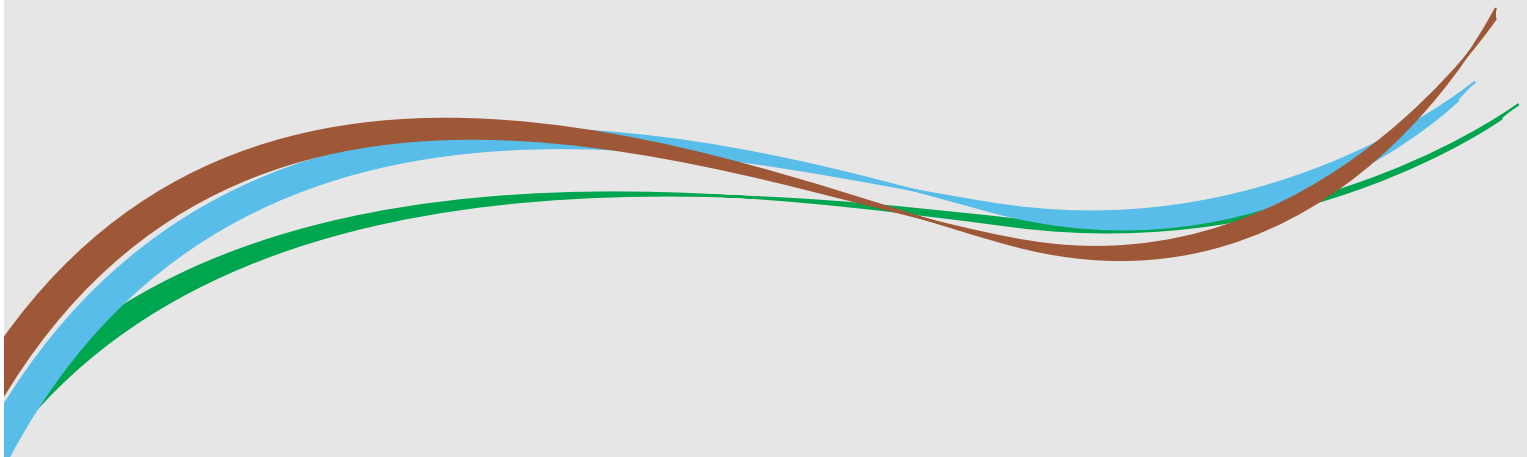# REPUBLIC OF KENYA

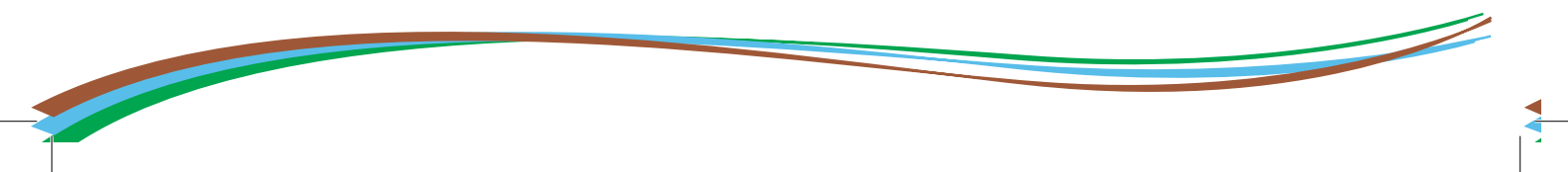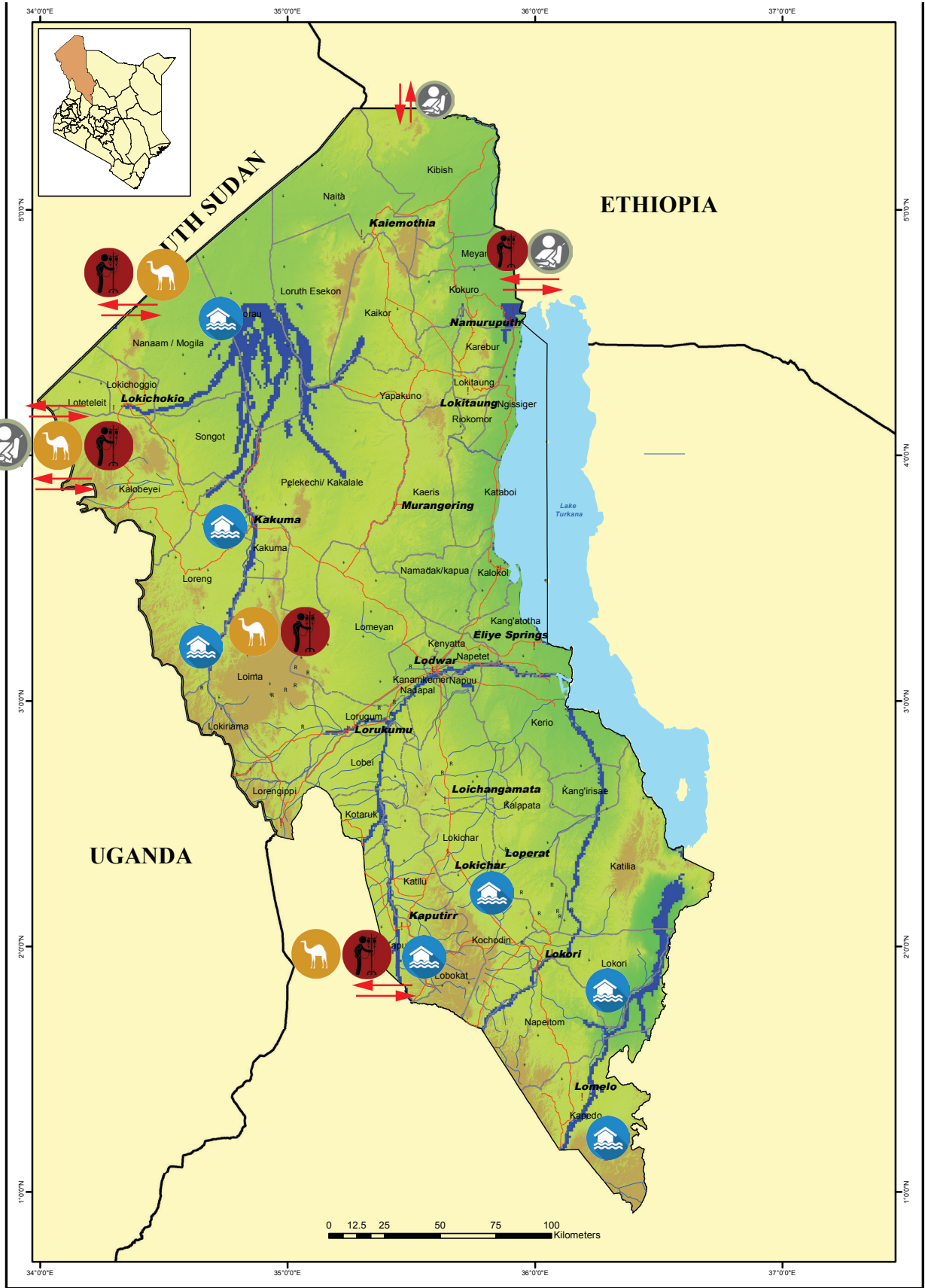# TURKANA COUNTY GOVERNMENT

Disaster Risk Management Policy

PUBLIC SERVICE, ADMINISTRATION & DISASTER MANAGEMENT

SOUTH SUDAN
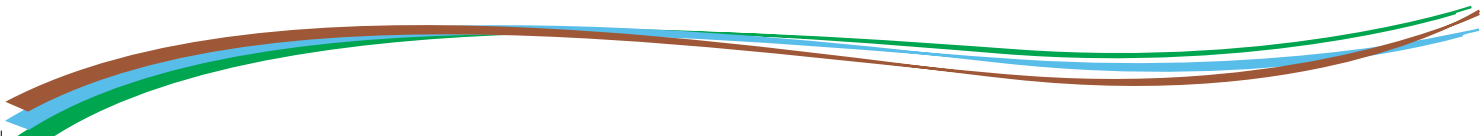
ETHIOPIA

UGANDA

Lake Turkana

Kibish
Naita
Kaiemothia
Loruth Esekon
Meyan
Kokuro
Kaikor
Namuruputh
Nanaam / Mogila
Karebur
Lokitaung
Lokichoggio
Yapakuno
Lokichokio
Lokitaung Ngissiger
Loteteleit
Riokomor
Songot
Kaeris
Kataboi
Pelekechi/ Kakalale
Murangering
Kalobeyei
Kakuma
Kakuma
Namadak/kapua
Kalokol
Loreng
Kang'atotha
Lomeyan
Eliye Springs
Kenyatta Napetet
Lodwar
Loima
Kanamkemer Napuu
Nadapal
Lorukumu Kerio
Lorugum
Lokiriama
Lobei
Loichangamata
Lorengippi
Kalapata Kang'irisae
Kotaruk
Lokichar
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Kochodin
Lokori
Lokori
Lobokat
Napeitom
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Lomelo
Kapedo

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5°0'0"N
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3°0'0"N
2°0'0"N
1°0'0"N

0 12.5 25 50 75 100
Kilometers

KEY

Conflict   Floods
Disease   Livestock

TABLE OF CONTENTS

ACRONYMS

CBOs	Community Based Organizations
CBPP	Contagious Bovine Pleuropneumonia
CDOC	County Disaster Operations Center
CIC	County Incident Commander
CSOs	Civil Society Organizations
DMC	Disaster Management Committee
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DRMTC	Inter-Agency Disaster Risk Management Technical Committee
EDE	Ending Drought Emergencies
EWS	Early Warning System
FAO	Food and Agriculture Organization
FBO	Faith Based Organization
HIV/AIDS	Human Immune-Deficiency Virus/ Acquired Immune Deficiency Syndrome
ICT	Information and Communications Technology
IDPs	Internally Displaced Persons
IGAD	Intergovernmental Authority for Development
ILRI	International Livestock Research Organization
IPCC	Inter- Governmental Panel on Climate Change
ISDR	International Strategy for Disaster Response
KALRO	Kenya Agricultural and Livestock Research Organization
KEMRI	Kenya Medical Research Institute
KPDF	Kenya Defense Forces
KRC	Kenya Red Cross Society
KWS	Kenya Wildlife Services
M&E	Monitoring and Evaluation
NDMA	National Drought Management Authority
NDOC	National Disaster Operations Centre
NEMA	National Environment Management Organization
NFI	Non-Food Items
NGOs	Non-Governmental Organizations
PPP	Public, Private Partnerships
SCDMC	Sub-County Disaster Management Committee
TUPADO	Turkana Pastoral Development Organization
UN	United Nations
UNDP	United Nations Development Programme
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Emergency Fund
VCT	Voluntary Counseling and Testing
VDMC	Village Disaster Management Committee
WDMC	Ward Disaster Management Committee
WFP	World Food Programme
WHO	World Health Organization

FOREWORD

Turkana County faces a number of disasters, both natural and human-made which include drought, floods, landslides, earthquakes, stormy rains, strong winds, hailstorms, pest infestations, diseases outbreaks, fire and traffic related accidents. Over the decades, the intensity, frequency and severity of some of these disasters haves steadily been increasing, triggered by climate change variability, urbanization, population growth, aridity, and environmental degradation.

Disasters cause death, disrupt people's livelihoods, endanger human and food security, damage infrastructure, disrupt ecosystem functions, and hinder socio-economic growth and development.

The County has experienced repeated episodes of droughts and floods that have affected the agriculture sector leading to massive livestock deaths and chronic food insecurity. Due to large resources allocated to respond to these disasters, little recovery times and large economic losses, there has been increased poverty levels of rural and peri-urban households and reduced ability of the county government to invest in key social-economic sectors which are overall important to reducing poverty. There is therefore an urgent need to address potential disaster risks for the socio-economic development of communities.

The development of the County Disaster Risk Management Policy is a major step towards achieving sustainable development in line with county, national and international frameworks. The policy will facilitate the effective coordination at all levels by leveraging on collective capacity by Government, communities and other stakeholders towards effective disaster preparedness, mitigation, response and recovery.

This policy calls upon all sectors and stakeholders to pursue proactive, integrated, innovative and realistic strategies with strong partnerships and networks for sustainable development. The policy guides all government, non-governmental organisations, private sector, media and development partners to effectively integrate disaster risk management programmes in all sectors.

The policy proposes establishment of comprehensive institutional and legal framework, political commitment as well as provision of adequate resources for Disaster Risk Management.

I laud all stakeholders for their contribution towards the development of this policy. It is, therefore, my sincere hope that all stakeholders in the county will align their activities to ensure that communities are resilient to disasters for sustainable development. Lastly, my Government is committed to ensuring successful implementation of this policy.

Hon. Charles Lokioto Ewoi,
County Executive Committee Member,
Public Service, Administration and Disaster Management.

ACKNOWLEDGEMENT

The formulation of the Disaster Risk Management Policy was through a rigorous and elaborate participatory consultation process with various stakeholders among them, Government Ministries and Departments, National and International NGOs, United Nations agencies, Development Partners, Civil Society Organizations, Local Leaders, Communities and Individuals.

Special mention goes to Oxfam International for providing the initial financial and technical support. The same goes to the UN Women for their role in supporting the review process to mainstream Gender into the DRM Policy. The two organizations have walked with the County Government in realizing strategic documents to give the County Government the much needed frameworks and legislation to inform its programming.

We are thankful to both the County Cabinet and County Assembly for their various roles in guidance and approval of the Policy.

It is thus my sincere hope that this commitment showed by all stakeholders in developing this policy will continue unto its implementation.

Mr. Abraham Losinyen,
County Chief Officer,
Administration and Disaster Management.

1.0 INTRODUCTION

1.1. Disaster has various definitions that span across disciplines and organizations. It is commonly defined as a serious disruption of the functioning of a community, or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. Disasters combine three elements: hazard, exposure and the vulnerability of affected people. "A disaster occurs when a hazard exposes the vulnerability of individuals, communities and systems in such a way that their lives are directly threatened or sufficient harm has been done to their community's economic and social structure to undermine their ability to survive".

1.2. Turkana County experiences multiple complex disasters which are related to droughts, flooding, conflicts, raids, landslides, human diseases outbreaks, livestock and wildlife epidemic, crop infestations, road or an industrial accident among others that negatively impacts human populations. Disaster profiles in Turkana County indicate occurrence of many incidents which have increased in frequency, intensity and severity over the past few decades. In most cases, entire populations of Turkana are affected by disasters that disrupt lives, livelihoods and a drawback from gains achieved in human development.

Disaster impacts are associated with loss of life and livelihoods, injury, diseases and other negative effects on human physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and ecological or environmental degradation. The impacts is aggravated by recurrent extreme climate change events, widespread poverty, demographics such as rapid population growth and increasing population density, ecological and hydro-meteorological phenomena and human-induced factors that has resulted to more areas being affected.

1.3. According to the Kenya National Human Development Report of 2014, Turkana County has a human poverty index (HPI) of 94 per cent with a contribution of 1.3 per cent to the national poverty. The population density distribution is dynamic owing to the pastoral livelihoods and nature of the Turkana people. Mortality rate is high; the infant mortality rate is 66 deaths for every 1000 live birth, as compared to the national rate of about 52 in every 1000 live births in 2015. Besides, HIV/AIDS is a threat to the Turkana population. According to the Medical records, the prevalence rate was 6.9 percent in 2012.

However, many deaths occur due to violent conflicts, diseases, and drought. Even though the humanitarian agencies and the county government have been implementing various projects and programmes geared towards disaster risk reduction, poverty reduction and improving food security in the County, vulnerability to disaster risks remains high. Majority of the rural households make up the poor and it is these poor households who frequently get severely impacted by disasters. In addition, the frequent multiple and complex disasters often disrupt progress and destroy the hard-earned fruits of humanitarian and developmental interventions in the area. The productive sectors that contribute directly and indirectly to the local and county economy through revenue generation and wealth creation such as pastoralism, fishing, agriculture, trade, tourism and oil industry have also been adversely affected by frequent disaster in the region.

1.4. That is why a policy and institutional framework for disaster risk management

that includes preparedness, mitigation, response and rehabilitation in Turkana and other counties prone to hazards is necessary. Disaster management includes sum total of all activities, programmes and measures which can be taken up before, during and after a disaster with the purpose of avoiding, reducing the impact or recovering from its losses. Disaster preparedness includes arrangements that ensure that a community is aware of and prepared for any disaster and, that should a disaster occur; all those resources and services which are needed to cope with the effects can be efficiently mobilized and deployed.

Whereas, disaster response are measures taken immediately prior to and following disaster impact, recovery and rehabilitation is the improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors. Disaster mitigation includes those activities designed to prevent or reduce losses from disaster. Presently, Turkana County lacks adequate policy measures necessary for disaster risk management for the affected communities. However, County Emergency and Disaster Management Act of 2016 was drafted and hurriedly passed by the Turkana County assembly that is not informed by a DRM policy.

1.5.   In most cases, the management of disasters by government departments and other actors at various spheres of engagement is almost entirely reactive in nature. It is also clear that the full continuum necessary for disaster risk management, such as prevention, preparedness, response and mitigation is often not an integral component of current disaster management systems in the county and of the various stakeholders. Rather, each disaster is treated as a crisis, and preparations are conducted to deal only with emergency situations as witnessed during the 2010, 2012 and 2016/17droughts.

The thrust of this Policy is to institutionalize disaster risk management in the county's development initiatives and structures. This focus is in keeping with County, National, Regional and International initiatives as contained in the targets set to achieve Kenya Vision 2030, The African continent 2063 Agenda, the Sustainable Development Goals, and the Sendai Framework of Disaster Risk Reduction2015-2030; Building Resilience of Nations and Communities to Disasters as agreed upon during the Third UN World Conference on Disaster Reduction held in Sendai, Japan on March 2015.

1.6.   The promulgation of the Kenya Constitution in 2010 and creation of devolve government in Kenya herald a new paradigm in disaster management. Chapter 11 of the Constitution on devolved Government functions distributes fire-fighting services and disaster management to the County governments. However, the complexity of disaster management makes it a shared responsibility of the national and county governments, humanitarian agencies, communities and individuals. The constitution also embodies an elaborate provision for the right to safety, security and healthy environment free from disasters as enshrined in Chapter IV of the Bill of Rights. The draft National Disaster Risk Management policy (DRM Policy 2017) also proposed establishment of an integrated multi-hazard disaster risk management approach by county Governments.

1.7.   This policy aims to put in place a systematic holistic disaster risk management framework for Turkana County. It further ensures that the linkage between the disaster risk reduction, climate change adaptation, poverty reduction, gender and all Sustainable Development Goals (SDGs) are integrated in all county government processes, plans, programmes and budgets at all levels in order to facilitate and realize disaster resilient county.

2.0 GOAL, OBJECTIVES AND GUIDING PRINCIPLES

2.1 Policy Mission
To build a safe and disaster resilient county through the establishment of a robust disaster risk management system that contributes to the protection of lives, livelihoods, property and the environment.

2.2 Policy Goal
To create an effective framework through which disaster risk management is entrenched in all aspects of the county development plans.

2.3 Approach
The policy proposes for a holistic, integrated, inclusive and multi-hazards approach which gives appropriate attention and resources to all phases of disaster risk management which includes prevention, preparedness, response and recovery with emphasis on building strategic partnerships at various levels.

The principles underpinning the policy are:
- a) Community based disaster management, including last mile integration of the policy, plans and execution. Actions will be undertaken at the lowest or least centralized competent level possible.
- b) Capacity development in all spheres.
- c) Consolidation of past initiatives and best practices.
- d) Cooperation with agencies at county and national levels.
- e) Multi-sectoral collaboration and synergy.
- f) Systematic gender sensitive approach

2.4 Policy Objectives
The specific objectives of the Turkana County Policy for DRM are to: -
- a) Establish and strengthen gender inclusive institutional mechanisms and capacities for Disaster Risk Management
- b) Reduce disaster risk and vulnerabilities by undertaking systematic identification and assessment of disaster risk and enhancing early warning systems
- c) Mainstream DRR into sustainable development policies, strategies and plans in all sectors
- d) Enhance resilience of the county to the impacts of disaster risk and climate change
- e) Ensure effective and coordinated disaster preparedness, response, recovery and rehabilitation that provide protection both physically and in terms of human dignity.
- f) Promote public, private partnerships in Disaster Risk Management.

2.5 Guiding Principles
The County Disaster Risk Management Policy shall be implemented in accordance with the following guiding principles: -

a) Rights of the citizens: promotion and protection of rights of all Turkana residents is an integral component of this policy. The county government will integrate human rights

in disaster risk management by way of promoting inclusivity and avoiding all forms of discrimination.

b)	Sound Planning using a gender sensitive, multi-disciplinary and multi-sectoral approach: effective disaster risk management depends on multi-sectoral planning and programming. Planning for disaster has to be undertaken at all levels; from the county to the village level. Therefore, the government will promote adoption of an inclusive gender sensitive, multi-disciplinary and multi-sectoral approach

c)	Community Participation: individuals of all genders within communities have valuable information and resources to share on the likelihood, causes and consequences of disasters. Given that they have rights and obligations to participate in key decisions that affect their lives, they are called upon to prepare for and respond to disasters. At all levels, government will provide appropriate mechanisms and equal opportunity for participation in all processes of disaster risk management. Communities will be encouraged to establish mechanisms, building on their traditional coping strategies to share knowledge and technologies and to pool together local resources for disaster mitigation, prevention, preparedness, response and recovery.

d)	Mainstreaming Disaster Risk Reduction and Resilience Building into Development: all development programs, policies, plans and strategies at all levels shall incorporate DRR and Resilience Building components. Vulnerability reduction and effective disaster risk reduction, and resilience building is key to sustainable development. This section must therefore compel various government institutions and sectors to ensure vulnerability reduction, disaster risk reduction and resilience building forms an integral part of their normal day-to-day development planning and implementation. This should also be inclusive with special emphasis on involving affected persons as gender shapes the extent to which men, women, boys and girls are vulnerable to and affected by disasters and emergencies. Even though DRR activities can help vulnerable communities become better prepared to cope with the hazards around them, it is the larger-scale economic and development activities that will be critical for building resilience, even to recurring crises, over the long term.

e)	Institutional Capacity Building: effective disaster management shall be based on constant reviewing and upgrading of institutional capacity to prepare for, responding to and cope with disasters at county and community levels. Coping capacity shall be judged in terms of the equipment, resources, skills and knowledge required to undertake effective disaster management. The county government and other stakeholders will continue to strengthen capacities through training, mentoring and skills development at all levels for better DRM programming.

l.	Coordination, Collaboration and Communication: adequate coordination and communication amongst communities and stakeholders at all levels are critical components of disaster management. Disaster risk communication and warnings are not effective if overly-general and not informed by gender-aware risk assessments and community-driven preparedness. Communicating actions for disaster preparedness and response by stakeholders must be community driven, sensitive to culture and context, gender-targeted, based on knowledge of how particular groups of women and men access, interpret and make use of life saving information about potential disasters. Men and women must have equal opportunities to be heard in planning for and implementing disaster risk management strategies. There is a need to integrate gender perspectives into early warning systems.

The County Government will establish well integrated, professionally resourced and

effective ICT infrastructure and communication systems that are functional even when normal communications are likely to be or have been interrupted by disasters.

f)   Comprehensive Risk Analysis: effective disaster risk management depends on an accurate analysis and mapping of the vulnerability and susceptibility of individual, a community, assets or systems to potential disaster risks. This will involve geo-referencing and risk (hazard, capacity and vulnerability) mapping and livelihood zoning. Undertaking disaster risk analysis shall enhance identification of specific gender needs and providing gender specific interventions for disaster reduction and resilience building.

g)   Integration of Climate Change into Disaster Risk Management: disasters in Turkana County are related to extreme climate events and are key causal factors for some protracted. Factoring of climate and weather information (such as early warning, technical and scientific analysis) in disaster management is a vital component of this policy. Climate Change will therefore be mainstreamed not only into DRM, but also in overall development planning and management as included in the County Integrated Development Plan (CIDP).

h)   Promotion of Public, Private Partnerships (PPP) in DRM. Threats of natural hazards affect both public and private sectors alike, thus a need for sustained, dynamic, innovative and inclusive partnerships. PPP will offer opportunities to combine resources and expertise and to act jointly to reduce risk and potential losses through joint collective capacity for early action especially for disaster preparedness and response.

i)   Research and Dissemination of Information: Research and information dissemination of knowledge and capacities for disaster risk reduction are critical components of effective DRM. Therefore, all stakeholders have the responsibility of collecting, collating, documenting and disseminating their good practices and experiences on disaster management for adoption and scale up. The county government will facilitate research as a key process for practical applications and in association with relevant stakeholders for strategic planning and adoption.

j)   National, Regional and International Partnerships and Agreements: The policy acknowledges that disasters transcend county, national and international borders. The county of Turkana shall subscribe to nationally recognized regional and international bodies and agreements related to disaster risk management. The policy shall promote participation in national, regional and global initiatives for the implementation of disaster risk reduction and response. Such instruments include the draft National Disaster Risk Management Policy 2017, Ending Drought Emergencies (EDE) and international and regional instruments ratified by the Kenya Government such as the Sendai Framework for Disaster Risk Reduction 2015-2030, IGAD Drought Disaster and Sustainability Initiative (IDDRSI),African Union Commission (AUC) Agenda 2063, as well as the Sustainable Development Goals (SDGs).

3.0 HAZARDS, POLICY INTERVENTIONS AND RESPONSIBLE INSTITUTIONS

3.0.1.   Turkana County is among Kenya's most disaster-prone counties and has experienced several natural and human-induced catastrophes or hazards causing high economic and human losses. The county is prone to drought, flooding, famine, raids, violent conflicts, transport accidents, fire-outbreaks, human epidemics of disease, landslides, environmental degradation, technological accidents, livestock and wildlife disease epidemics, crop pest infestation, protracted refugee influx and other disasters. Contact with these hazards have resulted in deaths, injury, disruption of socio-economic activities, loss of property, natural resources and other physical assets at the both household and community level.

3.0.2. Owing to increased frequency of these disasters, limited resources, inadequate administrative and technical measures necessary for disaster preparedness and response, and the absence of a clear policy framework, disasters impacts have continuously affected. In addition, the county lacks a depository and repository of vital data on the incidence of disasters and their effects on the communities and households. Enforcement of legislation on risk avoidance is weak such that disruptions arising from disasters have continued to grow without corresponding lessons learnt measures.

3.0.3. This policy, therefore, is an effort to put in place a systematic disaster prevention, preparedness, response and mitigation frameworks for the county. Institutions framework have been identified for each of the hazards that affect Turkana County. The policy emphasized that the Directorate of Disaster Management to coordinate all other institutions to establish mechanisms for joint monitoring, assessing and reporting on risk levels and actions being taken to minimize adverse effects.

3.1   Drought
Drought is lack or insufficiency of rain for an extended period of months or years when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. It can have a substantial impact on the ecosystem and agriculture of the affected region.Severe drought results in human and livestock deaths, as is also exemplified by the reduced water table, diminishing water levels in the major rivers in Turkana and massive crop failures. Studies show that adverse years of drought could cause high livestock mortality of up to (40-60%) as it happened in recent years 2002, 2006, 2008/9 and 2016/7, exceeding in destructiveness of the 1980 and 1984 historically significant droughts.

Inadequate water supply, diminishing livestock, crop failures and severe food insecurity during drought lead to hunger and famine whereas a stable water supply, food security, access and management of natural resources ensureoverall good health and high livestock and agricultural productivity. Water is the most priced commodity in the county which is key to food security, livestock production systems, socio-economic development and well-being of the county. It is also the first requirement for preventing water-borne diseases which is prevalent in Turkana.

The climatic records indicate that entire Turkana County continuously receiving less rainfall than before due to its geographical position, global warming and overall deteriorating

regional weather conditions. The recent drought events in the county were experienced in 1980, 1990, 1995, 2000, 2006, 2008-09,2010 and 2016/17 have affected the County.

3.1.1 Policy Actions on droughtmanagement

i. Define context based indicators for the type of drought (hydrological drought; socio-economic drought; agricultural or meteorological drought) to guide appropriate responses
ii. Develop and activate drought contingency plans
iii. Carry out drought rapid and detailed gender inclusive assessments
iv. Enhance response coordination mechanisms – logistics, pipelines and distributions at all levels
v. Establish proper mechanisms for weather data collections, predication, early warning and information dissemination to all stakeholders
vi. Formation of inclusive community disaster management committees
vii. Livestock off-take and restocking
viii. Establish a County database on drought information.
ix. Strengthen research institutions for development and improvement of drought tolerant livestock andcrops.
x. Mappingand zonation of drought prone areas.
xi. Integrate drought management programmes into the County Integrated Development Plan and all the sector plans in the county.
xii. Enforce implementation and compliance to environmental regulations and laws – including the customary laws.
xiii. Improve land use/rangeland management practices in the county.
xiv. Capacity building of communities and committees.
xv. Strengthen communityresilience through cross border peace building initiatives
xvi. Mainstreaming of DRR
xvii. Livelihoods diversifications and improvement of livestock production

The areas of action to promote resilience to drought include: climate change adaptation, agriculture and food security and livelihoods security, economic recovery, health, nutrition, and water and sanitation. Drought can often cause migration, requiring close coordination with other actors on responding to needs of internally displaced persons.

3.1.2 Responsible Institutions

- Public Service, Administration and Disaster Management (Lead)
- National Drought Management Authority - NDMA
- Metrological Department
- The Office of the Governor
- Education, Sports and Social Protection
- Trade, Gender and Youth Affairs
- Agriculture, Pastoral Economy and Fisheries
- Health Services and Sanitation
- Water Services, Environment and Mineral Resources
- Research institutions
- Kenya Red Cross,
- Community, Private Sector and Civil Society Groups
- Faith Based Organizations
- INGOS, UN agencies

3.2. Floods

Floodingis an overflow of water that submerges land, producing immeasurable property

damage or forcing evacuation of people and vital resources. Floods are caused due to heavy rainfall and the inadequate capacity of rivers to carry the high flood discharge. Floods develop slowly as rivers swell during an extended period of rain. Flooding occurs when water overflows or inundates land that is normally dry.

Flooding mostly happens when rivers or streams overflow their banks. Turkana County has frequently suffered from failures of the annual rains. However, in recent years 2006, 2007,2011 and 2018, witnessed a higher than expected rainfall which resulted to flash floods with many parts of the county experiencing loss of livestock and pasture. The surface runoff is extremely high which often led to flooding in the county.

The flash flooding is common phenomenon inTurkana West – Lopur, Kakuma, Letea, Kalobeyei, Songot, Lokichoggio and Nanam wards; Turkana Central – Township, Kangatotha, Kalokol and Kerio Wards; - Turkana East –Lokori/Kochodin and Katilia wards; Turkana South – Lobokat, Kaputir, Katilu and Lokichar wards. However, periodic mapping of flood prone zones will form part of disaster preparedness plans in the County.

3.2.1 Policy Actions on Floods Management
   i.   Gazette flood basins
   ii.   Establish early warning systems in the county to support regular assessments of floods
   iii.   Develop and implement Integrated River Basin Flood Management Plans
   iv.   Create awareness in the communities on flood risk reduction measures.
   v.   Enforce river bank management regulations
   vi.   Evacuations/ resettlement programmes
   vii.   Ensure proper physical planning of rural and urban settlements.
   viii. Health hygiene promotions on sanitation and hygiene

Areas for action to promote resilience to flooding include the following: climate change adaptation, education, agriculture, health systems, economic growth, housing, and poverty alleviation.

3.2.2 Responsible Institutions
   •   Public Service, Administration and Disaster Management(County Lead)
   •   The Office of the Governor
   •   Ministry of Interior and coordination
   •   Water Services, Environment and Mineral Resources
   •   Agriculture, Pastoral Economy and Fisheries
   •   Finance and Economic Planning
   •   Trade, Gender and Youth Affairs
   •   Water Services, Environment and Mineral Resources
   •   Health Services and Sanitation
   •   Infrastructure, Transport and Public Works
   •   Lands, Energy, Housing and Urban Area Management
   •   Education, Sports and Social Protection
   •   Community and Private Sector
   •   Kenya Meteorological Department/Services
   •   Kenya Red Cross Society
   •   Faith Based Organizations
   •   UN Agencies and NGOs

3.3 Food Insecurity

Food Insecurity/Famine is a severe shortage of food that may lead to malnutrition and death. Turkana is frequently ravaged by severe food insecurity. The acute food and nutritional insecurity (with food poverty at 81%) is due to the wide gap between food requirements and supply that is reflected in high food prices. Some of the factors contributing to extreme food insecurity include prolonged drought, crop failure and livestock deaths. Food insecuritycould also be a consequence of mass displacementfrom conflict and shortage.

According to the county reports, drought is the main cause of famine in Turkana. Approximately 60-90% of the county population relies on food relief from government, private sector, FBOs and NGOs. Despite the huge herds of livestock, culture inhibits slaughter or sale in acquisition of food especially prior to drought. It is not uncommon to see in local media, the images of a starved population of Turkana people being fed by relief agencies with declaration of famine. It has been reported that during droughts incidences of gender based violence increase with mostly women and girls at risk.

3.3.1 Policy Actions onFood Security andFamine
i. The relevant ministries shall take measures including specific programmes, needed to improve methods of production, conservation and distribution of food by making full use of available technical, scientific and traditional knowledge, disseminating knowledge of principles of nutrition.
ii. Design programmes to increase the quantity and quality of food available and accessible to all in order to ensure that population inTurkanahave an adequate, diverse and healthy diet that meet their specific needs.
iii. County Government shall establish and maintain adequate grain stores for chronic food insecure locations and other emergencies.
iv. During periods of food shortage, the department of Disaster Management shall coordinate the provision of relief food and non-food commodities to persons in need based on seasonality.
v. Support food for asset programmes aimed at preparing land, rehabilitating social infrastructure and other activities necessary for community stability.
vi. Promoting good livestock husbandry and modern farming methods among the communities.
vii. Establishing measures for household, community, and county food reserves and silos.
viii. Establishing a County database on famine.

3.3.2 Responsible Institutions
- Public Service, Administration and Disaster Management(Lead agency)
- The Office of the Governor
- Health Services and Sanitation
- Agriculture, Pastoral Economy and Fisheries
- Trade, Gender and Youth Affairs
- Water Services, Environment and Mineral Resources
- Tourism, Culture and Natural Resources
- Lands, Energy, Housing and Urban Area Management
- Community and Private Sector
- Education, Sports and Social Protection
- National Drought Management Authority (NDMA)
- Kenya Red Cross Society
- UN Agencies and INGOs

3.4 Raids and Violent Conflicts

Raids and Violent Conflicts continue to be a common disaster across the county, especially along the internal and external borders. Most of these conflicts result into loss of life, displacements, gender based violence, landlessness and loss of property. Livestock raids in Turkana involve members of neighboring communities raiding and taking livestock from another community. Turkana County recorded 592 raid-related deathsbetween 2006 and 2009. It is one of the cultural practices that has metamorphosed into senseless deaths, displacement of persons, loss of property and other adverse socio-economic effects. In recent years, livestock raiding in Turkana with the neighboring communities has become more frequent, violent and destructive. Violent conflict poses a significant threat to pastoral livelihoods which are already under pressure from recurrent drought, diseases outbreaks and previous political marginalization.

3.4.1 Policy Actions on Raids,Conflicts Management, Resolution and Transformation
i. Develop mechanisms for peaceful coexistence between communities
ii. Promote livelihood diversification activities along the borders
iii. Control the movement and proliferation of small arms and light weapons
iv. Conduct disarmament programmes and destruction of illegal ammunitions
v. Strengthen community policing
vi. Integrate and provide vocational skills to reformed warriors
vii. Undertake awareness creation and peace building
viii. Develop a comprehensive rangeland use plan and policy
ix. Enhance peace building and conflict management mechanisms

3.4.2 Responsible Institutions
- The Office of the Governor (Lead agency)
- The Office of the County Commissioner
- Public Service, Administration and Disaster Management
- Trade, Gender and Youth Affairs
- Lands, Energy, Housing and Urban Area Management
- Water Services, Environment and Mineral Resources
- Agriculture, Pastoral Economy and Fisheries
- Education, Sports and Social Protection
- Community and Private Sector
- Faith based organizations
- Kenya Red Cross Society
- UN Agencies, local organizations and INGOs
- Turkana Women Leaders Forum

3.5 Human Diseases Epidemics

Human diseases epidemics are the prevalence of a disease, in a particular community and at a particular period of the year with magnitude beyond normal coping mechanism of the local community and systems. Turkana County is at risk to human diseases outbreaks. The periodic or seasonal outbreak of endemic diseases include; cholera/Diarrhea diseases, malaria, Respiratory Tract Infections, HIV/AIDs, meningitis and hepatitis. Others are diseases such as diarrhea dysentery and typhoid.

Malaria tops the list of common human diseases in the county because the environment favors the breeding of mosquitoes, which are the vector for malaria. The common affected areas are Turkana North- Lake zone, Turkana west - Kakuma town& Refugee camp, Turkana Central – Town California/Soweto. Prevention of and early response to outbreaks are critical to saving lives and reducing the economic toll these disasters take.

3.5.1 Policy Actions on human diseases
i. Develop county health DRM Policy
ii. Establish and enhance referral system and mechanism
iii. Mapping of outbreak hotspots
iv. Promotion of condom use, mobile Voluntary Counseling and Testing (VCT) and PMTCT services;
v. Establish and strengthen disease surveillance systems
vi. Health education and promotions
vii. Coordination of health stakeholders
viii. Intensified research on HIV/Aids and related diseases in Turkana County
ix. Scale up Campaigns for Behavior Change Communication(BCC)
x. Strengthen emergency preparedness and response system
xi. Prepositioning of emergency kits – health
xii. Capacity building of health disaster committee at the health facility level.

3.5.2 Responsible Institutions
- Health Services and Sanitation (Lead)
- The Office of the Governor
- Public Service, Administration and Disaster Management
- Agriculture, Pastoral Economy and Fisheries
- Trade, Gender and Youth Affairs
- Water Services, Environment and Mineral Resources
- Lands, Energy, Housing and Urban Area Management
- Community and Private Sector
- Research Institutes
- Kenya Red Cross Society
- Faith Based Organizations (FBOs)
- UN Agencies and INGOs

The areas for action to promote community resilience to diseases include the following: climate change adaptation, agriculture and food security, livelihoods, economic recovery, health, nutrition, and WASH.

3.6   Livestock and Wildlife Diseases Epidemics
Livestock and wildlife diseases epidemics - The livestock sector faces major challenges such as livestock epidemics, which affect the county time and again. Prevalence of livestock diseases which includetrans-boundary diseases and predators is high. The most common diseases include Helminthosis,Peste Petis Ruminants (PPR), Contagious Bovine Pleuropneumonia (CBPP), and CCPP in shoats, Trypanosomiasis, and Mange. Of these diseases PPR is still the biggest threat to small stock followed by Helminthosis.

The technical government staff in the county, with support from Community Animal Health Workers, implements programmes to mitigate the effects of diseases. However, these interventions are challenged by inadequacy of tools, equipment and vaccines to handle the frequent diseases outbreaks adequately throughout the county. Prevalence of livestock diseases outbreaks though common in the whole County, the most affected areas recently includeUrum, Kibish, Oropoi, Mogila, Kapedo, Kainuk and Nakwamuru.

3.6.1   Policy Actions on Livestock Diseases
a) Livestock vaccinations against endemic diseases
b) Increasing veterinary drug access
c) Improving animal health services
d) Increasing livestock disease surveillance

e)   Strengthen extension services
f)   Public health awareness
g)   Improve on livestock breeds through upgrading and cross breading
h)   To control endemic livestock diseases, pests, parasites and disease transmission vectors
i)   Vaccinations against endemic livestock diseases
j)   Increasing veterinary drug access
k)   Research on livestock diseases control

3.6.2 Responsible Institutions

- Agriculture, Pastoral Economy and Fisheries (Lead)
- Kenya Wildlife Services
- Water Services, Environment and Mineral Resources
- Health Services and Sanitation
- Public Service, Administration and Disaster Management
- Trade, Gender and Youth Affairs
- The Office of the Governor
- Department of Livestock
- National Drought Management Authority (NDMA)
- Research Institutes
- Local organizations
- UN Agencies and INGOs

3.7   Internal and External Conflicts

Internal displacement in Turkana County is often traced to internal and external conflicts which have been going on for decades.In particular, violentexternal conflicts largely stemmed from natural resources competition and access (oil, geothermal, water and pasture), administration boundaries and political incitements. In the recent past, internal conflicts have been observed among communities and between them and the oil companies.

In Turkana County, the North and South parts are among the worst affected. Major conflict corridors in Turkana include: Kibish and Todonyang in the greater Turkana North; Oropoi and Lokichoggio in Turkana West; Kotaruk in Loima;all of the three (3) wardsof Turkana East;Lobokat and Kaputirwards in Turkana South and Kerio ward in Turkana Central Sub County.

3.7.1 Policy Actions

i.   Development of MOU/MOA between communities e.g. host communities/ private sector committee;
ii.   Civic educations and campaigns on rights and co-existence
iii.   Develop mechanisms for peace building, conflict management, resolution and transformation
iv.   Finalization of energy and land bill at the county level.
v.   Establish inclusive community based peace and security committees at all levels with representation
vi.   Develop conflict early warning systems
vii.   Control the movement and proliferation of small arms and light weapons
viii.   Reinforcement of existing community policing
ix.   Implementation of international treaties such as international crime and human rights.

3.7.2 Responsible Institutions
- Office of the Governor (Lead)
- Office of the County Commissioner (co-lead)
- Water Services, Environment and Mineral Resources
- Health Services and Sanitation
- Trade, Gender and Youth Affairs
- Education, Sports and Social Protection
- Public Service, Administration and Disaster Management
- UN, CBOs/NGOs/CSOs agencies
- Kenya Red Cross Society

3.8   Landslides

Landslides- are rapid movement of a large mass of mud, rocks, formed from lose soil and water. It usually follows heavy rainfall and high ground water flowing through cracked bed rocks and earth quakes and lead to movement of soils or sediments. Landslides are very difficult to predict but their frequency and extent can be estimated by use of information on the area's geology, geomorphology, hydrology, climate and vegetation cover and traditional knowledge.

Community settlement on steep slopes and other uncontrolled land use practices increase the likelihood of landslides and mudslides prevalence. The regions mostly affected during landslides in Turkana County are Suguta valley and its continuation to the north into southern Lake Turkana. Other areas prone to landslides include Lobolo in Kalokol ward.

Areas for action to promote resilience include the following: livelihoods, incident command system, improved monitoring, infrastructure development, economic recovery, health, and water and sanitation. Landslides and flooding can often lead to separation or loss of family members, requiring close coordination with other actors on internally displaced persons.

3.8.1 Policy Actions on landslides
i.   Gazette landslide prone areas and restrict human settlement in such risk areas
ii.   Landslides awareness raising and campaign
iii.   Promote rangeland rehabilitation andafforestation
iv.   Resettle all persons living in landslide prone areas
v.   Enforcement of relevant laws and policies
vi.   Support the application of appropriate and sustainable land use practices
vii.   Provide relief support – food and Non- Food Items (NFI) for people affected by landslide

3.8.2 Responsible Institutions
- Public Service, Administration and Disaster Management(Lead)
- The Office of the Governor
- The office of the Commissioner
- Water Services, Environment and Mineral Resources
- National Drought Management Authority (NDMA)
- Lands, Energy, Housing and Urban Area Management
- Trade, Gender and Youth Affairs
- Education, Sports and Social Protection
- Research Institutes
- Ministry of internal security
- Kenya Red Cross Society
- UN agencies and NGOs
- Turkana Women Leaders Forum
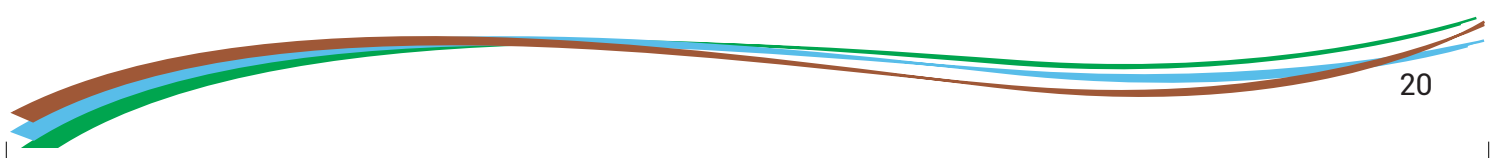
3.9 Fire-Outbreaks

Fire-outbreak- Fire hazards include the unplanned burning which may cause destruction of settlements, property and life. Fire disasters arise mainly from; natural causes, negligence, civil disorder, accident and enemy action. Among the many factors that cause fire hazards in Turkana are poor construction standards, accidents, arson and uncontrolled burning of shrub lands, pastureland or waste materials bush burning.

Fires are common in congested human settlements (Kraals), institutions of learning and markets places as a result of charcoal burning and, at refugee camp in Kakuma. Some of the most affected areas in the County are – Loareng'ak, Lokamarinyang, Napelet, Kibish, Lokichogio, Lorengipi, Namukuse, and Kapedo. The risk of fire hazards is likely to be higher with Turkana's increasing exploitation of oil resources which are highly inflammable and increasing urbanization in informal settlements.Fire management which include safety and protection will be the responsibility of Ministry ofLands, Energy, Housing and Urban Area Management

3.9.1 Policy Actions on fire-outbreak preparedness and response

i.   Coordinate fire safety activities such as training of rapid response volunteers, fire safety education and drills;
ii.   Coordinate fire response and provide ambulance services
iii.   Ensure there is effective fire safety management
iv.   Promotion of public safety within the realms of fire safety.
v.   Institute severe punishment, by-laws and ordinances to stop bush burning practices
vi.   Install fire-fighting equipment and machines in public institutions
vii.   Establish building codes specifying fire escape routes, fire resistant materials and fire detection systems
viii. Raise awareness on the causes and preventive actions on fire outbreaks
ix.   Conduct regular fire drills in public places and institutions of learning
x.   Establish regional fire facilities to correspond with emerging challenges
xi.   Develop partnerships with companies, organizations and institutions that have relevant firefighting equipment and rescue facilities.
xii.   Stock-piling of fire supplies

3.9.2 Responsible Institutions

i.   Lands, Energy, Housing and Urban Area Management (Lead)
ii.   Public Service, Administration and Disaster Management
iii.   Infrastructure, Transport and Public Works
iv.   Water Services, Environment and Mineral Resources
v.   The Office of the Governor
vi.   The office of the County Commissioner
vii.   Finance and Economic Planning
viii. Trade, Gender and Youth Affairs
ix.   Health Services and Sanitation
x.   Tourism, Culture and Natural Resources
xi.   Education, Sports and Social Protection.
xii.   Community and Civil Society
xiii. Kenya Red Cross Society
xiv.   The National Police Service

3.10 Oil, Mines and Unexploded Ordinances (UXOs)

The discovery of oil wells in Turkana County has the potential to cause oil explosions in the near future and large-scale spills and extensive environment degradation as has been experienced in many parts of the world where nascent oil industry has emerged. Appropriate measures therefore need to be put in place by the relevant agencies to avert any future catastrophesin the County. Mines are ammunitions designed to explode within proximity or in contact with a person or a vehicle.

There are also possibilitiesofdangerous devices like explosives, ammunitions, bombs, shells, mortars, grenades landmines, anti-tanks and anti-personnel. They are commonly used in contemporary wars and cause death and injury to humans and animals. Many of these devices that are fatal to the civilian communities are those that were abandoned unused but remain dangerous. They do explode anytime upon detonation by innocent children or adults who come in contact with them unconsciously. The most at risk areas in Turkana with potential UXOs include Lokichar basin, Nakukulas, Lokiriama, Letea, Kalobeyei, Songot, Lokichoggio, Nanam, Kibish, Lapur and Lake Zone wards. These are areas with a history or still experiencing violent conflicts.

3.10.1 Policy Actions for Oil explosions, Mines and Unexploded Ordinances
- Undertake Environmental and Social Impact Assessment and Audits
- Awareness on community about risks such as damages of oil pipes and wells, dangers of UXOs
- Robust safety regulations by oil companies
- Compensation policies to the communities
- Demining contaminated areas
- Undertake land use planning
- Relocate communities along the oil pipelines
- Providing relief assistance to the affected persons: medicine, shelter and NFI.

3.10.2 Responsible Institutions
- Water Services, Environment and Mineral Resources– (Lead)
- The Office of the County Commissioner
- The Office of the Governor
- Health Services and sanitation
- Public Service, Administration and Disaster Management
- Lands, Energy, Housing and Urban Area Management
- Infrastructure, Transport and Public Works
- Trade, Gender and Youth Affairs
- Education, Sports and Social Protection
- National Drought Management Authority (NDMA)
- National Environmental Authority- NEMA
- INGOs and UN agencies
- Community groups
- Private Companies

3.11 Transport Accidents

Transport accidents- the increasing numbers of accidents that take place during road and water transportation are occasionally fatal and hazardous. At the moment, it is the road accidents which are more frequent because road transportation is used more often by the Turkana resident. In recent years, buses and motorcycle (boda-boda) accidents have become notoriously rampart and fatal.

Over speeding and poor road condition are believed to be the major causes of tragic accidents along the main Kitale-Lokichoggio highway. In the recent past, road accidents are reported to be killing more people than bandits in Turkana, due to poor road infrastructure in the county.In addition, water accidents are occasionally reported among the fisher folks in Kalokol along Lake Turkana.

3.11.1 Policy Interventions on transport accidents
i.   Educate drivers and passengers on road safety
ii.   Improve road quality within Turkana
iii.   Establish well equipped hospital emergency facilities along major high ways
iv.   Promote public/private partnership on road quality and network improvement
v.   Enforce the Road Traffic Act
vi.   Establish water transport safety standards and facilities in Lake Turkana
vii.   Intensify supervision and monitoring of water transport systems
viii.   Procure ambulances for rescue
ix.   Conduct First aid trainingsin all public institutions

3.11.2 Responsible Institutions
• Infrastructure, Transport and Public Works(Lead)
• Traffic Police
• Finance and Economic Planning
• Health Services and Sanitation
• Tourism, Culture and Natural Resources
• Public Service, Administration and Disaster Management
• Education, Sports and Social Protection.
• Trade, Gender and Youth Affairs
• Education, Sports and Social Protection
• Kenya Red Cross Society
• Agriculture, Pastoral Economy and Fisheries
• Kenya Maritime Authority

3.12 Terrorism
Kenya has been the scene of various attacks attributed to terrorist elements in the recent past. If this trend is anything to go by then Turkana County might not be an exception for terrorist attack.Terrorism is defined as a coordinated crime and brutal aggression against government establishments, institutions and communities. The areas that could be the soft target for terrorist in the County includeKakuma, Lokichoggio, Kibish, Lodwar, Lokichar and Todonyang/Loawareng.

3.12.1 Policy Interventions
i.   Strengthen security infrastructure
ii.   Security surveillance using modern equipment
iii.   Create community awareness on the risk of terrorism
iv.   Strengthen community policing – NyumbaKumiinitiative
v.   Inspection and monitoring of borders and entry points into the county
vi.   Develop anti-terrorist media campaigns
vii.   Research on prevention of violent extremism

3.12.2 Responsible Institutions
• Office of the County Commissioner(Lead)
• Office of the County Governor

- Tourism, Culture and Natural Resources
- Public Service, Administration and Disaster Management
- Trade, Gender and Youth Affairs
- Education, Sports and Social Protection
- Kenya Defense Forces
- National Police Service
- Community groups
- Kenya Red Cross Society
- Kenya Airport Authority
- UN, INGOs, FBOs and CSOs
- Turkana Women Leaders Forum

3.13 Land conflicts

Land disputes and conflicting communal claims over rangelands, private claims on rangeland, land grabbing, disputed and corrupted land allocations in urban and peri-urban areas of Lokichoggio, Kakuma, Lokitaung, Kalokol, Lodwar, Lokichar, Katilu, Kaputir, Kainuk, Lokori,and Kapedo, and contested county borders – remain a major underlying cause of land conflict.

Oil exploration is already setting in motion local reactions, including speculative land-grabbing, that increase the odds of violent conflict even if actual oil extraction is not viable in some areas. The oil exploration in various part of the County may aggravate existing land conflict issues, including contested communal and political borders, local anxiety over land loss, land-grabbing, disputed allocation of oil revenues, in-migration, and control over elected County government positions.

3.13.1 Policy Interventions
i.   Strengthening of the County Land Management Board.
ii.   Lobbying for the finalization of the Community Land Bill.
iii.   Support the demarcations of National, County, Sub-County, Wards and Village boundaries.
iv.   Civil education on land rights to the communities.
v.   Formation of ward and sub-county community land use and land planning committee.
vi.   Strengthening inclusive community based structures and institutions on land disputes and resolutions.

3.13.2 Responsible Institutions
- Lands, Energy, Housing and Urban Area Management (lead)
- County Land Management Boards
- The Office of the Governor
- Office of the County Commissioners
- Trade, Gender and Youth Affairs
- Water Services, Environment and Mineral Resources
- Public Service, Administration and Disaster Management
- Infrastructure, Transport and Public Works
- National Environmental Management Authority- NEMA
- Research Institutions - KALRO
- NGOs and UN agencies
- Private organizations

3.14 Earthquakes and Volcanic Eruptions

Earthquakes is defined as a tremor of the surface of the earth, sometimes severe and devastating, which results from shock waves generated by the movement of rock masses deep within the Earth, particularly near boundaries of tectonic plates areas. Turkana County being in the rift-valley basin is prone to earthquakes. In January 2012,the Lake Turkana region was shaken by a quake that took place 15.2 km bellow the lake, and measured 5.2 on the Richter scale, according to the United States Geological Survey.

The greater north region of the County has witnessed long and huge fault lines especially during rainy seasons. Fault lines several metres deep and wide are still evident in Nanam, Lotikippi and Natodomeri plains.

3.14.1 Policy Interventions
i.   Establish effective early warning systems and information system
ii.   Raise public awareness on earthquakes risk and impacts
iii.   Acquire technology to monitor and detect occurrence of earth quakes
iv.   Develop earthquake preparedness strategies
v.   Approval of building structures cognizant of earthquakes safety measures
vi.   Map out earthquake prone areas
vii.   Develop earthquake resistant building standards
viii.   Ensure adherence to building codes and regulations
ix.   Undertake geological studies and research into earth movements
x.   Promote seismic safety activities

3.14.2 Responsible Institutions
•   Public Service, Administration and Disaster Management(Lead)
•   Water Services, Environment and Mineral Resources
•   The Office of the Governor
•   Meteorological department
•   Trade, Gender and Youth Affairs
•   Lands, Energy, Housing and Urban Area Management
•   Infrastructure, Transport and Public Works
•   Education, Sports and Social Protection
•   Kenya Red Cross Society
•   National Drought Management Authority (NDMA)
•   National Environmental Authority- NEMA
•   NGOs and UN agencies

3.15 Industrial or Technological hazards

A hazard originating from industrial or technological conditions, including accidents, dangerous procedures, infrastructure failures or specific human activities, that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

In Turkana County, examples of technological hazards include industrial pollution, chemical leakages from oil explorations and extraction, toxic wastes from hospitals, factories/ industries, transport accidents, factory explosion, and collapse of buildings, fires, and chemical spills. Technological hazards also may arise directly as a result of the impacts of a natural hazard event. The regions prone to this are the Oil drilling sites, industrial sites, dumping sites in urban centers.

3.15.1 Policy Interventions

i. Enforce standards and codes in factories, contractions and oil wells,
ii. Develop elaborate policy and monitoring of the location of industrial, Fuel stations, factories, housing, hazardous materials, refuse and waste disposal
iii. Strengthen supervision and monitoring of mechanical facilities including environmental audits
iv. Establish Insurance schemes for industrial workers
v. Enforce and strengthen proper urban planning standards
vi. Enforce standards on importation, storage of human and veterinary drugs and medical equipment
vii. Enforce laws on community compensations and insurance

3.15.2 Responsible Institutions

- Water Services, Environment and Mineral Resources (Lead)
- Lands, Energy, Housing and Urban Area Management
- The Office of the Governor
- Tourism, Culture and Natural Resources
- Trade, Gender and Youth Affairs
- Public Service, Administration and Disaster Management
- Infrastructure, Transport and Public Works
- National Environmental Management Authority- NEMA
- KEBS/ M&S department
- Private companies - Oil, Insurance, Industries.
- Kenya Red Cross Society
- INGOs and UN agencies

3.16 Retrogressive Cultural Practices

Retrogressive cultural practices must be reviewed because, in essence, culture is supposed to empower and should not make those practicing it vulnerable to other hazards. There are a number of cultural practices that are hazardous to humanity in the county. These include; female genital mutilation, open defecation, child labor and forced early marriages. Many of these practices lead to deaths and or permanent disability and social disorders. It is the duty of County Government to eradicate these retrogressive cultural practices. Other cultural practices like male circumcision need to be undertaken under clinical guidance.

3.16.1 Policy Interventions

i. Campaign and raise awareness on ending early marriages, gender based violence, childlabour and cultures that promote livestock raids
ii. Promotion of good cultural practices(Tobong"u Lore) in the county as platforms for disseminating information
iii. Raise awareness on the physical and social consequences of the practices
iv. Institute legislation, by-laws and ordinances to stop these practices
v. Promote community policing and surveillance to ensure that the practices are eradicated

3.16.2 Responsible Institution

- Education, Sports and Social Protection (Lead).
- Office of the Governor
- Office of the County Commissioner – Administration
- Health Services and Sanitation

- Trade, Gender and Youth Affairs
- Tourism, Culture and Natural Resources
- Kenya Red Cross Society
- INGOs and UN agencies.

3.17 Environmental Degradation

Turkana County has a fragile ecosystem which is prone to degradation. The soils are loose and are easily washed away by flash floods and heavy winds. Charcoal burning activities, deforestation, overstocking and the effects of increasing aridity due to climate change do contribute to environmental degradation.

The effects of environmental degradation include; soil erosion, air pollution, garbage pollution, waste disposal, deforestation, desertification, climate change, wild fires, sand and dust storms,destruction and losses due to strong winds like blown roofs which is very widespread in the county.The most affected areas include:major towns – Lodwar, Kalokol, Kakuma, Lokichoggio, Lokitaung, Lokichar, Lokori, Kainuk, Katilu, and Kaputir.

3.17.1 Policy Actions on environmental degradation

i.   Establish an urban physical plan to curb the rise of unplanned settlements;
ii.   County Policy on Liquid and solid waste disposal
iii.   Rehabilitate degraded grazing land;
iv.   Organize campaign on the importance of environmental conservation.
v.   Explore renewable sources of energy.
vi.   Educate the communities on the nature and causes of environmental degradation
vii.   Involve communities in environment protection
viii.   Formulate strict laws against environmental degradation such as charcoal burning and wood fuel harvesting
ix.   Develop programs for management of the environment
x.   Conduct environmental impact assessment and audits

3.17.2 Responsible Institutions

- Water Services, Environment and Mineral Resources (Lead)
- Lands, Energy, Housing and Urban Area Management
- County NEMA office
- Finance and Economic Planning
- Agriculture, Pastoral Economy and Fisheries
- Public Service, Administration and Disaster Management
- Infrastructure, Transport and Public Works
- The Office of the Governor
- Trade, Gender and Youth Affairs
- Health Services and Sanitation
- Tourism, Culture and Natural Resources
- Education, Sports and Social Protection.
- Research Institutions
- Kenya Forest Service (KFS)
- UN agencies, INGOs, CBOs

This Policy proposes an "all hazards" approach byinstitutions for effective coordination mechanisms, processes and principles in Turkana. An all-hazards approach will focus on establishing lasting institutions and mechanisms that can be flexibly applied to any current

or developing hazard and disaster.

3.18 Strong Winds and Heavy Storms

In Turkana County, strong storms are often accompanied by violent winds and hailstorms. Hailstorms can cause flooding and related public health hazards. Though not very common, various parts of Turkana are prone to strong winds with varying degrees. While the occurrence and magnitude is low, severe weather systems characterized by high winds and heavy rains occur.

Strong winds and hailstorms have the ability to cause widespread damage to houses, roads, crops, and livelihoods related to wind damage, storm surge, flooding and flash flooding, all depending on an area's geography and topography. Houses, human settlements and public infrastructure often suffer the most in Turkanasometime leading to deaths and disruption of social services. Lightning has a serious effect on human life whose impact may be reduced by following prescribed standard construction codes.

3.18.1 Policy Actions on violent winds
- Map and gazette heavy storms and wind zones areas
- Capacity building on preparedness and early warning of winds, hailstorms and secondary hazards at the community level
- Encourage agroforestrywhich is vital for the protection of homesteads
- Creation of public awareness on the evacuation in circumstances of heavy storms
- Enforce adherence to proper building codes and standards by designing wind-resistantstructures to protect people from risks in particularly vulnerable areas.
- Establishment of weather stations and end-to-end wind/hailstorm forecasting and early warning systems. The end-to-end approach includes hazard monitoring, forecasting, tools for decision makers, dissemination of warnings to stakeholders.

3.18.2 Responsible Institutions

- Public Service, Administration and Disaster Management (Lead)
- The Office of the County Commissioner
- Water Services, Environment and Mineral Resources
- The Office of the Governor
- Agriculture, Pastoral Economy and Fisheries
- Finance and Economic Planning
- Trade, Gender and Youth Affairs
- Health Services and Sanitation
- Infrastructure, Transport and Public Works
- Lands, Energy, Housing and Urban Area Management
- Community and Private Sector
- Kenya Meteorological Department/Services
- Kenya Red Cross Society
- Faith based organizations
- UN Agencies and NGOs

4.0 INSTITUTIONAL FRAMEWORK

4.1 Introduction

As disaster management is a multi-disciplinary process, all Sectoral Ministries and Departments will have a key role in the field of disaster management. The process involves all government ministries in collaboration with humanitarian and development partners, the private sector, local governments and the community.

The Ministry Public Service, Administration and Disaster Management will be the lead agency in coordinating all stakeholders on disaster management in the county. However, this policy recognizes that disaster risk managementis a shared responsibility between the County Government and National Government.

4.2 Overall Goal

The overall goal of the institutional framework is to strengthen and establish efficient institutional mechanisms for integrating of disaster management into the socio-economic and all environmental development processes at all levels in the County.

4.3 County Disaster Management Institutional Structure

4.3.1 The Governor

The County Governor is the Chief Executive in the county and has the mandate to declare a state of disaster in any part of the county in the event of a disaster. During a disaster, the Governor in consultation with County Disaster Management Committee shall declare an area or the county to be in a state of disaster. A State of Disaster shall be declared when most of the basic social services of a community have been seriously disrupted or broken down causing widespread human, material, economic or environmental suffering or losses to a population (Level 3).

Table 1: Levels and Declaration of Disasters

Level 1	Localized emergency events dealt within the regular operating mode of the protective, emergency and health services in Villages, Wards and Sub-County
Level 2	Emergency events that overwhelm the capacity of the resources in Sub-County, but which do not overwhelm the capacity of the County resources to respond and recover
Level 3	Emergency events that overwhelm a County and require mobilizing external resources to respond and recover from disasters

When a disaster is declared as Levels 3 by the Governor, the Director responsible for Disaster Management will take the lead, advise and provide all the relevant information to County Executive, Ministry responsible for Disaster Management. The CEC will upon certifying the situation at levels 3, through the County Disaster Committee or CSG, advice and request the Governor to declare a County State of Disaster.

Figure 1: Turkana County Disaster Risk Management Institutional Structure
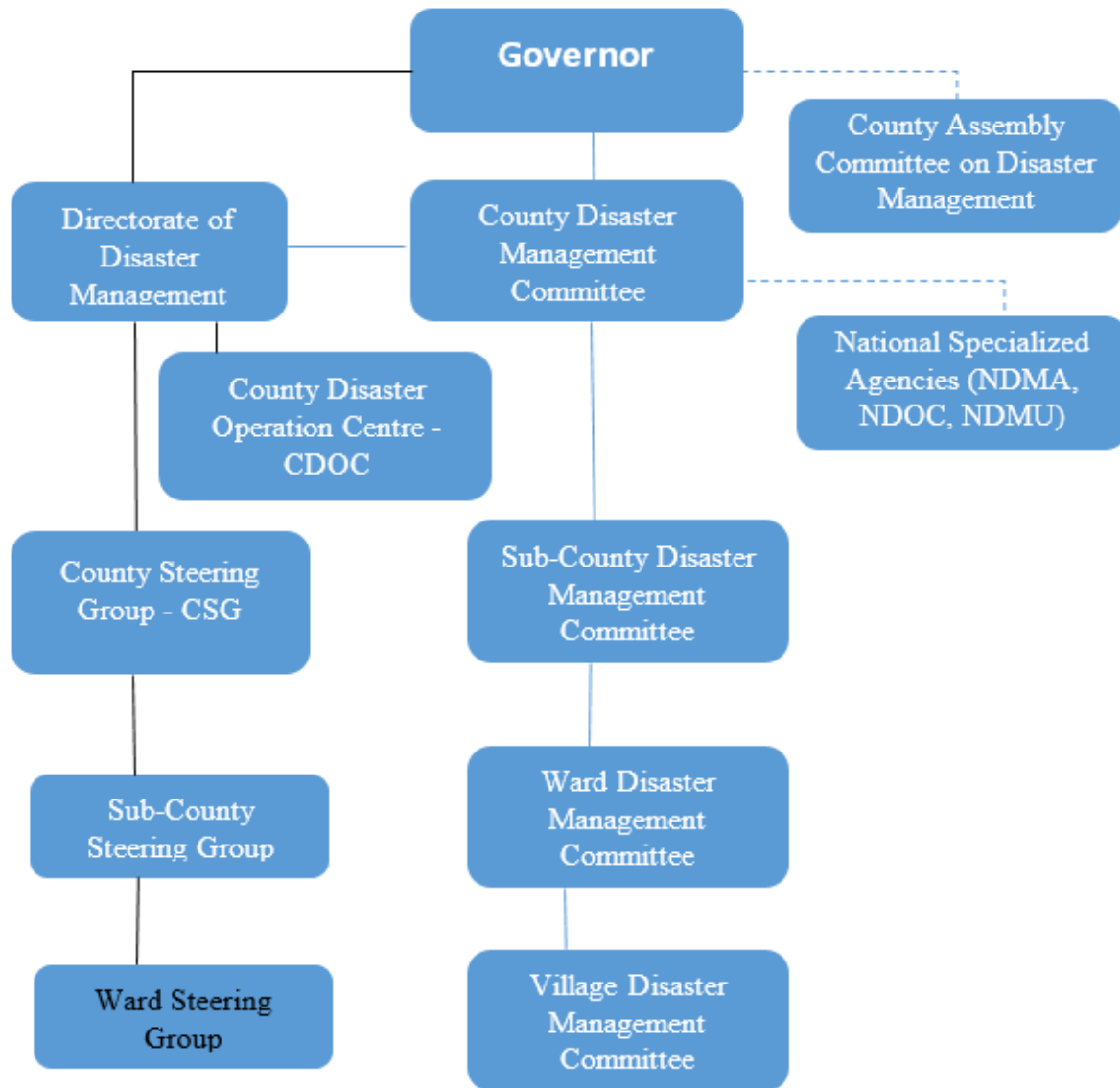
4.3.2 County Disaster Management Committee (DMC)

The County Disaster Management Committee comprising the County Executive, and representative of faith based, private sector, UN, development and humanitarian agencies. The committee shall be chaired by the Governor and will be responsible for:

- Declaration of disastersand provides oversight so that actions taken during a disaster response abide by international commitments, rules and procedures
- Define County resource needs for overall management of the disasters.
- Make recommendations for post disaster needs assessment of Critical Infrastructure and disaster losses
- Approve the use of County Emergency Funds

4.3.3 Directorate of Disaster Management

The Directorate of Disaster Management is responsible for coordination, implementation and monitoring of all disaster risk management policy and programmes in the county. The directorate is within the ministry of Public Service, Administration and Disaster Management. The directorate will be responsible for undertaking interventions in the three disaster phases: Pre-disaster, during disaster and post-disaster.

The Directorate of Disaster Management will:
- Be the secretariat for the County DMC and link with all line ministries and sectors.
- Establish and manage a county disaster operation Centre.
- Coordinate the County, Sub-County and Ward Steering Groups in disaster preparedness and response.
- Conduct disaster risk analysis to determine actual threats and triggers for preparedness actions, capacity gaps andresourcesfor response.
- Coordinate rapid needs assessments before, during and after disasters
- Establish a database ofpopulation at risk disaggregated by gender, age and locations at Ward, Sub-county and County level.
- Lead in Strategic planning in implementation of gender sensitive disaster risk managementplans at all levels.Coordinateresearch to collate, review and analyzedisaster risk information.
- Promote and strengthen linkages with key stakeholder's i.e. County government departments/ministries, international, national and local governmental and non-governmental organizations, sub-counties and community-based disaster management structures.
- Establish effective people-centred and gender sensitive early warning systems; and disseminate risk and early warning information at county, sub-county and ward levels.
- Strengthen DRM institutional capacity for Mainstreaming DRM in County government strategies, policies and plans
- Coordinate Lead and/or coordinate the preparation of County, sub-county, ward and village contingency and disaster preparedness plans and strategies

4.3.4 County Disaster Operations Centre (CDOC)
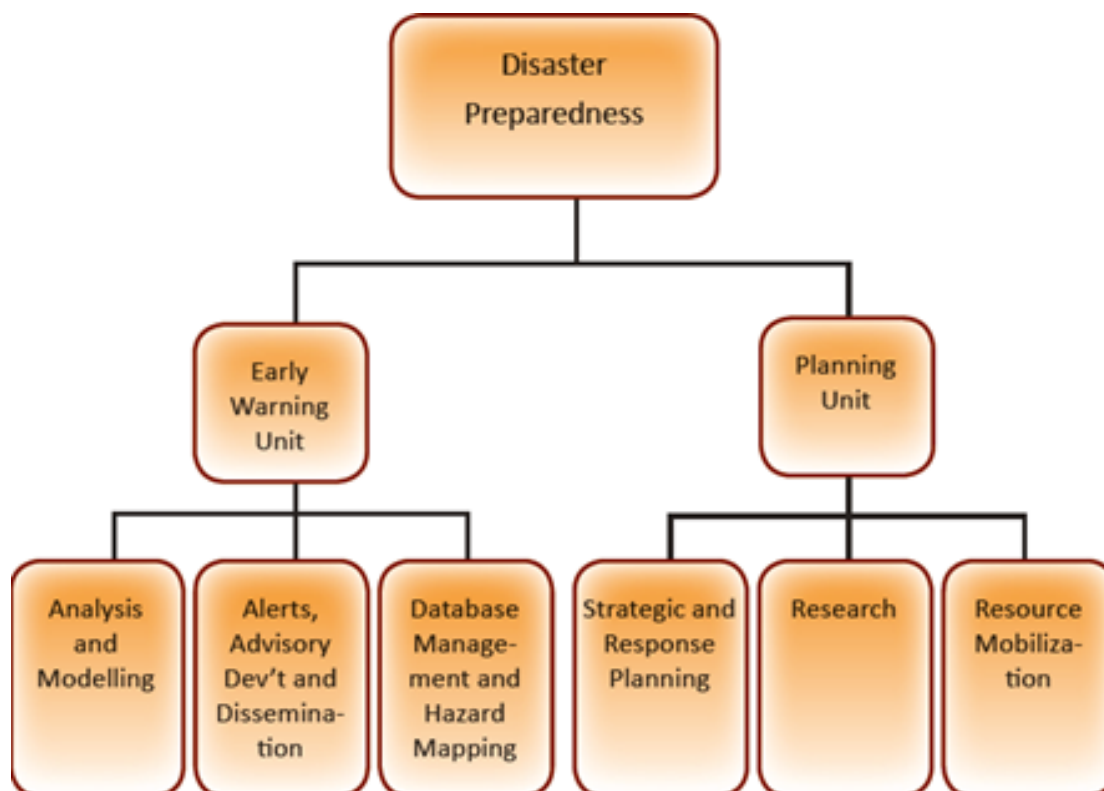
The CDOC shall be responsible for onsite coordination of the various emergency response institutions at the county such as the Kenya Police Emergency Units, KDF Emergency Support Units, Kenya Red Cross Society, hospital emergency units and networking with private emergency agencies, multilateral agencies, international organizations, and non-governmental organizations.

The CDOC is an establishment under the Directorate of Disaster Management. It shall be equipped with early warning systems, response facilities, specialized professionals and consultants.

CDOC functions shall not be limited to early warning and coordination, but will include among others:

- Coordinate fire-fighting, search and rescue, ambulance Services during emergencies
- Coordinating community based CMDRRaction planning, implementations and reporting
- Lead in DRM Trainings
- Collating and disseminatinggender sensitive Early Warning Information
- Manage Disaster Management Situation Room
- Establish a roster of Rapid Response Units

The Centre shall be directly linked to security operation centers, national government NDOC and all other emergency support function centers in the county on a 24-hour basis. The Centre shall have both disaster preparedness and disaster management units.

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                        ┌──────────────┐
                        │   Disaster   │
                        │ Preparedness │
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Figure 3: Turkana CDOC Disaster Management
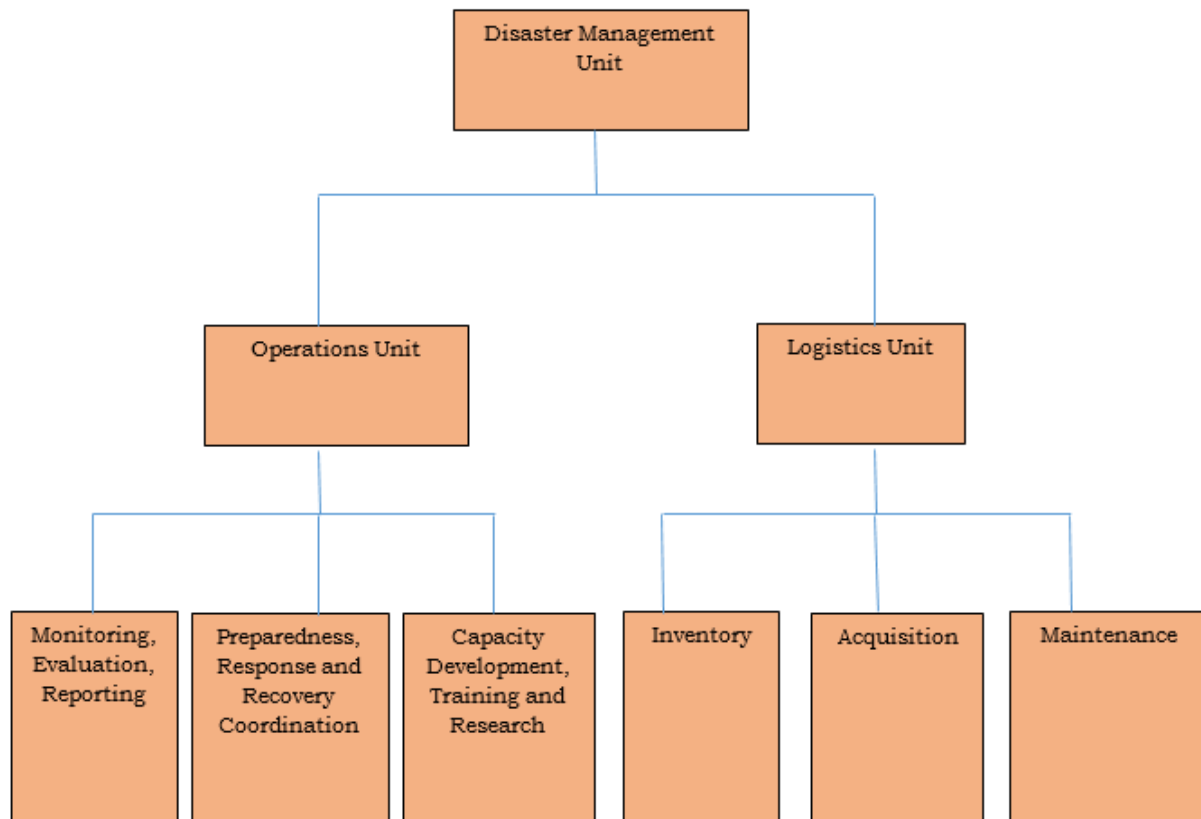
4.3.5 County Steering Groups (CSG)

There will be a County Steering Group to support the coordination of both development and emergency operations in the County. The Platform will be co-chaired by the County Governor and the County Commissioner.The County Steering Groups (CSG)members will comprise of relevant Chief Executive Committees, Chief Officers, Directors and Focal Point Technical Officers from line ministries, UN agencies, NGOs, County Gender Focal point, Private Sector Organizations, Youth-led oganizations, Youth Council, Women-led organization, women leaders, Civil Society Organizations, Academia and Research Institutions, Media Houses, KRCS among others.Depending on the type of disaster, relevant technical committee shall be constituted with guidance from the Directorate of Disaster Management. The CSG is a decision making structure and will meet at least quarterly (normalcy) and monthly during disaster response with standing agenda and approved Terms of Reference (ToR).

The CSG through the Sectoral Technical Working Groups will:
- Accrediting county based DRM partners (pre-during-after disaster) to assess the performance to ensure effectiveness and accountability to affected population.
- Lead in Strategic planning in implementation of gender sensitive disaster risk management plans at all levels.
- Coordinate, map out and keep track of the interventions being carried out by various stakeholders in the County.
- Develop, adopt and customize standard operating procedures and guidelines for all DRM actors at the County level
- Develop County preparedness, contingency and response plans

- Design joint strategies and work plans for the implementation, monitoring and evaluation of County DRM policies, plans, and strategies
- Mainstream DRM in all their operations, plans and strategies
- Coordinate annual Disaster Risk Management events for awareness
- The CSG will appoint a gender focal point to support mainstreaming of gender into disaster risk management strategies.
- Compile the status of DRM in the County on annual basis in line with national and international frameworks i.e. implementation of Sendai Framework for DRM
- Develop and maintain the Turkana County Emergency Response Team (CERT).

4.3.6 Sub-County Disaster Management Committee (SCDMC)

There shall be a Sub-County Disaster Management Committee (SCDMC) in all the Sub-Counties of Turkana County. The SCDMC will establish a Sub County Steering Group to coordinatedisaster risk management at the sub-county level.The committee shall be chaired by the Sub-County Administrator and will comprise of the Disaster Management Officer (as secretary), The Deputy County Commissioner (as alternate chair), Sub-County CSG membersincluding all heads of departments,the administrative police representative and representatives of other relevant government agencies and Partners within the sub county including Kenya Red Cross Society and relevant NGOs.The SCGMC will collate all community disaster risk reduction plans at sub-county level and coordinate implementation strategies by all stakeholders.The roles of SCSG are similar to the CSG highlighted in section 4.3.5.

4.3.7 Ward Disaster Management Committees (WDMC)

The Ward Disaster Management Committee shall be headed by the Ward Administrator. The Area Chief, Village Administrators, local administrative police, and faith-based organizations, youth and women group organizations'representatives as well as other Technical Staff and Partners, in theward shall be members of the committee. The functions will include:

- Collate community managed disaster risk reduction plans into a ward DRR plan
- Develop and maintain the Community Emergency Response Team (CERT).
- Compile database of populations at risk disaggregated by gender, sex and locations
- Define ward level priorities for DRM and incorporate targeted disaster risk management activities into community-based programs
- Ensure a balanced participation by various groups including women networks in decision making for DRM.

4.3.8 Village Disaster Management Committee (VDMC)

The local village disaster management committee shall be the lowest unit of Disaster Preparedness and Management in the county. The chairperson of the Village shall be the Village Administrator. Selected representatives (gender sensitive) from the village shall be members of the village disaster management committee. The committee will also include school representatives, institutional facilities representatives, traditional opinion leader's faith based organizations representatives etc.

5.0 KEY MINISTRIES AND INSTITUTIONS CHARGED WITH DISASTER MANAGEMENT FUNCTION

The day-to-day implementation of disaster management activities will, in many cases be carried out by sectoral line ministries, departments, other public and private institutions inclose consultation and guidance of the Directorate of Disaster Management. In disaster management, complementary roles are performed by these Sectors and community groups right down to household units. These complementary roles relate to all phases of disaster risk management and not only disaster response. Ultimately, disaster risk reduction is the responsibility of all citizens, not just those who have been identified in this policy. In the Policy, key roles are going to be defined and responsible institutions spelt out under each ministry and the county.

The Office of the Governor: The office of governor is responsible for declaring a state of emergency in any part of the county in the event of a disaster. Declaration of a State of Disaster means the provision of the required relief services and goods to the affected population and takes precedence over all other programmes of government, thus calling for immediate re-programming and re-allocation of resources.

5.1   County Ministries and Institutions

5.1.1 Public Service, Administration and Disaster Management
The Directorate of Disaster Management is the lead unit responsible for disaster management in the County. Public Service, Administration and Disaster Managementishome to the directorate of disaster management and shall coordinate and provide policy direction for risk reduction, prevention, preparedness, mitigation and response actions in the county in consultation with other line ministries, humanitarian and development partners, and the private sector.

5.1.2 Agriculture, Pastoral Economy and Fisheries
Pastoral Livelihoods and Livestock resources are the back-bone of the county's economy and domestic food supply. Turkana Countyhas been repeatedly affected by drought frequently resulting into food insecurity and famine. Furthermore, when people are displaced or struck by any disaster, the provision of food suffers due to stress placed on production systems. High population growth rate, pasture degradation, climate change, land fragmentation and past economic and social neglect have been some of the causes of stress on the pastoral economy and livestock and agricultural production sector. While tackling these, it is crucial to integrate disaster risk management into the agricultural sector.

The overarching objective will be to ensure that adequate food is produced for all areas of Turkana by promoting appropriate production and post-production systems, good animal husbandry and fisheries practices.

5.1.3 Health Services and Sanitation
Turkana has experienced health related disasters such as epidemics of disease outbreak

and epidemics such as malaria, cholera etc. Other disasters that result in displacement of large numbers of persons require immediate health interventions to prevent outbreaks of diseases in congested camps. The experience in Turkana has shown inadequacies in health services provision such as lack of drugs, personnel and equipment. This situation calls for specific programmes for medical mass causality preparedness and management which should be deliberately derived and implemented as an integral part of disaster preparedness and management.

The objective would be to provide adequate as well as timely health services which prevent unnecessary loss of life, when a disaster strikes and quick restoration of their productive capacity.

5.1.4 Water Services, Environment and Mineral Resources

Many disasters directly affect environment besides the communities. The on-going developments in the energy sector in Turkana, especially oil exploration, requires the county to put in place strict and effective mechanisms to avert disasters related to; oil exploration, transportation and use, including environmental degradation.

The Ministry responsible for environment is mandated to ensure environmental quality. Through the National Environment Management Authority (NEMA) as the coordinating body, the Ministry can enhance the health and quality of life of all the people of Turkana, and promote long term sustainable socio-economic development through sound environmental, natural resource management and use. NEMA can also ensure the integration of environmental concerns in all development policies, planning and activities at county, sub-county and local levels, with the full participation of the individual and community. NEMA can encourage optimized resource use and the achievement of a sustainable level of resource consumption, by raising public awareness to understand and appreciate the linkages between the environment and development.

The overarching objective will be to ensure that the oil and other mineral exploration activities are well coordinated, regulated and monitored to ensure adherence to risk reduction strategies.

5.1.5 Infrastructure, Transport and Public Works

Many bridges, drifts and roads get washed away in different parts of the county whenever there are heavy rains. Poorly maintained and narrow roads exacerbate road traffic accidents. The Ministry needs equipment and expertise for emergency repair of bridges and roads. In addition, the Ministry requires equipment that can be called upon for rescue purposes in case of collapsed buildings etc.The objective will be to design, construct roads and bridges with adequate capacities to withstand hazardous situations. Haphazard settlements, poor urban physical planning, lack of quality assurance and building standards, and lack of risk analysis in infrastructure development are among the several factors that increase people's vulnerability to disasters in the County. There is need to ensure that infrastructure development in particular, housing are designed and constructed with adequate capacities to withstand hazardous situations.

5.1.6 Education, Sports and Social Protection

Children are among the most prone to risks, hazards and disasters in any area because of their age, limited experience and knowledge of the dynamics of nature and human activity. Hazards and disasters can affect children while at school or on their way to or from school. The Ministry of Education must ensure school buildings are built strong enough to withstand all hazards that affect them. School buildings are often used as internally displaced persons (IDP)centers by communities neighboring the school, in case

of emergencies. The buildings should therefore, not become death traps for the children and the neighboring communities.

The Ministry needs to mainstream disaster risk management to the education curriculum at all levels. This will enable the children to grow up while knowing the risks and hazards in their society and how to avoid or manage them. Pupils and students are also good educators of theircommunities; they therefore contribute to community education on risk and hazards management once equipped with the knowledge at school.

The overarching objective is to minimize risks of hazards and impact of disasters on school going children and to improve safety of school buildings and introduce disaster risk education into school's curriculum at all levels.

5.1.7 Lands, Energy, Housing and Urban Area Management
Haphazard settlements in fast growing urban areas like Lodwar combined with poor urban physical planning, lack of quality assurance and building standards, and lack of risk analysis in infrastructure development are among the several factors that increase people's vulnerability to disasters in the county. The desired objectiveunder this ministry is to ensure that infrastructure development in particular; housing is designed and constructed with adequate capacities to withstand hazardous situations. As such, the ministry needs to:

- Develop quality standards and building codes to be used and followed in any infrastructure development especially commercial buildings
- Ensure that all investors and projects adhere to the building codes and enforce standards for quality assurance
- Ensure that all urban councils and other responsible institutions have in place mechanisms andprocedures of approving physical plans and inspecting infrastructure development toenforce quality standards
- Guide the county on appropriate physical planning to avoid haphazard development
- Mainstream disaster risk management into sectoral plans

5.1.8 Finance and Economic Planning
The Ministry of Finance and Economic Planning is charged with the overall responsibility of financial allocationto disaster management. Furthermore, in conjunction with the ministry for Public Service, Administration and Disaster Management, this ministry is charged with the responsibility of Administering a CountyDisasterEmergency Fund. The fundwill among other things provide for substantive resources necessary for responding to emergency situations. The fund is constituted by a 2% of the County's budget.

5.2   National and other Institutions/Structures

Since disaster management is a national and county government function, according to the Kenya Constitution of 2010, other key national structures with a role to play in the policyimplementation are summarized below.

5.2.1 National Drought Management Authority (NDMA)
In November 2011, the National Drought Management Authority (NDMA) was established by the Government of Kenya as a permanent and specialist institution of government to manage drought and climate risks. NDMA is the agency mandated to ensure that drought does not result into emergencies and that the impacts of climate change are sufficiently mitigated.

In the county, NDMA integrates with and undertakes the following:
- Drought management and climate change adaptation for sustainable livelihoods.
- Provides leadership and coordination of county's management of drought risks and enhancing adaptation to climate change.
- Supervision and coordination over all matters relating to drought management.
- Provision of a platform for long-term planning and action, as well as a mechanism for solid coordination across Government and with all other stakeholders.

5.2.2 National Disaster Operation Centre (NDOC)
The NDOC was established in January 1998 by an act of Parliament to act as the focal point for coordinating response to emergencies and disasters in Kenya. It is on constant standby, with a reporting center running 24 hours a day, 7 days a week, from which emergency operations, activities and events are recorded and communicated for action.

The functions of NDOC are:

- To co-ordinate and control disaster response efforts,
- To act as the command centre for all communications and information relating to response operations, and
- To liaise with responsible ministries on national response efforts.

The NDOC deals with sudden onset of both natural and human-induced emergencies in the country. It is responsible for the effective coordination, early warning and preparedness of the various emergency response institutions of government such as the Police, KDF Emergency Support Units, Kenya Red Cross Society, hospital emergency units and in the networking of private emergency agencies, multilateral agencies, international organizations, and non-governmental organizations.

5.2.3 The Kenya Red Cross, National and International Humanitarian Agencies
The Kenya Red Cross, National and International Humanitarian Agencies, other voluntary organizations and professional bodies are able to make valuable contributions to all aspects of disaster risk reduction in the county through prevention, preparedness, mitigation, response and recovery.Their activities are in most cases effective at the county and local (community) levels through the promotion of public awareness of the threat and its effects, and through training aimed at developing self-help and self-reliance.The Kenya Red Cross has a special role to play in disaster risk management as an auxiliary to Governmental capability.

5.2.4 The Kenya Police, Kenya Defense Forces, National Youth Service, the Ministry of Devolution & Planning and other Agencies:
The security forces are standby, organized and well-equipped institutions located strategically across Kenya. They can be called upon at short notice to give a full range of support (rescue, transport and recovery) during emergencies. The security agencies are a major source of equipment, well organized personnel and other logistics for emergency management. The security forces, however, are not well placed for; vulnerability assessments, risk mapping, public awareness sensitization and education, mitigation, preparedness and contingency planning which are better performed by the civilian technical institutions. The objective of the security forces in times of disaster is to ensure timely provision of support in numbers of human resources, equipment and logistics whenever massive disasters occur, and that is beyond the capacities of the regular emergency institutions.

5.2.5 The National Platform for Disaster Risk Reduction
The National Platform for Disaster Risk Reduction is a stakeholder's forum for

consultation,negotiation, mediation and consensus building on disaster risk reduction.The broad objectives of the forum are to:

a. Promote and enhance education, public awareness and advocacy of disaster risks.
b. Obtain commitment from the public leadership to disaster risk reduction.
c. Stimulate and strengthen multi-disciplinary and multi-sectoral partnerships andnetworks for Disaster Risk Reduction at all levels.
d. Improve dissemination and understanding of natural and man-made causes ofdisasters, and their related effects upon vulnerable communities.
e. Plan dissemination of information on Disaster Risk Reduction
f. Play an advisory role to all the stakeholders on DRR

Membership of the National Platform is drawn from all the Line Ministries, NGOs, and CBOs.The UN agencies and the Private Sector also participate and share theirinformation, knowledge and expertise with the other stakeholders. The Platform works closely with the Ministry of Devolution & Planning Directorates, NDOC and NDMA in coordination with the County DRR platform.

5.2.6 Communities and Individuals
Communities are responsible for taking measures within their own capacities, to protect their own livelihoods and property. However, it is expected that measures taken by individual households and communities form part of an integrated approach which will include the development of family management capacities and a reduction in their vulnerability over time.

The county disaster preparedness and response policy should advocate for community and individual capacity to withstand disaster threats therefore, communities and families have a responsibility to ensure that their attitudes to and understanding of those threats, their perceptions and normal ways of countering the risk are known to those whose role is to convert local information into national programming. The objective is to develop an integrated approach for community capacity building, leading to reduction of their vulnerability to disasters.

6.0 STRATEGIES AND MECHANISM

In the process of planning and providing a dynamic disaster management policy for the County the following strategies and mechanism will be adapted:

6.1 Risk, Vulnerability and Resilience Assessments

Effective disaster preparedness and response depend on accurate information, projections and forecasts that are conducted with scientific precision and in considerations of indigenous knowledge. Risk and Vulnerability assessment is the process of systematically identifying all undesirable incidents, assessing how likely it is that the events will occur, assessing the immediate negative consequences, analyzing the vulnerability of the activity, and assessing the ability to handle its impacts. In order to utilize knowledge of both men and women ensure both men and womenare represented on assessmentteams.

The County Government together with its partners shall build the capacity of the technical personnel to conduct periodic multi-hazard risk analysis using nationally accepted tools and methods. To ensure that there is timely risk, vulnerability and resilience assessments the County Government shall procure relevant equipment both for effective monitoring, assessments and response. The equipment will include weather and tectonic forecasting equipment, ambulances and evacuation vans, fire-fighting equipment and safe water transport tanks, boats etc.

6.2 County Disaster Management and Response Plan

The policy proposes formulation and review of a county disaster management plan. The plan shall be the basis to establish guidelines and procedures which will assure maximum and efficient utilization of all county resources, minimize the loss of life and/or injury to the population, and protect and conserve resources and facilities during disasters. The County Disaster Management Plan includes information on: -

g. the vulnerability of different parts of the county to different forms of disasters;
h. the measures to be adopted for prevention and mitigation of disasters;
i. the manner in which the mitigation measures shall be integrated with the development plans and projects;
j. capacity building and preparedness measures to be taken;
k. the roles and responsibilities of each department of the county government in relation to the measures specified in section (b),(c) and (d);
l. the roles and responsibilities of different departments of the county government in responding to any looming disaster situation;
m. the gender targeted communication of risks and strategies

6.3 County Emergency Fund

The policy propose that County Government sector ministries to budget accordinglyfor disaster preparedness and response activities from annual budgetary allocations according to their sector DRM needs. Laws governing such funds will be reviewed in order to provide for allocation of funds from devolved kitties for County Disaster Risk Management every financial year.

The policy proposes the establishment of County Emergency Fund in accordance with the provision of section 110 of the public finance management act. The act proposes for County Treasury to set aside up to 2% of annual County revenue budgets as County emergency funds that can be accessed for disaster response. The County Emergency Funds will be replenished annually in accordance with the results of the risk assessments and research centers.

The Turkana County Emergency Fund shall be used towards meeting the following expenses for the Directorate of Disaster Management to coordinate emergency preparedness, mitigation, response, and reconstruction in the county beyond the sector ministries' disaster response kitty. The County Emergency Fund shall be financed from the following sources, namely: -

a. Allocation by the county as per the PFM as percentage of county annual budget
b. Such monies or assets as may accrue to the Directorate in the course of the exercise of its powers or the performance of its functions;
c. Grants made by the national government or other county governments;
d. loans, aid or donations from national or international agencies; and
e. All monies from any other source provided or donated or lent to the Directorate of Disaster Management.

6.4   Early Warning Systems

Early warning is a prerequisite for successful Disaster Management interventions and it is the foundation upon which other efforts can be undertaken. The government and all other stakeholders will ensure that relevant, reliable, up-to-date, gender informed and timely information is provided to the community and the citizens. Disaster risk communication and early warnings are not effective if overly-general and not informed by gender-aware risk assessments and community-driven preparedness.

Women's and men's daily chores revolve around social networks, roles and relationships that can be utilized for early warning informationexchange.For disaster risk communication to be effective, communicators of early warning information must be creative, sensitive to culture and context, and gender-targeted. This is becauseparticular groups of women and men create, receive, interpret and exchange knowledge about hazards anddisasters differently, are able to agree on cause of action.

The Directorate of Disaster Management will establish a forum for coordination of the various early warning systems and in liaison with the NDMA, Meteorological Department/Services and other actors; generate and disseminate early warning bulletins.

In addition, the department of disaster management at the county will establish Memorandums of Understanding with local FM Radio, TV Stations and Mobile Phone Telecommunications Companies to enable the use of their facilities to send out early warning messages whenever the need arises.

6.5   Physical Planning

Poor planning in the community settlement and urban areas increases risk and vulnerability of the population and other resources to disasters such as fires, diseases outbreaks and accidents. The county Land, Physical Planning and Urban Areas Management ministry are obliged to ensure that all human settlement and urban centers planning is responsive to Disaster Management standards.

Such standards include provision of road access to all housing units, ensuring that constructions adhere to disaster standards in their architectural and structural plans. For instance, public facilities should be compliant with all the requirements such as fire-extinguishers, escape doors, and structures for the physically challenged or special groups such as the elderly or children. The Physical Planning unit shall be required to establish an urban physical plan to curb the rise of unplanned settlements for effective disaster preparedness and response.

6.6   Gazetting Disaster Prone Areas

The County Government shall come up with Turkana County risk, hazard and disaster profiles and maps portraying each of the known natural and human induced hazards. The hazard maps will be updated periodically to keep with the changing dynamics. The County risk, hazard and disaster profiles and maps shall be produced and reproduced in sufficient quantities and mechanisms for wider distribution. Electronic copies of the profiles and maps shall be made available to the public through relevant websites and other electronic mechanisms at the County.

Communities living in very risky and hazard prone areas will be informed of planned gazettement by the County Government. After gazettement, persons affected will be assisted to resettle elsewhere under a voluntarily arrangement. Government will make appropriate arrangements to ensure safety and continuity of cultural practices and traditions of all communities being resettled.

6.7   Defining and Enforcement of Standards

The county government shall be responsible for establishing regulatory standards, guidelines and procedures for all the disasters, setting building standards, hazard mapping, and advising local communities in disaster prone areas. To ensure that the county has adequate capacity to implement and enforce the standards, capacity building will be conducted for the department of Disaster Management to strengthen the capacity of quality assurance and standards in the county. Since the County government is responsible for approving development projects and building plans, they will ensure that they meet the standards for disasters preparedness.

6.8   Awareness Raising and Education

There is clear evidence that advocacy is necessary to raise awareness on the need for activeparticipationin disaster preparedness, response and promote embedding ofdisaster prevention culture. The Department of Disaster Management at the county will develop a plan to raise awareness on disaster risks and measures to reduce these risks to enhance a culture of safety among all people in their everyday lives. It shall also work with the Ministry of Education to inculcate the culture of risk management education; creates and reflects gender differences among the children in ECD schools. Further, the County Department of education together with its partners shall set up a Risk Education programme to identify and influence the degree to which risk management techniques are taught in schools and other educational establishments, including universities where undergraduate courses lead to entry into safety critical professions such as engineering and design etc.

6.9   International, National Partnership and Co-operation

Most of the disasters in Turkana County such as livestock diseases outbreaks or violent conflicts have a cross-border dimension. The County Government through the relevant department shall seek to establish partnerships with like-minded partners, government agencies, neighboring counties, bilateral and multilateral partners. It shall work closely with National Government, private financial institutions, development partners International NGOs, local NGOs and UN Agencies in disaster preparedness and response initiatives. It

will also seek to empower the local business community to provide locally availablegoods and services before and during emergencies

6.10 Disaster Research and Documentation

Science-driven approaches to disaster preparedness and response can help communities become more resilient and reduce the human and economic impacts of disasters. The County Government will partner with research and academic institutions to undertake context based research, disaster assessment and documentation. Research plays a significant role in all stages of disaster risk management often providing rapid scientific assessment of and usable knowledge to decision makers. Men and women are equal sources of important practice-based knowledgethat may be necessary to mitigate hazards, disaster risk reduction and adaptation to changing environments.

Senior women especially carryimportant cultural knowledge and historical memory about risk management, adaptation and survival skills. The documentation of past experiences, customary and indigenous knowledge will enable the Government and other agencies to make adequate preparations to manage disasters. The documentation will be key in developing disaster profiles, mapping and early warning and prediction systems in the County. Partnership with research and academic institutions will be instrumental to the delivery of this mechanism for disaster preparedness and response.

6.11 Gender Commitment and Integration

Gender equality and women's participation in disaster have been placed as areas of vital importance in this policy document. The county government shall strengthen its commitment for gender integration to ensure that the County actors have adequate capacity to take gender-responsive disaster preparedness and response plans. There is also a need to ensure that there is enhanced gender-responsive public services, participation, access and control over means of production and resources throughout disaster management cycle. Empowerment of women in disaster preparedness and response shall include but not limited to the following;

This policy proposes the following actions to enhance gender responsive DRM practice and empower men and women in disaster preparedness and response:

- Facilitate county capacity for sex-disaggregated data collection by gender and age through information management systems and capacity building of disaster management officers and/or focal pointsto improve targeting of programs and assistance
- Utilize gender-budgeting in risk communication programs to track outreach and benefits
- Consult gender and communication experts in designing awareness campaigns for disaster preparedness and response
- Increase women's leadership and participation in disaster governance from the community to county level
- Strengthen women's economic empowerment through resilient livelihood systems
- Include gender outreach and inclusivity in monitoring and evaluation of risk communication systems
- Prioritize the use of non-traditional community-based mediaand partner with local women's networksas gender differences are evident in women's and men's uses of preferred and trusted media.
- Relate all risk communications to specific cultural groups based on sex- and age-specific data in risk assessments
- Ensure that disaster response teams in thecounty, sub-county, ward community-

based disastercommittees, both men andwomen are represented.
- Promote gender awareness among local media professionals through networking and resource exchange with different media
- Increased protection of women & access to justice for women at risk and in need of protection

6.12 Monitoring, Evaluation and Reporting (M & E)

The policy proposes thedesign of a monitoring and evaluation system to assess its implementation progress, highlight key changes and provide feedback to communities and other stakeholders to ensure accountability and transparency, facilitate appropriate decisions on future implementation and review of the policy and facilitate timely reporting of progress based on County, National and International obligations.

Monitoring compliance which involves collecting and analyzing information and data on the compliance status of the different stakeholders to disaster management shall be conducted progressively. Gender informed impact assessments and M&E is also essential to provide evidence to support future disaster and response interventions in the County. Some of the monitoring and Evaluation activities of County Disaster Management Committee will be highlighted in the Disaster Act to include;

vi. Regular review and update of Early Warning Systems for preparedness and response.

vii. Establish progress indicators for all programs and activities, and where possible, set targets on annual multi-year plans.

viii. Regular review and assessment of the strategic interventions for disaster preparedness and response at all levels including the county Government.

ix. Develop disaster management monitoring guidelines and a standardized reporting system to assist in monitoring and data collection and reporting at all levels.

x. Document and publish periodically ward, sub-county, and county state of disaster preparedness and response reports.

xi. Assessing efficiency, effectiveness and overall outcomes of disaster interventions with respect to the vulnerable groups and their life and livelihoods, socio-economic systems and the environment.

xii. Periodically conduct impact assessment studies for the DRM interventions to track changes and results for evidence based decision making.

xiii. Collate and periodically update thematic and geographic focus of all stakeholders in relation to disaster risk management planning, coordination and reporting in the county.

7.0 POLICY IMPLEMENTATION AND LEGAL FRAMEWORK

The County Disaster Risk Management Policy shall be reviewed periodically and its implementation monitored systematically due to the dynamism of disasters events and unpredictable climate change scenarios. Without timely review of the implementation process, it would be difficult to trace if the measures identified to achieve policy objectives have been appropriately taken.

7.1 The County Disaster Risk Management Act
This policy urges the Directorate of Disaster Management to develop through a consultative process and present to the County Assembly a Disaster Risk Management bill to revise the existing County Emergency and Disaster Management Act 2016. The proposed comprehensiveCounty Disaster Risk Management Act will enforce key provisions of this policy.

7.2 Incentives and Punitive Measures
The legislation shall provide for incentives to encourage government agencies, the public and all other stakeholders to comply with the provisions relating to the preparation, reviewing and implementation of Disaster Risk Management plans. The legislation shall also provide for incentives to encourage government and non-governmental agencies to comply with requests by the directorate of disaster management for information. Provision shall also be made for appropriate penalties in the case of non-compliance and for deliberate failure or omissions to undertake appropriate DRM actions.

7.3 Financial Provisions
The County Assembly shall ensure that adequate resources and facilities are provided to the ministry in charge of Public Service, Administration and Disaster Management–Directorate of Disaster Management to enable it to perform its functions effectively.

7.4 County Emergency Fund
This policy urges the Ministry of Finance Planning and in liaison with ministry in charge of Public Service, Administration and Disaster Management to operationalize the County EmergencyFund Act. The Act should among others provide for annual allocation of a specified percentage of the annual approved budget to the County Emergency Fund. The fund will be used for Disaster Risk Management in the county. International and other Development partners should be encouraged to contribute to the fund. A transparent mechanism of accessing resources from the fund should be worked out.

7.5 Administration of the Fund
The ministry in charge of Public Service, Administration and Disaster Managementshall be responsible for the administration of the fund. The operation of this fund will be undertaken through the relevant ministries requests according to the existing financial regulations.

7.6 Making Regulations
The CECin charge of Public Service, Administration and Disaster Management shall make regulations to implement the provisions of this policy. Sub-counties and wards shall develop by-laws to operationalize the implementation of the policy.

7.7 Implementation

A detailed strategic plan and budget will be developed which identifies priority capacity building activities, deliverables and milestones to establish the institutional framework laid out in the Disaster Risk Management Policy. The detailed strategicplan will highlight inclusive participation in DRM cycle, enhancing gender inclusive partnerships;scale up of actions for resilience building, knowledge transfer and bottom up disaggregated data and information collation and dissemination.

7.8   Transitional arrangements

Upon approval of this policy, all previous arrangements and structures for DRM will be re-aligned to those proposed in this policy. The current DRM coordinating teams shall transition into the proposed directorate of disaster management as per all responsibilities defined in the policy.

DEFINITION OF TERMS

Act means the Disaster Risk Management Act;

Climate Change refers to any change in climate over time, whether due to natural variability or as a result ofhuman activity (IPCC, 2001);

Climate Variability refers to variations in the mean state and other statistics of the climate on all temporal and special scales, beyond that of the individual weather events. Variability may be due to natural or internal processes within the climate system;

Disaster reffers to a serious disruption of the functioning of a community or society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community/society to cope using its own resources.

Disaster Management: reffers to the organised analysis, planning, and decision-making, allocations of resources, roles and responsibilities to prepare, prevent, mitigate, respond and rehabilitate/recover from disruptions by disasters.

Disaster Risk Reduction: reffers to a systematic development, application of policies, strategies and practices to minimize vulnerabilities and disaster risks through preparedness, prevention and mitigation of adverse impacts of hazards within a context of sustainable development.

Disaster Risk Management: The systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.

Early Warning Systems (EWS): This is an organised structure for prediction and dissemination of timely and effective information to allow individuals who may be at risk to take action to avoid or reduce their risk and prepare for effective response.

Hazard: A hazard is a potentially damaging physical event that may be caused by environmental and bio-technological processes resulting to loss of life and livelihoods, injury, damage of property and infrastructure, disruption of economic and social functioning of individuals/communities.

Hydro Meteorological Hazards: This is a natural or human induced phenomenon causing atmospheric, hydrological and oceanic disturbances that may result in loss of lives and livelihoods, injuries, economic and social disruptions and environmental degradation.

Mitigation: These are measures undertaken to limit adverse effects that may result from a hazard.

Preparedness: These are activities and measures undertaken in advance to ensure effective response to the impact of hazards, including the insurance of timely and effective early warnings, temporary evacuation of people and property from threatened locations.

Prevention: These are activities for outright avoidance of adverse impacts of hazards related to environmental and bio-technological hazards.

Relief/Response: This is assistance and/or intervention during or immediately after a disaster to meet preservation of life and livelihoods through provision of basic subsistence needs to the affected individuals/community. It may be of immediate, short-term or protracted duration.

Resilience/Resilient: This is the capacity of a system and/or a community/society exposed to hazards to resist and adapts in order to obtain an acceptable level in functioning structure. This is determined by the degree to which the social system is capable of organising itself and the ability for learning and adaptation, including capacity to recover from a disaster.

Risk: Risk is a probability of an individual/community to be adversely impacted by a disaster. The risk is determined by a combination of the hazards that threaten the population and its vulnerability to those hazards.
Risk is expressed as; Risk = Hazard x Vulnerability
Vulnerability: is the susceptibility of the individual, community, property, infrastructure or the environment to a hazardous event.