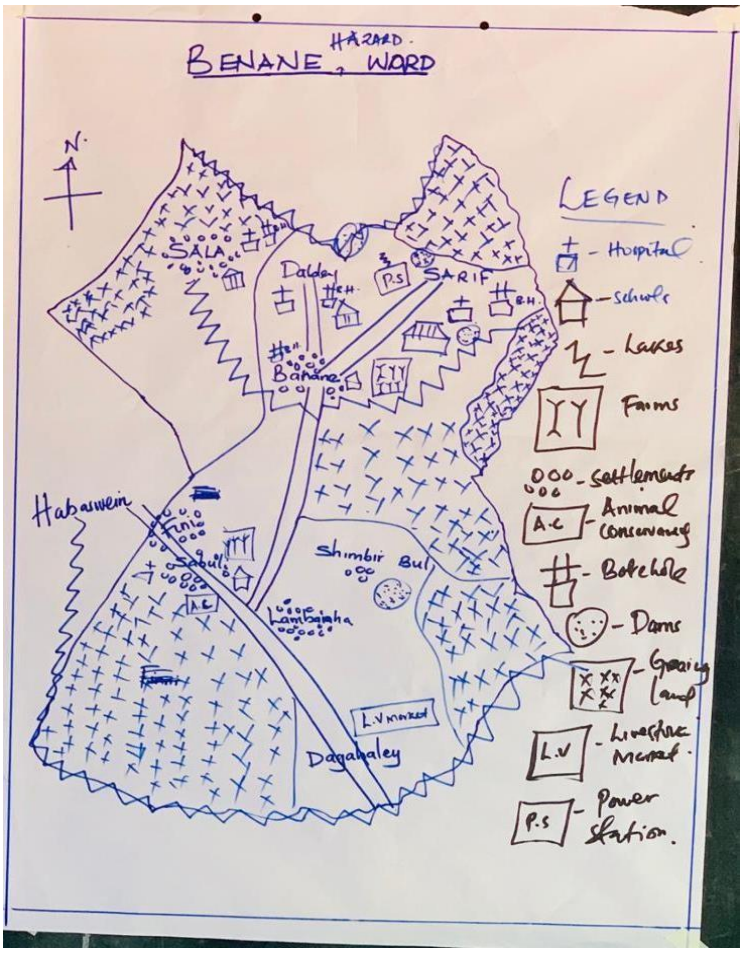
Wargadud Ward Community members and the PCRA team participate in a group photo

Basir/Lakole Ward Community members and the PCRA team participate in a group photo

Arbajahan Ward Community members and the PCRA team participate in a group photo

Dela Ward Community members and the PCRA team participate in a group photo

Wagalla Ward Community members and the PCRA team participate in a group photo



Hazard Map drawn by the community

Elnur/Tulatula Ward Community members and the PCRA team participate in a group photo

Ademasajida Ward Community members and the PCRA team participate in a group photo

Community members being taken through the PCRA process (Godoma Ward)

Benane ward PCRA

Wagberi ward PCRA

Township ward prioritization of hazards

A community member explaining key points to the group.

Burder Ward community members preparing the seasonal calendar

Elben ward participatory climate risk assessment

Wagalla PCRA

A photo session of Barwaqo Ward community. 	

Community discussion in Dadajabula ward

Lagboghol Ward Community PCRA

B) Questionnaires (with participants list)

Buna ward

WAJIR 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.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

1. Climate change Hazard Analysis and Vulnerability Assessment

A. Information

Date: 19TH & 20TH		County WAJIR		Ward: BUNA/BATALU
Facilitator: HASSAN IBRAHIM AHMED				Note taker: ABDULLAHI OMAR
Name (Participants)	Gender	Age		Institution/organization
		Below 35	Above 35	
1. ALI OMAR OSMAN	M		✓	WARD ADMIN - BATALU
2. MOHAMED ALI MOHAMUD	M	✓		CHAIRPERSON - WACCC
3. ALI ABDINOOR OSMAN	M		✓	TOWN ADMIN - BUNA
4. ABDIRAHMAN NOOR ADAN	M		✓	SUB-COUNTY AGRIC-OFFICER
5. SAIDA YUSSUF HUSSEIN	F	✓		SUB-COUNTY WATER OFFICER
6. ABDULLAHI BULLE OSMAN	M		✓	SUB-COUNTY VETERINARY
7. ABUBAKAR JIBRIL HASSAN	M	✓		AGRICULTURAL EXTENSION
8. OSMAN MOHAMED AMIN	M		✓	RANGELANDS COMMITTEE
9. ABDULLAHI HASSAN ABDI	M		✓	RANGELANDS COMMITTEE
10. KALI ALI S. ADAN	F		✓	RANGELANDS COMMITTEE
11. MADINA ALI HASSAN	F		✓	REP. WOMEN
12. ABDINOOR ALI ABDOW	M		✓	REP - PLWD
13. SEYNAB HASSAN MOHAMED	F	✓		REP - WOMEN
14. ISHA HUSSEIN ABUKAR	F		✓	REP - WOMEN
15. SAFIA ABDULLAHI AHMED	F		✓	REP - WOMEN
16.				
17.				
18.				
19.				
20.				

B. **Main Findings of the exercise**

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

DROUGHT
DISEASE
WILDLIFE MENACE
DEFORESTATION
FLOODS
BUSH FIRE
MIGRATION CONFLICT
SOIL EROSION

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

YES, FREQUENT & PROLONGED DROUGHT DUE TO DIFFERENT WEATHER PATTERNS.
EXPERIENCED VERY HIGH TEMPERATURES

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Yes, Rainfall has reduced currently in frequency and intensity. Previous years the long rains used to occur between March to May and now, it is between Mid April and Mid May. Short rains occured between October to November previously. Currently it is between mid November & December.
- Previously the dryspell was between January to mid March. Currently the dryspell extends between May & December.
- Previously floods occured between April & May, October & November, currently not much has changed.
- Drought used to occur between January, February, September, October & November. Currently they occur 12 months a year.
- Disease outbreaks used to occur between Mid March & April and September & October. Currently Disease outbreaks occur between start of March - May & mid September - November.

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

HAZARD	RANK	SCORE
DROUGHT	1	18
DISEASE	2	6
WILDLIFE MENACE	3	5

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

HAZARD	IMPACT
DROUGHT	LIVESTOCK DEATHS & DEPLETION OF PASTURE & WATER STRESS
DISEASES	POOR HUMAN HEALTH, DEATH OF LIVESTOCK & HUMAN MALNUTRITION
WILDLIFE MENACE	LOSS OF LIVESTOCK, LOSS OF HUMAN LIFE, BODILY HARM TO HUMANS & LIVESTOCK

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

THE POOR - BECAUSE THEY LACK RESOURCES & INCOME FLACTUATION)
THE ELDERLY, WOMEN, CHILDREN & PLWD'S - THEIR CAPACITY IS LIMITED & PRONE TO RISKS & MAY LACK MOBILITY.
THOSE WHO HAVE NOT EMBRACED DIVERSIFICATION (LACK OF ALTERNATIVE SOURCE OF INCOME)

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- Which assets or resources are most affected, and which are not affected? Explain.

In the Economic Category, livestock & farm products are most affected and the transport sector is least affected. Livestock & farm products are the main economic stream in this livelihood zone and this is due to inadequate rains & livestock diseases, poor regeneration of pasture, poor livestock body condition, low market prices & increased distances between water sources.
Transport sector is rarely affected by drought.
Schools are most affected by drought leading to dropouts. Hospitals are also affected by influx of patients & insufficient drug levels. Boreza shades are not affected by the hazards.

- Why are some hazards more harmful than others?

Drought has a direct impact on life & livelihoods. It affects the most resources & assets and a large population of the community.
Drought intensity & frequency is also higher compared to other hazards.

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

Bunal Batelu Ward is highly affected at large due to the consecutive failure of rainfall attributed to depletion of pastures & browsers, water stresses, resource based conflict.
Increased disease in both human & livestock thus causing poor health & livestock deaths.
Increased wildlife menace within neighbouring villages due to prolonged drought. Due to livestock death & increased carcasses which attract predators.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

2. Community local response and Adaptation goals

C. Main findings of the exercise

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

Destocking, ~~migration~~ & Offtake of livestock
Relocation & migration.
Killing/ poisoning of threatening wildlife.
Borrowing on Credit.
Small scale water harvesting.
Strengthening fence using thorns to keep wildlife out.
Kitchen gardening

- 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?

Borrowing on Credit - the community has lenders, it is easily accessible and there exists community trust.

Relocation of livestock - availability of pasture & water in other location.
Formation of Rangeland Management will make it more effective & sustainable.

Fodder production - provides a quick solution to reduce livestock death & increase livelihoods. Use irrigation to improve production.

Sending children to low cost boarding schools - It will increase retention & reduce dropouts.

The government can initiate sustainable programs (diversification of livelihood, sustainable food systems, capacity building, desilting of water pans & maintenance of boreholes to improve water accessibility.

- 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?

WFP - Social protection, sustainable food systems.
NDMA - Social protection, livestock feeds provision & fuel subsidies
REDCROSS - OFFTAKE PROGRAM, Relief
County & National government - Relief food distribution.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Establishment of Range land Management
Establishment and operation of water management committees.
Migration and relocation
Drought - water trucking, livestock offtake, provision of drought tolerant seeds (short term)
- Drilling borehole, water harvesting, fodder production - (long term)
Diseases - Isolation, Vaccination, Provision of drugs (short term)
- Insurance provision
Wildlife Menace - Provision of early warning messages (short term)
- Insurance, wildlife conservancy & Compensation (long term).

- 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

HAZARD	STRATEGY	INTERNALLY	EXTERNALLY
DROUGHT	Exploration of available water sources	LAND	FINANCE/FUNDS
		SKILLED PERSONNEL	MACHINERY
	Embrace innovative & sustainable farming	Land	Skilled personnel
		Water [illegible] acquifers	Finance
	Enhance animal health	Skilled	Finance
	Management systems in the ward	personnel	Access to Drugs

Korondille ward

WAJIR 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.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

1. Climate change Hazard Analysis and Vulnerability Assessment

A. Information

Date:	County WAJIR			Ward: KORONDILE WARD Note taker: SHARIF IMAN
Facilitator: HASSAN				
Name (Participants)	Gender	Age		Institution/organization
		Below 35	Above 35	
1. HASSAN ABDULLAHI SHEIKH	M		✓	chairman Ward CCA
2. MOHAMUD ABDI OSMAN	M		✓	Chair ALNUSRA Group
3. ABDULLAHI AHMED	M		✓	Treasurer Water Users
4. ABDI SHUKRI IBRAHIM	M	✓		N/A
5. AHMED JELLE	M	✓		N/A
6. HASSAN AHMED	M	✓		Chair Kubeogo YG
7. HASSAN KEROW	M		✓	IMAM
8. OSMAN ABDI	M		✓	Pastoral member
9. ~~HASSAN~~				
10. HABIBA HUSSEIN	F		✓	FATIYA women grp
11. HABIBA SALAH	F		✓	Umur W. Group Mem
12. SAADIA MOHAMED	F	✓		Kadeogo Treasurer
13. SAADIA DAYOW	F	✓		AL HAMDU W. Group
14. BILAY IBRAHIM	F	✓		Trear Group Hafi
15. IDOY HASSAN	F	✓		chair person Korni YG
16. SEINAB SHEIKH.	F	✓		chairp. Horman Group
17.				
18.				
19.				
20.				

B. **Main Findings of the exercise**

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

- Drought
- floods
- Strong wind
- deforestation
- environmental pollution
- diseases (human & livestock)
- conflict
- wildlife menace

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

Yes. Change in weather patterns leading to frequent & prolonged droughts
- high temperatures
- Inadequate rainfall / erratic rainfall
- loss / reduced vegetation cover
- Desertification

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Yes – events
Rainfall
long rains – previously Mar–May; current end of Apr – May
short rains – previous Oct – Dec; current end of Nov – Dec
Dry season – previously – Jan–Feb & Jun – Sept; current Jan – Apr & Jun – Nov
floods – previously – mid Apr – May; current – only May
Drought – previous – Jan – Feb; current – All year round

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

Hazard	Rank	Score
1. drought	01	22
2. diseases (human & livestock)	02	11
3. deforestation	03	03

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

Impact

drought
- low purchasing power / low market price
- outbreak of diseases
- water shortage
- reduced pasture
- crop failure
- food insecurity

diseases
- high mortality rate
- reduces livestock price
- low productivity
- cause malnutrition
- poor health in human

deforestation
- lack of rain
- soil erosion
- strong wind
- over grazing
- depletion of pasture

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

- the poor due to lack of resources and inflactuation of income
- the elderly, children, women, PWD's – they have limited capacity hence more prone to risks
- those with no alternative source of income (not diversified their livelihood)

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- Which assets or resources are most affected, and which are not affected? Explain.

In economic category - drought highly affect livestock leading to loss of livestock and low productivity
diseases &
- drought also highly affects farming due to low/ inadequate rainfall
- petty trade highly affected by drought due to affecting loss of livelihood
physical category - water pans & boreholes highly affected by drought leading to drying up
Natural resources - forest highly affected by drought & deforestation
physical & natural resources - less likely affected by ~~diseases~~ & deforestation

- Why are some hazards more harmful than others?

Drought has a direct impact on life & livelihoods - affects most resources & largest (large population of community)
drought has high intensity & frequency compared to other hazards.

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

- The entire ward is largely affected by the impact of drought which is loss of livestock, loss of livelihood, depletion of pasture, shortage of water.
- human & livestock diseases has increased in recent years across the entire ward causing poor human health & death of livestock
- Leyaya, korondille, arache are highly affected by floods due to their location at the areas surrounded by hills hence causing floods.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

2. Community local response and Adaptation goals

C. Main findings of the exercise

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

drought
- provision of hay & root berries
- migration of livestock in search of pasture & water
- borrowing on credit
- contribution from relatives
- small scale water trucking

disease
- Provision of drugs & vaccines
- livestock off take for disposal
- Provision of drought supplements
- support of nutrition supplements

Deforestation
- Afforestation (tree planting)
- practise Agroforestry

- 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?

drought
- Provision of hay and root berries very effective but not sustainable - provide quick solution
- Relocation and migration of livestock in search of pasture & water very effective but less sustainable
- borrowing on credit - the community has local lenders which is easily accessible - effective but not sustainable

diseases
- provision of drugs & vaccines - very effective but not sustainable
- provision of nutritional supplements for human effective but depends on access and availability.

- the government can initiate and implement sustainable programs like diversification of livelihood & sustainable food system & capacity building/maintenance of existing boreholes

- 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?

WFP - social protection & sustainable food systems
NDMA - social protection, livestock feed provision & fuel subside
Red cross - off take program
County & national govt - Relief food distribution

- the government & NGOs should improve by offering their support & full coverage to the wards

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Drought – Provision of hay and water berries - Short term
– water trucking – Short term
– relief food distribution - "
– destocking – Short term
– fodder production / drilling boreholes, rangeland, – long term
disease – Short term (vaccine, isolation, quarantine), creating awareness
long term and provision of supplements
– mass vaccination of livestock, support nutrition supplements
deforestation – Short term
– Creating awareness on importance of Afforestation
– Tree planting campaign. long term – nursery seedling
– mass tree planting

- 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

Hazard	Strategy	Internally	Externally
drought	– formation of Rangeland management committee – managing degraded land – Increase access and availability of water and fodd production	land Community	finance skilled personel machinery
disease	– Increase easy access and availability of essential drugs & vaccines	Community health workers	finance skilled personel drugs
deforestation	– Provide alternative source of energy – Increase tree planting – Enhance seedling production	Forest land Community	finance skilled personel

DANABA WARD

WAJIR 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.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

1. Climate change Hazard Analysis and Vulnerability Assessment

A. Information

Date:	County WAJIR			Ward: DANABA
Facilitator: SHARIF IMAN				Note taker: ABDULLAHI IMAN
Name (Participants)	Gender	Age		Institution/organization
		Below 35	Above 35	
1. ABDISHUKRI MOHAMED	M		✓	WCG
2. MOHAMED IBRAHIM IBREN	M	✓		WCG
3. ISACK HUSSEIN SHONE	M		✓	DANABA WATER USERS
4. MOHAMED ISAK ADUE	M		✓	DANABA WATER USERS
5. ADAN ABDULAHI ABD.	M		✓	
6. ALI MAALIM ADAN	M		✓	RELIGIOUS LEADER
7. KHADIJA ABDULAHI ABD.	F		✓	DANABA WOMEN GROUP
8. ADAN MUHAMUD HASSAN	M		✓	DANABA BEE-HIVE
9. GURAY MOHAMED ISSACK	F		✓	DANABA WOMEN GRP
10. HALIMA SONO IBREN	F		✓	DANABA WOMEN GRP
11. BURAY ABDRAHMAN ISSAK	F		✓	DANABA WOMEN GRP
12. SAADIA ABSIKADIR MOHAMED	F		✓	DANABA WOMEN GRP
13. HASIBA MAALIM HUSSEIN	F		✓	AGRICULTURE DANABA GRP
14. ALINUR HAJI	M		✓	DANABA AGRICULTURE GRP
15. MOHAMED IBRAHIM MANO	M			
16.				
17.				
18.				
19.				
20.				

B. **Main Findings of the exercise**

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

Drought
Floods
Conflicts
Disease
Locust invasion
Pests & disease
Wildlife menace
Deforestation

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

- Inadequate rainfall
- diseases
- locust invasion
- drought
- High temperature
- Strong wind

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

ES - Rainfall occured between March - April & October - Nov in previous years - Currently it rains from mid April - May & Mid Nov - Dec & Jun - July

Dry seasons occured between Jan - end of Feb, in previous years. Currently the dry season occurs between Jan-Apr & July - September.

Previously drought occured between Aug - Sept, currently the trend takes place from Jan - Dec, they are unable to predict it.

Conflict previously occured between mid Feb to May, currently it takes place from Jan - May.

Marriages occured between Feb - May previously, Currently it occurs between Jan - Jun & Oct - Nov. This is due to increase in population.

Diseases mainly occured between Jun - July, Currently they face challenges Feb - Jun - Nov & Jun - Dec

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

HAZARD	RANK	SCORE
Drought	23	1
Disease	7	2
Deforestation	3	3

Disease & Deforestation had tied ab & during the main vote. A revote produced the final result

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

Drought - has a huge impact on livestock

Diseases - affect both human & livestock. It causes poor human health & death of livestock

Deforestation - has an impact on land, pasture grounds and water

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

Children - they become malnourished as they can't eat anything apart from milk.
women - they don't get nutritious value living drought
Poor - they don't have the funds.
Elderly - due to age they are mostly affected as they weaken.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- Which assets or resources are most affected, and which are not affected? Explain.

Livestock, health, land, pasture & water points are most affected by the 3 hazards. During drought livestock lack pasture and water points dry out. Diseases affect both human & livestock. Their health of humans reduce, animals become weak and eventually die. Deforestation reduces natural forage growth.

Sand harvesting, shamba & roads are the least affected. The impacts on these resources is low. They are hardly affected by the prioritized hazards

- Why are some hazards more harmful than others?

Some hazards are unpredictable, they can occur year round and impact a lot of resources. The community in Dancha mainly relies on livestock which suffer the most when hit with drought & diseases. The frequency & intensity of such hazards has also increased in recent years.

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

Dancha's vulnerability has increased. They rarely migrate & the population is increasing.

Some community members lack livestock, which is the main source of income.

2. Community local response and Adaptation goals

C. Main findings of the exercise

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

→ Relocation of livestock to neighbouring regions i.e Ethiopia & Mandera.
→ The community has always purchased animal feeds to deal with lack of pasture.
- Selling of livestock at low prices to avoid drought & disease.
- They rely on borrowing funds & family financial support.
- To mitigate water shortage the community has always mobilized for water trucking.
- Waidor/Tarandey, Habakhurde are some medicines the community uses to fight drugs. Quran recitation is also used to treat some ailments.

- 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?

For Drought, Afforestation efforts would be most effective & sustainable in the future as forests can be used / integrated with farms. Purchase of drugs would easily counter threat of diseases during drought. The government can support efforts of afforestation and also supply drugs to centers.
When faced with challenges of deforestation, reporting deforestation is effective but not sustainable. To close this gap, the authorities ought to thoroughly pursue notorious cases when reported & increase patrol to curb this. Afforestation efforts will help mitigate deforestation & creating awareness against such a vice would make it more effective & sustainable. The government can post officers in areas ~~with~~ ~~high~~ which experience higher levels of deforestation.

- 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?

ALDEF – social protection (kshs. 9,000 per household for 4 months – 70 households)
WFP – for 5 years relief food & social protection (228 households)
Save the children – social protection / cash transfer.
NDMA – social protection / cash transfer
WCG – relief food distribution / ~~food~~
→ They ~~can increase coverage of distribution of~~ vet / screen applicants thoroughly to ensure the most vulnerable are prioritized.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Drought → Short term → provision of fodder/relocation to greener pastures, water banking
Long term → protection of fodder, managing livestock population, drilling boreholes & crop protection.

Diseases → Short term → provision of drugs & borrowing or credit & family support.
Long term → mass vaccination & screening & diversification of livelihood.

Deforestation → Short term → Creating awareness, regulate to KFS & reducing destruction rates.
Long term → Reforestation, Addressing root cause & forest patrols.

- 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

#HAZARD	STRATEGY	INTERNALLY	EXTERNALLY
Drought	Enhancing further seed protection Adopting sustainable crop combination Addressing cause of trade Management of water system	Land & Community	Finance Technical/ personnel
Disease	Increase access to drugs Employ survey & investment strategy. Enhance availability & accessibility of food supply	Community	Finance Drugs
Deforestation	Increase forest cover Promote sustainable forest management	Land Forest Community	Finance Technical bar- Seedlings.

GODOMA WARD

WAJIR 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.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

1. Climate change Hazard Analysis and Vulnerability Assessment

A. Information

Date:	County WAJIR			Ward: GODOMA
Facilitator: HASSAN				Note taker: SHARUN
Name (Participants)	Gender	Age		Institution/organization
		Below 35	Above 35	
1. ABDI DILSOW ALI	M		✓	CHIEF - NATIONAL GVT
2. ABDI NUNOW ABDI	M	✓		Community Member.
3. ALI MOHAMUD IBRAHIM	M		✓	Former Chief
4. ADAN SHARIF HOKORA	M		✓	Community Member
5. HALIMA BILLOW IBRAHIM	F		✓	BISMILLAHI SELF GRP
6. RAHMA SHEIKH MOHAMED	F		✓	ALHAMDU SELF GRP
7. HALIMA ABDI AHMED	F		✓	Community Member.
8. ASLI GULLET HASSAN	F	✓		Community member
9. LADAN BILLOW IBRAHIM	F		✓	KABAB POULTRY KEEPERS
10. FATUMA IBRAHIM ABDI	F		✓	HOSTHOLAT GRP
11. HALIMA ALI MOHAMUD	F	✓		Community Member
12. ABUKAR HUSSEIN AHMED	M		✓	WCG - Security Guard
13. DILSOW NUROW ADAN	M		✓	WCG - Security Guard
14. Hussein Magal ATC	M		✓	WCG - Snr. Support Staff
15. BILLOW IBRAHIM SANEY	M	✓		Task Rep.
16.				
17.				
18.				
19.				
20.				

B. **Main Findings of the exercise**

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

- drought
- deforestation
- Floods
- Human & livestock diseases
- Poor Infrastructure
- Soil erosion
- Water Shortage

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

YES - high temperatures due to change in weather patterns
- Strong winds
- Inadequate or lack of rainfall
- Shortage of water & pasture reduction
-

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Yes -

Event	Previous	Current
Rainfall	Mar – May (Long rain) Oct – Dec (short rain)	Apr – May (long rains) Mid Nov – Mid Dec (short rains)
Dry season	Feb & Sep	Jan – April & June – sept
Cold season	July – Aug	Mid May – Mid June
Drought –	August	Jan – Mid April – July – Dec
disease –	MAR – MAY	MAR – July, OCT – DEC
FARMING –	MAR – MAY	NOV

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

Hazard	Score	Rank
Drought	10	2
Deforestation	12	1
Diseases	8	3
Floods	0	–
water shortage	4	4
poor Road	1	5

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

Drought – loss of livestock, shortage / water shortage & vegetation deficiency

Deforestation – Soil erosion, lack of rain, strong wind and encroachment of wildlife)

Diseases – Malnutrition in children, Increase human death, low Productivity in livestock & Human

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

– Those who fully depend on livestock only as their source of livelihood.

– The poor – limited capacity to respond to risks & hazards effectively

– ~~Are~~ Children, pregnant mothers, elderly & PLWD – More ~~suspec~~ highly affected by drought & diseases

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- Which assets or resources are most affected, and which are not affected? Explain.

In the Vulnerability matrix - drought was ranked highest harmful - (32) points while deforestation was ranked 2nd with (21) points and disease ranked 3rd with (16) points

resources most affected
Livestock - 1
Household / settlement - 2
Forest - 3
Resource not affected
Roads, sand harvesting
Hills

- Why are some hazards more harmful than others?

Some hazard like drought is more harmful because it affects most of the asset & resources and its high causing in ↑ vulnerability & stress
drought has been ranked the highest harmful at (32) points while deforestation ranked second at (21) points and disease ranked third at (16) points

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

Entire ward is vulnerable to the risks & hazards identified - drought, disease (human & livestock) & desertification

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

2. Community local response and Adaptation goals

C. Main findings of the exercise

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

local response

Drought – rangeland management
– migration of livestock
– Destocking,
– provision of animal feeds in small scale
– Borrowing off food on credit

Deforestation – planting of trees
– construction of local gabions
– protect household with fence

Diseases – Taking preventive measures
– Isolation & Quarantine
– Vaccination & nutrition supplement

- 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?

Impact

Drought – Rangeland management was rated very effective and sustainable because it protects grazing land to curb lack of pasture hence reduce livestock death rate.
– Relocation & migration rated effective and moderately sustainable because this have been mode of life style

deforestation – planting of trees rated effective but less sustainable

diseases – Taking preventive measures very effective but less sustainable due to availability & Access of drugs

– the Government – can support by Creating awareness on importance of trees, provide fodder, access to water

- 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?

ALDEF – Cash transfer
WFP – Cash transfer, training on farm production
Save the Children – nutrition supplements, serviced machines (boreholes)
NDMA – animal feeds, fuel subsidy, Cash transfer

County Govt & National Govt – relief food, animal feeds

Islamic relief – animal feeds

How to improve
- Increase portion & coverage of support
- public participation – effectiveness
- timely support

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Hazard	short-term	long term
Drought	- livestock insurance - selling of livestock & saving - Destocking of old herds - social protection by govt/NGOs	- Improvement of Animal breeding - Have emergency Preparedness plan - food production in large scale
deforestation	- Tree planting, provision of certified seedlings	- Enforcement of policies & regulation,
Diseases	- Provision of drugs & supplements	- Mass vaccination of livestock & screening of

- 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

Hazard	Strategy	Internally	Externally
drought	dissemination of Early warning messages	Community	Funds
	Enhance food security	land	
	Improve effective water management System	existing water points land	Fund machinery
Disease	to increase access & availability of drugs & supplements		
	taking Preventive measure	Community Health Workers Health Centres	Finance drugs vaccines skilled personnel
deforestation	Conservation of forest cover	Forest community	Technical support Finance

Action
- Diversification of livelihood
- Increase farm production & livestock-through Sustainable Agri. System
- Conserve forest Cover
- Preventive measures
- Increase access & availability of drugs/ supplements

GUDAR WARD

WAJIR 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.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

1. Climate change Hazard Analysis and Vulnerability Assessment

A. Information

Date:		County WAJIR		Ward: GURAR
Facilitator: HASSAN				Note taker: ABDULLAHI
Name (Participants)	Gender	Age		Institution/organization
		Below 35	Above 35	
1. QASSIM MOHAMED		✓		TOWN ADMIN
2. KHADIJA OSMAN			✓	COMMUNITY MEMBER
3. FATUMA ABDULLAHI		✓		COMMUNITY MEMBER
4. HALIMA ABDINUR ABDI			✓	COMMUNITY MEMBER
5. MOHAMEDNUUR OSMAN			✓	COMMUNITY MEMBER
6. HALIMA ALI ADAN			✓	COMMUNITY MEMBER
7. MOHAMED OSMAN ADAN			✓	WUA – ~~CHAIR~~ SECRETARY
8. ABDINUUR HASSAN GABOW		✓		GAMACHU YOUTH GRP – CHAIR
9. ABDI MOHAMED YUSUF HINI			✓	COMMUNITY MEMBER
10. SULEKA ABDULLAHI YUSUF		✓		WUA – CHAIR
11. IBRAHIM HASSAN ALI			✓	MIDNIMO YOUTH GRP. CHAIR
12. NUHOW MOHAMUD ALINUR			✓	COMMUNITY MEMBER
13. YASMIN ABDIKADIR BURU		✓		COMMUNITY MEMBER
14. FATUMA ALI YUSUF		✓		TSC
15. ABDIKHER NUROW		✓		
16.				
17.				
18.				
19.				
20.				

B. **Main Findings of the exercise**

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

Drought
Diseases
Floods
Overgrazing.
Deforestation
Water shortages
Poor infrastructure - roads
Wildlife menace
Conflict

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

- Lack of rains
- Higher temperatures

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Yes Rainfall during previous years occurred between Mar-May & Oct-Dec. Currently it rains between Apr & mid Nov-Dec.
Drought previously was experienced by the months of Sept. Currently it has increased & is experienced between Jan-Mar & May-Nov.
Dry season previously occurred between Feb & Jun-early August. Currently it has increased. They experience it from Jan-Mar & May-Nov.
Diseases in previous years occurred in Jun & July. Currently they face challenges from Jan-Dec all year round.
Migration occurred in Sept, currently they migrate in Jan-May & Sept-Dec
Floods occurred in Mar-May & Oct-Nov, currently they experience it in Mar
Conflicts ~~[illegible]~~ occurred between Jun, they face 0 conflicts currently.

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

#	HAZARD	SCORE	RANK
1	POOR INFRASTRUCTURE	15	1
2	DROUGHT	13	2
3	DEFORESTATION	05	3

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

Drought – Loss of livestock, water shortage, hunger, school drop outs & low enrollment. Increased crimes/theft.

POOR ROADS – lack of access & availability essential commodities, Rising in prices, accidents, poor markets.

DEFORESTATION – low rainfall is experienced, lack of pasture & water, strong winds, high temperatures & soil erosion

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

WOMEN – they are responsible for most household work/jobs like fetching water & gathering firewood
CHILDREN – are dependent on parents for basic needs, more prone to diseases due to immunity.
ELDERLY – they don't have access to resources & are reliant on families
THE POOR – they lack the resources/financial
COMMUNITIES L

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- Which assets or resources are most affected, and which are not affected? Explain.

1. LIVESTOCK - Poor roads limits transport of livestock, drought & deforestation reduce livestock forage.
2. FARMING, TRADE, - farming is affected & they lack rainfall & water.

Hazards Impact trade routes. As their main trade is in livestock, it is negatively impacted by drought.

SCHOOLS & POWER STATION ARE LEAST AFFECTED. They are not directly impacted by the hazards.

- Why are some hazards more harmful than others?

All problems are caused by the hazards. Drought is the leading cause of loss of livestock.

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

GURAR TOWN IS FACING AN INCREASE IN POPULATION LEADING TO RESOURCE CONSTRAINTS i.e WATER SHORTAGE.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

2. Community local response and Adaptation goals

C. Main findings of the exercise

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

Digging of shallow wells has provided water during drought.
Local contributions have cushioned communities against hunger.
Relocation in search of pasture has always been done.
Searching for food in neighboring countries i.e Ethiopia
Reporting security matters to security agencies.

- 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?

Revitalization of peace committees to promote co-existence of communities during migration. The government can also mobilize to make it more effective.
Tree planting is effective & can be improved through provision of drought tolerant seeds.
Creating awareness on the importance of schools will reduce the number of drop outs & reduce low turnout.

To alleviate these hazards the government can support by
Provision of food, road construction, rehabilitation of water trucking, improving security / protection

- 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?

SAVE THE CHILDREN – water trucking.
ISLAMIC RELIEF – SOCIAL PROTECTION.
WFG – water trucking food relief.
National & County Government – Food distribution.

Increase of amounts, distribution number will improve the programs.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

	Short term	Long term
Drought	- Destocking - water trucking - Crop protection - Farmland bunds - Enforcement of laws	- Purchase livestock insurance - Construction of underground tanks & boreholes - Crop protection - School feeding programs - Employment of youth
Roads	- Murraming, gravelling & building of culverts	- Tarmacking of roads
Deforestation	- Awareness creation on the importance of trees - Reporting cases to KFS	- Tree planting - nursery seedlings of forest - Employment & posting of rangers.

- 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

Drought – Selling livestock cheaply, diversification of livelihood, increase low cost boarding schools, Increase security measures. Finance, land, machinery, certified seeds are needed. Improving availability & accessibility to clean water ought to be prioritized.

Hazard	Strategy	Internally	Externally
Pwr roads	Improve sustainable road network	Land	Finance, machinery skilled, manpower.
Deforestation	Increase forest cover Addressing human activities Creating deforestation	Forest	Seedlings, Finance, Skilled Manpower.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- Which assets or resources are most affected, and which are not affected? Explain.

1. Water Pans – Drying up of the Pans.
2. Boreholes – reduced yield during dry spell
3. Livestock → increased mortality due to drought as well as loss of productivity.
4. Livestock markets → Reduced trading due to poor conditions of the livestock body condition

- Why are some hazards more harmful than others?

Some hazards are more harmful than others because of their magnitude of their severity e.g. Drought impacts cut across all livelihood sectors

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

vulnerability has increased in children under 5 as well as those who depend purely on livestock products. this is because children under the age of 5 require milk which is mainly sourced from the livestock that is under threat.

→ Livestock owners use their goats and sheep as a currency thereby an negative impact on the same reduces their purchasing power to an extent

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

2. Community local response and Adaptation goals

C. Main findings of the exercise

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

→ Use of Indigenous Traditional knowledge to treat the diseases

→ Slaughtering of animals before onset of drought and conservation of the meat into 'nyirinyiri' – dried meat to be consumed during the drought

→ Use of Quran as healing power.

- 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?

1. The Quran is a healing power and therefore the communities are urged to increase in frequency of the same.

2. Conservation of dried meat as a measure of food security should also be emphasized by the government.

- 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 – Kenya Climate Smart Agriculture a government and world bank, Project is helping Diff Ward to diversify their livelihood to poultry keeping, bee keeping and ~~Agricultural~~ sorghum farming under irrigation to improve the resiliency the community

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

1. Climate change Hazard Analysis and Vulnerability Assessment

A. Information

e:	County WAJIR			Ward: DIFF WARD
litator:				Note taker:
ne (Participants)	Gender	Age		Institution/organizatio
		Below 35	Above 35	
NIMO GALIBET HUSSEIN	F		✓	
IKRAN SALAT ADAN	F	✓		
EBLA SALAT MOHAMED	F		✓	
IFRAH AHMED ABDULLAHI	F	✓		
BAHSAN SALAT ABDI	F	✓		
Abdirahman Hasir Shallow	M	✓		
SAHARA KAHIN RASHID	F	✓		
HABIBA DIRIYE ALATI	F		✓	
MAHAT BAKAL IBRAHIM	M		✓	
ABDIRAHMAN OMAR HASSAN	M	✓		
SAHARA SANTUR MOHAMED	F		✓	
IBRAHIM HUSSEIN HAJI	M	✓		
ABDI HUSSEIN MUHUMAD	M	✓		
KATHAR DAGANE SAJID	M	✓		
ABDI AHMED ALI	M		✓	
MEIMUNA ADAN	F	✓		

B. Main Findings of the exercise

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

- Drought
1. Livestock diseases
- Human Diseases
- Deforestation
(5) Conflict
(6) Poaching
(7) Floods
(8) Extreme heat.
(9) Terrorism

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

Yes → Reduction in rainy season and the amount of rain per season.

→ Increased livestock and human diseases

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- [illegible] changes in frequency and intensity of the identified climate hazards over the last 10, 20-30 years? Explain (Using Seasonal calendar)

Yes → The amount of rain has reduced [illegible] about 3 months whereas the dry season has increased similar number of months this is attributed to climate change.

- Which are the 3 main [illegible] hazards affecting your region/community? (Participants vote using the hazards identified to list 3 main hazards)

1. Drought
2. livestock diseases → Sheep goat Pox
3. Human Diseases

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

1. Drying up of water pans.
2. Lack of pasture and browse for animals
3. Human & wildlife conflict
4. Impact on livelihood such as loss of [illegible] and vulnerability.

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

→ Women - Pregnant & lactating → they were special nutritional requirement which cannot be [illegible] during the dry season.
→ Poor → The poor are most affected because they were barely surviving [illegible] and the droughts has exacerbated their situation.
→ livestock owners → Main livelihood has been depleted by the drought and diseases.

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- What actions would be needed to reach short term and long term resilience of communities agai[nst] identified priority Hazards/risks?

1. Shorterm – Continuously build the capacity of members of the community to diversify their in[come] sources.
2. Long term – Build the resilience of the com[munity] by addressing all possible causes of dea[th] of livestock and human as well as cro[ps]

- What do you think would be the best strategies for building the resilience of local people to clim[ate] change? What is needed internally and externally? What would be some of your priorities? (Acti[ons]

1. Expansion of the health facility to level [illegible] hospital
2. Building of a mega dam and pip[ing] the same to resident.
3. Increasing the staffing level of the hos[pital]
4. Desilting of all the water pans.
5. Seed distribution

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

WAGBERI WARD

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.

1

WAJIR 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. Adan Ahmed Mohamed	M	✓		County
2. Ibrahim Ahmed osman	M	✓		County
3. Dawd Adow Abdi	M	✓		Youth
4. Arfon Sheikh Mohamed	F		✓	Women
5. Fatuma Ahmed Mohamed	F		✓	Women
6. Mohamed Abdi Noor	M		✓	Ward climate change Comm
7. Mamken Buruk Mohamed	F		✓	Women
8. Fatuma Hassan Mohamed	F		✓	Women
9. Mahamed Billow Abdi	M		✓	Village Elders
10. Arfon Alas Sheikh	F		✓	climate change Committee
11. Adam Bashure Khalif	M		✓	climate change committee
12. Hassan Ahmed Maalim	M		✓	Climate change committee
13. Mwalim Abdi Mohamed	M		✓	Village Elder/Minority
14. Fatuma Kali Dhir	F	✓		Disability
15. Alasa Abdi Kalimoji	F		✓	Women
16.				
17.				
18.				
19.				
20.				

B. Main Findings of the exercise

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

-drought — Scarity of water
-inadequate rainfall — deforestation
-wildfire — livestock disease
-floods — -Solid waste
- drought
- grabing of community grazing land
- Food security

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

-YES

-Suppressed and unpredictable rainfall seasons

- Long dry spells due to global warming

- frequent $ Intense drought

-

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

- In previous seasons (10, 20, 30 years) rainfall was btwn March – May while short rains Oct – Dec. Currently long rains are just few weeks of April while short rains is in mid of Nov
- dry seasons previous were in Jan, Feb, July & August currently is all through the year
- livestock diseases is experienced through the year while previous it was only after the rains
- special events (prayers & weddings) – before it was after rains now its anytime throughout the year

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

1. Food Security
2. ~~Solid waste~~ Scarcity of water
3. Solid waste

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

Hazard	Impact
Scarcity of water	loss of livelihood outbreak of diseases low attendance of students
Hunger / food security	- death - Increased crimes - Malnutrition - diseases
Solid waste	- human & livestock diseases - environmental pollution - attracts snakes & scorpions - mosquito breeding zone - death & injuries

3

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

- Children under 5 years
- pregnant & lactating mothers
- elderly, sickly & ~~persons~~ (PLWDs)
- Poor people

They are most vulnerable due to their limited capacity interms of strength & resources.

- Which assets or resources are most affected, and which are not affected? Explain.

Most affected

Forest, pasture, shallow wells, farming, livestock, business and Health.

least ~~last~~ affected

Sand, quarry, roads, Houses, grouped associations, security & Skills.

- Why are some hazards more harmful than others?

Scarcity of water is rated most harmful than other with (37 points), Food scarcity (25) while solid waste rated (25)

(X) Scarcity of water affects most is more harmful because lives and other resources depend on water for their survival hence has major impact.

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

- The entire ward have been affected and is vulnerable to the three most threatening hazard
- Vulnerability of the community has increased over the years due to

Increased settlement and population of both humans & livestock and also increased cost of living due to change in weather patterns and other effects.

4

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

2. Community local response and Adaptation goals

C. Main findings of the exercise

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

Hazard	Impacts	local responses
Scarcity of water	- loss of livelihood - outbreak of diseases - low attendance & absenteeism	- deepening of shallow wells - water trucking - enclosure drive - drugs & vaccination
Hunger (Food Security)	- death - increased crimes - malnutrition - diseases	- eating of wild fruit - borrowing on credit - family support - sell of plots
Solid waste	- Human & livestock diseases - environmental pollution - attracts snacks & scorpions - mosquito breeding zones	- burning & burning - land fill - community sensitization - mosquito spray

- 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?

deeping of shallow wells, water trucking, drugs & vaccinato borrowing on credits, community sensitization are all effective but not sustainable - all this local response need funds and resources to keep them sustainable while the community have limited capacity to sustain this activities for long.
- the govt can support by identifying the community needs and gaps and later implementing sustainable programs.

- 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?

National govt - Security, bursary, relief food
County govt - relief food, fodder, drugs & appliances water trucking, Agriculture

NDMA - Cash transfer,
WFP - Cash transfer
Save the Children - Nutritious supplements
ALDEF - Capacity building / Cash transfer

5

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

Adaptation Strategy

Scarcity of water
- diversification of livelihood
- Treatment & conservation of water
- capacity building on water management

Hunger (food security)
- alternative source of livelihood
- Increase disease surveillance
- Increase access to drugs

Short term
- water trucking
- deepening shallow wells
- water harvesting
- kitchen gardens
- social safety nets
- Outreach programs

long term
- piping of water to household
- boreholes & mega dams
- Crop production

- 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)

Hazard	Strategy	Locally	Externally
Scarcity of water	- Enhance water conservation & water management strategy	Local Community	Machinery, Finance, Skills
Food security	- Economic empowerment - livelihood diversification	Local Community	Finance, Skills, seedling
Solid waste	- Community sensitization on solid waste management	Local Community	Finance, Skills

6

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

1. Climate change Hazard Analysis and Vulnerability Assessment

A. Information

Date: 04/04/2023	County Wajir			Ward: Wagberi Location
Facilitator: Abdirie				Note taker: Ibrahim
Name (Participants)	Gender	Age		Institution/organization
		Below 35	Above 35	
1. ADAN MOHAMED JIMALE	M	✓		Ward Admin
2. WARSAME SARAH BULE	M		✓	Town admin
3. Ali Mohamed Abdullahi	M	.	✓	Chief
4. ABDIA SAID OMAR	F		✓	Committee member
5. GEDI ABULLE YUSSUF	M	✓	✓	committee chairma
6. ADAN KALIC YUSSUF	M			Committee Membe
7. Ahmed ADAN ABDILE	M		✓	Committee Membe
8. ABDI ALI Hamus	M		✓	Committee Membe
9. Halima Kulan Hassan	F		✓	Committee mem
10. Rukia Bare Samatar	F		✓	Committee Memb
11. Asha Bishar Abulle	F		✓	Committee Memb
12. Khadija Billow Kusow	F		✓	Committee Mem
13. Arfow Abby Jimale	F		✓	Committee Mem
14. Arfow Sarah Abdi	F		✓	Committee Mem
15. Mohamed Ghaal Bule	M		✓	Committee Mem
16.				
17.				
18.				
19.				
20.				

B. Main Findings of the exercise

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

-drought
-inadequate rainfall
-wildfire
-floods

- drought
- Food Security
- Deforestation
- bush fire
- over settlement
- poaching
- Wildlife menace

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

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

-YES

-Suppressed and unpredictable rainfall seasons

- Long dry spells due to global warming

- Strong winds

- Intense & frequent drought

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

Rainy Seasons - Previously (10,20,30 years) March – May (short rains) & Oct – Dec (long rains)
Currently - rains only few days in April and towards Nov

dry seasons - previously - Jan – Feb & June to September
- currently - All year round

Diseases (human & livestock) - previously in June & Dec after the rains
- currently all year round due to drought

social events - previously after the rains - in June & December
- currently - Anytime of the year

~~Food Shortage~~ - previously in March & August - Currently All year round.

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

The Community voted drought as Number one most threatening hazard, Number 2, Food Security (Hunger) and Finally Number 3 - Deforestation

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

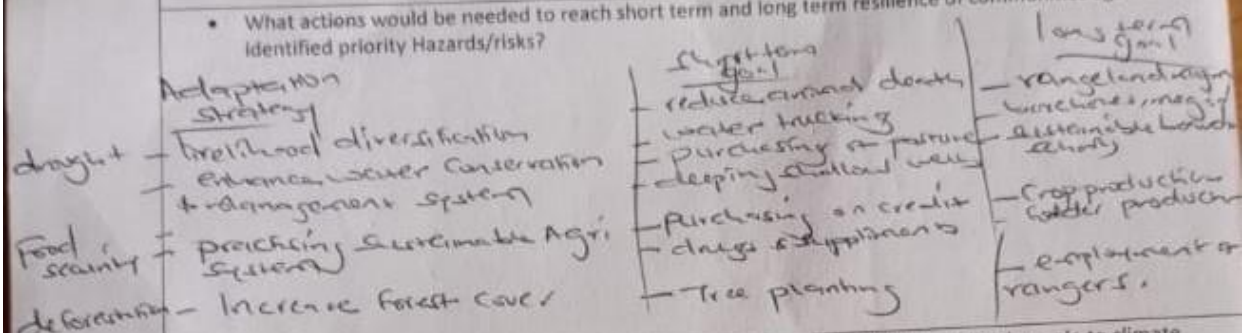
drought - loss of livelihood
- Scarcity of water
- diseases
- School drop-outs
- migration
- loss of vegetation / pasture

Food security - Malnutrition
- diseases
- low attendance / absenteeism
- divorce
- Increase in crimes
- Mental Stress
- migration

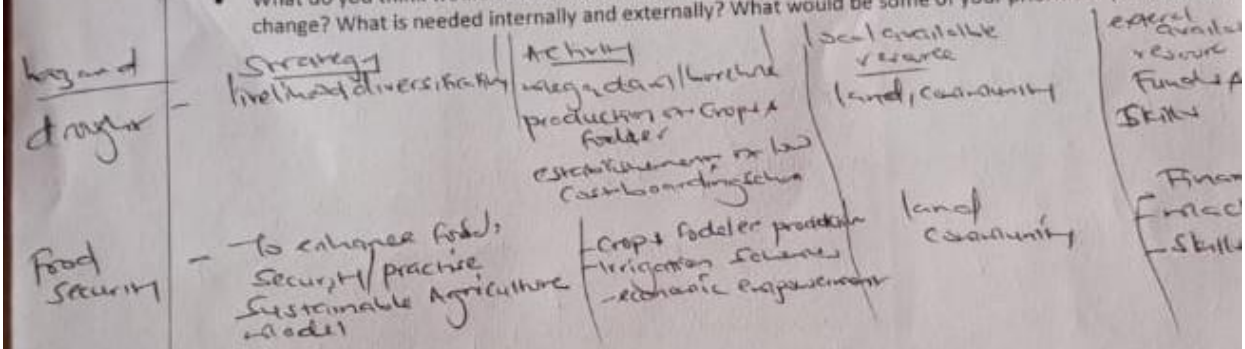
Deforestation - Change of weather pattern (global warming)
- loss of vegetation cover
- Soil erosion
- No shade
- Strong winds

WAJIR COUNTY PARTICIPATORY CLIMATE RISK ASSESSMENT COMMUNITY ENGAGEMENT TOOL.

- 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 internally and externally? What would be some of your priorities? (Action Plan)



6