MINISTRY OF HEALTH

HEALTH SECTOR DISASTER RISK MANAGEMENT STRATEGIC PLAN 2014-2018

KENYA VISION 2030

Kenya Health Sector Disaster Risk Management Strategic Plan 2014-2018

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TABLE OF CONTENT

Foreword ..... **II**

Acknowledgements ..... **III**

Executive Summary ..... **IV**

Lists of Acronyms and Abbreviations ..... **V**

Definition of Terms ..... **VI**

1. Introduction **1**

2. Background **2**

3. Hazard Profile **3**

3.1 Situation Analysis 6

3.2 Swot Analysis 7

4. Strategic Directions **8**

4.1 Goal 8

4.2 Overall Objective 8

4.3 Strategic Objectives and Interventions 8

5. The Implementation Plan **9**

6. Coordination Structures for Implementation **13**

6.1 Coordination Structure for Management of Emergencies and Disasters in Kenya 14

7. Monitoring Implementation of the Strategic Plan **15**

8. Cost Estimates and Financing **23**

List of Contributors **24**

FOREWORD

Kenya is committed to integration of Disaster Risk Management (DRM)into all sectors to advance the management of emergencies and disasters and to build disaster resilience in the health sector.

The development of the health sector Disaster Risk Management (DRM) and Resilience Building Strategic plan 2014-2018 is guided by Kenya's global and national commitments that include the World Health Assembly (WHA) resolutions and the Kenya Constitution 2010.

This plan was developed by Ministry of Health in collaboration with stakeholders and is aligned to the Hyogo Framework of Action (2005-2015), the Sendai Framework of Action (2015-2030), the Sustainable Development Goals (SDGs 2015-2030), the Kenya Vision 2030, the Kenya Health Policy (KHP), the Kenya Health Sector Strategic Plan (KHSSP) 2013-2018, Kenya National Disaster Response Plan (2014),the Kenya Health Sector Disaster Risk Management (DRM) Capacity Assessment Report of 2013 and the Kenya Health Sector referral strategy and guidelines.

Several assessments identified gaps in handling of emergencies and disasters from a holistic, multi-sectoral approach, this strategic plan is envisaged to transform and build the health sector resilience to emergencies and disasters. This plan will be implemented by the Kenya health sector with leadership of the Ministry of Health through the division of health emergencies and Disaster Risk Management (DRM).

The Ministry of Health is grateful to all those who contributed to various efforts in shaping the development of this plan and is committed to its full realization. The plan has an inbuilt monitoring framework to track the achievement of milestones towards attainment of disaster resilience for the health sector.

This Ministry is committed to working collaboratively across the national and county governments, health sector partners and all other stakeholders to ensure the successful implementation of this plan.

Dr. Cleopa Mailu

Cabinet Secretary

Ministry of Health

ACKNOWLEDGEMENTS

Extensive consultations among various stakeholders and experts marked the development of this strategic plan.

Among the organizations and agencies that contributed were Ministry of Health, Government agencies (NDMU, NDOC), UN agencies (UNFPA, UNISDR, WHO, UNICEF), development partner agencies (CDC, ACF-USA), humanitarian organizations (IRC, KRCS) and Universities (USIU-A, MMUST, Moi University, John Hopkins University),

I would like to particularly thank the technical working group consisting of Dr. Izaak Odongo (MoH), Dr. Simon Kibias (MoH), Dr. Muriuki Gachari (MoH), Dr. James Teprey (WHO), Dr. Nollascus Ganda (WHO), Pius Masai Mwachi (NDMU), Dr. Simiyu Tabu (Moi University), Aaron Kimeu (MoH), Rose Ayugi (MoH), Oyundi Nehondo (ACF-USA), and Josephine Ayaga (MoH).

Special thanks go to WHO for financial, technical support and guidance.

Dr. Nicholas Muraguri

Principal Secretary

Ministry of Health

EXECUTIVE SUMMARY

The health sector Disaster Risk Management (DRM) strategies outlined in this booklet was built on the Hyogo Framework of Action for Disaster Risk Management (DRM) (2005-2015), the Sendai framework of action on Disaster Risk Reduction (2015-2030), the Sustainable Development Goals (SDGs 2015-2030), the Kenya Vision 2030, the Kenya Health Policy, the Kenya Health Sector Strategic Plan (KHSSP) 2013-2018, Kenya National Disaster Response Plan (2014), the Kenya Health Sector Disaster Risk Management (DRM) Capacity Assessment Report of 2013 and the Kenya Health Sector Referral Strategy and Guidelines(2014-2018).

An assessment of the health sector DRM capacity revealed several weaknesses including; leadership, governance, coordination, legal and policy frameworks and structures that have been inadequate or lacking. As well, key implementation documents such as guidelines, SOP'S, and annual work plans require drawing up or to be updated. Resources (human, material, monetary and time) have not been commensurate with the needs. There has been little if any research or innovation in the field of DRM for health. Investment in incident surveillance, risk communication, preparedness planning has also been inadequate.

The strategic priorities are developing and strengthening leadership, governance, coordination and collaboration for DRM; enhancing prevention, preparedness & response planning and 'building back better' in post-disaster recovery; improving risk surveillance, early warning, risk analysis and communication; strengthening research, innovation, information, education ,communication, and resource mobilization and investments for DRM for the health sector and in Kenya.

This five year strategic plan will be implemented over the period 2014-2018 at the national, county, sub-county and community levels with the collaboration and partnership of all stakeholders under the stewardship of the Division of Health Emergencies and Disaster Risk Management (DRM). The estimated costs of implementing this strategy amount to approximately Ksh. 867.million.

LISTS OF ACRONYMS AND ABBREVIATIONS

ATLS:	Advanced Trauma and Life Support
BLS:	Basic Life Support
CBRN:	Chemical Biological Radiological and Nuclear
DRM:	Disaster Risk Management
DHIS :	District Health Information System
EMMS:	Essential Medicines and Medical Supplies
EMS:	Emergency Medical Services
EMC	Emergency Medical Care
EOC:	Emergency Operation Centre
EPR:	Emergency Preparedness and Response
HAZMAT:	Hazardous Materials
HICS:	Hospital Incident Command System
GPRS:	General Packet Radio Services
ICC:	Inter-Agency Coordinating Committee
ICS:	Incident Command System
IGAD:	Intergovernmental Authority on Development
IDSR:	Integrated Disease Surveillance and Response
ISDR:	International Strategy for Disaster Risk Reduction
KIRA:	Kenya Initial Rapid Assessment
KHSSP:	Kenya Health Sector Strategic Plan
MCI:	Mass Casualty Incident
MSP:	Ministerial Strategic Plan
NDOC:	National Disaster Operations Centre
NDMU:	National Disaster Management Unit
SOPs:	Standard Operating Procedures
SDGs:	Sustainable Development Goals
UNGA:	United Nations General Assembly
VRAM:	Vulnerability, Risk Analysis and Mapping
WHO:	World Health Organization
WHA:	World Health Assembly

DEFINITION OF TERMS

Disaster
A serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of affected society to cope using only its own resources

Assessment
Survey of a real or potential disaster to estimate the actual or expected damages and to make recommendations for prevention, preparedness and response

Geological Hazard
Is one of several types of adverse geologic conditions capable of causing damage or loss of property and life. Hydro-Meteorological factors are important contributors to some of these processes.

Hazard
It is a known or perceived danger.

Hazard Assessment
This is a process of estimating, for defined areas, the probabilities of the occurrence of potentially-damaging phenomenon of given magnitudes within a specified period of time.

Hazard Mapping
The process of establishing geographically where and to what extent particular phenomena are likely to pose a threat to people, property, infrastructure, and economic activities

Hydro - Meteorological Hazard
Process or phenomenon of atmospheric, hydrological or oceanographic nature that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Preparedness
Building the emergency management profession to effectively prepare for, mitigate against, respond to, and recover from any hazard by planning, training, and exercising.

Recovery
Rebuilding communities so individuals, businesses, and governments can function on their own, return to normal life, and protect against future hazards

Rehabilitation
The operations and decisions taken after a disaster with a view to restoring a stricken community to its former living conditions

Response
Conducting emergency operations to save lives and property by positioning emergency equipment and supplies; evacuating potential victims; providing food, water, shelter, and medical care to those in need; and restoring critical public services

Resilience
The power or ability to withstand or recover quickly

Risk
The estimated probability that damage will occur to life, property, or the environment if a specified dangerous event occurs

Risk Analysis
The determination of the likelihood of an event (probability) and the consequences of its occurrence (impact) for the purpose of comparing possible risks and making risk management decisions.

Risk Assessment
The determination and presentation the potential hazards, and the likelihood and the extent of harm that may result from these hazards

Risk Management
The process whereby decisions are made and actions implemented to eliminate or reduce the effects of identified hazards.

Risk Reduction
Long-term measures to reduce the scale and /or the duration eventual adverse effects of unavoidable or unpreventable disaster hazards on a society which is at risk

Technological disaster (or “man-made disaster”)
A disaster attributed in part or entirely to human intent, error, negligence, or involving a failure of a man-made system, resulting in significant injuries or deaths

Vulnerability
Degree to which people, property, resources, systems, and cultural, economic, environmental, and social activity is susceptible to harm degradation, or destruction on being exposed to a hostile agent or factor

1. INTRODUCTION

Kenya has over the years experienced emergencies and disasters of various types such as geological, hydro-meteorological, biological, societal unrest, terrorism and technological disasters that disrupt livelihoods, destroy the infrastructure, divert planned use of resources, interrupt economic activities and retard development. In the last decade, Kenya has experienced major epidemics, floods, drought, social unrest and mass casualty incidents.

The world conference on disaster risk reduction held in January 2005 at Hyogo, Japan resolved that nations around the world integrate risk reduction into the various sectors of their economies. At the follow up conference in Sendai, Japan, in 2015, the vision of the world as regards disaster risk reduction was sharpened by laying emphasis on risk management for sustainable development and poverty reduction. The Sustainable development goals (SDG's) 2015-2030 place more emphasis on disaster preparedness and response activities as a key element for sustainable development by 'strengthening the capacity of all countries for early warning, risk reduction and management of national and global health risks'. Equally, the WHA has made several resolutions and recommendations that have seen the health sector worldwide make strides in attaining DRM milestones. Regional efforts to adapt the Disaster Risk Management (DRM) component have been embraced by the various regional bodies such as AU, IGAD and EAC.

In Kenya, DRM has been incorporated into national documents including the Kenya Constitution 2010, Vision 2030, MTP II, Kenya Health Sector Strategic Plan (KHSSP) and Ministry of Health Strategic plan.

This strategic plan aims to provide a guide towards efficient implementation of DRM within the health sector.

2. BACKGROUND

During the third world conference on disaster risk reduction, held in Sendai Japan in March 2015, Kenya committed to disaster risk reduction and the building of resilience to disasters. The Ministry of health in collaboration with other currently existing National coordination platforms (NDMU and NDOC) offers leadership and coordination to the health sector in DRM. The health sector has recognized DRM by incorporating it in key strategic documents such as the Kenya Health Policy, the KHSSP and the MSP.

Health sector leadership and coordination is a shared responsibility. The national government is responsible for the broad stewardship and development of regulatory frameworks while the county governments exercise control over the operational level. Emergency and disaster management is a shared function between the national and county governments

3. Hazard Profile

Kenya experiences various categories of disasters and emergencies and loses the equivalent of 5.5% of its GDP every seven years. Recent events in Kenya have shown an increasing frequency and magnitude of sudden onset disasters. In the last five years the country experienced droughts, floods, civil unrest, mass casualty injury incidents, and inter-communal violence with internal displacements of populations, refugee influx, disease epidemics, landslides and earth tremors

DISEASE OUTBREAK SUMMARY 2012-2016 KENYA			
2013	**Cases**	**Deaths**	**CFR**
Polio	14	0	0
Dengue Fever	733	0	0
Measles	31	0	0
Cholera	41	0	0
Anthrax	27	0	0
2014	**Cases**	**Deaths**	**CFR**
Aflatoxin outbreak	31	10	32
Measles	502	0	0
Anthrax	19	2	11
Q-fever	85	6	7
Dengue Fever	309	0	0
Kalaazar	217	11	5
RVF	14	1	7
Cholera	2	0	0
Hepatitis B	200	0	0
2015	Cases	Deaths	CFR
Cholera	10,733	178	2
Measles	41	1	2
2016	Cases	Deaths	CFR
Cholera	4,370	60	1
Measles	121	1	1
Hepatitis B	37	0	0
Hepatitis A	237	0	0
SARI	512	70	14
Yellow fever	2	1	50

*Ministry of Health Disease Surveillance and Response Unit

Some of the Disaster Occurrences in Kenya 2009-2015

YEAR	HAZARD/DISASTER	AREAS COVERED	ESTIMATED CASUALTIES
2008	Post election violence	Whole country	• 1020 dead
	Fire outbreak	Meru central district	• 90 acres gutted down
	Skirmishes	Trans-nzoia, Laikipia West	• 52 killed and houses burnt • down
	Cholera outbreak	Nyanza, western, NEP, Wajir district, Migori, Suba, Homa Bay, Siaya, Bondo, Kisii, Naivasha &Nku	• 122 dead
	Army worms	Over 20 districts	• Crops destroyed
	Conflicts	Mwingi, Rift valley, Mai mahiu, NEP	• 19 Killed
	Floods	Rift valley, Kitale, Transzoia, Makueni, Mwala/Kibwezi, Bundalangi	• 24 killed • 2396 affected
	Water borne diseases	Bungoma West district	• 11 killed
	Road accident	Western province, Narok, Kitui, Machakos road,Kakuma Longirima road & Eldoret Kitale road, Kericho,	• 33 killed
	Gas cylinder leak	MlolongoAthi-river	• 10 admitted in hospital
	Drowning incident	Mwala, Kitui	• 10 people drowned
	Mudslides	Pokot central	• 11 killed
	Cattle rustling	Pokot	• 16 killed • 200 goats, 245 sheep 147 donkeys stolen
	Drought and Famine	North Rift, Eastern, Central	• (NO FIGURES)
	Fire out-breaks	Nakumat Down Town supermarket-Nairobi, Sachangwan oil Tanker-RiftValley, Tuskys Supermarket-Embakasi, Gigiri Villa Franca, Mukuru Slums, TiwiResort club Mombasa, Huruma estate, Kibira Match, Master Factory, Donhorm estate, Musokolo-Busia	• More than 120 dead • Property worth • Millions destroyed
2009	Fatal road accident	Nairobi-Nakuru road, Wote-Machakos road, Thika-Nairobi road, Isiolo-Meru highway	• 34 dead
2015	Garissa University College attack	Garissa	• 148 victims dead

* National policy for disaster management in Kenya march, 2009

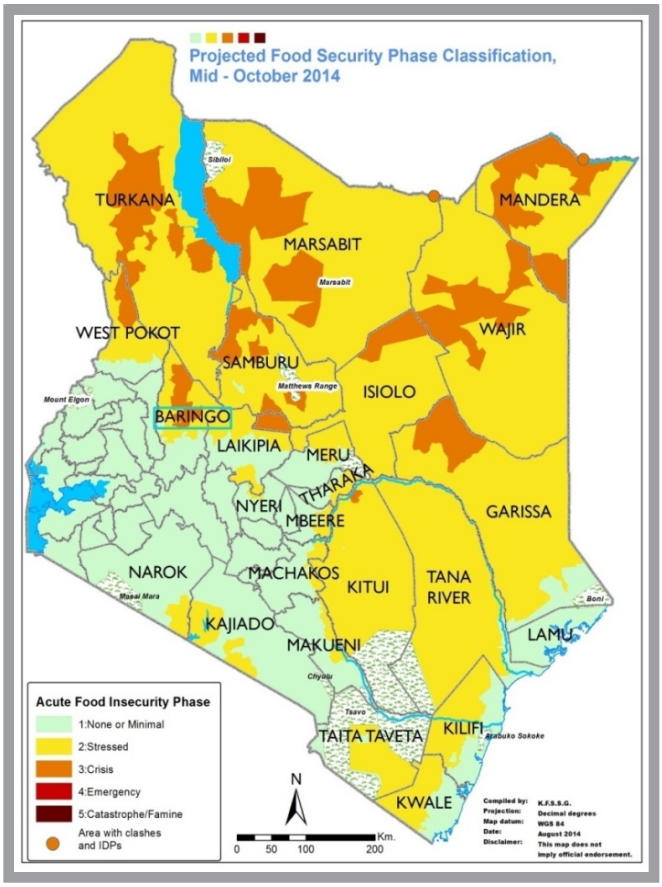


*Figure 1: Food insecurity areas in Kenya *Kenya food security Steering group*

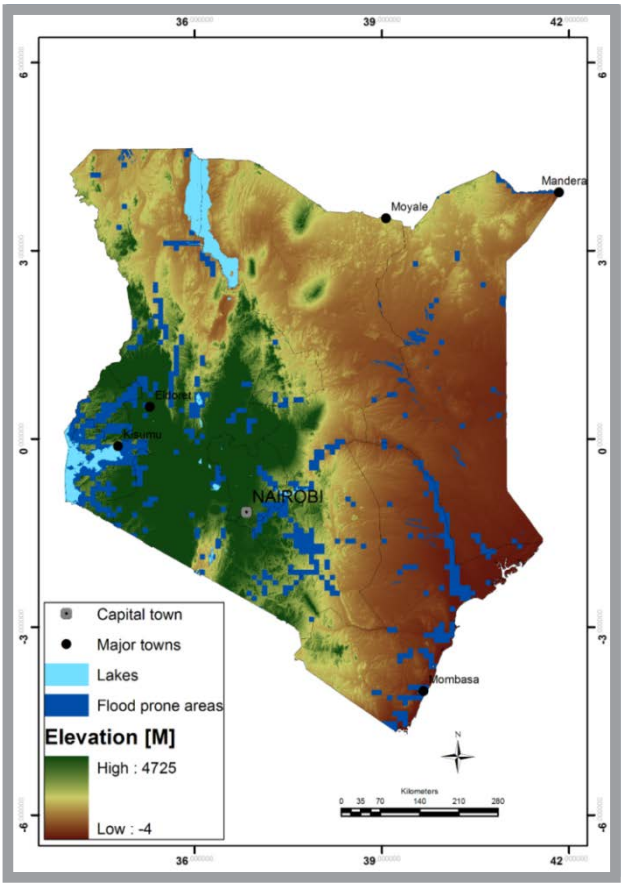


*Figure 2: Flood prone areas in Kenya * Kenya Meteorological Department*

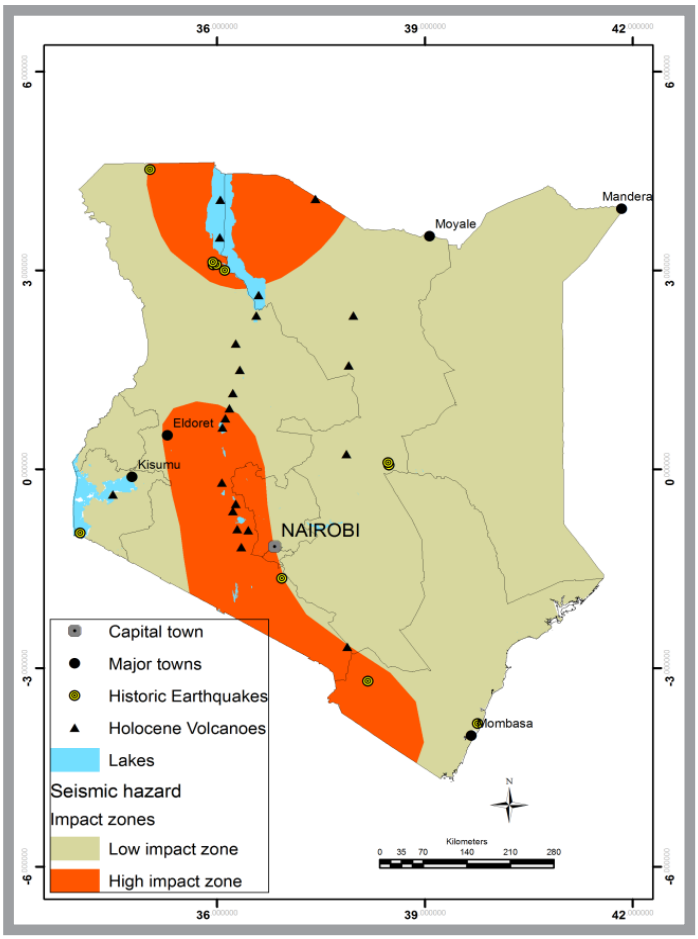


*Figure 3: Seismic Hazard Zones * Kenya Meteorological Department*

3.1 SITUATION ANALYSIS

DRM coordination and management structures exist both at the national and county levels. County health departments have designated officers responsible for streamlining DRM activities at the local levels and overseeing integration of DRM with the various sectors. The coordination and management structures are, however, in need to be strengthened for them to be more effective.

The absence of health sector specific Disaster Risk Management (DRM) policies at the national level has curtailed effectiveness in virtually all aspects of DRM within the health sector. Besides the policy vacuum, other documents for effective implementation such as guidelines, standards, strategic plans, annual work plans and SOPs have not been developed. Additionally, the Kenya health sector lacks a multi-hazards plan. However, there exists a community health strategy and a national volunteerism policy that are possible avenues for successful community entry. Advocacy and stake-holder engagements have been intermittent at the national level but limited at the county and community levels.

There is no established routine of carrying out simulations and drills to enhance preparedness. Pre-hospital care including ambulance service and its coordination is not well defined. The concept and existence of safe and prepared hospitals is poor. There is no formal program for hospital safety and preparedness assessment. Few health facilities have master plans and some were constructed with very minimal consultations with relevant professionals. With the lack of preventive maintenance over the years, some of the older health facility buildings are no longer resilient for use. There is no policy that guides investment in recovery activities. Surge capacity is inadequate at all levels as well as in the health facilities including a lack of institutional emergency operations plans.

Public health surveillance in the health sector is strong but biased towards communicable disease, with little emphasis on non-disease events. There are some weakness in data collection and a lack of knowledge on data analysis and utilization among health workers and managers. Risk quantification and analysis is not often done in health sector. The country lacks comprehensive risk assessment intelligence information that can be used to plan for interventions. Examples of weak institutionalization of emergency preparedness in Kenya include the poor accessibility of early warning information from other relevant sectors such as early warning information of the meteorological department for drought and flood preparedness, tracking weather related diseases outbreaks such as Malaria and Ministry of livestock for zoonosis diseases. The ministry of health also lacks access to data and information from other agencies working in emergency management, and vice versa, for example the Kenya Red Cross. Risk information is not regularly packaged and communicated to policy makers and the community.

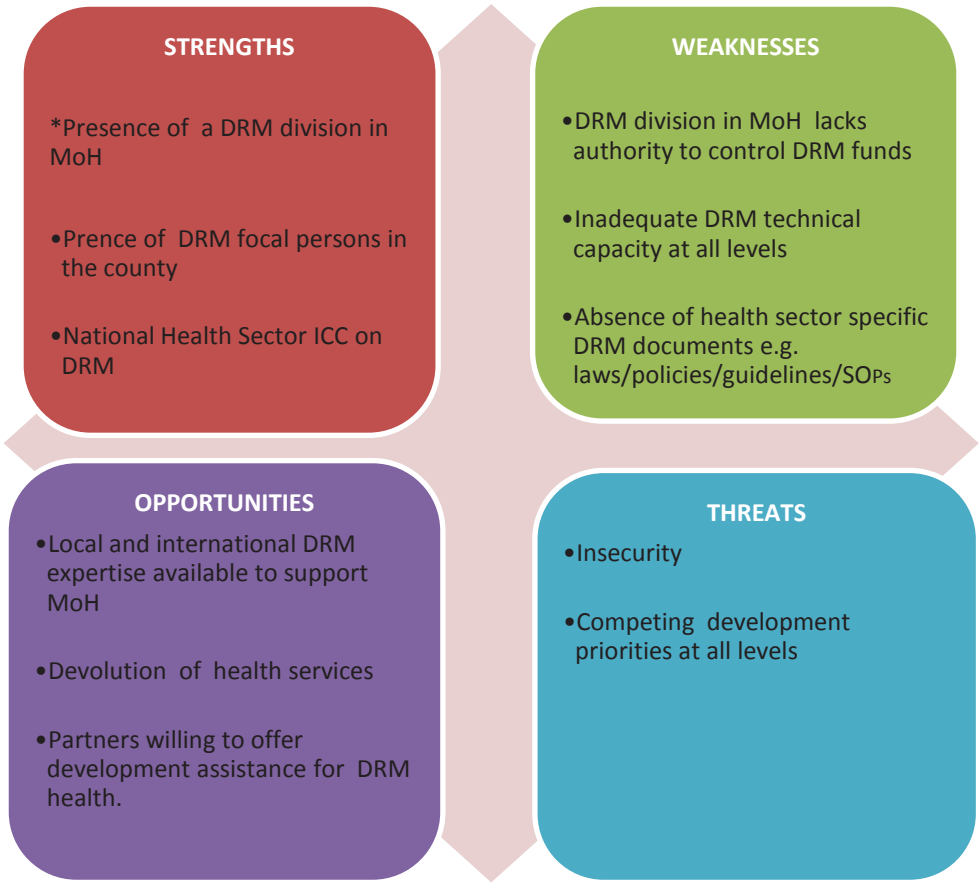
Knowledge management for Disaster Risk Management (DRM) in the health sector is inadequate. As much as DRM data is available at various levels, hardly any operational research has been carried out. Kenya Health Sector Country Capacity Assessment was the only single formal assessment carried out nationally. Academic researches done have not had ample opportunity for dissemination. Additionally, findings of such researches have not been used to inform policy making. Public education has proved to be greatly successful in the war against several problems of public health significance;

however, this has not been utilized to a good extent in DRM. Innovative approaches including mobile telephony, Mobile phone money transfer, GPRS and use of social media for public communications has not been extensively used in DRM.

Investments and capacity building in DRM in the health sector in Kenya have been largely inadequate. Contingency funds at the national and county levels allocated for emergency and disaster management are mainly to cater for response activities. These funds allocated for emergency response are often not easily accessible when urgently required as there is no policy to guide expedited release of funds for emergency operations. The mandated division of the ministry of health has limited access to funds committed for emergency and disaster management. This situation has led to failure to focus on key priorities identified by the Hyogo and Sendai frameworks, which lay significant focus on resilience building. Capacity building in health emergencies management is inadequate both in the health workers' training institutions and in the various on-job-training avenues available. Majority of health workers and managers have not been trained to handle emergency situations at health facility, community, regional levels and national levels.

The situation analysis has identified gaps that need to be addressed by the health sector in consultation with wider stakeholders recognizing the existing documents including national policies and legislation.

3.2 SWOT ANALYSIS



4. STRATEGIC DIRECTIONS

4.1 GOAL

A Kenya health sector resilient to emergencies and disasters

4.2 OVERALL OBJECTIVE

To reduce excess morbidity and mortality attributable to emergencies and disasters

4.3 STRATEGIC OBJECTIVES AND INTERVENTIONS

Strategic Objective	Strategic interventions
1. *To develop and strengthen leadership, governance, coordination and collaboration for health DRM*	1. Strengthen coordination mechanisms, structures and partnerships at all levels 2. Improve regulatory and policy environment to entrench DRM in the health sector 3. Strengthen capacity for DRM program management.
2. To enhance prevention, preparedness & response planning and 'building back better' in post-disaster recovery.	1. Strengthen multi-hazard preparedness, contingency planning, response & recovery 2. Establish systems for safe and resilient hospitals/facilities 3. Strengthen systems and capacity for mass casualty incident management 4. Establish systems for management of nuclear, biological and chemical incidents (HAZMAT/CBRN). 5. Strengthen cross cutting issues in emergency and disaster management
3. To improve disaster risk surveillance, early warning, risk analysis and communication	1. Establish a system for disaster risk communication. 2. Improve risk surveillance
4. To strengthen research, innovation, information, education and communication	1. Improve knowledge management for decision making in DRM. 2. Establish an information system for DRM
5. To mobilize resources for investments in DRM through partnership	1. Improve resources available for DRM programs interventions. 2. Better management of pooled resources for emergency management

5. THE IMPLEMENTATION PLAN

Introduction to the implementation plan

The table below shows how the strategic objectives that are to be attained over a period of 5 years spanning 2014-2018 with the corresponding outputs, budget and time frame for the implementation. The outputs expected are listed under each strategic intervention. Since this strategic plan was developed at the end of the first year of the five year period of implementation, outputs from the activities are expected from the second year.

Strategic Objective	Strategic interventions	Outputs	Estimated Costs (Ksh'000)	YEAR				
				1	2	3	4	5
To develop and strengthen leadership, governance, coordination and collaboration for DRM	1. Strengthen coordination mechanisms, structures and partnerships at all levels	A National DRM ICC and County DRM stakeholders forums established	5,559					
		DRM committees pegged on community units.	18,236					
		Management structures for DRM established at the all levels	13,677					
		M&E system for DRM programs established.	18,236					
		Senior level managers in health sector at national and county trained on resource mobilization	3000					
		DRM integrated into community health strategy, (Training modules guidelines and data tools).	18,236					
		DRM incorporated into County Integrated Development Plans (CIDP)and county health sector plans.	3000					
	2. Improve regulatory and policy environment to entrench DRM in the health sector	Health SectorDRM regulatory frameworks developed and incorporated into the National DRM policy.	3500					
		Guidelines, Norms and standards for operations and procedures for DRM at all levels developed.	18,236					
		Referral strategy for health sector reviewed and aligned to DRM	9,118					

		Kenya mass casualty incident management protocols completed and disseminated.	10000					
		Policy on emergency medical care completed and implemented.	13,677					
		County Capacity Needs assessment for DRM management support at all levels conducted	13,677					
	3. Strengthen capacity for DRM program management.	Capacity development plan for DRM management support at all levels developed	28,236					
		Management support for national and county DRM programming provided	36,472					
		Hazard Profile, Vulnerability Risk Analysis and Mapping conducted	25,677					
To enhance prevention, mitigation, preparedness & response planning and 'building back better' in post-disaster recovery.	1. Strengthen multi-hazard preparedness, contingency planning, response & recovery.	Multi-hazard preparedness and response plans at national and county levels developed.	36,472					
		Health Sector Emergency Operations Centres (EOC) at national and county established	58,500					
		Training and rehearsal (table top exercises, simulation and drills) at all levels conducted.	19,400					
		Capacity for initial rapid assessment of incidents, emergencies & disasters built.	28,677					
		Risk reduction, Emergency and Disaster preparedness capacity in community units strengthened.	18,236					
		Post-disaster/incident needs assessments for all disasters/incidents (with recommendations) conducted.	15,677					
		Systems and capacity for contingency planning and creating contingency stockpile of health products established.	36,472					
		Two yearly Hospital safety and readiness assessment conducted.	13,677					

	2. Establish systems for safe and resilient hospitals/facilities	Upgrading National and County referral facilities to meet standards for safety and resilience carried out.	48,500					
		Capacity for response to mass casualty incidents developed	37,600					
		Hospital incident command system (HICS) for crisis management rolled out.	25000					
		Skills for management of medical and trauma emergencies scaled up.	7500					
	3. Strengthen systems and capacity for mass casualty incident management	Equipment and medical products for management of medical and trauma emergencies in county referral hospitals availed.	50000					
		National mass casualty incident management protocols adapted and operationalized.	8500					
		Community systems for pre-hospital care established.	50000					
	4. Establish systems for management of nuclear, biological and chemical incidents (HAZMAT).	Centers for management of victims of HAZMAT/CBRN incidents established	10000					
		Health sector teams in management of HAZMAT/CBRN incident survivors trained.	5000					
		Products and technologies for management of HAZMAT/CBRN incidents acquired.	8000					
		Systems for psychosocial care in emergencies and disasters established	2000					
	5. Strengthen cross cutting issues in emergency and disaster management.	Capacity for management of the health consequences of gender based violence developed.	2000					
		Capacity for coordination/management of referral for the health consequences of disability and prolonged care following emergencies and disasters developed.	5000					
		Systems for support for vulnerable groups (children, elderly, HIV/AIDS, pregnant women, TB, MSM, NCD, marginalized communities) during	3,500					

		response and recovery established.		
To improve disaster risk surveillance, early warning, risk analysis and communication	1. Establish a system for disaster risk communication.	Biannual risk mapping and analysis conducted	18,800	
		Health Sector DRM risk Communication Strategy finalized, disseminated and implemented.	9,400	
		Risk surveillance incorporated into IDSR	5000	
	2. Improve risk surveillance	Mechanism for sharing multi-sector early warnings instituted.	30,000	
		Operational research for evidence based advocacy and decision making in DRM conducted.	10,000	
To strengthen Research, Innovation, information, education and Communication	1. Improve knowledge management for decision making in DRM.	Information sharing mechanisms for DRM research/ information established	30,000	
		Develop a reporting system for health emergency coordinators.	10000	
	2. Establish an information system for DRM.	DHIS enhanced to collate and transmit real-time data on mass casualty incidents and disasters through the e-platform.	18527	
To mobilize resources for Investments in DRM	1. Improve resources available for DRM programs interventions .	Advocate for increased budgetary allocation for DRM Programs at MoH National and at County Health Departments.	0	
		Mechanisms with key stakeholders for engagement during emergency management established	2000	
	2. Better management of pooled resources for emergency management	Mechanism for public private partnerships in DRM established	2000	
		Systems for expedited procurement of goods and services (including tax rebates) during emergencies established	3000	
		TOTAL	**866,975**	

6. COORDINATION STRUCTURES FOR IMPLEMENTATION

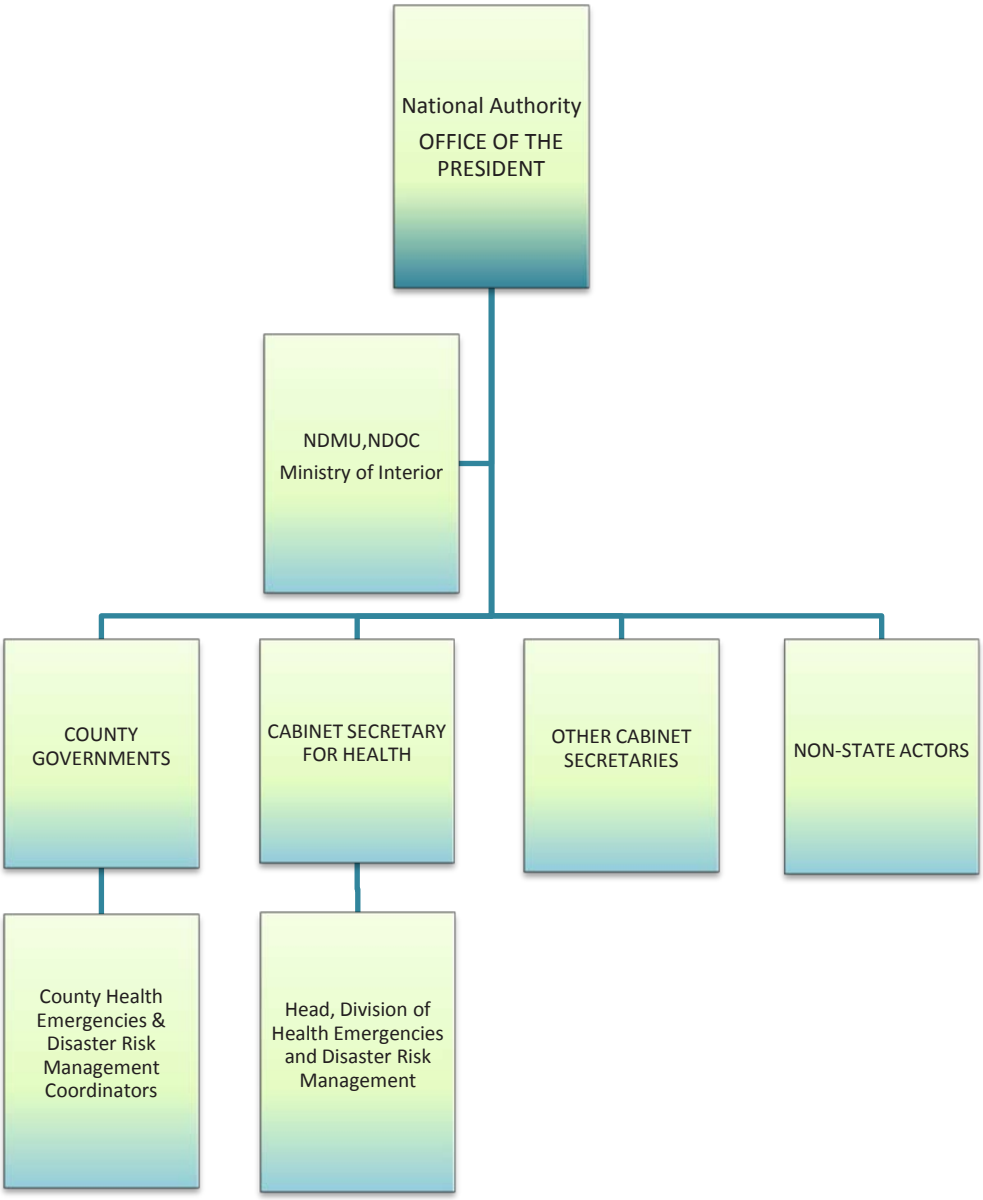
The office of the president is the overall coordinating authority for emergency and disaster management in Kenya through the Ministry of Interior and Coordination of National Government. The cabinet secretary for health is the highest authority in the health sector and bears overall responsibility for all matters health, including DRM. The Interior and Coordination of National Government has two implementing units for emergency and disaster coordination and management namely, NDMU and NDOC. The ministry of health is represented in the two units by the head of the division of health emergencies and Disaster Risk Management (DRM).

The ministry of health has an established ICC (inter-agency standing committee of national and international agencies) that provides overall advice and oversight to the health sector on DRM. The division of health emergencies and Disaster Risk Management (DRM) in the ministry of health is a under the directorate of curative and rehabilitative services. The county Governments are semi-autonomous. The county departments of health are the operational and implementing units for health in Kenya. Each of the county health departments has a designated officer responsible for coordination of health emergencies and Disaster Risk Management (DRM).

The division of health emergencies and Disaster Risk Management (DRM) in the ministry of health is mandated to save lives and protect health through management of emergencies and disasters by leading in policy formulation, partner coordination, technical support to county governments, capacity building, monitoring risks, disaster response and knowledge management. The division of health emergencies and Disaster Risk Management (DRM) has two implementing units; the Emergency Preparedness and Disaster Risk Reduction unit and the Pre-Hospital Care and Emergency Medical Response unit.

Disaster Risk Management (DRM) is a function in the Kenyan constitution that is mandated to both the national and county governments. The ministry of health supports implementation of DRM in the counties through the county health emergency and disaster coordinators.

6.1 COORDINATION STRUCTURE FOR MANAGEMENT OF EMERGENCIES AND DISASTERS IN KENYA



7. MONITORING IMPLEMENTATION OF THE STRATEGIC PLAN

In order to track the progress of implementation of the strategic plan, the Ministry of Health shall carry out baseline, mid-term and end term evaluations. These periodic reviews are conducted with internal and external stakeholders to review progress and take necessary action. Monitoring of the process of attainment of the strategic objectives will be through review of the mid and end term results conducted by the Ministry of Health.

The outcome indicators under each strategic objective will be as follows;

Strategic Objective	Outcome indicators
To develop and strengthen leadership, governance, coordination and collaboration for DRM	1. Functional coordination mechanisms at national, county and community levels
	2. Proportion of approved CIDP s with health DRM components.
	3. Enhanced capacity for DRM program management.
To enhance prevention, mitigation, preparedness & response planning and 'building back better' in post-disaster recovery.	1. Proportion of planning entities (National/county level departments, institutions) with all-hazard plans.
	2. Proportion of Referral hospitals with systems for safety and resilience.
	3. Proportion of counties that have implemented the ICS, HICS, and MCIM protocols for mass casualty incident management
	4. Functional system for management of nuclear, biological and chemical incidents (HAZMAT/CBRN).
	5. Proportion of counties with plans for addressing vulnerable groups in DRM
To improve disaster risk surveillance, early warning, risk analysis and communication	1. Proportion of counties integrating disaster risk communication plan in their all hazards plan.
	2. Proportion of counties with updated risk maps (preferably GIS)
To strengthen Research, Innovation, information, education and Communication	1. Number of .evidence informed policy decisions on DRM
	3. Proportion of counties with an above 90% reporting rate for emergencies and disasters
To mobilize resources for Investments in DRM	1. Per cent increase in budgetary allocation for DRM programs interventions.
	2. Better management of pooled resources for emergency management

The monitoring of performance will be pegged on output indicators as shown in the table below. The targets set for each year in the implementation period are shown below. Monitoring of implementation of activities at the county level shall be conducted on a quarterly basis.

Outputs	Output Indicators	Unit of Measuremen	Responsible	Targets			
				2015/ 2016	2016/ 2017	2017/	2018/
National DRM ICC and county DRM stakeholders forums established	Number of counties with stakeholder forums for DRM established. (Well constituted and meeting quarterly).	Quarterly stakeholder meetings,	Head DRM MoH/ CEC's Health	10	20	30	47
DRM committees pegged on community units	Proportion of community units DRM committees	Monthly committee meetings	CEC's Health	10%	20%	30%	40%
Management structures for DRM established at all levels	Number of counties with DRM Management structures. (programmatic	County, sub county and facility DRM plans	Head DRM MoH	10	20	30	47
M&E system for DRM programs established.	DRM M&E framework document	M&E reports	Head DRM MoH		100%	100%	100%
Senior level managers in health sector at national and county trained on resource mobilization	Proportion of senior managers at national and county level trained on resource	-Training reports, -DRM resources mobilized	Head DRM MoH	50%	100%	100%	100%
DRM Integrated into Community Health Strategy Documents(Strategy, Training modules, guidelines and data tools).	Revised Community Health strategy document	Updated and Approved CHS documents	Head DRM MoH		100%	100%	100%
DRM incorporated into County Integrated Development Plans (CIDP) and county health sector plans,	Number of counties whose County Integrated Development Plans (CIDP) and county health sector plans with DRM component	CIDP and county health sector plans with DRM component	Head DRM MoH/CECs Health	30	47	47	47
Health sector DRM regulatory frameworks developed and incorporated into the national DRM policy	national DRM policy with Health as a priority	national DRM policy with Health as a priority	Head DRM MoH	100%			

Norms, standards, guidelines and SOPs for operations and procedures for DRM at all levels developed.	Norms, standards, guidelines and SOPs for health sector DRM	Policy documents	Head DRM MoH			100%	100%
	Proportion of referral hospitals with emergency response plans and SOPs for	Hospital plans and SOPs	Head DRM MoH	20%	60%	80%	100%

Outputs	Output Indicators	Unit of Measuremen	Responsible	Targets			
				2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019
Referral strategy for health sector reviewed and aligned to DRM.	Revised referral strategy for health sector document	Updated and Approved CHS	Head DRM MoH	100%	100%	100%	100%
	SOPs for referral	referral SOPs	Head DRM MoH	100%	100%	100%	100%
Kenya mass casualty incident management protocols completed and disseminated	Kenya mass casualty incident management protocols	Approved MCI protocol	Head DRM MoH	100%	100%	100%	100%
Policy on emergency medical services implemented	Kenya Policy on emergency medical care policy	Approved policy document	Head DRM MoH	100%			
	Proportion of counties adhering to EMS policy	Survey report	Head DRM MoH/CEC's		50%	75%	100%
Capacity needs assessment for DRM management support at all levels conducted	Needs assessment for DRM management support	Assessment reports	Head DRM MoH	100%			
Capacity development plan for DRM management support at all levels developed	National DRM Capacity development plan	Approved capacity development plan	Head DRM MoH		100%	100%	100%
	number of counties with a capacity	Assessment report	CEC's Health		10	20	47
Technical support for national and county DRM programming provided	Number of counties that have in the last year received technical support for DRM	Technical reports	CEC's Health	15	25	40	47
Hazard Profile, Vulnerability Risk Analysis and Mapping conducted	Hazard and VRAM Map	Hazard and VRAM report	Head DRM MoH	100%			

Multi-hazard preparedness and response plans at national and county levels developed	National all hazards plan	Approved plan	Head DRM MoH	100%			
	Number of Counties with all hazards plans	Approved plans	CEC's Health	5	25	40	47
Health Sector Emergency Operations Centres (EOC) at national and county established	National level health sector EOC	Annual report	Head DRM MoH	100%			
	Number of counties with	Assessment report	CEC's Health			10	20

Outputs	Output Indicators	Unit of Measurement	Responsible	Targets			
				2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019
Training and rehearsal (table top design, exercises, simulation and drills) at all levels conducted.	National – Training, Exercise, simulation and drill reports	Reports	Head DRM MoH	1	1	1	1
	County –Training, Exercise, simulation and drill reports	Annual reports	CEC's Health	10	20	30	47
Capacity for initial rapid assessment of incidents, emergencies & disasters built.	Number of health managers at national and county trained on KIRA	Timely KIRA reports	Head DRM MoH	60	120	180	220
Risk reduction, emergencies and disaster preparedness in community units strengthened.	Proportion of community units sensitized on DRM	Sensitization reports	CEC's Health		5%	10%	25%
Post-disaster/incident needs assessments for all disasters/incidents (with recommendations) conducted.	Proportion of disasters within the last year with post-disaster needs assessment reports	PDNA reports	Head DRM MoH	100%	100%	100%	100%
Systems and capacity for contingency planning and creating contingency stockpile of health products established.	Formulary for stockpiling for health emergencies	Contingency plans with formulary of stockpiles	Head DRM MoH	100%	100%	100)	100%
Two yearly Referral Hospital safety and resilience assessment conducted.	60 Referral hospital safety and resilience index reports	HSI (Hospital safety index) chart	Head DRM MoH	10	30	50	60

Upgrading of Referral facilities to meet standards for safety and resilience carried out.	Number of referral hospitals assessed upgraded to improve disaster resilience	Hospital upgrade Plans and Budgets	CEC's Health	0	10	30	50
	Number of referral hospitals allocating budget to spend on upgrading to make disaster resilient.	Available budget	CEC's Health	10	25	35	60
Capacity for response to mass casualty incidents developed	Number of ICS trainings held	ICS reports	Head DRM MoH	3	8	13	20
Hospital incident command system (HICS) for crisis management rolled out.	Number of hospitals holding HICS training	HICS reports	CEC's Health	20	30	40	60
Skills for management of medical and trauma emergencies scaled up.	Number of health workers trained in BLS, ACLS (Basic Life Support and Advanced Life Support) skills.	Training Reports	Head DRM MoH	100	20	30	40
Equipment and medical products for management of medical and trauma emergencies in referral hospitals availed.	Number of referral hospitals equipped according to standards	Assessment reports	CEC's Health		10	30	45
National mass casualty incident management protocols adapted and operationalized.	Number of counties adapting the national MCI protocols	Assessment reports	CEC's Health		20	40	47

Outputs	Output Indicators	Unit of Measurement	Responsible	Targets			
				2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019
Community systems for pre-hospital care established.	Number of community based youth volunteers trained as first responders.	Assessment report	CEC's Health	1000	2000	3000	40000
Centres for management of victims of HAZMAT/CBRN incidents established	Number and location of specialized centres identified/recommended	Assessment reports	Head DRM MoH	1			

Health sector teams in management of HAZMAT/CBRN incident survivors trained.	Number of health specialist teams trained on HAZMART/CBRN	Training report	Head DRM MoH	1	2	3	4
Products and technologies for management of HAZMAT/CBRN incidents acquired.	Number of specialized HAZMART/CBRN management centres equipped	Assessment report	Head DRM MoH		1	1	1
Systems for psychosocial care in emergencies and disasters established.	Compiled database of professional counsellors	Register	Head DRM MoH	100%			
	Collaboration agreements with professional counsellor associations	MoUs	Head DRM MoH	100%			
Capacity for management of the health consequences of gender based violence developed.	Number of health managers trained on SGBV	Training Reports	Head DRM MoH	100	200	300	400
Capacity for coordination/management of referral for the health consequences of disability and prolonged care following emergencies and disasters developed.	Protocol on referral for disability	Approved policy	Head DRM MoH			100%	
Systems for support for vulnerable groups (children, elderly, HIV/AIDS, pregnant women, TB, MSM, NCD, marginalized communities) during response and recovery established.	Guidelines on mapping of vulnerable groups during disasters	Guidelines document	Head DRM MoH		100%		
Health Sector DRM risk Communication Strategy finalized, disseminated and implemented.	Health Sector DRM risk Communication Strategy document	Strategy document	Head DRM MoH		100%		
Biannual risk mapping and analysis conducted	Risk mapping and analysis reports	Risk maps	Head DRM MoH	100%		100%	

Outputs	Output Indicators	Unit of Measurement	Responsible	Targets			
				2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019
Systems for support for vulnerable groups (children, elderly, HIV/AIDS, pregnant women, TB, MSM, NCD, marginalized communities) during response and recovery established.	Guidelines on mapping of vulnerable groups during disasters	Guidelines document	Head DRM MoH		100%		
Health Sector DRM risk Communication Strategy finalized, disseminated and implemented.	Health Sector DRM risk Communication Strategy document	Strategy document	Head DRM MoH		100%		
Biannual risk mapping and analysis conducted	Risk mapping and analysis reports	Risk maps	Head DRM MoH	100%		100%	
Risk analysis information incorporated into IDSR	Approved revised IDSR guidelines with DRM	Revised IDSR document	Head DRM MoH		100%		
Mechanism for sharing multi-sector early warnings instituted.	Platforms for sharing multi-sector early warnings	Minutes and reports	Head DRM MoH	50%	100%		
Operational research for evidence based advocacy and decision making in DRM conducted.	Operational research findings reports	Annual Research papers	Head DRM MoH	2	4	6	8
Information sharing mechanisms for DRM research/ information established	Annual symposiums	Bulletins and Annual reports	Head DRM MoH	1	2	3	4
Develop and operationalize a reporting system for health emergency coordinators.	Reporting tools	Reports and Bulletins	Head DRM MoH	100%			
	Number of counties trained and orientated on a reporting system for health emergencies	Training and Orientation Reports	Head DRM MoH	47			

Outputs	Output Indicators	Unit of Measurement	Responsible	Targets			
				2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019
DHIS enhanced to collate and transmit real-time data on mass casualty incidents and disasters through the e-platform.	At least three indicators relevant to DRM in the DHIS	Intergrated DHIS reports	Head DRM MoH		100%		
Advocate for increased budgetary allocation for DRM programs at MoH National and at County Health Departments	Increased DRM budget allocation	Annual plans and budgets trend	PS Health CEC 's Health	30%	50%	100%	100%
Mechanisms for engagement with key stakeholders in emergency response established	frameworks for stakeholder collaboration	Reports and MOUs	Head DRM MoH	100%			
Mechanism for health sector public private partnerships PPP in DRM established	frameworks for PPP engagements in DRM	MoUs	Head DRM MoH	100%			
Systems for expedited procurement of goods and services (including tax rebates) during emergencies established	Timely procurement of goods and services during Emergencies	SOP s on emergency procurement	Head DRM MoH	100%			

8. COST ESTIMATES AND FINANCING

Funding for the implementation of the strategic interventions will primarily be from the GoK with support from development, humanitarian and other implementing partners.

Strategic Objective	Strategic interventions	Cost Estimates Ksh.'000
To develop and strengthen leadership, governance, coordination and collaboration for DRM	1. Strengthen coordination mechanisms, structures and partnerships at all levels	79,944
	2. Improve regulatory and policy environment to entrench DRM in the health sector	68,208
	3. Strengthen capacity for DRM program management.	90,385
To enhance prevention, mitigation, preparedness & response planning and 'building back better' in post-disaster recovery.	1. Strengthen multi-hazard preparedness, contingency planning, response & recovery.	227,111
	2. Establish systems for safe and resilient hospitals/facilities	118,600
	3. Strengthen systems and capacity for mass casualty incident management	108,500
	4. Establish systems for management of nuclear, biological and chemical incidents (HAZMAT/CBRN).	25000
	5. Strengthen cross cutting issues in emergency and disaster management.	10500
To improve disaster risk surveillance, early warning, risk analysis and communication	1. Establish a system for disaster risk communication.	33200
	2. Improve risk surveillance	40000
To strengthen Research, Innovation, information, education and Communication	1. Improve knowledge management for decision making in DRM.	40000
	2. Establish an information system for DRM.	20,527
To mobilize resources for Investments in DRM	1. Improve resources available for DRM programs interventions.	0
	2. Better management of pooled resources for emergency management	5000
	TOTAL Ksh.	**866,975**

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