



EVIDENCE BASED VULNERABILITY CAPACITY ASSESSMENT REPORT

Strengthening Resilience to Disasters in Urban and Rural Malawi (STRIM) Project



Funded by the European Union (ECHO) and co-funded by Belgian Red Cross, Danish Red Cross and Netherlands Red Cross with technical support from COOPI

The European Union is supporting the Disaster Risk Reduction Action Plan for Malawi with the aim to support Strategies that enable communities and the national society strengthen their preparedness and Response capacity against natural hazards both in Rural and Urban Settings, thereby increasing resilience and reducing vulnerability.

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10 March 2020



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ACRONYMS AND ABBREVIATIONS

ALC	African Lake Company
COOPI	Cooperazione Internaionale
DMCC	Department of Metrological and Climate Change
DRM	Disaster Risk Management
ECHO	European Commission Humanitarian Organization
EU	European Union
EVCA	Evidence Based Vulnerability Capacity Assessment
GVH	Group Village Head
FGD	Focus Group Discussion
IFRC	International Federation of Red Crescent and Cross
MRCS	Malawi Red Cross Society
BRC	Belgium Red Cross
NFIs	None Food Items
NSO	National Statistics Organization
PQL	Planning Quality and Learning (MRCS Department)
DODMA	Department of Disaster Management
SCDP	Secondary Centre Development Program
STRIM	Strengthening Resilience in Malawi
T/A	Traditional Authority
VCPC	Village Civil Protection Committee
VI	Vulnerability Index

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EXECUTIVE SUMMARY

The Malawi Red Cross Society (MRCS) with the support from European Union and cofounding from Partner National Societies (BRC, NRL and DRC) undertook Evidence Vulnerability Capacity assessment (EVCA) between 1st November and 15th November, 2019 with the aim of embarking on an urban Disaster Risk Reduction (DRR) intervention [**Strengthening Resilience in Malawi project**] to tackle urban vulnerabilities while at the same time strengthening resilience in the three Traditional authorities of Karonga district. **The broad objective** of the project is to contribute to reducing the impact of disasters in Malawi by Strengthening the preparedness and response capacity of national response structures, communities and schools.

Essentially, the broader objective of the STRIM project would be achieved in three phases:

1. Strengthening existing collaboration and partnership framework of MRCS stakeholders
2. Conducting vulnerability capacity assessment/Multi-hazard risk assessment
3. Implementation of the community-level urban DRR community action plans

The expected results of the program include:

- Regional Red Cross structures and National level stakeholders are able to conduct coordinated and scalable actions through strengthened response capacities and improved information availability
- Local communities are strengthened in their capacity to respond to identified hazards through improved Early Warning Systems, integrated community and district level contingency plans and trained, well-equipped community-based response structures
- Increased DRR awareness and improved infrastructure and response capacities in targeted schools leads to reduced impact of disasters.

Primarily the EVCA process identified a number of Vulnerabilities, Capacities and prevalent disasters that exist in the target areas as highlighted below.

Hazards	Vulnerabilities	Capacities
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Floods Army worm Strong winds Drought Disease outbreaks Earthquake Fire outbreaks	Low lying flood plain High network of rivulets Distant public health facilities Lack of safe drinking waters Lack of reliable Early Warning Systems Lack of working tools for response teams	Manpower Availability of volunteers in time of need Availability of public infrastructures Available highlands for safe settlement High social capital Available drought resistant crops High water table
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Table 1: Summary of vulnerabilities and Capacities

CHAPTER 1 INTRODUCTION AND BACKGROUND

1.1 Introduction

This chapter introduces Malawi by placing her into a regional map and then provide detailed Country Profile, as well as characteristics of the targeted cities of Lilongwe and Mzuzu, together with Karonga district. Within this chapter, the project plan will also be discussed, Evidence Based Vulnerabilities Capacity Assessment will also be defined and its objectives will be listed.

1.2 The Country Disaster Profile



Figure 1: Map of Malawi

The republic of Malawi is a landlocked country in the south-eastern Africa. It is bordered by Mozambique to the east and southwest, by Tanzania in the north and northwest. Lake Malawi, one of the deepest Great Rift Valley lakes in the world, accounts for almost one fifth of the country's area. Three regions demarcate Malawi; North, Central and South. Lilongwe City is the national and administrative city capital. In the North, Mzuzu is the city while Blantyre and Zomba are two cities in the southern area.

The Country boasts a diverse array of flora and fauna made up of a variety of woodlands, tropical rainforests, open savannah high altitude grasslands and scrub.

Malawi is highly vulnerable to the impacts of extreme weather events given its location along the great African Rift valley, rapid population growth, unsustainable urbanization, climate variability and change, and environmental degradation. The most common weather related shocks affecting Malawi include; floods, drought, stormy rains, strong winds and hailstorms.

According to PDNA report (GoM 2019), over the past 5 decades Malawi has experienced more than 19 Major floods and seven droughts, with these events increasing in frequency, magnitude and

scope over the years. These shocks have had significant impact on people's lives, livelihood and socio-

economic infrastructure in the affected areas, pushing a large number of people into poverty and food insecurity.

Recently, the country has been hit with various hydro-metrological hazards, with a probable expectation of experiencing even more intense occurrences in the immediate future. In 2015, a heavy flood hit the greatest part of the country, leaving many communities destitute of both shelter and food security while hundreds of unrecorded lives were lost. In 2016, drought affected over 3.3 million people across the country with the impact on the population being cumulative. On 8th March, 2019, in the consideration of the heavy rains, floods and strong wind associated with Tropical Cyclone Idai affected the southern regions and partly the central districts.

The vulnerability of the country to hydro-metrological hazards and the existing community resilience and capacity gaps, leaves much to be desired from the humanitarian sector.

Below are the statistical figures of the targeted areas for disaster preparedness project in Malawi. The aggregate data is extracted from NSO 2018 PHC report¹. The data is segregated by gender!

Traditional Authority	Male population	Female Population	Total
Lilongwe City	795,427	842,156	1,637,583
Mzuzu City	108,848	112,424	221,272
Karonga District	176,197	188,831	365,028
TOTAL	1,080,472	1,143,411	2,213,883

Table 2: NSO 2018: Population statistics- Three of Five T/A, Karonga

1.3 Malawi Red Cross Society

The Malawi Red Cross (MRCS) is a local humanitarian organization with its ultimate motto being “**Hope To Those in Need**”. Since its establishment, the MRCS’s ambition has been to assist the most vulnerable members of the society defined as those that are at greatest risk from situations that threaten their capacity to live with an acceptable level of social and economic security and human dignity. Like any national society, MRCS is guided by the 7 fundamental principles of the RC/RC Movement including humanity, impartiality, neutrality, voluntary service, universality, unity and independence. The National Society depends on a country wide volunteer support base and branch network consisting of Red Cross oriented community volunteers who support the work of the Red Cross.

¹NSO (2018). Population Housing and Census Preliminary Report_ Government of Malawi

Consistent with its mandate and vision, Malawi Red Cross Society with financial support from ECHO and Partner National Society (Belgium Red Cross, Danish Red Cross and Netherlands Red Cross) intends to implement, in areas wards of Lilongwe and Mzuzu, and the rural Group Village Heads (GVHs), an urban disaster risk reduction project (Strengthening Resilience in Malawi-STRIM). The project is focusing on National Society capacity development and Strengthening Community resilience to disaster. The overall goal is to contribute to reducing the impact of disasters in Malawi by Strengthening the preparedness and response capacity of national response structures, communities and schools.

To this effect, Malawi Red Cross Society, cognate with the hazards and risks associated with the urban areas, chose Lilongwe and Mzuzu as the priority pilot centers, together with Karonga District, specifically, T/As Kilupula, Mwakaboko and Mwirang'ombe based on perceived level of vulnerability to hydro-metrological disasters in the area.

1.4 Evidence Vulnerability Capacity Assessment

EVCA is basically a method of investigation into the risks that people face in their locality, their vulnerability to those risks and the capacity to cope with and recover from disasters. The IFRC describes the EVCA as an integrated part of disaster preparedness that can contribute to the recreation of community based disaster preparedness programs at the rural and urban grassroots levels. This tool has been argued as enabling local priorities to be identified and defined, leading to the design of actions that contribute to disaster reduction. With the EVCA local people and the communities become more completely involved in the identification of risk and in the design of program and actions to prepare for disasters.

CHAPTER 2: RESEARCH METHODOLOGY

This chapter outlines operational definitions and research methods that were used to gather information for the EVCA. It was of prime importance to define and clarify the operational definition to be used in the EVCA, as well as the methods for data collection.

2.1 THE EVCA PROCESS

The resource materials were taken from previous MRCS-EVCA reports and other Federation EVCA reference materials. Considering that the EVCA tools were traditionally designed to be used in rural settings, the following steps were followed:

2.1.1 Setting Up of EVCA Teams and EVCA Objectives

The EVCA teams was set up comprising members from the MRCS head office and the various district teams (Including Head of PQL, Project Coordinators, District Coordinators, Project officers, CDFs and Volunteers and other members of staff). The teams were guided by the head of PQL through the terms of reference [Appended] which had specific objectives and desired deliverables at the end of the exercise for each district team.

2.1.2 Planning the EVCA

The planning process for the EVCA exercise largely comprised of the following operands

i. Target community sensitization

The department of Planning Quality and Learning (PQL) led the sensitization activity to the relevant stakeholders both at national level and in the target districts in collaboration with the District coordinators. All stakeholders were well informed about the exercise and were fully engaged throughout the process.

ii. Development of data collection tools

Data collection templates were developed to collect information. Particular attention was paid to the data collection instruments so that they were flexible and enabled participants to provide information in guided semi-structured manner. In tandem with this, the multidisciplinary EVCA team conducted a two-day tool development and review session which was followed by a EVCA tool training. The training program was done in two phases. Initial phase, comprised

of the team of both national and district level supervisors. The teams was exclusively oriented in a hands on session for each of the tools and how the data would be probed and collected in the process. This session also served to review the developed tool into a better format for ease of the data collection in the field in form of language and data matrix schema.

The tools used in the process were:

1. Hazard assessment matrix
2. Historical profile
3. Seasonal Calendar
4. FGD (Community Baseline Information)
5. Hazard mapping
6. Pairwise ranking
7. DRM Plan

Finally, the enumerators and volunteers were oriented on the process and EVCA tools in the particular districts. This provided an opportunity for volunteers to participate in theoretical and practical exercises prior to supporting the EVCA in the target communities.

iii. Participatory data collection with communities and stakeholders

Various participatory data collection methods were used in the process including; Focus Group Discussions, Facilitation-sessions and team observations in the process. Key interviews were also facilitated in the school with senior administration staff. The district stakeholders comprised of members form various government Civil Society Organization sections including; Social welfare, DODMA, Education, DMCC, Health and Water Supply among others.

iv. Systematizing, analyzing and interpreting the data

Information gathered was presented by group leaders from each of the targeted GVH among all the three T/As and discussed by the whole group. The information collected from focus group discussions and key informant interviews were systematically presented in tables. Related information on vulnerabilities, risks, hazards and capacities were interpreted and consolidated in the report.

v. Report Compilation and sharing with the community and Stakeholders

VCA Findings were consolidated, and the report will be shared with all stakeholders to comment and adopt it, before commencement of community action plans. Hence, funding

resources are needed in order to share the outcome of the VCA with both the district level stakeholders and communities at both area and GVH levels.

2.2 Limitation of the study

Timeframe of the EVCA process from data collection, screening, analysis and report submission was limited. Team leads had to work overnight to meet deadlines.

CHAPTER 3: EVCA FINDINGS

3.1 INTRODUCTION

This chapter presents the findings of the EVCA in the cities of Lilongwe and Mzuzu, and Karonga district. It highlights the vulnerabilities, capacities, hazards and risks associated with each of the targeted townships, findings of each of the tools used for the EVCA, categories of vulnerabilities and capacities highlighted in the first chapter of this report were used. Additionally, cross-cutting issues are presented for each township area before specific findings are presented.

3.2 The Cross-Cutting issues in the urban and rural setting

The cross-cutting hazards emerging from the FGDs, interviews and direct observation across all three areas (Lilongwe, Mzuzu and Karonga) are cognately presented in a wholesome in the subsection of this report. The main hazards as reported from the areas in the district are; Flood, Army worms, Drought, Strong winds and Cholera in order of their precedence. The table below displaces the summary of hazards among all towns.

HAZARD	Rank Summary across Lilongwe, Mzuzu and Karonga						SUMMED RANK
	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Rank-6	
Flood	13	2	3	0	2	0	1
Drought	5	5	5	4	0	0	3
Strong winds	0	1	7	7	3	0	4
Cholera	0	1	2	3	2	1	5
Army worms	3	10	2	3	2	0	2

Key: Summed rank of value 1= Most prevalent hazard/ 7=Least prevalent hazard

Table 3: Summed-rank of hazards in the district

The hazards have seen the community grappling with disasters which have left many people losing their property, livelihoods and being food insecure! During rainfall the communities are highly prone to flooding, Armyworm and Dry spells. Strong winds and earth tremors are highly reported to be abundant in the dry seasons.

3.2.1 Historical profile

A brief historical profile about Malawi district is outlined below, detailing its development and major hazards experienced in the past two centuries.

Year	Description	Year	Description
1500	Founding of Maravi “ <i>Flames</i> ” Kingdom	1960	Kamuzu attend a Constitution review for Nyasaland in London
1800	Chewas “ <i>Foreigners</i> ” migrate to Maravi from Republic of Congo [<i>Flee civil unrest and diseases</i>]	1961	MCP win overwhelming victory in election for a new Legislative council
1812	Battle between Chewas (Congolese) and Natives (<i>Abatwa/Akafula</i>)	1964	Nyasaland Become Independent State from British Protectorate
1855	Conquest of the Maravi Empire [<i>Due to onset of slave trade/African Colony</i>]	1964	Nyasaland is Renamed “Malawi” after former Maravi empire Cabinet Crisis – Kamuzu dissent with his Ministers
1856	Ngonis migrate to Maravi Empire from South Africa (Led by Zwangendaba)	1970	Big Flood in Karonga- Township area submerged
1859	Coming of Dr. David Livingstone to Maravi	1987	Drought hit Malawi- 1,429,267 people affected
1861	First University come to Malawi “University Mission to Central Africa- U-M-C-A”	1990	Drought hit Malawi- 2,800,00 people affected
1865	War between Christian Missionaries and Muslim Yaos	1991	Flood hit Malawi- 268,000 people affected
1881	The Machawas “Yaos” Migrate to Maravi from northern Mozambique – <i>Yaoland</i>	1992	Drought hit Malawi- 7,000,000 people affected
1875	Free Church of Scotland arrive in Mangochi (Chief Mponda, Muslim Yao, welcomes Christianity)	1997	Drought hit Malawi- 10,000,000 people affected
1876	Church of Scotland established in BT- (Present HHI)	2001	Flood affect 500,000 people
1881	Scotland Mission open Bandawe Station in North (NkhataBay)	2002	Drought hit Malawi- 2,829,435 people affected Flood hit Malawi- 246,340 people affected
1889	The White fathers arrive in Mangochi- Catholic Church come to Maravi	2003	Floods affect 81,604 people
1890	Lomwes tribe arrive in Southern Malawi from uLomwe, <i>Mozambique south east of Lake Chirwa</i>	2005	Drought hit and affect 5,100,000 people across the country
1894	Livingstonia mission opened by Robert Laws	2007	Drought affect 520,000 people Flood affect 180,246 people
1891	Malawi declared a British Protectorate	2015	Flood affect over 1.1 million people
1953	Malawi federated with Southern and Northern Rhodesia (Zimbabwe and Zambia)	2016	Drought affect over 3,300,000 people across the country
1907	Maravi empire changed to Nyasaland (Yao “Nyasa” for Lake) by British protectorate	2018	Strong winds hit southern part of Malawi- Over 2,500 households affected (Chikwawa, Mulanje and Thyolo)
1915	John Chilembwe uprising against British rule	2019	Floods hit Malawi – 975,600 people affected
1950	Nyasaland joined with North and Southern Rhodesia (Zambia and Zimbabwe) – Federation of Rhodesia and Nyasaland	2019-2021	ECHO-STRIM DRR Action plan implemented in Lilongwe city, Mzuzu city and Karonga district!
1958	Dr. H Kamuzu Banda return to Nyasaland from USA, UK and Ghana.		
1958	Dr. H Kamuzu become leader of Nyasaland African Congress (NAC – later became MCP)		
1959-1960	Kamuzu arrested and sent to Gwelo Prison		

Table 4: Historical profile for Malawi

At national level, the major and notable disasters that have hit all towns with highest damages on both livelihoods and infrastructure are Floods and Strong winds. It may be noted though that the specific communities did not rank Earthquake as high in the level vulnerability index (VI) due to its periodical occurrence. However, the damage caused by earthquake far exceeds the cumulative damages of most of the frequent hazards in the area, as earth tremors are none selective and affect all people in spite of their varying social capillary levels.

3.2.2 Baseline information

Most families among the three target areas of Lilongwe, Mzuzu and Karonga are averagely large. The average family size reported to be 5.2. It is however, noted that highest family sizes were reported in Karonga District unlike the two cities which have less family average sizes while reporting to have high population densities due to high urbanization taking place in the country.

The highest authority in matters of disaster and response in all areas are the existing Village Civil Protection Committee (VCPC) and Ward Civil Protection Committees (WCPC), seconded by the GVH/Ward leaders who oversee a collection of Villages/Households under their jurisdiction. It is also, noted here that most house types are made of burnt bricks across all towns, however, a greatest proportion of these houses are built in risk low lying areas making them more vulnerable to flooding disaster. The most vulnerable population at most risk to all disaster overly identified were; Children, women, elderly and disabled. These groups are physiologically unable to escape promptly when a disaster strike due to their locomotion limits by incidences of poor sight, slow moving, lack of sense of hearing, unconsciousness, pregnancy burden and chronic illnesses.

The main public health emergencies in the area were identified as; inadequate number of clinics, unavailability of clean safe water in most areas and the need to have established Evacuation sites where people would find refuge without distracting other social-cultural and economic systems like; education and worship in the areas they apparently use as evacuation sites (Schools and Churches). The water sources relied for in the area are; boreholes and streams which are highly vulnerable to disasters like flooding while most boreholes need maintenance and are left unused by the communities.

From the Focus Group Discussions (FGDs) it is reported that the areas have experienced remarkable experience in regard to Climatological changes overtime. Participants in all the towns were able to

demonstrate this by accurately ascertaining that; average coldness is lower and hotness is higher, intermittent precipitation patterns and wind patterns. The major issues of such changes are attributed to the high and fastest growing population in the district which pose an overstretch on the carrying capacity of the available forestry resources.

Through the FGD sessions a number of gaps were identified among both the existing response teams (VCPC/WCPC) and the community as a whole in time of disasters. The response teams explicitly bring up the lack of materials for their use in time of disasters as a major issue surrounding their work of humanity in times of need.

In FGDs and Key Informant interviews it was observed that some of the items that are most needed among the affected persons in times of disasters are listed below in the table. The list is not exhaustive but highlights among the top priority items in need.

NFI Needed in times of Disasters by the community	
<ul style="list-style-type: none"> • Cash (Money) • Tarpaulins • Sleeping mats • Soap • Sanitary pads • Mosquito nets • Chlorine • Clothes 	<ul style="list-style-type: none"> • Family tents • Gloves • Kitchen sets • Blankets • Pails • Plates

Table 5: List of Needed NFIs during disasters

It was also unveiled through the discussions with the community key persons through their interaction and within the FGD sessions that among areas with available response teams their capacity to respond in times of need is limited to the reality of in-availability of working tools. Some of the tools the teams need to properly operationalize their work in times of disasters were reported to be as listed in the table below;

WCPC/VCPC (Response Teams requirement)
<ul style="list-style-type: none"> • First aid kits • Bicycle • Gloves • Trainings in Disaster response • Work suits • Gum boots • Raincoats • Stretchers • Helmets • Masks • Chlorine tablets

Table 6: List of needed items for Response teams

3.2.3 Community Hazard Assessment

The Community hazards were properly analyzed together with potential vulnerabilities and the existing capacities in each of the target communities. This table below gives an overall picture of the district reported hazards and vulnerabilities from a general perspective. However, in particular there is a section reporting the analysis outcome of each of the targeted Traditional authorities with their varying ranks of vulnerabilities and capacities. The rank of 1 details a hazard of highest vulnerability index (VI) while the rank of 7 detail lowest VI.

Disaster ranking for Karonga as reported by the community participant shows that Flooding is the supreme challenge followed by Army worm, Drought and Strong winds respectively. The other hazards include; Earthquakes, Cholera and Locust of which their vulnerability index among communities are relatively low.

Hazard	Rank	Vulnerabilities	Capacities
Flood	1	<ul style="list-style-type: none"> Houses in in lower terrain where flood water flows Most houses built with mud and trees easily fall in flood Rice farming along river banks increase susceptibility Low flat settlement plain land Rivulet networks- many surrounding rivers 	<ul style="list-style-type: none"> Availability of Response teams (VCPC) to enforce mitigation measure Availability of man-power to undertake preparedness actions Existing public facilities for evacuation sites Available highlands to be used as new settlement
Armyworm	2	<ul style="list-style-type: none"> Lack of appropriate pest management skill Lack of pest control chemicals Food insecurity due to low harvest 	<ul style="list-style-type: none"> Availability of extension workers in the area

Dry spell (Drought)	3	<ul style="list-style-type: none"> • Low yield due to intermittent rainfall • Food insecurity • Starvation 	<ul style="list-style-type: none"> • Availability of streams and rivers to undertake irrigation to supplement rainfall • Availability of drought resistant crops e.g. Cassava, millet and sorghum
Strong winds	4	<ul style="list-style-type: none"> • Loss of public structures e.g. Schools, hospitals • Disruption of high terrain settlement 	<ul style="list-style-type: none"> • Availability of dense vegetative cover in some areas • Availability of committed VNRC committees
Cholera	5	<ul style="list-style-type: none"> • Lack of local clinics • Immediate loss of lives • Lack of enough health personnel • Lack of water guard 	<ul style="list-style-type: none"> • Some Wards/GVHs have HSAs who work to supper on issues of public health • At least each of the T/As has one clinic which provide

Table 7: Cross-cutting vulnerabilities and capacities

3.2.3.1 Vulnerabilities in the Community

The main vulnerabilities in the communities are due to their geographical set out of the area. The area is highly low lying and the existence of various rivulets make both flooding and spread of diseases and other hazards easier to affect a large mass area.

Also, the lack of appropriate response skills is among the prime vulnerability list for most area. The response teams do not have technical know-how on how they control and respond to prevailing incidences in their vicinity. There is good need of the community response teams to be trained in response.

3.2.3.2 Capacities in the community

The capacities in the district are skewed to availability of raw resources like committees, public facilities and land resources. However, these resources have more to be desired in terms of skills, knowledge and associated amenities to make them appropriately useful e.g. Committee need trainings to enhance their capacity and public facilities need additional amenities to make them useful as evacuation sites.

3.3 Area specific issues

This section gives area specific issues across the district as segmented by targeted area divisions of Lilongwe city, Mzuzu city and Karonga district.

3.3.1 Prominent issues in Lilongwe City

Lilongwe is the largest city and became the administrative capital of Malawi in 1975 after relocating from Zomba city. Lilongwe has witnessed a high urbanization rate ever since accelerated by the relocation of all government head offices from Blantyre. The city is situated at the Centre of a large agricultural area and there are many economic activities taking place. Lilongwe's total land area is 727.79sq km. With the expected expansion of the area, environmental degradation and climatological impacts become on the leading causes of the apparent hydro-metrological hazard evading the area in the recent decades. Lilongwe has and is frequently hit by Floods, Strong winds, Dry spells and Disease outbreaks. Below is the summed rank summary of hazards experienced in the city of Lilongwe.

The Findings were established through assessment exercise that took place in ward divisions of Biwi, Kaliyeka, Kawale, Mchesi and Mtandire within Lilongwe city council.

HAZARD	Rank Summary across Four Wards (Mchesi, Kaliyeka, Kawale, Mtandire and Biwi)				SUMMED RANK
	Rank-1	Rank-2	Rank-3	Rank-4	
Flood	5	0	0	0	1
Dry spells	0	0	3	2	4
Strong winds	0	2	1	2	3
Cholera	0	3	1	1	2

Key: Summed rank of value 1= Most prevalent hazard/ 4=Least prevalent hazard

The related vulnerabilities and capacities of all selected wards in Lilongwe City are summarized in the table below for each of the hazards identified by the community participants through the FGD discussions that were set up by the selected members of the communities.

Hazard	Rank	Vulnerabilities	Capacities
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Flood	1	<ul style="list-style-type: none"> • Loss of houses • Lack of response skills and tools 	<ul style="list-style-type: none"> • Available response teams • (Though they need refresh in disaster response) • Available evacuation sites • Available highlands for escape
Cholera	2	<ul style="list-style-type: none"> • Food insecurity • Starvation 	<ul style="list-style-type: none"> • Availability of drought resistant crops e.g. Cassava, millet and sorghum
Strong winds	3	<ul style="list-style-type: none"> • Loss of public structures e.g. Schools, hospitals • Destruction of homes • Lack of vegetative cover 	<ul style="list-style-type: none"> • Availability of committed VNRC committees
Dry spells	4	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •

Table 8: Prominent issues in Lilongwe City

3.3.2 Prominent hazards in Mzuzu City

Mzuzu City is one of the fastest growing cities in Malawi and is the third largest urban center after Lilongwe and Blantyre. According to 2018 NSO report, Mzuzu has a population of 221,272 and it has experienced the highest inter-census growth rate in Malawi at 5.4 percent beating the national average of 2.9 annual population growth contributing to population density of 1,516 people per square kilometer beating the national average of 186 people per square kilometer. This has contributed to uncontrolled development in fragile areas leading to environmental degradation and consequently disasters

The area has flooding, Landslide, Strong winds and Disease outbreak as major hazards. Flood is the most prevalent and highly devastating hazard while landslide is reported to be least recurring but very devastating.

The table summary of summed-ranks for hazards below outline the various hazards and their related levels of vulnerabilities (votes) across the city selected wards of Chibanja, Chibavi, Chiputula, Masasa and Mzilawayingwa in Mzuzu city.

HAZARD	Rank Summary across the 4-wards (Chibanja, Chibavi, Chiputula, Masasa and Mzilawayeingwa)						SUMMED RANK
	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Rank-6	
Flood	4	1	0	0	0	0	1
Landslides	1	3	1	0	0	0	2
Strong winds	0	1	3	1	0	0	3
Disease outbreak	0	1	2	2	0	0	4
Dry Spells	0	0	3	0	1	0	5
Fire	0	0	1	0	0	0	6
Road Accident	0	0	0	1	0	0	7

Key: Summed rank of value 1= Most prevalent hazard/ 7=Least prevalent hazard

Through the Focus group discussions and key informant interviews held in the target areas, it was possible to establish the available capacities and raring vulnerabilities across the five wards in the city. The table below detail the associated vulnerabilities and capacities for each of the hazards in Mzuzu city.

Hazard	Rank	Vulnerabilities	Capacities
Flood	1	<ul style="list-style-type: none"> Poor drainage systems management in the city Poor waste management Uncontrolled urban development Encroached settlement into stream areas Lack of functional early warning systems 	<ul style="list-style-type: none"> Available response structures (WCPC/WDC) Public infrastructures (Schools/Churches)
Landslide	2	<ul style="list-style-type: none"> Settlement in risky areas (fragile soils along rivers) Construction in sloppy hill sides 	<ul style="list-style-type: none"> Availability of streams and rivers to undertake irrigation to supplement rainfall
Strong winds	3	<ul style="list-style-type: none"> Lack of defensive vegetative cover Escalating deforestation 	<ul style="list-style-type: none"> Good arid weather for pine trees (Windbreak)

		<ul style="list-style-type: none"> Land elevation topography escalates wind velocity 	<ul style="list-style-type: none"> Forestry authority available to enforce afforestation
Disease outbreaks	4	<ul style="list-style-type: none"> Poor water-waste management in slums Poor drainage systems Poor waste disposal 	<ul style="list-style-type: none"> Available public and private health facilities Skilled Health personnel to assist in health campaigns and case management
Dry Spells	5	<ul style="list-style-type: none"> Food insecurity Lack of drought resistant crops 	<ul style="list-style-type: none"> Available water streams for irrigation (Small scale)
Fire outbreaks	6	<ul style="list-style-type: none"> Unregulated structures in market places Lack of function alarm system Close kneading of building 	<ul style="list-style-type: none"> Available of Fire fighters in the city to extinguish and sensitize community on safety measures
Road Accidents	7	<ul style="list-style-type: none"> Unregulated roads close to schools and markets Lack of law enforcement Limited road safety education in school 	<ul style="list-style-type: none"> Man power to elect muddy humps on roads

Table 2: Prominent issues in Mzuzu city

3.3.3 Prominent issues in Karonga District

Karonga district lies along the great Rift-Valley of Africa, along the stretch of Lake Malawi. The district is unique; a great part of the settlement lies in low-flood plain area. This explains why the vulnerabilities of the area geographically differs with those of the earlier two cities. Flood is the most prevalent and highly devastating hazard while Amy worm, Drought and Strong winds follow relatively in recurrence in the area as shown in the table of summed-ranks below.

HAZARD	Rank Summary across the 3 T/As in Karonga (Mwakaboko, Kilupula and Mwirang'ombe)						SUMMED RANK
	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Rank-6	
Flood	13	2	3	0	2	0	1
Army worms	3	10	2	3	2	0	2
Drought	5	5	5	4	0	0	3
Strong winds	0	1	7	7	3	0	4
Cholera	0	1	2	3	2	1	5

Key: Summed rank of value 1= Most prevalent hazard/ 7=Least prevalent hazard

The vulnerabilities and Capacities of the district, across the three Traditional Authorities are highlighted for each of the hazards in the table below.

Hazard	Rank	Vulnerabilities	Capacities
Flood	1	<ul style="list-style-type: none"> Houses in in lower terrain where flood water flows Most houses built with mud and trees easily fall in flood Rice farming along river banks increase susceptibility Low flat settlement plain land Rivulet networks- many surrounding rivers 	<ul style="list-style-type: none"> Availability of Response teams (VCPC) to enforce mitigation measure Availability of man-power to undertake preparedness actions Existing public facilities for evacuation sites Available highlands to be used as new settlement
Armyworm	2	<ul style="list-style-type: none"> Lack of appropriate pest management skill Lack of pest control chemicals Food insecurity due to low harvest 	<ul style="list-style-type: none"> Availability of extension workers in the area

Dry spell (Drought)	3	<ul style="list-style-type: none"> • Low yield due to intermittent rainfall • Food insecurity • Starvation 	<ul style="list-style-type: none"> • Availability of streams and rivers to undertake irrigation to supplement rainfall • Availability of drought resistant crops e.g. Cassava, millet and sorghum
Strong winds	4	<ul style="list-style-type: none"> • Loss of public structures e.g. Schools, hospitals • Disruption of high terrain settlement 	<ul style="list-style-type: none"> • Availability of dense vegetative cover in some areas • Availability of committed VNRC committees
Earthquake	5	<ul style="list-style-type: none"> • Settlement disruption • Infrastructure damages • Road network broke down due to broken bridges 	<ul style="list-style-type: none"> • Availability of response teams
Cholera	6	<ul style="list-style-type: none"> • Lack of local clinics • Immediate loss of lives • Lack of enough health personnel • Lack of water guard 	<ul style="list-style-type: none"> • Some GVHs have HSAs who work to supper on issues of public health • At least each of the T/As has one clinic which provide
Locust	7	<ul style="list-style-type: none"> • Loss in crops • No yield realized 	<ul style="list-style-type: none"> • Available crops officers and extension workers in the area

Table 3: Prominent issues in Karonga district

3.3.4 DRM Plans

The main output of the EVCA process are the DRM plans for each of the target GVHs. The specific DRM Plan for each of the GVHs have been blended into overall district plan of issues to be addressed over a period of 5 years within which some actions area are short term and others long-term.

Refer to [annex 3-5](#) for the harmonized DRM Plan output for Lilongwe city, Mzuzu city and Karonga district.

CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

This chapter summarizes the findings of the EVCA the conclusion and provides the recommendations to be taken into account in order to address some of the problems that the communities are facing in relation to the disasters.

4.1 Recommendations

The findings highlighted in the previous chapters' reveal hazards and disasters which can be summed as revealing inadequate resource deployed by key sectors such as health, social services, water and sanitation, and agriculture and infrastructure development. The situation has left the communities of T/As Mwakaboko, Kilupula and Mwirang'ombe vulnerable to impending disasters. In the health area, issues of Cholera and lack of health proper access to safe water came eminent among few GVs however, the apprise of such cases are highly contagious to effect the whole district. Hence, proper attention need to be taken as related to this hazards. In the area of DM, there are many gaps that are identified ranging from lack of proper mitigation, preventive, response and recovery initiatives. Set against this background, what the way forward in strengthening the resilience capacity of Karonga district in terms of disaster of disaster preparedness? This report suggests the following in working towards the attainment of the above mentioned goal:

4.2.1 Short-term recommendation

- a) There is need to train response teams (VCPC/WCPC) in disaster response
- b) Establishment of Early Warning Systems to abet the high faulty cases of flooding in the district
- c) There must be a multi-stakeholder cooperation in provision of clean water the community
- d) There must be massive effort put in by the government and other stakeholders, including the NGO sector, on Community awareness in areas Climate Change and environmental conservation
- e) Need for dissemination and sharing of the developed DRM-Plan in the VCA process to be shared with appropriate stakeholders to take part in addressing issues raised in this report
- f) Need of Malawi Red Cross Society to increase its volunteer base in the three areas as to help in carrying out some of the operation plans (DRM Plan)
- g) Proper engagement with the target communities to carry out community led undertakings in the DRM plans responsibly
- h) Establish GVH/Ward Contingency plans among all areas as apparently there is none!
- i) Need to engage Forestry department and VNRMC in the address efforts of deforestations

- j) Engagement with the Agriculture offices on possibility of establishing small scale irrigation initiatives to counteract drought and dry spell effects.

4.2.2 Long-term recommendation

- a) Establish natural regeneration areas to conserve the environment
- b) Empower local committees with PASSA knowledge and skills through open days
- c) The Malawi government through department water supply should expansion of water supply initiatives in rural areas (Installation of boreholes and tap water)
- d) Government in collaboration with NGO partners to consider construction of Evacuation sites for communities to use in times of disasters in order to avoid disruption of school programs
- e) Undertake riverbank reinforcement of by constructing dykes in rivers of highest hazards.
- f) Promotion of VSL group formation in ward areas to curb the effort of Poverty emanating from community vulnerabilities to hazards
- g) Learn new skills to introduce cleaner and energy serving technologies such as briquets and energy stoves

4.2.3 Capacities in the district

In the implementation of the above mentioned recommendations, the local capacities listed below can be used in the attainment of the short and long-term recommendations:

- a. Manpower in the form of hard working men, women and youth
- b. Availability of some educated response teams
- c. Trained First Aiders (Red Cross)
- d. Availability of infrastructure
- e. High social capital

4.3 Conclusion

The EVCA process has brought to the fore various challenges that are faced by the communities in Lilngwe city, Mzuzu city and Karonga district. In particular, the assessment exercise has created an invaluable awareness in Malawi on prevailing risks, hazards and capacities in the areas and thus a platform to inform planning, implementation and monitoring of priority action points identified by the communities themselves. In this respect, the basis for fighting vulnerabilities and strengthening resilience of targeted communities in the ECHO-STRIM project has been laid.

Ultimately, it is of highest necessity that the findings of this study be shared with the various stakeholders at both National and local community level so that other actions which are beyond the reach of the outputs of ECHO-STRIM project would be complimented by other partners of particular interest. This can be

done by staging meetings at both DCPC and ACPC/WCPC level in the district as one way of Community engagement and Accountability.

Annexes

Annex 1: EVCA TOR

Annex 2: DRM Plan- Karonga District

Annex 3: DRM Plan- Mzuzu City

Annex 4: DRM Plan- Lilongwe City

Annex 5: FGD Participant list (Among Districts)

Annex 6: EVCA toolbox

Annex 1: Terms of Reference

Malawi Red Cross Society (ECHO-STRIM)

EVIDENCE BASED VULNERABILITY CAPACITY ASSESSMENT TERMS OF REFERENCE

Evidence Based Vulnerability Capacity Assessment (EVCA) in the Context of Urban and Rural Disaster Risk Reduction for Malawi.

1. Background

Malawi is one of the countries in the Southern African Development Community (SADC) highly aligned to Climate Change vulnerability and hence increased exposure to weather-related risks. The Climate Change Vulnerability Index (CCVI) ranks Malawi in the category “Extreme at risk” to climate change impacts in the world and the country has experienced an increasing number of adverse and increasing climatic hazards over the last several decades. The country is also partially recovering from the high impact of the hydro-metrological disaster aftermath of the heavy flooding experienced in the year 2015 in most parts of the country.

MRCS has supported several communities affected by the various kinds of disasters with multiple response modalities across the country. Currently, the Society is implementing a number of DRR projects aimed at enhancing the resilience of local communities to respond to hydro-metrological disaster. The Strengthening Resilience in Malawi (STRIM) project expands on the coverage area of the existing projects and supports both local communities and national’s institutional capacities to prepare and respond to Disasters through Climate Change approach. The project intends to carry out a participatory EVCA in order to work with government partners and beneficiary communities to better understand the causes of vulnerability, establish local capacities and gaps, and design appropriate interventions (action plans).

2. Rationale

Malawi Red Cross Society has received funding from the European Commission for Humanitarian Organization (ECHO) with cofounding from Belgian Red Cross to implement an Urban-Rural DRR- Action plan among the areas with highest vulnerability. It is proposed to use this opportunity to work with the communities that will benefit from the project to analyze the causes of their vulnerability to disaster and climate change aspects.

MRCS has conducted Vulnerability Capacity Assessments and disaster management with previous ECHO funded project officers, local structures and communities. Field participatory EVCA was subsequently carried out in the districts covered by previous and ongoing action plans. STRIM project become the fifth DRR action plan covered in roll out of EVCA assessment exercise in Malawi Red Cross society in Malawi.

Further evaluation of MRCS DRR projects raise the need for greater community involvement in needs assessment in needs assessment during project design and also continuous vulnerability assessment. It is against this background this STRIM-DRR EVCA is being organized.

3. Objectives

The objectives of the planned EVCA exercise are to:

- i. Support selected communities that will benefit from the STRIM project to assess the causes of their vulnerability to climate-related disasters.
- ii. Establish the existing capacities and gaps of local communities to respond to disasters and devise ways to bridging the some of the gaps through the particular project activities.
- iii. Provide a baseline for the evaluation of the project at the end of the intervention
- iv. Enhance community ownership of the intervention that purports to promote better knowledge of the project's goal and sustainability.
- v. Devise community action plans emanating from the EVCA process.

4. Expected Output

A clear and concise report on the findings presented both electronically and hard copy shared with all project stakeholders. The report should include the following:

- *Executive summary*
- *Background information*
- *Research Method: (The EVCA Process)*
- *VCA Findings – Consolidated for all districts*
- *VCA Outputs – Community action Plans (DRM)*
- *Conclusion and recommendations*
 - *Short term recommendations*
 - *Long term recommendations*
 - *Vulnerabilities and Capacities in the districts*

5. Methodology

The process will be carried out in three stages. The first consists of a two-day preparatory workshop by the management team to plan for the EVCA exercise, agree on appropriate tools to use and identify field facilitators for the EVCA exercise.

The second will consist of orientation of selected field facilitators. At this stage, those not familiar with EVCA and disaster management will be given an overview. Also, a practical hands on guide on the use of selected tools will be done with the aim of establishing similar understanding of the EVCA process among all facilitators.

This will be followed by three days' field work where different groups in Lilongwe city, Mzuzu city and Karonga district will be engaged in the EVCA process. A day will be set aside for each district team to come together and synthesize the findings from the field, and lay a foundation for the district reports with the charge of the District Coordinators. The District Team leads shall be given 1 week to consolidate all field findings into a district report and submit a copy to the PQL

unit for further scrutiny and consolidations before a final copy is submitted to MRCS management and the donor.

6. Processes

In summary the following processes are anticipated for the planned EVCA exercise:

- Agree on the Terms of Reference
- Orientation of the field facilitators
- Field Data collection
- Analysis of the findings and production of desired outputs
- Draft report presentation by district teams
- Comments on the draft reports
- Production of the final report

7. Work Schedule

The details of the work schedule will be worked out jointly with the district project staff. However, the work is expected to commence on 4th November, 2019 and a final report to be submitted on 16th November, 2019.

Annex 2: DRM PLAN-Karonga District

HAZARD	ISSUES/ Problems to address	Activity and Place	Target	Timeframe	Resources	Community Resources	Other Resources	Responsible Person	Monitoring Indicator
Flood	Over-population	Family planning campaigns	20 GVHs	2019-2014	HSA, Funds, IEC Materials	Volunteers Health Surveillant Assistant	NGOs (Banja la Mtsogolo)	HSAs	No. Family campaigns undertaken
	Defor station	Reforestation in catchment areas of Nyungwe, Kyungu Wovwe, Kasantha, Chimbilili and Lufilya rivers Natural regeneration areas	60,000	2019-2021	Polythene tubes, Seedlings, Seeds, Wheelbarrows, Hand folk, shovels, gumboots, guidelines	Man power, VNRC teams, Land resource	NGOs (Forestry department, Extension workers) Committees: VNRMC	VNRMC	No. Trees planted Survival rate of trees
	Overgrazing	Establish communal grazing land on shift- grazing	40 Grazing cites	2019-2024	Land resources Expertise in animal feed production, Grazing seeds	Land resource	Agricultural Extension workers	VNRMC	No. of grazing sites established
	Riverine cultivation	Establish by-laws to conserve riverbanks	1 By-Law	2019-2020	Funds to support development process	Volunteer	Agriculture personnel	VCPC	No. By-laws established
	Poor drainage system	Riverbank reinforcement	6 Rivers	2019-2024	Sacks, Holes, Labor, Shovels	Manpower (Labor)	Water department Department works, DoDMA	VCPC	No. Rivers reinforced
	In-availability of dyke	Construction of Dyke	5 Dykes	2019-2024	Sacks, Holes, Labor, Shovels	Manpower (Labor)	Water department Department works	VCPC	No. Dykes
Army worm	Crop damage and low yield	Crop inspection and dis-infection	20 GVHs targeted	2019-2024	Pesticides, Sprayers	Volunteers	Agriculture department	AEDC	Curriculum developed Training TORs

		Civic education on control measures							No. meetings conducted
Drought	Low yield	Small scale irrigation initiatives	12 GVHs	2019-2022	Irrigation cites, technical expertise	Irrigation land Manpower	Agriculture department	AEDC	No. established irrigation initiatives
	Famine	Establish drought resistant crops	20 GVHs	2019-2021	Seedlings, stem s, suckers, crop expertise	Land and Manpower	Agric.	AEDC	No. GVHs Supported
		Winter Cropping	20 GVHs	2019-2024	Water sources, Seedlings, Seeds, guidance		Agric.	AEDC	No. GVH supported with winter cropping
		Establish VSL groups	40 VSLs	2019-2020	Technical lead, Stationery, Transport,		NGOs	AEDC	No. VSLs established
	Scarcity of water	Conserve natural water reserve Install boreholes	20 Cites 20 Boreholes	2020-2024	Drilling machines, WASH experts, Installation gadgets, Labor	Supporting labor, Cite of installation	Water Supply department	Water supply Department	No. Boreholes installed No. cites conserved
Strong winds	Deforestation	Afforestation	60,000 trees	2019-2024	Land resource, Seedlings, Tubes and Labor	Labor, Land resources	VNRMC Forestry	Forestry officer	No. Trees planted
	Destruction of infrastructure	PASSA Campaigns	20 campaigns	2019-2024	PA System, Facilitation materials, Volunteers	Volunteers	NGOs Housing department	VCPC chair	No. PASSA Campaigns
	Loss of lives	Train in Disaster Response and PASSA	20 Sessions	2019-2024	Training materials, PASSA experts Stationary	Training area, Response teams	NGOs Housing department	DoDMA	No. Trainings undertaken
Earthquake	Infrastructure damages	PASSA trainings and campaigns	20 Sessions	2019-2024	Training materials, PASSA experts Stationary	Training area, Response teams	NGOs Housing department	DoDMA/ VCPC	No. PASSA trainings done
	Loss of lives	Early warning system set up	6 EWS (18 EWT)	2019-2024	Phones, Working tools, Trainings,	Volunteers	NGOs Water Supply, DoDMA	DoDMA/ Red Cross Society	No. EWS established

	Disruptions of settlement	PASSA Campaigns in risk areas	20 Sessions	2019-2021	Training modules, Stationary, Hall facility	Community Halls (Public schools)	NGOs Water Supply, DoDMA	RED Cross Society	No. Campaigns done
Cholera	Open defecation	Toilet construction campaigns	20 Sessions	2019-2021	PA System, Posters, Stationary	Volunteers	Ministry of Health	Health Saveillant Assistant	No. ODF campaigns
	Unsafe drinking water	Chlorine distillers' installation Water guard	100 Distillers	2019-2024	Distillers kits, Chlorine fluid, Labour	HSA Volunteers	Ministry of Health	HSA	No. Chlorine Distillers installed
	Poor sanitation and hygiene	Sanitation campaigns (Construct disposal area)	60 Campaigns (3 per GVHs)	Nov, 2019 Dec, 2020	PA System, Posters, Stationary	Volunteers	Ministry of Health	HSA	No. Sanitation campaigns done
Locust	Damage to crops	Pest control guidance	20 Sessions	Nov-Feb 2019-2024	PA System, Posters, Stationary	Volunteers	Agriculture dept.	AEDO	No. Pest Control Sessions done
	Low yield and famine	Plant resilient crops (none feed to locust)	20 GVHs targeted	Nov-Jan 2019-2024	Seedlings, Technical expertise	Some seedlings locally found	Agriculture dept.	AEDO	No. GVHs Supported with locust resistant crops

Annex3: DRM Plan for Mzuzu City

HAZARD	ISSUES/ Problems to address	Activity and Place	Target	Timeframe	Resources	Community Resources	Other Resources	Responsible Person	Monitoring Indicator
Floods	Deforestation	Planting fruit trees	10,000 trees	December	Labour, Land, Wheelbarrows, picks, seedlings Shovels, Seeds	Labour, Land, hoes	Red Cross Society Mzuzu City Council , Plan International, Beautify Malawi	WCPC Chair 0999291555	Planting fruit trees
	Poor drainage system	Drainage system maintenance	10 drainage systems	Aug- Dec 2020	Cement Bricks	labour	City council, plan, MRCS SOS	Ward development, committee	# of drainage systems maintained
		Drainage system cleaning	10 drainage systems	Aug- Dec 2020	Hoes, shovels, gloves, wheel barrow, gam boots, rakes, masks	Labour	City council, plan, MRCS SOS	Block leaders, VDC,CBO	# of drainage systems cleared
	Poor waste Management	Sensitization of people on proper waste disposal in all 6 neighbourhoods of the Ward	6 meetings every quarter	2019-2024	PA system, Drama group, Expert speakers	Labour	NGOs Govt	WDC Block leaders	NO. of meetings NO. of people reached
		Establish and construct communal places where waste should be disposed (refuse banks)	6	2019-2020	Land , cement, sand, iron sheets, iron rods	Land, labour	NGOs Govt.	Block leaders WDC WCPC	NO. of refuse banks established

	Poor housing structures	Sensitization on dangers of illegal developments and settlements	6 meetings every quarter	2019-2024	PA system, Drama group, Expert speakers	Labour	NGOs Govt	WDC Block leaders	NO. of meetings NO. of people reached
	Poor farming practices (Along rivers)	Social mobilisation on effects of doing farming activities in dambos	200 farmers	May to Aug 2020	Refreshments, Stationery, Lunch	Meeting venue	Ministry of Agriculture Malawi Red Cross	Councillor WDC Malawi Red Cross Ministry of Agriculture	# farmers trained
	Risky settlement								
Landslides	Poverty	VSL groups	500 HHs	Jan-Dec 2020	Training Passbooks, Safe box, interested people, meeting place	Meeting place, Interested people	SOS, St. Johns of God, COMSIP, Community Development	Taonga and Chidetso CBO	#People or accounts opened in VSL groups
	Deforestation	Plant fruit trees	10,000	Nov-Dec, 2019	Labour, Land, Wheelbarrow, picks, seedlings, shovels, seeds	Labor, Land, hoes	Red Cross, Mzuzu city council, Plan International, Beautify Malawi	WCPC Chair 0999291555	No. trees surviving
		Skills in alternate energy	200 HHs	July-Dec 2020	Sawdust, Soil, Labor, Mould, Facilitation	Sawdust, Soil, labor	Red Cross, City council, Plan Malawi	WCPC Chair	# HHs trained
	Risky settlement areas	Education of PASSA	15000	June-Dec 2020	Facilitators, Education materials, EIC Materials on safe shelter	WCPC, BCPC	Red Cross, MCCCI, SOS	WCPC, BCPC	No. people reached
Strong winds	Deforestation	Planting fruit trees	80,000 trees	December	Labour, Land, Wheelbarrows, picks, seedlings Shovels, Seeds	Labour, Land, hoes	Red Cross Society	WCPC Chair 0999291555	No. trees surviving

							Mzuzu City Council , Plan International, Beautify Malawi		
	Lack of Knowledge on Safe housing	Lack of knowledge on safe house construction	Teaching people Safe house construction skills	60,000	June to December	Facilitators, Education materials, photos of safe houses and unsafe houses, Megaphone, WCPC, BCPC	WCPC, BCPC	Red Cross, MCC, SOS	WPCPC BCPC
	Poor housing construction	Sensitization on proper construction of houses	6 meetings every quarter across wards	2019-2024	PA system, Drama group, Expert speakers	Labour	NGOs Govt	WDC Block leaders	NO. of meetings NO. of people reached
Disease outbreaks	Poor waste management	Sensitization of people on proper waste disposal in all 6 Neighbourhood of the Ward	6 meetings every quarter	2019-2024	PA system, Drama group, Expert speakers	Labour	NGOs Govt	WDC Block leaders	NO. of meetings NO. of people reached
	Poor hygiene	Conduct community hygiene promotion activities in all neighbourhoods	6	2019-2014	IEC materials expert speakers PA system	labour other materials	NGOs Govt	WDC Block leaders WCPC	NO. of promotions NO. of people reached
	Door to door/ household visits on hygiene promotion by HAS in all neighbourhoods	all HHs	2019-2024	IEC materials Expert speakers- public health officials	their presence	NGOs Govt.	HSAs Block leaders	NO. of HHS reached	Door to door/ household visits on hygiene promotion by HAS in all neighbourhoods

	especially Chibanja South and central								especially Chibanja South and central
	Door to door/ household visits on hygiene promotion by HAS in all neighbourhoods especially Chibanja South and central	all HHs	2019-2024	IEC materials Expert speakers- public health officials	their presence	NGOs Govt.	HSAs Block leaders	NO. of HHS reached	Door to door/ household visits on hygiene promotion by HAS in all neighbourhoods especially Chibanja South and central
	Conduct community clean-up day or campaign	whole Ward	Oct- Nov	brooms shovels wheelbarrow gumboots	labour	NGOs Govt	Councillor WDC WCPC	No. of people participating	Conduct community clean-up day or campaign
FIRE	Damage and loss of property	Social mobilisation in prevention of fire break outs	2953 households	Jan 2020 to Dec 2020	Refreshments, Stationery, Lunch	Meeting venue	Mzuzu CC Malawi Red Cross ESCOM	Councillor ESCOM Community	# HH sensitised
ROAD ACCIDENTS	An increase in the number of road accidents	Social mobilisation in proper road use	5000 people	Jan to Dec 2020	Refreshments, Stationery, Lunch	Meeting venue	Depart of road traffic Malawi Red Cross	Councillor Depart of road traffic Community	# people sensitised

Annex 4: DRM Plan for Lilongwe City

HAZARD	ISSUES/ Problems to address	Activity and Place	Target	Timeframe	Resources	Community Resources	Other Resources	Responsible Person	Monitoring Indicator
Floods	Deforestation	Establish tree nurseries and regeneration areas	50,000	2019-2024	Polythene tubes, Seedlings, Seeds, Wheelbarrows, Hand folk, shovels, gumboots, guidelines	Man power, Forestry teams, Land resource	NGOs (Forestry department, Extension workers) Committees: School Climate clubs (DIPSAC)	WCPC Chair	No. Trees planted Survival rate of trees
	Lack of Dyke	Dyke Construction	3	2019-2024	Funds and Working tools	Man power	Department of Works, Department of Water	WDC Chair	No. of Dykes rehabilitated or constructed
	Poor drainage system	Construction of Water ways	5	2019-2024	Hoes, Shovels, Gumboots, Lines and Tape measure	Manpower	Department of Public works,	WDC	No. water ways done
Cholera	Unsafe drinking water	Supply of Chlorine tablets	150,000	2019-2020	Human resource, Chlorine tabs	Volunteers	Logistics to move among wards	HSAs	No. Chlorine tabs distributed
	Sewer bursts	Regular monitoring of Sewer system	Twice a month					HSAs	Reports of Monitoring visits
	Limited Health promotions	Health promotion campaigns	1 per quarter`					HSAs	No. Promotions campaigns
Drought	Low yield	Small scale irrigation initiatives	2 Wards	2019-2022	Irrigation cites, technical expertise	Irrigation land Manpower	Agriculture department	AEDC	No. established irrigation initiatives

	Famine	Establish drought resistant crops	5 Wards	2019-2021	Seedlings, stem s, suckers, crop expertise	Land and Manpower	Agric.	AEDC	No. GVHs Supported
		Winter Cropping	5 Wards	2019-2024	Water sources, Seedlings, Seeds, guidance		Agric.	AEDC	No. GVH supported with winter cropping
		Establish VSL groups	40 VSLs	2019-2020	Technical lead, Stationery, Transport,		NGOs	AEDC	No. VSLs established
	Scarcity of water	Conserve natural water reserve Install boreholes	20 Cites 20 Boreholes	2020-2024	Drilling machines, WASH experts, Installation gadgets, Labor	Supporting labor, Cite of installation	Water Supply department	Water supply Department	No. Boreholes installed No. cites conserved
Strong winds	Deforestation	Afforestation	50,000 trees	2019-2024	Land resource, Seedlings, Tubes and Labor	Labor, Land resources	VNRMC Forestry	Forestry officer	No. Trees planted
	Destruction of infrastructure	PASSA Campaigns	20 campaigns	2019-2024	PA System, Facilitation materials, Volunteers	Volunteers	NGOs Housing department	WCPC chair	No. PASSA Campaigns

