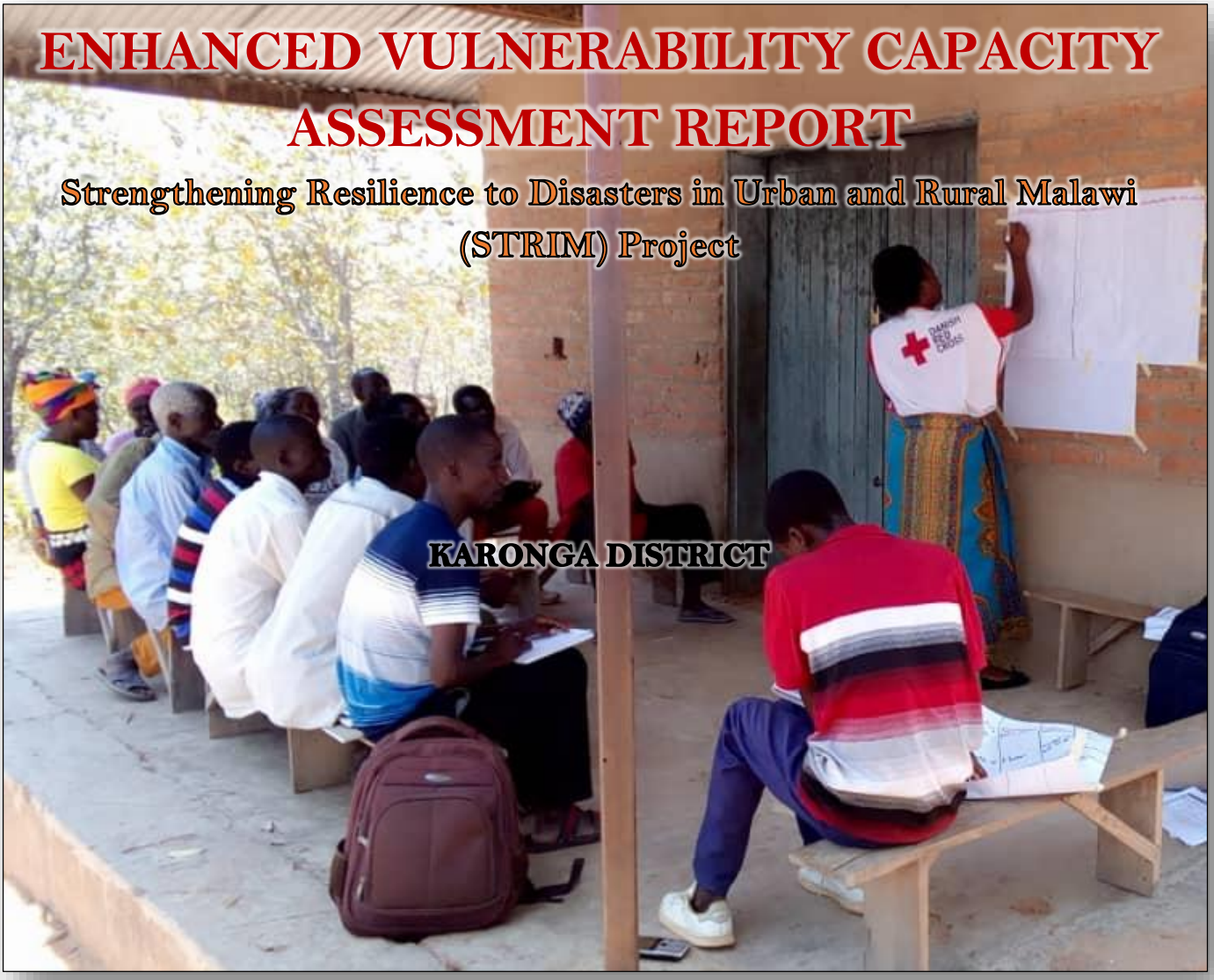
Humanitarian Aid and Civil Protection

ENHANCED VULNERABILITY CAPACITY ASSESSMENT REPORT

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



KARONGA DISTRICT

Funded by the European Union (ECHO) and co-funded by Belgian Red Cross, Danish Red Cross and Netherlands 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.

Submitted by:

Prince Malema

2 March 2020

Belgian Red Cross

COOPI COOPERAZIONE INTERNAZIONALE

The Netherlands Red Cross

DANISH RED CROSS

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

Hazards	Vulnerabilities	Capacities
• Floods • Army worm • Strong winds • Drought • Cholera • Earthquake • Locust	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

Table 1: Summary of vulnerabilities and Capacities

CHAPTER 1 INTRODUCTION AND BACKGROUND

1.1 Introduction

This chapter introduces Karonga district by palcing it into a national map and then provide detailed District Profile, as well as characteristics of the targeted Traditional authorities. Within this chapter, the project plan will also be discussed, Vulnerabilities Capacity Assessment will also be defined and its objectives will be listed.

1.2 Karonga District Profile

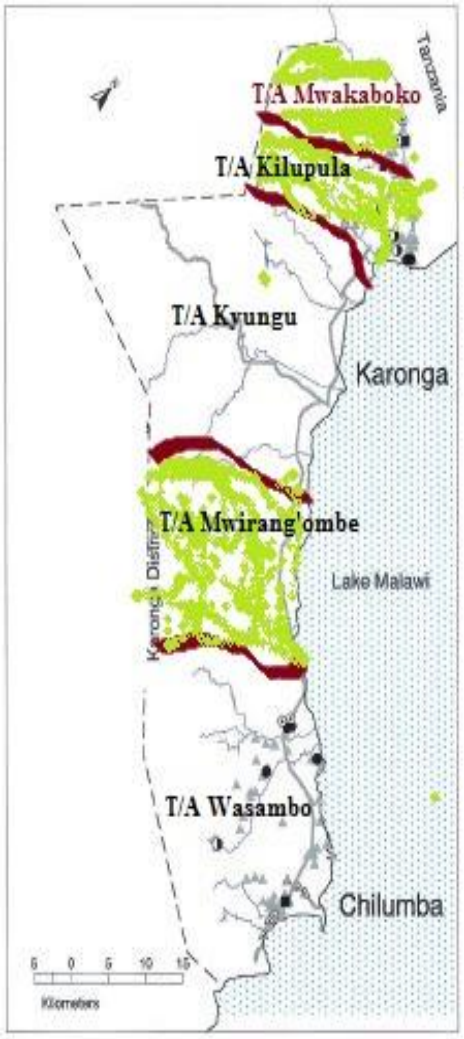

Figure 1: Map of Karonga district

Karonga district is composed of 5 Traditional Authorities with a population slightly more than 365,000 and representing about 2% of the Malawi's population. The five traditional divisions are; Mwakaboko, Kilupula, Kyungu, Mwirangombe and Wasambo. Of the five divisions Mwakaboko, Kilupula and Mwirang'ombe lie within the lower plain of the great lift valley of Africa (Along lake Malawi). The three shaded T/As have over time emerged the highly susceptible areas to flooding and strong winds due to their geographical vulnerability.

The areas are interlinked with many long and short range rivulets what make them highly vulnerable to hydro-metrological hazards.

The area has recently been hit by many floods that has since many local and international organizations taking special interest in helping the affected people in almost a perennial annual prevalence.

Brief disaster profile and growth

The district has experienced overarching number of disasters in the recent decades. Between 1970s and 80s, a major flooding disaster destroyed most of the old town along the lakeshore in

the 1980s. This forced the moving of township from (old-town) to new (present) town site away from the lakeshore[1]. Since 1989 two major projects, i.e. the flood control project and Secondary Centres Development Programme (SCDP), have been implemented to redevelop the town. [2]The projects significantly contributed to the attraction to local investments and migrants leading to the town's declaration as a township and also as a planning area under Town and Country Planning Act in 1992(GoM, 2013). The declaration meant that all land uses had to be regulated through land use zoning. In 2008 Karonga Town had a major boost when the Paladin Africa Energy Limited's Kayelekera Uranium Mine was opened 30km to the west of the town.

Traditional Authority	Male population	Female Population	Total
Mwakaboko	11974	12415	24889
Kilupula	37721	40703	78424
Mwirangombe	18048	19397	37445
TOTAL	67743	72515	140758

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

The mine increased demand for housing, social, economic services and food supplies from the local producers around Karonga Town and beyond. Karonga is currently the fifth largest and one of the most rapidly growing towns in Malawi. Despite the land use planning regulations, the town continues to be at risk to different hazards such as earth tremors, strong winds and floods which damage infrastructure, and disrupt services and livelihoods. [2]According to Lunduka et al. (2010) Karonga Town registered the largest number of disasters in Malawi between 1946 and 2008.

In 2010 the district was badly hit with a "Once in history" earthquake that continued to happen in varying magnitude across the district. Many public and individual infrastructures were destroyed including property, subsistence and many injuries and deaths followed. Apparently, the district is marked as one of the hot spots of disaster in Malawi.

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

[1]GoM, (1986). Karonga Flood Control Project, GITEC Consult, OPC Lilongwe

[2]GoM, (2013). Karonga Urban Structure Plan 2013, Lilongwe

[3]Lunduka R (2010), Malawi Disaster Risk Reduction and Climate Adaptation, Research for Cord-Aid, Lilongwe

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.

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 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 Vulnerability Capacity Assessment

VCA 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 describe the VCCA 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 VCA 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. (IFRC, 2006)

[4]International Federation of the red cross and Red Crescent Societies. What is VCA? An introduction to Vulnerability capacity assessment, Geneva. Switzerland, 2016.

CHAPTER 2: RESEARCH METHODOLOGY

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

2.1 THE VCA PROCESS

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

2.1.1 Setting Up of VCA Teams and VCA Objectives

The VCA 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 VCA

The planning process for the VCA 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 VCA team conducted a two-day tool development and review session which was followed by a VCA 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 VCA tools in the particular districts. This provided an opportunity for volunteers to participate in theoretical and practical exercises prior to supporting the VCA 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 before 30th November, 2019 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 VCA process from data collection, screening, analysis and report submission was too limited. Team leads had to work overnight to meet deadlines which affected day time effectiveness in field supervision of the whole process.

CHAPTER 3: VCA FINDINGS

3.1 INTRODUCTION

This chapter presents the findings of the VCA in Traditional Authorities of Kilupula, Mwakaboko and Mwirang'ombe, in Karonga district. It highlights the vulnerabilities, capacities, hazards and risks associated with each of the targeted T/As, findings of each of the tools used for the VCA, categories of vulnerabilities and capacities highlighted in the first chapter of this report were used. Additionally, cross-cutting issues are presented for each Traditional area before specific findings are presented.

3.2 The Cross-Cutting issues in the District

The cross-cutting hazards emerging from the FGDs, interviews and direct observation across all the three T/As in 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, Earthquake, Cholera and locust in order of their precedence. The table below displaces the summary of hazards among all the three T/As in Karonga.

HAZARD	Rank Summary across the 20 GVH in three T/As						SUMMED RANK
	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Rank-6	
Flood	13	2	3	0	2		**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	**6**
Army worms	3	10	2	3	2		**2**
Earthquake	1	0	0	2	7	1	**5**
Locust	0	0	0	1	0	0	**7**

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. Despite more areas ranking Earthquakes as most notable hazard in their area, it becomes one of the three infrequent disasters in the area (others being Locust and Cholera).

3.2.1 Historical profile

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

Year	Description
1880	Chief Mlozi arrives in the area (cite is named as *Kapolo* "Slave")
1882	Mlozi establish slave township at Kambwe (8 km away from present town)
1884	African Lakes Company (ALC) arrives at Kambwe
1887-1895	**Long battle between Mlozi team vs ALC**
1891	Scotland Mission arrives in the area
1895	Mlozi is captured by the ALC
1896	Population boost as new inhabitant move to Kabwe township (Prob. End of Slavery)
1909-1916	**The "Battle of Karonga" - Germans in Tanzania vs British protectorate**
1931	Construction of the first District Hospital
1947	Airfield constructed near the lake- Old town
1945	Catholic mission arrives and is established
1955	St. Mary's Schools established
1959	Township moves from Kambwe (Mlozi town) to south-eastern lakeside- Malema 1
1970s	**Major Flood disaster hit the district- Lakeshore town badly hit**
1980s	Moving of the town from Old-Town Westward (Present township)- Malema 2
1989	Flood Control Project begin (Drainage system across the township)
1989	Secondary Centre Development Program begin
1997	**The Great National Drought – Famine hit Karonga**
2008	Kayerekera Mine rollout
2010	**Major Earthquake hit Karonga**
2015	Flood hit the area
2017	Cholera severely hit area
2018	**FLOOD hit the area (Over 250 houses fall in T/A Kilupula only)**

Table 4: Historical profile for Karonga district

At district level, the major and notable disasters that have hit Karonga with highest damages on both livelihoods and infrastructure are Floods and Earthquake. It may be noted though that the specific

communities did not rank Earthquake as send 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 in Karonga are averagely large in size due to extended family system. The average family size reported among all the three T/As is 6.35 members. It is however, noted that highest family sizes were reported in T/As Kilupula and Mwakaboko which all fall towards the borderline with Tanzania unlike T/A Mwirang'ombe which is in a distant southern-side of Karonga.

The highest authority in matters of disaster and response in all areas are the existing Village Civil Protection Committee (VCPC), seconded by the GVH who oversee a collection of Villages under their jurisdiction. It is also, noted here that most house types are made of burnt breaks across all traditional authorities, 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 chronical illnesses.

The main public health emergencies in the area were identified as; lack 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 20 GVHs 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) 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	
• Cash (Money) • Tarpaulins • Sleeping mats • Soap • Sanitary pads • Mosquito nets • Chlorine • Clothes	• 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;

VCPC (Response Teams requirement)
• 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	• Houses in in lower terrain where flood water flows • Most houses built with mad and trees easily fall in flood • Rice farming along river banks increase susceptibility • Low flat settlement plain land • Rivulet networks- many surrounding rivers	• 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	• Lack of appropriate pest management skill • Lack of pest control chemicals • Food insecurity due to low harvest	• Availability of extension workers in the area
Dry spell (Drought)	3	• Low yield due to intermittent rainfall • Food insecurity • Starvation	• 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	• Loss of public structures e.g. Schools, hospitals	• Availability of dense vegetative cover in some areas

		• Disruption of high terrain settlement	• Availability of committed VNRC committees
Earthquake	5	• Settlement disruption • Infrastructure damages • Road network broke down due to broken bridges	• Availability of response teams
Cholera	6	• Lack of local clinics • Immediate loss of lives • Lack of enough health personnel • Lack of water guard	• 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	• Loss in crops • No yield realized	• Available crops officers and extension workers in the area

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 Prominent area specific issues (Traditional Area)

This section gives area specific issues across the district as segmented by traditional areas divisions of T/A Mwakaboko, T/A Kilupula and T/A Mwirang'ombe.

3.3.1 Traditional Authority Mwakaboko

T/A Mwakaboko has flooding, drought, armyworm and Strong winds as primary hazards that make the area most vulnerable to. Flood is the most prevalent and highly devastating hazard while strong winds is reported to be least recurring but hazardous too. The table below detail the associated vulnerabilities and capacities for each of the hazards in T/A Mwakaboko.

Hazard	Rank	Vulnerabilities	Capacities
Flood	1	• Loss of houses • Lack of response skills and tools	• Available response teams • (Though they need refresh in disaster response) • Available evacuation cites • Available highlands for escape
Drought	2	• Food insecurity • Starvation	• Availability of drought resistant crops e.g. Cassava, millet and sorghum
Armyworm	3	• Lack of pest control chemicals • Crop damage	• Availability of Agricultural extension workers
Strong winds	4	• Loss of public structures e.g. Schools, hospitals • Destruction of homes • Lack of vegetative cover	• Availability of committed VNRC committees

Table 8: Prominent issues in T/A Mwakaboko

3.3.2 T/A Kilupula

T/A Kilupula lies in the same stretch with T/A Mwakaboko and has similar characteristic needs and vulnerabilities. Similarly, the area has flooding, drought, armyworm and Strong winds as primary hazards. Flood is the most prevalent and highly devastating hazard while strong winds is reported to be least recurring but hazardous too. The table below detail the associated vulnerabilities and capacities for each of the hazards in T/A Mwakaboko.

Hazard	Rank	Vulnerabilities	Capacities
Flood	1	• Most houses built on a lower terrain • Area interlinked with various rivulets	• Availability of highlands • Availability of public facilities like schools and churches as evacuation sites
Drought	2	• Low yield and mass starvation	• Availability of streams and rivers to undertake irrigation to supplement rainfall
Army worm	3	• Food insecurity due to low harvest	• Availability of extension workers in the area
Strong winds	4	• Disruption of high terrain settlement	• Availability of committed VNRC committees

Table 2: Prominent issues in T/A Kilupula

3.3.3 T/A Mwirang'ombe

T/A Mwirang'ombe is unique, a great part of the settlement pattern lies in the upland. This explains why the vulnerabilities of the area geographically differs with those of the earlier two traditional authorities. Drought is the most prevalent and highly devastating hazard while Flooding is reported to be third in recurrence in the area. The table below detail the associated vulnerabilities and capacities for each of the hazards in T/A Mwirang'ombe.

Hazard	**Rank**	**Vulnerabilities**	**Capacities**

Drought	1	• Low yield due to intermittent rainfall • Food insecurity • Starvation (Livestock and people)	• Availability of streams and rivers to undertake irrigation to supplement rainfall • Availability of drought resistant crops e.g. Cassava, millet and sorghum
Armyworm	2	• Lack of appropriate pest management skill • Lack of pest control chemicals Food insecurity due to low harvest	• Availability of extension workers in the area
Flood	3	• Houses in in lower terrain where flood water flows • Most houses built with mad and trees easily fall in flood	• Availability of Response teams (VCPC) to enforce mitigation measure • Existing public facilities for evacuation sites • Available highlands to be used as new settlement
Strong winds	4	• Destruction of public facilities • Disruption of high terrain settlement	• Availability of committed VNRC committees

Table 3: Prominent issues in T/A Mwirang'ombe

3.3.4 DRM Plans

The main output of the VCA 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 for the harmonized DRM Plan output for Karonga district.

CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

This chapter summarizes the findings of the VCA 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) 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) Need to engage Forestry department and VNRMC in the address efforts of deforestations
i) 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) The Malawi government through department water supply should expansion of water supply initiatives in rural areas (Installation of boreholes and tap water)
c) 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
d) Undertake riverbank reinforcement of by constructing dykes in rivers of highest hazards.

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 VCA process has brought to the fore various challenges that are faced by the communities in Traditional areas of Mwakaboko, Kilupula and Mwirang'ombe. In particular, the assessment exercise has created an invaluable awareness in Karonga district 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 EHO-STRIM project has been raid.

Ultimately, it is of highest necessity that the findings of this study be shared with the various stakeholders at both district 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 level in the district as one way of Community engagement and Accountability.

Annexes

Annex 1: VCA TOR

Annex 2: VCA Summed-rank matrix (District and T/A levels)

Annex 3: DRM Plan-District

Annex 4: FGD Participant list

Annex 5: FGD Guideline

Annex 6: VCA toolbox

1. **Terms of Reference**

   To be attached

2. **Annex 1: T/A Kilupula: Hazard analysis**

T/A Kilupula	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Summed-Ranks
Flood	9	1	1	0	0	1
Drought	0	2	4	1	0	2
Strong wind	1	1	5	5	0	4
Army work	1	4	1	3	2	3
Earthquake	0	0	0	1	7	5

Annex 2: T/A Mwakaboko

T/A Mwakaboko	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Summed-Ranks
Flood	3	0	0	0	0	1
Drought	0	0	2	1	0	2
Strong wind	0	0	0	2	1	4
Cholera	0	0	1	0	1	6
Army worm	0	3	0	0	0	3
Locust	0	0	0	0	1	5

Annex 3: T/A Mwirang'ombe

T/A Mwirang'ombe	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Summed-Ranks
Flood	0	1	2	0	2	3

Drought	4	1	0	0	0	1
Strong wind	0	0	2	2	1	4
Cholera	0	1	1	2	0	5
Army worm	1	2	0	1	0	2

3. 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 Civic education on control measures	20 GVHs targeted	2019-2024	Pesticides, Sprayers	Volunteers	Agriculture department	AEDC	Curriculum developed Training TORs 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, stems, 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	Training area,	NGOs Housing department	DoDMA/ VCPC	No. PASSA trainings done

					Stationary	Response teams			
	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	Agriculture dept.	AEDO	No. GVHs Supported with

						locally found			locust resistant crops