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FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF DISASTER RISK REDUCTION



**ASSESSING DROUGHT AND WOMEN'S LIVELIHOOD VULNERABILITY IN WARD 10,
BUHERA DISTRICT, ZIMBABWE**

BY

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APPROVAL FORM

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



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Signature...

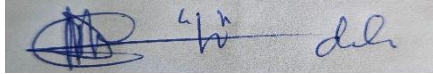
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DECLARATION FORM

I, **MUPFUNGIDZA DENNIS**, registration number **B210050A**, declare that this dissertation is the product of my own work and has not been not been copied from any source without acknowledgement to the originators. Every source that was cited or used has been identified and given full credit as a reference. The work has only been submitted to the Disaster Risk Reduction Department at Bindura University of Science Education.

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A handwritten signature in blue ink, appearing to read 'Mupfungidza Dennis', is written over a horizontal line.

Date: 30/05/25

ABSTRACT

The study will assess the vulnerability of women livelihoods to drought disasters, analyse the intersectional factors influencing women's vulnerability to drought and determine impacts of drought disasters on the livelihoods of women in Ward 10, Buhera District. The intensity and frequency of drought disasters has deeply affected women livelihoods globally, regionally and locally. Depending on the context and perspective, droughts such as meteorological, agricultural, hydrological and socioeconomic were looked into. The study applied a mixed method approach to collect and analyse both qualitative and quantitative data on drought and women's livelihood vulnerability in Ward 10, Buhera District, Zimbabwe. Questionnaires were used to collect quantitative data while interviews and focus group discussions were used to gather qualitative findings. Quantitative data were analysed using descriptive statistics (frequencies and percentages) and inferential statistics (chi-square tests) and presented in form of tables, graphs and charts while qualitative data were analysed using themes and presentation in form of verbatim and narratives. The study looked into variables that affect women's vulnerability status, including age, marital status, educational attainment and occupation, hence increasing their vulnerability to drought. More so, the study indicated different marital status among respondents, with the majority being (55.1%) married, tailed by descending figures of (19.1%) widowed, (11.2%) divorced and (14.6%) single. On education, bulk of women completed primary school education, followed by secondary and tertiary education, the least group did not possess formal education. As for employment, the (60.6%) most women were unemployed, with a notable number (32.7%) participating in informal employment and a minor segment (6.7%) in formal employment. Findings revealed that there is a significant relationship between age and vulnerability status ($\chi^2=15.048a$, $p = .002$) and marital status ($\chi^2=12.769a$, $p=.002$), education level ($\chi^2=24.327a$, $p=0.000$) and occupation ($\chi^2=16.715a$, $p=0.000$). The study also concluded that that 68.54% of the respondents interviewed were vulnerable to droughts and 31.46% are less vulnerable. The study thus, recommended intervention by the Government of Zimbabwe and Non-Governmental Organisations, gender responsive policies, property, enhanced women land and ownership, capacity building and awareness, monitoring and evaluation of social protection interventions.

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ACRONYMS

AGRITEX	Agricultural Technical and Extension Services
CA	Conservation Agriculture
CSA	Climate-Smart Agriculture
DA	District Administrator
DRR	Disaster Risk Reduction
EMA	Environmental Management Agency
EMA Cap 20:27	Environmental Management Act (Chapter 20:27)
FAO	Food and Agriculture Organization
GoZ	Government of Zimbabwe
GIS	Geographical Information Systems
GPSs	Global Position Systems
NGOs	Non-Governmental Organizations
RS	Remote Sensing
SAPs	Sustainable Agricultural Practices
UNDP	United Nations Development Programme
ZimVac	The Zimbabwe Vulnerability Assessment Committee

CHAPTER I

INTRODUCTION

1.1 Chapter Introduction

In this chapter, the study's contextual, objectives and research questions are examined. Additionally, a problem statement, delimitation, limitations and significance of the study on the impact of drought on women's livelihood vulnerability in Ward 10 of Buhera District are provided. Before providing a chapter summary, the study will define important terms like livelihoods, disaster, and drought.

1.2 Background of the Study

The occurrence and power of natural hazards have grown in numbers universally on annual bases. Unlike other natural disasters, drought gradually tightens its hold, steadily impacting the affected region over time. Vicente-Serrano et al., (2022) highlighted that, in the past quarter century, the globe has seen a growing susceptibility to drought, with climate predictions suggesting an escalation in both the intensity and frequency of droughts across many global regions. Globally, drought has affected a number of women livelihoods in countries such as the United States of America, Canada, Iran, Afghanistan, Tajikistan, Uzbekistan and Turkmenistan, Russia, China, India, Somalia, Mali and Australia (Eriyagama et al., 2020). Universally women farmers currently account for 45 to 80% of food production in developing countries depending on the region, hence are the most impacted by drought. From earlier studies, women account for almost to 80% of food in developing countries, but own less than 20% of the land globally (Giller et al., 2021). This discrepancy confines women access to essential resources, limiting their capacity to prepare and recuperate from droughts.

According to Hayman & AgReady (2023), it is alleged that droughts countersign approximately 15% of disaster related economic losses internationally and are accountable for 85.8% of livestock deaths, affecting over 3.2 billion people. As women make up a large percentage of the agricultural labour force, their livelihoods activities are at risk owing to drought in rain fed agricultural areas (Chanana-Nag & Aggarwal, 2020). Drought have differential effects on gender as they are subjected to different roles during disasters, with vulnerable groups such as women suffering most. In periods of droughts, people lose their livelihoods, with women suffering most by virtue of being custodian of most duties in family set up. In times of drought, women often undertake lengthy journeys to secure clean water and collect firewood for their households. Each year, on October 15, the International Day of Rural Women is celebrated to recognize the essential contributions of rural women in maintaining both

their local communities and the world's food systems, yet their efforts are being hampered by droughts. Regarded as key drivers of food security, rural women are crucial for building resilient and sustainable agricultural systems, a vital pace in achieving sustainable development goals such as zero hunger and gender equality (Naheed & Rukhsana, 2024). Having these effects of drought on a global scale, there has been a number of global frameworks in efforts to curb drought risks on women livelihoods.

In Africa, numerous drought incidents have caused much damage such as crop failures, livestock deaths and human losses at different scales. Through drought occurrence in Africa, it has been noted that rural women contribute 70% in agricultural activities, despite having least capacities and resources to handle with the effects of droughts and climate change (Musiime, 2018). During the 2015/2016 era, the region experienced one of the worst El Nino induced droughts which drastically affected the agricultural sector (Manyakaidze, 2023). Due to continuous climate change, droughts have increased frequency, intensity and duration, negatively impacting rural women livelihoods in Black Africa, where they mostly hinge on rain fed small scale agrobusiness activities. In Somalia, Kenya and Ethiopia, drought has been one of the main reasons for poor women livelihoods (Lwanga-Ntale & Owino, 2020). Having so much impact on the African region, droughts experience has disproportionately affected rural women in particular. Africa's poor rains, adverse climate, frequent droughts and excessive reliance on subsistence farming without other dependable alternative livelihood springs of income have left the majority of women vulnerable to drought disasters.

Zimbabwe is one of the nations in Southern Africa prone to droughts resultant in livelihoods reduction due to crop failure, loss of livestock and water resources. To add more, the country has grappled with a series of droughts which negatively impacted the most vulnerable people in the country (Chidarikire & Saruchera, 2024). Record had it, that the country suffered from four successive droughts in a period of ten years, 2002-2003, 2004- 2005, 2007-2008 and 2011-2012. According to Chigavazira (2019), Zimbabwe was once the bread basket of the SADC, yet today the once booming agricultural production has dwindled and has been overshadowed by multiple socio-economic and political challenges worsened by recurring drought disasters. Ndlovu & Mjimba, (2021) opined that, Zimbabwe's, rural women's livelihoods are more impacted by drought catastrophes than those of other groups because of their role in the home as care givers. Against this background, the researcher intends to investigate, assess and make an analysis on the impacts of droughts disasters to women's livelihoods strategies in Ward 10, Buhera District, Zimbabwe.

1.3 Problem statement

Women play a very critical role in trying to meet household needs. In many rural communities, women are expected to take the lead in managing household resources and adapting to environmental challenges. With droughts in question, the initiatives headed by women have seriously been affected by unpredictable climate related disorders worsening the difficulties faced by women, having the key task of providing and taking care of the family. These challenges not only strain their daily lives but also hinder their ability to sustain community-based projects, aimed at improving livelihoods (Kamara et al., 2019), (Pasanchay & Schott, 2021) and (Savari et al., 2023). Although studies had been carried out by several researchers (Algur et al., 2021, Singh et al, 2013, Ncube et al., 2018), Government institutions and Non-Governmental Organisations (NGOs), there is scant knowledge on the specific impacts of droughts disasters on women's livelihood strategies particularly on a localised rural scale. The subject is not being addressed from a needs-based approach by most organizations in Zimbabwe and in most cases, it is misunderstood, hence in trying to bridge this gap, it is against this background that the research intends to weigh the impacts of droughts on women and their livelihood strategies in the face of the recurrent droughts in Ward 10, Buhera District. Thus, this study aims to comprehend and clarify the vulnerability of women livelihoods to droughts through recognition and examination of the various approaches by women against droughts catastrophes.

1.4 Aim

To explore women's livelihoods and related vulnerabilities in the background of recurrent drought disasters in Zimbabwe.

1.5 Research objectives

- i. To assess the vulnerability of women livelihoods to drought disasters in Ward 10, Buhera District.
- ii. To analyse the intersectional factors influencing women's vulnerability to drought in Ward 10.
- iii. To determine impacts of drought disasters on the livelihoods of women in Ward 10, Buhera District.

1.6 Research questions

- i. How are women's livelihoods vulnerable to drought disasters in Ward 10, Buhera District.

- ii. How do various intersectional factors affect women's vulnerability to drought related challenges in Ward 10, Buhera District?
- iii. What are the impacts of drought disasters on women's livelihood vulnerability in Ward 10, Buhera District.

1.7 Limitations

There are potential limitations to the study beyond the control of the researcher and these have a potential to influence the interpretation of the findings. Factors such as inadequate manpower, derisory sampling methods and selection, lacking sample sizes for statistical analysis, shortage of prior studies on the subject, inappropriate data collection methods, tools, or techniques, limited data access, time constraints, budget confines and accessibility matters are instances of what the researcher cannot control. Due to different ethnics, approachability to the research zone may be restricted and to avoid such the researcher had to follow the required protocols with the district authorities for easy access. Secondary data such as journals and the internet were used to counter the issue of lack of previous information on the study. In response to financial constraints, the researcher made a write up to NGOs such World Vision, Plan International, OXFAM and UNDP requesting funding usually allocated for researchers. Instruments used to collect data may also hinder effective data collection and, in this regard, funds from the above sated NGOs were used to acquire latest GPSs and Tablets.

1.8 Delimitations

Accordingly, this study focused on samples of women who participate in active livelihoods from the age of 18yrs and above in Ward 10, Buhera Central District, Manicaland Province. In the case of an almost uniform population, a sample size of 25% of women in the area of research is deemed representative enough to make inferences to the entire population. Clarifying the scope and delimitations of a study is helpful for interpreting the results as the (delimitations) scope and materials influence them (Jha, 2023).

In terms of conceptual coverage, this study focused mainly with meteorological, agricultural and hydrological droughts mainly experienced in Buhera District, a semi-dry area in Zimbabwe. Meteorological droughts, which are characterized by prolonged erratic rainfalls, are the most common in Ward 10, Buhera, District. These droughts often lead to agricultural droughts, which have a major detrimental impact women livelihood activity, causing crop failures, low yields, and livestock losses, hence food security. Additionally, there are hydrological droughts, which exacerbate water scarcity

for household and agricultural use, depleting surface water sources such as rivers and dams as well as groundwater supplies. Together, these droughts often combine to create socio-economic droughts, in which a lack of water impairs livelihoods, increasing poverty, thereby necessitating food aid.

1.9 Significance of the study

The findings from this exploration shall support disaster practitioners, communities, Non-Governmental Organisations (NGOs) and the government in the understanding of how droughts impact affects women and their livelihoods strategies for easy formulation and implementation of policies. Disaster practitioners will use data obtained from research on how best to assist women in the district to mitigate against drought disasters. Communities shall be easily noticed in this research by organisations who does women empowerment, NGOs shall gain more from this research by having data of women who needs aid to empower themselves to safeguard their livelihoods strategies, whilst the Government shall use this research as a launching pad to formulate policies which protects women livelihoods from drought disasters. It is hoped that findings will be of use towards Disaster Risk Reduction (DRR), contributing positively to the attainment of global Sustainable Development Goals (SDGs).

1.10 Definition of terms

The following definitions were provided to form a firm background and elucidate all likely grey areas.

1.10.1 *Disaster* – Referring to this study, a disaster is a serious disturbance to the operation of a community over a period of time that causes widespread human, material, economic or environmental loss which exceeds the ability of the affected community or society to cope using its own resources, (Makwana, 2019). Disasters vary from technological, geo-physical, environmental and health hazards which can be either natural or man-made.

1.10.2 *Drought* – According to the author, a drought is a protracted dry period in the accepted climate cycle, affecting the environment. It is a gradual onset catastrophe marked by insufficient rainfall, leading to a scarcity of water (Lloyd-Hughes, 2014). According to AghaKouchak, et al., (2021), it is a water scarcity event caused by natural variability in climate, human activities, or a combination of both, with wide-ranging impacts on the environment, economy, and society. In this study, the researcher adopts the second definition by as it relates droughts to shortage of water required for everyday livelihoods activities.

1.10.3 Livelihoods - According to Ku & Ma, (2015), Massawe & Massawe, (2020) and Singh, (2021), livelihoods refer to means of securing the basic necessities of life. Understanding livelihoods is essential for contending poverty, creating development initiatives that work and inspiring sustainable actions. Having a look on how people and communities make their lives better, policymakers develop engrossed interventions for social justice, resilience, and economic development.

1.11 Chapter Summary

The chapter provided an overview of the study area's history and the research's goal, which is to determine how droughts have affected rural women livelihoods vulnerability in climate changing settings, emphasising study goals, objectives and research components.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

This chapter provides thorough examination of the existing writings on impacts of drought disasters on women livelihoods in Zimbabwe and investigates into the multi-dimensional ramifications of drought on women's economic livelihoods. Addressing research questions and objectives undercurrents on drought and women's livelihood vulnerability, hence the chapter provide valuable insights on the research problem. The literature review covered the Intersectionality Framework Model, impacts of drought disasters, social and cultural factors on women's livelihood vulnerability.

2.2 Conceptual framework

The research was guided by Intersectionality Framework model, originally developed by Kimberle Crenshaw in 1989, to define the exclusion faced by black women. It aims to examine how numerous social identities, such as gender, race, class, customs, sexual alignment, interconnect and interrelate in influencing one's experience and vulnerabilities within systems of society, power and oppression (*see Figure 2.1*). Employing the model in the assessment of drought and women's livelihood vulnerability in Ward 10, Buhera District Zimbabwe, researchers, policymakers, and practitioners seeks to increase the comprehension of the multipart ways intersecting factors influence women's experiences of risk, resilience and empowerment during drought disasters. Using the intersectional approach, the researcher aims to expand understanding, drive comprehensive interventions and advocate for equitable solutions that promote resilience and empower women to reduce vulnerability in the face of drought induced hardships.

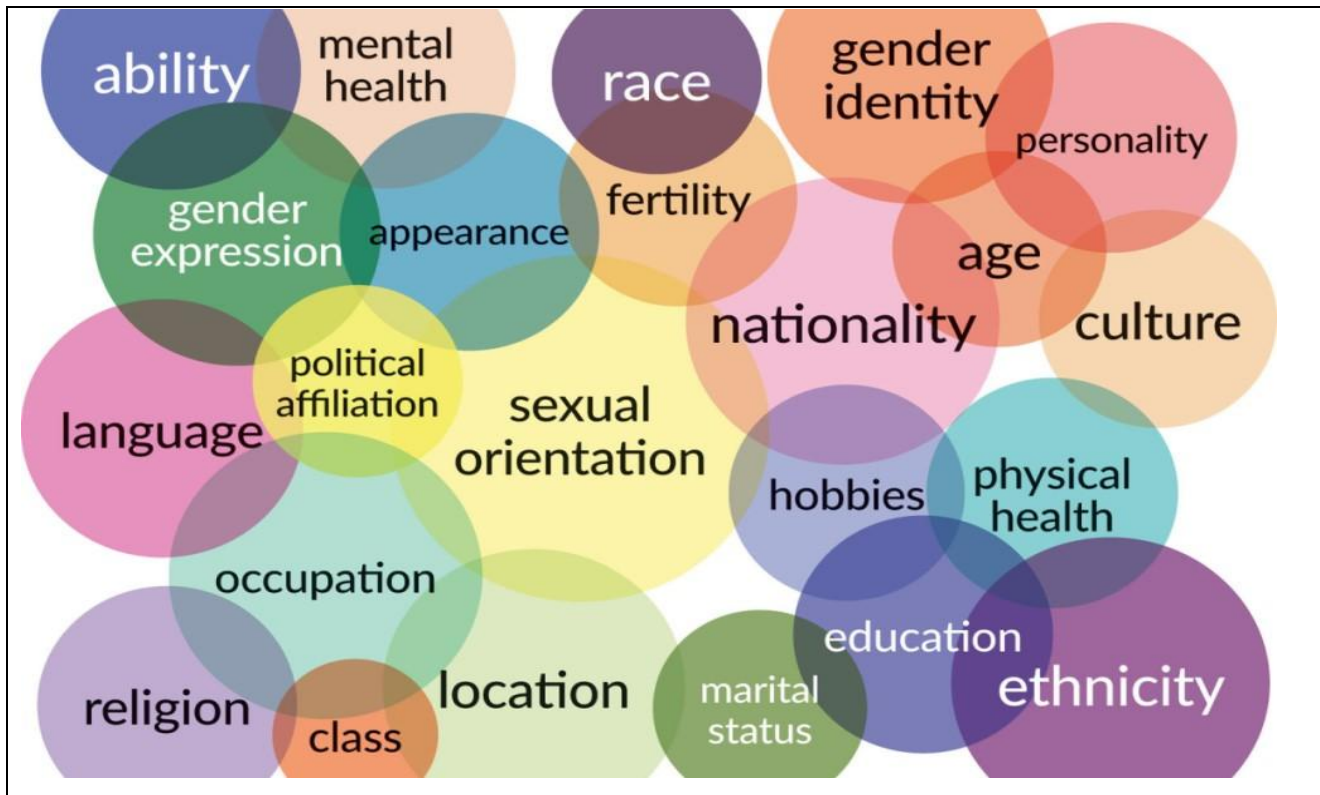


Figure 2.1: Intersectionality Framework Model. [Source: Corus, & Saatcioglu, (2015), 35(7-8), 415-429].

2.2.1 Applicability of the Intersectionality Framework Model

In the context of drought and women's vulnerability in Buhera district Ward 10, the Intersectionality Framework model highlights how intersecting factors exacerbate their experience to drought challenges and their ability to prepare and respond to disasters (Sharma et al., 2022). The major advantage is that it recognises the notion that women's experiences of vulnerability to disasters are shaped by a complex interplay of factors within their environment of existence. Applying the Intersectionality Framework Model in the context of Buhera district, Ward 10, women's livelihoods vulnerability, complex realities caused by droughts can be brought to light, hence finding better solution to reduce livelihoods vulnerability to drought disasters. According to Chisty et al., (2021), the model indicates that women's vulnerability to drought disasters is not just a result of individual characteristics, but is deeply rooted in how systemic structures, lack of resources, multiple forms of discrimination, limited access to essential services, economic opportunities, education, healthcare and social protection mechanisms discriminatory policies, cultural norms, institutional practices, access to resources, social position, power and oppression.

The model offers powerful platform or foundation for understanding the intersecting factors that shape women's livelihood vulnerabilities during drought disasters.

Despite the model having covered most of the interconnecting intersectional factors, the framework has some notable weaknesses. It is alleged of oversimplifying complex interactions between various identities and social structures, hence leading to generalized assumptions on droughts and women livelihood vulnerability. The framework also scuffles to capture abreast with the evolving nature of vulnerabilities and the differential effects of drought women livelihoods over time. To counter the challenges deficiencies arising from the model, the researcher applied longitudinal research to investigate how vulnerabilities evolve over time, taking women and underrepresented groups directly on board to partake in the investigation process. Lastly, the researcher made use of data triangulation to syndicate quantitative and qualitative data to gain a more understanding of social subtleties.

2.3 Definition and Scope of Drought

In this context, it is generally referred as a prolonged phase of erratic rainfall, leading to scarcity of water (Mera, 2018). It is a temporary in nature but a recurring natural phenomenon categorised by a substantial shortage in water availability or expected levels over a season. Definitions of drought vary according to context and perspective, which can be meteorological, agricultural, hydrological or socioeconomic drought.

2.4 A review of drought phenomenon and its gravity

The various forms of droughts are categorised as either meteorological, agricultural, hydrological, or socioeconomic. Their duration, intensity and the vulnerability have been greatly influenced by modification in climate and are foreseen to become further serious in future decades. If not timely intervened, droughts can have serious effects on rural women livelihoods, precisely on women who contribute to household management and economic production through livelihood activities. In this regard, the author shall define, metrological, agricultural, hydrological and socioeconomic droughts, before giving perspective of droughts globally, regionally in Africa and locally in Zimbabwe. The researcher shall dwell on metrological droughts in Ward 10 ,Buhera District.

2.4.1 Metrological Droughts

As highlighted by Guo et al., (2020), Zhou et al (2021) and Jimoh et al (2023), metrological droughts refer to periods of significantly erratic precipitation compared to the long term average for a specific region. This kind of droughts happens when climatic patterns are interrupted by natural prolonged

precipitation deficit of certain periods. Climate variability such as El Nino or La Nina general trends in climate change greatly influence the trends of meteorological droughts. The impacts of meteorological droughts can vary considerably, based largely on the climate region, with dry and semi-arid areas being the most vulnerable. Though meteorological droughts have been deemed a normal part of the climate systems, they have become common and severe because of global warming, making them a significant concern for water resource management.

2.4.2 Agricultural drought

According to Dietz, et al., (2021), Bogale & Erena, (2022) and Orimoloye et al., (2022) agricultural drought refers to insufficient soil moisture to meet the needs of crops, plants and livestock, leading to reduced agricultural productivity. As propounded by El Kenawy, (2024), inadequate water management or hot temperatures cause evaporation to dry up open sources and reservoirs, causing agricultural droughts even in regions known of average and above average precipitation. This affects rural communities and families who largely relies on water for subsistence living, as their crops wither and livestock suffers. Sustainable solutions, such as drought resistant crops, effective irrigation systems and improved water management techniques to safeguard this valuable resource, are needed to combat agricultural drought.

2.4.3 Hydrological drought

As propounded by Bhaga et al., (2020), Mishra, (2023) and Scanlon et al., (2023), hydrological drought refers to a significant reduction in water availability in surface water (rivers, lakes, reservoirs) and groundwater systems over an extended period. The type of drought mostly occurs when the water supply and water tables falls below normal levels in hydrological systems, probably as a result of an extended drought or increase climate temperatures. Hydrological droughts are caused by increased evaporation, decreased precipitation and excessive use of water resources (Dai et al., 2018). By the reason that adequate time is required to restore aquifers and water bodies, hydrological droughts may persist long after normal rainfall been received. The severity of hydrological droughts is mostly influenced by human demand, climate and water management practices, hence are largely impacted by this kind of drought.

2.4.4 Socio-economic Drought

As water scarcity begins to affect anthropoid activities such as farming, industry and domestic use, leading to economic and social problems is regarded as socio-economic drought (Wang et al., 2022)

and (Orimoloye et al., 2022). Unlike other forms of drought, which focus on natural water deficits, socio-economic drought is characterized by the misalliance between water supply and demand, which is often exacerbated by population growth, overuse and inadequate water management (Zisopoulou & Panagoulia, 2021). In addition to other droughts, socio-economic drought affects people's livelihoods activities, food security, health and economic stability. Taking for example, the decreased water availability leads to crop failures, increased food prices, loss of livelihood incomes and sometimes migration or conflict over scarce resources. Further to that, socio-economic droughts impacts heavily in areas that are highly dependent on water such as ARDA irrigation schemes in Inyanga. As propounded by Ngene et al., (2021), it is impossible to ignore the necessity of effective policies, community-based adaptation plans and integrated water resource management in order to lessen the effects of socio-economic droughts.

2.5 Global prevalence of droughts

A worldwide issue, droughts have a devastating adverse effect on women's livelihoods activities, providing grave hindrances to sustainable development, particularly those in the rural areas. Globally, climate change has made droughts more severe and frequent, with varying effects in different places. Wide-reaching, by virtue that women are mostly the main providers and caregivers in most communities, they are always impacted by droughts particularly in developing nations. Central America is one of the continents that was immensely affected droughts as evidenced by the prolonged drought in the Dry Corridor, affecting countries like Guatemala and Honduras, leading to severe crop losses (Läderach, 2021). As a result, many women have turned to migration as a coping strategy, leaving their families behind and increasing their vulnerability to exploitation (Chikumbu 2016). The ongoing drought in Somalia, aggravated by climate change and conflict, has displaced millions, with women being on the negative end. In their homes, many women have taken on more duties, which have further strained their mental and physical health (Dirie et al., 2024)). To effectively reduce women livelihood vulnerability globally, investing in women's livelihoods is critical for enhancing capacities and building resilience against droughts, particularly in Sub-Saharan Africa, Asia and Central American regions.

2.5.1 Drought in the Sub-Sahara Region

Sub-Saharan Africa also known as Black Africa is one of the regions that has faced serious droughts, due to climate change, anthropogenic El Nino and La Nina actions. These droughts have affected the agrarian division, exacerbating food insecurity, displacing masses of publics in the counties with the

Somali Peninsula and Southern Africa being severely impacted. High susceptibility and incapability of African states south of Sahara Desert, to manage the effects of droughts on women livelihoods have led to several impacts of droughts in the region. Examples include the 2016-2017 drought in Somalia which increased famine risks on over 6 million Africans, women complementing the bulk figure. This has been necessitated by poor performing economies, poverty, conflicts, rapid increase in populations and above all, climate change. According to Hawkins et al., (2022), the adversative effects of droughts on women are witnessed in most countries south of Sahara Desert, particularly in agrobiodiversity and ecologies. Rosen et al., (2021) has it that, the inequalities resultant from the social positions of women inside the African household system have increased women livelihood vulnerability from droughts effects. Though there has been intervention by both international and local stakeholders, it has been insufficient to solve the impacts of drought on women livelihoods in the region.

2.5.2 Drought in Zimbabwe

Zimbabwe experienced a number of droughts since 1982, which have been exacerbated by deforestation, climate change and inadequate water management. The most serious droughts occurred in 1982-1984, 1991-1992, 2001-2002, 2015-2016, 2018-2019, and 2023-2024 (*see table 2.1*).

Table 2.1, Drought history since 1982

Year(s)	Impact	Sources
1982-1984	Agricultural decline, Food Insecurity, Economic collapse, water shortages, environmental degradation and social impacts.	Takuva & Swart (2025). Mugiyo et al (2023).
1991-1992	Agricultural decline, Food Insecurity, Economic collapse, water shortages, environmental degradation and social impacts.	Mupepi & Matsa (2022). Mahuni et al (2025).

2000-2002	Agricultural decline, Food Insecurity, Economic hardships, water shortages, environmental degradation, social impacts, Corruption and Conflicts.	Mupepi & Matsa (2022). Takuva & Swart (2025). Mahuni et al (2025).
2015-2016	Dependence on Aid, Energy Crisis, Health Crises, Social Strain, Water Shortages, Severe Crop Failures, Animal loses and Food Insecurity.	Mamombe (2017). Mugiyo et al (2023).
2018-2019	Dependence on Aid, Energy Crisis, Health Crises, Social Strain, Water Shortages, Severe Crop Failures, Animal loses and Food Insecurity.	Frischen et al (2020). Mupepi & Matsa (2022).
2023-2024	Dependence on Aid, Energy Crisis, Health Crises, Social Strain, Water Shortages, Severe Crop Failures, Animal loses and Food Insecurity.	Mugiyo et al (2023). Mupepi & Matsa (2022).

Over the period under review, Zimbabwe faced a number of droughts which affected the agricultural sector and the livelihoods of its population, particularly women. The nation's hefty dependence on rain nourished agriculture made it become more vulnerable to drought disasters. One serious drought was experienced in 1982-1984 which triggered widespread crop failures and economic collapse, severely impacting rural women livelihoods. The 1991-1992 drought mirrored these effects, with significant economic downturns and environmental stress while the 2000-2002 drought compounded these issues with corruption and conflicts, further destabilizing the region, followed by the 2015-2016, 2017-2018 and the 2023-2024 El Niño induced drought. According to Mupepi & Matsa (2022), the 2023-2024 was one of the worst droughts in decades, affecting 7.6 million people, destroying 80% of crops, increasing food insecurity, water scarcity and social vulnerabilities, particularly for women. During these droughts in Masvingo province, women reported that they had to sell livestock

and household assets to cope with food shortages, further entrenching their economic vulnerability. Additionally, increased competition for scarce resources led to rising domestic tensions and, in some cases, domestic violence (Chingarande et al., 2020). The droughts in Zimbabwe exemplified the broader challenges of climate change, particularly for vulnerable populations.

2.6 Vulnerability of women livelihoods to drought risk

The effects of droughts on women's vulnerability livelihoods is a critical research area, reflecting the intersection of different factors towards vulnerability of women livelihoods to droughts (Ha et al., 2023). Gender equality fostered by limited access to resources and expected societal roles increase women vulnerability to droughts particularly in rural areas where there are limited coping capacities. Due to their responsibilities for household food security, water collection, and caregiving, increase their vulnerability to drought effects. According to Misra & Tewari, (2024), droughts disproportionately impact women livelihood, particularly in developing regions where they often serve as primary caregivers and agricultural producers. Earlier research indicates that women are more severely affected by droughts due to their roles in household upkeep, agriculture, economic and food production and against this background, the author shall discuss economic, social and environmental vulnerability.

2.6.1 Economic Vulnerability

According to Sam et al., (2020), gender disparities and restricted access to resources, women living in rural areas are extremely vulnerable economically during droughts. They frequently make their living from farming and natural resources, both of them being negatively impacted through droughts. Women find it difficult to adjust to or recover from crop failures and livestock losses because they have restricted access to property, loans and expertise (Liru, 2020). The low pay and lack of job security offered by informal sector like small scale farming, vending, poultry and livestock etc., makes women vulnerable to livelihoods income loss during times of drought disaster crisis. As indicated by Algur, et al., (2021), female adults are inclined to engage in unpaid care tasks like fetching water and taking care of families during droughts, which reduces their time to engage in livelihood income generate activities. More so, reduced market opportunities and growing food prices exacerbate women livelihood vulnerability to drought. As highlighted by Zafarullah & Swarna, (2024), without social safety nets or financial stability, women are frequently pushed into exploitation, migration, or poverty. With this literature on women economic vulnerability, there is scant information particularly on women in Ward 10, Buhera District.

2.6.2 Social Vulnerability

Droughts in Zimbabwe have negatively impacted women due to engrained gender inequalities, restricted resource access and social roles as evidenced by earlier researches. As a result of societal norms and gender roles that restrict their opportunities and decision making authority, women are socially vulnerable to droughts (Nosheen & Ahmad, 2023). As indicated by Nyahunda & Tirivangasi, (2020), in many communities, women handle the majority of household chores, such as gathering water, preparing meals and providing care which become increasingly difficult as resources become scarcer during droughts. They become even more marginalized as a result of their increased workload, which leaves little time for community involvement, education, or earning money, therefore exposing women to heightened economic and social vulnerabilities during droughts. Furthermore, women frequently lack access to leadership positions, academics, and material, which hinders their ability to prepare for or recuperate from catastrophes (Hemachandra et al., 2020). As social safety nets and support networks are frequently insufficient, women are left to shoulder the majority of the burden of surviving in their families and communities. Despite this literature, there is information gap on women social vulnerability in Ward 10, Buhera District, hence this study capitalise on that.

2.6.3 Environmental Vulnerability

During the past decade, droughts have negatively impacted women's livelihoods, precisely in rural areas, due to environmental vulnerabilities. According to Rao et al., (2019), women's strong dependence on environmental resources for survival renders them environmentally susceptible to droughts, as at most times are in charge of gathering firewood, water and silage in rural areas. These chores get harder as droughts erode these supplies, exposing women livelihoods to environmental vulnerability. Prolonged droughts compel women to travel further, putting them at risk for physical harm, safety hazards and time poverty. This restricts their capacity to participate in activities that generate revenue. Furthermore, women also frequently oversee livestock and small-scale farming, which are particularly vulnerable to crop failures and water shortages brought on by drought. As postulated by Nosheen et al., (2023), women livelihoods are particularly vulnerable to environmental shocks as a result of their dependence on resources affected by climate change. Arbeit information on environmental vulnerability, there is scarce information on women environmental vulnerability to

drought disasters in Ward 10, Buhera District, hence presenting an information gap, making this study relevant.

2.7 Impacts of drought disasters on the livelihoods of women

Drought disasters have profound implications on the livelihoods of women worldwide, cascading from global to regional and local scales. According to Chigavazira, (2019), the convolutions of income generating activities and retorts across the African region differs, particularly in developing countries where women bear a disproportionate burden when drought strikes their livelihoods, affecting their economic empowerment, social well-being and household resilience. Women in Zimbabwe are pivotal in the society by ensuring dependable access to sufficient quantities of safe and healthful food, yet they face numerous obstacles during droughts and, in this regard, the following livelihoods were looked into.

2.7.1 Small Scale Farming

According to Giller et al., (2021) and Mizi, (2021), small scale farming refers to agricultural operations conducted on comparatively small land areas, usually with the help of family or community labour, and with an emphasis on diversified, sustainable production for local or regional markets. Globally, small scale farming serves as a primary livelihood for millions of women, who play a pivotal part in food production for their household and communities. Li & Zhu, 2024 indicated that, in East Asia, women are responsible for up to 80% of food production, yet they frequently lack control over the land they cultivate. Small scale agriculture offers the primary stream of revenue for millions of women worldwide and they are crucial to the supply of food for their families and the vulnerability of women to drought is greatly predisposed by a number of intersectional issues, particularly when it comes to small scale farming (McCarthy, 2018). Due to their frequent relegation to subsistence farming and reliance on traditional crops that might not withstand climate pressures, global women farmers are particularly susceptible to drought disasters.

In many African countries, smallholder farming mainly involves women, who make up the bulk of participants in agricultural workforce, yet they have very little financial means to engage in sustainable farming practices, which leaves them more vulnerable to the effects of drought (Fan & Rue, 2020). Cognitively, women farmers in Africa play a pivotal character in the production of food, but encounter a number of problems due to prolonged droughts in the area. As indicated by Ndlovu & Mjimba, (2021), in many African nations, women's contributions to agriculture are often

undervalued by droughts, limiting their ability to protect their small scale farming. In Uganda, women's farming cooperatives have successfully improved access to markets and agricultural training, helping them withstand the pressures of drought.

Agriculture is a key livelihood activity in Zimbabwe and women perform a central part in small scale farming, cultivating crops such as maize, millet, sorghum and groundnuts, despite them being significantly affected by severe recurring droughts (Mpala & Simatele, 2024) and (Chakauya et al., 2023). They are involved in land preparation, planting, weeding and harvesting, contributing to food security and income generation for their households. Crop failures, reduced yields and livestock losses due to drought disasters have significantly affect women small scale agricultural livelihoods in Zimbabwe and this has resulted in food insecurity, income loss and increased poverty among women who rely on agriculture for their livelihoods. Despite all this literature on effects on droughts on women livelihood vulnerability, nothing has been written precisely on its effects on women in Buhera District, Ward 10.

2.7.2 Gardening

According to Mees, (2018), gardening is a concerted determination where persons organize themselves to cultivate and uphold a common garden interplanetary. Globally, droughts have impacted women livelihoods such as gardening, essentially depriving women chance to grow food, improve food security and fortify links within their communities. Thompson, (2012) postulated that, these gardens are frequently essential resources that contribute to better of the women livelihoods worldwide. In the United Kingdom, the Incredible Edible Movement (IEM) encouraged women communities to grow food together, with many of them taking leadership roles in these projects. Despite women taking a leading role in community gardening as their livelihoods, many of them have been affected by the increasing numbers of droughts.

Although women sometimes encounter obstacles due droughts, community gardening is an essential source of revenue and nourishment in Africa (Naicker et al., 2023). In South Africa as highlighted by Mbelebele et al., (2024), women involved in community gardens often rely on their traditional knowledge of farming, yet they lack access to training and modern agricultural practices which have increased their vulnerability during drought. According to Errico, (2021), in Tanzania, women's gardens are essential for household food supply, but their access to land and resources are limited by patriarchal land tenure systems and this had been made worse by increased drought disasters in the

region. In this regard, the strain on resources caused by droughts exacerbate existing disparities, hence making it difficult for African women to sustain their gardening efforts.

In Zimbabwe, women participate in community gardening initiatives, where they grow vegetables and fruits collectively to improve food availability to generate revenue. As a consequence of erratic rainfalls due climate changes, drought conditions have led to crop failure and reduced yields in community gardens due to lack of water for irrigation (Tomatis et al., 2023). This has resulted in diminished harvest, affecting the availability of fresh produce for consumption and sale. In the studies by Kadio et al., (2024), maintaining community gardens during droughts expose women to threat to health such hyperthermia, dehydration, and exhaustion which then affect their production. Despite the abundance of literature on the subject, no literature on the impacts of droughts on women involved in community gardening in Buhera Central District, Ward 10, has been provided, hence indicating knowledge gap for this study.

2.7.3 Vending

As indicated by Orlale, (2023), vending refers to the informal trade practiced by rural women, who sell goods such as food, crafts, or textiles to support their families and communities. As highlighted by Chirau, (2012), market vending aids as an important foundation of income for many rural women universally. Internationally, drought disasters have far reach consequences on rural women livelihoods, particularly those engaged in market vending activities. In countries like India, prolonged droughts which have severely affected women livelihoods such as vending, leading to food shortages and increased prices for essential goods (Lyngwa & Sahoo, 2025). Women market vendors have faced challenges in sourcing affordable products to sell, impacting their income and ability to support their households.

Drought catastrophes have a drastic effect on livelihoods in Africa, particularly for women who work as market vendors. Rukasha et al., (2021) opined that, market vending represents a substantial base of revenue for a number of women across continents and droughts have severely disrupted their economic activities, exacerbating existing vulnerabilities to droughts. This disruption often leads to women increased economic hardships, food insecurity and challenges in meeting basic needs. In regions of Africa where droughts are prevalent, such as the Horn of Africa or the Sahel, prolonged dry spells have affected women market vending leading to the unavailability and affordability of goods for market vendors, impacting their ability of women to generate income.

In Zimbabwe, market vending is a common income generating activity that enables women to earn money and support their families during prolonged drought disasters (Nyathi, 2024). Women participate in market vending, selling agricultural produce, handmade crafts, clothing and household items in local markets. Drought conditions have caused poor crop yield, limited availability of agricultural produce for women to sell in the markets, due to decreased supply of produce and other food items on the market, hence having a negative effect on the women livelihood. According to Clissold et al., (2024), drought disasters have also restricted the diversity of products, reduced availability of produce and handicraft materials to sell in the markets, limiting the range of goods women offer, hence decline in customer interest and sales. Though literature was provided on the effects of droughts on women market vending, injustice has been done on its effects precisely on women in Buhera Central District, Ward 10, hence the study becomes relevant.

2.7.4 Poultry and Livestock Management

Prolonged drought conditions have led to water scarcity and feed shortages, impacting the livestock industry, hence women involved in poultry and livestock management face challenges in sourcing adequate feed and water for their animals, leading to decreased productivity and financial strain (Ahmad et al., 2022). Brown et al., (2019), in countries like Cambodia and Laos, women are often responsible for managing poultry and livestock, particularly in smallholder farming systems often bear the brunt of drought challenges. On a global perspective, women's traditional knowledge in poultry and livestock livelihood management is vital, but often goes unrecognized in resource allocation.

In the African region, poultry and livestock are viewed as a key economic asset and women's limited access to these assets restrict their financial independence and pliability during drought (Bwalya et al., 2024). Women often have less access to markets for selling poultry and livestock, which limits their income potential and ability to recover from economic shocks caused by drought. In countries like Ethiopia and Somalia, recurrent droughts have devastated livestock populations, leading to livestock deaths and reduced milk and meat production, hence women responsible for managing poultry and livestock bear the brunt of these losses, facing diminished income and increased food insecurity during drought disasters, (Koo et al., 2019). The above mentioned have further exacerbated the vulnerability of women to drought impacts.

As opined by Mutasa, (2010), in Zimbabwe, women in poultry and livestock management face additional gender specific challenges during droughts, such as inadequate access to capitals, lack of deciding power and social constraints that affect their ability to adapt to changing conditions and make informed choices for their businesses. Dealing with the loss of livestock and the economic uncertainties resulting from drought disasters can have emotional and mental health impacts on women (Algur et al., 2021). Diversified income sources, improved water management strategies and access to social support networks help women better cope with the impacts of drought, particularly in the poultry and livestock sector. Disdain having the above literature on the effects of droughts on women involved in poultry, there is limited research on the specific impacts of droughts on women poultry farming in Ward 10, Buhera District, highlighting a gap in understanding their unique struggles in this subject.

2.7.5 Tailoring and Sewing

As indicated by Kaipainen & Pöllänen (2021), tailoring and sewing refer to the craft of designing, cutting and stitching fabrics to create garments and other textile products. Around the world, women earn a living through tailoring and sewing, particularly in rural and semi-urban areas where drought catastrophes jeopardize livelihood incomes. During periods of severe droughts, agricultural output declines, reducing household income, hence women are left with less capital to invest in these projects but rather feed from hand to mouth. Narayan, (2024), in India, the idea of **"self-help groups"** has gained traction, where women come together to learn sewing and tailoring skills as a form of livelihood. The 2019 drought in Maharashtra left women who had developed sewing skills through these programs better equipped to handle economic stress heavily impacted by severe droughts as people could not buy their products citing that they were prioritizing food on the table (Algur et al., 2021). These skills have better equip women globally to deal with drought impacts.

In Africa, as highlighted by Anjum & Aziz (2025), women rely on sewing and tailoring skills as vital sources of income, however they are heavily affected by severe droughts during climate variability. Drought disasters often constrain their ability to fully capitalize on these opportunities increasing women's livelihoods vulnerability to them. As indicated by Ohiozebau, (2018), Nigeria women in rural areas have increasingly turned to sewing as an alternative livelihood during times of drought, hence the probability of the above livelihood being affected becomes low.

Zimbabwean women with sewing skills offer tailoring services and other textile goods for local sale to the community and this livelihood has been severely hit by drought disasters, which have reduced the community's purchasing power due to a reduction in agricultural products (Chinokwetu, 2023). During droughts, households may prioritize spending on essential items like food and water, leading to a decrease in demand for non-essential goods such as clothing. This results in a reduction in orders for tailored garments, impacting the income of women involved in tailoring and sewing. Women in the tailoring and sewing business may struggle to attract clients and maintain a steady income, as drought disrupts supply chains and leads to shortages of materials such as fabrics, threads and accessories needed for tailoring and sewing. Though much has been said on effects of droughts on tailoring and sewing, little is known about how droughts specifically affect women in Ward 10, Buhera District, indicating a knowledge gap about their particular drought challenges in this area.

2.7.6 Craftsmanship and Artisanal Work

Globally, during periods of drought disasters, women's livelihoods from craft and artisanal work are not exempted. According to Dana et al., (2022), craftsmanship and artisanal work refer to the skilled creation of handmade goods using traditional techniques and local materials. Women often engage in various forms of crafts such as weaving, pottery and jewelry making as vital sources of income and cultural expression. In India, women artisans in rural areas create intricate textiles and handicrafts that reflect their cultural heritage, yet during droughts, the decline in agricultural income reduces demand for handmade goods, impacting their livelihoods, threatening not only their income but also their cultural livelihoods as craftsmen traditions (Thounaojam & Ojha, 2025). The effects of droughts on this particular livelihood have increased women's vulnerability by reducing their resilience and capacities.

Prolonged drought diminishes the resources available for crafting, such as the natural materials used in their jewelry. In Morocco, women engaged in traditional handicrafts such as carpet weaving face challenges when drought affects agricultural productivity, reducing household incomes and limiting their ability to invest in their craft (Davis, 2018). Despite their skills and cultural significance, women often find it difficult to maintain their craft during prolonged droughts. Oriakhogba, (2020) pointed out that, South Africa craft cooperatives like the Women's Craft Collective (WCC) empower women to create and sell handmade goods, including textiles and home décor items. These cooperatives not

only provide financial support but also foster community solidarity to increase resilience in the during catastrophes such as droughts disasters.

Tapfuma et al., (2024) indicates that, women in Zimbabwe particularly Matebeland North, Mashonaland West, Mashonaland Central and Manicaland Provinces are skilled in crafting traditional items such as baskets, pottery and textiles to produce handicrafts for sale locally or abroad as part of their livelihoods. Drought conditions have negatively affected the availability and quality of raw materials used in crafting traditional items such as baskets, pottery and textiles by women. Mutasa, (2010) highlighted that, due to the effects of recurring droughts in Zimbabwe, there has been shortages of materials like reeds, clay and fibers, disrupting production processes, hence delays in creating handicrafts cause decreased sales and disruptions in production. Although there are abundance studies on drought effects on women in the craftsmanship and artisanal work in Zimbabwe, much has not been done on how droughts affect women craftsmanship and artisanal work in Ward 10, the Buhera district.

2.7.7 Income Servings and Landing Schemes

According to Muir et al., (2017), income savings and landing schemes refer to community based financial initiatives that aim to enhance economic stability among individuals. Internationally, income serving programs and landing schemes are essential instruments for enabling women to deal economic obstacles arising from drought disasters. Income serving programs, such as cash transfers, microloans, and community savings groups, provide immediate financial support, enabling vulnerable populations to sustain their livelihoods during crises like droughts or economic downturns (Lind et al., (2022). Together, income serving initiatives and landing schemes form a powerful tool in fostering resilience, reduce poverty, promote self-reliance, ensuring that women recover and thrive during times of drought.

In Africa, income serving initiatives and landing schemes are vital lifelines for women communities grappling with poverty, climate change and economic instability (Keil & Zangrillo, 2020). As opined by Fanconi & Scheurle, (2017), during droughts emergencies, income serving programs like cash transfers, microloans and community savings groups give women immediate financial relief so they can meet their basic needs. By enabling women to launch small enterprises, make agricultural investments or pay for necessities, these programs promote resilience and lessen vulnerability among women. According to Ross (2024), income serving initiatives and landing schemes are transforming

women lives across Sub-Saharan Africa, increasing their livelihoods yields, diversifying their revenue streams and adjusting to climate change. With increase in climate change, droughts have negatively affected this livelihood particularly by African women.

As indicated by Pomeroy, (2020), in Zimbabwe, income and landing schemes are financial initiatives designed to enhance livelihoods and support economic development, with women contributing regularly to create a pool of funds. These groups provide loans to women for income livelihood activities to stabilise women financial base against drought economic shocks. According to Ahinsah-Wobil (2024) and Msangi et al., (2024), both income and landing schemes have the potential to uplift women rural communities in Zimbabwe through improved access to resources, enhanced livelihoods and promoting food security. However, despite much information on how drought affects women income savings and landing schemes in Zimbabwe, scant literature is provided on how droughts particularly drought women livelihood in Ward 10, Buhera District and this paper intends to capitalise on this knowledge gap.

2.8 Factors Influencing Women's Livelihood Vulnerability to Drought

Women's livelihoods vulnerability to drought is not solely influenced by a single factor, but is deeply entangled with a number of intersectional factors and it is against this background that this sector intends to examine various social, cultural and environmental factors that contribute to women's heightened vulnerability to drought.

2.8.1 Gender roles and Responsibilities

Gender roles and responsibilities are shared prospects and standards that dictate in what manner persons should act grounded on their professed gender (Rudman & Glick, 2021). During droughts, women face time and energy limitations, impeding their ability to achieve socially constructed gender roles, intensifying their livelihood vulnerability to drought disasters. Entrenched in societal expectations, these roles impose burdens on women, aggravating the impact of drought disasters on their livelihoods. In research conducted by Wawire, (2003) in Africa, it was discovered that men's power as family leaders and providers was reduced as women were in charge of the drought relief food. According to the Australian study, Arku and Arku (2010) highlighted that during droughts in Ghana, women were put in more hours than men since males were unsupportive and their culture disapproved men engaging in reproductive labor, hence women became vulnerable to drought disasters, being necessitated by gender roles.

The majority of rural women fulfill the gender duties of taking care of the family, yet data gathered in Zimbabwe showed that men are better off during droughts because of their resistance and adaptability (Kanengoni, 2020). In earlier research, during droughts bulky of underemployed men moved to cities where they found work but failed to send home remittances, increasing burden on women and made them more vulnerable to droughts. Instead, they sought out doxies in urban areas, which allowed HIV and other sexually transmitted diseases to spread to women whose livelihoods already impacted by drought disasters. This placed an additional burden on women livelihoods, further exhausting their physical and emotional resilience to droughts. Despite having this literature, no specific information was provided on effects of gender roles and responsibilities on woman in Ward 10, Buhera District, hence indicating a knowledge gap.

2.8.2 Culture and influence of patriarchy

According to Hoque, (2021), culture and the influence of patriarchy are interconnected concepts that impact social structures, norms and individual behaviors. The further recurrent and strong droughts develop, the larger the load women transport in execution generative and productive roles, as well as civic roles, thereby increasing women livelihoods vulnerability. In this study, international research has demonstrated that men gain more from this culture and women can improve their ability to adapt by leveraging their current strengths (Aljofan et al., 2024). Because they have few options, women's livelihoods remain susceptible to droughts.

Africa is a complex and multifaceted issue, deeply rooted in historical, social and economic contexts, as it is believed that African ethos does not acknowledge women's civil rights or positions of authority as women are supposed to support men in whatever they do. Culturally in Africa, it is believed that the house is for the woman, the land is for the man and the idea is central in considering the Shona philosophy in Zimbabwe which endorse the concept of “**musha mukadzi**”, meaning the home is made of a woman, but when one looks more closely at the family, a man confirms important decisions. Furthermore, culture and patriarchy influences the discussion of land ownership and access, shedding light on the opinions neighbouring the function of culture and its impact on drought and women livelihoods vulnerability response. Despite having the power to make decisions, women are unable to access family planning services and information, culture and influence of patriarchy makes their livelihoods even more vulnerable to drought disasters (Willan et al., 2020). Having knowledge on culture and the influence of patriarchy on women livelihood vulnerability to drought,

there is a knowledge gap on how it influences women in Ward 10, Buhera District hence this study becomes relevant.

2.8.3 Access to Resources

As defined Rosen et al., (2021), lack of access to resources for women refers to insufficient access to essential tools, support systems and services that women need to successfully respond to and mitigate the effects of droughts. Since their limited access to resources compromises their ability to earn a living, women are frequently the first to face challenges during droughts (Ahmed & Eklund, 2021). Women's vulnerability to drought is increased by unequal access to resources such as land, water, credit and technology, limiting their capacity to adjust to shifting drought disasters. Additionally, internationally women encounter difficulties when trying to access credit and inputs, limiting their ability to invest in livelihoods activities, to recover from the effects of drought disasters.

Anbacha & Kjosavik, (2019) opined that, women in Africa face substantial problems to financial and material resources, mostly as a result of patriarchal inheritance customs, which have a substantial impact on their ability to make a living and adapt to drought conditions. In Zimbabwe, women's livelihoods are greatly impacted by their lack of access to resources, which increases their vulnerability to droughts, particularly in rural communities where gender blindness and inequality is protuberant. Rural women frequently lack access to vital resources that are necessary for resilient livelihoods and agricultural production, such as land, credit and technological assistance hindering their capacity to adapt or recover from droughts (Ahmad et al., 2022). Having all this literature on the effects of limited access resources on women livelihood vulnerability to disasters, scant information has been provided on its effects on women of Ward 10, Buhera District, hence the need for this research.

2.8.4 Lack of Legal Rights

According to the definition by Hirschon, (2023), lack of legal rights for women refers to the absence or insufficiency of laws that protect and promote the rights and freedoms of women in various spheres, including social, political, economic and personal domains. Globally, the lack of appropriate legal rights for women makes them more vulnerable to drought disasters. In most countries, women often experience discriminatory laws and practices, restricting them access to financial resources, decision making authority, inheritance rights and capital asset ownership (Kidito, 2024). These legal

restrictions may make it more difficult for women access aid, secure livelihoods and adjust to shifting environmental conditions during drought emergencies.

In Africa, women's livelihoods are more vulnerable to drought due to lack of legal rights on their part. When it comes to inheritance laws, property rights and land tenure, women have few legal protections (John, 2019). Due to high vulnerability of their capital assets, during droughts women in Africa are more vulnerable to droughts as a result of lack of well-defined legal rights. Without legal protections, women might find it difficult to get resources, support aid and credit to deal with the effects of drought and protect their livelihoods. In Zimbabwe, women's vulnerability to droughts is greatly impacted by this, preventing women in rural areas from obtaining land ownership, inheritance rights and power to make decision in their homes and communities, resulting in their inability to protect their livelihoods from drought disasters. Disdain having vast literature on the effect of legal limitations on women against drought disasters, there is few information on how this affects women in Ward 10, Buhera District, presenting knowledge gap.

2.8.5 Social Networks and Support

As opined by Story et al., (2020), social networks and support refers to the connections, relationships and systems of assistance that women can rely on in times of crisis or natural disasters. In order to lessen the impact of drought on women's means of subsistence, their societal and support systems are crucial. Despite the fact that the global system has numerous networks that support them, women are more susceptible to drought disasters due to lack strong social networks, excluding them from making decision processes and lacking community support (Dapilah et al., 2020). Worldwide, women who are a part of strong social networks are regarded as better, with less susceptibility to the impacts of drought on their subsistence tasks, through effective exchange of information, experiences and organized group activities.

The susceptibility of women's livelihoods to drought in Zimbabwe is significantly influenced by social networks and support systems. Aldrich et al., (2021) are of the opinion that, women in African communities often rely on informal social networks, such as family, friends, neighbours, and community groups during times of drought and other crises. In times of drought, Zimbabwean women frequently turn to their families, community organizations and women's groups for support, information exchange and resource mobilization (Kanengoni, 2020). These social ties can help women deal with the effects of drought and safeguard their livelihoods by giving them access to

resources, practical help and emotional support. Little is known about how social network and support affect women vulnerability in Ward 10, Buhera District, indicating a knowledge gap which needs to be covered in this study.

2.8.6 Health and Wellbeing

Globally, women's livelihood vulnerability to drought disasters is mainly predisposed by their health status. As defined by Lawn et al., (2020), health and wellbeing are referred to the physical, mental, and social wellbeing of women during emergencies and natural disasters. Women's livelihood vulnerability is further worsened by a lack of access to healthcare services, raised stress, anxiety levels, increased risks of malnourishment and waterborne diseases. Protecting women's livelihoods during drought disasters encompasses taking heed of their well-being by paying attention to women's health needs to ensure equal access to essential healthcare services, physical and psychosocial health support. As indicated by Asmall, (2020), women in Africa are more vulnerable to droughts due to lack of medical facilities and efficient health infrastructure. By the reason that women have limited access to essential maternal and child health care, pregnant and nursing mothers are more vulnerable to drought disasters, increasing their vulnerability statuses.

According to Algur et al., (2021), in Zimbabwe, the impacts of drought disasters on women's livelihoods are suggestively aggravated by their health and wellbeing. Pregnant women, nursing mothers, elderly women and single mothers are the most vulnerable groups to drought disasters due to their hard time in trying to get food on the table, accessing maternal demands and child health care. Protecting women's livelihoods during drought emergencies in Zimbabwe requires ensuring access to medical facilities, encouraging nutrition interventions and offering psychosocial support (Charamba et al., 2024). Since women's livelihoods are vulnerable to the impacts of drought disasters, it is imperative that their health and wellbeing be addressed during disaster events. Despite this literature on the effects of health and wellbeing on women vulnerability status, there is information gap how this affects women vulnerability in Ward 10, Buhera District, hence this study becomes relevant.

2.8.7 Education and Awareness.

According to Okada et al., (2025), education and awareness is the interconnected processes aimed at informing, enlightening and empowering individuals or communities about specific topics, issues or skills. Internationally, women's livelihoods vulnerability status to drought effects are as a result of

lack of clear knowledge and understanding about drought preparedness and mitigation strategies. Women who receive education are better equipped to access resources, make educated decisions and take part in community resilience projects that protect their everyday livelihoods from the effects of drought disasters (Islam & Walkerden, 2022). Regionally, the lack of education and awareness about drought preparedness and mitigation measures has greatly contributed to high levels of women's livelihood vulnerability to drought impacts. As opined by Ngcamu & Chari, (2020), many African women have restricted access to proper schooling, training programs and information resources that assist them better understand and respond to drought events. Women's access to early warning information and adaptive coping mechanisms for drought challenges are hampered by their lack of education, their vulnerability status to droughts increases.

Furthermore, from earlier researches, women in Zimbabwe face difficulties in accessing formal education, training opportunities and information on drought risk reduction strategies (Grey et al., 2020). Therefore, the vulnerability of Zimbabwe's women livelihoods to the impacts of drought has increased due to lack of knowledge and education on drought disasters affecting the women's ability to make educated decisions, put adaptive measures in place and seek for help in protecting their livelihoods during drought disasters against their livelihood activities. Reducing the vulnerability of Zimbabwean women's livelihoods activities to drought requires drastic improvements in education and awareness initiatives, encouraging information exchange and equipping women with the required skills and knowledge against drought disasters. Despite having abundant literature on the effects of education and awareness on women livelihoods, there is limited research on the specific impacts of it on women in Ward 10, Buhera District, highlighting a gap in understanding their effects in enhancing women vulnerability status against disasters, giving relevance to this research.

2.9 Chapter summary

This chapter reviews other researches on the vulnerability of women's livelihoods to droughts disasters, highlighting the profound impacts and contributing factors. It points out how droughts disproportionately affect women, particularly in developing regions where they are primary agricultural producers and caregivers. However, despite having challenges, the chapter have noted that empowering women is crucial for enhancing their resilience to drought shocks.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

This section aims to give a well thorough synopsis of the research design and methods used in this study. It summaries the method used to collect and gather data and information for the research. The chapter also consists of the study area, design, methods, presentation of data collection tools, target population and sampling techniques, data analysis methods, data reliability as well as study validity and limitations.

3.1 Study Area

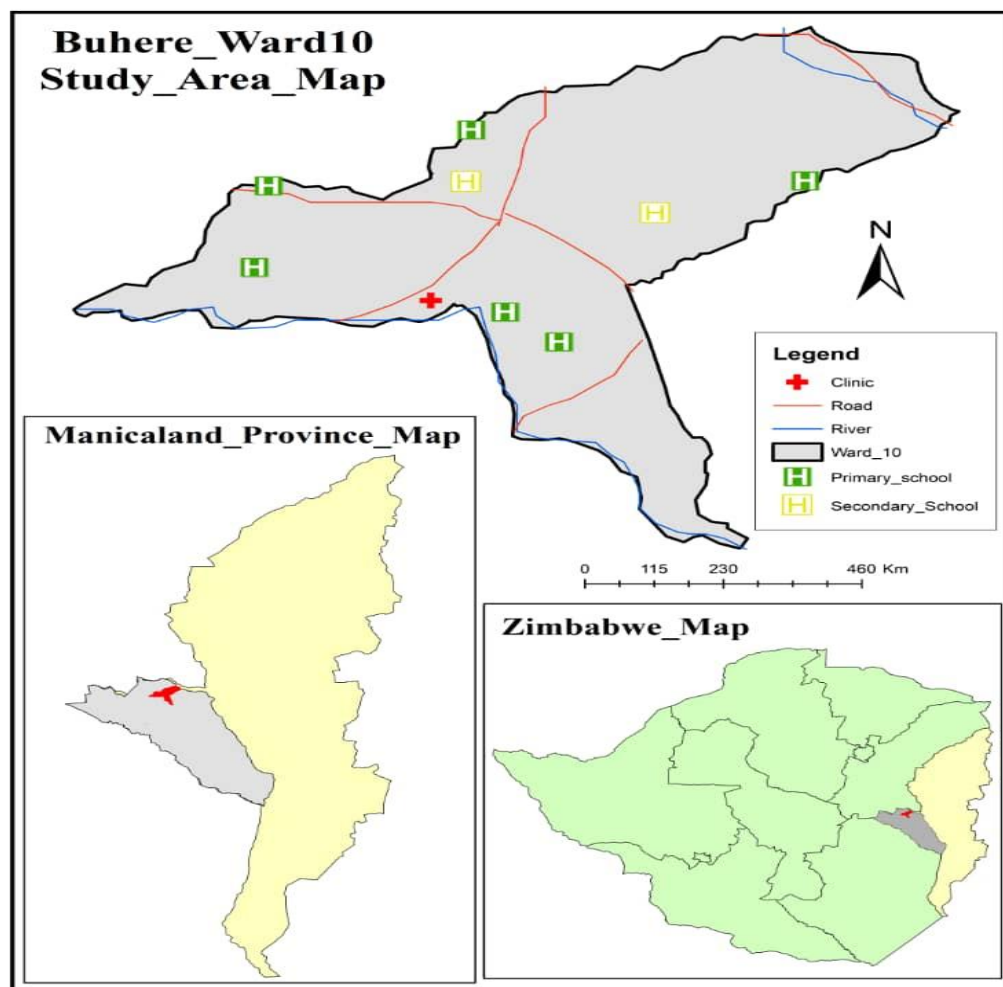


Figure 3.1 Map showing (a) Ward 10, Buhera District (b) Ward 10, Buhera District, Manicaland Province (c) Ward 10, Buhera District, Manicaland Province in Zimbabwe [Source: Author]

The study was conducted in Manicaland Province, Ward 10, Buhera District and is amongst the thirty three (33) districts that make up Manicaland Province. Buhera District is bordered by Chikomba and Wedza Districts to the North, Makoni District to the Northeast and Mutare District to the East. To the Southeast lies Chimanimani and Chipinge Districts, while Gutu District in Masvingo Province lies to the Southwest. The district's main town Buhera, located around 170 kilometres by road Southwest of Mutare, the Provincial Capital City. Other neighbouring townships and growth points in the district include Murambinda, Nyashanu and Dorowa. The Save River outlines the Eastern and Northeastern boundaries, demarcating Buhera from Chipinge, Chimanimani and Mutasa Districts, whereas the Devuli River, a Save offshoot, scripts the Southeastern borderline. Located at an elevation of 0 meters above sea level, Buhera is characterised by humid subtropical climate with dry winters (Board, 2020). According to Ruguwa (2021), the district's annual average temperature is 22.18°C, 0.55% below Zimbabwe's national average. It is in ecological region four (4) and five (5), receiving low rainfall of approximately 450-650mm per annum whilst its sandy soils are generally infertile and highly susceptible to erosion. The economy of Buhera District highly rely on subsistence agriculture, with maize, millet (Mhunga) roundnuts (Nyimo) and groundnuts (Nzungu) as the main crops. The name Buhera originates from an Anglicized and Nguni-influenced version of VuHera, which interprets to "territory of the Hera," symbolising the historical existence of the Hera ethnic group of the Shona in the area. According to ZimStats (2020) Census, the district encompasses 42,870 households, whilst 5 607 people, 3, 076 women and 1466 households living in Ward 10, each household averaging four (4) to seven (7) members.

3.2 Research Design

This research made use of case study research design to plan, collect and analyse data on the impacts of droughts women livelihoods in Buhera district Ward 10. Research design is the comprehensive approach that outlines the actions followed by the study, data to be collected and methods of data collection and how data will be analysed in addressing the research problem. According to Annamalah, (2024), case study research design is suitable in a study like this as it allows for a comprehensive exploration of specific cases, providing rich and detailed insights that other methods may not capture. Thus, in this investigation, a case study allowed the researcher to sightsee deep into how droughts have particularly affected women and their livelihoods vulnerabilities in the district, highlighting difficulties and coping mechanisms in ways that general surveys might have missed. The major benefits of utilising the case study research design were that, it makes possible for the

researcher to analyse the intersectional factors influencing women's livelihoods vulnerability to drought, as well as the context surrounding the topic of study. Moreover, case study research design enables research effectiveness, gathering of data at negligible costs of effort, money and time.

3.3 Research Methods

In this study, the researcher applied a mixed method approach which combines both quantitative and qualitative methods to collect valid and trustworthy data, with the qualitative approach serving as a supplement to the quantitative approach. As propounded by Creswell and Creswell, (2018), multiple sources guarantee the internal validity of data obtained. Quantitative methods were used to measure numeric data to assess droughts impacts on women's livelihoods in Ward 10, Buhera District, whilst qualitative methods offered detailed insights into its effects. Against this background, the mixed method approach allowed the researcher to obtain trustworthy and legitimate data into how various intersectional factors affect women's adaptive capacity and resilience to drought related challenges in Ward 10, Buhera Central District.

The merits of adopting the mixed approach method are that, it enabled the author to validate his findings, ensuring that the results are more solid and dependable by triangulating data from both qualitative and quantitative sources. More so, the various intersectional factors affecting women's adaptive capacity and resilience to drought related challenges were revealed through qualitative methods, which quantitative data might have missed, hence addressing difficulties that women livelihoods encounter during droughts, requires an understanding of these subtleties. The intricacy of problems such as the effects of drought on livelihoods frequently necessitates knowledge from a variety of disciplines (economics, sociology, environmental studies), hence the research findings are enhanced by a mixed methods approach, which considers viewpoints from various disciplines.

Therefore, the triangulation mixed methods design (*see Figure 3.2*) was used in this researcher to assess the effects of drought on women livelihood vulnerability to by using both qualitative and quantitative data.

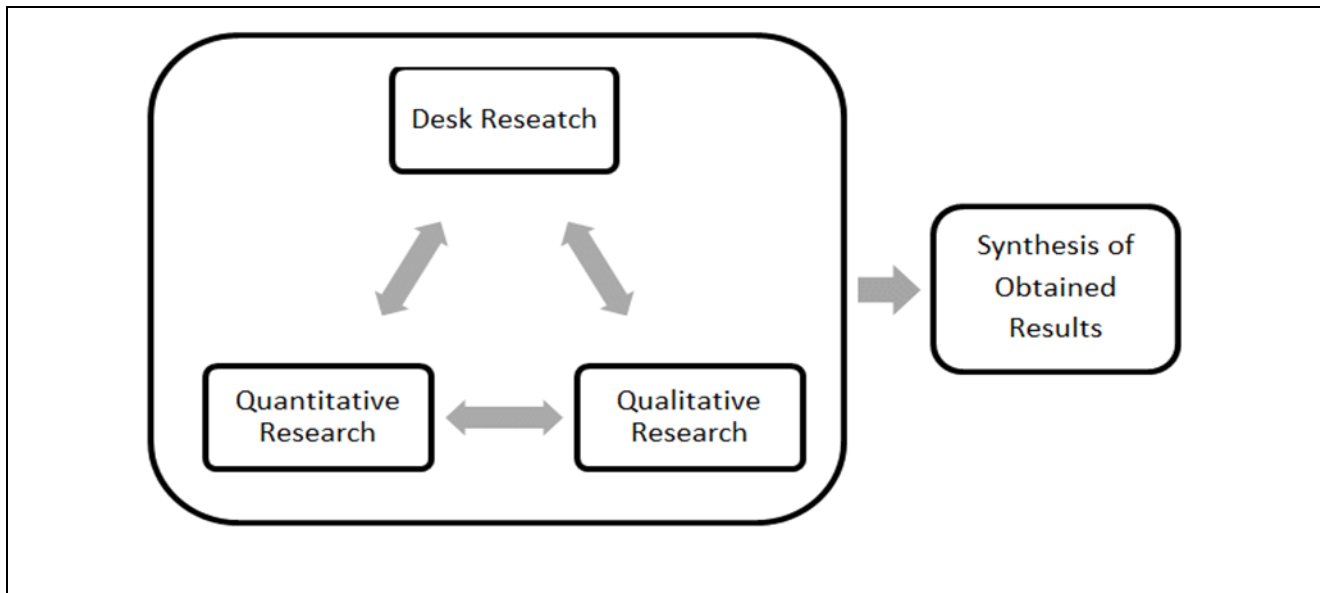


Figure 3.2: Triangulation mixed method design [Source: Donkoh, & Mensah (2023), 10(1), 6-9]

When using a mixed method approach, triangulation enables the gathering of complementary and clear distinct data on the same subject, which can subsequently be combined for analysis and interpretation. It provides chances for results from various research techniques to converge and be corroborated (Creswell & Plano-Clark, 2011). Using various techniques to collect data from various sources makes intuitive sense and contributes to an effective design.

3.4 Data collection instruments

During this research, the data collection instruments used included interview guide, questionnaires, focus group discussions, document analysis and observation guide. According to Atkinson et al., (2015), using a combination of these tools enables researchers to gain a comprehensive understanding of the problem, which will facilitate efficient analysis and response development, hence the choice of instruments for data collection is contingent upon the context and research objectives. These tools were used to ensure questions are consistently asked by offering comprehensive insights and understanding of complex issues by useful exploration of unique or rare phenomena.

3.4.1 Questionnaire

A questionnaire (*see appendix 2*) was employed in this research to implore data correlated to women’s insights on droughts and how it impacts their livelihoods in Buhera District, Ward 10. A designed questionnaire having both closed and open-ended questions was distributed to the designated women to probe into both numeric data and qualitative insights from respondents. As highlighted by

Taherdoost, (2021), questionnaires are organised forms with a set of questions intended to collect either qualitative or quantitative data and is one effective tool for gathering data for research.

Before the questionnaires were distributed, the researcher carried out an experimental study. This was done to pre-run the questions, to check for accuracy, consistency and monitor completion time and changes were made when necessary once weaknesses were identified. Women in the study area were then given 94 questionnaires which were prepared and distributed physically. Women of the ages 18 and above were selected by the researcher to respond to the questions depending on their willingness to participate rather than according to a preset protocol. Respondents were given two (02) weeks to respond and fill in the questions. To make it easier to read, present, analyze and discuss the data, the questionnaires standardized questions and response format made sure that each participant answered in the same way. To ensure that the questions were translated correctly and were easy to comprehend in order to get insightful answers, the researcher had to translate the questionnaire from English to Shona and Ndebele with the assistance of additional research assistants.

In this study, the researcher used questionnaires as they are typically a faster way to gather data than other approaches and allow respondents to expound, describe and explain themselves hence, obtaining rich and well informed data. More so, faster insights can be obtained by easily compiling and analysing data, particularly with software tools. Administering questionnaires is generally less expensive than other data collection techniques as the time and effort required for data collection can be decreased by distributing them to numerous respondents at once.

3.4.2 Key informant interviews

During the study, the author made use of interviews, a technique for gathering qualitative data direct in person or online discussions between participants and the researcher. Key informant interviews are useful for gathering detailed qualitative information that can help us comprehend complicated problems more thoroughly (Akhter, 2022). The key informants included the Headman of Ward 10, Ministry of Gender, Women and Parliamentary Affairs, two (02) representatives from World Vision Organisation one (02), Agritex Officer (01) and Meteorological Station one (01). During interviews, asking questions was made easier by using an interview guide, intended to allow standardised questions to be inquired to the women involved in livelihoods activities to value their different responses and obtain firsthand data (*see appendix 3*).

The researcher applied interviews as they provided better examination of participants emotions and moods through body language, including gestures and facial expressions, to clearly observe the participants sentiments and emotions, (Ekman, 1964). This aided the researcher in learning more about how women livelihoods are affected by droughts, strategies used to address the impacts and the degree of success of these measures. Moreover, they provided opportunity for clarification and questioning while also aiding in the detailed description of circumstances. With their special benefits in depth, adaptability and contextual awareness, interviews are an effective method in qualitative research. In research, key informants are crucial because they offer insightful opinions, local viewpoints, and contextual information that improve comprehension of complicated topics like how climate change affects women's agricultural livelihoods (Habib et al 2022). Confidentiality and privacy issues were addressed in the introduction to reassure the participants that their privacy would be respected throughout the interview. The key informants conducted in-person interviews while maintaining social distance.

3. 4.3 Focus Group Discussions

The study also made use of Focus Group Discussion (FGD) (*see appendix 4*), with some knowledge and willing women community members. According to Kamberelis et al., (2018), FGDs provide a cooperative setting for obtaining a range of perspectives and comprehending the intricacies of participants' attitudes and experiences. FGDs focused on rapport building with the objective of analysing how intersectional factors influence women's livelihood vulnerability to drought in Buhera district Ward 10. They were conducted with a total number of twenty (20) women further divided into 2 separate groups of tens, with the researcher as the moderator, helping the researcher to elicit information from the community. Each group had a representative from all the age groups of 18 to 35, 36 to 50, 51 to 65 and 66 and above (*see photograph 4.1*) and these women also represented all the livelihoods activities undertaken by them in the Ward 10. Separate groups enabled the researcher to give each member participating enough time to air her views and also assisted in preserving the conversation to decrease cases of arguments and friction.

The advantages of utilizing this research instrument were that, it allowed the researcher to capture pertinent and relevant information pertaining the study. Additionally, FGDs produced rich qualitative data and a variety of viewpoints as participants shared their thoughts and experiences. Participants had to build on each other's responses, inspire one another's ideas, resulting in revelations that might not surface in surveys or interviews thereby exploring issues in greater detail.

3.4.4 Observation guide

In this study, the researcher used observation guide (*see appendix 5*), an organised method for methodically gathering information through direct observation. The guide explored content on the subjects of the impacts of drought disasters on women's livelihood vulnerability, how do various intersectional factors affect women's vulnerability to drought related challenges and what policy and recommendations to curb the vulnerability of women livelihoods to droughts disasters in Ward 10, Buhera District. As indicated by, Anguera et al., (2018), observation guide outlines the conditions for the observations by listing specific elements to be observed, such as people, activities, interactions, and environments. Observation schedules were made, data collected through watching behaviours of women in their day-to-day livelihood activities. The author saw it fit to use it in this study as it assists researchers in concentrating on particular, pertinent elements of the surroundings, actions, or interactions. In addition, the study aimed to refrain from questioning women about topics that are readily apparent on the ground. In clearly articulating the observation's goals and focusing on certain behaviours, interactions or events to be examined, these observations assisted in validating the data collected from people. Furthermore, observation guide helped to organise data for simpler analysis and interpretation, guarantee consistency in data gathering between observations and enable comprehensive documentation of pertinent aspects.

3.5 Target population

The target population group for this research was women from the villages of Kuvarega, Mahwite, Mupambwi, Chitsamatanga and Chatikobo, of the age of 18 and above. According to the ZimStat (2022) census, there was 3, 076 women, 5 607 people living in Ward 10 with a total of 1466 households, of averagely four (4) to seven (7) people per household. Having a deeper grasp of the target population, made the researcher adapt better data collection techniques such as questionnaire, interviews, observations and focus group discussions to establish the traits and preferences of the participants. A clear target audience is ultimately necessary for an efficient research design in order to guarantee significant findings (Adeoye, 2024).

3.6 Sample size

A sample of 94 women and their varied livelihoods were chosen from the targeted demography due to insufficient resources to obtain data from large pool respondents. An adequate sample size is vital for valid and dependable results (Zou, & Sunindijo, 2015). For a population of 3076, with a 95% confidence level, a 10% margin of error and a population proportion of 50%, the obligatory sample

size is 94 respondents. To calculate the sample size based on the provided parameters, the formula by (Althubaiti, 2023), sample size determination in research, particularly estimating a proportion was used. The formula is as follows:

$$n_0 = \frac{Z^2 \cdot p \cdot (1 - p)}{E^2}$$

- a. n_0 = initial sample size
- b. Z = Z-score for the confidence level (for 95%, $Z=1.96$)
- c. p = estimated population proportion (0.5 is often used if unknown)
- d. E = margin of error (expressed as a decimal, so 10% becomes 0.10)

Working:

1. Identify the parameters:

$$Z=1.96 \quad Z=1.96 \text{ (for 95\% confidence level)}$$

$$p=0.50 \quad p=0.50$$

$$E=0.10 \quad E=0.10$$

$$1.96^2=3.8416 \quad 0.96^2=3.8416$$

$$0.5 \cdot (1-0.5) = 0.5 \cdot 0.5 = 0.25 \quad 0.5 \cdot (1-0.5) = 0.5 \cdot 0.5 = 0.25$$

$$0.10^2=0.01 \quad 0.10^2=0.01$$

So,

$$n_0 = 3.8416 / (0.25 \cdot 0.01) = 3.8416 / 0.0025 = 1536.64 \approx 1537$$

4. Initial Sample Size: $n_0=1537$

5. Adjust for Finite Population:

Since the population size (N) is 3076, apply the finite population correction:

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}} = \frac{1537}{1 + \frac{1537 - 1}{3076}}$$

Plugging in the values,

$$n = \frac{1537}{1 + \frac{1537 - 1}{3076}} = \frac{1537}{1 + 0.4967} = \frac{1537}{1.4967} = 1026.8 \approx 1027$$

Thus, the calculated sample size is approximately $n=1027$ (rounded to nearest whole number). Despite the fact that most quantitative research objects for a margin of error of 5% or less the author have decided to use 10% supported by sources that offer an insight into situations in which a 10% margin is acceptable. A higher margin of error (10% or more) may be used effectively in certain situations,

such as exploratory studies, according to (Cochran, 1977). Dillman et al., (2014), stress in their book the significance of context-specific survey design, pointing out that although a 5% margin of error is frequently mentioned, a margin of 10% may be appropriate for specific types of research, particularly when considering the costs and practicality of data collection.

3.7 Sampling techniques

Depending on the objectives of the study, the resources at hand and the characteristics of the population under study, the sampling technique selected had a significant impact on the validity and reliability of the research findings and in this study, the author used random and purposive sampling. Simple random sampling improved the representativeness and generalisability of the results by guaranteeing that each member of the population has an equal and known chance of being chosen whilst purposive sampling helped in the selection of women participants according to particular traits or standards pertinent to the study question. The two methods are explained below.

3.7.1 Random and Purposive sampling methods

In this study, the researcher used random and purposive sampling methods in order to meet the purpose and objectives of the research by selecting households from the ward. Creswell (2013) highlights that, the effectiveness of a study largely relies on the sampling methods applied by the researcher. Since the population was large and the characteristics were similar, the researcher used random sampling method, whilst purposive sampling was employed to select key informants who possess depth knowledge on the subject under study. Purposive sampling was employed to choose women from selected household for questionnaires and FGDs on regular intervals. In this research, random and purposive sampling allowed the researcher to explore the vital chore of creating new knowledge through the procedures of comparison and contrast by grouping respondents according to preselected standards pertinent to a particular research question. Simple random sampling was employed in the distribution of questionnaires to 94 women involved in a variety of livelihoods permitting each group equal chance of representation.

The major paybacks of utilising the two sampling methods are that, both purposive and random sampling techniques offered special benefits that were used in harmony with the objectives and setting of the research. Purposive sampling provided depth and focused on the vulnerable women population, whereas random sampling greatly improves generalisability and minimised the cases of bias when selecting respondents from large pools of potential participants.

3.8 Data analysis methods

In this study, the author made use of both quantitative and qualitative data analysis methods which are explained in detail by the subsequent paragraphs.

3.8.1 Quantitative analysis

During study, the investigator utilised the quantitative data analysis to data collected by the above-mentioned instruments in Buhera district, Ward 10. According to Ismail et al., (2024), quantitative data analysis is appropriate to this study as it provides valuable insights through systematic examination of numerical data. Thus, in this study, the quantitative data analysis allowed the researcher to explore, determine impacts of drought disasters and analyse the intersectional factors influencing women's vulnerability to drought in Buhera district, Ward 10.

Chi-square relationship test and descriptive statistics were used in a mixed approach to evaluate the impacts of drought on women's livelihoods in Buhera district, Ward 10. Combining these quantitative techniques provided a thorough grasp of the drought related vulnerabilities that women face and pinpoint the variables that can lessen those vulnerabilities. Data was analysed using SPSS method and presented it using pie charts, tables and bar charts. The researcher chose to use the SPSS analysis methods as it offers a complete set of competences in sustenance of the entire logical process from data. More so, with quantitative data analysis, numerical data was methodically analysed, thereby yielding insightful information. Furthermore, through the use of diverse statistical techniques and visualizations, researchers were able to make inferences that helped guide decisions and advance their field understanding.

3.8.2 Qualitative data analysis

During study, the researcher utilized the qualitative data analysis (narrative) to analyse data collected during field study. Narrative analysis was utilized by the researcher for quantitative data analysis by examining stories, sentiments and personal profiles of respondents, to evaluate how effective are the existing measures to curb the impacts of droughts disasters on the livelihoods of women in Ward 10, Buhera district. As propounded by Lim, (2024), identifying patterns, themes and insights requires an understanding of the subtleties of human behaviour and context, which is why qualitative data analysis becomes a critical component. Therefore, the researcher was able to investigate the effects of drought disasters and examine the intersectional factors influencing women's drought vulnerability in Buhera district, Ward 10, thanks to the quantitative data analysis in this study.

The researcher chose to use the Narrative analysis method because it offer an inclusive set of competences in support of the entire analytical process from data. The advantages of using this qualitative data analysis method is that it provides deep, rich insights into participants feelings, ideas and experiences that quantitative approaches might miss. With this method, researchers can investigate intricate social phenomena, unearth underlying motives and spot subtle patterns and themes, leading to a more comprehensive comprehension of the topic. Qualitative approaches are also adaptable and flexible, allowing for modifications throughout the study process in response to new information. They also made it possible to include participant voices through direct quotes and narratives, which raised the results legitimacy and relatability.

3.9 Data reliability and study validity

In this study a pilot survey was undertaken in order to determine validity of the instruments. This was done to gain familiarity with the environment and respondents thus assessing arrangements for fieldwork. This also helped to make estimates of the time it will take to complete questionnaires, response rates as well as necessary alterations to the layout of the questionnaire. It also assisted to evaluate fieldwork preparations through familiarising with women, approximating response rates and the time required by questionnaire takes to finish up. Reliability and validity are ideas used to appraise the quality of study demonstrating how well a method, technique or test in delivering out uniformity and validity of a measure. According to Khanal & Chhetri (2024), validity is a degree to which a research study measures what it intends to measure. In order to regulate and determine the validity of the data instruments, a pilot study was conducted first. The validity and reliability of the data tools were confirmed by data cleaning, which was done to look for any errors or missing data.

3.10 Ethical considerations

To maintain ethical relations during the research process, stern adherence to ethical values was maintained, including seeking permission, safeguarding informed consent from respondents, regarding privacy rights and honoring local cultural traditions and values. Consent was sought from interviewees before proceeding with interviews. Authority to conduct the study was sought from the District Administrator, local Councilor and Village Headman. Participant privacy was upheld by ensuring obscurity throughout the research. For interviews involving married women, permission was sought from their spouses. Ethics are rules and principles of right and wrong accepted by an individual or a social group with respect to certain actions and to the badness or goodness of the motives and ends of such action (Chaddha, & Agrawal 2023). These ethics assisted the author in ensuring that the

research was conducted without ethical violations. Observation of these ethics also helped to maintain peace as interactions with the participants remained confidential and they were informed of the purpose of the study as well as their right not to continue or answer questions that made them feel uncomfortable.

3.11 Chapter Summary

The chapter deliberated the area of study, approaches, giving an insight of the research methodology used in evaluating the effects of drought on women livelihoods vulnerability. More so in this chapter, discussions were done on research design, research tools as well as sampling techniques used to gather data.

CHAPTER IV

PRESENTATION OF FINDINGS, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents and discusses the research findings of this study on the effects of drought on rural women livelihood vulnerability, presented, analysed and discussed thereof under the key concepts of researches contained in research techniques employed thereof. The data was analysed using a mix of interpretive and narrative methods. This chapter's sections offer a summary of how the drought has affected women's livelihoods in Buhera Central District's Ward 10. Graphs, charts, and tables were used to visually present data obtained.

4.2 Questionnaire Response Rate

This study initially focused on 94 households as a sample for questionnaire surveys, but to due circumstances beyond respondent's control, some of the questionnaires were not returned, thereby leading to 89 only being responded to. Figure 4.1 provides an illustration of the response rate.

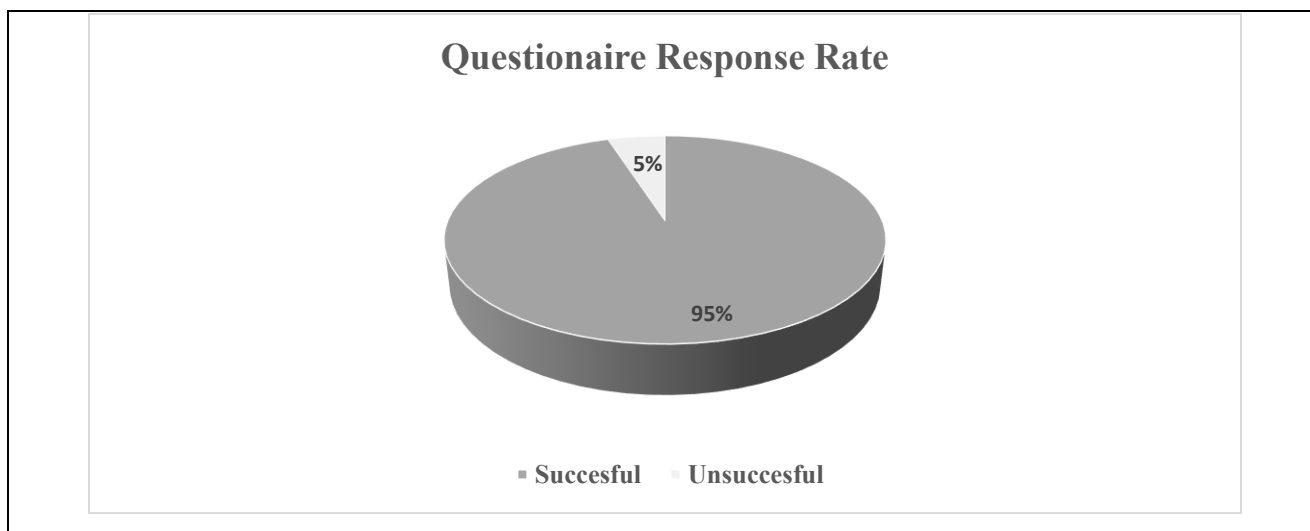


Figure 4.1 Questionnaire Response Rate(N=94), [Source Author]

According to figure 4.1, five percent (5%) of the questionnaires were either rejected or not returned by the respondents, whereas ninety five % (95%) of the questionnaires were successfully returned. Based on the ninety five (95) % of returned questionnaires, the researcher conducted data analysis despite the unsuccessful ones. Subsequently, the participants' varied answers were examined in light of the study's objectives.

4.3 Socio-economic Characteristics of Respondents

The study worked into various socio-economic characteristics factors or profiles of women in Ward 10, Buhera District, whilst concurrently addressing the objective of the study which states, “*To analyse the intersectional factors influencing women's vulnerability to drought in Ward 10.*” These characteristics were important in the study as they represented intersectional factors that influence vulnerability of women livelihood to drought disasters in ward 10, Buhera District. Table 4.1 summaries the profiles of women according to their socio-economic demographic characteristics.

Table 4.1. Socio-economic Demographic Characteristics of Respondents

Variable	Category	Frequency
Age	18-35yrs	18 (20.2%)
	36-50yrs	19 (21.3%)
	51-65yrs	31 (34.9%)
	>66yrs	21 (23.6%)
Marital Status	Single	13 (14.6%)
	Divorced	10 (11.2%)
	Widowed	17 (19.1%)
	Married	49 (55.1%)
Level of Education	Not educated	18 (20.2%)
	Primary level	26 (29.3%)
	Secondary level	31 (34.8%)
	Tertiary level	14 (15.7%)
Occupation	Formally employed	6 (6.7%)
	Informally employed	29 (32.7%)
	Not employed	54 (60.6%)

According to Table 4.1 of those surveyed, the bulk of responders (34.9%) were between the ages of 51 to 65, whilst 20.2% were between the ages of 18 to 35 and 21.3% were between the ages of 36 to

50 and 23.6% were for the age of 66 years and above. Women between the ages of 18 and 50 are the economically active population of the community and comprise the main labour force in rural communities hence are less vulnerable due to better capacities and resilience. By virtues of their numbers, low capacities and resilience, those of the age 51 and above are highly vulnerable to the effects of droughts as they are low economically active. The elderly, 66 years and above were part of the study to tap into their valuable native information erected over decades of practice and experience on the impacts of drought on women and were consulted in line with Chen et al (2018), who stated that wisdom comes with experience and age.

The researcher also inquired into the respondent's marital status of women in Ward 10, Buhera District and the results are illustrated by Table 4.1 above. Given the above figures, 55.1% of the respondents were married, whereas 19.1% were widows, 11.2% were divorced and 14.6% were single. In earlier research made, men in the villages were underemployed during droughts, with half of them moving to cities where they found work but failed to send home remittances, which increased the burden on women and made them more vulnerable to droughts (Bharadwaj et al., 2022). The interpretation is that, compared to other groups, married and widowed women who made up the majority of respondents were more vulnerable to droughts than other groups due to their roles in livelihoods, water collection and household management. Single and divorced constituted small numbers, hence less vulnerable due to fewer dependents, increased mobility and high financial independence.

According to the research as illustrated by Table 4.1, the majority of the women completed primary level (29.3%), with secondary level (34.8%), tertiary level (15.7%) and not educated (20.2%). According to the findings, the more women learn or acquire knowledge, the less vulnerable to drought disasters are, as more education frequently translates into better access to resources, skills and decision making possibilities, improving resilience against drought impacts on their livelihoods. According to Dufty (2020), knowledge and information about drought disasters are positively impacted by education and experience by giving people the ability to think critically comprehend the effects of such disasters.

According to Table 4.1, 6.7% of respondents are formally employed, 32.6% are informally employed and 60.6% are not employed. It has been noted that women's occupation influence their resilience and capacities during droughts as those women who are formally employed are less vulnerable than

those who are informally or not employed. According to Ncube, et al., (2018), women perform an important part in livelihoods production particularly within the informal sector, but they are mostly affected by drought. During this study, the researcher found out that most women are vulnerable to droughts as bulky them 60.6% are not employed and 32.7% are not employed, hence they lack stable income to sustain their livelihoods.

4.4 Vulnerability of women livelihoods to drought disasters in Ward 10, Buhera District

In this study, the researcher looked into various factors that intersect with drought to increase the vulnerability of women livelihoods in ward 10, Buhera District. To establish a firm foundation on this concept, various indicators of vulnerability were looked (*see table 4.2*).

Table 4.2: Vulnerability of women in Ward 10, Buhera District.

Indicators of vulnerability in Ward 10	Yes	No
Are you having easy access to land and resources during times of drought?	35(39.3%)	54(60.7%)
Are you having access to credits and financial resources during droughts?	11(12.4%)	78(87.6%)
Are you having enough access to markets to sell your produce before, during and drought times?	48(53.9%)	41(46.1%)
Are you benefiting from NGOs operating in Ward 10, Buhera District?	3 (3.4%)	86(96.6%)
Are you able to balance household activities with livelihood activities during drought times?	21(23.6%)	68(70.4%)
Are you involved in more than one livelihood activity?	11(12.4%)	78(87.6%)
Are you receiving enough support services (education, health, legal) during drought disasters?	40(44.9%)	49(55.1%)
Are you involved in decision making process against droughts?	5(5.6%)	4(94.4%)
Are you food secure before, during and after drought disasters in Ward 10, Buhera District?	39(43.8%)	50(56.2%)
Do you have access to clean water and sanitation during drought disasters?	68(76.4%)	21(23.6%)

Table 4.2 highlights the vulnerability of women in Ward 10, Buhera District, during droughts. The data reveals significant drought challenges with 60.7% lacking easy access to land and resources and 87.6% have no access to credits or financial resources, severely limiting coping mechanisms. Market access is relatively better, with 53.9% able to sell produce but 96.6% report no benefits from NGOs, indicating limited external support. Only 23.6% can balance household and livelihood activities and 12.4% engage in multiple livelihood activities, reflecting low economic diversification. Support services are inadequate with 55.1% and 94.4% are excluded from drought related decision making, underscoring marginalization. Food security is a concern with 56.2%, yet 76.4% have clean water and public health facilities, a relative strength. These findings indicate that women in Ward 10 face multidimensional vulnerabilities, requiring targeted interventions to enhance resource access, economic opportunities and inclusion in decision making processes. Figure 4.2 illustrates vulnerability status.

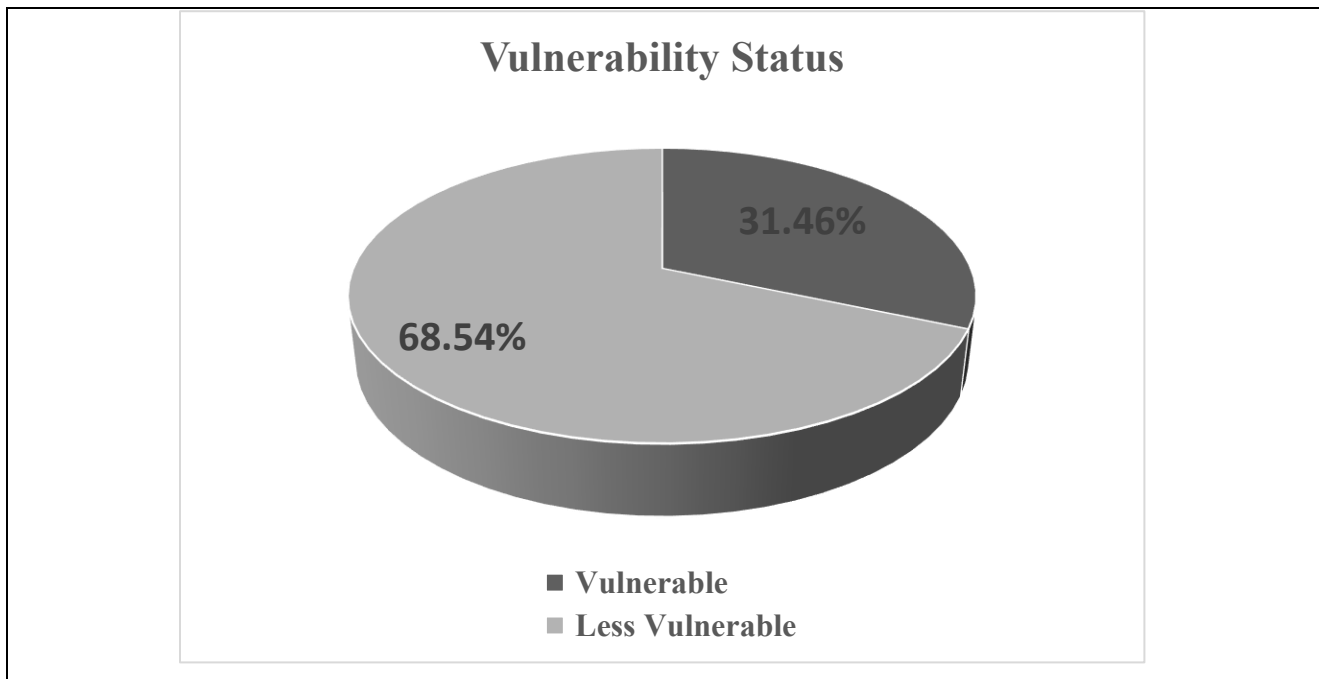


Figure 4.2 Vulnerability Status, (N=89), [Source Author]

During survey, the researcher established that 68.54% of the respondents interviewed are vulnerable to droughts and 31.46% are less vulnerable (see Figure 4.2) and, this is supported by secondary data by one of key informants from the Ministry of Gender and Social Welfare who said,

Most of women in Ward 10, Buhera District are vulnerable to drought disasters as 70% of them are on Social Welfare lists benefiting from either the government or NGOs food assistance, cash transfers or food for work.

The study indicates that bulk of women in Ward 10, Buhera District, are highly vulnerable to droughts. This is reinforced by a Ministry of Gender and Social Welfare informant, who stated that 70% of women rely on social welfare, including government or NGO cash transfers and food aid. The heavy dependence on external support underscores significant vulnerability, as most women lack independent resources to withstand drought disasters. The data points out the pressing necessity for interventions to boost economic resilience, resource access and self-sufficiency among these women to mitigate drought impacts effectively.



Photograph 4.1 [Source Primary Data] Photograph 4.1 shows one of the groups in the field during FGDs, who indicated that the vulnerability status of women to drought disasters in Ward 10, Buhera District is more biased to women than men, hence supporting the motion by Figure 4.2, that 64.58% of women are vulnerable to drought and 31.46% are less vulnerable.

The research results from the group discussions are supported by Chigavazira, (2019) who indicated that, complexities of livelihood strategies and responses across the African region have increased, particularly in developing countries, as women bear a disproportionate burden when drought strikes their livelihoods, affecting their economic empowerment, social wellbeing and household resilience. This was also supported by Bharadwaj et al., (2022) in earlier research who indicated that men in rural communities were underemployed during droughts and half of them moved to cities where they found work but failed to send home remittances, which increased the burden on women and made them more vulnerable to droughts. This then makes the research finding relevant by indicating that most women in Ward 10, Buhera District has high vulnerability status.

4.5 Intersectional factors affecting women's livelihood vulnerability to drought disasters in Ward 10, Buhera District

The section responds to the objective: *Intersectional factors influencing women's vulnerability to drought in Ward 10*. Socio-economic aspects such as age, marital status, educational levels and

occupation were assessed against vulnerability status of women staying in the studied community. Vulnerability status was considered to be the dependent variable while socio-demographic characteristics were considered to be the predicting variables. Table 4.3 summarizes the findings on the relationship between socio-demographic variables and vulnerability status using Chi-square test for association.

Table 4.3: Chi-Square Tests for association between socio-demographic factors and vulnerability status of women livelihoods in Ward 10, Buhera District

Variable	Category	Vulnerable	Less Vulnerable	χ^2	p-value
1. Age	18-35 years	08	10	15.048 ^a	.002
	36-50 years	09	10		
	51-65 years	26	05		
	>65 years	18	03		
2. Marital Status	Single	12	01	12.769 ^a	.000
	Divorced	10	03		
	Widowed	18	01		
	Married	20	24		
3. Education	No formal Education	12	00	24.327 ^a	.000
	Primary Education	30	09		
	Secondary Education	17	08		
	Tertiary Education	02	11		
4. Occupation	Formally employed	00	06	16.715 ^a	.000
	Informally employed	18	11		
	Not employed	43	11		

Bold figures represent significantly different ($p < 0.05$).

Findings in table 2 indicated that there is a significant relationship between age and vulnerability status ($\chi^2=15.048^a$, $p = .002$) and marital status ($\chi^2=12.769^a$, $p=.000$), education level ($\chi^2=24.327^a$, $p=0.000$) and occupation ($\chi^2=16.715^a$, $p=0.000$). This means that vulnerability of women livelihoods during drought is controlled by age, marital status, education level and occupation. Those who are within the active ages have (18-50 years) are less vulnerable to drought as compared to those above

the age of 50 years and those that are widowed and married are more vulnerable than single and divorced women. Individuals with higher levels of knowledge are less susceptible to droughts and women who are formally employed have better resilience to drought. One Key Informant had this to say during interview (translated in English);

Women livelihoods in Ward 10 are suffering from the effects of drought disaster because of various intersectional factors exacerbating and lack of institutional frameworks that are women oriented to support their efforts hence, their livelihoods become vulnerable to the effects of drought disasters.

The sentiments above indicates that quite a number of Women in Ward 10 face heightened vulnerability to drought impacts due to intersectional factors like inadequate access to resources, gender based exclusion and insufficient institutional support. The lack of women oriented frameworks exacerbates vulnerabilities, leaving women reliant on external aid. Key informant interviews highlight that patriarchal norms restrict women's land ownership and decision making, while focus group discussions with women reveal feelings of marginalization and insufficient training for drought resistant livelihoods. These perceptions accentuate the necessity for gender-responsive strategies to enhance women's resilience and economic empowerment against drought disasters.



Photograph 4.2 Women observed while working in a community garden {Source Primary Data}

Women are depicted as key players in agriculture, highlighting their vital role in food security and household wellbeing. Photograph 4.2 exhibit that more women are vulnerable to drought disasters as it witnessed by wilting and stunt growth of plants in their gardens, hence affecting negatively their livelihood.

The study's findings indicate that woman's susceptibility to drought is influenced by her age, marital status, level of education, and occupation. In general, women between the ages of 18 and 50 are less vulnerable than those over 50. Compared to women who are single or divorced, married and widowed women are typically more vulnerable. Women who have more formal education and work experience become more resilient and less vulnerable to the effects of drought. Furthermore, women who possess greater knowledge and abilities are less vulnerable because they can manage disasters more skilfully. In general, women's experiences and reactions to drought hardships are greatly influenced by social and economic factors generally known as intersectional factors. The results tally with the research findings by (Rudman & Glick, 2021), who indicated that gender roles and responsibilities is the societal expectations and norms that command how persons should behave based on their perceived gender, hence women become more vulnerable as they are expected to fend food for the whole family. To add more, Sharma et al., (2022) highlighted that, the Intersectionality Framework model highlights how multiple intersecting factors aggravate women's vulnerability to risks challenges and the ability of them to prepare and respond to disasters, thereby supporting the findings by the study that women vulnerability to drought is exacerbated by intersectional factors. This then makes the research finding relevant by indicating that most women in Ward 10, Buhera District are vulnerable.

4.6 Impacts of Drought on Women livelihoods

This section of the study responds to the objective which sought. *To determine impacts of drought disasters on the livelihoods of women in Ward 10, Buhera District.* The study looked at how droughts affected women's livelihood activities in Ward 10 of the Behera District, in order to determine their impact. Respondents were asked about drought impacts on their livelihoods and their responses were summarized in figure 4.2.

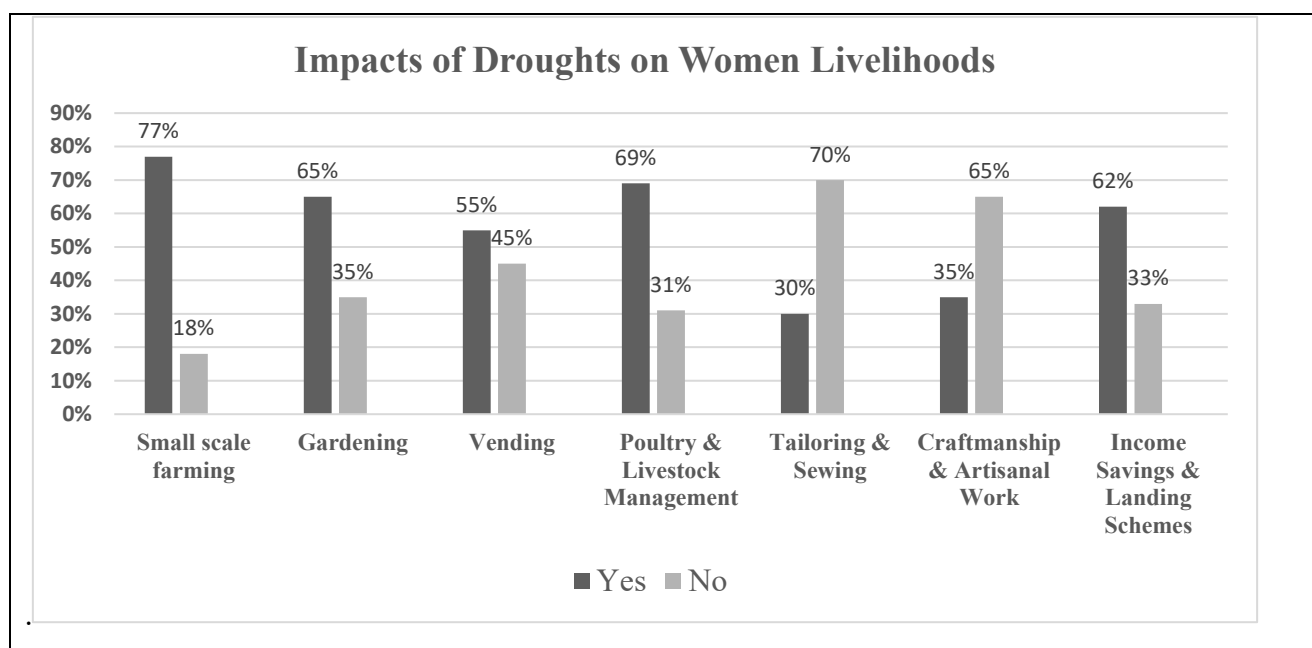


Figure 4.4. Impacts of droughts on Women Livelihoods.

Findings in Figure 4.4 highlighted that the bulk of livelihoods (72%) remained affected by effects of drought disasters and 2 of the livelihoods (tailoring and sewing, and craftmanship and artisanal work) out of the seven studied, were less affected by drought disasters. The most affected livelihood was small scale farming (77%), followed by poultry and livestock farming (69%) and the least affected being tailoring and sewing (30%). Overall, most women's livelihood in Ward 10, Buhera District are vulnerable to drought disasters. The respondents are dependent on their livelihood, hence due to drought, it has been difficult for them to achieve the above mentioned factors, and this has affected many women especially those who specialize in single livelihoods. The results from the questionnaires were confirmed by responses from key informant interviews, for instance one outspoken World Vision humanitarian officer had this to say;

In Buhera, protracted droughts have created serious problems that have an impact on livelihoods which resulted in a number of problems against women. Due to their reliance on rain fed agriculture, many families are susceptible to drought due to changes in the environment. In this regard, this has necessitated World Vision to establish permanent structures or I can say administrative offices at Murambinda growth point

It is clear from the researcher's observations on how drought catastrophes have impacted Ward 10 that droughts in the Buhera district are there to stay and in that regards, individuals should therefore bring adaptation measures to defend their livelihoods. Therefore, it has been challenging for women

to adopt sustainable livelihood practices due to lack of suitable coping mechanisms and as a result, this intensified the poverty cycle against women livelihoods in Ward 10, Buhera District.



Photograph 4.3. (a) and (b) showing drought impacts on small scale farming and gardening

Photograph 4.3 (a) shows dried out fields or parched soil, with wilting or dead crops. The plants appear shrivelled, the land could look cracked, indicating severe water shortage. This reflects how drought conditions result in crop failure and loss of farm productivity, threatening women farming livelihoods. Photograph 4.3 (b) depicts garden with wilting plants, dried-up water sources, or incomplete growth of vegetables or fruits. The struggle to maintain small scale gardening during drought may be exemplified by women gardeners attempting to water plants with limited resources.

The study's research findings from the study indicates that droughts has a significant negative influence on women livelihoods in Ward 10, Buhera District, particularly small scale farming and livestock and poultry production, making women widely vulnerable. The photographs of wilting gardens and dried fields highlight these struggles, demonstrating how water shortages impede food production and sustainable women livelihoods hence families that bank on rain fed farming are susceptible to environmental changes, with drought causing crop failure, decreased productivity, and increased poverty. These findings are supported by McCarthy, (2018) who indicated that, small scale agriculture provides the primary source of revenue for millions of women worldwide and they are crucial to the supply of food for their families and the vulnerability of women to drought is greatly influenced by a number of intersectional factors, particularly when it comes to small scale farming. Furthermore, according to Chigavazira, (2019), across the African region, particularly in developing

countries, women bear an unequal burden when drought strikes their livelihoods, affecting their economic empowerment, social well-being and household resilience. In this regard, both scholars support the findings by the study that droughts highly impacts women livelihood activities in Ward 10, Buhera District, hence impacting their vulnerability statuses. However, the researcher's observations underscores the persistence of droughts, necessitating adaptive measures.

4.7 Chapter summary

In this episode, the author presented the results of the study through narratives for qualitative data as well as charts, tables and graphs for the quantitative data. The main focus in this segment of the study was transformation of data into meaningful information that responds to the study objectives and research questions. The following chapter will be on research conclusion, summary and commendations.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is the final section of the project which summaries, concludes and suggests recommendations, by focusing on summary of key results based on the objectives with regards to the research which is, assessment of drought and women livelihood vulnerability in Ward 10, Buhera District. The chapter is therefore presented in these three main sections, summary, conclusion and recommendations arising from the key findings and as guided by the research objectives.

5.2 Summary of key findings

The study successfully investigated ways which women's livelihoods in Ward 10 of Buhera District have been impacted by droughts. The study flow is provided by the study's outline, which also includes the study's background, problem statement, goals and research questions. The controlling factors of the study were three objectives which spoke directly to the main aim which through which the researcher sought to assess the effects of drought on women and livelihood vulnerability. From the research, it was noted that droughts are areal menace to women livelihood vulnerability. More so it was noted that Ward 10 women livelihoods such as small scale farming, vending, poultry and livestock, tailoring and sewing, craftsmanship and artisanal work and income schemes and landing schemes were under threat from drought impacts. Additionally, the study established types of droughts operating in Ward 10, Buhera District and the various intersectional factors exacerbating droughts and vulnerability such gender roles, culture and influence of patriarchy, access to resources, lack of legal rights and health and wellbeing. This study made use of case study research design to plan, gather and analyse data on the impacts of droughts women livelihoods in Buhera district Ward 10, applying a mixed method approach by combining both quantitate and qualitative methods to gather valid and trustworthy data. This enabled the researcher to validate his findings, ensuring that the results are more solid and dependable by triangulating data from both qualitative and quantitative sources. Findings from the study were provided in line with the following research objectives.

5.2.1 Vulnerability of women livelihoods to drought disasters in Ward 10, Buhera District

The research started by inquiring into the various socio-demographic factors such as age, marital status, level of education and occupation. During the study, it was noted that the mentioned factors have a bearing on drought and women livelihood vulnerability in Ward 10 Buhera District. Women

between the ages of 18 and 50 are the economically active population of the community and comprise the main labour force in rural communities hence are less vulnerable due to better capacities and resilience. By virtue of their numbers, low capacities and resilience, those of the age 51 and above are highly vulnerable to the effects of droughts as they are low in terms of being economically active hence they are more vulnerable to droughts. Married and widowed women who make up the majority of respondents are more vulnerable to droughts than other groups as a result of their part in livelihoods, water collection and household management. Singles and divorced constitute small numbers, hence less vulnerable due to fewer dependents, increased mobility and high financial independence. The bulk of the women completed primary and secondary level whilst a few others attended tertiary school and the least number not educated, hence the study discovered that the more women learn or acquire knowledge, the less vulnerable to drought disasters as more education frequently translates into better access to resources, skills and decision making possibilities, improving resilience against drought impacts on their livelihoods.

The study inquired into the effects of occupation on vulnerability of women livelihoods to drought particularly on women who are formally employed, informally employed and those that are unemployed. Most women are vulnerable to droughts as bulky them are informally or not employed hence they lack stable income to sustain their livelihoods. The researcher used frequencies to analyse data from used responses to establish vulnerability status of women livelihoods to droughts in Ward 10, Buhera District and it was established that most of the respondents interviewed are vulnerable. This notion indicates most women livelihoods in the Ward 10 are vulnerable as bulk of them are depending on aid, either as cash transfers or food aid for their survival.

5.2.2 Intersectional factors affecting women's livelihood vulnerability to drought disasters in Ward 10, Buhera District

The vulnerability status of the women in the community under study was assessed in relation to socioeconomic factors of age, marital status, occupation, and educational attainment, with vulnerability status as the dependent variable and sociodemographic traits as the predicting factors using the Chi-square relationship test. The study indicated that there is a significant relationship between age and vulnerability status. According to the Chi-square relationship test made, the interpretation is that, vulnerability status of women livelihoods during drought is controlled by age, marital status, education level and occupation. Those who are within the active ages have (18-50 years) which is the economically active age, are less vulnerable to drought as compared to those

above the age of 50 years who lacks capacities and resilience to droughts due to age factor. Those that are widowed and married are more vulnerable than single and divorced women. Individuals with higher levels of knowledge were less susceptible to droughts whilst women who are formally employed have better resilience to drought.

5.2.3 Impacts of drought disasters on the livelihoods of women in Ward 10, Buhera District

In line with this objective, the study made an inquiry into the various livelihoods' activities undertaken by women in Ward 10, Buhera District which have been under threat from droughts through questioning of respondents about drought impacts on their livelihoods. Women livelihood activities such as small scale farming, vending, gardening, poultry and livestock, craftsmanship and artisanal work, tailoring and sewing were under scrutiny, income savings and lending schemes were looked into. Results from the study shows that majority of livelihoods were affected by effects of drought disasters and two of the livelihoods that is tailoring and sewing, and craftsmanship and artisanal work were less affected by drought disasters. The most affected livelihood was small scale farming followed by poultry and livestock farming and the least affected being tailoring and sewing. Overall, most women's livelihood activities in Ward 10, Buhera District are vulnerable to drought disasters.

5.3 Conclusion

Basing on results, the study concludes that there is the strong relationship between women's livelihoods and drought induced vulnerabilities, showing that social demographic factors have a big impact on how resilient or susceptible women are to drought disasters. The results indicate variables that influence women's adaptive capacity, including age, marital status, educational attainment and occupation, increasing women susceptibility to drought disasters, hence affecting their vulnerability status. In particular, during drought episodes, women of old age, married, widowed and not educated, are at high risk due to a number of intersectional factors mentioned in the Intersectional Framework Model.

5.4 Recommendations

- Interventions by the GoZ and NGOs in Ward 10, Buhera District to reduce the effects of drought on women livelihoods vulnerability to address social and demographic disparities such as improved access to education, resources, and livelihood diversification to reduce women's vulnerability.

- Gender responsive policies that integrate gender sensitive approaches, to eradicate gender blindness and enhance gender responsiveness.
- Property, land and ownership rights through the enactment and enforcement of acts that defend women's land rights and guarantee fair access to land ownership.
- Capacity and resilience building through training programs and educational initiatives to inform women about their rights, legal entitlements and opportunities for property ownership.
- Improved women's access to capital resources such as credit loans, technology, education, natural resources and agricultural inputs through provision of economic empowerment programs to enhance their capacity to adapt to drought conditions, diversify livelihoods and improve agricultural productivity.
- Monitor and evaluate the effectiveness of capacity building and social protection interventions through regular assessments using GIS and Remote Sensing applications.

5.5 Chapter summary

In this section, the author engrossed summary findings and conclusions made from the primary findings. The study was looked on how drought has affected women livelihood vulnerabilities in Ward 10, Buhera District with regards to the relationship on how intersectional factors associates with vulnerability status. In the end, the researcher proffered some recommendations towards policy development and future practices.

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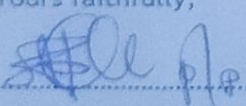
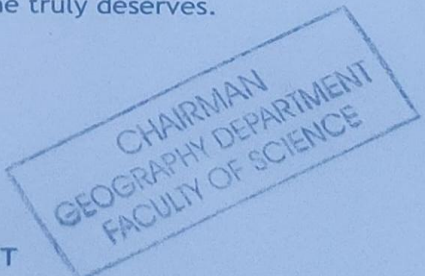
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APPENDIX 1: Approval Letter from BUSE

	DISASTER RISK REDUCTION DEPARTMENT BINDURA, ZIMBABWE WhatsApp : +263773487211 E-mail: emavhura@buse.ac.zw
BINDURA UNIVERSITY OF SCIENCE EDUCATION	
CHAIRPERSON'S OFFICE	
 Wednesday, 15 May 2025	
TO WHO IT MAY CONCERN	
 Dear Sir/Madam	
 RE: RESEARCH SUPPORT LETTER FOR DISASTER RISK REDUCTION STUDENT	
 I am writing on behalf of the Disaster Risk Reduction Department requesting your collaboration on the research of our fourth-year student, MUPFUNGIDZA DENNIS REGISTRATION NUMBER B210050A . The student is studying for a 4-year Bachelor of Science (Honours) Degree in Disaster Risk Reduction (HBSc.DMSc).	
 In the fourth year of study, students are required to do field research which require them to do their data collection for research purposes.	
 We will be highly obliged to furnish you with additional information about industrial arrangements and procedures, if our request is considered.	
 Kindly accord her the due cooperation she truly deserves.	
 Yours faithfully,  Prof. E. Mavhura (chairperson) DISASTER RISK REDUCTION DEPARTMENT	

APPENDIX 2: Questionnaire guide

My name is Mupfungidza Dennis, a Bindura University of Science Education fourth year student undertaking a Bachelor of Science Honours Degree in Disaster Management Sciences. It is a prerequisite for final year students to undertake a research project and I am carrying out research on **ASSESSING DROUGHT AND WOMEN'S LIVELIHOOD VULNERABILITY IN WARD 10 BUHERA, ZIMBABWE**. I am kindly appealing for your assistance, contributions, and relevant information regarding this research. Information provided will be strictly kept confidential and private to pursue academic fulfilment. You are advised that upon participating in this survey there is no financial benefit. Your cooperation is greatly appreciated.

Ethical declaration

I assure you that all the information gathered from you will be used for academic purposes and the willingness to participate remains upon your discretion. You shall not be coerced into providing information for this research and if you choose to take part, the researcher will guard your privacy unless consent is given to disclose your identity.

For further information regarding this study, you can get in touch with me on

Phone number: 0712555349/0776491081

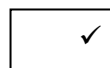
Email: mossadsalimu@gmail.com.zw

Date of completion.....

Respondent No.....

Instructions:

- Please fill in the space provided
- Place a tick where appropriate



APPENDIX 2: Questionnaire

SECTION A: Demographic data

1. Age group

18-25 years	26-45years	46-65 years	66 years and above

2. Marital status

Married	Divorced	Single	Widowed

3. Level of education

Primary ☐ ZJC ☐ "O" Level ☐ "A" Level ☐ Tertiary ☐

Other.....
.....
.....

4. Household /family size

1-2	2-3	3-4	5+

SECTION B: Drought awareness.

5a) Have you ever heard about droughts?

Yes ☐ No ☐

b) What does drought mean basing on your own understanding?

.....
.....
.....

c) In your opinion, what are the causes of drought?

Natural ☐ Man-made ☐ God's Case ☐

Other.....

SECTION C: Drought and livelihood history.

6. For how long have you lived in Ward 10, Buhera District?

<1 year	1-5 years	5-10 years	10-15 years	15years +

7. What livelihoods practices do you engage in for a living?

Livestock and Poultry ☐ Farming ☐ Vending ☐ Crafting ☐ Gardening ☐

Other, specify if involved in more than one livelihood

.....

8. Are you having enough access to markets to sell your produce before, during and drought times?

Yes ☐

No ☐

9. Are you having easy access to land and resources during times of drought?

Yes ☐

No ☐

10. Are you food secure before, during and after drought disasters in Ward 10, Buhera District?

Yes ☐

No ☐

11. Are you involved in decision making process against droughts?

Yes ☐

No ☐

12. Do you have access to clean water and sanitation during drought disasters?

Yes ☐

No ☐

13. As women, what challenges do you face in trying to cope with effects of drought?

Limited decision-making power	
Loss of income	

Lack of access to resources	
Increased poverty	
Water scarcity	
Poor mental health	
Malnutrition	
Limited access to information	
Other	

13. Are you having access to credits and financial resources during droughts?

Yes ☐

No ☐

If No, explain

.....

.....

.....

4. Are you able to balance household activities with livelihood activities during drought times?

Yes ☐

No ☐

.....

.....

15. As women what are the factors that have increased the impacts of droughts to you income generating activities?

.....

.....

.....

16. Do men and women in your household experience drought impacts differently?

Yes ☐

No ☐

If YES, please explain

.....

.....

.....

SECTION D: Adaptation measures to effects of drought.

17. (a) As women, what are the activities that you are doing in your area to reduce drought effects?

Diversification of income sources	
Livestock management	
Water conservation	
Water harvesting	
Irrigation	
Water rationing	
Growing short season varieties	
Growing drought resistant crops	
Early and late planting	
Food storage	
Other	

17.(b) How effective are these measures in reducing the effects of drought?

.....

.....

.....

.....

18. Are you receiving enough support services (education, health, legal) during drought disasters?

Yes ☐ No ☐

If YES, specify.....

19. Are you benefiting from NGOs operating in Ward 10, Buhera District?

Yes ☐ No ☐

If YES, explain

.....

.....

.....

20. Are you having access to credits and financial resources during droughts?

Yes ☐

No ☐

If YES, specify

.....

.....

.....

21. Do you feel more vulnerable to drought impacts compared to men in your community?

Yes ☐

No ☐

Explain

.....

.....

.....

SECTION E: Suggestions

22. What do you think should be done to improve your livelihoods as women?

.....

.....

.....

23. Is there any other information that you may want to add?

.....

.....

Thank You.

APPENDIX 3: Interview Guide

My name is Mupfungidza Dennis. I am a student currently studying Bachelor of Science Honours Degree in Disaster Management Sciences at Bindura University of Science Education. This interview guide has been designed to collect information from representatives in the study area. You are requested to provide the following information to the best of your knowledge. The information will be treated with strict confidentiality.

Ethical declaration

I assure you that all the information gathered from you will be used for academic purposes and the willingness to participate remains upon your discretion. You shall not be coerced into providing information for this research and if you choose to take part, the researcher will guard your privacy unless consent is given to disclose your identity.

Interview date.....

- a. How long have you been living in Buhera?
- b. What do you think are effects of droughts on women?
- c. Are you having easy access to land and resources during times of drought?
- d. Are you having access to credits and financial resources during droughts?
- e. Are you having enough access to markets to sell your produce before, during and drought times?
- f. Are you benefiting from NGOs operating in Ward 10, Buhera District?
- g. Are you able to balance household activities with livelihood activities during drought times?
- h. How has educational level affected our coping ability to drought disasters?
- i. Are you receiving enough support services (education, health, legal) during drought disasters?
- j. Are you involved in decision making process against droughts?
- k. Are you food secure before, during and after drought disasters in Ward 10, Buhera District?
- l. Do you have access to clean water and sanitation during drought disasters?
- m. How is drought affecting the income generating activities of women Ward 10, Buhera District?
- n. What are you doing to reduce the effects of drought to women income generating activities in Ward 10?
- o. How effective and friendly are those interventions in responding to the adverse impacts brought about by drought?
- p. What challenges have you been facing in implementing those interventions?

- q. How best do you think women income generating activities can be enhanced in the face of drought?
- r. Is there any other information that you may want to add in line with this research?

THANK YOU.

APPENDIX 4: Focus Group Discussion Guide

I am Mupfungidza Dennis, a student at Bindura University of Science Education fourth year student undertaking a Bachelor of Science Honours Degree in Disaster Management Sciences. It is a prerequisite for final year students to undertake a research project and I am carrying out research on **ASSESSING DROUGHT AND WOMEN'S LIVELIHOOD VULNERABILITY IN WARD 10 BUHERA, ZIMBABWE**. I am kindly appealing for your assistance, contributions and relevant information regarding to the research. The information gathered in this research will be solely used for academic purposes and will be treated with strict confidentiality. Participation in this study is voluntary.

Ethical declaration

I assure you that all the information gathered from you will be used for academic purposes and the willingness to participate remains upon your discretion. You shall not be coerced into providing information for this research and if you chooses to take part, the researcher will guard your privacy unless consent is given to disclose your identity.

Thank you in advance for your time and assistance

FGD code/ID _____

Time _____

Facilitator _____

Background of the participants

No. of Females	Age range	Occupations	Village	Levels of Education
Questions & themes			Notes of answers	
Knowledge on drought				
Do you know/ have you heard about drought? ▪ Where did you hear about it? ▪ What is it? ▪ Follow up questions [Does anyone feel like adding?] ▪ What are the indicators of drought?				

How do you know that a drought is occurring, which are the parameters being affected? ▪ Are there changes in their water sources, vegetation, temperature, rainfall patterns? ▪ What specific changes have occurred in livelihood work or income during drought periods? How are these changes affecting you? ▪ Are there tasks or roles that become more difficult during drought? ▪ How do droughts impact your ability to provide food, water or care for your household?	
Practical exercise 1 engaging the community	
▪ Practically coming up with seasonal calendars showing linkages between droughts throughout the seasons in groups for the past 5 decades of 80s, 90s, 2000, 2010, 2020 ▪ Drawing or pictorial to also show some shifts (if any) that come with the season	
Intersectional factors of vulnerability	
▪ Are all women in the community affected in the same way by drought? If not, who is most affected and why? ▪ How do factors like age, marital status, income level, education, or occupation affect how women experience drought? ▪ Are there groups of women who have a harder time recovering from drought and why?	
Coping strategies and community support	
▪ Are you involved in more than one livelihood activity? ▪ What do you usually do to cope with the effects of drought? ▪ Are you having easy access to land and resources during times of drought? ▪ Are there any women-led initiatives or informal networks that help during difficult times?	

Policy and intervention needs	
▪ What kind of support would make it easier for women to cope with drought? ▪ What policies or programs have helped (or failed) in the past? ▪ Are you benefiting from current drought policies as Ward 10, Buhera District? ▪ What specific changes would you suggest to local or national government, NGOs, or other organizations?	
Practical exercise 2 engaging the community	
▪ Coming up with posters which relay information in a manner that is quite understandable to them.	
Perceptions on the level of adoption of the co-produced knowledge	
▪ Do you think the information you generated (as a community) will be adopted or accepted within the community? ▪ Why or why not? ▪ Compare to knowledge coming from outside the community	
Concluding questions	
▪ Do you have any questions for us? ▪ Is there anything else regarding effects of drought and women livelihoods you want to share?	

For further information regarding this study, you can get in touch with me on

Phone number: 0712555349/0776491081

Email: mossadsalimu@gmail.com.zw

Thank you.

APPENDIX 5: Observation Guide

Observation component	Comment
Signs of drought.	
Availability and condition of water sources, farmland, gardens and livestock	
Market areas or local businesses (active or reduced).	
Types of income generating livelihood activities women are engaged in.	
Types of occupation involved by respondents.	
Changes in work routines (working longer hours, travelling further)	
Time spent collecting water.	
Household stress or visible tension	
Signs of social cohesion, family displacement and domestic violence.	
Visible signs of malnutrition or hunger.	
Community meetings or gatherings on drought related issues.	
Women participation at meetings	
Crop yield, growth rate, crop and animal health.	
Numbers of NGOs giving food aid and social assistance to women.	
Signs of mental health and stress among women	
No of meals taken by a household per day	