

**FACTORS THAT INFLUENCE SEASONAL MIGRATION OF FLOOD PRONE
POPULATIONS IN THE SHIRE RIVER VALLEY**

M.A (DEVELOPMENT STUDIES) THESIS

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UNIVERSITY OF MALAWI

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M.A (DEVELOPMENT STUDIES) THESIS

By

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Submitted to the Faculty of Social Science in partial fulfilment of the requirements for
the Degree of Master of Arts (Development Studies)

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DECLARATION

I, the undersigned, solemnly declare that this research paper is a product of my own work. I confirm that there is nowhere else that this study was done by any other scholar and submitted to any institution for this similar purpose. However, those scholars whose studies have been cited or reviewed have been recognized and acknowledged under the list of references.

RICHARD KAUTALE TEMBO

Full Legal Name

Signature

Date

CERTIFICATE OF APPROVAL

I, the undersigned hereby declare that this thesis is indeed his own work and has been submitted with my approval.

Signature: _____ Date: _____

BENJAMIN KANEKA, PhD (Senior Lecturer)

SUPERVISOR

DEDICATION

I do dedicate this paper honorably to both my late mother Elestina Getrude Bonface and late father Nelio Sabe Kautale Tembo, for their efforts to keep me in school and their parental love during their lives on earth. I also dedicate this paper to the entire family of Kautales (brothers and sisters, cousins and all relatives) who supported me financially, morally and physically. I would also want to dedicate this work to my wife, my two daughters, Blessings and Chisomo. Finally, I dedicate the same to people of the Shire River Valley (Nsanje and Chikwawa districts), especially the flood prone populations, to whom this paper was founded upon.

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ABSTRACT

This study was aimed at investigating factors that influence seasonal migration of flood prone populations in the Shire River Valley. Seasonal Migration is common in the Shire River Valley during every flooding season. This tendency has caused chronic poverty amongst flood-prone populations as they lose assets, crops, livestock each time they move from one place to the other. The IHS (2017) report stated that the flood-prone populations tend to be poorer due to seasonal migration caused by floods. The study was carried out in five (5) Traditional Authorities namely; Nyachikadza, Mbenje and Tengani in Nsanje district and Makhuwira and Kasisi in Chikwawa district. The study purposefully targeted 100 flood affected individuals who were randomly sampled from 10 camps (7 camps and 70 individuals in Nsanje, 3 camps and 30 individuals in Chikwawa) that were existent during the 2019 Cyclone Idai flood disaster for survey interviews. The quantitative data was analyzed using an SPSS IBM version 20 which enabled calculations of descriptive statistics. Qualitative data was collected through Focus Group Discussions (FGDs), coupled with pairwise ranking matrix which ranked the factors in order of importance. Key Informant Interviews (KIIs), In-depth Interviews (IDIs) were also used with local leaders, Civil Protection Committees (CPCs) and experienced district officials. The qualitative data was analyzed by reviewing the transcriptions, verbal recordings and observations. The research results showed that the main factors that influence seasonal migration of flood-prone populations, in order of importance, are largely economic factors, physical factors, political factors and socio-cultural factors. These factors are aggravated by the challenges faced by flood-affected populations while in camps and shorter distances between the camp sites and original areas. The study also affirmed that flood-prone populations return to the flood-prone areas in order to cultivate (82%) and fishing (53%) which are broadly economic reasons. The second broader reason is physical factor to secure their ancestral land (63%) in the flood prone areas justified by the reason that they do not have land to settle and cultivate in the upland. This study recommends that tailor-made solutions focused on the above factors in their priorities must be implemented. To do this better, there must be exhaustive consultations between Government, local leaders, communities and stakeholders in resettlement policy frameworks, livelihoods options and relevant land laws to guide relocation of flood-prone populations.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACPC	Area Civil Protection Committee
ADC	Area Development Committee
ADDMO	Assistant District Disaster Management officer
CADECOM	Catholic Development Commission of Malawi
CPC	Civil Protection Committee
DADO	District Agriculture Development Office (er)
DC	District Commissioner
DoDMA	Department of Disaster Management Affairs
DPD	Directorate of Planning and Development
EAM	Evangelical Association of Malawi
FAPs	Flood Affected Populations
FGDs	Focus Group Discussions
FPPs	Flood Prone Populations
GoM	Government of Malawi
GVH	Group Villagehead
HH	Household
HHH	Household Head
IDIs	In-Depth Interviews
IDPs	Internally Displaced Persons
IHS	Integrated Household Survey
KIIs	Key Informant Interviews
MDAs	Ministries, Departments and Agencies
NAPA	National Adaptation Programme of Action
NGOs	Non-Governmental Organizations
SPSS	Statistical Package for Social Sciences
T/A	Traditional Authority
UNDP	United Nations Development Programme
UNISDR	United Nations International Strategy for Disaster Reduction
UNDAC	United Nations Disasters Assistance Coordination
VCPC	Village Civil Protection Committee
VH	Villagehead
WB	World Bank

CHAPTER 1

INTRODUCTION

1.1 Background

This study was founded on an observed tendency amongst flood prone populations in the Shire River Valley who migrate from flood-prone areas to safer places when they anticipate flood risks or when affected by the floods. However, after few months they return to the flood prone areas when the flood waters have receded. This behavior amongst many flood-prone populations occur sometimes annually due to floods. This pattern has resulted into a forced, cyclic or seasonal migration of flood-prone populations i.e when hit by floods, they migrate out and migrate in afterwards and this is repeated during every flood occurrence.

Flood disasters have always rendered most affected populations homeless and landless especially female headed households, child headed households, the elderly and other vulnerable groups because of their weak and vulnerable socio-economic statuses and poverty. Floods force them to migrate out and live in tents and temporary shelters in adjacent upland areas and villages. Despite the impacts of floods, flood affected populations do return to the flood-prone areas. This observation was also made by Lovell and Le Masson (2014) who stated that despite the impact of floods and the challenges that flood victims face, most of them do not relocate permanently to uplands or safe places, rather they return to flood-prone areas, which makes them to be at risk if the floods are to occur again (Lovell and Masson, 2014). They observed that floods are becoming more frequent and are forcing many people to move. Some migrants, however, eventually return to the vulnerable areas to resume life as normal (Lovell and Le Masson., 2014).

The Shire River Valley is one of the flood-prone areas in Malawi that are heavily affected by floods. Along this valley, flooding occurs when the country experiences normal to above-normal rains. The Meteorological Department in 2015 determined that usually flooding happens when the country receives an average rainfall amount of 750 millimeters (30inches).

This is experienced mainly between the months of January and April. Excess rains of above 750mm cause overflowing and inundation along the Shire and Ruo rivers. Rivers overflowing is exacerbated by human activities along the rivers such as cultivation along the riverbanks, poor land-use and husbandry practices such as mono-cropping, ridging along steep slopes, bushfires, and failure to use organic manure, deforestation and inadequate soil and water conservation measures. These human activities cause siltation in the riverbeds and reduce river depth and causing overflowing and flooding mainly along the Shire River Valley (GoM, 2012). Sometimes, for instance, Nsanje district gets heavily affected by flash floods as a result of heavy rainfall in Thyolo, Mwanza and Chikwawa districts (Department of Disaster Management Affairs (DoDMA), 2012, 2015). In Nsanje, heavy flooding occurs at the confluence of Ruo and Shire Rivers affecting Makhanga trading center, Mchacha James village, Fatima and Chiromo. More effects are also experienced in areas down the river such as Tengani, Nsanje boma, Nyachikadza up to Marka. In 2015, in Nsanje out of 238,103 people, 74,250 people were displaced representing 28% of the total population in the district, of which 31 people died, and 153 people were reported missing (DoDMA, 2015a). In this district, flood affected populations from flooded areas migrate to temporary camps which are usually constructed at Bitirinyu in Traditional Authority Ndamera; Nsanje Boma camp in Traditional Authority Malemia, Bangula camp at Bangula trading center and Mbenje camp along Lalanje river in Traditional Authority Mbenje. In Chikwawa district, the flood-prone zones include islands in the Shire River, Elephant marsh and settlements along Mkombedzi River, Ndakwera flood zone and Sekeni flood zone in Nchalo. Mwanza river affects Tomali flood zone (T/A Ndakwera) and Bereu flood zone. Nyakamba River affects Makande / Ngabu zone. While at the boundary of Chikwawa and Nsanje districts, the Lalanje River affects Chidyamanga, Lalanje flood zone, and settlements along the Shire River (Government of Malawi, 2012). In this district, the camps are constructed at Jombo in T/A Ngabu; Sekeni at Nchalo under Paramount Chief Lundu. Bereu in Traditional Authority Ndakwera; Chikwawa boma in Traditional Authority Kasisi and at Mulilima under Traditional Authority Mulilima respectively (DoDMA, 2012).



Figure 1 Flood affected populations at Sekeni camp (Nchalo) in Chikwawa (DoDMA,2015b)

The effects of floods on the people living in the flood-prone areas are numerous ranging from economic, social, physical, psychological and many other impacts which cumulatively result into chronic poverty. For instance, in Nsanje 70% of the population is always affected by the floods and in Chikwawa 40% of the population is affected by flooding annually. This has resulted into higher poverty and vulnerability levels in the two districts. The overall poverty headcount in 2008 showed that Nsanje and Chikwawa districts had the highest proportion of households classified as ultra-poor in the country (Shela, et al., 2008). This poverty level was attributed to flood damages and losses. The IHS (2017) report stated that the flood-prone populations tend to be poorer due to floods for instance the poverty rate of Chikwawa was 65.80% in 2017 from 40% in 2008 (IHS, 2017). Flood affected populations experience socio-economic impacts such as loss of hard-earned developmental gains, loss of meagre assets, damage and loss of infrastructures, and loss of crop plants resulting into poverty and food insecurity. When floods hit the flood-prone populations, Government of Malawi (GoM) and humanitarian agencies spend money on response activities or relief assistance such as food and non-food assistance, recovery and reconstruction activities. These result into huge expenditures. For instance, in 2015 almost US\$335 million was spent in response and US\$494million on recovery activities totaling to about US\$900million.

And in 2019 about \$220million was also spent on flood disaster response activities (DoDMA 2015). These are huge losses to the nation yet they could be avoided through permanent relocation and by avoiding seasonal migration which expose flood prone populations to future flood damages and losses.

In an attempt to sustainably reduce flood risks on people living in flood-prone areas, the Government of Malawi (GoM) and developmental partners have always persuaded the flood-prone populations to permanently migrate to safer areas as a sustainable preventive risk reduction measure. The GoM does assure the affected populations that land would be allocated to them in some neighboring villages for them to permanently settle. The GoM has always suggested to the affected populations that the flooded areas must be used for farming while the upland areas must be used for permanent homes (GoM 2012, 2015). During a visit in 2012 to the Shire Valley area, the then President of the Republic of Malawi urged flood victims to relocate to safer areas. He also advised the flood survivors to utilize the flood-prone areas for farming.

"Moving upland would secure your lives while you could use the flooded areas for farming after the floods. So, you would benefit from two worlds." (The President of Malawi, addressing flood victims in Chikwawa; Nyasatimes, 2012).

On the contrary, a majority of the flood-prone populations have always returned to their original flood-prone areas soon after the flood waters have receded. For instance, after the devastating 2015 floods, the majority of the flood affected populations who are largely smallholder farmers returned to the flood-prone areas (Nsanje District Council, 2015a). This has been the tendency amongst flood-prone populations in the country for years. These actions have potentially impacted on the socio-economic, political, environmental, demographic, cultural and ethnical facets of the nation.



**Figure 2: Flood affected families migrate to safer areas during 2019 floods
(Researcher)**

The daunting tasks in this study were therefore to investigate factors that influence flood-prone populations to seasonally migrate in and out; why do they return into flood-prone areas and refuse to settle permanently in safer upland areas.

A study by Chawawa (2018) tackled one aspect in which it focused on *why do flood-prone populations insist living in flood-prone areas*. In her study, it was revealed that flood prone populations insist living in flood prone areas mainly for cultivation in the fertile soils. It says smallholder farmers argue that flash floods bring fertile soils from upland areas that enhance crop production. The fertile soils allow smallholder farmers to grow a variety of crops, fruits and vegetables throughout the year, some of which they sell.

My study complements these findings and went further in investigating the reasons why flood affected populations return to the flood-prone areas in spite of the flood dangers. It also investigated the challenges faced at the camps. Again, the study ranked the factors in order of importance, to understand the role of each category of factors in influencing flood-prone populations to insist staying and return to flood-prone areas which eventually result into seasonal migration.

1.2 Problem Statement

Poverty levels and food insecurity are increasing amongst people living in flood-prone areas in the Shire River valley due to flood impacts. The IHS (2017) report stated that the flood-prone populations tend to be poorer due to floods for instance the poverty rate of Chikwawa was 65.80% in 2017 from 40% in 2008 (IHS, 2017). This is so because flood-prone populations migrate out and return to flood-prone areas and they are always exposed to future flood disasters. These flood-prone populations settle, re-invest, cultivate and carry out agricultural/economic activities in such flood-prone areas after the floods have subdued. However, when the heavy rains come again causing flooding, most of their assets, crops, livestock, shelters are washed away and their livelihoods and economic activities are interrupted again. It is hypothesized that the losses and the tendency of seasonal migration make them poorer resulting into chronic poverty. Seasonal migration has resulted into lack of permanent houses, there are economic losses, infrastructure losses and huge expenditures to recover from the floods. It is argued that if they could not settle in flood-prone areas, then losses could be avoided and they could invest in the upland, create wealth and move out of chronic poverty. Government of Malawi and humanitarian actors would channel the resources to other development interventions.

During flood disasters, the Government of Malawi, developmental aid organizations, donor agencies, local and International Non-Governmental Organizations spend resources into food assistance, purchase of household materials, relief materials for them to live in the temporary camps and for recovery programmes. These flood disaster response and recovery programmes have been argued to be very expensive and affect the national budget heavily and consequently affect budget allocations to other equally important development projects that would benefit many Malawians.

For instance, during the January 2015 floods, the damage caused by floods was estimated at US\$335 million, with a need of US\$494 million for recovery and reconstruction (GoM, 2015). Just three years later, in 2019 Cyclone Idai caused around \$220 million worth of damage (Government of Malawi, 2019). The Government of Malawi has been impressing upon populations that live in flood-prone areas to relocate to upland areas that are safe from floods. However, they have been reluctant to do so and return to continue living in the flood-prone areas despite experiencing recurring flood disasters.

Therefore, this study investigated the factors that influence seasonal migration of flood-prone populations in the Shire River Valley i.e why do they insist and *why do they return into flood-prone areas*. New knowledge on this topic was needed since there are studies that touched one aspect of the cycle i.e why do they insist staying in flood-prone areas but with limited focus on why do they return. Seasonal migration is a cycle with stages and at each stage there are reasons.

1.2.1 Research Questions

- Why do flood-prone populations insist living in flood-prone areas?
- What challenges do flood-prone populations face while in camps?
- What factors drive them to return to the flood-prone areas?

1.2.2 Hypotheses

- There are no factors that influence flood-prone populations to insist living in flood-prone areas.
- There are also no reasons for returning to flood-prone areas soon after the floods.
- All factors have the same importance in influencing seasonal migration by flood-prone populations.

1.3 Objectives

1.3.1 Overall Objective

To investigate factors that influence seasonal migration of flood-prone populations in the Shire River Valley in Malawi.

1.3.2 Specific Objectives

- To investigate the perceptions of flood-prone populations on their vulnerability to floods; living in flood-prone areas, relocation and why they return to flood-prone areas.
- To explore the perceptions of humanitarian players towards flood prone-populations on their vulnerability, why they insisting staying and returning to flood-prone areas
- To understand the reasons (in order of importance) why they insist living in flood-prone areas
- To study the factors (in order of importance) why do flood-prone populations return to flood-prone areas after the floods

1.4 Significance of the Study

The study was sought to reveal factors that influence flood-prone populations to migrate out and return to the flood prone areas. Chawawa (2018) tackled one aspect of the knowledge gap in which her study looked at why flood-prone populations insist living in flood prone areas. It did not look at the knowledge gap on challenges faced in camps and why flood-prone populations return to flood prone areas.

Heinonen (2006) acknowledged that there was need for more research to understand seasonal migration. This is corroborated by Wilkinson, et. al., (2016) who stated that there was need for more research studies on relocation and migration since it is very expensive to recover from flood damage than to permanently relocate to safe areas. Yet in the Shire River Valley seasonal migration is prevalent exposing families to future floods and the cycle repeats itself every flood occurrence resulting into chronic poverty.

Chawawa (2018) agrees with Wilkinson et.al., (2016) on the knowledge gap and asserted that it was evident that little is known about the processes and factors that influence the smallholder farmers to continue living in the flood prone areas. She argued that,

“It was evident that smallholder farmers living in the flood-prone areas are not given an opportunity to express themselves in order to be understood how they perceive their own vulnerability to floods and even why they are motivated to live in the flood prone areas.”.

Equally, this study argued that there could also be little known about the factors that influence flood affected populations to return to flood-prone areas. My study engaged the affected populations during the 2019 floods to find out the various reasons why they insist living in flood-prone areas and why do they return after the floods. This study completes what Chawawa (2018) looked into and added the knowledge by looking at why do the flood-prone populations return from the camps after the floods. And further ranked the factors in order of their influences. Discovering the factors that influence return-migration and the challenges faced in temporary camps can help to understand comprehensively seasonal migration tendency amongst flood-prone populations. Ranking the factors in order of influence added information to the knowledge gap on the debate as which of the factors are the most critical factors influencing this phenomenon and enabled linking the factors together for better targeting of interventions, policy and actions. This is key to developing effective policy responses, adaptation plans and investments.

CHAPTER 2

LITERATURE REVIEW

This chapter has been divided into Conceptual framework and the Theoretical framework. In view of that the study searched the concepts and the theories that applied to the study. It reviewed the definition of migration, types of migration, seasonal migration, reviewed factors that influence migration and the migration theories.

2.1 Conceptual Framework

2.1.1 What is migration

Divisha (2020) defined Migration as the progression of people from one place to another, to establish their permanent or semi-permanent residence at the destination.

Hugo (2013) defined Migration as the voluntary or involuntary moving away of households from a place of origin, either on a permanent or temporary basis.

Zhou (2020) defined Migration as a permanent or semi-permanent relocation of people from one location to another.

The three definitions of migration above are in agreement that migration involves movement of people from one place to another either on permanent or temporary basis.

Zhou (2020) further said that migration can either be involuntary (forced) or voluntary (by choice) depending on the causes of migration which vary from the pure desire to experience life in another place or to avoid risks (eg floods, hurricane) found in an area.

2.1.2 Types of Migration

There are many types and forms of migration but for the purpose of this study selected types of migration were reviewed. Zhou (2020) grouped types of migration based on the causes for the movement. He said that people either are made to move involuntarily (forced), are put in situations that encourage relocation (reluctant), or choose to migrate (voluntary) (Zhou, 2020).

Forced Migration: refers to the movements that refugees, migrants, and IDPs make. These can be either within their country or between countries after being displaced from their homeland (Giovetti, 2019). Forced migration is a negative form of migration (Zhou, 2020).

Reluctant Migration: is a form of migration in which individuals are not forced to move, but do so because of an unfavorable situation (floods, hurricane etc) at their current location (Zhou, 2020).

Seasonal Migration: is a form of return migration-when people change their location due to effects of climate change e.g floods. It is also referred to as temporary migration or circulation (Hugo 2013). Seasonal migration is a form of forced migration i.e the case of flood-prone populations in the Shire River Valley who are forced to seasonally migrate out due to floods.

After the review of the definitions of migration, types and causes of migration, this study found out that people in the Shire River Valley are forced by floods to migrate from the flood-prone areas to safer areas to be safe, to avoid flood risks, they do it every season they anticipate floods. They temporarily migrate to safer areas and return afterwards. The three definitions fit into this study and a forced-seasonal migration applies.

2.1.3 Factors that cause migration

The study reviewed some literature on factors that cause migration. Petersen (1958), Lee (1966), Perch-Nielsen *et al.* (2008) and Foresight (2011) stated that migration is a complex interplay of multiple factors. Among the root causes of migration are **economic factors** such as poverty, unemployment or desire for better or more livelihood opportunities; **social factors** (for example, politics, desire for more education or preference for living in a certain climatic or social/political context; **environmental factors** that include degradation of ecosystems, local overuse of resources or external overexploitation of resources, and/or degraded security conditions.

Johnson et al. (1981) collaborated with Boswell and Crisp (2004); also argued that apart from a set of social, economic, political and environmental factors, migration of population in any region is determined, to large extent, by the perceptions and behaviors of individuals concerned (Johnston et al, 1981: p.218). Elliott (2007); Maltoni (2007) and Hugo (2013) also highlighted that apart from the economic, social, and environmental factors there are also political, cultural, and historical factors such as chieftaincy, voters' allegiance to some political parties, territorial boundaries and cultural beliefs.

Farhana et al. (2012) found the following factors on migration; *Natural Factors* a) Flood and River bank erosion b) Storm; they argue that populations will migrate when they experience devastating flood disasters where the assets have been washed away and there are soil loss and loss of soil fertility for sustainable agricultural productivity. *Economic Factors* a) Poverty b) Unemployment. *Social Factors* a) Population explosion b) Marriage c) Social inequality / discrimination, religious violence *Political Factors* a) crossing boarder b) involvement of politics. Ness (2015) mentioned a number of socio-economic reasons for migration which included family moved, lost land/lost home and natural calamities.

The literature shows that there are categories of factors that influence migration ranging from natural factors, economic factors, social factors, political factors, environmental factors, physical factors. However, this study finds a gap where the literature does not provide the factors in order of influence. The factors seem not to be ranked. Also, the factors are for general migration by any grouping irrespective of their situation. In this study the factors were contextualized to see how do they apply to the flood-prone populations in the Shire River Valley.

2.1.4 Benefits of migration

Warner and Afifi (2013) argued that unlike the Marxist approach, the current thinking about migration goes beyond its negative role by giving emphasis to the positive contribution of migration towards improving the livelihoods of poor people.

Obokata, et. al (2014) argued that migration is a coping strategy for flood-prone populations (fpps). He said onset of hazards such as floods can lead to people migrating temporarily with the possibility and expectation of returning home, with such temporary movement highlighting migration as a short-term coping or adaptation strategy (Obokata, et. al, 2014).

Mirza, et al. (2003, p.7) stated that people cope in different ways. Coping strategies include actions such as migration from flood-affected areas and building of flood shelters among others. According to Mirza migration from flood-affected areas is one of the coping strategies.

De Haan (1999) and Skeldon (2002) said that migration is considered one of the livelihood strategies that rural households pursue. They argue that migration is one of the most durable components of the livelihood strategies of people living in rural areas.

Deshingkar and Grim (2004) alluded that in Cambodia migration is an attractive option when the place the person is migrating to offers resources critical to maintaining a livelihood. For instance, in Malawi, if at the temporary camps, the flood-prone populations do not earn or maintain their livelihoods then they are likely to (migrate back) return to flood-prone areas where they would continue with farming as a source of their livelihoods.

Addo and Danso (2017) in their study, it was revealed that a source of livelihood is one of the reasons that communities who live in flood-prone areas would not be willing to move and relocate upland. Equally so, if staying in camps or new locations provides resources to maintain their livelihoods they would permanently settle.

2.1.5 Problems associated with Migration

On the contrary to the positive role of migration, a number of writers have argued against the positive role of migration. According to Ellis (2003), he stated that migration does not play a positive role towards improved livelihoods rather it is due to misunderstanding about livelihood strategies. In this statement Ellis meant that migration has more negative effects than the positive contribution to the livelihoods of the flood-prone populations who migrate seasonally.

The same was echoed by Asfaw et al. (2010) who stated that while others view seasonal migration as a livelihood option but migration is still perceived negatively, and there has been little awareness of its significance either positively or negatively. This is due to research studies being inclined to one side i.e positives only of the topic and not the other.

The reviewed literature shows that seasonal migration has positive impacts on populations' livelihoods while others contend that seasonal migration has more negative impacts than being a livelihood strategy. This creates a dilemma as to whether seasonal migration is really a livelihood strategy for the flood-prone populations in the Shire River Valley apart from the fact that flood-prone populations cling in flood-prone areas for cultivation.

2.1.6 Migration in Malawi's flood-prone areas

In Malawi, seasonal migration is mainly caused by the floods. It is both a forced migration and return migration. For instance, in the 2014/15 rainy season, the country experienced severe flooding which forced the affected populations to migrate to temporary camps and surprisingly, after few months, many flood victims returned to the flood prone areas (UNDAC, 2015). In the Shire River Valley this tendency is prevalent.

In Malawi flood-prone populations migrate out from flood prone areas to safer upland areas when affected by the floods and return (migrate in) afterward to continue with their normal life. This makes it a two-way movement which creates a seasonal migration cycle.

The flood-prone populations settle, re-invest, cultivate and carry out agricultural/economic activities in such flood prone areas after the floods have subdued. However, when the heavy rains come again causing flooding, most of their assets, crops, livestock, shelters are washed away and their livelihoods and economic activities are interrupted again. These losses and the tendency of seasonal migration make them poorer resulting into chronic poverty.

Seasonal migration has resulted into lack of permanent houses, losses when floods have hit the populations and huge expenditures to recover from the floods and families fail to create and accumulate assets. It is argued that if they could not settle in flood prone areas, then losses could be avoided and they could invest in the upland, create wealth and move out of chronic poverty. Government and Humanitarian actors would channel the resources to other development interventions.

2.1.7 Migration of flood prone populations in the Shire River Valley



Figure 3: Flood affected families in Chikwawa forced to migrate out to safer areas during the 2019 floods. (Researcher).

Migration of flood prone populations in the Shire River Valley is two-way and is a forced migration. They migrate out when affected by floods and migrate in when the flood disasters and risks have disappeared resulting into a cyclic migration.

In Nsanje, flood affected populations from the flooded areas migrate to temporary camps which are usually constructed at Bitirinyu in Traditional Authority Ndamera; Nsanje Boma camp in Traditional Authority Malemia, Bangula camp at Bangula trading center and Mbenje camp along Lalanje river in Traditional Authority Mbenje.

In Chikwawa district, flood affected populations migrate into camps which are constructed at Jombo in T/A Ngabu; Sekeni at Nchalo under Paramount Chief Lundu. Bereu in Traditional Authority Ndakwera; Chikwawa boma in Traditional Authority Kasisi and at Mulilima under Traditional Authority Mulilima respectively (DoDMA, 2012).



Figure 4 Flood affected populations at Sekeni camp (Nchalo) in Chikwawa (DoDMA, 2015b)

2.1.8 Problems Associated with Migration in Malawi's flood prone areas

Flood-prone populations migration is characterized by moving from flood-prone areas to safer upland areas and return when flood disasters disappear. The problem is that they migrate out and return in the process some assets are lost and economic activities are disturbed. The bad thing is that the flood-prone populations re-settle, re-invest, cultivate and carry out agricultural/economic activities. However, the problem re-surfaces when the heavy rains come again causing flooding, most of their assets, crops, livestock, shelters are washed away and their livelihoods and economic activities are interrupted again. These losses and the tendency of seasonal migration make them poorer resulting into chronic poverty.

The IHS (2017) report stated that the flood-prone populations tend to be poorer due to floods for instance the poverty rate of Chikwawa was 65.80% in 2017 from 40% in 2008 (IHS, 2017).

Seasonal migration has resulted into lack of permanent houses, losses when floods have hit the populations and wastages to recover and failure to create and accumulate asset base. It is argued that if they could not settle in flood-prone areas, then losses could be avoided and they could invest in the upland, create wealth and move out of chronic poverty. Government and humanitarian actors would channel the resources to other development interventions.

2.1.9 Government Interventions to protect flood-prone populations

During flood disasters, the Government of Malawi, developmental aid organizations, donor agencies, local and International Non-Governmental Organizations spend resources into food assistance, purchase of household materials, relief materials for them to live in the temporary camps and for recovery programmes. These flood disaster response and recovery programmes have been argued to be very expensive. For instance, during the January 2015 floods, the damage caused by floods was estimated at US\$335 million, and the GoM had to source funds for recovery and reconstruction activities of about of US\$494 (DoDMA, 2015a). In 2019, due to Cyclone Idai, recovery and reconstruction activities were also done including the post-disaster recovery and resilience activities (DoDMA, 2019).

The Government of Malawi has been impressing upon populations that live in flood-prone areas to relocate to upland areas that are safe from floods. However, they have been reluctant to do so and continue to live in the flood-prone areas despite experiencing recurring flood disasters.

Also, the Government of Malawi and humanitarian agencies have been facilitating disaster risk reduction measures such as construction of dykes, re-afforestation, river banks rehabilitation among others to reduce the impacts of floods on flood-prone populations. The impacts of the disaster risk reduction measures have been swallowed by the impacts of floods since every rainy or flooding season, the floods impacts are big in magnitude and intensity.

2.1.10 Reasons for staying in flood prone areas

Tahira and Kawasaki (2017) found out that the poor smallholder farmers have insisted staying in flood prone areas because they would struggle to establish a new livelihood in new places. And that they do not have the capacity to relocate. They argued that relocating to new areas requires capital, land and other assets that would help the farmers to establish themselves in the new areas. In the absence of these, the farmers feel that they would suffer (Ibid).

In the Shire River Valley there are also reasons that people give for insisting living in flood prone areas. A study by Chawawa (2018) found out that people stay in flood prone areas for various reasons which include sustaining their livelihoods, identity, culture and lack of adequate resources that would facilitate resettlement in new upland areas.

The interdependence of smallholder farmers living in the flood prone areas and those living in upland areas reveal that temporary migration as one of the best adaptation strategies and that permanent migration would exacerbate vulnerability to climate variability when there is drought in upland areas resulting in crop failure.

According to Chawawa (2018) the factors for insisting living in flood prone areas are variously political, socio-economic and personal in nature. Political reasons were loss of chieftaincy; subjects being obedient to their chiefs, socio-economic reasons included sustaining livelihoods, identity and fear of drought in the upland areas. Chawawa recognized that there is widespread misunderstanding of motivations to live in the flood-prone areas and the reasons for migrating back to the flood prone areas.

In addition, Chawawa (2018) mentioned the barriers and limitations to permanent resettlement such as inadequate space for both settlement and farming in the new areas of relocation, lack of land compensation and alternative livelihoods (Chawawa, 2018). According to Chawawa drought in the upland areas is another hindrance for flood-prone populations to settle in new settlements. Lack of fertile land in the upland areas unlike the flood-prone areas where flooded water brings rich soils for crop production.

Chawawa (2018) findings agree with the Lee (1966) migration theory which stated that there are push-pull factors at point of origin and at destination. In between also there are intervening obstacles like barriers and limitations.

My study had to validate the findings of Chawawa (2018) regarding the reasons why flood-prone populations insist staying in flood-prone areas. In addition, the study had also to rank the reasons in order of importance using the pairwise ranking method. It further complemented the findings of Chawawa by investigating why do they return to the flood prone areas and what are the challenges they face in camps. All these factors together enabled a comprehensive understanding of the return-migration of flood-prone populations in a holistic manner. Also, ranking of the factors in order of influence will help to deal with the significant influencing factors and all of them comprehensively.

It is therefore evident that the reasons for insisting staying in flood-prone areas fall in different categories namely economic, political, physical, social or cultural. In this study, the factors were categorized and contextualized. For example, *economic factors* include economic activities like crop production, fishing, small businesses, lack of money; *physical factors* considered were mainly availability of land, food shortages, water shortages; *political factors* were GoM role in relocation, chieftaincy and political boundaries; *Socio-cultural factors* included cultural systems, norms and social systems.

2.1.11 Why do flood-affected populations return to flooded areas

Ibrahim et al. (2001) mentioned new unsuitable sites as other drivers that can influence people to return to their original land. For instance, unsuitable new sites can lead to loss of livelihoods, one's own community, cultural alienation and create further poverty which makes many people to abandon the new sites and return to the location of their original community.

Temporality of the event or short duration of the event does also influence the return-migration. As argued by Hugo (2013) that forced/ seasonal migration is perceived as dramatic environmental event which is temporary. So, it is perceived that floods are just for a short period and they vanish. This makes it impossible for people to permanently relocate rather choose to return (Hugo, 2013).

Elliot (2012) found out that migrants that move because of a crisis are more likely to return to their places of origin once the crisis has passed.

Adriana et al. (2016) came up with some arguments that suggest that floods tend to have very short-term impacts and flooded areas are associated with higher income hence attract flood affected populations to return to flooded areas.

Alexandra et al., (2018) came up with the following factors why people return to flood prone areas namely a) lack of infrastructure which makes safe locations hazardous; b) lack of livelihood options; c) lack of affordable housing means high-risk areas are also cheap places to live.

The gap in these findings or literature is that they are tilted to urban floods, flooding in cities. Also, the factors have not been put in broader categories of reasons for return-migration and have not been ranked. The question both Chawawa (2018) and other scholars were supposed to address which my study brought them on spot is; why do people move back to flood-prone areas after the floods? As alluded by Schumacherr. (2016) that the problem is that we know very little about the underlying reasons (Schumacherr, 2016). The other daunting question is whether the factors for moving back to flood-prone areas are precisely the same as those for which the people insist living in flood prone areas? This study also focused on this area and prioritized the reasons. Further it correlated the factors for insisting living in flooded areas and the reasons for returning to flooded areas.

2.2 Theoretical Framework

According to Abend (2008), he stated that theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions (Abend, 2008).

There are several theories of migration that this study reviewed and two of them were used to describe the seasonal migration phenomenon for flood-prone populations in the Shire River Valley. The theories are by Ravenstein in 1885 who referred to them as Laws of Migration and those by Lee (1966).

2.2.1 Ravenstein's Laws of Migration:

Ravenstein (1885) was the first one to attempt spelling out the 'laws of migration'. Ravenstein identified a set of generalizations, which he called 'laws of migration'. Most of these generalizations are applicable even today. The study looked at selected few of the generalizations which were applicable to the behavior of flood-prone populations in the Shire River Valley. For instance, (a) he states that there is an inverse relation between distance and volume of migration. **Majority of migrants move to short distance only.** Thus, migration is more likely to occur at shorter distances rather than long distances. This is partly due to lower costs and the social networks associated with short distance movements. In the Shire River Valley, flood affected populations migrate to places which are shorter and closer to their original areas. And, also mentioned by Chawawa (2018) that the flood affected populations have social networks with people in the upland areas. The theory, the generalization and findings by Chawawa do apply.

In addition, Ravenstein suggested that certain "push" and "pull" factors influence the decision to migrate, and humans have a natural disposition to improve their material living conditions (Warner and Afifi, 2013). Conditions in flood-prone areas, or safer areas and camps can either be push or pull factors that can influence flood-prone populations to insist, refuse and return in flood-prone areas. It can also be argued that the push and pull factors can influence permanent relocation or return migration. Push factors include: floods (resulting into forced migration), fear of future floods, unfavorable conditions after the floods, interruption of livelihoods, impact of floods and challenges they face if they remain in flooded areas. Pull factors include governments and humanitarian agencies response support while in camps, livelihoods at point of destination, social networks, availability of land might pull or attract them to casually move to safer place. There are two ways of applying the push-pull factors for both place of origin and place of destination.

2.2.2 Everett Lee's Theory:

Lee proposed another comprehensive theory of migration in 1966. He begins his formulations with factors, which lead to spatial mobility of population in any area. These factors are: i) Factors associated with the place of origin, there are many factors which motivate people to leave their place of origin to outside area. These are referred to as push factors. ii) Factors associated with the place of destination; these are very attractive forces (pull factors) at the area of destination.

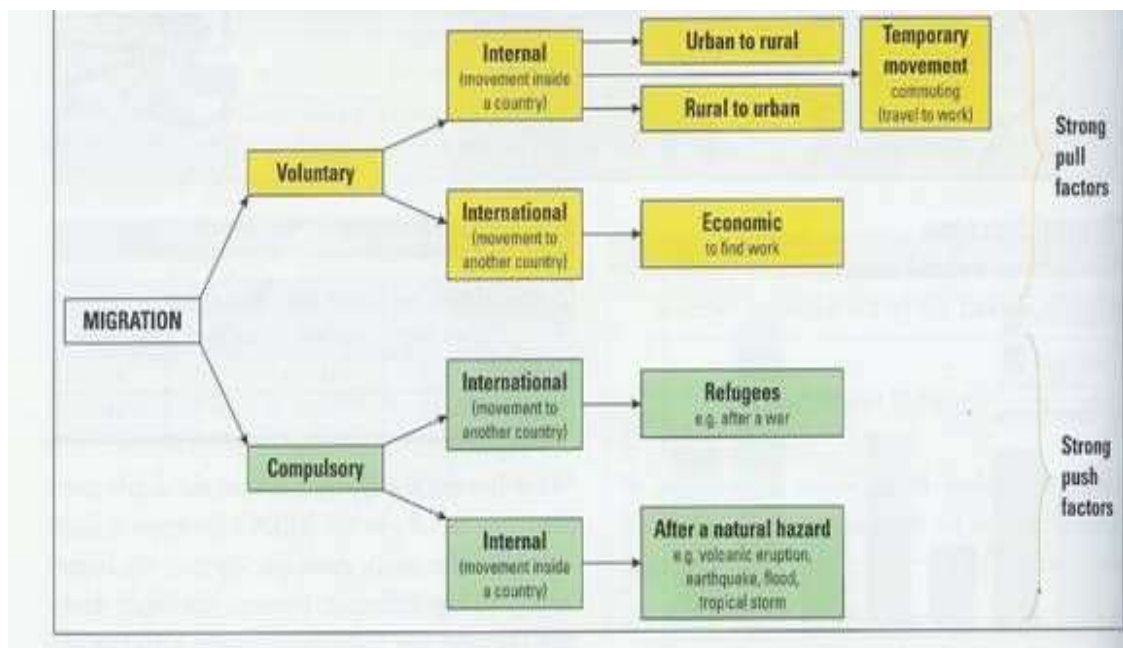


Figure 5: A model showing (Push-Pull) factors that influence migration (Lee, 1966)

iii) Intervening obstacles, are obstacles like distance and transportation which increase migrant selectivity of the area of destination. Lee also refers to cost of movements, ethnic barriers and personal factors as intervening obstacles. iv) on Personal factors, Lee argues that it is the personal factors on which the decision to migrate from the place of origin to the place of destination depends. In fact, it is an individual's perception on the 'push and pull forces' which influence actual migration. According to Lee, each place/destination possesses a set of positive and negative factors. While positive factors are the circumstances that act to hold people within it, or attract people from other areas, negative factors tend to repel them (Lee, 1975: p.191). i.e factors that influence

flood-prone populations to stay in flood prone areas and factors that influence them to return.

Also, distance separating the places of origin and destination as an intervening obstacle or as an influencing factor of migration, has been more frequently referred to by a number of authors including Ravenstein (1885), but according to Lee, distance while omnipresent, is by no means the most important factor (Lee, 1975: p.193). Furthermore, the effect of these intervening obstacles varies from individual to individual.

Apart from the factors associated with places of origin and destination, and the intervening obstacles, there are many personal factors, which promote or retard migration in any area. Lee argued that factors prevailing at the places of origin and destination are not as important in affecting migration as individual's perception about these factors. This could be true as there is patches of flood-prone areas whose inhabitants left the areas for permanent housing in the upland areas and use the flood prone areas for cultivation. While others returned and they are continuing with their normal lives. Their personal factors (perceptions) mattered.

2.2.3 Summary on theories (Laws of migration by Ravenstein, Everett Lee)

The two migration theories by Ravenstein (1885) and Lee (1966) have common conjectures where both have mentioned that there are always Push-Pull factors and personal factors at play that influence migration. They disagree on distance as a factor that it does also influence migration. Nevertheless, this research study used the Lee Everett migration theory as the main theory to describe the behavior of the flood-prone populations and factors that influence seasonal migration. Lee's (1966) theory also provides a conceptual framework to understand the factors influencing seasonal migration of flood prone populations in the Shire River Valley. This study discussed the Lee's (1966) theory and how it applies for the Shire River Valley migration patterns of flood-prone populations.

He summarized them as: (1) factors associated with the area of origin; (2) factors associated with the area of destination; (3) intervening obstacles especially distance, though the two theorists do disagree, was combined with Ravenstein (1885) generalization which states that migration is more likely to occur at shorter distances rather than long distances; and that (4) personal factors do matter as well.

The gap in Lee's theory was to assume that factors/push or pull factors have the same value or significance which cannot be the case. So, the gap is that the factors or the push and pull factors were not ranked and the study had to look into such an element. Without such information, policy holders and humanitarian agencies may fail to prioritize factors to concentrate on in order to stop the tendency of return-migration in flood-prone populations. Again, Lee's disregard for the distance separating the places of origin and destination as a factor that influence migration as argued by Ravenstein (1885) would be a mistake. This study disagreed with Lee and agreed with Ravenstein on distance as one of the factors considering the trends of migration by flood-prone populations in the Shire River Valley. The distances between the origin and place of destination are usually shorter.

Nevertheless, this study was mainly guided by the elements in the Lee's (1966) migration theories and partly by Ravenstein (1885) generalizations. The research study hypothesized that the flood affected populations will seasonally migrate due to Push-Pull factors, intervening obstacles i.e as long as where they migrate to is a shorter distance and personal factors. Push-Pull factors are factors at place of origin and factors at place of destination.

In this study, factors that influence flood-prone populations to stay in flood prone areas are both push factors and pull factors it depends which factors weigh more.

Equally, factors that influence flood-affected populations to return are both push and pull factors depending on which ones weigh more to force an individual or a flood affected society to decide to move or not. The distance from their original areas and the temporary shelters is the intervening obstacle and also personal factors do matter.

In this study the same push-pull factors were contextualized so that they fall in categories of political, social, economic, cultural, physical/environment to understand the context about what exactly influence the trend amongst flood-prone populations in the Shire River Valley. It is premised that there are push-pull factors for flood-prone populations to insist staying in flood prone areas and also there are push-pull factors that influence flood-prone populations to return to flood prone areas. In both cases intervening obstacles and personal factors do matter.

CHAPTER 3

STUDY METHODOLOGY

3.1 Research/Epistemological Approach

The methodology of this study was aligned to the aim of the study which was to investigate the factors that influence seasonal migration of flood-prone populations in the Shire River Valley. Mainly to explore factors (in order of importance) why flood-prone populations insist staying in flood-prone areas; and to study the factors (in order of importance) why flood-prone populations return to flood-prone areas. Also, specifically to understand the perceptions of the flood-prone populations themselves on their vulnerability to floods, their lives in camps, permanent relocation and seasonal/return migration and to examine the perceptions of government agencies, humanitarian agencies towards flood-prone populations vulnerability to floods, permanent relocation and seasonal/return migration.

In order to answer the main aim of the study and the specific objectives, the study used both qualitative and quantitative approaches for data collection and analysis. The study collected quantitative data and conducted quantitative analysis of the primary data. Equally, in order to unearth perceptions, it collected qualitative data that had to be analyzed qualitatively. The qualitative approach was sought on premise that it is possible that overtime, researchers have missed an opportunity to hear from the flood-prone populations in-depth on their perceptions and the reasons for insisting staying and returning to flood-prone areas. To prioritize the reasons, a ranking method (pairwise) was used to engage KIs, discussants to rank the factors in order of importance on an assumption that factors may not have equal influence on seasonal migration trend. **Pairwise ranking** method is a participatory method used by individuals or teams to qualitatively prioritize a list of multiple available options/factors/ items where all items are ranked against each other. *Retrieved from: <http://www.keyperformance.com/2018/09/pairwise-ranking-six-step-approach-evaluating-alternatives>*. While in literature this method is perceived to be more of a qualitative method but I did find it that it is also a quantitative method because at the

end of the process scores and rankings are determined which are quantitative (figures) in nature.

The Pairwise ranking was easier to do with the respondents in a participatory manner and it gave the flood affected populations an opportunity to analyze the factors themselves and put them in order of their importance right on spot together with the researcher unlike with the Lickert Scale ranking method where data analysis is mainly in the hands and control of the researcher. <https://www.questionpro.com/blog/what-is-likert-scale>

The quantitative approaches responded to the same research questions but where numbers and ranking of factors were used to come up with statistics which were interpreted to give meanings of the outcomes. In addition, the quantitative tools enabled comparing of factors and listing of the factors in their order of priorities i.e if factors for insisting staying in flood-prone areas are the same with those reasons for returning to flood-prone areas.

In summary, the methodology assumed that a) there are no plausible factors for insisting staying in or returning to flood-prone areas by the flood prone populations b) all factors have the same importance in influencing seasonal migration of flood prone populations.

3.2 Study Design

The study used mixed methods and tools on the premise that the study had both qualitative and quantitative aspects to be investigated, understood and triangulated. The mixed method approach was a useful approach in this study because it enabled the study to be flexible and reflect on different perspectives onto a real-world context regarding seasonal migration of flood prone populations. The mixed methods and tools allowed triangulation of the data collected either qualitatively or quantitatively.

The qualitative approaches were heavily relied upon in this study and enabled in-depth understanding of the perceptions and the reasons for insisting staying or return to flood-prone areas after the floods.

Chawawa (2018) also observed and stated that

“It was evident that smallholder farmers living in the flood prone areas are not given an opportunity to express themselves in order to be understood how they perceive their own vulnerability to floods and even why they are motivated to live in the flood prone areas.”.

To achieve this, the qualitative data was collected using the Key Informant Interviews (KIIs), the Focus Group Discussions (FGDs) and In-Depth Interviews (IDIs) with key informants within the community, chiefs, CPCs members from flood prone populations who once migrated and returned. Also, a Pairwise ranking method was used to engage the respondents in a participatory manner to give their perceptions, to analyze the factors in order of their importance right on spot together with the researcher why they practise return-migration.

Equally using a checklist of questions, government officials and humanitarian agencies representatives in the two districts were targeted for the Key Informant Interviews as regards to their perceptions and what they thought would be the factors influencing the tendency. Again, with the district stakeholders a pairwise ranking tool was used to engage them on prioritization of influencing factors and see if the priority lists of the two, flood-affected populations and the stakeholders, were matching.

Quantitative methods were used to capture descriptive statistics through surveys where individuals in the camps were randomly selected to respond to a semi-structured questionnaire. The questionnaire had themes that enabled capturing of information to answer the research questions. The questions in the questionnaire were in line with the variables which had to be entered into the database for analysis. The dependent variable in this study was the seasonal migration and independent variables were factors like economic factors, social factors, political factors, physical/environmental factors, cultural factors and distance from the flood prone area.

The study used context analysis as a data analysis method. The SPSS was used as a tool to manage the data collected for further processing into information for interpretation. For the qualitative data was analyzed manually using the words, transcription, and the pair-wise ranking tool was used to compare factors in order of their importance.

3.3 Data Collection Methods

The data that was collected in this study was both primary and secondary. With this in mind the study used a mixed method approach to collect the data. The primary data was collected through the survey in which data gathered consisted of both qualitative data on perceptions and quantitative data on frequencies and other descriptive statistics about factors for return-migration. Also, the primary qualitative data was collected through Focus Group Discussions, Key Informants Interviews and the In-depth Interviews.

The secondary data was gathered through literature review from the journals, books and records/reports from the two districts councils.

3.4 Data Collection Tools

To collect primary data, surveys and pair-wise ranking methods were used. For surveys a semi-structures questionnaire was used and for pairwise ranking a pair-wise ranking matrix was used. These enabled collection of mainly the quantitative data. On the other hand, the qualitative primary data was collected using a checklist of questions during the KIIs, FGDs, IDIs and even using the pair-wise ranking tool. The pair-wise ranking tool is both a qualitative and quantitative participatory tool which enable the researcher to engage people to talk and at the same time to rank issues under discussions.

3.5 Study Population

The study was carried out in the Shire Valley districts of Chikwawa and Nsanje. The two districts are usually the worst affected by floods. The Shire Valley was preferred because seasonal migration of flood prone populations is very prevalent in the area. The target areas included Traditional Authorities Mbenje, Nyachikadza and Tengani in Nsanje, then Kasisi, and Makhuwira in Chikwawa district. The main target populations were flood prone populations including individuals, community disaster management structures and local leaders from flood prone areas. The study specifically also targeted individuals who migrated out and returned afterwards. Other stakeholders such as district officials, and experts were targeted as key informants. IDIs targeted respondents from flood prone areas and those who have been in those areas for decades and they have firsthand experiences of the floods and seasonal migration.

3.6 Sampling techniques

Purposive sampling was used to determine which Traditional Authorities, Group Village heads and villages in Chikwawa and Nsanje district would participate in the study. According to Palinkas et al. (2013); Palys, (2008) and Suri (2011) purposive sampling is a sampling technique whereby the sample is chosen based on certain criteria determined by the researcher's interest, in order to obtain applicable data in relation to significance, meaningful understanding and depth of the researched matter. This was a deliberate sampling technique to ensure that most affected T/As, GVHs and Villages participate in the study to give their experiences about floods and seasonal migration.

The camp sites where the flood survivors temporarily settled during the 2019 flood disaster were purposefully targeted in the two districts for FGDs, KIIs, IDIs and administration of questionnaires. Using the 2019 districts flood damage data, the T/As heavily affected by floods were sampled depending on the extent of flood damage to that particular T/A. In line with this the camps to which the affected populations from the selected T/As settled were identified and sampled. In Chikwawa two (2) T/As were selected namely Makhuwira and Kasisi. From Nsanje three (3) T/As were selected namely Nyachikadza, Tengani and Mbenje. After selecting the T/As, the 2019 flood records in the districts further helped the study to map out where flood-affected populations from these T/As were temporarily camping to target the individuals in camps with interviews. Ten (10) camps were determined, 3 camps in Chikwawa and 7 camps in Nsanje. The study used simple random sampling to determine individuals that will be targeted for survey interview for quantitative data and others with IDIs, KIIs, FGDs for qualitative information.

3.7 Sample size

Five (5) T/As (3 T/As from Nsanje and 2 T/As from Chikwawa) from which flood prone populations originated from were sampled namely; Nyachikadza, Mbenje and Tengani in Nsanje and Makhuwira and Kasisi in Chikwawa. At community level, a total of thirteen (13) informants were sampled for KIIs and IDIs from the two districts (5 in CK and 8 in Nsanje) including chiefs, opinion leaders, and CPCs leaders. Thirteen (13) FGDs were convened 8 in Nsanje and 5 in Chikwawa. For the face-to-face surveys, the sample size was 100 individuals/respondents from flood-prone populations who were randomly selected in the camps for interviews (70 respondents in Nsanje and 30 respondents in Chikwawa).

At district levels six (6) experts were selected for KIIs, three (3) from each district and two (2) FGDs were conducted, one (1) from each district. The FGDs enabled the district officials to discuss the factors and rank the factors in order of importance through the pairwise ranking matrix.

3.8 Data Analysis

The study analyzed both secondary and primary data to determine fulfilment of the study objectives and research expectations. The analysis of the primary data enabled the interpretation of the findings and describing the meaning of the information gathered.

According to Strydom, Fouche and Delport (2005, p. 218), data analysis means finding answers by way of interpreting the data and results. To interpret is to explain and find meaning.

The secondary data included reviewing of specific district flood records, DoDMA records, flood damage assessment reports, flood affected assistance records at district level and flood reports by other developmental partners in the two districts.

The qualitative data was analyzed using the content analysis approach by reviewing statements made, observations, transcribed verbatims, translations and notes from the FGDs, KIIs, IDIs to make inferences based on themes. While the pairwise ranking method enabled ranking of factors in order of importance in influencing seasonal migration.

The quantitative data processing and analysis used a Statistical Package for Social Sciences (SPSS) version 20 software to deduce descriptive statistics to help in interpretation of study findings. The descriptive statistics and other statistical outcomes from the analysis were explained and given meanings in line with the study objectives. The quantitative analysis was also triangulated with the qualitative analysis and their meanings.

3.9 Study Limitations

The study was limited in terms of the possibility to generalize the findings from the Shire River Valley to apply them to many other flood-affected districts in Malawi where seasonal migration tendencies do also exist. It left a gap on knowledge whether the factors in the Shire River Valley on seasonal migration are the same with those in other districts and is the order of importance of the factors the same?

CHAPTER 4

RESULTS AND DISCUSSIONS

This chapter presents results of this study which was aimed at investigating factors that influence seasonal migration of flood prone populations in the Shire River Valley districts of Chikwawa and Nsanje. The results of the study and discussions have just tackled pertinent study questions. The chapter has also discussed findings of other scholars and were debated in reference to my findings. This was done to see which findings are agreeing, which ones are different and why; what additional knowledge has been discovered through the study.

The main focus of the study was to investigate reasons why flood prone populations return to flood prone areas after the floods. And further to study the reasons (in order of importance) why flood-prone populations return into flood prone areas after the floods; to investigate the factors (in order of importance) why they insist living in flood prone areas. Other specific objectives include: to understand the perceptions of flood prone populations to their vulnerability and the seasonal migration tendency; also the perceptions of Government officials and humanitarian agencies towards flood-prone populations' seasonal migration tendency.

Therefore this chapter has started discussions regarding perceptions of flood-prone populations on their vulnerability to floods; perceptions of humanitarian agencies and government agencies on flood-prone populations vulnerability and seasonal migration; discussed the results about why flood prone populations insist living in flood prone areas; again looked at the challenges they face at place of destination; and most importantly explained why do they return to flood prone areas after the floods have receded. Also, a comparison was made on the reasons between factors for insisting living in flood-prone areas and reasons for returning to flood-prone areas.

4.1 Flood-Prone Populations and local leaders' perceptions on vulnerability to floods

This section has covered perceptions of both flood prone populations and that of their leaders on their vulnerability to floods, on insisting living in flood prone areas, and their perceptions on the tendency of return/seasonal migration.

4.1.1 On their vulnerability to floods

Table 1 shows perceptions on vulnerability to floods

	Male		Female		Total
	Number	Percent	Number	Percent	
Perceptions on level of vulnerability					
Vulnerable	15	15	14	14	29
Very Vulnerable	37	37	33	33	70
Temporary occurrence	1	1	0	0	1

On vulnerability, the study findings show that majority of the flood prone populations in the Shire River Valley (70%) feel very vulnerable to flood disasters, while (29%) feel it's a mere vulnerability and 1 % perceive flooding as just a passing event. Despite majority being aware of their vulnerability, majority are reluctant to relocate to safer areas. This shows that people in flood prone areas are not ready to permanently relocate despite being aware of their vulnerability. This agrees with Combest-Friedman et al. (2012) who emphasized that households that live in flood prone areas are aware of the increase of rainfall and changes in the intensity of floods and the associated risks but they are reluctant to relocate to safer areas. This finding also corroborates with Lee theory of migration, which contends that personal factors (perceptions) do matter in regards to decision to permanently relocate or not.

Lee (1966) argued that there are personal factors on which the decision to migrate from the place of origin to the place of destination depends. In fact, it is an individual's perception about the 'pull and push forces' which influence actual migration.

4.1.2 On why flood-prone populations insist staying in flood prone areas

Flood-prone populations feel staying in flood-prone areas is their livelihood strategy since those are the areas where they are able to do economic activities and earn a living. They feel the flood-prone areas are for cultivation (86%); they want to protect ancestral land (40%); protection of cultural sites (30%); because of fertile soils (79%); for fishing (43%); that the areas are their own lands given by their departed parents (57%); that they don't have land in the upland to cultivate and stay (45%) and that government has no strategy on them to move out of the flood prone areas (53%).

The findings agree with what Chawawa (2018) found that smallholder farmers cling to flood-prone areas for crop production and fishing. However, on the other hand my study found contrary findings whereby the reasons like coercion by the chiefs for them to stay in flood prone areas (2%) was not the main pull factor. Also, that chiefs do coerce the subjects to avoid losing the chieftaincy did not come strongly in this study. These assertions depart from other scholars' findings and public opinion who argue that fear of losing chieftaincy, desire for handouts were found to be some of the reasons for people to still live in flood prone areas. My findings show different reasons as mentioned above. This might be because impact of floods on flood-prone populations is becoming greater every new flood occurrence which is making the people to change their minds. In 2019, during data collection for this study, majority of households and chiefs affected by the 2019 Cyclone Idai seemed to have changed their minds, attitudes and thinking about insisting living and returning to flood-prone areas. They seemed to be supporting permanent resettlement.

Also, my findings agree with Chawawa (2018) who said that there is less consultations with the affected populations themselves to understand their reasons. Chawawa discovered that this perception could be due to failure of GoM and stakeholders to involve the populations to express their reasons why they resist relocation. It asserted that

It is evident that little is known about the processes and factors that influence the smallholder farmers to continue living in the flood prone areas which influence public misconception and inappropriate policies and strategies.

4.1.3 On permanent relocation

The flood-prone populations agree that permanent relocation can be a sustainable flood risk reduction measure. The reasons given included that they would be safe (95%), they are tired with the consequences of floods (80%) and considering the damage floods (78%) cause on their lives and livelihoods. But their perception is that government has the responsibility to start the program of permanently relocating the habitual flood-affected populations. They do expect government, chiefs and humanitarian agencies to give them the land to settle and the materials to build stronger houses in the upland and safer areas. Literature shows that in 2012, 2015 and even 2019 floods, GoM indicated that there are pieces of land for the flood-affected populations to be relocated to but practically according to the findings of this study, it shows that it is not clear where would the flood-affected populations be relocated, and there is very limited indication from GoM and humanitarian agencies if they are ready with the resources for the flood-affected populations to permanently relocate.

4.1.4 Perceptions on the return migration

People from flood-prone areas feel that returning to flood prone areas is not a safer way but they argue that while in temporary camps Government and humanitarian agencies must show commitment to relocate them than just promising. They should show and give them the land, construction materials and livelihood options so that they are attracted to settle. They argue that given that all the needed items are available they can consider permanent relocation, but where the needed materials are not provided, and there are no alternative livelihoods measures, they do not have an option but to return to their flood prone areas.

the major reasons why flood prone populations return to flooded areas is to continue farming and fishing (economic factor). (FGD, Nyachilenda-Nsanje).

In moving forward, Government must intervene. There must be good coordination between the Government and the chiefs on the allocation of land. (FGD, Makhuwira-Chikwawa).

The other reason is that host chiefs and communities are not willing to provide land for flood prone populations to resettle. They mentioned that land is the second biggest factor because pieces of land belong to the owners who demand compensation. Also, others are just not willing to give land for others to resettle.

In ranking the factors amongst other factors in influencing seasonal/return migration amongst flood prone populations, it was discovered that both **economic reasons** and **physical reasons** were rated highly. See fig 6 below.

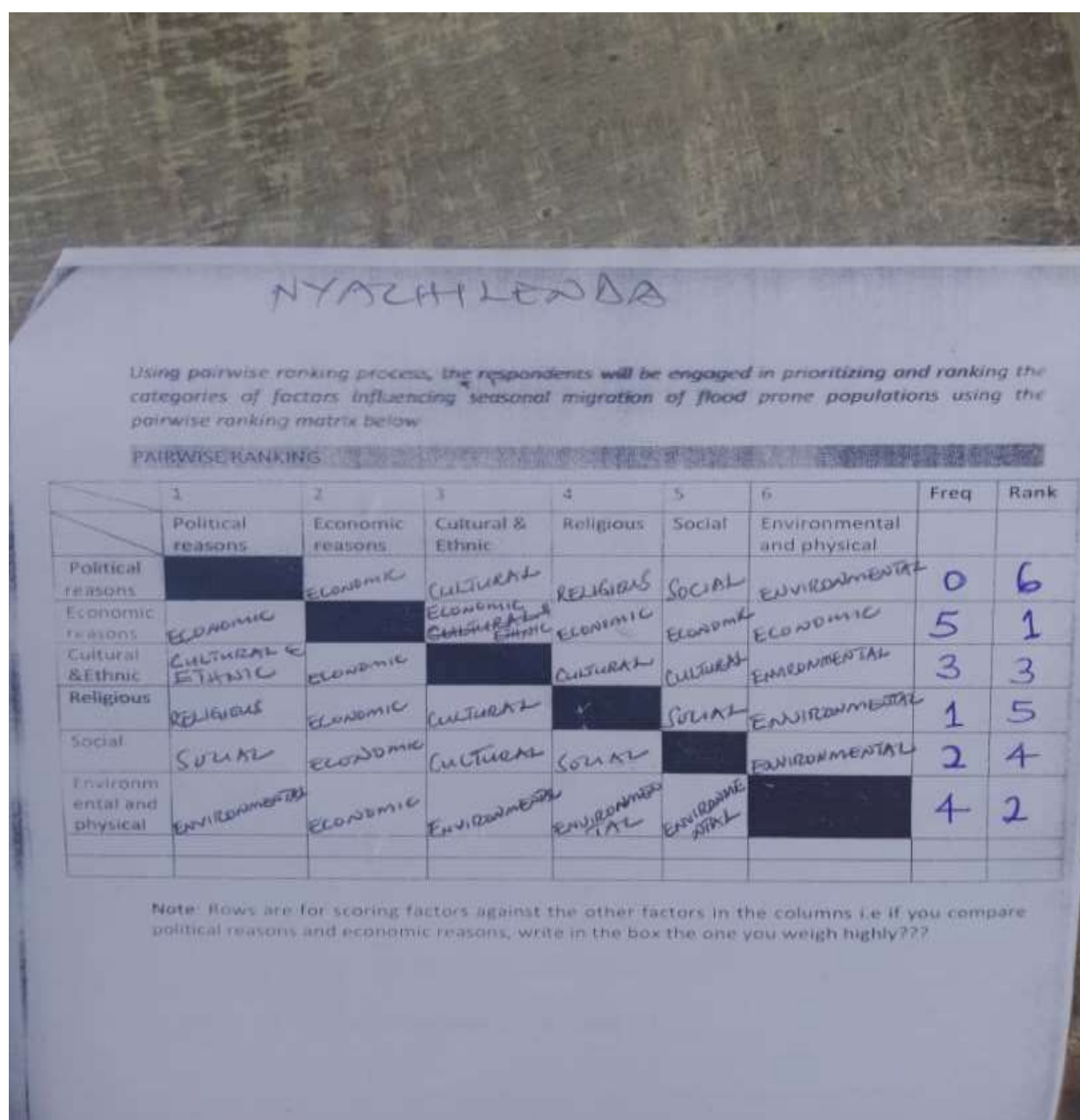


Figure 6 Showing factors ranked in order of importance by the communities and their leaders (Researcher).

The ranking by discussants in Ndamera/Nyachilenda Nsanje was further agreed by a VCPC chairperson at Phimbi camp under Nyambaro VCPC in Chikwawa in which he narrated how factors have direct influence on each other.

If land is found but there is no money to buy or to compensate the land owners, resettlement will not take place. Equally if funds are available but land is not available for the flood-prone populations, relocation will not take place [IDI, Phimbi VCPC chair, Makhuwira, Chikwawa].

The study also showed that **socio-cultural strings** are also hindering the resettlement attitudes as both communities would find it difficult to mingle and adapt to cultural dynamics from each other. Chiefs and their subjects are not willing to be mixed up with other populations whose cultures and beliefs are different.

In summary as regards perceptions, the study confirms that flood-affected populations do hold their perceptions about their vulnerability to flood risks and seasonal migration but their perceptions are not fully tapped or understood either because they do not have that opportunity to express them or researchers have not been able to unearth critical issues that lead to their perceptions. The flood victims have different perceptions on their vulnerability and why they are resisting permanent relocation.

As one of the key informants lamented during the IDI,

These people don't know how we suffer in camps and how degrading it is to be in camps, we want to be relocated but GoM, stakeholders just tell us to relocate but how and where they don't tell us. [IDI, Tengani, Nsanje].

4.2 Government agencies and Humanitarian actors' perceptions towards flood-prone populations' vulnerability to floods

To capture opinions of different stakeholders in the two districts about the cause of seasonal migration of flood prone populations, the study used IDIs, KIIs and FGDs to triangulate their perceptions and those opinionated by the flood prone populations and their local leaders. The study interviewed Assistant District Disaster Management Officers (ADDMOs) from the two districts, CADECOM, EAM, RED CROSS, EAGLES Relief, DADOs from the two districts.

4.2.1 On flood prone populations being vulnerable

The district councils and the humanitarian actors in the two districts indicated that most of the flood prone areas are inhabitable. And when they see flood victims returning to the flood prone areas looks ridiculous to them. Just as many would ask these questions, don't they see that they are vulnerable? Then why do they return to flood prone areas? They feel they are stubborn and enjoy handouts when floods occur.

4.2.2 On flood prone populations insisting staying in flood prone areas

In getting their opinion on why they think flood prone populations insist living in flood prone areas or why do they return after the floods, the officials were in agreement that the reasons people give are that they want to continue fishing and to be closer to their farm land for food production.

Flood prone populations have appetite to continue farming and fishing along the river banks where much of their livelihoods are earned. (FGDs, District Stakeholders, Nsanje).

These are the economic activities which were also mentioned by the flood prone populations as the major reasons why they cling to flooded areas.

The other reasons that were highlighted were lack of Government aggression on resettlement programme; lack of local government direction on chieftaincy after relocation; lack of legal ownership of land for settlement and cultivation for the flood prone populations.

Government and chiefs should consult each other and work together on the resettlement programmes. They must agree where to relocate the flood prone populations, land compensation issues, required amenities and draw an agreeable resettlement programme (FGD, Stakeholders, Nsanje).

4.2.3 On return migration of flood prone populations

District officials feel that the flood-prone populations take floods casually. They think flood prone populations look at floods as a passing event, duration of the floods is shorter, time of staying at the camp is shorter as well and challenges at the camp are not adequately solved hence people just return;

Flood prone populations look at floods as a temporary occurrence where they only spend few months at the camp and within the period while in camps, they see no way of sustaining their livelihoods other than returning to the same flood prone areas. [KII, District Official, Nsanje].

The findings are in agreement with the push-pull factors by Lee (1966) who argued that migration depend on attracting forces and repelling forces at both place of origin and place of destination. In this study it was argued that if place of origin, despite getting flooded has attracting forces and repelling forces in camps, people will either return or not.

On their perception towards seasonal migration tendency, from the interviews that were conducted, it was revealed that many stakeholders in the districts agree that seasonal migration by the flood-prone populations is not beneficial. They argued that this behavior promotes dependency syndrome; it is costly and time consuming. Ultimately it retards development since many of the developmental activities cannot be sustained.

During the FGD with district stakeholders the discussants suggested as follows;

We suggest that the GoM and chiefs should encourage flood prone populations to permanently move out of the flood prone areas and permanently resettle in safer areas. [FGD, District Stakeholders, Chikwawa].

Key informant from a humanitarian agency in the district added that *when the flood prone populations have been relocated to safer areas, they must also be provided with basic social services. [KII, Cadecom, Chikwawa].*

The officials were also aware that the resettlement programme is complex and attracts different opinions, requires mutual understanding amongst flood-affected populations, stakeholders and development partners. In the interim, the districts suggested a number of disaster risk reduction measures as corroborated by one of the partners who said;

While waiting for fully-funded and operationalized resettlement programs, the districts can encourage construction of dykes to cope with floods;

construction of strong structures, adherence to seasonal weather forecasts and advices; conduct participatory approach to safe shelter awareness to be some of the interim mitigation measures while strategizing on permanent relocation. [KII, Red Cross Society Malawi, Chikwawa].

In wrapping up, the discussants in Nsanje and Chikwawa were asked on what should be done to deal with seasonal migration by specifying what they think Government, chiefs, flood-prone populations and host communities must do. It was mentioned that

Government must provide land for relocation and also identify partners to support with essential services; must sort out chieftaincy issues beforehand; must provide resettlement packages and conduct civic education on resettlement and construction of safer shelters. On the part of the chiefs, then they must help or assist in identifying and providing land and set by-laws commanding each and every family to relocate. For the flood prone populations, they must accept to resettle in the allocated pieces of land; and provide labor for construction of their own houses. The host communities must agree to provide land to others for resettlement and cultivation. (FGDs, Stakeholders, Chikwawa & Nsanje.)

Figure 7 below shows a completed pairwise ranking matrix by the district officials and stakeholders. When the district stakeholders were engaged into pairwise ranking of factors, to depict what they thought are the major factors influencing seasonal migration of flood prone populations, they were in agreement that it has to do with **economic factors** i.e cultivation, fishing (in flood-prone areas) and no money to buy land and construct a new house in the upland. They contended that in order to end this phenomenon then there must be sufficient resources to enable resettling of flood-prone populations and seconded by availability of land to relocate the flood prone populations, which is a **physical and environmental factor**. Third factor was **socio-cultural reasons** whereby societies seem not ready to just mix-up since they have different cultures and beliefs. In this study it was revealed that religious reasons do not matter.

Using pairwise ranking process, the respondents will be engaged in prioritizing and ranking the categories of factors influencing seasonal migration of flood-prone populations using the pairwise ranking matrix below

PAIRWISE RANKING

	1	2	3	4	5	6	Freq	Rank
	Political reasons	Economic reasons	Cultural & Ethnic	Religious	Social	Environmental and physical		
Political reasons		Economic reason	Cultural & Ethnic	Religious	Social	Environmental and physical		
Economic reasons	Economic		Economic	Economic	Economic	Economic		
Cultural & Ethnic	Cultural & Ethnic	Economic		Cultural & Ethnic	Cultural & Ethnic	Environmental & physical		
Religious	Political	Economic	Cultural & Ethnic		Social	Environmental & physical		
Social	Social	Economic	Cultural & Ethnic	Social		Environmental & physical		
Environmental and physical	Environmental & physical	Economic	Environmental & physical	Environmental & physical	Environmental & physical			

Note: Rows are for scoring factors against the other factors in the columns i.e if you compare political reasons and economic reasons, write in the box the one you weigh highly???

Factor	Score	Rank
Political =	0	0
Economic =	10	1
Cultural & Ethnic =	5	3
Religious =	0	0
Social =	4	4
Environmental & physical =	8	2

Figure 7 Pairwise Ranking Matrix for prioritization of influencing factors (FGD, Stakeholders- Chikwawa). (Researcher).

4.2.4 Perceptions on why flood prone populations are reluctant to permanent relocate after the floods

This study has found out that while flood-prone populations wait upon the GoM and stakeholders to relocate them permanently, stakeholders do not perceive so. They think they must first change their attitude and think about permanent relocation then GoM and stakeholders will come in to support.

Chawawa (2018) learnt from district officials in Nsanje that they perceive that the flood-prone populations are stubborn and refuse to move upland because they know government and humanitarian actors will always support them anyway during floods. My study found contrary findings where handouts were not confirmed to be primary reason for refusing relocation by flood victims. Flood-prone populations gave reasons both for insisting and returning to flood-prone areas.

Perception of another key informant is that;

Flood-prone populations look at floods as a temporary occurrence where they only spend few months at the camp and within the period, they see no way of sustaining their livelihoods other than returning to the same flood prone areas. [KII, District Official, Nsanje].

Looking at the perceptions from the two groups i.e flood-prone populations and the district officials, the study contends that stakeholders and flood-prone populations are still differing on perceptions and understanding about the issue of permanent relocation. Flood prone populations have their own reasons for clinging in flood prone areas and seasonally migrating in and out. On the other hand, district officials and experts feel flood-prone populations are adamant and have handout syndrome in them. On the other hand, admittedly, the district stakeholders observed that there is no proper guidance and commitment from government and the chiefs on the matter of relocation.

However, there is a common belief between stakeholders and flood-prone populations on the first two factors, economic and physical factors, that they are the ones influencing seasonal migration of habitual flood prone populations. A case was narrated about Mwalija village in T/A Kasisi, Chikwawa which was affected by the 2019 floods. There were humanitarian actors and the GoM with resources or houses construction materials and at the same time land was available for resettlement.

The economic (financial resources) factor and physical factor (land was found for reconstruction of permanent houses) attracted the affected populations to settle permanently and no returning. The origin or vacated place is now used for cultivation where people just built temporary shelters to rest when growing crops in the flood-prone area.

4.3 Factors that influence seasonal migration

This section of the results chapter dwelled on quantitative analysis where statistics were deduced using SPSS to triangulate with the qualitative analysis which has been made in the previous section. The section has used quantitative statistics to clearly come to the factors that influence seasonal migration of flood prone populations. The study firstly had to understand why do the flood prone population insist living in flood prone areas. Then also the study looked at the challenges, migrants face in the new destinations/camps and the reasons why they return to the flood-prone areas.

A comparison on the reasons for insisting living in and returning into flood-prone areas was also discussed. A simple table was done to see the relationships between reasons for insisting living in flood prone areas and reasons that prompt the flood affected populations to return to flood prone areas.

4.3.1 Why do flood prone populations insist living in flood-prone areas in order of importance

The table 2 below shows a list of reasons why flood prone populations stay in flood prone areas despite the flood dangers. Then table 3 shows the factors or the reasons in order of importance as ranked by the respondents during the surveys. In ranking the factors, the respondents were asked to mention 5 priority reasons for insisting staying in flood-prone areas and why do they return afterwards.

Table 2 Why do flood-prone populations insist living in flood prone areas

Reasons for insisting living in flood prone areas					
Reason	Male		Female		Total
	Number	Percent	Number	Percent	
For cultivation in fertile soils	46	46	40	40	86
To protect ancestral remains (<i>grave yards, cults</i>)	23	23	17	17	40
Protect cultural sites (<i>traditional places which make history for the people-like Mbona shrine</i>)	20	20	10	10	30
For fishing as a source of income	34	34	9	9	43
Its our ancestral land (<i>land given to them by their ancestral parents for cultivation</i>)	32	32	25	25	57
No land to cultivate in the upland	22	22	23	23	45
Hostility of the host communities	1	1	1	1	2

	Reasons for insisting living in flood prone areas				
Reason	Male		Female		Total
	Number	Percent	Number	Percent	
Government not doing anything	26	26	27	27	53
Temporary relief assistance in camps	2	2	3	3	5
Encouraged by chiefs	2	2	2	2	4

To answer the study specific objective regarding the reasons why people still live in flood prone areas despite the fact that they are either vulnerable or very vulnerable, the study found out that the reasons for clinging to flood prone areas are; for cultivation (86%); protect ancestral land (40%); protection of cultural sites (30%); because of fertile soils (79%); for fishing (43%); that the area is their own land given by their departed parents (57%); that they don't have land in the upland to cultivate and stay (45%) and that government has no strategy on them to move out of the flood prone areas (53%). These findings are not very different with what Chawawa (2018) found maybe the difference could be on actual percentages and on prioritizing the reasons.

On the other hand, the reasons like coercion by the chiefs for them to stay in flood prone areas (4%) and hostility of host communities (1%) were not significantly flagged out in this study. This statement departs from other scholars' findings and public opinion who argue that fear of losing chieftaincy, desire for handouts were found to be some of the reasons for people to still live in flood prone areas. Chawawa (2018) reported that some farmers indicated the decision to move upland or not is from their chiefs since they cannot disobey chiefs. That the chiefs do not encourage their subjects to relocate to new territories for fear of being governed by new chiefs and the erstwhile loses his or her chieftaincy. My study did not confirm that chiefs force the households to live in flood prone areas as only few respondents said so (4%).

In present era chiefs have less power or control on families' decisions and they cannot just dictate things. People have opened up in this democratic era. Again Chawawa (2018) found out from district officials in Nsanje that the flood prone populations are stubborn and refuse to move upland because they know government and humanitarian actors will always support them anyway during floods. My study found contrary findings where handouts benefits did not come strongly as a reason for refusing relocation by flood victims.

Table 3: Five Priority Reasons for living in flooded areas

Priority Reason	Male		Female		Total
	Number	Percent	Number	Percent	
For cultivation in the fertile soils after the floods	44	44	38	38	82
Because of fertile soils to produce bumper yields	15	15	14	14	29
For fishing to sell fish as a source of income	39	39	14	14	53
Its our ancestral land (<i>land given to them by their ancestral parents for cultivation</i>)	35	35	28	28	63
No land to cultivate in the upland	19	19	26	26	45

In ranking the reasons for insisting staying in flooded areas, the study discovered that cultivation (82%) in the fertile alluvial soils was the main reason, seconded by fear of losing own land given by their parents and ancestors (63%); fishing was also mentioned and that they don't have land to cultivate in the upland areas on third and fourth respectively.

In broader categories as put by Lee (1966) and other scholars the reasons are mainly economic reasons i.e cultivation (82%), fishing (53%) and environment and physical reasons i.e no land to cultivate in the upland and to protect their ancestral land.

The political and social reasons were not much flagged out amongst the top priority reasons at least for insisting living in flood prone areas. This might be so because GoM, chiefs usually do not disturb them when they are safe and living their lives despite being in flood-prone areas. It seems nobody, no institution would tell flood-prone populations to leave and move to the upland area when there is no flood disaster. According to Ravenstein (1885) and Lee (1966) the reasons for insisting living in flood prone areas have to do with pull factors and push factors at place of origin which are broadly categorized in this case as economic factors, physical and environment factors. The elements of the theories which this study based on have been applied and proved.

4.3.2 Livelihoods and challenges while in camps/new destination

Table 4 below shows livelihood strategies that flood affected populations employ or depend on while staying in camps or relatives' homes and at any place of destination after the floods. The table has also shown the challenges faced by the flood affected populations while in camps.

Table 4 How do flood affected people earn a living at the camp and challenges they face

Means for livelihoods	Male		Female		Total
	Number	Percent	Number	Percent	
Nothing	9	9	4	4	13
Ganyu	39	39	35	35	74
Depending on handouts	32	32	28	28	60
Farming in the upland	0	0	1	1	1
Dimba farming after waters subdue	16	16	12	12	28
Fishing	15	15	10	10	25
Trading	5	5	3	3	8
Challenges at the camp					
Theft	12	12	4	4	16
Ridiculed	2	2	0	0	2
Water Shortages	32	32	22	22	54
Food shortages	48	48	42	42	90
Contagious diseases	28	28	25	25	53
No money	37	37	34	34	71
Inadequate space for shelter	35	35	31	31	66
Breakup of families	23	23	13	13	36
No land to cultivate in the upland	5	5	2	2	7
Ghost flood victims	10	10	7	7	17
Host chiefs give conditions for staying at the camp	1	1	0	0	1

This reflection on livelihoods at the camp and the challenges flood-affected populations experience while in camps was premised on the fact that their lives and livelihoods at these camps would influence them to return or to stay at the camp or seek permanent settlement around the area. This is in line with the theories by Ravenstein and Lee and what other scholars have already alluded under literature that conditions or factors at place of destination do influence migration. The study found out that what flood victims do at the camp were myriad; others were earning their livelihoods through ganyu (74%), receiving relief items (60%); fishing and continue with winter/dimba cropping and a good population literally were not doing anything (13%). Thus, in camps a total of 73% (60% +13%) depend on relief assistance.

Those participating in ganyu, do it to the surrounding communities by providing labor in hosts' gardens in the upland. It was also observed that while at the camp the families go back to the flooded areas to grow crops using the residual moisture and do fishing and return to the campsite again.

On challenges faced while at the camp, the flood victims mentioned that their major challenge is food shortages (90%); no money (71%); inadequate space for sleeping/shelter (66%); shortage of water (54%); contagious diseases (53%) and also theft and ghost flood victims.

This study found out that the challenges in camps are too many and complex to entice flood-prone populations to stay in camps on anticipation of handouts as some scholars and public opinions put. During the FGDs the victims said,

conditions in camps are humiliating, not conducive for families. we are ridiculed as refugees, insulted and there is no adequate food, water, sanitary facilities so we are prone to diseases. [FGD Mwalija, Chikwawa].

The same lamentation was made by flood victims at Sekeni camp in Chikwawa during the visit to one of the camps,

We wish we could be given a chance to be heard than coming up with inhumane perceptions about us. It is very humiliating to be in camps, where there is no adequate food, no respect, no dignity and family relations and systems are disrupted. The little we get cannot suffice bigger families for a long time. [FGD, Sekeni Camp, Chikwawa].



Figure 8: shows conditions in temporary camps, how families live and share resources during 2019 floods (Researcher)

Figure 8 above accentuates to the point made by one of the respondents who lamented that camp situations are really humiliating and would not be a trigger for one to insist living in flood prone areas to benefit from camp situations or relief items. But flood-prone populations provided their own reasons for seasonally migrating in and out.

It was revealed during the study that there are some flood-affected populations who desire to relocate but they mentioned hindering factors such as where would they access the land amidst host communities who are not willing to give them portions of land. The host chiefs and communities (77%) are not willing to give land to the flood affected populations either for resettlement and cultivation. Host communities demand compensation for the pieces of land or government must buy the land to enable them access land for resettlement.

This is in corroboration with a statement made by the ADDMO for Chikwawa district council who confirmed that land is an issue.

There is need for stakeholders to support with resources to purchase land for the flood victims to settle as it has been done by a certain NGO i.e VOICES, which bought land for flood victims at Phimbi, in Makhuwira for the flood affected households to settle in the upland.
[KII, ADDMO Chikwawa].

4.3.3 Factors that influence the flood prone populations to return into the flood prone populations in order of importance

Table 5: why do flood affected populations return

Reasons	Male		Female		Total
	Number	Percent	Number	Percent	
To continue with fishing	39	39	20	20	59
Cultivation in fertile soils after the floods	50	50	37	37	87
To secure our ancestral land	39	39	39	39	78
No land to cultivate in the upland	32	32	29	29	61
Hostile communities	5	5	2	2	7
Lack of government guidance	25	25	26	26	51
The relief assistance is temporary and inadequate	4	4	2	2	6
Encouraged by chiefs	0	0	1	1	1

On investigating the reasons why flood prone populations return to flood prone areas, the respondents mentioned that they would want to continue cultivation in fertile soils (87%); seconded by the reason to secure ownership of their own ancestral land which was given to them by their ancestors (78%) and third on the list is that in the upland

areas there is no land for them to cultivate and settle (61%); for fishing (59%), lack of Government guidance (51%) as one of the informant said,

Government is also not showing any direction and willingness in allocating land to flood-prone populations. [KII, Mbenje, Nsanje].

Other reasons for returning to flood prone areas were because of hostile communities (7%), because the relief assistances are temporary and inadequate (6%) and encouraged by chiefs to return (1%). In this study it is evident that the decision to return is made at household level and not forced by chiefs. According to theorist Lee (1966) personal factors do play a role to stay in safer areas or return.

Table 6: Broader Priority factors for return to flood prone areas

Factors	Male		Female		Total
	Number	Percent	Number	Percent	
Economic factors (farming, fishing, small businesses, no money)	53	53	44	44	97
Political factors (<i>Government not doing anything, political boundaries, budgetary allocation</i>)	10	10	17	17	27
Social factors (<i>societal norms, social systems</i>)	4	4	4	4	8
Physical and Cultural factors (<i>to secure their ancestral land</i>)	42	42	37	37	79
Environmental and physical reasons (<i>land availability, funds to buy land</i>)	25	25	35	35	60

In order of importance, the priority reasons for return are broadly economic reasons (97%) thus for cultivation, fishing and small businesses. Seconded by physical factor to secure ancestral land (79%). Thirdly, are physical reasons (60%) that they do not have land to settle and cultivate in the upland. Political reasons (27%) included that government not doing enough to give direction on how to make the flood-prone populations safer all the times. On the least is that of socio-cultural factor to protect cultural sites (14%) and to safeguard ancestral remains like graveyards (9%).

The findings show that economic and physical factors are strong drivers or push-pull factors for the flood-affected populations to return to flood prone areas. Vindicating the concepts and theories by both E.G Ravenstein and Everett Lee. That there are pull-push factors for migration i.e there are factors at place of origin and factors at place of destination.

The reasons for returning to flood prone areas were not different in order of importance from district to district and between males and females but differed on percentages. For instance, on broader priority reasons for return, on economic reasons (53%M, 44%F); physical reasons (42%M, 37%F); cultural factors (25%M, 35%F); on political reasons (10%M, 17%F). It was observed that female respondents viewed physical factors (no land to cultivate, no land to settle) as very important factors for return. On the other hand, male respondents rated highly the economic reasons as they want to continue cultivation, fishing and doing small businesses.

Table 7: Distance as an intervening obstacle for migration

Distance between flood prone village and the camp/new destination					
	Male		Female		
	Number	Percent	Number	Percent	Valid Percent
Less than 1km	15	15	14	14	29
1-2kms	19	19	14	14	33
Over 2-5kms	5	5	11	11	16
Over 5-10kms	5	5	1	1	6
More than 10kms	9	9	7	7	16

The study discovered that the distances between the flood prone villages and the camps are often shorter distances like less than 1km (29%); between 1-2kms (33%) and rarely 10kms. This distance-factor influence flood prone populations in the Shire River Valley to return to their original flooded areas after the floods because they are closer.

These findings agree with the theory Ravenstein (1885) who argued that migration is more likely to occur at shorter distances rather than long distances. And according to Lee (1966), these are just intervening obstacles/factors facilitating migration alongside push-pull factors.

For instance, during data collection on distances in Mwalija, T/A Kasisi Chikwawa, it was discovered that the distance between the old village and the new village is significantly shorter. So, the new village is for permanent houses while the old village is for cultivation. Thus, seasonal migration is being facilitated by some of flood-affected populations because of the shorter distance between place of origin and destination. This is in addition to pull-push factors at place of origin and destination

4.3.4 Are the factors for insisting staying flood prone areas and those factors for returning the same?

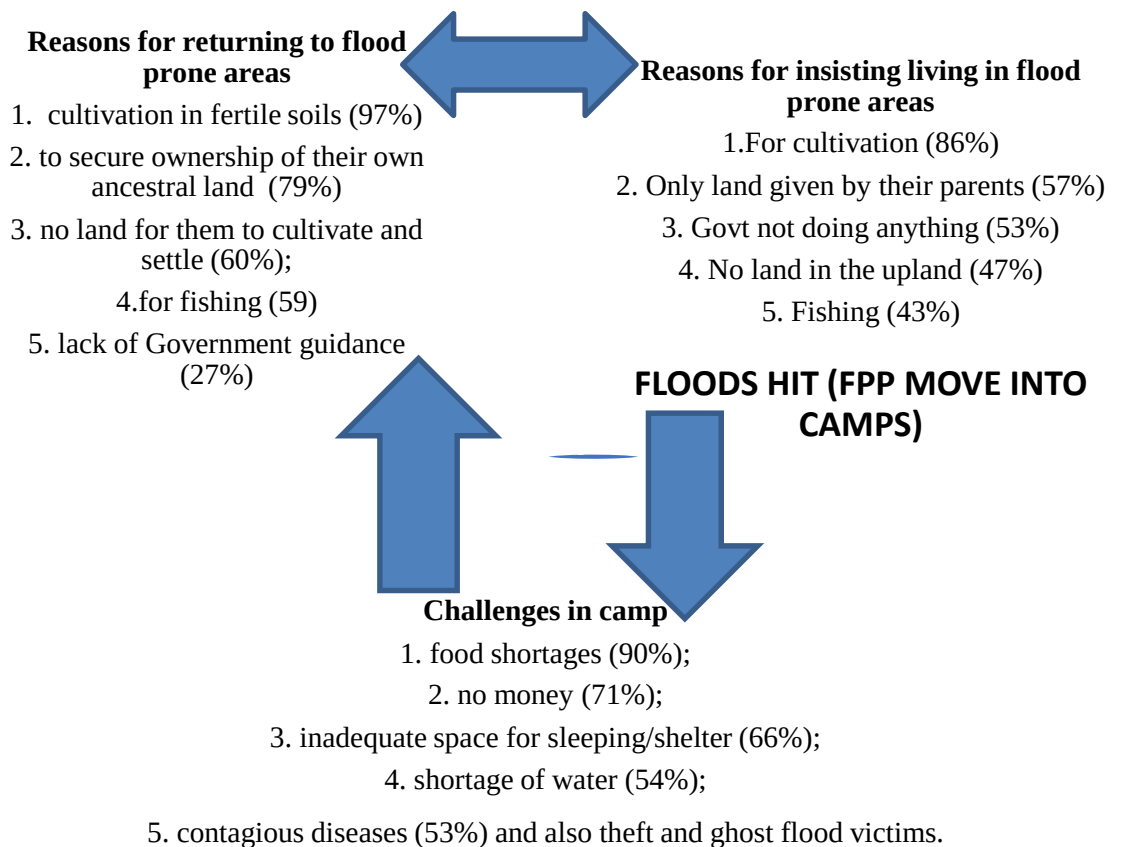


Figure 9 Shows how seasonal migration comes about and repeats itself (Researcher)

Figure 9 above provides a pictorial/figurative explanation about the whole seasonal migration cycle keeping in mind the push-pull factors within the migration process. It

shows that at every stage within the migration cycle there could be push factors as well as pull factors. And, also the intervening obstacles. This is in line with the Lee (1966) theory of migration. The study conceptualized that when flood prone populations are in the flood prone areas, the push factors that would trigger them to move out of the area are climatic shocks e.g floods and the factors that would pull them to a new destination are alternative livelihoods, availability of land to settle and cultivate and favorable environment. And the intervening obstacles between origin and place of are the distances and challenges faced. Equally the push factors to return to the flood prone areas are cultivation, no land in upland, no alternative livelihoods while in camps. So, when floods hit again the pull-push factors are activated and seasonal migration cycle continues.

This cycle in this study has been deduced to show how seasonal migration happens in the Shire River Valley when the floods affect the flood prone populations. Using the same migration cycle, a comparison was made on factors why people insist living in flood prone areas and why do they return.

Table 8: a summary table showing priority reasons for the cyclic movement of flood prone populations

REASON	FOR LIVING IN FLOOD PRONE AREAS		FOR RETURNING TO THE FLOOD PRONE AREA	
	Broader category	Percent	Broader Category	Percent
Cultivation	Economic	82	Economic	87
Fishing	Economic	53	Economic	59
To secure the ancestral land	Physical	63	Physical	78
No land to cultivate in the upland	Physical and Economic	45	Physical and Economic	61
Lack of government guidance	Political	23	Political	51

This study discovered that the reasons for insisting living in flood prone areas and those factors influencing return migration from the camps are the same. This was based on the bivariate analyses which were conducted where seasonal migration was operationalized as a dependent variable to compare priority reasons for insisting staying versus priority reasons for returning to flood-prone areas.

It is evident that flood-affected populations when in camps and don't have alternative livelihoods they will always return to their flood prone areas for cultivation (87%), fishing (59), to safeguard and secure their ancestral land (78%)-thus to avoid losing their ancestral land given to them by their parents, also that they don't have land to cultivate in the upland (61%) and that Government is not giving direction (51%) to them to permanently relocate. The higher percentages on reasons for returning confirms the argument why majority would prefer to return to flooded areas after camp period. It is therefore discovered that the flood-prone populations still want to stay in flood prone areas and return on similar grounds and have the same priority reasons.

The study shows that while in the camps, the flood-prone populations expect government to intervene with lasting solutions but unfortunately it does not give guidance as over half (51%) of the populations in the camps feel it is the duty of the government to ensure the flood-prone populations have land to cultivate and stay. And also provide alternative livelihoods which could compensate what they can lose from the flooded areas.

In broader categories, the main contributing factors that influence seasonal migration of flood prone populations in order of importance are; economic factors; physical factors and political factors and cultural/ethnic factors. As seen in the above table that these are strong triggers for seasonal migration and strategies are needed to deal with the factors to curb seasonal migration of flood prone populations in the Shire River Valley districts of Chikwawa and Nsanje. Relief assistance, handouts and all other food distribution programmes have little chances of minimizing or eradicating the tendency. But a well-designed and well-funded resettlement or relocation program has the potential to stop the tendency.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Recommendations

The study recommends that to facilitate permanent relocation of flood-prone populations, the Government of Malawi should engage the local leaders from both sending and receiving communities to agree on new villages and land compensations implications. Firstly, Government, local leaders and development partners must map out places where to relocate the flood prone populations dependent on nearness to their original flooded areas. Because this study shows that flood prone populations are willing to relocate few kilometers away from their original villages.

Government, donor agencies and development partners must move together with the guidelines on how to relocate the flood prone populations and commit funds to invest into sustainable resettlement program with facilities like houses, boreholes, schools, markets in new locations than temporary relief packages.

Each of the influencing factors for the seasonal migration of flood prone populations must be strategically targeted and be aligned with strategic solutions and blended with one another to enable a permanent relocation. Because it was discovered that factors influencing seasonal migration of flood prone populations are interdependent, therefore these factors must be tackled holistically and simultaneously.

Government and Development partners must provide a comprehensive and complete package to flood prone populations to incentivize them to relocate. In this package the first to be considered must be materials for the construction of new strong houses in the identified locations. Then livelihoods packages must be ongoing while in the new locations and supporting them to use the flooded land for cultivation. Again, there must be demand-driven livelihoods alternatives for the flood prone populations while they are in temporary camps to enable them prepare for resettlement.

5.2 Conclusion

In conclusion, the study has found out that flood prone populations insist staying, returning into flood prone areas mainly for economic reasons, physical reasons, political reasons and socio-cultural reasons in that order of importance. These are aggravated by challenges faced while in temporary camps when affected by floods. The literature corroborates with this conclusion as it has been reviewed that there are myriad factors that influence season migration of flood prone populations and some of them are the ones which have been found in this study. There are pull-push factors which are at place of origin and place of destination which result into flood prone populations to seasonally migrate in and out of flood prone areas. Further adding to literature is that in this study those various factors have been ranked in their order of importance as perceived by the flood prone populations in the Shire River Valley on the premise that not all factors have the same magnitude of influence to the tendency.

Specifically, the study has concluded that stakeholders and flood prone populations are differing on perceptions and understanding about the issues of permanent relocation. Flood prone populations have their own reasons for clinging in flood prone areas and why they migrate in and out every flooding season.

Narrowing to the factors in the context of the Shire River Valley, the factors that influence seasonal migration in order of importance are, *economic factors* which include cultivation for food production and fishing; seconded by *the physical factors* such as no land to settle and cultivate in the upland and unfertile soils and drought in the upland places and that they cannot afford to lose their ancestral land. *Political reasons* include that the Government of Malawi is deemed not doing enough to commit the budget and financial package and policy guidance to enable the habitual flood affected populations to permanently relocate.

The study concludes that if nothing is done to deal with the factors found in this study and that there are no alternative economic activities for the flood prone populations who depend on crop production and fishing, and that no land is found for them to relocate it will be an uphill to stop the tendency of seasonal migration. As a result the poverty levels of flood prone populations who migrate in and out of flood prone areas will keep on increasing.

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APPENDICES

Interview Introduction and Consent

Hello Sir/Madam.

My name is **RICHARD KAUTALE TEMBO**. I am a Masters Student at Chancellor College, the University of Malawi. I am conducting a research study on ***Factors Influencing seasonal migration of flood-prone populations in the Shire River Valley Districts of Chikwawa and Nsanje***. The information that will be collected will help to understand the reasons why flood-prone populations migrate to safer areas when they anticipate flood risks and return to flood prone areas when floods have receded. The study wants to understand why flood prone populations behave this way. Ultimately the information will help the Government of Malawi (GoM), development partners, and donors to devise long-lasting strategies for the flood-prone populations. Your household was selected for the survey. I would like to ask you some questions about your household and some questions linked to the research topic. The questions will take about 20 to 30 minutes. All of the answers you give will be confidential and will not be shared with anyone other than the University and Government of Malawi. I don't anticipate that there are any risks associated with your participation. We hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time. In case you need more information about the research report, you may contact the person listed on this form.

Research investigator: RICHARD KAUTALE TEMBO

Research assistant's name:

Research Participants name:

By accepting to take part in this interview;

1. I am voluntarily taking part in this study. I understand that I don't have to take part, and I can stop the interview at any time;

2. The transcribed interview or extracts from it may be used as described above;

3. I have understood what this research is all about

4. I don't expect to receive any benefit or payment for my participation;

5. I will be able to ask any questions I might have, and I understand that I am free to contact the researcher with any questions I may have in the future.

Before I proceed? Are you giving me the consent to go ahead with the interview?

1. Yes 2. No

Thank you for agreeing to be interviewed as part of the above research project.

Appendix A: HOUSEHOLD QUESTIONNAIRE

For the interviewer

1. Questionnaire Number:
2. Enumerator's Code:
3. District Code:
4. Centre Code/Camp Name:
5. Date of Interview
6. Checked: 1. Yes 2. No

HOUSEHOLD DEMOGRAPHIC DATA

Q7	Name of respondent		
Q8	Sex of the respondent	1)Male 2)Female	
Q9	Age of the respondent (in years).	1) 15 – 19 years old; 2) 20– 24 years old; 3) 25-29 4) 30-34 5)35-40 6)41-45 7)46-50 8)51 – 55 Years old; 9) Over 55 years old	
Q10	Marital Status	1) Single (Never married) 2) Married (with one spouse) 3) Married (polygamous) 4) Widow/widower 5) Divorced/Separated	
Q11	Relationship with the household	1) Head 2) Spouse 3) Son/daughter 4) Niece/Nephew 5) Grandson/daughter 6) Mother/Father 7) Grandmother/grandfather 8) Aunt/Uncle	
Q12	Education Level	1) None; 2) Preschool 3) Primary Standard 1-5 4) Primary Standard 6-8 5) Secondary F 1-2 6) Secondary Form 3-4; 7) Tertiary	

		SURVEY QUESTIONNAIRE	
Q13	Occupation	1) Farming; 2) Fishing; 3) Trade; 4) Salaried job/Employed; 5) Others, specify	
Q14	Village of Origin		
Q15	Years of Stay in the Original Village (Flood Prone Area).	1) 8months to 1 year; 2) over 1-2 yrs 3) over 2 – 3 years; 4) Over 3 – 5 years; 5) More than 5 years	
Q16	Name of the camp/Host Village		
Q17	Distance between the origin Village (Flood Prone Village and host village or the camp).	1) less than 1 Km 2) over 1-2Kms; 3) Over 2-5Kms; 4) over 5-10Kms; 5) More than 10Km	
Q18	Number of months staying at the camp or with the host household	1) 1-3months; 2) 4-7 months; 3) 8-10months; 4) Over 10 months	
	EXPERIENCES AND LIVELIHOODS OF FLOOD PRONE POPULATIONS BEFORE THE FLOOD DISASTERS		
Q19	What are your main sources of income? (Multiple responses)	a) Farming b) Fishing c) Trade d) Salary job/Employment e) Government Pension f) Others, specify	
Q20	What are your main sources of food? (multiple answers)	a) Subsistence farming b) Relief assistance c) Fishing d) Livestock farming e) Ganyu f) Business g) Relatives handouts h) Other, specify	

		SURVEY QUESTIONNAIRE	
Q21	Have you ever been affected by the floods?	1) Yes 2)No	Purposeful targeting/sampling to ensure that the respondents are those who were affected by the floods before
Q22	If yes, how have floods affected your life in the past 5 years? Multiple responses	a) Lost assets b) Lost livestock c) Lost farm land with crops d) Lost buildings e) Lost relations f) Other Specify	
Q23	How do you perceive your vulnerability to floods?	1) vulnerable 2)very vulnerable 3)normal 4) temporary vulnerability 5) part of livelihoods	
Q24	What influences/encourages you to live in flood prone areas? Multiple responses	a) Cultivation b) Protect ancestral remains c) Protect cultural sites d) Protect tourism sites e) Fertile soils produce bumper yields f) Fishing which is a source of income g) Its my ancestral land h) No land to cultivate in the upland i) Hostility of host communities j) Government not doing anything k) The relief assistance is temporary l) Our chiefs or local leaders encourage us to stay m) Other (specify)	
Q25	Amongst the reasons, mention 5 major factors that influence you to live in flood prone	1) 2) 3) 4) 5)	

	areas in order of importance		
	SURVEY QUESTIONNAIRE EXPERIENCES AT THE ONSET OF FLOODS AND COPING MECHANISMS		
Q26	What do you do when you anticipate flood risks or have been affected by floods?	a) Seek temporary shelter b) adapt c) nothing d) waiting till the flood water recedes e) specify	Skip to Q28 for responses b to e.
Q27	If the response is a) where do you seek shelter when affected by flood disasters	1) relatives 2) temporary camps 3) schools 4) churches 5) neighboring villages	Skip to Q29
Q28	What are the reasons for remaining in flood-prone area even when you have been affected by floods or anticipate flood risks(Multiple responses)	a) able to cope b) tired of migrating c) fear of losing assets (specify) d) because floods are temporary e) Other (specify)	
Q29	What do you do to earn a living when you have remained in the flood prone areas despite the impacts of floods? Or how do you cope? (Multiple answers)	a) Nothing b) Ganyu c) Receive handouts or relief items and food from well-wishers and NGOs d) Farming in the upland area e) Farming in the flood prone area when flood waters have subdued f) Fishing g) Informal jobs h) Trade i) Other specify	
Q30	What are the main challenges you face when you remain in flood	a) Food shortages b) water-borne diseases c) No money d) Break-up of social ties	

	prone areas. Multiple answers	e) Crocodile attacks f) Other, Specify	
Q31	Are you able to cope with the flood disasters on your own, without external support?	1) Yes 2) No	If No, skip to Q33
Q32	If yes, What do you do to cope with flood disasters on your own (Multiple responses)	a) b) c) d) e) f)	
Q33	If no, how do external agencies/support help you to cope with the flood disasters	a) b) c) d) e)	
Q34	Having experienced the impacts of floods would you be willing to permanently settle in safer places?	1) Yes 2) No	
	EXPERIENCES AND LIVELIHOODS AT CAMPSITES		
Q35	What are the reasons for migrating out when affected by floods (Multiple Responses)	a) to be safe b) tired of the consequences or impacts of flood disasters c) flood damage is always huge d) government directive e) chiefs directive f) NGOs encourage us to do so g) Own willingness h) Other, specify	

		SURVEY QUESTIONNAIRE	
Q36	What do you do to earn a living when you have migrated to the temporary camp? (Multiple answers)	a) Nothing b) Ganyu c) Receive handouts or relief items and food from well-wishers and NGOs d) Farming in the upland area e) Farming in the flood prone area when flood waters have subdued f) Fishing g) Informal jobs h) Trade i) Other specify	
Q37	Describe your relations with the host populations during disaster especially when you are at the temporary camps?	a) Hostile b) Friendly c) Sympathetic d) Want to take advantage of us e) Host chiefs and local leaders give us conditions of staying at the camp f) Other, specify	
Q38	What are the main challenges you face when you are at the temporary camps? (Multiple answers)	a) Theft b) Ridiculed c) Water shortages d) Food shortages e) Contagious diseases f) No money g) Inadequate space for shelter h) Break-up of social ties i) No land to start farming again j) Ghost flood victims are rampant k) Host chiefs give us conditions for staying at the camp l) Our original leaders and chiefs seemingly lose control of their subjects m) Other, Specify	
Q39	Are the host communities willing to give you (flood-prone	1) Yes 2) No	

	populations) land for settlement?		
Q40	What major challenges you face when you return to your original villages?	a) Farm inputs to start farming again b) Lost relations c) Lost assets and crops d) Lost shelters e) Other, specify	
	PERCEPTIONS OF FLOOD POPULATIONS ON PERMANENT RELOCATION		
Q41	Who do you consult first when flood disaster recede? Why?	1) Household head. Why _____ _____ 2) Relatives.why _____ _____ 3) Chiefs or local leaders.Why _____ _____ 4) Government.why _____ _____	
Q42	Having experienced the impacts of floods would you be willing to permanently settle in safer places?	2) Yes 2) No	
Q43	Have you ever thought of permanently settling in safer upland areas?	1) Yes 2) No	If No, Skip to Q45
Q44	If yes why (multiple Responses)	a) to be safe b) tired of the consequences or impacts of flood disasters c) flood damage is always huge d) government directive e) chiefs directive	

		f) NGOs encourage us to do so g) Own willingness	
Q45	If No why (Multiple Responses)	a) Fertile soils left with the flood waters b) Its my ancestral land c) No land to cultivate in the upland d) Hostile host communities e) Government not doing anything f) Chiefs fear of losing chieftaincy g) Other (specify)	
Q46	What motivates you to return to flood prone areas after the floods? Multiple responses	a) To do fishing which is a source of income b) Cultivation since fertile soils left with the flood waters which enable us to produce bumper yields c) Its my ancestral land d) No land to cultivate in the upland e) Hostility of host communities f) Government not doing anything g) The relief assistance is temporary h) Our chiefs or local leaders encourage us to return i) Other (specify)	
Q47	Amongst the reasons, mention 5 major factors that influence you to return in order of importance	1) 2) 3) 4) 5)	
Q48	Do you see any problem in migrating to safer places when there are flood risks and return after the floods have receded every year or during the	1) Yes 2) No	

	flooding phenomenon?		
Q49	If yes, why? (Multiple reasons)	a) b) c) d) e)	
Q50	If no, why? (Multiple reasons)	a) b) c) d) e) f) other specify	
Q51	Imagine government, chiefs decide to relocate you to upland areas, would you accept or not?	1) Accept 2) Will deny 3) Don't know	
Q52	If yes, why? Multiple responses	1) 2) 3) 4) 5)	If No, skip to Q54
Q53	If no, why? Multiple responses	1) 2) 3) 4) 5)	
Q54	Where would you go given the land to settle?	Give name of the T/A----- --- GVH----- Village-----	
Q55	Give reasons for Q54	1) 2) 3) 4) 5)	

APPENDIX B: GUIDING QUESTIONS FOR KIIS, IDIS

1. What are you doing or is the district, development partners, government doing to assist flood prone populations? Multiple answers

2. How can flood prone populations become more resilient to (cope with) floods?

_____What do you think would be the lasting solution to prevent flood disasters?

3. What can be done for the flood prone populations to decide for permanent settlement?

4. Do you think permanently relocating the flood affected populations one of the solutions?

5. Do you think cyclic migration better than permanent settlement? How, explain?

6. What do you think are the major factors influencing seasonal migration in Malawi?

7. What can be done to discourage seasonal migration amongst flood prone populations?

8. In your opinion, what do you think are some of the major challenges that are preventing flood prone populations from permanently relocating?

10. What do you think the government and other development partners should do to assist flood prone populations to prevent seasonal migration?

a) Government

b) Chiefs

c) Flood prone populations

d) Host populations

11. What do you think the government and other development partners should do to encourage flood prone populations to permanently relocate?

a) By Government

b) By Chiefs

c) by flood prone populations

d) by the receiving populations

Appendix C: GUIDING QUESTIONS/CHECKLIST FOR FGDs

1. Have you ever been allocated land/place to permanently settle?

1) Yes 2) No

If yes,

where? _____

If No,

why? _____

2. Are you willing to permanently settle in safer areas?

1) Yes 2) No

If yes

why? _____

If no

why? _____

3. Do you know any other place earmarked for permanent settlement for the flood prone populations

1) Yes 2) No

If yes, mention the village, GVH and T/A

—

4. Are your chiefs willing to provide land for flood prone populations to settle?

1) Yes 2) No 3) Don't know

If yes why? _____

If no why? _____

5. Are the host chiefs willing to provide land for flood prone populations to settle?

1) Yes 2) No 3) Don't know

If yes why? _____

If no why? _____

6. What are the conditions chiefs lay down for the chief and people from the flood prone areas

a) Land is given in exchange for equal land in the flood prone area

b) All flood prone populations fall under that jurisdiction

c) Temporary settlement then they will go back

d) Monetary compensation

e) Other Specify

7. What do you think is motivating flood prone populations to return to their arable land?

- a) No land to cultivate in the upland
- b) Hostility of host communities
- c) Government not doing anything
- d) The relief assistance is temporary
- e) Cultivation
- f) Protect ancestral remains
- g) Protect cultural sites
- h) Protect tourism sites
- i) Fishing
- j) No land is given to settle and cultivate
- k) We are like refugees
- l) Our chiefs or local leaders encourage us to return
- m) Other (specify)

8. What do you think is hindering flood prone populations to permanently settle in safer areas?

- a) Fishing which is a source of income
- b) Fertile soils left with the flood waters which enable us to produce bumper yields
- c) Its their ancestral land
- d) No land to cultivate in the upland
- e) Hostility of host communities
- f) Government not doing anything
- g) The relief assistance is temporary
- h) Our chiefs or local leaders encourage us to return
- i) Other (specify)

9. How can seasonal migration be enhanced or improved?

- a) Through policy frameworks
- b) Government to intervene
- c) FPP to build two houses
- d) Permanent relocation
- e) Early flood warning systems to be put in place
- f) Other Specify

10. What do you think are the main factors influencing seasonal migration in order of importance

- 1)
- 2)
- 3)
- 4)
- 5)

Appendix D: PAIRWISE RANKING MATRIX

Using pairwise ranking process, the respondents were engaged in prioritizing and ranking the categories of factors influencing seasonal migration of flood prone populations using the pairwise ranking matrix below

PAIRWISE RANKING

	1	2	3	4	5	6	7	Total Score
	Political reasons	Economic reasons	Cultural	Ethnic	Religious	Social	Environmental and physical	
Political reasons								
Economic reasons								
Cultural								
Ethnic								
Religious								
Social								
Environmental and physical								

Note: Rows are for scoring factors against the other factors in the columns i.e if you compare political reasons and economic reasons, how could one weigh political reasons against economic reasons or vice-versa???

Appendix E: DATA COLLECTION STRATEGY

Type of Method	Type of data	Tool	Participant/respondent	Number	Sampling technique
Quantitative	Quantitative	Household survey using Questionnaires	Households	100	Random
		Pairwise Ranking	Discussants during FGDs	19	Purposeful (At district and community levels)
Qualitative	Qualitative	KII-Checklist	Chiefs (lower or middle) Government officials (Frontline staff and middle) Development partners (Frontline staff and middle)	13	Purposeful (District and Community levels)
		FGD-Checklist	Females Males	13	
		IDIs-Checklist	Chiefs (Traditional Authority), Government officials (Decision-making and Policy level); Development partners (Decision-making and Policy level).	6	Purposeful