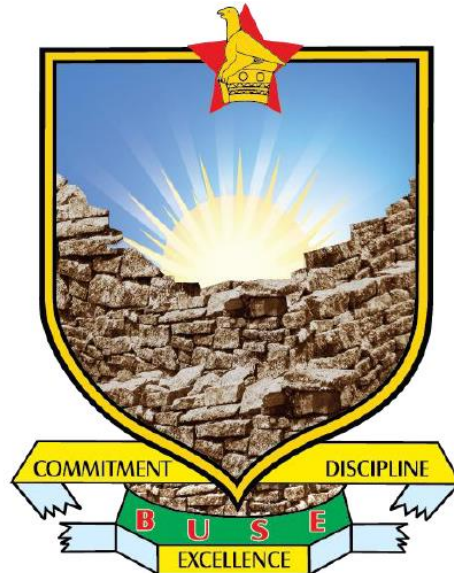


BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF DISASTER RISK REDUCTION



**EXPLORING THE PREPAREDNESS OF PERSONS WITH DISABILITIES TO FLOOD
DISASTERS: A CASE STUDY OF KANYEMBA WARD IN MBIRE DISTRICT,
ZIMBABWE**

BY

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B225123B

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR A MASTER OF
SCIENCE DEGREE IN DISASTER RISK MANAGEMENT**

DECEMBER 2023

APPROVAL FORM

The undersigned certify that they have read this project and have approved its submission for marking after confirming that it conforms to the Faculty of Science and Engineering, Department of Disaster Risk Reduction and MSc project requirements.



Dr E. Mavhura

December 02, 2023

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DATE

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr E.D. Mavhura my dissertation advisor. All sources of materials used for the thesis have been properly acknowledged, I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of learning any degree

ERM

.....

28 November 2023

EVELYN RUVIMBO MDUTSHWA

DATE

DEDICATION

I dedicate this piece of work to all persons with disabilities in Zimbabwe. Remember “The only disability is the inability to see ability.”

ACKNOWLEDGEMENTS

Firstly, I would like to thank The Lord God Almighty for in Him I live and move and have my being. My sincere gratitude also goes to my supervisor Dr E. Mavhura for his guidance and unwavering support during this work. I would also like to thank the Bindura University of Science Education Department of Disaster Risk Reduction lecturers for imparting me with the knowledge that enabled me to carry out this study with ease. I would like to thank the research respondents for the cooperation and contributions that they made to this research, for without their support the research would not have been a success. Lastly, my heartfelt appreciation goes to my family for their support and encouragement throughout my study period.

ABSTRACT

Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments. These people have a higher risk of dying or getting injured during disasters such as flooding than the general population. The impact of flood disasters on persons with disabilities is both a direct and indirect. This research explores the preparedness of persons with disabilities to flood disasters. It adopted a case study research design involving Ward One (Kanyemba) of Mbire District which experiences flood disasters on an annual basis. In-depth interviews were held with civil protection officials within the district of Mbire, ward councillors, and traditional leaders among others. The key informant interviews were complimented with a questionnaire survey that targeted persons with disabilities, their caregivers, and organisations for persons with disabilities (OPDs). Results showed that persons with disabilities in Kanyemba are not prepared for flood disasters. Rather, they are often among those most adversely affected by flooding, sustaining disproportionately higher rates of morbidity and mortality, and are among those least able to access emergency support. Flood disasters also seriously affect the access of persons with disabilities to food, safe drinking water and sanitation services, health-care, education and training, adequate housing and access to decent work. The barriers affecting persons with disability's flood preparedness were found to be a combination of attitudinal, institutional, economic and environmental factors. While attitudinal barriers include stigma and discrimination from the community and low self-esteem, physical one includes visual and physical impairments. In addition, environmental barriers found in this study include inaccessibility of local paths during rainy season and inaccessibility of infrastructure and community buildings. Institutional barriers include a lack of expertise on disability-inclusive disaster risk reduction. The most common economic barrier was a lack of funding for disability-inclusive programs. Despite this, the study reviewed that there are a few enablers that should facilitate flood preparedness among persons with disabilities. The enablers are related to policy and legal frameworks, capacity-building and awareness being done by both the government and development partners, accessible infrastructure and technology, inclusive planning and decision-making process. The study recommends that persons with disabilities be included in disaster risk reduction (DRR) initiatives. Their participation would allow for tailored DRR measures that address the specific concerns of persons with disabilities. A human rights-based approach is needed to empower persons with disabilities as agents of change in addressing the impacts of flooding in their day-to-day lives.

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LIST OF ABBREVIATIONS

DIDRR	Disability Inclusive Disaster Risk Reduction
DRR	Disaster Risk Reduction
EWS	Early Warning System
OPDs	Organizations for Persons with Disabilities
PWDs	Persons with Disabilities
SFDRR	Sendai Framework for Disaster Risk Reduction
UNDRPD	United Nations Convention on the Rights of Persons with Disabilities
UNISDR	United Nations Office for Disaster Risk Reduction

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CHAPTER ONE: INTRODUCTION

1.1 Introduction

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) states that persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (UNCRPD, 2006). According to Fujii (2012), persons with disabilities have a two to four times higher risk of dying or getting injured during flood disasters than the general population. Due to the impact of impairments (for example; motor, sensory, cognitive-linguistic) and activity limitations (for example; mobility and communication) on their capacity to prepare for, evacuate and recover from flood disaster events, this group is at a higher risk than the general population (Rooney & White 2007, World Health Organization 2013, Zakour, 2015). A disproportionate number of persons with disabilities endure institutional exclusion, poverty, and a lack of social support. This makes them more vulnerable to flooding disasters (Smith & Notaro, 2009). Planning for evacuations must consider the unique requirements of persons with disabilities. Mobility aid, accessible evacuation shelters, and dependable power supplies for devices like power wheelchairs and communication devices are all included in this. Disability-inclusive disaster risk reduction (DIDRR) is a relatively recent development. DIDRR is the process of reducing barriers and strengthening enabling actions (enablers) to ensure meaningful engagement of persons with disabilities in community-based disaster risk reduction (CBDRR) programmes, making them more visible and prioritised in disaster mitigation, preparedness, response and recovery initiatives and to ensure all these levels are inclusive of persons with disabilities (Christian Blind Mission, 2020). The first international framework to take disability issues into account was the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015–2030 (UNISDR, 2015). To uphold equality and human rights for all, it is crucial to integrate disability into disaster planning and responses by making disability concerns and persons with disabilities visible in national and international action plans and policies (Ganon, 2019). The rights-based approach of the UNCRPD and the SFDRR will guide this study.

1.2 Background of the Study

Disability is a complex, dynamic and multidimensional construct (WHO, 2011). Persons with disabilities face a multitude of barriers to accessing services and community assets (Kett & Twigg, 2007). Persons with disabilities refer to persons with physical or sensory impairments which limit their day-to-day activity. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) classifies disability into five categories. These are physical, visual, intellectual, mental, speech and/or hearing (UNCRPD, 2006). According to the World Health Organization (WHO, 2005), 80% of persons with disabilities live in low-income nations such as Zimbabwe, making up about 600 million people or 10% of the world's population today. The death rate of persons with disabilities is two to four times higher than that of people without disabilities in various disaster situations, according to the data that are currently available (UN, 2020). In December 2006, the UN Convention on the Rights of Persons with Disabilities (UNCRPD) was ratified. The Convention represents a paradigm shift in how people perceive and respond to persons with disabilities. It takes to a new height the movement from viewing persons with disabilities as objects of charity, medical treatment, and social protection to viewing persons with disabilities as subjects with rights, who are capable of claiming those rights and making decisions for their lives based on their free and informed consent as well as being active members of society. The Convention is designed to be an explicit human rights instrument with a social development component. It adopts a broad definition of persons with disabilities and restates the requirement that people with all different kinds of disabilities are granted access to all fundamental freedoms and human rights. It explains and qualifies how all categories of rights apply to persons with disabilities and points out where accommodations must be made so that they can exercise their rights effectively. It also points out situations where persons with disabilities' rights have been violated and calls for stronger rights protection.

In particular, Article 11 of the UNCRP emphasizes the parties' responsibility to take all necessary measures to ensure the protection and safety of persons with disabilities in situations of risk, including situations of armed conflict, humanitarian emergencies, and the occurrence of natural disasters (UNCRPD, 2006). Additionally, Article 4.1 encourages States Parties to ensure and promote the full realization of all human rights and fundamental freedoms for all persons with disabilities without discrimination of any kind based on disability. Article 32

acknowledges the significance of international cooperation in addressing some States' limited capacity to respond to risk situations and humanitarian crises (UNCRPD, 2006).

Inclusion of persons with disabilities in disaster risk reduction is required by the Sendai Framework for Disaster Risk Reduction (2015-2030) (UN, 2015). The viability of the targets for disability-inclusive disaster risk reduction is, however, still undetermined. Disability-inclusive disaster risk reduction is a rising field of practice, however, Zantema (2011) stated that persons with disabilities are still excluded from disaster preparedness programs. Due to stigma, they are also excluded from leadership and training positions in disaster management. It may significantly reduce their vulnerability and improve the effectiveness of response and recovery activities if the needs and voices of persons with disabilities are taken into consideration at all stages of the disaster management process, especially during planning and preparation (Zantema, 2011). Nevertheless, most organizations fail to appropriately plan for or incorporate persons with disabilities in their disaster management efforts, despite a growing global focus on disaster risk reduction as opposed to only disaster response (Twigg, 2018).

The Constitution of Zimbabwe affirms the inherent dignity and equal worth of every human being (Constitution of Zimbabwe, 2013). Additionally, it recognizes the equality of all people, and under the principle's clause, the rights of persons with disabilities are specifically acknowledged (Section 3 [2]). Additionally, the Constitution (Section 22 [3]) requires the use and development of communication methods that are appropriate for people with physical and mental disabilities. Equal access encompasses communication as well as physical access to buildings and other amenities. Therefore section 22(4) also requires the State to put policies in place to guarantee that persons with disabilities have access to the same facilities as the general population. Following section 22 of the Constitution, persons with disabilities are also integral to the national goals. The section recognizes as one of its guiding principles the right of people with physical and mental disabilities to be treated with respect and dignity. It is the responsibility of the State and all government agencies to support persons with disabilities in realizing their full potential. It acknowledges that disability is a multifaceted issue that cannot be handled by a single government agency. The State is also required to create programs for the welfare and development of PWDs. (Part 22 [3]).

In June 2021, the Government of Zimbabwe enacted the National Disability Policy (NDP), which focuses on persons with disabilities (National Disability Policy, 2021). The policy adopts a human rights perspective by recognizing the value, equality, and dignity of every human being, including persons with disabilities. Additionally, the National Disability Policy (2021) highlights the rights that should be granted to persons with disabilities in disaster risk management in order to promote disaster preparedness. It is the primary piece of legislation that grants persons with disabilities in Zimbabwe the right to engage in activities that improve their level of disaster preparedness. It clearly defines the rights that must be granted to persons with disabilities. It is against this background that this study seeks to explore whether or not the rights articulated in the Constitution of Zimbabwe and the National Disability Policy are being accorded to persons with disabilities to enhance their state of disaster preparedness.

1.3 Statement of the Problem

Despite a significant rise in disability-inclusive disaster risk reduction, persons with disabilities are frequently left out of DRR policy and practice. This has a significant impact on their level of disaster preparedness, making them vulnerable to various hazards. Kanyemba ward in Mbire is not an exception. It is one of the most vulnerable areas to floods in Zimbabwe. The ward has 52 persons with disabilities in Kanyemba in 2022 (ZimStat, 2022) including men, women and children whose ages range between 5 to 62 years. Their disabilities include physical, visual and hearing/speech impairments. Yet the Ward experiences frequent localised flooding (Bola et al., 2013). Backflow from the downstream Cahora Bassa Dam and rainfall events from the large upstream catchment are the two main factors that contribute to flooding (District et al., 2022).

In these situations, persons with disabilities face numerous challenges. They often encounter barriers due to inaccessible infrastructure and lack of inclusive planning (May and Shakeen, 2014). Inadequate provision of accessible transportation and communication systems further adds to their difficulties (Samant et al., 2020). Additionally, limited access to information and emergency warnings increases the vulnerability of persons with disabilities as they are unable to make informed decisions regarding their safety (May and Shakeen, 2014). These challenges all emanate from a lack of flooding disaster preparedness and highlight the urgent need for

disability-inclusive disaster risk reduction measures that address the specific needs of persons with disabilities in flooding disasters (Samant et al., 2020).

1.4 Justification of the Study

Preparedness planning is a crucial part of disaster risk reduction. The exclusion of persons with disabilities from flood disaster response efforts highlights a worrying gap between policy and implementation. Disability is largely absent from flood disaster risk reduction programs, even though persons with disabilities are more vulnerable to flood disasters and should, therefore, be given an active role in planning and response strategies. Persons with disabilities and their respective organizations will have a better understanding of flood disaster preparedness as a result of including them in such activities. National contingency and relief/rescue agencies will also have a better understanding of how to conduct inclusive risk analysis and formulate barrier-free flood preparedness plans if persons with disabilities are included. Therefore, this research will help to improve the level of flood disaster preparedness among persons with disabilities in Zimbabwe. It also contributes to the literature on disability-inclusive disaster risk reduction and empowering persons with disabilities.

1.5 Research Aim

This research aims to explore the preparedness of persons with disabilities for flooding disasters in Kanyemba Ward, Mbire District.

1.6 Research Objectives

- To assess the state of flood disaster preparedness for persons with disabilities in Kanyemba Ward, Mbire District.
- To analyse the barriers to the participation and inclusion of persons with disabilities in flood disaster preparedness activities and policies.
- To analyse the enabling environment for disability-inclusive disaster risk reduction efforts in Kanyemba Ward, Mbire District.

1.7 Research Questions

- How prepared are persons with disabilities for flood disasters in Kanyemba, Mbire District?

- What barriers are affecting persons with disabilities' participation in flood disaster preparedness activities and policies?
- What enablers exist for the participation and inclusion of persons with disabilities in flood disaster preparedness activities and policies?

1.8 Delimitations of the Study

The study area is the Kanyemba ward in the Mbire district. Kanyemba lies in the Lower Manyame sub-catchment, which forms part of the Lower Middle Zambezi Valley. It is located at the confluence of the Zambezi and the Mwanzanutanda rivers. When following Zimbabwe's political boundaries Kanyemba is in Ward 1, Mbire District. The district is in Mashonaland Central Province. Kanyemba is bordered by Mozambique to the east and Zambia to the north. The ward's population of about 4,500 people is spread across 24 villages under Chief Chapoto. The study area is inhabited by the Chikunda and the Doma tribes. These tribes were previously nomadic hunter-gatherers who were forced to settle down as a result of colonialism (Marindo-Ranganai, 1995; Isaacman, 2000).

The Chikunda and Doma tribes settled in the mountains near the Zambezi River. However, during the droughts of 1984 and 1986, they moved from the mountains to settle in Kanyemba in the Zambezi Valley. They have been relatively isolated from mainstream Zimbabwean society (Marindo-Ranganai, 1995; Isaacman, 2000). The core livelihood activities in the area are crop production and livestock rearing. Crops such as maize, sorghum, millet, cowpeas, pumpkins, bananas and vegetables are grown, mainly along the Mwanzanutanda floodplain. Due to erratic rainfall, the ward is considered unsuitable for dry-land cropping, and as a result, floodplain crop cultivation is practised. Goats are the major livestock kept in the area since the area is infested with tsetse flies which make livestock rearing difficult. Cattle are generally preferred by tsetse flies. When using an agro-meteorological classification, the area is suitable for livestock production under extensive production systems and for wildlife production (FAO, 2006).

1.9 Definition of terms

1.9.1 Disability

Definitions of disability vary according to regions, countries and context. Hence, there is no overall agreed definition. However, the UNCRPD (2006) states that persons with disabilities

include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others. This study adopts this definition.

1.9.2 Disability-Inclusive Disaster Risk Reduction

Disability-inclusive disaster risk reduction (DIDRR) is the process of reducing barriers and strengthening enabling actions (enablers) to ensure meaningful engagement of persons with disabilities in community-based disaster risk reduction (CBDRR) programmes, making them more visible and prioritised in disaster mitigation, preparedness, response and recovery initiatives and to ensure all these levels are inclusive of persons with disabilities (Christian Blind Mission, 2020). DIDRR is an approach, that brings to the fore the requirements of Article 32 of the Convention of the Rights of Persons with Disabilities (United Nations 2006) and ensures that persons with disabilities lead pre-planning efforts (Centre for Disability Research and Policy & Natural Hazards Research Group 2017). The CRPD, in Article 32, urges States Parties to undertake appropriate and effective measures to advance international cooperation and its promotion, including ensuring that international cooperation is inclusive of and accessible to persons with disabilities, as well as facilitating and supporting capacity-building, including through the exchange and sharing of information, experiences, training programmes and best practices, among other relevant factors. DIDRR directs attention to the person with a disability, their skills and support needs in interaction with the environment and structural factors that create or restrict capabilities around emergency preparedness and action during a natural hazard emergency (Twigg, 2018). DIDRR requires removing the barriers that hinder persons with disabilities from engaging in disaster risk reduction activities through principles of accessibility, participation, collaboration and non-discrimination (Centre for Disability Research and Policy & Natural Hazards Research Group 2017). The Sphere Handbook, fourth edition published in 2018, highlighted the importance of including persons with disabilities through consulting with persons with disabilities, ensuring accessibility through addressing barriers and discrimination, and undertaking disability-disaggregated data collection.

1.9.3 Disaster

Khan (2008) asserted that the term disaster owes its origin to the French word *Desastre* which is a combination of two words ‘des’ meaning bad and ‘aster’ meaning star. Thus, the term

refers to a 'Bad or Evil star' (Khan 2008). Disaster according to the United Nations International Strategy for Disaster Reduction (UNISDR) (2002) is a serious disruption of a functioning community or a society involving widespread human and material environmental losses and impacts which exceed the ability of the affected community to cope using only its resources. In this regard, disaster is any natural or human-caused event which causes gross suffering to humanity and impacts negatively the environment to the extent that it surpasses the level or capacity at which the affected community can cope by using its resources to reduce or survive its catastrophic ramifications. It is paramount to the study to understand the following concepts and how they relate to each other: disaster, disability and vulnerability.

1.9.4 Disaster Preparedness

Disaster preparedness constitutes measures that enable governments, organisations, communities and individuals to respond quickly to disaster situations (Carter, 1992). Disaster preparedness refers to pre-disaster activities that are undertaken within the context of disaster risk management and are based on sound risk analysis. This includes the development/enhancement of an overall preparedness strategy, policy, institutional structure, warning and forecasting capabilities, and plans that define measures geared to helping at-risk communities safeguard their lives and assets by being alert to hazards and taking appropriate action in the face of an imminent threat or actual disaster (OCHA, quoted in ISDR 2007). Disaster preparedness also refers to the capacities and knowledge developed by governments, professional response organisations, communities and individuals to anticipate and respond effectively to the impact of likely, imminent or current hazard events or conditions (ISDR, 2008). Preparedness action is carried out within the context of disaster risk management and should be based on a sound analysis of disaster risks and be well linked to early warning systems. It includes contingency planning, stockpiling of equipment and supplies, emergency services and stand-by arrangements, communications, information management and coordination arrangements, personnel training, community drills and exercises, and public education. It must be supported by formal institutional, legal and budgetary capacities (ISDR 2008).

Disaster preparedness is a huge part of disaster risk reduction and has been propounded in several global frameworks for disaster risk management. The Hyogo Framework for Action

(HFA), which ran from 2005 to 2015, outlined five specific priorities for action with the fifth one being Strengthening preparedness for response. HFA's priority five explained how improved preparedness in disasters had a domino effect on disaster response which would result in saving lives and livelihoods, particularly when absorbed into an overall disaster risk reduction approach. Strengthened preparedness for hazardous events is mainly concerned with two objectives, increasing the capacity to predict, monitor and be prepared to reduce damage or address potential threats and strengthening preparedness to respond in an emergency and to assist those who have been adversely affected (UNISDR, Hyogo Framework for Action, 2005) and (UNISDR, 2008). Preparedness, therefore, involves developing a proper plan for ensuring that all elements of the early and initial risk assessments are well recognised and mechanisms for minimizing the risk and saving lives and properties are appropriately established and coordinated (UNISDR, 2008). The Sendai framework for disaster risk reduction adopted in 2015 and set to run for 15 years has its fourth priority vested also in disaster preparedness. Priority four: Enhancing disaster preparedness for effective response and to Build Back Better in recovery, rehabilitation and reconstruction is a continuity of priority 5 of HFA but goes further to highlight the need for preparedness to be aligned with a mind to recover, rehabilitate and reconstruct after a disaster has occurred. Enhancing disaster preparedness will allow communities not just to recover but to recover quickly, then depending on the impacts of the disaster to rehabilitate and reconstruct faster since preparedness measures in anticipation of the disaster will have been taken. In the Sendai framework, it is highlighted that: The steady growth of disaster risk, including the increase of people and assets exposure, combined with the lessons learned from past disasters, indicates the need to further strengthen disaster preparedness for response, take action in anticipation of events, integrate disaster risk reduction in response preparedness and that ensure capacities are in place for effective response and recovery at all levels (IFRC, 2015); (UNISDR, Sendai Framework for disaster risk reduction, 2015). This therefore means that the main goal of preparedness is to create a readiness or an ability to quickly and appropriately respond to disasters. It is known that disasters can be unpreventable and commonly unpredictable (Levac, 2012). However, with significant disaster preparedness, there is a higher possibility of reducing losses of life and property. According to Morrissey and Reser (2003), disaster preparedness reduces psychological pain associated with the likelihood of the occurrence of these disasters. Therefore, if a person gets prepared for a possible future disaster, the physical and psychological impact will be reduced. Finally, disaster preparedness reduces the traumatic stress associated with flood occurrences (Morrissey and Reser, 2003).

This study therefore seeks to explore the preparedness of persons with disabilities to disasters in Kanyemba Ward, Mbire District.

1.9.5 Disaster Risk Reduction

Disaster risk reduction is defined as the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse effects (USAID, 2011). Disaster reduction strategies include, primarily, vulnerability and risk assessment, as well as several institutional capacities and operational abilities. They also include the assessment of the vulnerability of critical facilities, social and economic infrastructure, the use of effective early warning systems, and the application of many different types of scientific, technical, and other skilled abilities are essential features of disaster risk reduction (USAID, 2011). The idea of disaster risk reduction is to focus on preparedness before the occurrence of a disaster to limit its impact and increase people's capacity to cope with it once it occurs. The concept of disaster risk reduction is pertinent to this study in order to enable persons with disabilities to be more prepared in disaster situations.

1.9.6 Flooding

Whether they are national, regional, municipal, or institutional, floods are basin-wide phenomena that disregard all boundaries—whether political, administrative, or otherwise created by humans (Bakker, 2009). According to Jonkman & Kelman (2005), a flood is defined as the presence of water in areas that are usually dry while a “flood disaster” is a flood that significantly disrupts or interferes with human and social activity. Depending on their temporal and spatial size, floods might be classified differently (Menne and Murray, 2013). Examples of floods include; slow-onset riverine floods (fluvial), Flash floods (rapid onset), Pluvial or surface water floods affecting sewers and urban drainage and groundwater flood. River floods result in a slow rise of water level as well as gradual inundation of large areas through water spilling over river banks and are caused by excessive rainfall not necessarily in the flooded area but upstream of the river (Jonkman and Kelman, 2005; Keoduangsine and Goodwin, 2012). Extensive, long-lasting floods (plain floods) often result in flooding of larger areas. They are almost invariably caused by rainfall lasting several days or weeks, associated with

prior soil saturation. A flash flood is defined as a “fast and extreme movement in a high level of water into a usually dry area.” The duration of a flood is short and frequently associated with severe damage (Menne and Murray, 2013). These occur after high-intensity local rainfall leading to a quick rise of water levels affecting the lives of inhabitants (Jonkman, 2005). River floods are the most common flood type occurring in Kanyemba ward.

1.9.7 Participation

In general, participation refers to people's involvement in initiatives aimed at improving their socioeconomic circumstances or resolving personal issues. They take part in goal-setting as well as the creation, execution, and assessment of plans and initiatives. According to Uphoff (1987, cited in Asaduzzaman, 2008:62), participation is the process of involving a significant proportion of people in environments and activities that improve their well-being. Poppe (1992:45) gave a detailed definition of participation. He described participation as the democratic and voluntary involvement of persons in decision-making about agenda-setting, policy formulation, planning, implementation, and evaluation of any development program. In essence, it is a dynamic group procedure where all participants share, contribute, or are impacted by the ideas and actions that are exchanged in order to solve problems or make decisions (Banki, 1981:533 quoted in Samad, 2002:53). In order to maintain the developments achieved throughout time, community participation in the exercise of "voices and choices of the community and the development of human, organizational, and management capacity to solve problems as they arise" is crucial (Sastry 2001:2). When people are aware of the advantages of being involved in the community and experience a feeling of belonging, it inspires them to collaborate. In this study, participation has been defined as the process of people's participation in goal-setting, planning, implementing, and assessing plans and programs at each stage of disaster risk reduction—where the voices and choices of the community are adequately addressed.

1.9.8 Preparedness planning

Preparedness planning aims to establish a standing capacity to respond to a range of different situations that may affect a country or region by putting in place a broad set of preparedness measures. This includes early warning systems, ongoing risk and vulnerability assessment, capacity building, the creation and maintenance of stand-by capacities and the stockpiling of

humanitarian supplies (ISDR, 2006). Undertaking a contingency planning process will be a key component in developing an analysis of what needs to be done in this process, and will help in the designing, testing and implementation of response actions. In order for a plan to be effective, all participating actors must be meaningfully involved in its development (Twigg, 2018). A process that is built around participation will lead to increased ownership by all those involved and will contribute to the smooth implementation of plans during times of disaster. This includes participation at the local, national and international levels. Coordinated participation will help to work out problems of who is responsible for what when a disaster occurs. It also allows for effective scaling up during disasters; thereby ensuring the required goods and services get to the most affected and vulnerable populations (ISDR, 2006). Sound preparedness planning should lead to an improved state of readiness that ultimately leads to safeguarding lives and livelihoods. The process of developing a national or community preparedness capability should reflect in legislative and institutional arrangements, coordination structures, contingency and response plans as well as information and communication systems (Twigg, 2018). While the process may require significant time and resources, all partners must have a genuine sense of ownership, as this is a requirement for sustainability. The plan is a product to facilitate improved readiness (Twigg, 2018). Preparedness planning is the key to improving the state of flood disaster preparedness for persons with disabilities.

1.9.9 Vulnerability

Khan (2008) defined vulnerability as the extent to which a community is likely to be damaged or disrupted by the impact of a particular hazard, on account of its nature, construction and proximity to hazardous terrains or a disaster-prone area. Wisner et al (2003) state that vulnerability involves a combination of factors that determine the degree to which someone's life, livelihood, property and other assets are put at risk by a discrete and identifiable event (or series or cascade of such events) in nature and society. Therefore, vulnerability can be understood as the condition that enables a hazard to become a disaster (Tapsell 2010). This implies that vulnerability is viewed in the context of one's capacity or economic position to react to a potentially damaging event in a given situation. USAID (2011) categorized factors that form the basis of vulnerability; socioeconomic, physical and environmental factors. Pawaringira (2008) considers vulnerability as the degree of loss resulting from a potential phenomenon or the impact of the hazard on people, infrastructure and the economy. In this

case, vulnerability depicts the degree of exposure to a potentially damaging hazard to the community. Therefore, the effects of a disaster are determined by the extent of a community's vulnerability to the hazard (USAID, 2011). Disaster then becomes an outcome of an arrangement, equation or combination of hazards, conditions of vulnerability and lack of capacity or ability to muzzle the potential negative consequences of risk using available resources. Persons with disabilities have high vulnerability to disasters due to physical, social, attitudinal and structural barriers that they face.

1.10 Organization of the Study

Chapter One: This chapter will include the introduction, background, statement of the problem, research aims, objectives of the research topic, limitations and delimitations that surround the research topic and the conceptualization of terms that are pertinent to the study. Chapter Two: This chapter will contain a literature review. The chapter will focus on reviewing secondary sources such as texts, journal articles and any material of academic importance to the topic to review previous research done on the topic to in turn establish a gap in the knowledge that justifies studying this research topic. Chapter two will also contain the theoretical framework where the theories and approaches that will inform the study will be discussed. Chapter two will also analyse the legal framework that is associated with the topic under study. Chapter Three: Chapter 3 contains the research methodology. The chapter will explain methods employed by the researcher to achieve research objectives and answer research questions. Chapter Four: Contains the research findings, data analysis and presentation. Chapter Five: This chapter outlines the recommendations and conclusions.

1.11 Chapter Summary

This chapter focused on the problem and its setting. The chapter began with an introduction whereby the researcher introduced the area of interest for discussion and brought out the area of research inquiry. This was followed by the background of the study which provided the overview of the study and established the context of the study. The background of the study also identified the problem gap of the study that needs to be addressed and justified the need for conducting the study. This section was followed by the statement of the problem which explained the issues predominant in the area of study which drives the researcher to do in-depth study and analysis to understand the issues and/or solve the problem. This was followed by the

research aim, the overall rationale, value and significance of the study. The research objectives and questions were also outlined followed by a justification of the study. Research assumptions were explained and these were succeeded by the limitations and delimitations of the study. Terms and concepts that are pertinent to the study were also explained. The final section is the organization of the study. The next chapter will present the literature review surrounding the research topic.

CHAPTER TWO: LITERATURE REVIEW

2.1 Theoretical framework

2.1.1 The Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030 is a significant initiative for persons with disabilities (UNISDR, 2015). The framework, which has been adopted by UN member states, consists of four priority areas and seven targets that together are intended to significantly reduce disaster risk and losses from both natural and man-made disasters. It also calls for more concentrated efforts to be made to manage disaster risks. The Sendai Framework is important because it is the first to consider persons with disabilities and firmly defines that they, together with their organizations, should be included in disaster risk reduction at all levels, from design to implementation. The SFDRR highlights the needs of persons with disabilities to a much greater extent than previous frameworks such as the Hyogo Framework for Action 2005–2015 (HFA). There was no direct mention of persons with disabilities in the HFA, whereas the SFDRR has both direct and indirect references to persons with disabilities. Persons with disabilities are mentioned five separate times as part of the preamble, the guiding principles, the priorities for action, and the role of stakeholders. Their inclusion in the document firmly establishes persons with disabilities and their advocacy organizations as legitimate stakeholders in the design and implementation of international disaster risk reduction policies.

The first direct mention of persons with disabilities appears in the preamble of the SFDRR under Paragraph 7, which calls for a more people-centred preventive approach to disaster risk (UNISDR 2015a). The SFDRR states that ‘While recognizing their leading, regulatory and coordination role, Governments should engage with relevant stakeholders, including women, children and youth, persons with disabilities, poor people, migrants, indigenous peoples, volunteers, the community of practitioners and older persons in the design and implementation of policies, plans and standards’ (UNISDR 2015a: 5). The SFDRR identified that it is the responsibility of governments to engage relevant stakeholders, including persons with disabilities. This slight language change strengthens the likelihood that the needs of persons with disabilities will be part of ongoing disaster risk reduction processes spearheaded by governments committed to the implementation of the SFDRR. In addition, references to

persons with disabilities in Paragraph 7 in the context of the design and implementation of policies, plans, and standards are significant. The inclusion of persons with disabilities in their development is not only an equity goal, it is a pragmatic goal. Input from persons with disabilities is grounded in their own experiences. Their knowledge is first-hand and thus able to propose strategies that appropriately address barriers. Persons with disabilities are also knowledgeable about what approaches will result in effective methods for disaster risk reduction for the disability community.

Also, in Paragraph 7, the SFDRR contains several important disability-related constructs that become highly relevant in disaster situations. The disability-related constructs of inclusion and accessibility appear as common terms in discussing disaster risk reduction and state “Disaster risk reduction practices need to be [...] inclusive and accessible in order to be efficient and effective” (UNISDR 2015a:5). Within the disability community, accessibility is multifaceted and has been a longstanding goal in the areas of education, transportation, housing, and employment. Accessibility does not only refer to physical access but also access to services and resources.

The term inclusive within the disability community is used to convey the concept that people and societies should accommodate the needs of persons with disabilities in a manner that allows them to freely and independently live in the way they choose. Most recently, inclusion has involved efforts to assimilate persons with disabilities into educational, workplace, and community environments. Along these lines, inclusion in the disaster context implies intent to assimilate the needs of persons with disabilities in emergency planning and practices so that they receive disaster-related preparation and services as do all other people. The final direct reference to persons with disabilities falls under Section V: Role of Stakeholders, under Paragraph 36(a), which states that "Persons with disabilities and their organizations are critical in the assessment of disaster risk and in designing and implementing plans tailored to specific requirements, taking into consideration, inter alia, the principles of universal design" (UNISDR 2015a: 20). Recommendations from the Disability Caucus are particularly evident in the text on the role of stakeholders. The role of persons with disabilities is treated as critical in assessing the design and implementation of plans. Also, in Paragraph 36(a), the role of “Persons with disabilities and their organizations” is acknowledged (UNISDR 2015a, p. 20). This attention

is beneficial to persons with disabilities as organizational advocacy can sometimes be more powerful than individual advocacy. Zimbabwe is a signatory to the SFDRR; therefore, this research aims to assess whether or not the relevant stakeholders are abiding by the provisions of the framework when it comes to ensuring disaster preparedness for persons with disabilities.

2.1.2 The United Nations Convention on the Rights of Persons with Disabilities

Overcoming the barriers to disability-inclusive disaster risk reduction is a major challenge, but there are indications that progress can be made through the implementation of rights-based approaches and by developing and applying indicators of inclusion in humanitarian and DRR interventions (Twigg, 2018). Inequality and exclusion of persons with disabilities, or violation of their dignity are issues of human rights, social justice and entitlement. For many years, rights-based approaches have been advocated as having the potential to lead to a paradigm shift in institutional policy and practice towards disability (Twigg, 2018). A human rights-based approach to disability sees persons with disabilities as people with inherent rights, who are capable of claiming those rights and making decisions, as well as being active members of society. This study made use of the rights-based approach to disaster risk management as articulated in the CRPD of 2006. Disability is conceptualized using a variety of frameworks. A progressive shift in emphasis from a charity, medical and social to a human rights model of disability respectively, has caused views on disability to go through a transitional period in recent years (Twigg, 2018). The Social Model of Disability unquestionably reflects the human rights perspective, creating the Human Rights Model of Disability. The CRPD has transformed the social model of disability into a human rights model (Combrink, 2014). This model emphasizes persons with disabilities' inherent human dignity (Della, 2017). In this model persons with disabilities are treated as equal citizens with the same rights and obligations. Disability is a human rights concern because they should be able to enjoy all human rights on an equal footing with everyone else. According to Degener and Quinn (2002), the state must remove obstacles put up by the community in order to guarantee complete adherence to the concept of human dignity and equal legal protection for all. Instead of formal equality, the focus is on substantive equality. Additionally, this model claims that the absence of impairment does not automatically qualify someone as a subject of human rights (CRPD).

The rights-based approach emphasizes that when a disaster strikes, people should not forfeit their fundamental human rights. When preparing for, responding to, or recovering from a disaster, four types of rights should be protected, according to international rules on protecting persons in disaster situations. Information and participation are under the fourth category of rights (CRPD, 2006). Affected communities have a right to information and involvement in choices that affect their life, such as those involving disaster planning, training, and risk reduction. These should be included at all stages of disaster risk management; they are not luxuries to be thought about after fundamental requirements have been met. Persons with disabilities are consulted during the policy-making and implementation processes under the rights-based approach (CRPD, 2006). An environment that is conducive to disability-inclusive disaster risk reduction will be created by treating persons with disabilities as fellow human beings with the same rights, needs, and capacities. Zimbabwe took a significant step toward recognizing the rights of persons with disabilities on September 23, 2013, when it formally ratified the Convention on the Rights of Persons with Disabilities of 2006 and its Optional Protocol.

The UNCRPD's Article 4(a) calls for the adoption of appropriate legislative measures to carry out the rights recognized therein, and Article 4(b) of the Convention instructs States Parties to take all appropriate steps to amend or repeal any existing laws that discriminate against persons with disabilities. The Convention is designed to be an explicit human rights instrument with a social development component. It adopts a broad definition of persons with disabilities and restates the requirement that persons with all different kinds of disabilities should be granted access to all fundamental freedoms and human rights. It defines and qualifies how all categories of rights apply to persons with disabilities, points out where accommodations must be made so that they can exercise their rights effectively, and pinpoints places where their rights have been violated and where the defence of those rights needs to be strengthened (United Nations, 2006). The CRPD represents every generation of human rights, and its goal is to ensure that all persons with disabilities can fully and equally enjoy all human rights and basic freedoms.

However, despite the evolution of the human rights-based approach to disability as part of the global legal and policy frameworks, persons with disabilities continue to be seen as vulnerable in the face of disasters rather than as key stakeholders and contributors to disaster preparedness.

In order to determine how far the Zimbabwean government has gone in granting disabled individuals the right to actively engage in disaster preparedness operations, this study will use the CRPD as a benchmark. The main custodian of human rights is the state. As a result, it needs to be held responsible when rights are denied or violated. The rights-based approach to disaster risk reduction was appropriate for this study since it hinged on the notion that persons with disabilities have the right to take part in activities that improve their level of preparedness for disasters.

2.2 Classification of disabilities

In Disaster Risk Reduction (DRR), different health conditions are grouped in larger impairment groups, where needs are reasonably similar within the group. This research will utilize the classification of five types of impairment, as outlined in the UNCRPD. This is because it is simple and can be utilized and understood by non-specialists. These classifications are detailed in Table 2.1.

Table 2.1 Classification of impairments

Five Types of Impairment: Four Functional Groups for DRR					
Type of impairment	1. Physical	2. Visual	3. Hearing and/or Speech	4.a) Intellectual	4.b) Mental
Description	Loss or deformity of a limb. loss of physical function	Vision loss <ul style="list-style-type: none"> • Partial: low vision. • Entire: no vision / blindness 	Decreased ability to detect or understand sounds. <ul style="list-style-type: none"> • Partial: hard of hearing • Entire: deafness Often goes with decreased ability to speak.	Decreased ability of cognitive functioning and adaptive skills.	Significant behavioural or psychological pattern that is thought to cause distress or disability. It is linked to a person's mental health.
Functional Consequence	Difficulty/being unable to move different body parts.	Difficulty/being unable to see.	Difficulty/being unable to hear and/or speak	Difficulty/being unable to reason, understand, solve problems, adapt behaviour, etc.	Difficulty/being unable to reason, understand, solve problems, adapt behaviour, etc.
Examples (medical conditions falling under this group)	Spinal cord injury. amputation. club foot.	Myopia. cataract. glaucoma.	Tinnitus. Auditory nerve damage.	Cerebral palsy autism.	Depression. Schizophrenia. Anxiety disorders.

(Source: UNCRPD, 2016)

2.3 Flood Disasters and Disabilities

The most destructive disasters that have occurred in recent decades globally have been floods. Floods have resulted from several driving factors, including changes in the environment and climate, as well as an increase in global population that has concentrated people in high-risk areas like hillsides, flood plains, and coasts (Madhuri 2016; Cobian et al., 2019). The Intergovernmental Panel on Climate Change (IPCC) states that it is becoming more and more evident that several water-related variables, such as rainfall, have been measurably impacted by climate change (IPCC, 2014). According to Bacanović (2014), climate change causes flooding due to increased precipitation, more frequent hurricanes that bring more rain, higher sea levels that amplify storm surges, and more high tide flooding. Without undermining the increasing health pandemics, water is the cause of the majority of natural disaster losses worldwide, claims Kron (2015). Severe floods were reported in 2020 in Uganda, Namibia,

South Africa, Brazil, Columbia, and Mexico (Petrovi et al., 2021). Research indicates that 2021 saw some exceptionally severe flooding in several locations, including the Philippines, central Europe, India, Colorado, USA, Canada, Mexico, Indonesia, Australia, Southern Africa, China, Russia, and Sardinia, Italy (Petrovi, 2022). While there are several contributing factors to floods, most researchers agree that floods have catastrophic effects on the majority of nations and communities. UNICEF (2019) reports that after local rivers and their tributaries burst their banks, flooding and landslides have affected an estimated 50,000 households out of 250,000 people, including 120,000 children. According to earlier research, flooding frequently results in serious destruction of homes, schools, infrastructure, and the economies of the majority of nations. Developing nations are particularly vulnerable, accounting for over 95% of all losses resulting from water-related incidents (World Bank, 2000; Hennighausen and Suter, 2020). Studies in the past have shown that different people are affected differently by disasters like floods. This suggests that different factors, such as gender, age, household levels of sustainable livelihood, disability, and others, affect how devastating floods are. As a result, there is a growing emphasis among scholars to approach research on disaster preparedness from a disability-inclusive perspective (Bacanovi, 2014).

This perspective has drawn attention because of the differentiated effects that floods have on persons with and without disabilities, as well as the various approaches that they take when confronted with similar circumstances (Nyakundi et al., 2010). There isn't much research, specifically, on the preparedness of persons with disabilities to flood disasters (Bacanovi, 2014). Despite this paucity of literature, the few studies that have been conducted on the subject demonstrate that, when it comes to flood disaster preparedness, persons with disabilities typically lag behind persons without disabilities. Research has demonstrated that not every person is affected equally by natural disasters like floods (Parkinson, D.; Zara 2013). Research has shown that persons with disabilities have more vulnerability to disasters than persons without disabilities (Keating et al., 2014). According to research, persons with disabilities are twice as likely as persons without disabilities to become victims of disasters (Enarson and Meyreles, 2004). Additionally, persons with disabilities have a 14-fold higher risk of dying in a disaster than persons without disabilities, particularly in developing nations. Several factors are responsible for this trend. Persons with disabilities are more vulnerable to disasters due to a variety of factors, including a lack of social connections, unequal distribution of power, low levels of preparedness for disasters, a lack of community support networks, an

absence of early warning systems that are appropriate, being excluded from disaster risk reduction initiatives, and high rates of illiteracy (Kashyap and Mahanta, 2018). According to previous research, several factors have increased the vulnerability of persons with disabilities to flooding (Kashyap and Mahanta, 2018). Their vulnerability has been exacerbated by the neglect that persons with disabilities experience from society. The higher degree of vulnerability has been attributed to a variety of factors, including cultural issues, lack of education, resource scarcity, and financial constraints. Persons with disabilities are more vulnerable to floods due to a lack of access to information, education, and awareness of risks and hazards (Cobian and Resosudarmo, 2019). According to Kashyap and Mahanta (2018), there is an assertion that because persons with disabilities are largely excluded from the educational system, they are more susceptible to natural disasters because they have less knowledge about disaster management. According to Kashyap (2018), persons with disabilities tend to be more vulnerable than persons without disabilities during a disaster because they have less access to resources because of their impoverished circumstances and unequal opportunities for health care and education. Persons with disabilities are particularly vulnerable during floods because they must rely on persons without disabilities in the event of food shortages. Persons with disabilities are more vulnerable to disasters during times of disaster because of their unique needs and socioeconomic status.

According to Armaş and Gavriş (2013), stigmatization and societal inequality make persons with disabilities particularly vulnerable to disasters. Furthermore, it is contended that persons with disabilities lack the capacity to flee or escape from disasters without the aid of persons without disabilities. They are highly vulnerable as a result. Sam Chanthy and Hay Samchan (2014) posit that the perception of persons with disabilities as incapable of making meaningful contributions to disaster risk reduction is another factor contributing to their vulnerability to disasters. According to Armaş and Gavriş (2013), this belief has significantly increased the vulnerability of persons with disabilities to flooding and other connected disasters. Every stage of the disaster process—exposure to risk, risk perception, preparedness, response, physical and psychological effects, recovery, and reconstruction—reflects social exclusion. This indicates that the vulnerability of persons with disabilities before and following disasters has been exacerbated by exclusion, subordination, dispossession, and discrimination within communities.

2.4 Flood Disaster Preparedness

Preparedness is defined as the knowledge, capabilities and actions of governments, organizations, community groups, and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions (UNISDR, 2009). Furthermore, Edward (1993) defines disaster preparedness as making sure the society is ready for any disaster likely to occur, through taking preventive measures and reacting to a disaster. However, preparedness is not fixed in nature, it changes. It requires regular amendments and transformation as social circumstances change (Perry and Lindell, 2003). Accordingly, Paton (2003) created a model that depicts the stages of how people prepare: from being encouraged to prepare, to creating an intention to deciding to prepare for a disaster; the perception of preparedness refers to a series of actions people take to lessen the negative effects that a disaster has (Faupel et al., 1992). To be prepared for flood disasters, a variety of actions can be taken. Assessing the quantity of emergency supplies kept on hand is a common way to look at household preparedness (Levac et al., 2012). Mulilis et al. (1990) listed the following as some indicators of preparedness: keeping a radio and flashlight handy, keeping a first-aid kit, food, and water on hand, gatherings to seek advice on what to do in the event of a flood, reading materials as well as listening to communications related to flood preparedness. Disaster preparedness has been studied either as a broad concept or with a few specific subcategories in earlier studies. Disaster preparedness, as described by Malkina-pykh (2013), can be divided into three groups or elements: Material preparedness entails making significant renovations to the house and having a variety of essentials on hand, such as provisions for food and water, a fire extinguisher, and a first aid kit. Finding a safe location for temporary relocation or an external gathering spot are examples of planning activities. Knowledge and skills refer to people's understanding of the disaster as well as how to be prepared for it, such as by taking a course in first aid or studying disaster preparedness literature.

Table 2.2 shows the different indicators on which researchers can assess the level of disaster preparedness as opined by Mavhura et.al (2020). These components were used in this study to assess the level of flood preparedness of persons with disabilities in Kanyemba Ward, Mbire District.

Table 2.2 Flood Preparedness Indicators

Indicator	Description
Resource availability	Stockpiling food and non-food items; financial and materials resources for use during and after disaster
Emergency plans	Agreed plans describing the means to address a disaster within a specific time frame; detailed mechanisms for operations at the onset of a disaster.
Evacuation plans	Moving people and assets temporarily to safer places before a hazardous event.
Early warning system	Set of capacities needed to generate and disseminate timely and meaningful warnings to enable communities to prepare and act appropriately in sufficient time before a disaster.
Flood knowledge	Scientific and indigenous knowledge about flood risk reduction. Includes how floods are generated and monitored, knowing places prone to flooding and why.
Flood awareness raising	Raising common knowledge about flood risks, causes and actions that reduce exposure and vulnerability.
Floodproofing information	Provision of information about designing or retrofitting buildings and their contents to make them more resistant to flood losses.
Disaster education and training	Culture of training in basic skills and safety
Post-flood recovery	Restoring or improving the pre-disaster conditions of the stricken community
Risk communication	Ways in which risk information is formulated, delivered, interpreted and acted upon in disaster preparedness, response and recovery
Social capital	Connections among people in a community and the norms of reciprocity and trustworthiness that arise from them.

Source: Mavhura et al, 2020

Preparedness for disasters is influenced by several factors. Risk perception, critical awareness, outcome expectancy, feeling of community, self-efficacy, and responsibility efficacy are a few of the variables affecting preparedness. According to Kinatader et al. (2015), risk perception is the conviction that one's own life and health are about to be threatened. Even so, other factors may mitigate the perception that a particular disaster could endanger one's life (Paton et al., 2000; Paton et al., 2003). An individual's perception of risk increases following the event (Jackson, 1981). The extent to which people consider and discuss a particular source of threat or danger in their surroundings is known as critical awareness (Paton, 2003). Individual low-risk awareness may impede preparedness effectiveness (Scolobig, 2012). Households with low-risk awareness are thought to be less equipped for disasters (Scolobig, 2012). Consequently, there is insufficient ability to adapt to disasters. These results align with the findings of Terpstra et al. (2009), Miceli et al. (2008), and Grothmann and Reusswig (2006). Additionally, these researchers have demonstrated a positive correlation between disaster preparedness and risk-related anxiety. Accordingly, the likelihood a person will take

precautions increases with their level of risk awareness (Floyd et al., 2000; Neuwirth et al., 2000). As a result, being prepared is increasingly important when it comes to effectively adapting to disasters. According to Paton (2003), outcome expectancy refers to the belief about the ability of one's actions to effectively lessen or mitigate a problem. In a study on bushfire preparedness, Paton (2005) discovered that while negative outcome anticipation was the cause of non-preparation, the expectancy of positive outcomes had an immediate impact on intention and preparation. The belief in one's ability to act effectively is known as self-efficacy (Encyclopaedia of Adolescence, 2011).

In situations involving natural hazards, self-efficacy is thought to be a prerequisite for resilience and adjustment adoption (Bishop et al., 2000; Lindell and Whitney, 2000). Paton (2003) asserts that there is a strong correlation between self-efficacy and the quantity and calibre of preparedness actions performed, as well as the degree of perseverance and effort put forth in risk reduction (Levac, 2011). People are more likely to participate in preparedness actions when they have greater confidence in their ability to handle an emergency (Bandura, 1998).

People tend to be more likely to prepare if the people around them believe in preparedness, especially if peers and families have the resources to foster self-efficacy (Levac, 2011). Attachment to people and places is the definition of a sense of community (Paton, 2006). It is known to affect choices about adjustments. Individuals who possess a strong sense of community are more likely to translate their intentions into genuine readiness (Paton, 2006). The idea that one has accountability for oneself and other people is known as perceived responsibility. This will determine the extent to which a person is ready for a disaster. According to Ballantyne et al. (2000), there is less chance of intentions turning into deeds when people believe that others are in charge of ensuring their safety. People are more likely to turn intentions into deeds if they feel that they have an obligation to protect others and their own lives (Paton, 2006).

2.5 Barriers to Disability-Inclusive Disaster Risk Reduction

Much more work needs to be done to remove the barriers preventing persons with disabilities from being included in disaster risk reduction and response, even though policies, standards, and guidelines are starting to address their needs and rights in disaster situations (Twigg, Kett, Lovell, 2018). Disability inclusion will not be accomplished without confronting the institutional and societal marginalization, exploitation, and discrimination that persons with disabilities face both during and outside of disasters. Physical, environmental, institutional, socioeconomic, or attitudinal barriers may hinder persons with disabilities from fully and effectively participating in disaster preparedness and recovery activities. By removing these barriers, every person in society can benefit from DIDRR initiatives, thereby reducing the disproportionately negative effects experienced by persons with disabilities.

Lack of understanding and awareness regarding the unique needs and challenges faced by persons with disabilities in disaster situations constitutes one of the main barriers to DIDRR. When it comes to including persons with disabilities in disaster risk reduction efforts, this lack of awareness frequently results in inadequate planning and preparation (World Health Organization, 2007). It is challenging to develop and put into practice efficient plans and measures to meet the needs of this vulnerable population without the necessary knowledge and awareness (United Nations Office for Disaster Risk Reduction, 2019). One of the main barriers to DIDRR is a lack of understanding and awareness. Mehta and Munshi-South (2018) assert that a large number of people and communities are unaware of the distinctive needs and vulnerabilities faced by persons with disabilities in times of disaster.

The lack of awareness is caused by a lack of education and training regarding disability inclusion in disaster management procedures. Furthermore, White (2014) contends that the implementation of DIDRR is further hampered by the inadequate understanding of disability rights. It is possible to significantly increase the ability to include persons with disabilities in disaster risk reduction initiatives by addressing these knowledge gaps. Many disaster response workers are not equipped with the knowledge and abilities needed to properly assist persons with disabilities both during and after disasters, (Altay and Labonte, 2014). In the end, this lack of training makes it more difficult for them to offer the right form of support and accommodations, which makes persons with disabilities' vulnerabilities and challenges

during disasters even more severe. Furthermore, Schomerus et al. (2017) point out that the training that is currently given to disaster response staff frequently ignores the special needs and opinions of persons with disabilities, which makes it even more difficult for them to adequately respond to these populations. Thus, in order to improve disaster response personnel's comprehension and ability to assist persons with disabilities during emergencies, extensive disability-inclusive training programs must be developed and put into place.

Another significant barrier to DIDRR is the insufficient dissemination of information to this population. Persons with disabilities cannot effectively plan for, respond to, or recover from disasters without timely and accurate information (Handicap International, 2013). This presents an additional risk regarding their safety and welfare during emergencies (IFRC, 2007). The necessity of involving persons with disabilities in disaster risk reduction initiatives has come to light more and more in recent years (Twigg, 2015). Even so, there are still a lot of barriers standing in the way of persons with disabilities being effectively included in disaster preparedness and response (Twigg, 2015). Among these barriers is a lack of understanding and awareness of the unique requirements and vulnerabilities faced by persons with disabilities (Twigg, 2015). Furthermore, during disaster events, there is a lack of inclusive and accessible dissemination of information and communication (Twigg, 2015). Furthermore, physical barriers like inaccessible evacuation centres and transportation systems make it extremely difficult for persons with disabilities to seek safety and assistance in an emergency (Twigg, 2015). In general, these barriers must be removed to guarantee the complete and significant involvement of persons with disabilities in efforts to reduce the risk of disaster.

Important variables that impede the participation of persons with disabilities in disaster risk reduction initiatives include environmental and physical barriers. These barriers may consist of insufficient assistive devices, such as wheelchairs or hearing aids, or inaccessible infrastructure, like buildings with no ramps or elevators. Furthermore, the environment may provide difficulties for those with mobility impairments, for example, uneven terrain or unclear signage, which can make evacuation challenging (McNamara & Gibson, 2019). In order to guarantee that persons with disabilities participate fully and equally in disaster preparedness and response activities, these barriers must be removed. Another barrier to DIDRR is the inaccessibility of infrastructure and facilities. Research has shown that during disasters,

persons with disabilities have limited mobility and evacuation capacity due to poorly constructed and inaccessible buildings, roads, and transport systems (Raman, 2018). This increases their vulnerability to the effects of disasters by limiting their capacity to look for and obtain necessary services and resources (Sarambounou et al., 2020). The challenges that persons with disabilities experience in times of disaster are further compounded by inaccessible communication systems and an absence of accessible information (Barnes, 2012).

DIDRR faces significant barriers due to the inadequate availability of assistive devices and technologies. In times of disaster, these technological devices are essential for helping persons with disabilities increase their safety and independence but access and availability are still restricted, especially in developing nations (Samuel et al., 2018). Several factors such as inadequate funding, lack of knowledge among decision-makers and disaster management organizations, and the absence of strong policies and guidelines governing the distribution of assistive technologies and devices contribute to this inadequacy (Dupin et al., 2019; Khasnabish et al., 2017). As a result, persons with disabilities are more vulnerable in disaster situations because they frequently lack the resources needed to adequately prepare for, respond to, and recover from disasters.

Barriers to communication and information are key factors impeding the successful application of disability-inclusive disaster risk reduction techniques. These barriers frequently result from a lack of channels for accessible communication and a disregard for the varied needs of persons with disabilities. According to Bechtel et al. (2017), the lack of inclusive and accessible communication infrastructures significantly restricts the capacity of persons with disabilities to access critical information and warnings promptly during disasters, which hinders their ability to make decisions and take appropriate action. Social and attitudinal barriers make it more difficult to include persons with disabilities in disaster risk reduction initiatives. People's participation and engagement are restricted when there are negative societal attitudes regarding disabilities, which frequently result in discrimination and exclusion (Banerjee, 2019). Furthermore, the general population's ignorance and lack of knowledge of disability issues impede the formulation and application of inclusive policies and practices (Kett, 2018). As a result, persons with disabilities typically have their voices and perspectives ignored and their needs are not given adequate consideration.

Another significant barrier to achieving DIDRR is the exclusion of persons with disabilities from decision-making processes. People with disabilities are frequently excluded from important discussions and decision-making forums that have a direct impact on their lives in emergencies, which results in a lack of precise and nuanced knowledge of their particular needs and abilities. The vulnerability of persons with disabilities is increased by this exclusion, which perpetuates the cycle of marginalization and exclusion (UNISDR, 2015). Lack of representation and participation in disaster preparedness and response activities further exacerbate the barriers faced by persons with disabilities in flood disaster preparedness. Studies have indicated that this specific group is frequently disregarded and left excluded from policy development and decision-making procedures (Burton et al., 2017). Furthermore, it is common for the voices and experiences of people with disabilities to be ignored, which leads to the implementation of policies that fall short of meeting their unique needs (Klein et al., 2015). Financial barriers also impede the accessibility and utilization of resources for preparedness and resilience for persons with disabilities. This includes having not enough funds to buy essential emergency supplies, make evacuation plans tailored to the needs of persons with disabilities, or renovate their homes to make them flood-resistant (Ahmed et al., 2018; Quy et al., 2020). The financial barriers that persons with disabilities must overcome are exacerbated by the high cost of assistive technology and accessible infrastructure (United Nations, 2015).

It has been determined that overcoming legal and policy barriers will be crucial to attaining DIDRR. These barriers include the absence of regulations mandating accessibility and adequate accommodations in evacuation centres and transportation networks, as well as the explicit exclusion of disability from disaster response and management plans (UNDESA, 2013; UNISDR, 2015). These barriers are made worse by the DRR policies' limited acknowledgement of disability as a cross-cutting issue and the underwhelming participation of organizations that advocate for persons with disabilities in the policy-making process (IDDC, 2017; WHO, 2011). Furthermore, the implementation of DIDRR measures is hampered by the lack of enforcement mechanisms and accountability measures and inadequate laws and regulations that support disability inclusion (IDDC, 2017). Another barrier to DIDRR is the absence of enforcement mechanisms for disability rights. International frameworks and guidelines exist, but national enforcement of them to guarantee the protection and inclusion of

persons with disabilities is weak. The implementation of DIDRR is hampered by this lack of enforcement (Fan et al., 2020).

The lack of coordination between organisations for persons with disabilities and disaster management agencies is one of the main barriers to disability-inclusive disaster risk reduction. Samant et al. (2018) claim that these disaster management agencies frequently function autonomously and fail to consider the unique requirements and vulnerabilities of persons with disabilities in times of emergency. When there is a lack of cooperation, it becomes difficult to successfully handle the unique challenges that persons with disabilities encounter during disasters. According to Lavin et al. (2019), this lack of coordination leads to poor preparation, communication, and response plans, which worsens the effects of disasters on persons with disabilities. Table 2.3 below gives an overview of the types of barriers that persons with different types of disabilities may face in disaster preparedness. It should be noted that individuals may have multiple disabilities or secondary conditions which will also impact their ability to access and benefit from disaster and emergency management services.

Table 2.3 Barriers faced by persons with disabilities in disaster preparedness

Disability Category	Possible Conditions	Example of barriers
Sensory Disability	Total blindness or low vision	-Reading print warnings, evacuation and other instructions, and documents on emergency preparedness, relief, and other information. -Emergency warnings, updates and other critical information provided in text form only on television -Navigating new surroundings in shelters and temporary housing
	Total deafness or disability of hearing	-Hearing warnings, weather information and maps of impact areas, evacuation/safety instruction, guidelines and updates on the radio or television without captions or sign language interpretations -Communicating with first responders, emergency management personnel, and providers involved in relief operations
	Speech impairment	Communicating with first responders, emergency management personnel, and providers involved in relief operations
Physical Disability	This includes loss of mobility, dexterity, and control over some level of body functioning.	-Loss of essential assistive devices like a wheelchair or durable medical equipment in rapid response and evacuation situations -Lack of accessible transportation for evacuation -Evacuation and rescue from high buildings when elevators stop functioning -Being unable to enter or use shelters or temporary housing (including restrooms and toilets) due to accessibility barriers, or enter public buildings to access welfare and other assistance services -Commuting between places (such as between home, aid camp, shelter) due to debris and destruction on roads
Cognitive Disability	Cognitive disabilities include many different types of disabilities which may impact a person's memory, thinking and problem-solving, visual, math, reading and language comprehension, and ability to pay attention or follow instructions.	-Difficulty understanding, remembering, or following instructions -May not remember contact information for emergency contacts, family members
Psychosocial Disability	Just like physical disabilities, psychosocial disabilities may exist before a disaster or may result from the traumatic and distressing events surrounding a disaster or emergency (e.g. post-traumatic stress disorder).	-Need for screening and counselling services, especially when a disaster causes the onset of psychosocial disabilities -Lack of awareness and empathy about the needs of persons with psychosocial disabilities -Disruptions of established relationships with care providers.

Source: Handicap International (2012)

2.6 Enablers of Disability-Inclusive Disaster Risk Reduction

Enablers of DIDRR aim to increase the capacity of persons with disabilities to withstand emergencies and disasters through a variety of strategies and components (UNDRR, 2018).

The utilization of accessible communication and assistive technologies to improve information dissemination and decision-making processes, the adoption of inclusive policies and laws, and capacity-building initiatives aimed at disaster management organizations and persons with disabilities are some examples of these enablers (Woodward, 2016). Additionally, in order to guarantee that the unique requirements and vulnerabilities of persons with disabilities are appropriately taken into consideration during disaster preparedness, response, and recovery efforts, community involvement and participation—especially from persons with disabilities, their families, and relevant organizations—are essential (Tapia Granados, 2017).

Including inclusive policies and a rights-based approach in disaster management frameworks are facilitators of disability-inclusive disaster risk reduction (Hanley et al., 2019). Furthermore, the effective mainstreaming of disability-inclusive practices necessitates the development of partnerships and collaborations among stakeholders, including persons with disabilities, governments, non-governmental organizations, and the private sector (United Nations Office for Disaster Risk Reduction, 2019). These kinds of partnerships can improve the flow of information and experience, guaranteeing that strategies for disaster risk reduction take disability perspectives into account (United Nations, 2015).

2.7 Chapter Summary

This chapter highlighted the literature that is relevant to the topic under discussion in line with the objectives and research questions. Literature from journals, research papers and other peer-reviewed literature was analysed in order to gain a deeper understanding of persons with disability and disaster preparedness. This was followed by an analysis of the barriers and enablers of Disability-inclusive disaster risk reduction. The theoretical framework that underpins this study was then explained. This includes the Sendai Framework for Disaster Risk Reduction and the rights-based approach of the United Nations Convention on the Rights of Persons with Disability. The next chapter discusses the research methodology.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology and the research design that was used in this study. The type of methodology used in a study depends on the problem and the objectives. Therefore, this chapter gives a detailed layout of steps followed such as research methods, research instruments employed, and the data analysis.

3.2 Research Design

The research was guided by an interpretive-constructivist paradigm. Qualitative data were gathered to comprehend the flood disaster preparedness for persons with disabilities. The interpretive method was appropriate for this study because it views reality as something that exists in human minds and is dependent on experiences and interpretation from those minds rather than as something that is out there (Prof & Jenkins, 2004). The rationale behind this qualitative study design was that it was the most appropriate method for understanding social or human problems, particularly those connected to disaster risk reduction (Aspers & Corte, 2019). The other reason is that reality is not independent, rather it is socially created and can have various meanings.

The study employed the qualitative case study research design. The chosen case is Kanyemba Ward 1 in Mbire District. This research design was chosen because a single case can provide insight into the events and situations prevalent in a group from where the case has been drawn. It is a very useful design when exploring an area where little is known or where there is a need to have a holistic understanding of the situation, phenomenon, episode, site, group or community. A case study is very relevant when extensively exploring and understanding rather than confirming and quantifying (Pilot, 2016). In this design, the attempt is not to select a random sample but a case that can provide you with as much information as possible to understand the case in its totality (Reed, 2018).

3.3 Data collection methods

3.3.1 Key Informant Interviews

Key informant interviews were carried out with four (4) representatives from Organizations for Persons with Disabilities (OPDs) who are also disability rights advocates and experts. Six (6) other key informants from the District Civil Protection Committee (DCPC) were interviewed. These interviews were carried out through telephone. The purpose of the key informant interviews was to collect in-depth information from experts or people who are knowledgeable on the topic under discussion. These experts, with their particular knowledge and understanding, provided insight into the state of disaster flood preparedness of persons with disabilities, and the barriers that affect flood disaster preparedness for persons with disabilities and gave recommendations for supporting persons with disabilities in disaster preparedness.

3.3.2 Questionnaires

Questionnaires were handed out to the participants who comprised twenty (20) persons with disabilities and ten (10) carers of persons with disabilities, to establish the extent to which persons with disabilities were being integrated into DRR programmes. This allowed them to freely and objectively express issues surrounding their state of disaster preparedness. Twenty variables were gathered for the questionnaire, which used eleven indicators to assess respondents' level of flood preparedness. Resource availability, emergency plans, evacuation plans, early warning systems, flood knowledge and awareness, flood education and training, information on flood-proofing, post-flood recovery, risk communication, and social capital are among the 11 indicators. A three-point Likert scale was used in the study to increase measurement accuracy for preparedness. On a scale of 1 to 3, respondents were asked to indicate how much they agreed with the variables: 1 = strongly agree; 2 = neutral; 3 = strongly disagree. The use of questionnaires and key informant interviews enabled the researchers to triangulate the data hence ensuring the trustworthiness of the findings.

3.4 Population and Sampling

A non-probability sampling technique known as purposive sampling was applied in this research. The researcher used their judgment to select the subjects to be included in the study based on their knowledge of the topic under study. Purposive sampling was the only appropriate method available if there are only limited numbers of primary data sources who can contribute to the study as is the case with this study. Thus forty (40) respondents were

purposively chosen as a sample for this study. These included twenty (20) persons with disabilities, ten (10) carers of persons with disabilities, four (4) representatives of OPDs and six (6) officials from the DCP working in Mbire District.

Table 3.1 Sample Size

	District Civil Protection Committee	Persons with disabilities	Carers of persons with disabilities	Representatives from organisations for persons with disabilities
Sample size of participants	6	20	10	4
Questionnaire		✓	✓	
Key Informant Interviews	✓			✓

3.5 Demographic characteristics of the participants

Sixty per cent (60%) of the respondents were males and forty per cent (40%) were female. This is because the researcher needed to have responses from participants who were at least able to comprehend the questions on the questionnaire. The reason for there being more males than females could be that as Musengi, Ndofirepi and Shumba (2013) state the school enrolment rate for persons with disabilities is still very low in developing countries and girls are mainly affected because most parents prefer to send the boy child to school rather than the girl child. Therefore, the gender disparity is not surprising because male persons with disabilities are relatively more learned than female persons with disabilities. Females face double discrimination based on gender and disability.

Sixty-five per cent (65%) of the participants were educated at least up to Ordinary Level. This shows that the respondents are competent and ensures the reliability of the data collected. With significant education, respondents tend to take their time in analysing the questionnaire and hence they tend to be unbiased in their responses. Respondents with significant levels of education tend to be rational in their analysis thus reducing the bias of the data to be collected which may result in obtaining better results to the conclusion of the general study. This is supported by the findings of Huffman (1974) in a study that analysed the impact of education on decision making where he found that education has an impact on decision-making.

Fifty per cent (50%) of the questionnaire respondents had physical impairments, 30% had speech/hearing impairments and 20% had visual impairments. The variation in the types of impairments is pertinent to the study because it will give the research more credibility in that views, attitudes, experiences and perspectives can be drawn from different angles. Disability is a complex, dynamic and multidimensional concept (WHO, 2011), therefore when conducting any research, researchers should strive to include persons with all types of impairments (Twigg, 2018). It should however be noted that in this research, persons with intellectual and mental disabilities were deliberately excluded. This is because the researcher assumed that they would not be able to fully comprehend the questions on the questionnaire.

3.6 Data analysis

Qualitative data was thematically analysed. Thematic analysis is a method for analysing qualitative data that entails searching across a data set to identify, analyse, and report repeated patterns (Braun and Clarke 2006). The researcher categorised the key themes that emerged from interviews as flood disaster preparedness, barriers to participation and enabling environment on disability-inclusive disaster risk reduction. The thematic analysis is an appropriate and powerful method to use when seeking to understand a set of experiences, thoughts, or behaviours across a data set (Braun and Clarke 2012). Descriptive statistics are provided to quantify data on the key themes. The researcher converted qualitative data to quantitative using a 3-point Likert scale and data analysis was done in Excel to generate tables, frequencies and percentages to illustrate figures. Thus, there were some situations where a combination of quantitative and qualitative was ideal. The main advantage of Likert Scale questions is that it is easy to understand them. When using quantitative data, it is easy to draw conclusions, reports, results and graphs from the responses. Likert surveys are also quick, efficient and inexpensive methods for data collection and analysis. However, the disadvantage of using the Likert scale is that people tend to avoid choosing the extreme options on the scale, because of the negative implications involved with "extremists", even if an extreme choice would be the most accurate response. The method may produce responses that are too subjective.

3.7 Data Validity and Reliability

The researcher used internal validity which refers to the validity/accuracy of the measurement tool. The validity of the data was based on triangulating different data sources by examining evidence from the sources and using it to build a coherent justification of themes (Creswell and Creswell, 2018). They went on to note that if themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding to the validity of the study. A pilot study was carried out on the research instruments. For reliability of data, an inductive analytic procedure involving sorting the database, a careful reading of texts, coding, and categorization and organizing of raw data into word files from field observations, interviews, and questionnaires were reviewed and cleaned.

3.8 Ethical Considerations

Participants were initially briefed about the purpose of the research and were assured that the information that will be collected will be used for educational purposes only and that no names will be mentioned in the writing up of the research. Participants were given the right to opt out of the study when they felt that the issues being discussed were against their conscience. The researcher obtained an access letter from Bindura University of Science Education. The researcher ensured that they had invaluable respect for the rights, dignity and worth of all respondents. Anonymity among the participants was assured. The researcher also acknowledged the works of other scholars used in the study. Therefore, the researcher ensured that they abide by these ethics in the whole process of conducting the research project.

3.9 Chapter Summary

This chapter focused on the research methodology and design used in the research study. The qualitative case study design was used. Key informant interviews and questionnaires were used to collect data leading to a better understanding of the research problem. The next chapter focused on data presentation.

CHAPTER FOUR: RESULTS

4.1 The preparedness of persons with disabilities to flood disasters

Persons with disabilities in Kanyemba ward, Guruve are less prepared for flood disasters. One of the critical areas of concern is the acute shortage of resources. Figure 4.1 illustrates that 25% of the questionnaire respondents strongly agreed that the community has emergency food and water, 20% were indifferent and 55% strongly disagreed. Key informants added by saying: *"It is difficult to stockpile emergency water and food due to financial constraints, therefore the community relies on donor support whenever floods occur"*, KI #6.

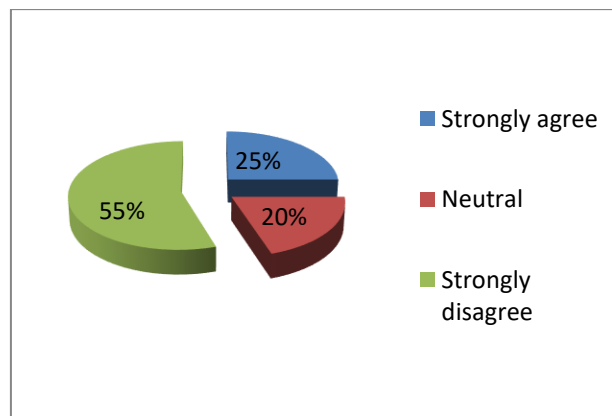


Figure 4.1 Availability of emergency food and water

Contingency funds are not available in the ward. Figure 4.2 illustrates that 10% of the respondents strongly agreed that the community has contingency funds that are available specifically for persons with disabilities welfare in case of flooding, 30% were neutral and 60% strongly disagreed with the assertion. Key informants reiterated that *"contingency funds for the general population are not available"* KI #2. Therefore, the idea of having contingency funds specifically for persons with disabilities is still far from being realised.

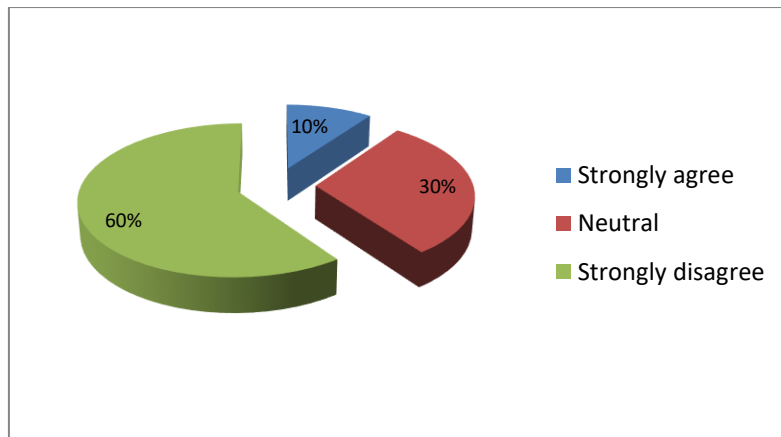


Figure 4.2 Availability of contingency funds

Although assistive devices such as wheelchairs, hearing aids and boats with ramps are essentials for persons with disabilities, they are rarely available within the ward. Table 4.2.3 illustrates that 80% of the respondents strongly disagreed that the community has assistive devices such as wheelchairs, hearing aids and boats with ramps for persons with disabilities and 20% were indifferent. It was derived from the interviews that there is a significant number of persons with physical disabilities who need wheelchairs for mobility.

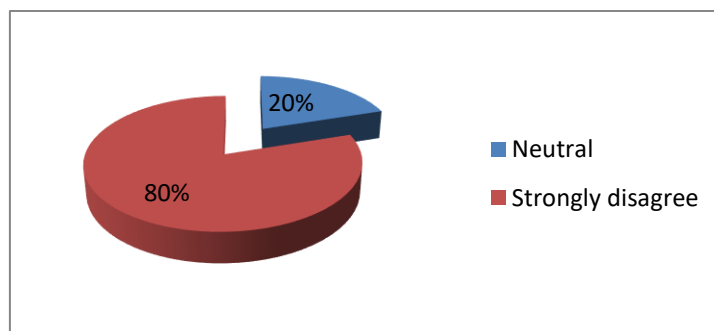


Figure 4.3 Availability of assistive devices

Kanyemba community does not have a community warehouse with relief items. Figure 4.4 shows that 25% of the respondents were indifferent and 75% strongly disagreed with the assertion that the community has a warehouse with relief items such as blankets, tents and mosquito nets. This situation was also bemoaned by key informant 8 who said that “to prepare for flood disasters, people have to stock food in elevated structures, but you will find that most

persons with disabilities have no source of income so they survive from hand to mouth. Therefore, storing food is not possible for them”.

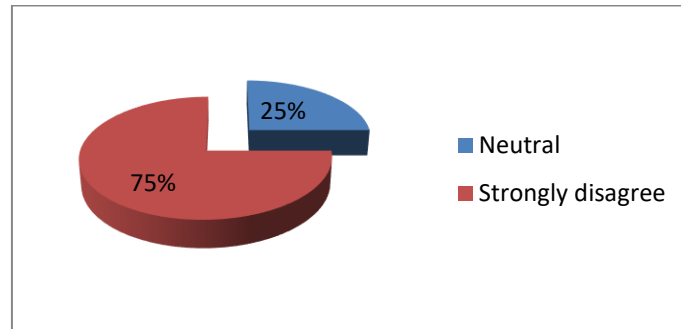


Figure 4.4 Existence of a warehouse with relief items

Another key aspect of food preparedness is the existence of flood emergency plans. Most of the participants in this study expressed ignorance of the plan. The majority of them did not know safe places for shelter during floods. Figure 4.2.5 illustrates that 25% of the respondents strongly agreed, 10% were indifferent and 65% strongly disagreed with the assertion that persons with disabilities know safe places for shelter during floods. Key informants indicated that persons with disabilities have no such knowledge because they are excluded from flood disaster preparedness programs.

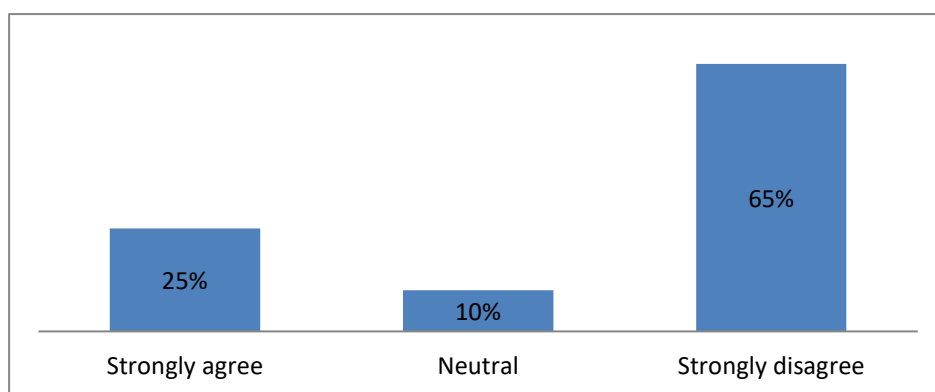


Figure 4.5 Knowledge of Safe Places

Despite the above shortcomings, persons with disabilities have people to assist them with mobility in case of flooding. Figure 4.6 illustrates that 60% of the respondents strongly agreed

and 40% disagreed with the assertion that persons with disabilities in the ward have people to assist them with mobility in case of flooding.

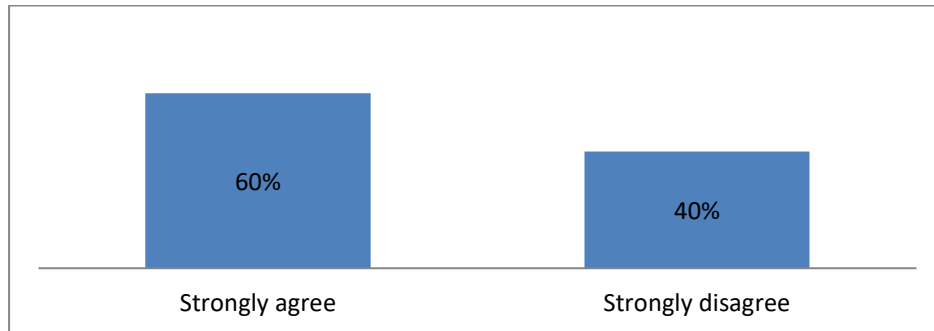


Figure 4.6 Assistance with mobility

However, many people in Kanyemba were not aware of evacuation plans and routes in their area. Figure 4.7 illustrates that 10% of the respondents strongly agreed, 10% were indifferent and 80% strongly disagreed with the assertion that persons with disabilities are aware of evacuation plans and routes. Key informant 5 bemoaned that *“persons with disabilities are deliberately excluded from disaster risk reduction programs and activities, resulting in lack of knowledge on evacuations plans and routes”*

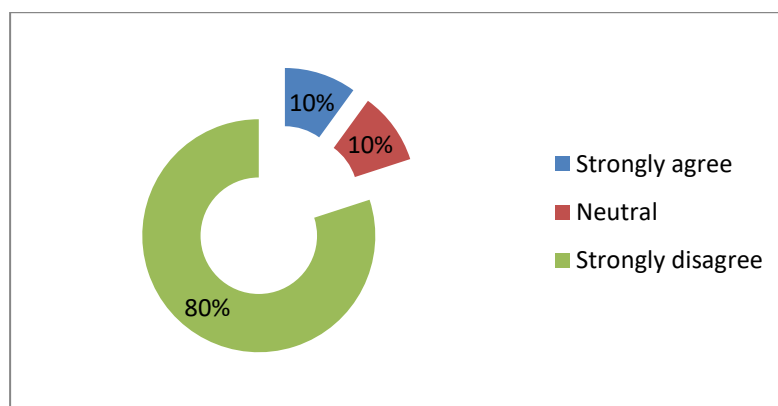


Figure 4.7 Awareness of evacuation plans

Many participants indicated that they were not aware of alternative safe and secure shelters. Figure 4.8 illustrates that 25% of the respondents strongly agreed, 10% were indifferent, and 65% strongly disagreed with the statement that alternative safe and secure shelter is available for persons with disabilities in case of flooding. One of the key informants explained that most evacuation centres are inaccessible for persons with disabilities because they are high structures that make it difficult for persons with disabilities to access them.

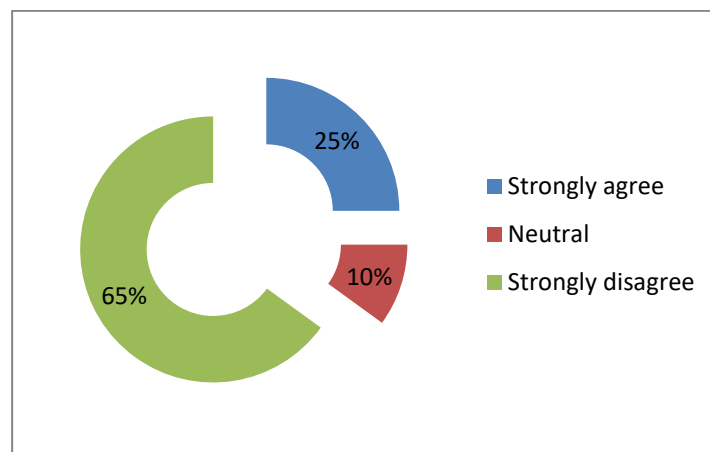


Figure 4.8 Knowledge of safe and secure shelter

The early warning system for flood disasters in Kanyemba was poor. The people felt that they did not have access to local hydrological and weather forecasts. Figure 4.9 illustrates that 10% of the respondents strongly agreed, 15% were neutral and 75% strongly disagreed with the assertion that the ward has access to local hydrological and weather forecasts.

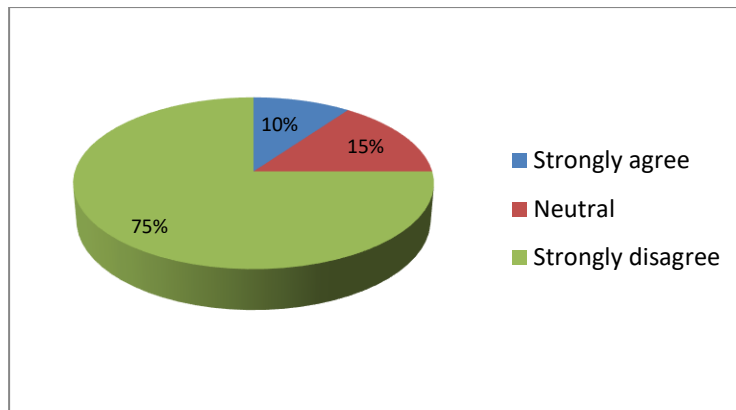


Figure 4.9 Access to weather forecasts

Figure 4.10 illustrates that 10% of the respondents strongly agreed, 10% were indifferent, and 80% strongly disagreed with the assertion that flood warnings are communicated via channels that can be easily understood by persons with disabilities. Key informant 2 also reiterated this challenge by adding that: *“Persons with disabilities face communication challenges as they are usually forgotten about when DRR information material is being compiled, resulting in information inaccessibility for persons with disability. Communication barriers result in persons with disabilities lacking awareness on disaster preparedness issues”* Key informant 1 also bemoaned the challenge of flood awareness information inaccessibility by stating that.

“Many times persons with disabilities may not even be aware that there is an imminent disaster due to inaccessible and inappropriate early warning systems. Flood disaster preparedness information from the Civil Department of Civil Protection is inaccessible to persons with disabilities. For example, information does not come in braille format for it to be accessible to blind persons. I am not blind but I have low vision and I can only read large prints. However, early warning information usually comes in small prints so I fail to access it. There is also usually no sign language interpretation on television and door-to-door early warning campaigns, therefore the deaf and hard of hearing are not able to access the life-saving information. Audio-based information is not appropriate for them. They need visuals instead. Persons with disabilities have low literacy rates because of high levels of poverty and the inaccessibility of Zimbabwe’s education system for persons with disabilities, therefore information must be availed to them in vernacular languages instead of English language”.

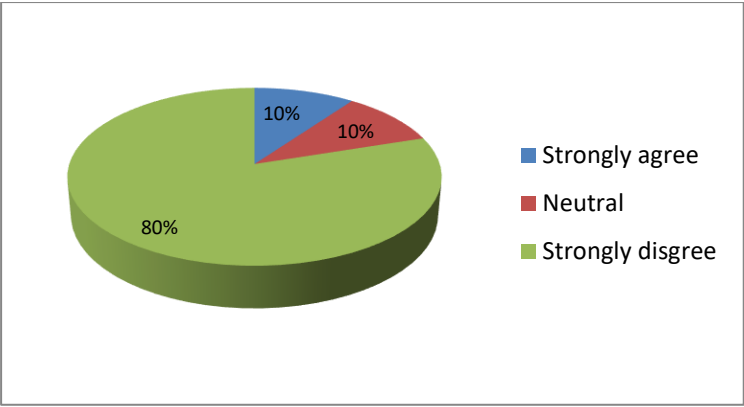


Figure 4.10 Access to flood warnings

The community cannot monitor flood water levels. As shown in Figure 4.11, 15% of the respondents strongly agreed and 85% strongly disagreed with the assertion that persons with disabilities can monitor flood water levels.

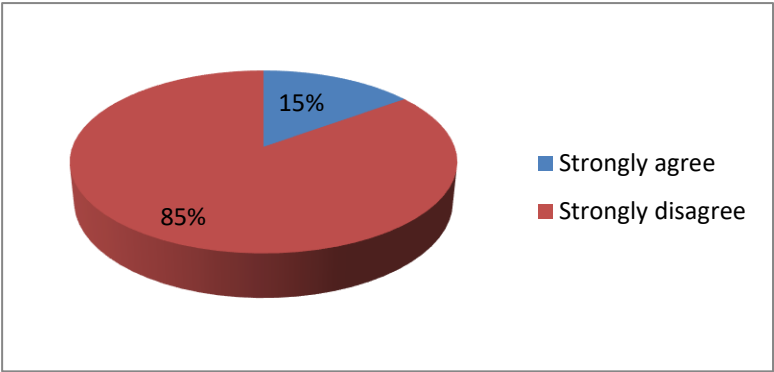


Figure 4.11 Capacity to monitor flood water levels

Flood warnings are communicated via channels that can be easily understood by persons with disabilities. Figure 4.12 below illustrates that 10% of the respondents strongly agreed 10% were neutral and 80% strongly disagreed that flood warnings are communicated via channels that can be easily understood by persons with disabilities. Key informants explained that flood warnings are designed without considering the unique needs of persons with disabilities. Information is not available in braille formats to accommodate the visually impaired and there is no sign language interpretation for the deaf.

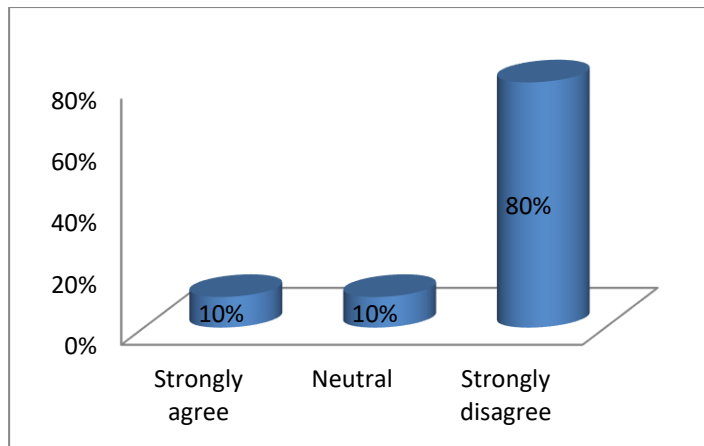


Figure 4.12 Flood warnings understood by the PWD

There are no flood maps that are understood by most people with disabilities. Figure 4.13 illustrates that 15% of the respondents strongly agreed, 10% were indifferent, and 75% strongly disagreed with the assertion that community flood maps are available and can be easily understood by persons with disabilities.

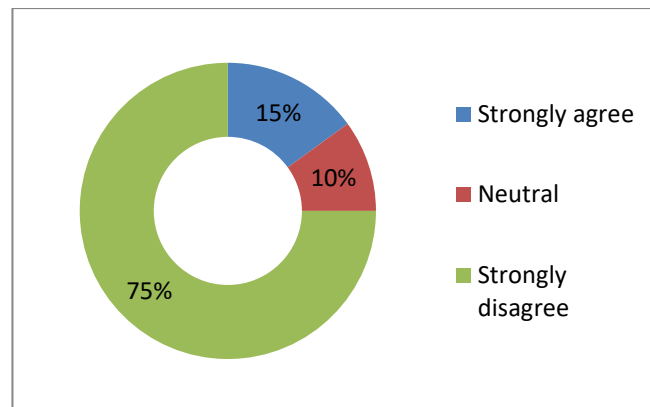


Figure 4.13 Availability of understandable maps

Training in search and rescue as well as first aid to persons with disabilities is not available. Figure 4. 14 illustrates that 30% of the respondents strongly agreed, 20% were neutral and 50% strongly disagreed that at least one person in the ward is trained. Key informant 7 added, “Disaster responders are afraid of us and do not know how to relate with us”. This therefore means that in case of a flooding disaster, emergency responders are more likely to sideline

persons with disabilities as they feel that they are not capacitated and knowledgeable enough to assist them during rescue operations.

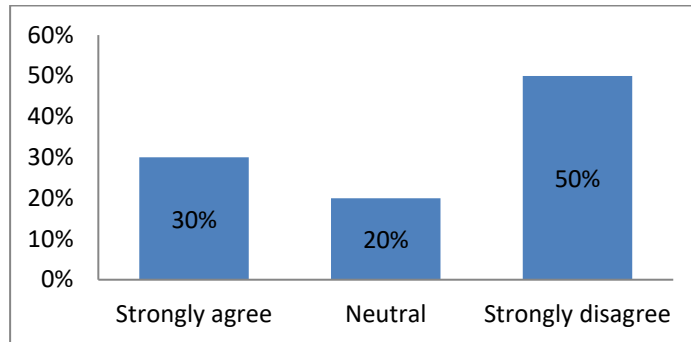


Figure 4.14 First aid training

Mock drills or simulations for flood preparedness are rarely done with persons with disabilities. Figure 4.15 illustrates that 20% of the respondents strongly agreed, and 80% strongly disagreed with the assertion that persons with disabilities participate in mock drills or simulations for flood preparedness.

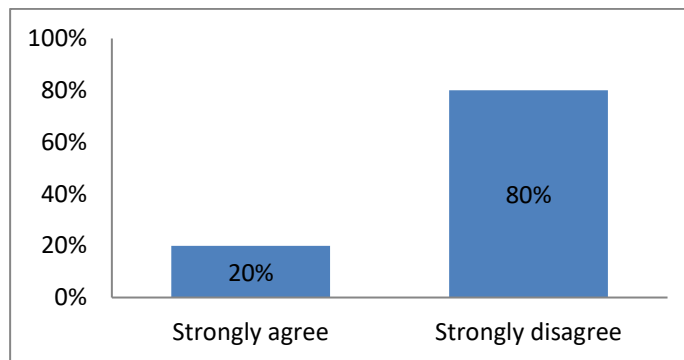


Figure 4.15 Participation in mock drills

Humanitarian aid is not deliberately targeted at persons with disabilities. Figure 4.16 shows that 25% of the respondents were neutral, and 75% strongly disagreed with the assertion that the community receives aid that is specifically targeted at persons with disabilities from the government, Red Cross or NGOs after flood disasters.

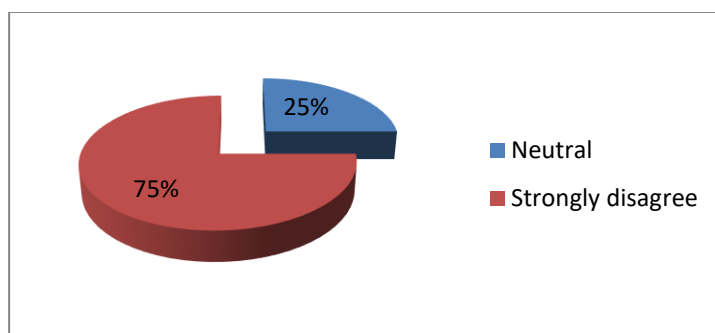


Figure 4.16 Aid for PWDs

Flood risk communication in Kanyemba is poor. Most respondents (85%) were not aware of the civil protection numbers to be called in case of a disaster. They did not have other alternative means of communication to send and receive flood alerts and appeals for humanitarian assistance. Figure 4.17 illustrates that 30% of the respondents strongly agreed, 20% were neutral and 50% strongly disagreed that the community has alternative means of communication to send and receive flood alerts and appeals for humanitarian assistance. Key informant 9 added that persons with disabilities are often excluded from flood communication due to information that comes in inaccessible formats. Key informant 5 also added that “persons with disabilities are also more likely to be the last group to receive humanitarian assistance due to mobility limitations so insufficient humanitarian assistance disadvantages them the most”.

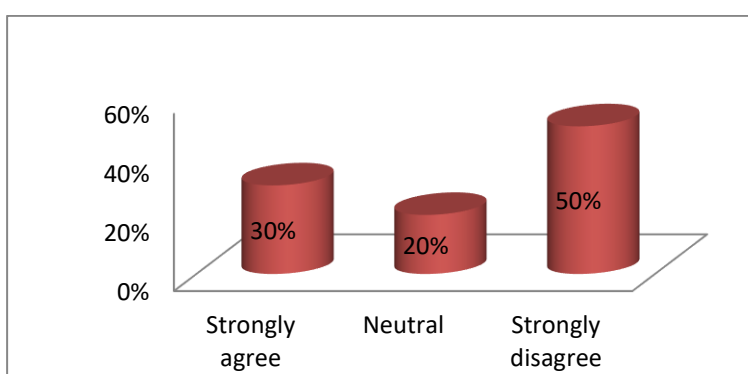


Figure 4.17 Availability of alternative communication

Although the Kanyemba community seem to be closed, members rarely help persons with disabilities during flood response and recovery. Figure 4.18 illustrates that 65% strongly disagreed that community members help persons with disabilities during flood response and recovery. Key informant 3 reiterated that “persons without disabilities do not know how to interact with us (persons with disabilities) so they resort to ignoring us and keeping their distance”. This situation puts persons with disabilities at risk of low disaster preparedness.

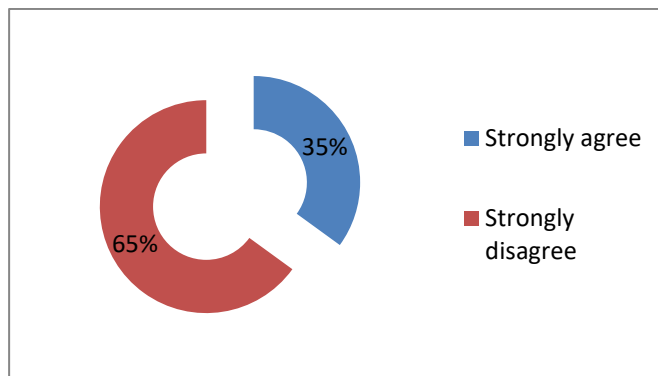


Figure 4.18 Availability of help in flood response and recovery

Formal and informal safety nets that cater for persons with disabilities are not available. Figure 4.19 shows that 75% of respondents strongly disagreed that the community has either formal or informal safety nets that also cater for persons with disabilities of trust for assistance and sharing flood information.

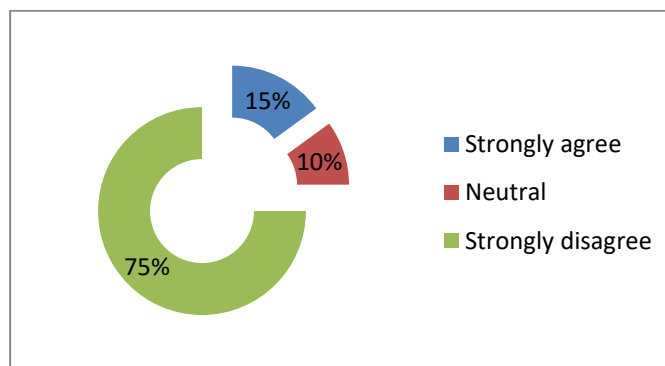


Figure 4.19 Availability of safety nets

4.2 Barriers to disability-inclusive Disaster Risk Reduction Programmes

Persons with disabilities face physical/environmental, institutional, economic and attitudinal barriers to participation in disaster preparedness activities and policies.

4.2.1 Physical/environmental Barriers

The nature of disability itself is hindering the participation of persons with disabilities in DRR activities. About 90% of the respondents strongly agreed that the nature of disability is hindering the participation of persons with disabilities in disaster risk reduction programs. Key informants explained that persons with disabilities are often deterred from attending flood preparedness programs due to the nature of disabilities such as visual and physical impairment. When a person is visually impaired they depend on others to take them to the meeting venues. Not having someone to depend on will mean that they cannot be present at such meetings. At the same time, there is a lack of accessible transport for evacuation. This was confirmed by 75% of the respondents who strongly agreed that lack of accessible transport for evacuation is a barrier to flood preparedness for persons with disabilities. The same point was restated by key informants who stated that persons with physical disabilities have a difficult time accessing transport for evacuation. This is because there would be no space for their wheelchairs in the vehicles and also, they would need assistance with boarding the vehicles.

The shelters and evacuation centres are not easily accessible to persons with disabilities. As shown in Figure 4.20 80% of the respondents strongly agreed that the physical inaccessibility of evacuation centres is a barrier to persons with disabilities state of flood disaster preparedness. A key informant highlighted that evacuation centres are not disability friendly. The restrooms and sleeping areas are not fitted with ramps, which encourages the exclusion of persons with disabilities. Floods require movement to higher ground so evacuation centres become inaccessible to persons with disabilities because of their location and immobility of persons with disabilities.

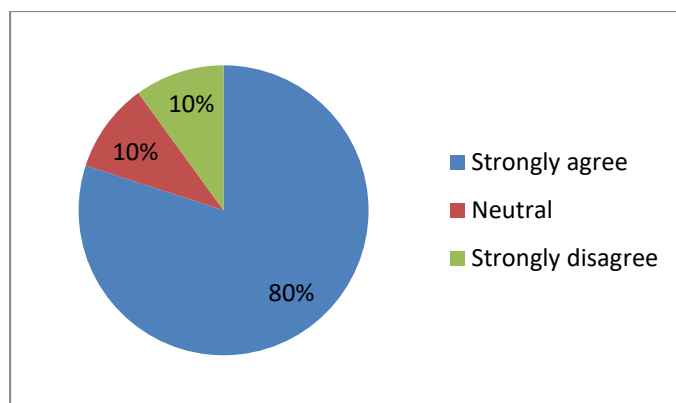


Figure 4.20 Inaccessibility of shelters and evacuation centres

During the rainy season, the local roads and paths become muddy making it difficult for persons with disability to move. About 80% of the respondents strongly agreed that the local paths become very muddy during the rainy season thus access becomes nearly impossible for persons with disabilities, which hinders their participation in disaster risk reduction meetings. Key informants added that this is especially true for those using wheelchairs.

4.2.2 Institutional Barriers

Persons with disabilities lack representation, coordination and partnerships with representative organizations. About 55% of the respondents strongly agreed that lack of representation, coordination and partnerships with representative organizations of persons with disabilities is a barrier affecting persons with disabilities' participation in disaster preparedness activities and policies. On a similar note, 80% of the respondents strongly agreed that a lack of expertise on DiDRR is a barrier to flood preparedness for persons with disabilities.

4.2.3 Attitudinal Barriers

Stigma and discrimination from the community were cited as the main attitudinal barriers faced by persons with disabilities. As Figure 4.21 illustrates, 90% of the participants strongly agreed that stigma and discrimination from the community is a barrier affecting persons with disabilities' participation in disaster preparedness activities and policies. Key informants highlighted that people have negative attitudes towards persons with disabilities. *“Society stigmatizes persons with disabilities. Some have the misconception that disability such as blindness is contaminable so they keep their distance from the blind person”* (KI #3). In

addition, about 65% of the respondents also strongly agreed that low self-esteem is another barrier that affects persons with disabilities' participation in disaster preparedness activities and policies.

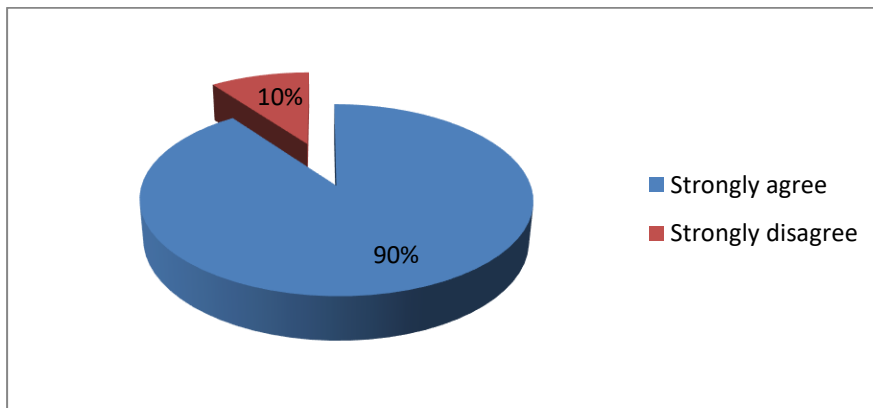


Figure 4.21 Stigma and discrimination

4.2.4 Economic Barriers

Lack of funding for programs was cited as the main economic barrier. As shown in Figure 4.22, 80% of the respondents strongly agreed that lack of funding for programs is a barrier that affects persons with disabilities' participation in disaster preparedness activities and policies. This barrier is leading to a lack of investments in disability-inclusive disaster risk reduction. Consequently, persons with disabilities' participation in disaster preparedness activities and policies is very limited.

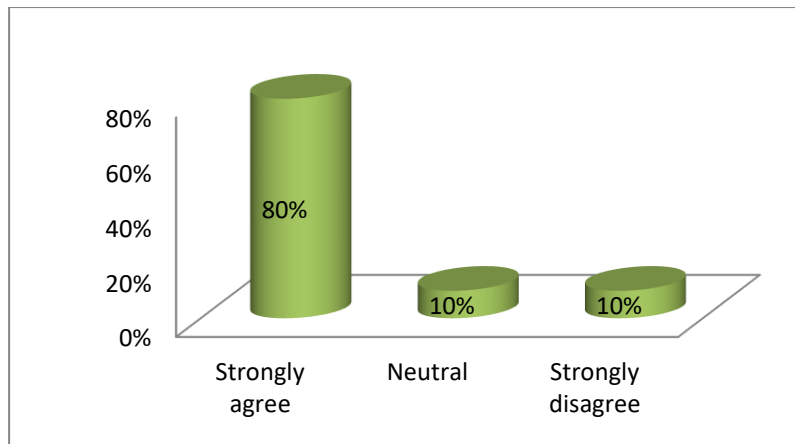


Figure 4.22 Lack of funding for programs

4.3 The enablers of disability-inclusive disaster risk reduction programmes

International conventions and agreements are enablers of the participation and inclusion of persons with disabilities in disaster preparedness activities, initiatives and policies. About 90% of the respondents strongly agreed that national legislation and policies are enablers that encourage the participation and inclusion of persons with disability in flood disaster preparedness activities, initiatives and policies to enhance their level of flood disaster preparedness. In addition, 80% of the respondents strongly agreed that training programs for disaster risk management professionals is an enabler that facilitates the participation and inclusion of persons with disability in flood disaster preparedness activities, initiatives and policies to enhance their level of flood disaster preparedness. As Figure 4.23 shows 85% of the respondents strongly agreed that public awareness campaigns are enablers that facilitate the participation and inclusion of persons with disability in flood disaster preparedness activities, initiatives and policies to enhance their level of flood disaster preparedness.

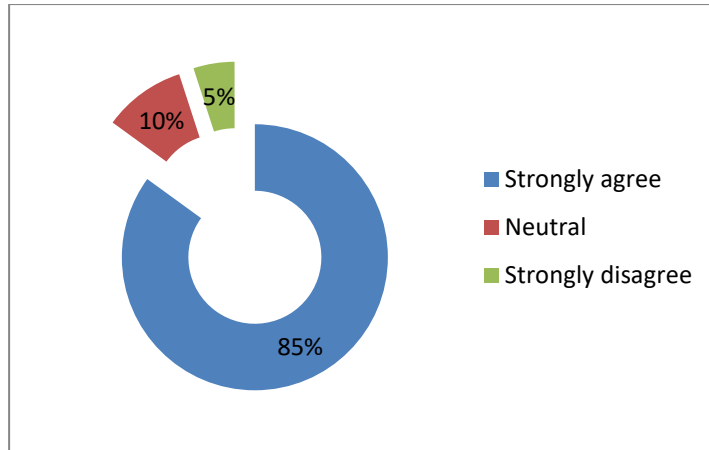


Figure 4.23 Awareness campaigns as an enabler to DiDRR

The involvement of persons with disabilities in DRR programmes is an enabler that facilitates their participation and inclusion in flood disaster preparedness activities, initiatives and policies to enhance their level of flood disaster preparedness. For this to be achieved, there should be consultation and collaboration with organizations for persons with disabilities.

4.4 Chapter Summary

This chapter presented the research findings using visuals such as pie charts and graphs. The next chapter subsequently focused on the discussions and conclusions drawn from the research findings.

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

It can be deduced from the findings that there is generally no emergency water and food available in the Kanyemba ward in case of flooding. This is alarming because flood preparedness entails prepositioning resources including food and non-food items that enable at-risk communities to quickly bounce back and move forward with their activities (Kanakis and McShane, 2016).

Kanyemba ward lacks assistive devices that are crucial for persons with disabilities to be able to be prepared for floods. This is alarming because as Mudzingwa and Madungwe (2019) assert “Most organisations do not have sign language interpreters for those with hearing impairment, ramps and lifts for people on wheelchairs and rails for people living with visual impairment. This makes the institutional environment unwelcoming to persons with disabilities. The results also indicate that the ward has low flood preparedness because “flood preparedness entails prepositioning resources including food and non-food items that enable at-risk communities to quickly bounce back and move forward with their activities” (Kanakis and McShane 2016). These resources are not prepositioned in Kanyemba.

A significant number of persons with disabilities in Kanyemba ward have no knowledge of safe places for shelter during floods. This signifies a low state of disaster preparedness because it is crucial for communities to know evacuation centres where they can find shelter in the event of a disaster. The majority of persons with disabilities in Kanyemba have no one to assist them in case of flooding. From the findings, it can also be deduced that persons with disabilities are not aware of evacuation plans and routes. Lack of knowledge of evacuation plans and routes may be the cause. From the responses, it can be deduced that there is generally no alternative safe and secure shelter available for persons with disabilities in case of flooding. This is worrying and denotes a state of lack of preparedness because safeguarding issues are crucial for persons with disabilities as they are more at risk of being abused and exploited compared with persons without disabilities.

Safe houses in Kanyemba ward are not easily accessible for persons with disabilities. These findings concur with what was pointed out by Parks and Benefits (2007) as cited by Chikuta (2014) that evacuation centres have posed one of the greatest challenges to persons with disabilities. Kanyemba community has no access to local hydrological and weather forecasts, which is a significant indicator of disaster preparedness. This is alarming because the "lack of local hydrological and weather stations makes it impossible to forecast accurately the weather conditions as well as the river flow during the rainy seasons" (Mavhura et al, 2020). Flood warning communication in Kanyemba is inaccessible for persons with disabilities. The importance of this indicator of disaster preparedness is emphasized by Snyman (2000) as cited by Chikuta (2014) who argues that access to information has always been a major challenge for persons with disabilities. He pointed out that in most cases; important information is not available in Braille and other non-text means of communication.

The research findings also indicate that Kanyemba ward has no flood maps that are available and easily understood by persons with disabilities. This is alarming and negatively affects persons with disabilities state of disaster preparedness because flood maps are crucial for the designing of appropriate structural and non-structural flood preparedness measures (Mavhura et. al, 2020). The research also found that persons with disabilities in the Kanyemba ward generally do not know how to move out of the floodplain during the rainy season. Rajah (2012) attributes this lack of knowledge to a lack of information for persons with disabilities. Communication barriers contribute to increased vulnerability in an emergency and present unique consideration for emergency responders (Turner, Windfuhr, Kapur, 2007). Persons with disabilities in Kanyemba do not participate in mock drills or simulations for flood preparedness. This means that persons with disabilities are excluded from activities that enhance their state of flood disaster preparedness.

Kanyemba community does not receive aid that is specifically targeted at persons with disabilities. A survey conducted after floods in Bangladesh in 2004, shows huge discrepancies in access to food and relief distribution between families with members with and without disabilities on the grounds of food distribution services (Kett, 2005). This finding was also reflected in the Women's Refugee Commission (2008) study which found that food distribution services and systems were inaccessible to people with visual and physical disabilities because

they were not prioritized in the system, the services were often very far away from their homes and difficult to get to, and also overcrowded. Having aid that is specifically targeted at persons with disabilities is a significant indicator of disaster preparedness. Therefore, persons with disabilities in Kanyemba have low disaster preparedness.

Persons with disabilities in the Kanyemba ward are facing the barrier of not having accessible local paths. Persons with disabilities in the Kanyemba ward are also hindered from participating in disaster-prepared activities because of the physical inaccessibility of shelters and evacuation centres. Inaccessible infrastructure and community buildings are other barriers which the study found to be affecting persons with disabilities' level of flood disaster preparedness. A study by Raman, (2018) highlighted that poorly designed and inaccessible buildings, roads, and transportation systems limit the mobility and evacuation capacity of persons with disabilities during disasters. This limits their ability to seek and access essential services and resources, making them more vulnerable to the impacts of disasters. The study also found that lack of representation, coordination and partnerships with representative organizations of persons with disabilities is a barrier affecting persons with disabilities' participation in disaster preparedness activities and policies.

Lack of expertise on disability-inclusive DRR was found to be another barrier to flood preparedness for persons with disabilities. Another barrier that the study found was that early warning systems in the ward cannot be understood by persons with disabilities. The study findings are also in line with the study by Parks (2011) where he concluded that the deaf in developing countries lack access to technologies which are designed for their specific use as most communication is done through auditory means (Parks, 2011). Persons with disabilities community are therefore systematically excluded from accessing disaster management information. The lack of statistics on the number of persons with disabilities in the ward and the types of disabilities that they have is another barrier that was found by the study to be affecting persons with disabilities' participation in disaster preparedness activities and policies. It can therefore be deduced that the DCP does not have up-to-date statistics on persons with disabilities in Kanyemba. This agrees with Rajah and Narasimhan (2023) assertion that "one of the major barriers to successfully meeting the needs of persons with disabilities in disaster or emergencies is that many first responders or government service providers may not know

how many persons with disabilities are affected and where they might be”. In addition, owing to stigma, societal misconceptions, and physical inaccessibility, persons with disabilities are often invisible or hidden in their communities (IFRC, 2007). Furthermore, Fox et al (2007) agreed with this finding by pointing out that risk and needs assessments done during preparedness and disaster risk reduction activities do not usually include questions to determine the prevalence of people with different disabilities in a given area.

Stigma and discrimination from the community were also found to be a barrier affecting persons with disabilities’ participation in disaster preparedness activities and policies. This is supported by Twigg’s assertion that “barriers to participation of persons with disabilities often relate to societal attitudes towards persons with disabilities, which prevent their active participation in DRR (Twigg, 2018). Banerjee (2019) further reiterates that negative societal attitudes towards disability often lead to discrimination and exclusion, limiting individuals' participation and engagement. Lack of funding for programs is a barrier that affects persons with disabilities’ participation in disaster preparedness activities and policies. This is in line with the findings of a review conducted by the European Disability Forum (UDF) in 2021 which found that there are no specific provisions at national and/or local levels for funding disability-inclusive DRR and recovery except for one country (Croatia) in the Asian region that has made a commitment to allocation of the state budget as well as funds from local and regional governments for disability-inclusive civil protection measures as part of its national strategy on equalization of opportunities for persons with disabilities. This is also supported by Kett et al who stated that lack of funding for programmes focused on disability, and for mainstreaming disability into wider programming, is a major constraint on disaster institutions wishing to support persons with disabilities, and can also lead to disability issues being sidelined or ignored (Kett et al., 2018).

The study found that policy and legal frameworks are enablers that encourage the participation and inclusion of persons with disability in flood disaster preparedness activities, initiatives and policies to enhance their level of flood disaster preparedness. The Sendai Framework for Disaster Risk Reduction and the United Nations Convention on the Rights of Persons with Disabilities both highlight the significance of ensuring the full involvement and participation of persons with disabilities in disaster risk reduction efforts (World Health Organization, 2021).

Capacity building and awareness were also found to be enablers that encourage the participation and inclusion of persons with disability in flood disaster preparedness. Sawada et al., (2019) also found that awareness campaigns play a significant role in educating the public about the unique challenges faced by persons with disabilities during disasters and fostering a sense of empathy and inclusion in society.

The study also found accessible infrastructure and technology to be another enabler. Aitsi-Selmi et al., (2015) supported this finding by stating that “incorporating accessible design features such as ramps, elevators, and tactile signage in buildings can enhance the mobility and independence of persons with disabilities during emergencies. Additionally, the integration of assistive technologies, such as alert systems and communication devices, facilitates the timely dissemination of information to those with sensory impairments. Inclusive planning and decision-making processes were also found to be enablers of persons with disabilities in flood disaster preparedness. Khasnabis et al., (2014) supported this by pointing out that by including persons with disabilities in these processes, their unique needs and perspectives can be identified and addressed, thereby ensuring that disaster risk reduction strategies are truly inclusive and responsive to all populations.

The research findings also indicated that consultation and collaboration with organizations for persons with disabilities is another enabler of persons with disabilities' disaster preparedness. Buckingham (2019) supported this finding by stating that collaboration with disability organizations can enhance the implementation and monitoring of DRR initiatives, as they can provide valuable feedback and recommendations. Data collection and monitoring were also found to be an enabler of persons with disabilities disaster preparedness. This finding agrees with the World Health Organisation (2011) which stated that monitoring and evaluation of these efforts provide valuable feedback for future improvements and aid in the identification of gaps and challenges faced by persons with disabilities.

5.2 Conclusions

From the overall results, the study can conclude that the hypothesis is that persons with disabilities in Kanyemba Ward, Mbire District are not prepared for flooding disasters. This has

been proven after having put forth the various indicators and variables of flood disaster preparedness and compared them with the research findings. The various barriers and enablers that affect persons with disabilities' participation in disaster preparedness activities and policies which were put forth by the research in the literature review were also confirmed by the research findings.

5.3 Recommendations

The study makes the following recommendations:

- The development of effective policy frameworks that promote disability inclusion, strong partnerships between governments and organizations for persons with disabilities, and dissemination of information in accessible formats.
- Improving data collection and analysis on disabilities in flood disaster contexts.
- Promoting capacity building and awareness programs for disaster risk reduction stakeholders
- Incorporating a rights-based approach and involving persons with disabilities in decision-making processes.
- Allocating enough funding specifically for Disability-inclusive disaster risk reduction

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APPENDIX 1: RESEARCH QUESTIONNAIRE

My name is Evelyn Mdutshwa. I am a Master of Science Degree in Disaster Risk Management student with Bindura University of Science Education. I am researching **EXPLORING PERSONS WITH DISABILITIES' PREPAREDNESS TO DISASTERS: THE CASE OF KANYEMBA WARD, MBIRE DISTRICT**

May you kindly assist by answering the following questions? The truthfulness of your response will help in the research.

On the completion of the questionnaire, tick the appropriate answer.

DEMOGRAPHIC DATA

Gender: Male Female

Highest Educational Level:

O' Level A' Level Certificate/Diploma Undergraduate Degree

Post Graduate Degree Doctorate Degree

Other, [specify].....

What is the level of flood disaster preparedness among persons with disabilities in Kanyemba Mbire District?

1. Resource availability

INDICATORS	1	2	3
	Strongly Agree	Neutral	Strongly disagree
Our community has emergency food and water			

Our community has contingency funds in case of flooding			
Our community has assistive devices such as wheelchairs, hearing aids and boats with ramps for persons with disabilities.			
We have a community warehouse with relief items such as blankets, tents, and mosquito nets.			

2. Emergency plans

INDICATORS	1	2	3
	Strongly Agree	Neutral	Strongly disagree
Persons with disabilities know safe places for shelter during floods			
Persons with disabilities have people to assist them with mobility in case of flooding			

3. Evacuation plans

INDICATORS	1	2	3
	Strongly Agree	Neutral	Strongly disagree
Persons with disabilities are aware of the evacuation plans and routes			
Persons with disabilities can easily get assistance to relocate from unsafe areas when it is necessary to do so			
Alternative safe and secure shelter is available for persons with disabilities in case of flooding			
Safe houses and evacuation centres are easily accessible for persons with disabilities.			

4. Early warning system

INDICATORS	1	2	3
	Strongly Agree	Neutral	Strongly disagree
Our community has access to local hydrological and weather forecasts			
Flood warnings are communicated via channels that can be easily understood by persons with disabilities.			
Persons with disabilities can monitor flood water levels.			

5. Flood knowledge

INDICATORS	1	2	3
	Strongly Agree	Neutral	Strongly Disagree
Community flood maps are available and can be easily understood by persons with disabilities			
Flood monitoring mechanisms are in place and known by persons with disabilities.			
Persons with disabilities know when to move out of the floodplain during the rainy season.			
Persons with disabilities avoid crossing flooded rivers and have assistance in crossing rivers when it is safe to do so.			

6. Flood education and training

INDICATORS	1	2	3
	Strongly agree	Neutral	Strongly disagree
At least one person in your area is trained in providing first aid to persons with disabilities.			
At least one community member is trained in the search and rescue of persons with disabilities.			
Persons with disabilities participate in mock drills or simulations for flood preparedness			

7. Post-flood recovery

INDICATORS	1	2	3
	Strongly agree	Neutral	Strongly disagree
Community recovery activities incorporate the 'build back better' principle			
The community receives aid that is especially targeted at persons with disabilities from the government, Red Cross or NGOs after flood disasters			

8. Risk communication

INDICATORS	1	2	3

	Strongly agree	Neutral	Strongly disagree
Persons with disabilities are aware of the civil protection numbers to be called in case of a disaster			
The community has alternative means of communication to send and receive flood alerts and appeals for humanitarian assistance			

9. Social capital

INDICATORS	1	2	3
	Strongly agree	Neutral	Strongly disagree
Community members help persons with disabilities during flood response and recovery			
Persons with disabilities have reliable social networks, connections and relationships of trust for assistance and sharing flood information			
The community has either formal or informal safety nets that also cater for persons with disabilities			

What are the barriers affecting persons with disabilities' participation in disaster preparedness activities and policies?

a) Physical

	1	2	3
	Strongly Agree	Neutral	Strongly disagree
The nature of disability may hinder the participation of persons with disabilities in disaster risk reduction programs			

b) Environmental

	1	2	3
	Strongly agree	Neutral	Strongly disagree

The local path becomes very muddy during the rainy season thus access becomes near to impossible for persons with disabilities. This hinders their participation in disaster risk reduction meetings.			
Infrastructure and community buildings have limited access to mobility			

c) Institutional

	1	2	3
	Strongly agree	Neutral	Strongly disagree
Lack of representation, coordination and partnerships with representative organizations of persons with disabilities			
Lack of expertise on Disability-inclusive disaster risk reduction.			
Early warning systems in the ward cannot be understood by persons with disability.			

d) Attitudinal

	1	2	3
	Strongly agree	Neutral	Strongly disagree
Stigma and discrimination from the community			
Lack of self-esteem			

e) Economic

	1	2	3
	Strongly agree	Neutral	Strongly disagree
Lack of funding for programs			
Lack of investments in Disability-inclusive disaster risk reduction			

What are the enablers of the participation and inclusion of persons with disabilities in disaster preparedness activities, initiatives and policies?

Policy and legal frameworks

	1	2	3
	Strongly agree	Neutral	Strongly disagree
International conventions and agreements			
National legislation and policies			

Capacity building and awareness

	1	2	3
	Strongly agree	Neutral	Strongly disagree
Training programs for disaster risk management professionals			
Public awareness campaigns			

Accessible infrastructure and technology

	1	2	3
	Strongly agree	Neutral	Strongly disagree
Barrier-free buildings and transportation systems			
Assistive devices and technologies			

Inclusive planning and decision-making processes

	1	2	3
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	Strongly agree	Neutral	Strongly disagree
Involvement of persons with disabilities in disaster planning			
Consultation and collaboration with organizations for persons with disabilities			

Data collection and monitoring

	1	2	3
	Strongly agree	Neutral	Strongly disagree
Collection of disaggregated data on persons with disabilities			
Monitoring and evaluation of disability inclusion in disaster risk reduction efforts			

APPENDIX 2: KEY INFORMANT INTERVIEWS

KEY INFORMANTS INTERVIEW GUIDE

The researcher is an MSc Disaster Risk Management student at Bindura University of Science and Education (BUSE). She is conducting a study on a topic entitled: **EXPLORING PERSONS WITH DISABILITIES PREPAREDNESS TO FLOOD DISASTERS: THE CASE OF KANYEMBA WARD, MBIRE DISTRICT**

This topic is significant because there is a need to enhance the state of flood disaster preparedness for persons with disabilities.

The objectives of the study are:

- To assess the state of flood disaster preparedness of persons with disabilities in Kanyemba Ward, Mbire District.
- To establish the barriers and enablers to the participation and inclusion of persons with disabilities in flood disaster preparedness activities, initiatives and policies.
- To explore ways of mainstreaming disability-inclusive disaster risk reduction efforts to enhance the state of flood disaster preparedness of persons with disabilities in Kanyemba Ward, Mbire District.

Accordingly, you have been selected to participate in the study as a respondent. This research is done for academic purposes only and your responses will not be disclosed without your permission. Furthermore, your identity will not be disclosed anywhere in the Dissertation to ensure the confidentiality of your responses. Should you have any queries or concerns or clarifications that you wish to raise with the writer, please do not hesitate to contact the writer at 0772968908. The researcher appreciates your support in advance.

Yours faithfully,

Evelyn Ruvimbo Mdutshwa

Date of interview:

Interviewee's name:

Name of Organisation:

Education:

Gender:

Contact information:

1) Considering the indicators of disaster preparedness below, comment on the state of flood disaster preparedness of persons with disabilities in Kanyemba Ward:

- Resource availability
- Emergency plans
- Evacuation plans
- Early warning systems
- Flood knowledge/awareness
- flood education/training
- Flood-proofing information
- Post-flood recovery
- Risk communication
- Social capital

2. What are the barriers affecting persons with disabilities' participation in flood disaster preparedness activities and policies?

3. What are the enablers that facilitate persons with disabilities' participation in flood disaster preparedness activities and policies?

4. What recommendations can be made to support persons with disabilities in flood disaster preparedness?

THANK YOU