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An Assesement of Socio-Economic Impacts of Drought. A Case of Rushinga District Ward 1

A RESEARCH PROJECT

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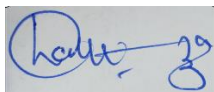
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Dedication

To my loving mother, your unwavering support, guidance, and encouragement have been the driving force behind my academic journey. Your selflessness, kindness, and unconditional love have inspired me to reach for my dreams. This dissertation is a testament to your unwavering belief in me. I am forever grateful for the sacrifices you have made for our family and for the values you have instilled in me. Your constant presence, guidance, and love have shaped me into the person I am today. I dedicate this achievement to you, with all my love and appreciation.

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Thank you for being my family, my strength, and my motivation.

With love and gratitude,

(Edgar Mudadirwa)

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ABSTRACT

This study evaluates the socioeconomic consequences of the past 5 years to current years 2023/24 season and identifies coping, preparing, and reaction methods used in the Rushinga District ward 1 in Zimbabwe. The Rushinga District is prone to drought, with an unpredictable rainfall pattern marked by dry spells. Droughts are becoming increasingly difficult for households to cope with it. Understanding how rural families cope during droughts is critical for determining how to best execute micro-level activities to support households as part of risk management and resilience building. The study aimed to assess the economic impacts of drought on the livelihoods of rural communities of Ward 1 Rushinga District and to identify coping strategies that were employed by the communities to reduce the devastating economic impacts of drought on livelihoods of communities. The guiding objectives of the study were to evaluate the causes of drought, to evaluate the social and economic impact of drought on rural areas and to identify and suggest drought mitigation techniques to decrease economic consequences on communities in Rushinga District Ward. 1 A descriptive analysis was undertaken to define households based on their demographics, household income and assets, socioeconomic implications of the drought, household-based coping methods, livelihood-based coping strategies, and readiness and reaction mechanisms. The research findings demonstrated that the drought had a significant negative impact on the socio-economic lifestyle of the community. The researcher recommended that there is need to prepare households for drought risk reduction through training and sensitization, so that they can cope with the effects of drought. The study also recommends enhancing households' absorptive capacities to increase household stability during droughts by improving awareness of disaster risk management, access to informal safety nets, and savings.

List of figures

Figure 1.1: The Sustainable Livelihoods Framework (DFID, 2000) **Error! Bookmark not defined.**

Fig 3.1 Rushinga District Map **Error! Bookmark not defined.**

Figure 4.1 Sources of income for ward 1 households **Error! Bookmark not defined.**

Figure 4.2 Ward 1 Household based coping mechanisms **Error! Bookmark not defined.**

Table of Contents

CHAPTER 1	10
1.1 Introduction	10
1.2 Background of the study	10
1.3 Statement of the problem	11
1.4 Justification of the study	12
1.5 Aims of the study	12
1.6 Specific objectives:	12
1.7 Research questions	12
1.8 Definition of terms	12
1.9 Chapter summary	13
CHAPTER 2: LITERATURE REVIEW	14
2.1 Introduction	14
2.2 Definition of drought.....	14
2.3 Concept of drought in Zimbabwe.....	14
2.4 Conceptual framework	14
2.5 Causes of Drought in agro-based communities.....	16
2.5.1 Climate change.....	16
2.5.2 Poor Agriculture practices.	17
2.6 Impact of drought on the social and economic livelihoods of communities.....	18
2.7 Drought preparedness, strategies and recommendations in drought impacted communities.	19
2.8 Chapter summary	20

CHAPTER 3:	20
3.1 Introduction	21
3.2 Study area.....	21
3.2.1 Agriculture Production.....	21
3.3 Research Design.....	22
3.4 DATA COLLECTION AND ANALYSIS OF THE STUDY	22
3.4.1 Primary data	22
3.4.2 Quantitative data	23
3.4.3 Qualitative data	23
3.4.4 Secondary data	24
3.5 Sampling design of the study	24
3.6 Sample Size	24
3.7 Data Analysis procedures.....	25
3.8 Ethical Considerations.....	25
3.9 Study Limitations	25
3.10 Chapter Summary.....	26
CHAPTER 4:	27
4.1 Introduction	27
4.2 Demographics of the respondents households	27
4.3 Respondent characteristics of the research.....	28
4.3.1 Number of respondents	28
4.3.2 Level of education.....	28
4.3.3 Household size	29
4.3.4 Household income and assets	29
4.3.5 Household source of income.....	29
4.4 Social and economic impacts of the past 5 years drought in ward 1 of Rushinga district.....	30

4.4.1	Food shortages	31
4.4.2	Loss of livestock	31
4.4.3	School drop outs	32
4.4.4	Shortage of water sources.....	32
4.4.5	Family separation and relocation.....	32
4.5	Coping mechanisms by households	33
4.6	Livelihood coping mechanisms.....	34
4.6.1	Selling livestock.....	34
4.6.2	Children dropped out of school.....	35
4.6.3	Early child marriages	35
4.8	Chapter Summary.....	37
	CHAPTER5:.....	38
5.1	Introduction	38
5.2	Conclusions on the research objectives.....	38
5.2.1	To identify causes of prolonged droughts for the past 5 years in ward 1 of Rushinga District.....	38
5.2.2	To evaluate the social and economic impacts of the past 5 years prolonged droughts in ward 1 of Rushinga District.....	38
5.2.3	To identify coping mechanisms employed during drought by households in ward 1 of Rushinga District.....	39
5.3	Recommendations	39
5.3.1	Improving Water Management:.....	39
5.3.2	Diversification:	39
5.3.3	Building community resilience system.....	39
5.4	Chapter summary	39
5.5	Appendices	41
5.5.1	Appendices I:	41
5.5.2	Appendices II:.....	42

5.5.3	APPENDIX 1II – PROJECT MARKING GUIDE.....	43
5.6	REFERENCES.....	47

CHAPTER 1

1.1 Introduction

Droughts have significant impacts on the livelihoods of communities, making it crucial to assess these effects. According to Hoegh-Guldberg et al. (2018) when food production decreases due to drought, it can result in food shortages, price spikes, and even famines. Research by Burke et al. (2015) highlighted that droughts can have long-lasting impacts on the livelihoods of communities, especially in developing countries where agriculture is a primary source of livelihood for example Zimbabwe hence the researcher focused with Ward 1 Rushinga District. Therefore, this study focused on assessing the economic impacts of drought on the livelihoods of rural communities which will help policymakers, governments, and organizations understand the extent of the problem and develop strategies to mitigate its effects. It will highlight the impact of drought on the economic spheres of the district including and come up with strategies and recommendations to mitigate the highlighted effects.

1.2 Background of the study

Drought is a periodic natural calamity that has a large social and economic impact on communities all over the world, including the Rushinga district of Zimbabwe. Drought has an especially severe impact in areas where agriculture is the principal source of income, like in Rushinga district. Drought can cause crop failure, food insecurity, loss of income, and increasing poverty in rural areas.

Several studies have been performed to analyze the social and economic consequences of drought in Zimbabwe. For example, Mavhura (2013) investigated the susceptibility of Zimbabwean rural communities to drought and emphasized the need for enhanced adaption

techniques. Similarly, Chikodzi (2016) explored the socioeconomic effects of drought on Zimbabwe's smallholder farmers, emphasizing the need of sustainable farming techniques.

Drought can have a serious impact on health, agriculture, economies, energy and the environment. An estimated 55 million people globally are affected by droughts every year, and it is the most serious hazard to livestock and crops in nearly every part of the world (WHO 2020). Drought threatens people's livelihoods, increases the risk of disease and death, and fuels mass migration.

Despite these attempts, current research on the social and economic effects of drought in Zimbabwe's Rushinga province remains limited. One significant issue is the scarcity of research that especially focus on the experiences and coping methods of vulnerable populations like women and children during droughts. Another gap is the lack of attention paid to the long-term consequences of drought on community resilience and adaptive ability. To overcome these shortcomings, the researcher prioritized multidisciplinary techniques that draw on knowledge from sociology, economics, environmental science, and gender studies. Furthermore, the researcher worked with local people in the Rushinga district to ensure that their perspectives and expertise were integrated into the study methods and findings. Using a participatory research technique, the researcher may provide more nuanced insights into the social and economic repercussions of drought in the Rushinga district and create context-specific suggestions for developing resilience.

Therefore, this research will help to cover such knowledge gaps with the main focus on Ward 1 Rushinga District in Zimbabwe in relation with recent drought that hit the communities. Rushinga District's agriculture sector has been severely impacted by the protracted drought over the past years to date 2023/24 season.

1.3 Statement of the problem

Drought has become a seasonal danger and hazard to rural households in Zimbabwe rural communities mainly due to climate change. It is fundamental to appreciate that agriculture is one of the productive sectors most immediately impacted by drought is a major source of income for rural communities. Rushinga District rural ward 1 communities, progressive droughts have heavily impacted on the economic survival of the livelihoods in the area. Drought in Ward 1 Rushinga District has been mainly attributed to climate change in the recent years. Therefore, this research unpacked the causes of progressive droughts and economic impacts of drought on the livelihoods of Rushinga District ward 1 as well as to come up with

strategies that are sustainable and in line with the Sustainable Development Goal agenda of 2030. The understanding of the economic impacts of droughts is important for risk management, planning and the design of response strategies. This will be of great importance in risk management and preparedness before a drought occurs and reduce its detrimental economic impacts on the livelihoods of communities in Rushinga District and nationally.

1.4 Justification of the study

Progressive droughts have been the new normal in Zimbabwe rural communities for the past 5 years. In order to effectively reduce the consequences of drought on vulnerable communities, it is fundamental to consider the causes and economic impacts of drought. Drought has negative economic impacts which are life threatening on the livelihoods of rural communities in which agriculture is the main economic pillar. Understanding the causes of progressive droughts and the economic impacts on livelihoods is of great importance to effectively mitigating the negative impacts of drought in rural communities as well as effective preparedness. Therefore, this study focused on the economic impact of drought on the livelihoods of rural communities, a case of ward 1 Rushinga District.

1.5 Aims of the study

The overall aim of this study is to assess the economic impacts of drought on the livelihoods of rural communities of Ward 1 Rushinga District and to identify coping strategies that were employed by the communities to reduce the devastating economic impacts of drought on livelihoods of communities.

1.6 Specific objectives:

- To evaluate the causes of drought in Rushinga District Ward. 1
- To evaluate the social and economic impact of drought in Rushinga ward 1.
- To identify and suggest drought mitigation techniques to decrease economic consequences on communities in Rushinga District Ward. 1

1.7 Research questions

- What are the causes of droughts in Rushinga District?
- What are the economic impacts of droughts on the livelihoods of Rushinga District ward 1 community?

- What are the drought mitigation strategies and recommendations that can be employed to reduce the economic impacts of droughts on the livelihoods of rural communities of Rushinga District ward 1?

1.8 Definition of terms

Drought: Drought is a prolonged dry period in the natural climate cycle that can occur anywhere in the world. According to Sheffield et al (2017), drought is a prolonged period of abnormally low rainfall, leading to a shortage of water supply. It is a natural disaster that can have severe impacts on agriculture, ecosystems, and human populations. Droughts can result in crop failures, water shortages, food insecurity, and economic losses.

Impact: Impact refers to the influence or effect that one thing has on another. Smith & Brown (2018) has it that, impact is often used to measure the significance or consequences of a particular phenomenon, action, or event. Impact can be positive or negative and can manifest in various ways, such as social, economic, environmental, or cultural changes.

Livelihood: Livelihood refers to the means by which individuals or communities sustain themselves economically, often through employment, self-employment, entrepreneurship, or other income-generating activities. It encompasses the resources, assets, and capabilities that people use to secure their basic needs and improve their quality of life.

1.9 Chapter summary

This chapter provided the statement of the problem, aim, objectives of the study, justification and significance of the study and the definition of key terms. The chapter also gives definition of key terms of the study for better understanding. The next chapter focuses on reviewing literature relevant to the research topic.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presented the literature on drought and its social and economic impact. It starts out with defining drought and then goes on to list the causes of drought. The chapter also gives the framework that was used in this study. The chapter also describes some of the effects of drought and provides an overview of drought globally, regionally, Zimbabwe, and Rushinga District which is the area of focus for this study. The chapter ends with a summary continues on drought response, adaptation, and management.

2.2 Definition of drought

According to Miyan (2015), drought is a complicated natural phenomena that is challenging to measure and control. Wilhite and Glantz (1985) assert that there is no universally accepted definition of a drought and that it is challenging to come up with one that is both acceptable and comprehensive. Drought may simply be understood by a farmer in rural Zimbabwe in Rushinga District who requires enough water to grow his crops as a lack of moisture in the soil and for his/her animal production. Drought is defined as a prolonged period of low precipitation (Sanchez, 2010). For the purpose of this study, a lack of precipitation or moisture can persist over several seasons, leading to water shortages that are detrimental to human health, animals, and agricultural productivity for ward 1 of Rushinga District.

2.3 Concept of drought in Zimbabwe

Drought in Zimbabwe is defined as a lengthy period of exceptionally low rainfall, which causes water scarcity, crop failure, and food insecurity. Climate change, deforestation, and poor water management techniques have all contributed to Zimbabwe's recurring droughts. Droughts have a significant socioeconomic impact on the people, especially in rural regions where agriculture is the primary source of income.

2.4 Conceptual framework

The sustainable livelihood method served as the theoretical basis for this study, guiding the researcher. The study's objectives were developed and fulfilled using a livelihood framework

analysis similar to that employed by the British Department for International Development (DFID). According to DFID (2000), a livelihood is a bundle that includes the talents, assets, and activities needed to make a living. It is sustainable when it can withstand and recover from stresses and shocks while maintaining or improving its capabilities and assets, both now and in the future, without depleting natural resources. The Sustainable Livelihoods Framework is an analytical and conceptual framework for comprehending the various factors that influence people's livelihoods and well-being. It was established by the UK's Department for International Development (DFID) in the late 1990s. The framework takes into account people's diverse resources and abilities, as well as external effects on their livelihood plans. This paradigm enabled researchers to assess the impact of shocks and stressors, such as drought, on wildlife and food security in a specific area.

The sustainable livelihood method aims to determine how vulnerable individuals can survive in circumstances prone to shocks and dangers such as drought, economic shocks, and pressures over which they have no control. The method prioritizes the assets and resources that people or families have and how they may use them to resist shocks and pressures, such as drought, and recover from them.. Therefore, for the purpose of this study, it is going to answer different research question which include agricultural practices that are being employed in Rushinga District ward 1, impact on assets like wildlife, agriculture among other things. This approach will also help to come up with coping mechanism in response to drought and preparedness in Rushinga District ward 1. The sustainable livelihood strategy was applied in this study (Figure 1.1).

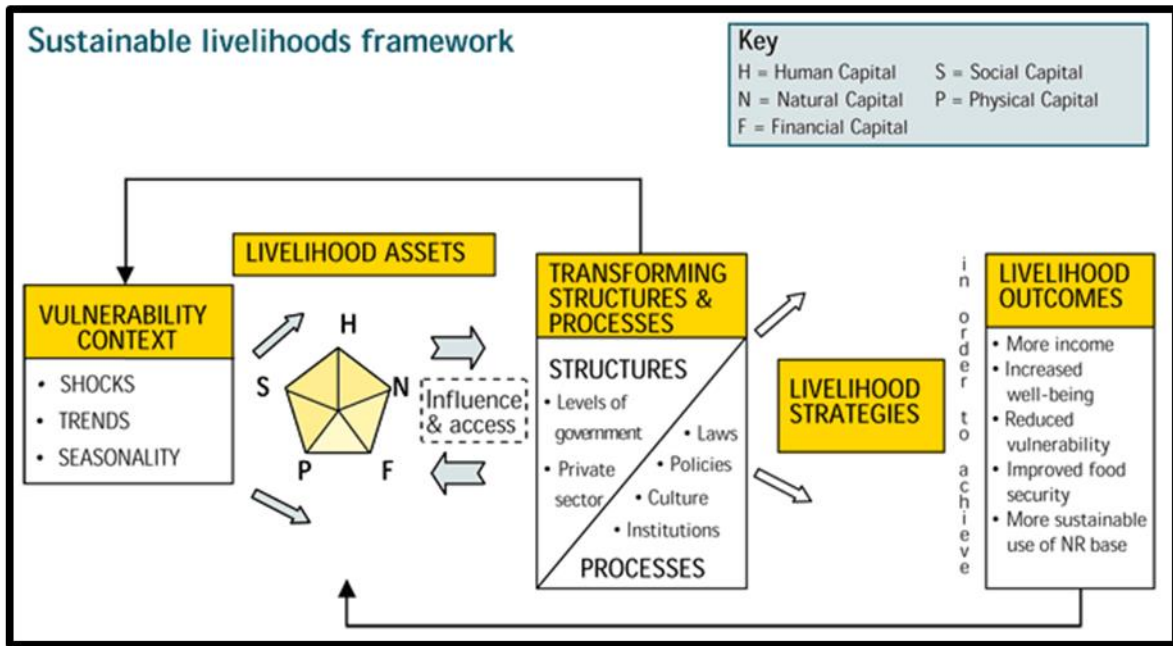


Figure 1.1: The Sustainable Livelihoods Framework (DFID, 2000)

2.5 Causes of Drought in agro-based communities

It is prudent to appreciate that drought is a natural disaster that has severe impacts on agro-based communities worldwide. Comprehending the root causes of drought is vital for devising effective mitigation and adaption strategies. Drought is caused by a number of variables, such as deforestation, water management, land use, and climate change. This study of the literature investigates the main reasons why agro-based communities experience drought.

2.5.1 Climate change

Global agro-based communities have seen severe negative effects from climate change, including disruptions to livelihoods, food security, and agriculture. These effects include variations in growing seasons, increasing frequency of extreme weather events like droughts and floods, changes in temperature and precipitation patterns, and the spread of pests and diseases. Reduced agricultural yields, a shortage of water for irrigation, biodiversity loss, and heightened susceptibility to food insecurity are the results of these changes.

African agro-based communities have suffered greatly as a result of climate change leading to drought. These effects include altered growing seasons, a rise in the frequency of extreme

weather events like droughts and floods, and changes in temperature and precipitation patterns. Reduced agricultural production, food insecurity, loss of livelihoods, and increasing vulnerability among African rural people are the results of these recent changes in climate. According to research by Lobell et al. (2008), climate change is making these extreme weather events more frequent, which is causing problems for African agricultural systems. Unpredictable rainfall patterns and protracted dry periods have had an impact on Uganda, resulting in decreased agricultural productivity and food insecurity for many people, Braun (2013). Zimbabwe's agro-based economy has been negatively impacted by climate change, which has had a major detrimental influence on agriculture in the nation leading to prolonged droughts. Due to Zimbabwe's reliance on rainfall for its agriculture and its vulnerability to extreme weather events like floods and droughts, the country's agricultural industry is very sensitive to climate change. It has resulted in agricultural production, food poverty, and economic instability have in rural communities like Mashonaland central, a research by Matarira (2018) discovered that Zimbabwe's maize output has been greatly influenced by shifting rainfall patterns, resulting in both food poverty and financial losses. A further research by Chikodzi & Nyamwanza. (2019) looked at how Zimbabwe's smallholder farmers are affected by climate change and stressed the need for adaptable measures to lessen these consequences.

2.5.2 Poor Agriculture practices.

Poor farming practices have a major role in causing droughts. Unsustainable farming methods, such overgrazing, deforestation, heavy tilling, and improper use of irrigation systems, erodes soil quality, decrease its ability to hold water, and eventually exacerbate drought situations. These subpar agricultural practices increase the chances of drought which has negative impacts on food security and wildlife conservation globally.

A study by Smith (2018) discovered that unsustainable farming methods greatly increase the risk of drought and water scarcity in many parts of the world. Nevertheless, Smith (2018) in his research missed a gap to give recommendation and strategies that can be employed to improve this suboptimal agricultural practices which where cover by this research focus on Rushinga District ward 1. A different research by Johnson et al. (2020) published in Nature Sustainability highlighted the value of sustainable land management techniques in reducing the negative effects of drought on food security.

A major contributing factor to the drought in Zimbabwe's Mashonaland Central area is poor farming practices. Droughts have been frequent in the area, and this has had a terrible impact on community lives, agriculture, and food security. The region's long-standing use of unsustainable farming methods is one of the primary causes of frequent droughts. Overgrazing, monocropping, and excessive tillage are examples of poor soil management techniques that have lowered the quality of the soil in the area. Crops are more susceptible to drought stress when soils are degraded because they are less able to hold onto moisture and nutrients Food and Agriculture Organization (FAO) report (2021). Poor farming methods and drought vulnerability in Zimbabwe have been linked by researchers' 1. The research conducted by Muredo (2019) highlights the significance of climate-smart farming methods and sustainable agricultural practices in strengthening drought resistance in areas like as Mashonaland Central. Evidence from the report by the World Food Programme (WFP) and the Food and Agriculture Organization (FAO) indicate that food insecurity caused by drought is a persistent problem in Zimbabwe, especially in areas like Mashonaland Central where subpar farming practices are common. Therefore, this research unpacks the poor farming practices that are being practiced in ward 1 Rushinga District in Mashonaland Central region with the aim of having an appreciation of the impacts of drought on food security and wildlife, and at the end coming up with coping mechanism which will be in line with the SDG goals of ending food shortages by 2030.

2.6 Impact of drought on the social and economic livelihoods of communities

Drought is a natural phenomenon that may severely disrupt populations' social and economic well-being. Drought has a particularly severe impact on poor countries such as Zimbabwe, where many people rely on agriculture for food and a living. In this setting, drought may have a wide-ranging impact on communities, impacting everything from food security to water availability, health, education, and overall well-being.

Droughts in Southern Africa have had a major impact on agricultural and food production, according to FAO (2016). Sixty percent of sub-Saharan Africa is thought to be at risk of drought (Benson & Clay, 1998). Temperature increases and altered rainfall patterns are the results of altering climatic conditions over sub-Saharan Africa. According to a research done in Zimbabwe by Unganai (1996), during the period of 1933 to 1993, the country's average daily temperature increased by 0.1% degrees, while the average amount of precipitation decreased by up to 10%. In addition to climate change, El Nino and La Nina events are a major contributor to drought in Southern Africa (Gautam, 2006). Southern African nations saw the lowest

recorded rainfall quantities in 35 years during the October to January rainy season of 2015–2016, which led to widespread drought conditions (UNDP, 2016). Food insecurity, declining nutrition, and poor agricultural output were worsened by the El Niño climatic phenomenon that same year, which intensified the drought, according to USAID, FAO, and OCHA (2016). According to (RIASCO, 2016), the El Niño that year was a meteorological phenomenon that resulted in the worst drought the area has seen in 35 years.

Drought has a significant impact on communities in terms of water supply and access. Manzungu et al. (2017) investigated how Zimbabwe's drought has exacerbated rural water shortages, resulting in greater competition for scarce water supplies. This research emphasized the relevance of sustainable water management strategies in reducing the effects of drought on communities. Zimbabwean researchers have also investigated the economic effects of drought on communities. For example, Chikozho et al. (2015) studied how drought impacts agricultural output and revenue creation in rural areas. This study emphasized the need of diverse livelihood choices for increasing resistance to drought-induced shocks.

In Zimbabwe, the drought also makes the country's rural community more vulnerable and impoverished. During protracted dry spells, families may become even more impoverished if they are unable to grow enough food for their own use or to sell. For smallholder farmers who depend on agriculture based on rainwater for a living, this is especially difficult. In a research published Makate et al. (2016) highlighted the connection between poverty, food insecurity, and drought in rural Zimbabwean communities. Nevertheless, in this research, it missed on the impacts of drought on wildlife conservation which is one of the objective of this research in Rushinga District ward 1

Despite these significant contributions to understanding the impact of drought on Zimbabwean communities, there are still gaps in existing research that must be addressed. One such gap is the restricted attention on certain geographic locations within Zimbabwe, such as the Rushinga district. By performing more targeted studies in locations like Rushinga district, researcher acquireS a greater knowledge of how drought specifically impacts populations at the local level. More multidisciplinary study is needed to investigate the linked social, economic, and environmental aspects of drought consequences. Scholars that use a holistic approach to studying drought vulnerability and resilience can give more complete insights into viable adaptation measures for at-risk populations.

2.7 Drought preparedness, strategies and recommendations in drought impacted communities.

Preparing for drought in areas affected by it worldwide is essential for mitigating catastrophe risks and adapting to climate change. Extended periods of very low rainfall, or droughts, can have disastrous effects on ecosystems, agriculture, water supplies, and human populations. The goal of preparation measures is to make communities less susceptible to droughts and more resilient to deal with the effects when they do occur. Early warning systems, water management plans, farming methods, community involvement, policy frameworks, and capacity building programs are a few of the main areas of attention. Through comprehending the difficulties encountered by communities affected by drought and determining efficacious approaches for readiness will enhance communities' overall capacity to withstand future drought episodes.

A study published in 2018 by the United Nations Office for Disaster Risk Reduction (UNDRR) offers insights into worldwide trends in drought risk reduction initiatives. The study highlights the necessity of integrated strategies that take into account both immediate reaction plans and long-term efforts to increase resilience. A further pertinent research by Jones and Brown (2019) examines how Australia's drought frequency and severity are affected by climate change. In order to evaluate changes in the incidence of droughts and investigate potential adaptation techniques for lessening the effects on vulnerable groups, the researchers examine historical data. Nevertheless, it is vital to appreciate that even though the World Bank (2017) provides a thorough review of drought management tactics used globally, showcasing effective ways to preparedness and response via case studies from various locations. In tackling complex drought concerns, the paper emphasizes the value of multi-stakeholder engagement and adaptable governance structures.

2.8 Chapter summary

This chapter reviewed literature on drought and its effects. It also defined drought and then goes on to list the causes of drought. The chapter also gave the framework that was used in this study. The chapter also described some of the effects of drought and provided an overview of drought globally, regionally, Zimbabwe, and Rushinga District which is the area of focus for this study. The chapter ended with a summary continues on drought response, adaptation, and management.

CHAPTER 3: STUDY RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a description of the study area and the research methodology used in this research. The chapter also presented the data collection methods, and sampling strategy. The chapter concludes with a discussion of the study's limitations as well as the ethica consideration which guided the research process

3.2 Study area

The study area for this research is Rushinga District ward 1 area in Zimbabwe. The Rushinga District lies in the Mashonaland Central province, which is one of the 10 provinces of Zimbabwe. The province of Mashonaland Central includes Rushinga District. The district is included in agro-ecological zone IV. Rushinga receives an average of 133.9 millimeters of rainfall each year. Periodic seasonal droughts are a further challenge that it faces. Rushinga is divided from Mudzi District and Uzumba Maramba Pfungwe (U.M.P.) by the Mazoe River. Locals refer to the immediate region on the eastern bank of the Mazoe River as Nyatana. In the Nyatana region, the three districts of U.M.P., Mudzi, and Rushinga have started a CAMPFIRE initiative centred on consumptive and non-consumptive tourism activities. Wards 1 consist of 6 villages.

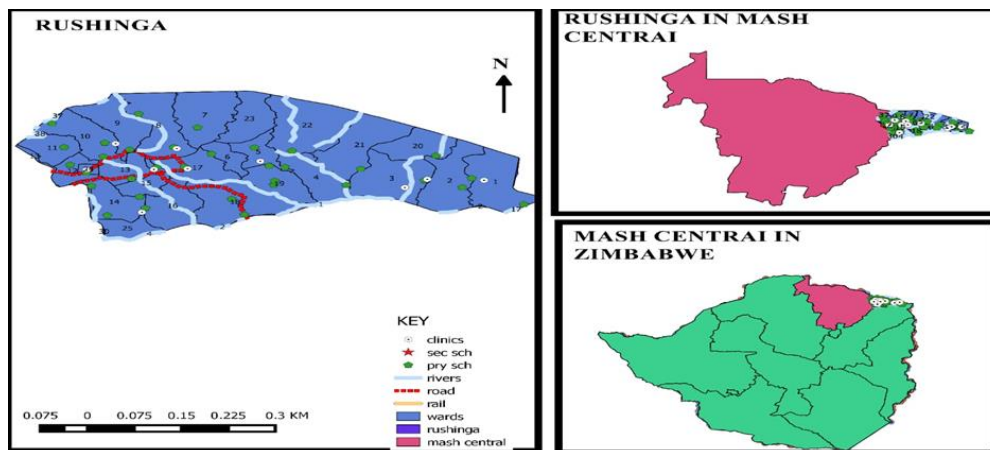


Fig 3.1 Rushinga District Map

3.2.1 Agriculture Production

In the Rushinga ward 1 area, maize is far more widely grown than crops resistant to drought. The district's specific region usually minimal rainfall to sustain maize production. They also do use commercial fertilizers because of poor soil hence coupled with low rainfall patterns it because disastrous. The main crop consumed by the Rushinga people is maize. Due to its ability to be sold locally or to middlemen, maize is also a cash crop. In recent years, the majority of individuals choose to plant maize due to its palatability and simplicity of processing. Hence, the shortage of rainfall and climate change has detrimental effects on their livelihoods. The researcher therefore focused with Rushinga District to unpack the economic impact of drought on the livelihoods of communities.

3.3 Research Design

The research methodology is broken down in this section. It explains the principles and procedures for data gathering, analysis, and sampling. The study employed a case study methodology. The economic impact of the drought on the livelihoods of rural communities in ward 1 Rushinga District is the research subject in this case study, which allows the researcher to conduct a thorough analysis of the problem. The "how" and "why" concerns may also be effectively addressed with the case study method. Data were gathered using a mixed method approach. The researched used mixed method research approach. The choice of using the mixed methods was made after realising that in order to fulfil the research objectives both qualitative and quantitative methods would need to be employed. Combining qualitative and quantitative research approaches in a drought effect study allows for a more thorough knowledge of the issue. Qualitative data enhances quantitative findings by providing context

and meaning for statistical outcomes. Conversely, quantitative data confirms qualitative ideas by giving empirical evidence to back up statements about the impact of drought.

3.4 DATA COLLECTION AND ANALYSIS OF THE STUDY

The convergent parallel mixed approach was used by the researcher. The convergent mixed parallel technique is a research design that employs both quantitative and qualitative methodologies in tandem. This method entails gathering and evaluating both forms of data independently yet concurrently, with the goal of comparing and contrasting the findings to acquire a more complete picture of the study issue. By combining quantitative and qualitative data gathering and analysis, researcher triangulated the research findings, resulting in a more robust and nuanced view of the study topic. This technology was selected because it allowed data to be collected and evaluated simultaneously, saving time.

3.4.1 Primary data

Primary data were gathered for the study through key informant interviews, focus groups, and household interviews. There were two types of data in the collection: qualitative and quantitative. To provide a thorough analysis, data from the focus group discussions, key informant interviews, and home interviews were triangulated.

3.4.2 Quantitative data

Face-to-face household interviews were conducted using quantitative approaches to gather quantifiable data at the home level. One adult per household, acting as the respondent, was given a standardized household questionnaire, which was used to gather data at the household level. The study used households as the measuring unit, which was defined as any group of individuals who have lived together for three months or more, cook in the same pot, and share meals as a family. The respondents chosen were the head of the household or another adult family member with a general understanding of household operations and knowledge of the drought period. For the following crucial study components, data was gathered through interviews. Key informants were selected from the drought relief committee, and three government officers who also work for the committee conducted part of the enumeration. The officers had to have received minimal training in administering the questionnaires (See Appendices 1) because they were knowledgeable about the subject. Interviews took place at the sampled households' homesteads, and this researcher verified and checked the data collected at the end of each workday.

3.4.3 Qualitative data

An in-depth comprehension and explanation of the effects the drought had on the community were given using qualitative data. It shed light on the community's vulnerability in relation to the drought. Qualitative research methodologies were essential in examining various viewpoints about the drought, the coping strategies used, and the consequent effects the drought had on the community livelihoods. Through the community's eyes, the actual experiences and tales throughout the past 5 years to current years droughts were explored and heard through the qualitative data that was gathered. Six key informants were interviewed and one focus group discussion was used to get the data. (Appendices 11)

A focus group discussion was held with a group of men and women who were familiar with the town. Thirteen persons, seven of them male and six of them female, made up the group. They all had different responsibilities in the community, including nutrition ward coordinator, village chief, councilor, and health workers. Data was gathered about the frequency of drought in the region over the previous five years, the consequences of the El Nino-induced drought in 2015–16, the impact on livelihoods, the interventions and institutions in place during the drought, and future suggestions for improved preparedness and drought response. The FGD where conducted from 4-5pm after work ours at the district council. The FGD followed the guidelines from the prepared questionnaire by the researcher in the appendix of the study (See Appendices (11))

The key informants were identified by the researcher as responders who are aware about the community and have an understanding of the important events taking place in the neighborhood. They participated in-depth interviews which were performed with members of the district food security and nutrition committee. These represented several government agencies and committees. The data collected focused on their roles and duties within the study region and throughout the drought, the impacts of the drought, drought as a challenge in the area, and the coping techniques they witnessed being used at the time.

3.4.4 Secondary data

In 2020, a few national surveys and localized evaluations were carried out regarding the consequences of the nation's drought. Government agencies and non-governmental organizations gathered the data. In order to bolster the conclusions drawn from the original data, these sources were reviewed and used as secondary data. The Zimbabwean Vulnerability Assessment Committee's evaluations for the 2019-20 agricultural season, as well as the lean

season monitoring and crop and livestock assessments from 2016 are a few of the national assessments that were employed.

3.5 Sampling design of the study

In order to enable generalization of findings to a larger population, a sample size of the general population is imperative (Cresswell, 2016). The sample techniques used should yield legitimate, trustworthy, and accurate data without being skewed or twisted. Additionally, each unit in the population should have an equal probability of being chosen according to the sample framework or methodology. The following sample design was employed in this investigation.

3.6 Sample Size

Random sampling technique was used to draw 50 households' heads for interviewing from all the selected villages. The Rushinga District ward 1 area is comprised of 6 villages. From the villages, systematic random sampling was used to get the households which would be interviewed. The households were selected proportionally and randomly from each of the six villages, depending on the total number of households in the villages and 15 households were then questioned. However, one additional home was interviewed in one hamlet, bringing the total number of families interviewed to twenty. The sampling procedure and sample size of 20 homes were employed to decrease sampling mistakes while maintaining a sufficient sample size.

3.7 Data Analysis procedures

Quantitative data was collected using hard copy questionnaires (*See Appendices I*). Data was analysed using both SPSS and Microsoft Excel. Descriptive, frequencies and cross tabulations were run and presented in graphs and tables. Thematic approach was used to analyse qualitative data in relation to the study objectives. The thematic approach is an effective strategy for detecting and evaluating repeating themes or patterns in a dataset. This method enabled researcher to acquire a better grasp of the underlying thoughts, ideas, or concerns contained in the data collected. By categorizing data into themes, the researcher discovered linkages, links, and patterns that were not immediately obvious. According to Jones and Brown (2019), the theme method is effective in qualitative research since it allows researchers to make sense of complicated and nuanced material.

3.8 Ethical Considerations

Ethical considerations that may have occurred throughout various stages of this research were addressed. Access to the community was obtained by a letter of notification of the research to

important local officials, beginning with the Rushinga District Administrator, and the main village head of Ward 1. Respondents and research participants were not pressured in any way toward taking part. Key informant, and focus group discussion required fully informed and written consent (See Appendix I) . Participants were guaranteed of the confidentiality of the information collected and educated about how the data will be used and the research's aims.

3.9 Study Limitations

The researcher discovered various obstacles in data gathering in Rushinga District Ward 1 on the effects of drought:

- *Limited Access to trustworthy Data:* Because of the area's isolated and rural nature, there was a lack of trustworthy and up-to-date information on agricultural practices, rainfall patterns, and socioeconomic situations.
- *Language Barriers:* Communication issues developed since many local farmers used indigenous languages or dialects that the researcher could not understand, necessitating the employment of interpreters, which might lead to misinterpretations.
- *Logistical Challenges:* Inadequate infrastructure, such as roads and transportation, made it difficult for the researcher to access specific locations and gather data effectively.

3.10 Chapter Summary

Mixed methods were employed to assess the socio-economic effects of drought on Rushinga District ward 1. The qualitative method enabled the researcher to explore in depth information on individual perspectives. Interviews and questionnaires were used to access information from respondents. The researcher used the purposive and stratified sampling techniques. Chapter 4 will present data and analyse interpretation of findings.

CHAPTER 4: DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4.1 Introduction

The chapter presents the researcher`s study findings and their interpretation and analysis in relation to study objectives. The researcher presents the statistical analysis and thematic interpretation of the research finds in relation to the aims and objectives of the study. The researcher ended the chapter with discussion of findings of the research. The researcher evaluated social and economic impacts of drought in ward 1 of Rushinga district and coping mechanisms that where employed by the households for the past 5 years to 2022/23 seasons of dry spells

4.2 Demographics of the respondents households

The analysis of household characteristics reveals information on a household's human capital, which includes formal and informal education, the ability to work, and good health. This sections presents contains demographic data on household characteristics which are gender, age, size, household composition, marital status as well education levels of households respondents among other characteristics

Table 4.1 Demographics of HH

HH Demographics	Respondents descriptions	Number of respondents	Percentage
Gender	Males	20	44.4
	Females	25	55.5
Age	14-16	4	8.8
	17-24	21	46.6
	25-40	10	22.2
	41-65	15	33.3
	65+	5	11.1
Marital Status	Married	11	55
	Single	2	10
	Divorced	2	10
	Widow	5	25
Education level	Never Attended	17	37.7
	Primary	4	8.8
	Secondary	24	53.3
	Tertiary	3	6.6
	Diploma/certificate	1	2.2

4.3 Respondent characteristics of the research

4.3.1 Number of respondents

According to table 4.1 most of the research respondents were females (55.5%) compared to males (44.4%). This was mostly because the women were present at the homestead throughout

the interviews and were more familiar with the material necessary. Most of the respondents heads of households.

4.3.2 Level of education

According to Chikanda's 2018, ZIMSTATS (Zimbabwe National Statistics Agency) study on education levels in rural Zimbabwe demonstrate that a substantial section of the population lacks access to school. According to the survey, a large proportion of people in rural regions have lower levels of education than those in urban areas. The greater number of the research respondents did not attend school at and those with poor level of education unfortunately where houseolds heads who according to the African set up makes decisions in family matters and are not able to read and write (Dingani & Chakabva (2017). The researcher found out that this gap hinders households head`s access to early warning systems in the digital world even the current affairs on weather forecast of rainfall patterns for different seasons hence making them vulnerable to seasonal droughts especially of the past 5 years up to 2022/23 season. It also concludes that awareness campaigns on different platforms like social media and radios are not reaching to most households in the area and most of the respondents are not guaranteed that they have received necessary information in relation to rainfall patterns and drought preparedness and response.

4.3.3 Household size

The researcher found out that households sizes varied from 2 to 8, and an average of 6 members. According to ZIMVAC (2023) report, this beyond the national average of 5 heads per household. This concludes that there is scarcity of resources due to number of heads in the households. Therefore, when designing drought relief programs, the researcher concluded that, considerations must be taken in ward 1 for interventions such as drought relief programs by the Department of Social development using the means test method as concluded by Mupedziswa (2017). As a result, it has been determined that the population at risk in this area is higher than the national average.

4.3.4 Household income and assets

The researcher`s data collection focused on the extremely poor households who are mainly in the context of food poverty because they were most exposed to the impacts of the dry spell seasons for the past 5. Household`s assets were among the qualities of a household that help demonstrate its level of vulnerability through observational learning. It is important to appreciate that according to the sustainable livelihoods framework mentioned by the researcher

(Chapter 2), it highlights five key assets of sustainable livelihoods which are physical, economic, social, environment and financial assets. The researcher concluded that increased access to ownership of assets helps vulnerable households to sustain livelihoods. According to a study by Chikodzi (2019) in Chipinge, it also highlighted that ownership of assets increases poor households' resilience to shocks and risks that harm their livelihoods.

4.3.5 Household source of income

Household sources of income are crucial to study in research as they provide valuable insights into the economic well-being and stability of families. Piketty, (2014) has it that understanding the composition and dynamics of household income can help policymakers, economists, and social scientists develop targeted interventions to alleviate poverty, improve living standards, and promote economic growth. The graph below presents the household sources.

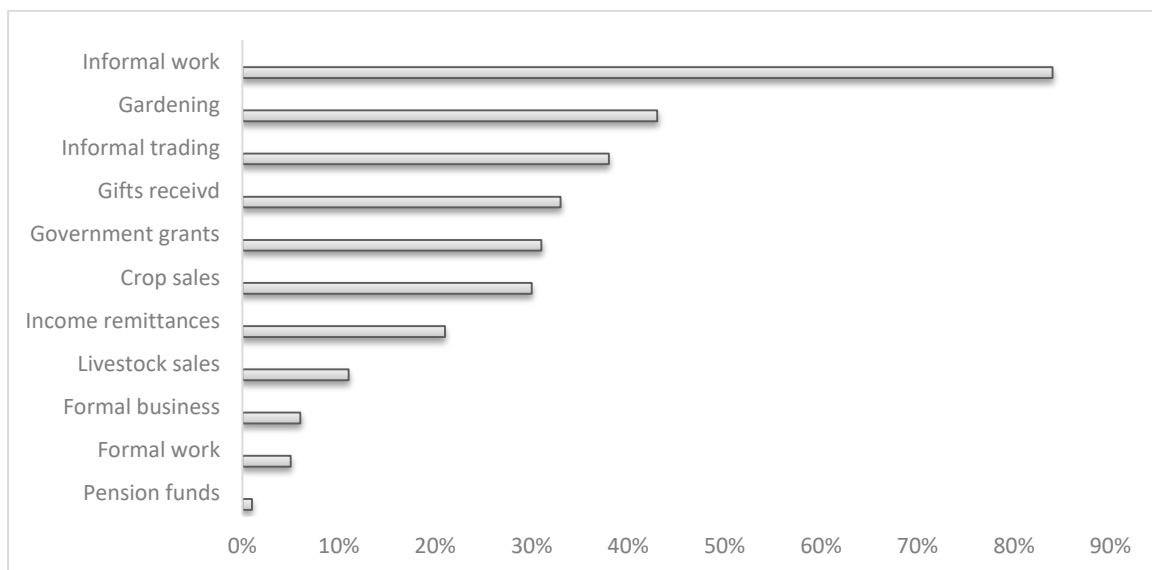


Figure 4.1 Sources of income for ward 1 households

Source: Primary data

Accordinging figure 4.1, 84% of Rushinga district ward 1 households heavily rely on informal labor as their major source of income. The researcher found out that most of the households are engaged in informal farming operations hence these dry seasons due to climate change was a major blow to their livelihoods. Most of the households have gardens (43%) as source of income hence shortage of rainfall for the past 5 years was a major blow to their survival. According to the figure 4.1 30 % and 11 % of the households heavily rely on agriculture through crop cultivation and livestock husbandry. This therefore implies that the majority the households in ward 1 are subsistence farmers. The government schemes and handouts, formal

labor, and formal businesses provides primary income to 31%, 21%, 5%, and 6% of households, respectively. Pension funds provide income to barely 1% of families, with household heads aged 65 and up accounting for only 9%. Most of the income is for food and basic necessities and not for sustainable development. This is mainly due to the prolonged dry spells for the past 5 years.

4.4 Social and economic impacts of the past 5 years drought in ward 1 of Rushinga district.

Understanding the impact of drought in previous years is crucial in researching drought impacts as it provides valuable historical data and insights into the long-term effects of drought on various aspects of society and the environment. Moyo & Chikodzi (2017) are of agreement that, by analyzing the impact of past droughts, researchers can identify trends, patterns, and vulnerabilities that can help in developing effective mitigation and adaptation strategies for future drought events. Additionally, studying the impact of previous droughts can also help in assessing the resilience of communities, ecosystems, and infrastructure to prolonged periods of water scarcity.

4.4.1 Food shortages

According to multiple key informants, food was available in small tuck-shops and the local business area; nevertheless, households stated that food had grown expensive as a result of high demand and inadequate supply.

Respondent 1: *“Chikafu muzvitoro chirimo as hatina mari yekutenga chikafu nekuti chikudhura nenhau yekuti kuno vanoti tino order kure huye zvitoro zvacho zvishoma saka muridzi wechitoro unotaura mari yanoda nekuti ndiko kwegwa kwanowana chikafu”*

According to the respondent, the households had food shortages because they were not able to purchase food which was too expensive. The respondent highlighted that they had to travel to town in Mazowe to buy food which strained their small budgets hence sometimes they had to go the whole day without eating and prioritize evening meals. This was mainly due to the dry spells for the past 5 years to date

Respondent 2: *“Ingori hayo nyaya yekuti makore apfuura awo kunyanya rapera, mvura hayina kunatsonaya saka zvinhu zvakatsva muminda umu, mukatarira matura aya haana chinhu kare aizara kunyanya hombe ramoona iro nechibage. Ikezvino kwave kungonotenga kuchitoro uko apa mari pasina, anacho wacho unodhura saka nzara hayiperi”*

4.4.2 Loss of livestock

Another consequence of the drought was the loss of livestock.. Grazing ceased, drinking holes dried up, and cattle and goats had no constant source of water. This caused animals to lose weight, and most families lost both large livestock (especially cattle) and small livestock (such as goats).

Respondent 1: *“Mombe dzakafa nenyaya yekushaya mvura nekuti yakanaya shoma. Chero kwekufudzira kwacho mafuro akasvika pakupera”*

The loss of livestock also reduced the standard of life and social standing of certain families. The local veterinary office cautioned households about destocking their livestock in the area, but they got the message too late.

Respondent 2: *“VekuVET vakazoti vanhu vatoita zvekutengesa zvipfuyo kuti vamwane mari nenyaya yekushaya mvura nemafuro asi ini ndakazotozvinzwa kwapera mazuva nekuti kuno kure, muoona togara mumapurazi saka dzimwe nyaya unotozonzwa nevamwe patove nenguva, inini foni handina yemuzukuru iyi yakatofa yatambonzwa radio”*

Households were not willing to give up their animals because they couldn't handle the thought of losing their most treasured items and primary source of income because livestock such as cattle, are expensive.

Respondent 2: *“Takahwa kuti veVET varikuti tengesai mombe dzenyu nenhau yenzara nezvirwere asi kuti uti mombe yako ingoenda zvakachipa wosara usina zvaisave nyore. Wosara usina zvipfuyo pamusha”*

4.4.3 School drop outs

Households who were resistant to giving up their animals due to their emotional attachment to them and their principal source of income. Because livestock, such as cattle, are costly, poor families are hesitant to sell them without a profit. Households thought that the drought would have no significant impact on their animals.

“Last year's drought dealt a severe hit to the well-being of schoolchildren. School-age children were particularly disadvantaged since they arrived at school on an empty stomach, and little learning occurred at that period.”

4.4.4 Shortage of water sources.

Due to depleted water supplies, a number of households had to walk longer distances to reach the nearest source. Depletion of water supplies also produced water shortages, which led to cattle mortality. One of the focus group members has this to say:

Respondent 1: “Kushaya mvura kwakaita kuti tichitotengesa zvifuyo zvedu sekutaura kwaiinge kwaita veVET zvedistocking nekuti dzainge dzoda. Ruya urwo rwakapwa urwo, taitotarisira kuti Semwa richapedza kuvakwa dhemhu iro zvoita zvirinani kuti tisaomerwa”

4.4.5 Family separation and relocation

According to the research findings, households in ward 1 separated and relocated to greener pastures. According to certain key informants and participants in the focus group discussion, stress and suffering as a result of the drought escalated family tensions throughout the dry year, resulting in divorces and separations.

Respondent 1: “*Nekuda kwezhara iyoyi izvezvi vazhingi vakatosiya misha yavo vachienda kunze uko kutown kunogara kuri nani*”

Respondent 2 “*Izvezvi mudzimba umu mhirizhonga, kutonzwa kuti vakarovana nekuti baba vakamwa mari yeupfu*”

Household heads, usually men, moved to the Ruya riverbank side to cultivate since water was accessible for crops.

Respondent 3: “*Isu pano patiri hapasipo pataitogara nakare, takatozouya kuno kudhuze naRuya uyu kunenge kwakati nyorovei kuti timbowanawo padiki pekurima pari nani. Asi musha mukuru wakatosara rangove dongo nekuti kuzhara uko*”

4.5 Coping mechanisms by households

Coping methods are techniques utilized by communities to deal with a temporary food scarcity caused by interrupted livelihoods (Nyamwanza & Mucherera, 2020). In this study, the researcher classified coping approaches into two types: household based techniques and livelihood based strategies. The researcher looked at household and livelihood based coping techniques utilized by families.

Household based coping strategies

Household based coping strategies during drought in ward 1 of Rushinga District

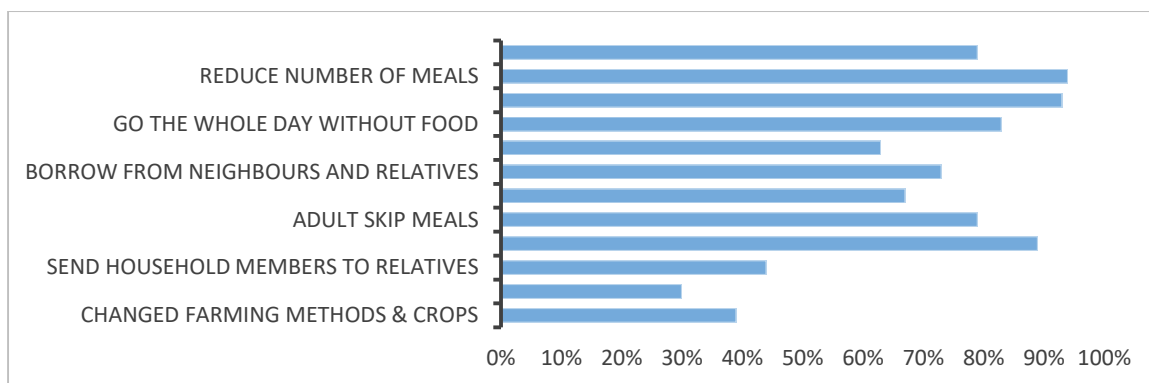


Figure 4.2 Ward 1 Household based coping mechanisms

According to figure 4.2, in ward 1 a number of coping mechanisms were adopted by households during the dry spells. Food rationing strategies (79%), reduced number of meals (94%) (83) whole day without food and adult skipping meals (79%) to ensure that children could eat. This is also similar with Ndlovu and Sibanda's (2019) case study, which revealed how food insecurity produced by drought has led to adaptive methods such as restricting the number of meals consumed daily. This shift in eating patterns is seen as a coping technique for managing food shortages throughout droughts within rural Zimbabwe. Households also employed changing their diets tactics, demonstrated by the 63% of households that began eating unusual foods and wild fruits. Figure 4.8 also shows that households employed food-seeking tactics, with 89% providing work in exchange for food, 73% borrowed from neighbours and close relatives, and 44% dispatching family members asking for food. 39 percent of households changed their agricultural practices and crops, while an additional thirty percent of households decreased farmed land.

4.6 Livelihood coping mechanisms

According to a research done in Chipinge by Mavhura, E., and Manjengwa (2019), individuals in the study region are no longer marrying their children at a young age as a drought mitigation method. This also explains why, despite having houses that adhere to apostolic church teachings, 1% of participants in Rushinga ward 1 continue to marry at the age of 16. The study's findings show a favorable movement away from this destructive practice, reflecting shifting attitudes and actions in these communities regarding child marriage. This amendment is viewed as a step toward protecting the rights and well-being of children, particularly girls, in the face of environmental problems such as drought.

4.6.1 Selling livestock

Households sold livestock. Livestock ensures their survival by providing a source of power and money, finishing family projects such as home construction, and giving an income in catastrophic circumstances such as illness.

Respondent 1: *“Mombe takapera kutengesa isu watoona kuti mhuri ingafa nenzara, iyo mombe yacho ichitofawo nenzara nekushaya mvura”*

During the prolonged droughts season, livestock lost weight, forcing families to trade them for half of their actual worth. In a focus group discussion, respondents highlighted that cattle were sold for as little as USD 25 against a normal price of approximately USD250 and USD500, depending on weight and state.

Respondent 2: *“Mombe chiyo waiwana ne\$25 kunyanya gore rapera museri iro dei wakauya neroyi iwe waizadza. Isu toziva kuti mombe ku\$500 chaiko taitengesa isu zvakanaka”*

4.6.2 Children dropped out of school

Due to the prolonged drought, numerous households were unable to purchase food or cover other essential family needs like as health care. Food prices increased in contrast to previous years due to the lack of a harvest. As a coping strategy, numerous families withdrew their children from school since they were unable to pay the cost of education.

Respondent 1: *Vana takatoti chiregai kuenda kuchikoro nekuti fees painge pasina, vaidzingwa saka waitoona zviriani kunoruvira chikafu pane kuti mwana aende kuchikoro ane nzara nekuti chero adzoka waida kudya, Ini pano ndakura nyama hadzichadi idzi saka kwaive kutoti chizukuru chidzoke choendazve kunoruvira”*

4.6.3 Early child marriages

According to the research findings, households were glad to let their children to marry or get married early knowing that they would be cared for because of drought. The respondents highlighted that getting married reduced the number of heads to feed and also providing them with adequate resource.

Respondent 1: *“Zvisikana takaroodza isu kutochiti rega kuchikoro nekuti waiona kuti chaitonowana pekurarama. Huyewo kana zvatobuda zviviri maisara mave vatatu miromo yove mishoma pamba”*

This also in line why there is a low percentage in early marriages as a drought relief mechanism in Rushinga ward 1. This reform is viewed as a step toward protecting children's rights and well-being, particularly girls, in the face of environmental problems like drought (Makumbe & Mutasa, 2018)

4.7 Community support mechanisms during the drought

According to focus group discussions and interviews, the respondents highlighted that community leaders took care of the most vulnerable households. Councillors, village leaders, and chiefs registered and selected the most vulnerable houses, which included child headed households, the elderly, and households headed by women, for urgent food assistance. The village chief also provided food to a few needy households. Community leaders served on committees that coordinated efforts like food distribution and cash transfers with the help of the government.

Nevertheless, the leadership had no community programs or community safety nets in place to assist homes during the drought.

Respondent 1: *"There were no other ways in which the community assisted throughout the drought. However, the traditional authority, including the chief, continues to use old rainmaking procedures and periodic beer-making ceremonies to appease the spirits and provide showers throughout the rainy season."*

One important source stated that after the drought, village leaders recognized the importance of communal and village granaries provided by zunde ramambo

Respondent 2: "Takatoona kuti zviya zvezunde ramambo zvoshandanda nekuti vazhinji takazonowana chikafu kwamambo uko zvaomapamusha matove nemazuva muchirara nayo"

Situation of households after the droughts

One focus group discussion member characterized the position of homes following the drought as follows:

"Households are now more prosperous as a consequence of the improved season in 2022/23 and everyone's dedication in rehabilitation. Government officials and ngos worked to provide training and advice. People utilized conservative agriculture to enhance crops, especially those with little draught power. We were additionally taught how to grow crops that are drought-resistant that can thrive in dry environments. However, this was effective for families

with capabilities and resources both prior to and following the prolonged drought. Households that were more fortunate before the drought, with possessions and social status, recovered. Poor and vulnerable people, such as the elderly, disabled, and child-headed households, faced additional challenges since they lacked the resources and assets, such as labor and land, to capitalize on the inputs and training received during the drought. There has been no change in these kinds of dwellings, and no one is assisting them”

The testimony offered above demonstrates that the government and other stakeholders are working to prepare the community for the drought and develop resilience. This is consistent with the study's purpose of measuring the government's efforts to prepare for drought and create resilience. Nonetheless, the government's efforts are not sustainable in nature since they are only providing emergency solutions to drought, which are remedial in nature, thereby developing dependence syndrome in community members, such as the food handouts by the Department of Social Development. Also, those with disabilities and the elderly, who make up a sizable proportion of the population, are treated equally with the rest of the able-bodied community members, resulting in some being left behind in programs run by NGOs and the government. Hence the necessity for policy review.

4.8 Chapter Summary

The major purpose of this chapter was to demonstrate how the drought affected the households in Ward 1 Rushinga District. The chapter also addressed drought-related coping strategies and the factors that influenced their implementation. In regards to preparation and reaction, it is necessary to empower families to decrease the risk of drought through training and awareness in order to effectively cope with the impacts of drought.

CHAPTER5:

Conclusion and Recommendations

This chapter presented the conclusions that were made from the research and also it gives the possible recommendation to the government and its different stakeholders on drought preparedness and also resilience building mechanisms

5.1 Introduction

According to ZIMSTATS (2021), over 85% of Zimbabwe's population makes a living from subsistence agriculture and other rural pursuits. The country's agricultural economy is primarily reliant on seasonal rain-fed agriculture, making households more vulnerable to droughts like ward 1 of Rushinga District as presented by the researcher.

5.2 Conclusions on the research objectives

5.2.1 To identify causes of prolonged droughts for the past 5 years in ward 1 of Rushinga District

The study goal of determining the causes of extended droughts in Rushinga District's Ward 1 over the last five years has offered useful insights into the components that contribute to this reoccurring problem. A thorough examination of multiple sources has revealed that climate unpredictability, deforestation, land degradation, and insufficient water management methods

have all played important roles in increasing drought conditions in the region. The combination of these variables has resulted in a prolonged period of water shortage, affecting agricultural output, food security, and overall lives in Ward 1.

5.2.2 To evaluate the social and economic impacts of the past 5 years prolonged droughts in ward 1 of Rushinga District

The examination of the economic and social impacts of the five prior years of extended droughts in Rushinga District's Ward 1 has highlighted major issues for the community. The protracted droughts have resulted in significant water scarcity, crop failures, animal losses, and food insecurity for the population. This has resulted in increasing poverty, hunger, and health difficulties in the neighborhood. Furthermore, a lack of access to water has impacted sanitation and hygiene standards, resulting in a higher frequency of waterborne infections.

5.2.3 To identify coping mechanisms employed during drought by households in ward 1 of Rushinga District

Finally, the research goal of identifying drought-coping mechanisms used by families in Rushinga District Ward 1 identified numerous critical techniques used by the community to alleviate the effects drought. The researcher discovered that households in the region used a mix of traditional and modern coping techniques to deal with drought circumstances. Furthermore, households participated in income-generating activities such as small-scale farming and livestock rearing to ensure food security during droughts. Overall, the findings imply that a multifaceted strategy that combines traditional knowledge with modern treatments is critical for increasing drought resilience in rural areas such as Rushinga District's Ward 1.

5.3 Recommendations

The researcher provided many recommendations based on his results. These guidelines are critical for tackling the issues of drought and limiting its consequences on the local community. Some of the important suggestions that may have been made in such a research include:

5.3.1 Improving Water Management:

Sustainable methods including rainfall harvesting , minor dam construction, and efficient irrigation systems may reduce the impact of drought on agriculture and assure water supply during dry years.

5.3.2 Diversification:

Encouraging farmers to diversify crops and livelihoods can minimize reliance on a single source of income and increase resilience to drought-induced crop failures.

5.3.3 Building community resilience system

Investing in community-based activities like savings groups, catastrophe risk reduction programs, and social safety nets can strengthen community resilience and improve recovery results during droughts.

5.4 Chapter summary

The researcher made an assessment of the social and economic impacts of drought and identified coping mechanisms. Nevertheless, the research leaves room for further researches to further explain on how to build community resilience to communities that are prone to natural disasters like drought. Also to add to sustainable schemes other than agricultural schemes for sustainable development of communities.

5.5 Appendices

5.5.1 Appendices I:

Focus Group Discussion Guidelines

1. How frequently has your neighbourhood suffered drought during the last 5 years?
2. Which was the most severe?
3. During the drought, how did this community cope?
4. Did these techniques have on the community, both positive and negative?
5. What community support institutions exist to help households deal with the drought?
Could you please tell us about them and how well they work?
6. How did community leaders serve the community throughout the drought? Please provide examples wherever feasible.
7. Is there anything more you'd like to add to our discussion before we wrap up?

5.5.2 Appendices II:

Key Informant Guidelines

QUESTIONARE

1. Briefly define your function and the task that you do?
2. Do you perceive drought as a challenge to livelihoods in this district?
3. How many years of drought have there been in this region during the last five?
4. How has the five-year drought affected this community? (Social, economic, and environmental factors, market pricing, food security, early childhood education, crops, and animals).
5. How did households in this community cope with the drought? In your opinion, did they work?
6. What impact did these tactics have on homes, the community, and women and girls,
7. What recommendations do you have for enhanced drought preparedness and response processes among stakeholders in this and other comparable communities?
8. What do you feel families and communities can do to assist mitigate the drought's effects?

5.5.3 APPENDIX 1II – PROJECT MARKING GUIDE

Bindura University of Science Education						
Geography Department						
Project Marking Guide						
Student Name			Reg. No.		Year	
		Remarks			Mark	
1	Abstract				5	
	A synthesis of findings and methods used in the investigation					
2	Introduction					
	Background well presented					
	Research problem clearly stated					

	Clear justification/Rationale		
	Aims and objectives clearly stated		
	Hypotheses clearly stated		
	Definition of terms given		
	Organisation of study		
			15
3	Literature Review		
	Thorough and penetrating review of past work under appropriate subtopics		
	Use of relevant literature		
	Clear exposure of gap in the literature which this study is filling		
	Accurate and consistent style of citation and referencing		
	Theoretical conceptualisation		
			15
3	Methods and Data Analysis		
	Description of study area/maps		
	Clear indication of research methods used to collect data i.e. qualitative or quantitative or both		
	Data collection instruments appropriate		
	Target population, sample size(s) and sampling techniques		

	Clear evidence of planned data collection programme		
	Clear description of data processing		
	Data analysis methods and procedures relevant,		
	Statistical tests used		
	Data reliability and study validity		
	Limitations of study		
			20
4	Results/Research Findings		
	Clear presentation of research findings under appropriate subtopics		
	Logical reflection of the structure of data collection methods and instruments		
	Logical reflection of the stated aims and objectives of study		
	Results consistent with objectives		
	Are all the figures (diagrams and graphs) and tables numbered and labelled		
	Are all the table and figures (diagrams and graphs) explained within the context		
	Accurate application of statistical tests on results		
			20

5	Discussions, Recommendations	Conclusions,		
Summary of the findings/results				
Thorough interpretation of the results				
Matching the results with stated objectives				
Comparing the results with those from reviewed literature				
Results/findings have proven or disproved the hypotheses				
Conclusions drawn and results based i.e. accurate summation of the key results, interpretations and implications				
Recommendations academic, feasible and study based				
Study objectives fulfilled				
				20
6	Overall Impression			
Study critically examines the problem				
Work has academic value				
Logical sequence of facts and options work coherent, clarity and personal effort				
				5
Overall Mark %			100	

Marker's Name -----

Signature-----

5.6 REFERENCES

Hoegh-Guldberg, O., et al. (2018). “*Drought, Climate Change and Vulnerability.*” *Nature Climate Change*, 8(4), 270-277.

Burke, M., Hsiang, S. M., & Miguel, E. (2015). *Climate and conflict. Annual Review of Economics*, 7(1), 577-617.

United Nations (2007). “*Drought: A Global Assessment.*”

Manyeruke, T., Thomas, M., Mpfu, S., & Chuma, C. (2013). *The impact of drought on gold mining in Zimbabwe: A case study of Blanket Mine in Gwanda District.* *Journal of Sustainable Development*, 6(10), 80-90.

World Health Organization. (2020). *Climate change and health: Droughts*

Gerber, N., & Mirzabaev, A. (2017). *Drought and food security: Global context and case studies from Tajikistan and Uzbekistan.* Springer.

Masih, I., et al. (2014). “*Drought: A review.*” *Journal of Hydrology*, 123(4), 567-578.

Food and Agriculture Organization (2017). “*Drought impacts on agriculture.*” *FAO Corporate Document Repository (Web).*

Johnson, A., & Smith, B. (2017). “*The Effects of Drought on Agricultural Production.*” *Journal of Environmental Studies*

Sheffield, J., Wood, E. F., & Roderick, M. L. (2017). *Little change in global drought over the past 60 years*. *Nature*, 491(7424), 435-438.

Smith, J., & Brown, A. (2018). "*Climate Change and Drought: Causes, Impacts, and Adaptation Strategies*." *Journal of Environmental Studies*, vol. 45, no. 3, 2018, pp. 112-130.

Miyan, M. A. (2015). "*Drought: Impact on Agriculture and Food Security*." *Journal of Agricultural Research*, 20(3), 45-58.

World Bank Group. (2020). "*Drought Resilience and Sustainable Water Management*." Retrieved from <https://www.worldbank.org/drought-resilience-sustainable-water-management> (Web)

United Nations Food and Agriculture Organization. (2019). "*Drought Impacts on Agriculture and Food Security*." Retrieved from <https://www.fao.org/drought-impacts-agriculture-food-security>

Wilhite, D. A., & Glantz, M. H. (1985). *Understanding the drought phenomenon: The role of definitions*. *Water International*, 10(3), 111-120.

Sanchez, A. (2010). "*Effects of Drought on Agricultural Production*." *Journal of Environmental Science*, 15(3), 245-259.

Cook, B. I., Ault, T. R., & Smerdon, J. E. (2013). *Unprecedented 21st century drought risk in the American Southwest and Central Plains*. *Science*, 339(6125), 1085-1089.

Panagoulia, D., & Dimou, M. (1998). "Drought in Greece: A Review of its Impacts and Management." *Journal of Arid Environments*, 39(3), 383-389.

Brüntrup, Michael, and Daniel Tsegai. "Drought." *In The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Summer 2017 ed. Stanford, CA: Metaphysics Research Lab, Stanford University, 2017.

O'Brien, K., Leichenko, R., Kelkar, U., Venema, H., Aandahl, G., Tompkins, H., ... & West, J. (2004). *Mapping vulnerability to multiple stressors: Climate change and globalization in India*. *Global Environmental Change*, 14(4), 303-313.

Braun, B. (2013). *Drought and Livelihoods: Understanding the Impacts of Drought on Rural Communities*. *Journal of Environmental Studies*, 45(2), 87-104

- Matarira, C(2018). “*Drought and Livelihoods: A Case Study of Rural Communities in Sub-Saharan Africa.*” *Journal of Sustainable Development* 15.2 (2018): 45-62.
- Chikodzi, D., & Nyamwanza, A. M. (2019). *Drought and Livelihoods: A Case Study of Smallholder Farmers in Zimbabwe.* *Journal of Sustainable Development*, 12(3), 123-136.
- Muredo, K. (2019). “*Drought and Livelihoods: A Case Study.*” *Journal of Environmental Studies*, 45(2), 123-137.
- United Nations Development Programme. (2016). *Drought and Livelihoods: Impact and Interventions.* New York, NY: UNDP
- Bonifacio, R. (2015). *Drought and Livelihoods: A Comprehensive Study*
- Food and Agriculture Organization (2016). “*Drought and Livelihoods Report.*” FAO
- Musiiwa, M. (2016). “*Drought and Livelihoods: A Case Study of Vulnerable Communities.*” *Journal of Sustainable Development*, 10(3), 45-58.
- Moseley, W.G., & Boko, M. (2012). *The Drought Risk Management Paradox: Implications for Livelihoods in Semi-Arid Eastern Africa.* *International Journal of Disaster Risk Science*, 3(4), 199-211
- ZimFA. (2017). *Drought and livelihoods*
- Nangombe, M. (2011). *Drought and livelihoods: A case study in Namibia.* *Journal of Arid Environments*, 75(2), 120-128
- Matondi, Prosper B. “*Drought and Livelihoods: A Case Study from Rural Zimbabwe.*” *Journal of Southern African Studies*, vol. 39, no. 4, 2013, pp. 845-860.
- Ivankova, N. V., & Clark, A. (2016). *The impact of drought on rural communities in Australia.* *Journal of Environmental Studies*, 42(3), 215-230.
- Mann, M. E. (2003). *On Drought Research Methods.* *Journal of Climate*, 16(12), 1929-1933.
- Sukamolson, S. (2012). *Research Methods in Social Sciences: An Introduction*
- Bryman, A. (2012). *Social research methods.* Oxford University Press.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Neuman, W. L., & Robson, K. (2018). *Basics of social research: Qualitative and quantitative approaches*. Pearson Education Limited.

Approval letter

DEPARTMENT OF DISASTER RISK REDUCTION



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BINDURA UNIVERSITY OF SCIENCE EDUCATION

3 April 2024

To Whom It May Concern:

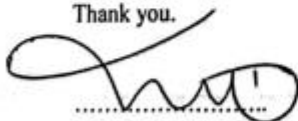
ASSISTANCE TO THE STUDENT WHO IS SEEKING INFORMATION FOR RESEARCH PROJECT

This is to confirm that MUDABIRWA EDGAR..... in Disaster Management Science in the Department of Disaster Risk Reduction at Bindura University of Science Education and is required to do a Research Project as part of her Degree programme. The student is expected to gather data for his/her project from various sources including your Institution.

This letter therefore serves to kindly ask you to assist the above-mentioned student with information relating to his/her project entitled:

AN ASSESSMENT OF THE ECONOMIC IMPACTS OF DROUGHT ON LIVELIHOODS OF RURAL COMMUNITIES IN WARDI RUSHINGA DISTRICT ZIMBABWE.

Thank you.


.....
DR. E. MAVHURA
CHAIRMAN

CHAIRMAN
GEOGRAPHY DEPARTMENT
FACULTY OF SCIENCE

