

UNIVERSITY OF CAPE TOWN



“It is what it is”: An ethnography of women’s experience of drought in

Madziva, Zimbabwe.

By

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ABSTRACT

Bad weather conditions such as drought have had detrimental effects on the agrarian life of the people in Madziva rural area, Zimbabwe. Due to the unfavorable weather conditions in this area, poverty and unemployment, most men migrated and continue to migrate to the urban areas in search of greener pastures. This research focuses on how these more frequent extreme weather conditions in Madziva, resulting in less predictable seasons, have increased incidences of precarity. This is important as it portrays how the climate has changed, its effect and the anxiety and expectations around it. Furthermore, providing perception of the nature of climate change in the village is important in order to assess the evidence of nature and level of climate change (manifesting through drought). As a result of the uncertainty caused by drought, the migration of men had been rampant in Madziva, and thus the village is characterized by a significant number of female-led households.

To understand the social, political and economic dynamics of what it means to survive in a time of drought for 'fragmented' families, an ethnographic research was conducted in Madziva over two months (14 June 2017 to 15 July 2017) and (10 December 2017 to 11 January 2018) during one of the worst droughts in Zimbabwe. This research follows the everyday lives of eight women and the interactions with 15 more women through focus group interviews in order to understand the strategies used to achieve survival. In this thesis, the results of an ethnography of women's experience of drought particularly in Madziva rural area in Zimbabwe between June 2017 and mid-January to mid-February 2018 are presented. It further explores, the locals' understandings of extreme weather conditions particularly in Madziva rural area and how practices, particularly those linked to gender, are shaped or reinforced.

This research found out that the people of Madziva rural area, particularly women are severely affected by drought as compared to men. This is because of the expectations of managing the household and caring for children which requires them to be heavily reliant on natural resources. The reliance on natural resources has been due to the very poor and non-performing Zimbabwean economy, however, these are the resources which become scarce in a time of drought, which exacerbates precarity. Additionally, women in rural areas such as Madziva have less access to critical information on shifts in cropping patterns and weather alerts, and this can be linked to the gendered structure of the village, where men are seen as the principle holders of knowledge of the land.

Furthermore, women also have very little power in decision making and access to resources because of the land ownership titles often given to the men of the household. However, with

the high migration to urban centers, there is a gap that the women of Madziva must navigate and this thesis aims to explore how this occurs. For instance, during the fieldwork, it became evident that irrespective of all these challenges that are caused by drought, women are always expected to make a plan to provide for their families although there is a stiff competition for the remaining natural resources. Women in Madziva negotiated relationships of marginality, responsibility, togetherness and belonging through the ways they experienced the challenges ushered by drought.

Keywords: Madziva rural area, drought, gender, challenges, migration, Zimbabwe.

DEDICATION

This thesis is dedicated to my brilliant and outrageously loving, supportive and always encouraging parents. My exuberant, sweet and kind-hearted siblings: Kudakwashe, Nathan, Memory and Miriam. My nephews, my niece and my sisters' in-law.

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Table of Contents

DECLARATION	ii
ABSTRACT.....	iii
DEDICATION.....	v
ACKNOWLEDGEMENTS.....	vi
LIST OF ACRONYMS	ix
List of figures.....	x
CHAPTER 1	11
1.1 Ties that bind, ties that break: Gender, families and life dynamics	11
Fig 1: Pre-mature wilting of crops in Madziva rural as a result of drought in Zimbabwe.....	16
1.2 Research question	17
1.3 A brief background of Zimbabwe and Madziva rural area weather conditions.....	17
1.4 Gender in relation to drought.....	21
1.5 El nino and its possible influence on weather patterns in Zimbabwe, Madziva rural.....	24
1.6 Ways of knowing weather in Madziva rural area: Indigenous knowledge, science and enlightenment.....	25
1.7 LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK	28
1.7.1 LITERATURE REVIEW	28
1.7.1.2 Vulnerability concept in Climate change	31
1.7.2 CONCEPTUAL FRAMEWORK	34
1.7.1.1) Slow violence: “Victims of extreme weather conditions in Madziva.....	34
1.7.2.2: Hyper objects: “The elephant in the room”	35
1.7.1.3: Decency: “Making a plan”.....	37
1.8 The journey through the research; Methodology and ethical considerations	37
1.8.1 The field: Madziva rural area.....	38
1.8.2 Ethnographic approach	38
1.8.3 Interviews	39
1.8.4 Participant observation.....	40
1.8.5 Networks in existence	40
1.8.6 Positionality and reflexivity.....	41
1.8.7 Data collection tools	42
1.8.8 Data analysis	42
1.8.9 Ethical considerations	43
1.9 Conclusion	44
1.10 Organization of the thesis	44
CHAPTER 2	45
2.1 Drought as a hyper object in Madziva	45
2.2 Experience of drought as a hyper object on a global level	46
2.3 Experience of drought as a hyper object on national level:	48

Zimbabwe	48
2.4 Women’s experience of drought a hyper object on a local level: Madziva rural area	49
2.5 Conclusion	52
CHAPTER 3	53
3.1 Introduction.....	53
3.2 Slow violence: Women’s experience of drought in Madziva	53
3.3 On eating and being eaten: The story of survival for women in Madziva	55
3.4 Migration and Family Fragments in a time of drought	56
3.5 More than human socialites: Slow violence on plants, critters and soils	58
3.6 From adaptation theory to matters of care: On a politics of well-being in Madziva	59
3.7 Government’s irregularities and uncertainty leading to poverty in Madziva rural	60
3.8 Lack of knowledge’s contribution to poverty in Madziva rural area	61
3.9 Poverty leading to health issues in Madziva	61
3.10 “Making a plan” in times of drought in Madziva rural area	63
3.11 Conclusion	64
CHAPTER 4	65
4.1 Facing the giant: Justice, gender equity, and mitigation measures in time of Drought and precarity in Madziva	65
4.2 Global perspectives on gender justice through legal reforms in time of drought and precarity .66	
4.3 The role of local institutions in mitigating extreme weather conditions impacts such as drought	67
4.4 Women as actors and indigenous knowledge in extreme weather condition mitigation.	68
4.5 Non-governmental Organizations and Societal approach in dealing with drought in Madziva..	68
4.6 The role of the government in mitigating the effects of drought in Madziva rural area	69
4.7 The gendered adaptation and mitigation measures	70
4.8 The imperativeness of indigenous knowledge in adapting and mitigating the impacts of drought in Madziva rural area	72
4.9 Conclusion	73
CHAPTER 5: EXECUTIVE SUMMARY	74
5.1 Introduction:.....	74
5.2 Objective of study	74
5.3 Summary, conclusion and findings.....	74
5.5 Recommendations.....	76
REFERENCE LIST	78

LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AVHRR	Advanced High-Resolution Radiometer
CA	Conservation Agriculture
ENSO	El nino Southern Oscillation
ESAP	Economic Structural Adjustments Programme
FAO	Food Aid Programme
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
IPCC	Intergovernmental Panel on Climate change
ISDR	International Strategy for Disaster Reduction
ITCZ	Inter-Tropical Convergence Zone
MDC	Movement Democratic Change
MD	Modern Knowledge
MP	Member of Parliament
NGO	Non-Governmental Organization
RHA	Risk hazard approach
UNDP	United Nations Development Programme
UNISDR	United Nations International Strategy for Disaster Reduction
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization
WFP	World Food Programme
ZANU-PF	Zimbabwe African National Union-Patriotic Front
ZIMVAC	Zimbabwe Vulnerability Assessment Committee

List of figures

Figure 1: shows premature wilting of crops in Madziva

Fig 2: Shows Young boys in Madziva exhuming mice and selling them on the side of the road in Madziva

Figure 3: Study area: Madziva rural area.

Figure 4: An image of me, pumping water from a manual borehole.

Figure 5: An illustration of how drought has destroyed crops in Madziva rural area.

Figure 6: The type of water that cattle in Madziva rural area drink due to water scarcity.

CHAPTER 1

1.1 Ties that bind, ties that break: Gender, families and life dynamics

Box 1

I was fortunate enough to have met one of my childhood friends, Patience, because I thought she was going to help me navigate my field site. I was sitting on a white painted bench just outside our rondavel when she came, and we spent about an hour chatting and giggling like little girls. I remember how easy it was to connect with her given our shared histories. It also made me quite aware of how different things have turned out for each of us. I was very aware of my privilege in that moment. Patience told me that she had to leave because there were a couple of things that needed to be done at her place. Her mother had gone to the garden to water the vegetables where she had to travel for about five kilometers (km) to get to the water source where she had erected the garden. Whilst she told me all of this, I could not help but wonder where their father was. Patience had not mentioned him during our conversation. I decided to escort her as I did not have much to do. I also saw it as an opportunity to familiarize myself with the area with her as my guide since I had not visited in a while. We headed off to her place where I met her siblings, who were quite shy. Unfortunately, I did not get to spend as much time as I would have liked to.

I kept thinking back about Patience's mother and some of the challenges she had to go through just to access water for gardening. For many, access to water means just opening a tap, but for most it means travelling distances. More so, they may have to travel further to collect water and firewood. Whilst in the field, I also had the same experience. To access water for consumption and domestic purposes, my cousins and I had to travel for about four to five kilometers.

I looked at the landscape around me and saw how dry it was. The landscape showed the changes over the years, and to me, it made drought real and very visible. The ground was bare, a clear indication of overgrazing and lack of rain, symbolizing drought. Tree leaves were brown showing a lack of water. The soil had become too sandy and looked barren because it was exposed to the scorching sun without receiving rains for weeks.

My aunt pointed out that since 2012, it had never rained like it used to in the previous decade. She concluded by saying, any year that ends with "2" must have been cursed in terms of the likelihood of poor rains or drought. Her conclusions were based on the fact that the years, 1982, 1992, 2002, and 2012 were drought years, and this is also substantiated by (Nangombe, 2010). Madziva has just gradually deteriorated from the one that I grew up knowing. In the rich dark soils where there used to be abundance of maize, chomolia, tomatoes and sweet potatoes, now there are only poor beds of pale green vegetables and garlic, evidently struggling to survive in

dusty soils. In the fields, maize and tobacco had succumbed to the extreme hot weather conditions wilting, turning yellow and brown. Even as I was strolling around the village, the heat was unbearable. I could feel it penetrating through my skin. Even my hair smelt like it was on fire.

In Zimbabwe, the meteorological records reveal notable high temperatures, rainfall variability and extreme events from November 2015 to December 2017 (Echanove, 2017). I witnessed some of these extreme perilous events. On the 15th of December 2017 in the afternoon I looked out towards the direction of Madziva growth point from the veranda of my aunt's bedroom. I was convinced that the rains were about to pour in the village as the thick rain bearing clouds appeared to be coming from the North-Eastern direction. However, on getting to Madziva early in the evening I was really surprised to find that not even a single drop had fallen in the village. For the greater part of December, it became a common sight to see clouds forming, promising to bring rain, and yet just disappearing without precipitating, paving way for a totally clear blue sky and leaving people with many unanswered rain related questions. People in Madziva were now asking whether the whole country was really preparing for a drought year.

Some people were suggesting of approaching spirit mediums so that someday the rain would fall. Approaching spirit mediums is not a new phenomenon to most Zimbabwean rural communities. Worby (1992) found that such scenarios in which rain bearing clouds come and disappear were attributed to the power of rival spirit medium or claimants to recognition as spirit mediums, who were trying to demonstrate their capacity to make the rain clouds come or go as a sign of their power and legitimacy.

Furthermore, Guha-Sapir *et al.* (2016:28) state that drought is one of the top climatic disasters to ever hit the country. Many people were affected by this hazard between 1982 and 2007. In Madziva, it seemed to have had a huge impact even in 2017/2018 years. As indicated by Smith (2007) and Elia, Mutula and Stilwel (2014), indigenous (local) people show that there are alternative ways of knowing about the climatic disasters. The Bonam in Burkina Faso rely on fruit production indicators of certain trees at the onset of the rainy season and temperatures during the dry season (Roncoli, Ingram and Kirshen, 2002:413). Roncolli (2006) concurs that there are multiple sources of weather forecasting among the villagers, as African farmers do not generally rely on a single forecasting indicator. In The sources of weather/farming season forecasting used in Madziva are mainly local indicators based on observing flora and fauna, the nature of the preceding winter period and prophecy from Independent African Churches.

With the 2017 rain season approaching, villagers had begun to assess the favorability of the coming rain season by comparing the situation in their village with that of other villages and various places in other parts of the country through different means of communication. The

common conclusions were that when wild fruits such as wild loquat fruit (locally called *mazhanje*), mango and berchemia discolor, also known as african sweets (locally called nyii) are in abundance, it therefore means that the rainy season will be a very good one and therefore the likelihood of a good harvest is very high (Mapara, 2009). The opposite is true; the scarcity of these fruits are interpreted as an indication of a poor rainy season ahead and consequently, expectations of a poor harvest (Muguti and Maposa, 2011).

As I moved through the village between December 2017 and January 2018, I noticed that the *wild loquat fruit* had not been as abundant as in other seasons. In fact, there was not even a single *wild loquat fruit* in the forest. Strangely though one could only sporadically find *fruit* at trees located in people's homesteads. I noticed that for the very first time since I was a child the *wild loquat fruit* tree at the far corner of my aunt's yard which produces very sweet *fruits* had no *fruits* at this time of the year. I began to wonder whether this was a sign that the tree had aged and therefore could no longer bear fruits. This was difficult for me to conclude and reconcile as most of these trees in the forest had no fruits. Just like most villagers I began to wonder whether it was an indicator of the coming poor 2017/2018 farming season. Though not fully convinced, I came to a partial conclusion that drought had just made people vulnerable to hunger and precarity as their sources of income, such as maize, which require a lot of rain could not survive in such weather conditions.

Chagutah (2010) notes that Zimbabwe's heavy reliance on rain-fed agriculture and natural resources for livelihood has made it more vulnerable to drought. Low agricultural yields, food insecurity, fall in economic productivity; retrenchments and poverty have been some of the effects of droughts in this country. For rural areas, it has been worse as most of them rely on agricultural activities. This has then necessitated the migration of people to cities in search for greener pastures.

Furthermore, in Madziva men have been migrating to cities in search of better opportunities. Most women mentioned that the reason why mostly men migrate to cities is because they cannot stand failing to provide for their families as breadwinners. Most men choose to go work and send remittances to their families. Others indicated that, traditionally, when there was no food in the home, men were expected to go out and hunt to fend for their families, and this has not changed.

Some of the delegation of tasks in managing the home that stem from traditional gendered norms and expectations have pressurized men to migrate to cities with the hope that they will find better jobs and provide for their families. Even the United Nation's Food and Agriculture Organization (FAO) (2017) indicate that because many men migrate to towns and immigrate to neighbouring countries to find work, 42.6% of agricultural households are headed by

women. Women are left in charge of all spheres of life. This has caused a major shift in the traditional roles where women had to renegotiate their identities as newly emerging primary providers in the absence of their male counterparts.

With the rural-urban migration of men, it has become the responsibility of women to take care of the families in all aspects of rural life in areas such as Madziva. The traditional living arrangements and nucleated families where women and men lived with the rest of their families have been relentlessly affected (Muia, 2003). In this study the definition of a household and household head was obtained from Foster *et al.* (1997: 158):

“A household is one or more people who share cooking and eating arrangements. The household head is the person primarily responsible for the day-to-day running of the household, including child care, breadwinning and household supervision; if tasks were shared, an attempt is made to determine the person primarily responsible for these tasks.”

In most of East Asia, the elderly are almost exclusively provided for by the intergenerational household with most elderly people residing with their children and grandchildren. The intergenerational family unit provides the daily food and housing requirements for the elderly and offers them the companionship of their children and grandchildren (Kochar, 1999). Generally older women in the developing world have been found to be more likely to live in solitary households than older men (Knodel and Ofstedal, 2003:684). These situations have been attributed to drastic changes in intergenerational relations leading to the rise of women headed households taking care of homesteads on their own in rural areas (Muia, 2013). However, this research found the contrary as all the women heads of households in the study were not living alone. Most of the elderly and young women were living with their grandchildren and children respectively. However, these women, as heads of households, were responsible for primary care-giving.

An example of this primary care-giving and responsibility in Madziva was indicated by Chipo who said that as a result of men moving to the urban areas, women are expected to do the work that men usually do when they are present. She mentioned that, in Madziva, men are usually responsible for irrigation schemes, heading cattle and ploughing in the fields, while women take care of the households and children. However, because of migration these dynamics, both domestic and non-domestic responsibilities are left in the hands of the already burdened women who have become overburdened.

However, it is what it is, life goes on. Irrespective of these challenges, families need food on the table, children need to go to school, and women are expected to ‘make a plan’. In Mutendi’s thesis, (2017) the concept of “making a plan” outlines the experiences of pregnant mine workers that, irrespective of the absence of decent supportive pregnancy infrastructures at the mine and the economic stability, women are obliged to ‘make a plan.’ Drawing this to the

context of this research fits in because, in the face of drought and absence of men to take up their non-domestic chores, women in Madziva are expected to “make a plan,” in providing for their families, regardless of water scarcity that has been exacerbated by drought and in most cases impeded bumper harvests for the market and consumption.

There are other social obligations that have been drawing women’s attention and inhibiting them from focusing on their own households. These activities are not compensated for and do not have a monetary attachment to them. Mai Gatsi, an elderly woman, respondent, indicated that sometimes most elderly and some middle-aged women in Madziva rural area are called upon to perform midwife roles because of their experience. She personally is expected to visit sick relatives and to help them seek medical treatment. Another respondent, Mai Mazwi mentioned that at some point she went to her daughters’ home to be near the health center where she was receiving treatment for her back. Unfortunately, in August 2017 her son-in-law passed away the afternoon she was supposed to return to the village, forcing her to extend her stay for close to a month to console her grieving daughter. However, when she came back home, vegetables in her garden were almost wilting in the hot December sun as her grandson had not irrigated them despite her constant reminders.

Women also take care of their grandchildren, attend funerals and still tend to their vegetable gardens. In their observations, Knodel, Watkins and Van Landingham (2003:156) show that social obligations which draw women heads of households away from their homes, their care giving role and their livelihood sources may lead to serious financial challenges if such roles compete with the time needed to earn a livelihood.

Furthermore, several women indicated that due to drought they have resorted to growing drought resistant crops such as sorghum, rapoko and round nuts. It is interesting that during these desperate times, women fall back on indigenous crops rather than relying on exotic cash crops such as maize, that are often seen as a symbol of advancement (Plessis, 2003:5). Maize is very important because it is a major food source due to its excellent properties; easy to propagate from single plants or small nurseries to hundreds of hectares and also easy to harvest (Plessis, 2003:7). However, as important as it is to the people of Madziva, for most people who had planted it, it had begun wilting in December, a month in which it is supposed to be germinating. The lack of rains affected the quality of the first maize that was planted with the first rains (locally called *Bumharutsva*,) which rained in October. Some maize crops were already drying up as if in preparation for harvesting even though it had not grown through the process of firming.

Fig 1: Pre-mature wilting of crops in Madziva rural as a result of drought in Zimbabwe



More so, observations by Lyimo and Kangalawe (2010) show that in Tanzania food security is affected by persistent drought in the face of rising temperatures and crop failures which are becoming common particularly among seasonal food crops. Such climate change induced situations are similar to the ones experienced by Madziva rural dwellers. This drought is bound to affect rural women heads of households as their major livelihood activities are agro-based which makes them increasingly vulnerable in the face of projected erratic rainfall activities. This had an impact on the yields from the fields of female heads of households whilst also affecting the quality of the harvest. Nelson (2011) pointed out that existing inequalities will see the impacts of climate change playing out into existing patterns of vulnerability in communities with the possibility of making patterns of inequality more pronounced.

As a way of curtailing these challenges, the people of Madziva resorted to growing indigenous crops which do not require much water. They have at least been able to provide for their families. One of the participants indicated that due to poor rains received that year and as the maize wilted in the sun, her household survived by eating indigenous pumpkins which she would cook in a small ten-liter drum. Her relish was the pumpkin leaves with the pumpkins replacing the staple food, stiff porridge (*sadza*). She was glad that no one died because of the severe hunger and that none of her livestock perished despite the lack of pasture and water. Respondents also pointed out that a number of villagers who had planted with the early rains managed to get a few buckets of maize. It was mainly those who planted late who never got any maize. Due to this experience, they always planted with the first rains despite it being a big

gamble. Boillat and Berkes (2013) and Moran *et al.* (2006) have also shown that shifting planting dates is also an effective adaptation strategy in the face of drought. In rural Hausaland, in some instances, seed is lost due to abortive sowing as planting dates change due to the erratic distribution of rainfall within the farming-season (Hill, 1972). As the impact of climate change continues to be felt, women heads of households increasingly have to shift planting dates in response to changing rainfall patterns and the unreliability of the rains.

Research on views from the vulnerable by authors such as Tanner (2010), Berrang-Ford *et al.* (2011), Arora-Jonsson (2011) and Madzingira (1997) have highlighted that women and children are more vulnerable to climate change when compared to men as they are the primary managers of family, food, water and health. However, women are not seen as just victims as researchers are aware of their agency and have taken cognizance of their ability “to make a plan” in spite of their challenges in the face of drought.

1.2 Research question

What are the locals' understandings of extreme weather conditions particularly drought in Madziva rural area in Zimbabwe? And how are gender roles shaped or reinforced by this?

The main purpose of this ethnographic study is to examine how women households in Madziva rural area understand, explain, experience and respond to the ongoing impacts of drought that has manifested in their rural area. The terminology used by these women to describe weather and climate as well as their explanations and understandings of climate change are based on their experience, close association and observation of daily, weekly, monthly, yearly and seasonal variations of weather and climate in their rural area. I spent most of my time in Madziva during holidays when I was growing up and I know the important roles that women played in the absence of their husbands. The decision to focus on women headed households in this research was thus influenced by my personal experiences.

This research does not seek to document the global level causes of climate change but rather seek to focus on the importance of local level understandings and explanations of the causes of drought. It focuses on the experiences of households that are headed by women who have lived in the study area for a number of years. They have observed changes in the weather and climate as well as the transformations in the explanations of weather and climate phenomena. The report thus seeks to make a significant contribution to the extension of the body of work on local knowledge, women who are heads of households and interspecies interaction in the area of climate change.

1.3 A brief background of Zimbabwe and Madziva rural area weather conditions.

Madziva rural area is in Mashonaland central province where it is dominated by Shona speaking locals. It lies 188km North West of Harare, the capital city of Zimbabwe, and its responsible local authority is Chaminuka Rural District Council (Manzira, 2015:3). Madziva was established after the amalgamation of Shamva Rural Council and Chaminuka Rural District Council in 1994, (Manzira 2015:3). During the pre-independence epoch, Mashonaland central province, where was believed to be on the forefront in resisting colonization under the leadership of the spirit medium Mbuya Nehanda (Chaminuka, 2017). Mbuya Nehanda was a respected Zezuru Shona spirit medium who was credited with being instrumental in the organization of the first nationwide resistance against colonialism between 1896 and 1897. This resistance was called First Chimurenga (Mpofu, 2014:155).

The issue of land in Zimbabwe is linked to African spiritual struggles, that every hero or heroine who subsequently came after Nehanda wanted to see and fulfill Nehanda's wish of blacks owning the land (Mpofu, 2014). This brings one to a conclusion that besides being an economic resource, land is also an important political and spiritual resource to the people of Zimbabwe (Mpofu, 2014). As a result, in places such as Madziva, not only do people rely on land for their survival through agrarian practices but land also gives one the sense of belonging. People without access to their land and organic connection with their ancestors are people without dignity and the very essence of sovereignty as pointed out by Mpofu, 2014: 13). Furthermore, in Madziva most people depend on having access to a small amount of land for crops, gardening for horticulture, pasturing livestock for either subsistence or for income from sale, which they can control independently (Makombe, 2013).

All the women in the study practiced rain-fed farming. Mai Choga pointed out that her main source of livelihood was her vegetable garden. However, Madziva has suffered from several droughts and this has been due to phenomena such as El-nino, among others. Thomas and Hollingsworth (2016) indicate that in 2015, El niño effects emerged globally ushering drier conditions and hotter than normal weather conditions to Eastern and Southern Africa. Zimbabwe has of late been affected by an increased wave of natural disasters in the form of droughts, floods and cyclones which are all climate change related (Brown *et al.*, 2012; Chagutah, 2011).

In Madziva, for a decade now as indicated by most participants, the rainfall patterns have been unpredictable and mostly characterized by dry spells. This is making women headed households' livelihoods precarious. It increases their vulnerability in the context of scarcity and limited access to resources. Pamhi, one of the participants, indicated that it has been years since Madziva has received proper rain. She mentioned that this has hindered most farmers' ability to have a bumper harvest for sale and consumption. This is substantiated by the Zimbabwe

Vulnerability Assessment Committee (ZIMVAC) (2010) which states that poor rainfall in Madziva has resulted in households failing to harvest any meaningful produce, adding that even those who have been fortunate enough to harvest grain have not had enough to sustain them throughout the season.

Paradza (2009:423) observed that in the backdrop of a deteriorating Zimbabwean economy which has affected the livelihoods and security of elderly and young people, other sources of income cushion the families in rural areas from the impact of a non performing economy. Such sources which are not linked to agriculture and not dependent on the health of the owner include remittances of incomes that are sent by those that are in cities to the elderly, women and those that live in rural areas.

Furthermore, despite farming being the main source of livelihood in Madziva, these women are increasingly diversifying and pursuing multiple livelihoods in the face of drought. Diversifying into non-farming livelihood activities has also been seen as important for rural households in order to generate additional income (Ulrich, 2010). Berkvens (1997) sheds light on the usefulness of economic diversification and enhanced productivity as an important component of rural development as linkages between different economic sectors in an area and between different areas are exploited. Adaptation strategies by women in Madziva have increasingly led to the pursuit of multiple non-farm economic activities as women pursue their economic independence. This is in line with Nelson (2011); Batterbury (2008); and Nhemachena (2008) who mention that many rural households are engaging in off-farm livelihood activities and livelihood diversification including renting out their rooms to outsiders and trading to make a living in the face of drought to cushion themselves from crop failure. With the help of their children, the women exhume and sell rodents such as mice along Mt Darwin and Bindura road.

Fig 2: The pictures below show how young boys exhume and sell mice on the side of the road in Madziva, Zimbabwe.



Furthermore, Zimbabwe is one of the countries in Africa that has been affected tremendously by drought, and some of the notable years that the country was seriously hit by drought include 1982-1983, 1986-1987, 1992-1993, 2002-2004, 2007-2008 (Jerie and Matanga, 2011). More so, the country seems to be facing mild drought from 2009 to 2018. It is crucial to note that the agricultural sector in Zimbabwe contributes to 19% of the country's Gross Domestic Product (GDP) and approximately 80% of Zimbabweans depend on agriculture which is mostly rain-fed (Madzwamuse, 2010).

Zimbabwe has a history of being a food exporting country, and that is where it got the title bread basket of Africa. There is a commonly held view that Zimbabwe used to be the bread basket of Africa, although the specific time frame in history is unclear (Sihlobo, 2017). The decline in Zimbabwe's maize production and trade balance worsened following the introduction of the country's Fast-Track Land Reform Programme in 2001 (Reuters, 2016). On the other hand, a regional drought worsened by the El Niño weather phenomenon has affected South Africa, Malawi, Zambia as well as Zimbabwe, leaving tens of thousands of cattle dead, reservoirs depleted and crops destroyed (Kassie *et al.*, 2017).

Furthermore, due to factors such as drought, the food supply dwindled to such an extent that there was insufficient food for the locals, and the major response was to seek international relief and food aid (Shoko, 2012). Tsitsi, who eventually became a friend of mine, said that although there are other factors such as bad politics and Economic Structural Adjustments Programs that worsened the food supply and the economic status of Zimbabwe, she stated that drought played a huge role in sabotaging food supply in the country.

Upon realizing the government's lack of sufficient money and capacity to respond given the severity of the drought, then president Robert Mugabe declared the drought a national disaster which then led the government to appeal for one billion United States dollars (Thomas and Hollingsworth, 2016) in national and international assistance. More so, Shamva district, where Madziva rural is located, is among Zimbabwe's severely affected areas and the trend is that the drought usually occurs once in every two years (Shoko, 2012). Furthermore, numerous rural communities were unable to grow any crops in 2016 despite having planted three or more times due to erratic rainfall. In other rural areas in Zimbabwe, most families that did not receive government and non-governmental assistance could only afford one meal a day (Thomas and Hollingsworth, 2016). This is not different to the situation in Madziva, as one of my participants Mai Paida remarked;

Mwanangu, tiripanguva yakaoma, mvura hakuna, zvatakarima zvakaoma nekushaya mvura, apa hurumende hapana kana zvairikumboita kutibatsira, tikutosimba nemaricho, izvezvi handizive kuti mangwana mhuri ndichaipei.

My child, we are facing hard times, there is no water. It did not rain. On the other hand, the government is not giving us any assistance, some of us we are now depending on part time jobs from local farms, and as I speak right now, I do not know what my family is going to eat tomorrow.

More so, while Zimbabwe has experienced drought and food deficit in the past, there are some other factors that are worsening the situation which are complicating the responses to the disasters and aggravating the crisis. The economy is in shambles, unemployment rate is high, and corruption is rampant (Thomas and Hollingsworth, 2016). People in Mashonaland Central, especially in the Madziva region, have seen the importance of land and they have treasured and perceived it as their main source of income through agrarian practices. Since they had acquired the land through an intense altercation between them and colonizers, people from this region put all their focus on land productivity as their means of production. Unfortunately, because of drought, people mostly women in Madziva have faced a lot of challenges, mainly socially and economically.

1.4 Gender in relation to drought

Drought vulnerability in Zimbabwean communities is disproportionate to gender (Mapfungautsi and Munhande, 2013). Drought is seen as a significant threat to women. Dodman (2010) argues that climate change will exacerbate gender dimensions of vulnerability, which arise from inequalities. Madzwamuse (2010) also states that 70% of women depending on small holder farming are particularly vulnerable to the knock-on effects of climate change.

In light of these views, it is imperative that focused solutions to address the root causes of vulnerability be sought. It must also be noted that not only are women vulnerable to the effects of climate change such as drought, gender inequalities have further burdened women.

Gender inequalities in the distribution of assets and opportunities ultimately mean that women's choices are severely constrained in the face of drought. For Antwi-Agyei (2012), in Ghana, female-headed households without any reliable sources of income are more vulnerable to the impact of climate change than male-headed households. Furthermore, constraints towards agro-based livelihood options for rural women in the face of drought are mainly attributed to restrictions regarding land ownership for rural women as they lack productive land to farm (Skinner, 2011:12).

As noted by Skinner (2011), many developing countries' economic constraints and cultural norms restrict women's access to paid employment which therefore means that their livelihoods are dependent on climate-sensitive sectors, such as subsistence agriculture or water collection. Nelson *et al.*, (2002:51); Dankelman (2002:24) and Skinner (2011:2) also show that it is highly likely that the impact of climate change is gendered as women and men do not experience climate change effects equally. Aguilar (2008) quoted in Crate and Nuttall (2009:12) contends that women's vulnerability to weather catastrophes is linked to the patriarchal nature of some societies which forces women to interact directly with their natural environment, while increasing their poverty and vulnerability to environmental change.

Observations of the poor communities in the Yucatan Peninsula in Mexico showed that in the event of a hurricane, there would be three to four women dead for every man Crate and Nuttall (2009). This was attributed to the culturally specific devaluation of their gender, as many live in conditions of social exclusion characterized by unequal access to resources. They are excluded from survival skills learning such as tree climbing and swimming which help during floods. There are also restrictions on women's movement in times of crisis and unequal allocation of food resources to girls and women, rendering them physically weaker in times of evacuation and crisis.

The burden of drought on rural women is further compounded by the fact that if climate change leads to increased aridity, women end up walking increasingly further and further to look for food, fuel and water compared to men (Brown, 2012; Denton, 2011; Ziervogel *et al.*, 2006). This increased burden on women has ripple effects as it ultimately means that women will have limited time to devote to their own education, income-generating activities or participation in community decision-making processes and thus further entrenching unequal gender relations Skinner (2011). Skinner (2011) further argues that climate adaptation policies too often treat

women only as vulnerable beneficiaries rather than as rights-holding citizens who need to be recognized for the agency, skills and experience that they can contribute.

What makes women relevant and important for this study is their intimate knowledge of environmental change and adaptation over time. Furthermore, in a gendered division of rural labor and expertise women are responsible for pumping, carrying, conserving and utilizing household water. Women are also engaged with other animal species as managers of livestock and defenders against predators. This research was also motivated by the realization that the impact of drought on women has received limited ethnographic scrutiny and more so in a region that cannot be classified as being semi-arid or arid. The study location is located in natural region III which should normally experience favorable climatic conditions and receive normal to above normal rainfall conditions.

The United Nations International Strategy for Disaster Reduction (UNISDR) (2014) notes that, annually 100 million women and girls are affected by disasters in which female-headed households are often among the poorest and most vulnerable to climate change risks. Brown *et al.*, (2012), view gender mainstreaming as vital in dealing with disasters which affect communities. Molden (2007:320) argues that climate change presents a significant threat to human security, especially for women who represent 70% of the world's poor population which relies on rain-fed agriculture.

Furthermore, women's alignment to nature has been matched and necessitated by the development of the elite masculine identity centering on distance from the feminine, from nature as necessity, from such natural areas in human life as reproduction, and around control, domination and interiorization of the natural sphere (Plumwood, 2002:34). Plumwood (2002) mentions that there are dominant and ancient traditions that connect men with culture and women with nature.

“The very idea of connecting women with nature seems too many to be regressive and insulting summoning up images of women as earth mothers, as passive, reproductive animals, contented cows immersed in the body and in the unreflective experiencing of life” (Plumwood, 2002:20).

According to Hegel, (1989) a woman is treated like a necessary object who is needed to preserve the species or to provide food and drink. However, feminine closeness to nature has hardly been a compliment (Aquinas, 1989: 183). Plumwood (2002:22) suggests that:

“The association of women with nature and men with culture or reason can still be seen as providing much of the basis of the cultural elaboration of women's oppression in the west”.

Understanding this migration of men to urban areas while leaving women behind in Madziva is relevant because according to the Shona culture, a woman is perceived to be the bedrock of

a home and has to take care of the family and the environment. This confines them and limits their movements and in times of drought they are left behind to face the calamity on their own. More so, women are also hardest hit by environmental degradation and are perceived to have special knowledge of natural resource system. This is a scenario I witnessed in Madziva. All women I interviewed were farmers. I saw most of them daily in their fields where they had planted their indigenous crops. This dedication is due to a heightened responsibility by women for household survival. For women drought means crops fail and families go hungry. When there is inadequate food, women can sacrifice theirs just to make sure the family is well taken care of. As such, women's socially ascribed roles as care-givers and providers make them vulnerable to drought.

There are different factors that have caused drought which include El nino. Thomas and Hollingsworth (2016) argue that the El nino-induced drought in Zimbabwe has caused decades of underdevelopment and on the other hand poor governance left 72 percent of Zimbabweans living below the poverty line. El nino is not peculiar to Zimbabwe at large, its effect has been experienced by most people. Chigora and Zvikomborero (2010) indicate that most regions in Zimbabwe suffered from the devastating effects of El nino and cyclone Eline which did not only expose the country to poverty but made people even more vulnerable. Most of the planted crops and livestock, especially in rural areas such as Madziva, were affected by the dry spells which left people without food and water for agricultural and domestic use. The next paragraph explores El niño's influence on the weather patterns in Zimbabwe, and how it has affected the livelihoods of rural dwellers such as the ones in Madziva rural area, predominantly women.

1.5 El nino and its possible influence on weather patterns in Zimbabwe, Madziva rural.

El nino is the local warming of surface waters that takes place in the whole equatorial region of the central and eastern Pacific Ocean of the Peruvian coast, which then affects the atmospheric circulation worldwide (Rojas, et al., 2014). It is associated with persistent warmer temperatures and consistent changes in wind and rainfall patterns. El nino has been described as an event which is a huge threat to crops as it is associated with drought while sometimes hurricanes and flash floods which both are not favorable conditions for most of the crops that are grown in areas like Madziva rural. In Zimbabwe the occurrence of drought is often linked to El nino episodes and has worsened since the 1980s (International Strategy for Disaster Reduction (ISDR), 2002:14). It is also indicated by Thomas and Hollingsworth (2016) that in 2015 El nino effects emerged globally as bringing drier and hotter conditions than normal. In Zimbabwe, it ushered in a situation of below-average rainfall with the previous rainy season

resulting in the worst drought in 35 years. It had severe impacts on agriculture, livestock and food security.

Although El Niño cannot be entirely held accountable for the drought that was experienced in Madziva, its occurrence has increased the weather uncertainty. The impact of El Niño were far more than anticipated and because of its severity which the government cannot solve alone, there is a need to increase humanitarian funding (Thomas and Hollingsworth, 2016). The assessment in 2015 by the government and international partners indicated that the impacts of El Niño were far worse than initially anticipated to such an extent that maize production for 2015 to 2016 cropping year was 35% to 50% below the five-year average.

The fluctuating weather patterns describe the events of El Niño taking place in Madziva and Zimbabwe at large. Kundai, one of the participants mentioned that:

We do not know what is really happening. In 2016 there was drought. In 2017 floods occurred several times, and this year it looks like there is no rain. We do not know how we are going to deal with this.

However, since there is no literature yet to support the claim that El Niño was responsible for the drought in Madziva between 2017 to 2018, it should be noted that if El Niño surely contributed to high temperatures, it is not the first time it happened in Zimbabwe. According to Rojas, *et al.* (2014) the countries affected by drought caused by the El Niño event in 1989 include, Botswana, Zimbabwe, South Africa and Southern Mozambique. It is said to have occurred again in 2008 in Zimbabwe. In 2006 to 2007 Agricultural production, the Southern and Western parts of Zimbabwe were partially affected by drought conditions linked to El Niño (Mpofu, 2007). This shows there is a possibility of it having occurred in Zimbabwe in 2017-2018.

Due to drought at the time of this research, people were still stocking their inputs in granaries at a time they should be planting. This has left many people in Madziva desperate and hopeless as their predictions regarding on rain had gone way off the mark. To understand more about predictions used by small-scale farmers, the following section will unpack the ways in which farmers in Madziva rural used indigenous knowledge as a meteorological service.

1.6 Ways of knowing weather in Madziva rural area: Indigenous knowledge, science and enlightenment

Indigenous knowledge is best described as a complex set of ideas, knowledge skills, and technologies existing and developed around specific conditions of people and societies indigenous to a geographic area (Wilson, 2008). It constitutes that knowledge that people in some communities have developed and continue to develop (Nayoo, 2007). Early attempts at

embracing indigenous knowledge systems in climate change faced resistance from biophysical scientists (Brokensha, 1980). However, studies conducted in agriculture and biodiversity suggested the importance of embracing indigenous knowledge systems in managing the effects of climate change and variability (Adger, 2003). Home-grown knowledge and solutions are perceived to be sustainable and acceptable to all local members (Risiro, 2012). Emphasizing the usage of locally engineered ethno-science is believed to fast track adaptation strategies and planning models which reduces the vulnerability to culminating disasters (Risiro, 2012).

Furthermore, it is beyond any reasonable doubt that women's local knowledge of local weather, crops and crop production enables them to employ strategies of seed selection that enables them to adapt to climate change. For example, in the face of drought women, to some extent, prefer growing local bred seed varieties such as *zviyo* (millet) as a response to the increasing uncertainty of the normal farming season. The knowledge of these women, related to long-term local climate variability, is grounded in the historical and contemporary understanding of their environment.

In the face of the unpredictability of rainfall, women are increasingly finding it difficult to plan and proceed with agro-based livelihood activities based on the rains' names. An example of indigenous knowledge that has been used by people of Madziva in the preceding years is that whenever they see certain species of birds flocking towards the East, it means that rain is going to fall the next day. These birds know the time they should cross over, the time the rain should be falling. This practice is not peculiar to Madziva.

In many indigenous communities, multiple ethno-meteorological indicators are used in planning and managing climate change hazards and risks. Some indigenous communities in Tanzania rely on information from tree phonology, birds and insects as sources of seasonal forecasting (Chang, 2008). These indicators are valued for providing spatial and temporal seasonal information important in agriculture. In other places, indigenous indicators have been used on a larger scale. Apart from birds, indigenous farmers also attached symbolic meanings to animal behaviors and breeding patterns in foretelling pleasant and unpleasant short- and long-term seasonal events. Generally, low breeding patterns by animals is usually associated with drought.

In other cases, presence of uncommon animals in communities provided invaluable seasonal information. As noted by Kijazi *et al.* (2013), the appearance of scarce bee-eaters in October indicates imminent rains in Tanzania. Such information is important in alerting farmers to get prepared for the new planting season. In other areas in Uganda, jumping of calves is associated with a good farming season with normal or

above normal rainfall patterns Okonya, *et al.*, 2013). It can be noted that different animal behaviors across the continent provide important information that can help with the implementation of pragmatic strategies for coping with disasters.

Furthermore, many local communities rely on rain making ceremonies for influencing weather and seasonal outlook. Execution or non-execution of rain making ritual has profound influence on seasonal quality. Consistent performance of the rain making ceremonies guarantees fruitful farming season (Roncoli *et al.*, 2002). Rain making ceremonies are common practice in many parts of Africa like Burkina Faso, (Roncoli, *et al.*, 2002) and Zimbabwe (Ngara *et al.*, 2014), among many others. Rain making rituals were performed for inducing rain or thanking ancestors and gods for good harvests. In some cases, rituals were conducted as a way of ending droughts or avoiding impending disasters (Roncoli *et al.*, 2002). Rain making ceremonies are both a goal and a strategy of avoiding disasters such as droughts.

There is also another factor that reduced the effectiveness of indigenous knowledge in local communities and that is its rigidities. Bio-physical scientists have blamed and regarded indigenous knowledge as a dead end in itself. Their arguments state that some of the ethno-meteorological symbols and indicators are losing their ground to climate change. As a result, vast plant species and animals are adapting to environmental changes and variations (Cleaveland and Soleri, 2007). These adaptation processes negatively affected indigenous indicators' efficiency in providing reliable seasonal information (Dove, 2000).

On another note, previous violent episodes of colonialism have been blamed for the demise of indigenous knowledge usage in farming communities. Juxtaposing of organic knowledge and western knowledge systems (WKS) created a rift between the two (Denes, 1993 in Ossai, 2010). Organic knowledge suffered a severe onslaught due to lack of power and authority by the local people to preserve it. By comparing the two, the observed outcome was skepticism and "othering" of the indigenous knowledge world view which paved way for its subsequent demise. Peripheral treatment of organic knowledge by colonizers coerced indigenous people into believing that pro-scientific technologies and science are superior than indigenous methods.

Though modern knowledge systems (MK) enjoy popularity in seasonal prediction and planning, research confirmed its shortcomings especially in remote rural communities. Marshal *et al.* (2011) argues that scientific meteorological prediction fails to address spatial and temporal weather trends in micro-ecological environments. In most poor countries of the global south, meteorological base stations provide forecasting information on wider agro-ecological environments. As a result, some predictions made

may not come to pass in all generalized areas. In most cases, local farmers end up shunning weather and seasonal information from meteorological centers.

A lack of efficient communication networks affects smooth dissemination and reception of seasonal information in remote areas. In most cases, local farmers' access to meteorological information is erratic and mainly spread through hearsay. Dependence on hearsay has thus subjected seasonal information to intense distortion. It is against this background that juxtaposition of meteorological and indigenous knowledge is recommended as the standing solution on accessing seasonal information (Speranza *et al.*, 2013).

1.7 LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The literature covers a range of perspectives and situations that have emerged because of women being left in charge of rural homes in the face of water shortages and drought that has been caused by extreme weather conditions in Zimbabwe. It builds on some conceptual frameworks that are relevant to the experiences that mostly women have gone through in Madziva rural area. The focus of these frameworks includes slow violence, hyper objects and decency.

1.7.1 LITERATURE REVIEW

Zimbabwe lies between 15° 30" and 22° 30" south of the equator and 25° and 33° 10" east of the Greenwich Meridian (Chifurira and Chikobvu, 2010:2). It occupies a generally stable plateau which subsides in the Northern part, along the Zambezi valley and in the South, in the Limpopo basin. It is characterized by moderate to high maximum temperatures and evaporation rates often exceed the rainfall limiting subsurface recharge (Davies and Burgess, 2005:1). However, temperatures vary with seasons. The country generally experiences a semi-arid, savannah climate, characterized by two seasons of wet and dry weather (Mutasa, 2008). The rainfall season runs from October to March and the dry season stretches from April to September (Brown *et al.*, 2012). However, the onset varies temporally and spatially, with the North-Western and Southern parts of the country receiving early rains.

Zimbabwe is found within the South Western Indian zone. In this region, low pressure, tropical cyclones, characterised by clockwise, center focused circulations of moisture laden strong winds, bring torrential rainfalls to the South and Western parts of the country (Chifurira and Chikobvu, 2010:3). However, rainfall intensity and amount depend on the passage of the upper westerly waves. Rainfall in the Northern upper part of the country relies on the Intertropical Convergence Zone ITCZ movement. The Southward oscillation of the ITCZ brings heavy rains

which reach peak in December and January (Dube, 2008). However, its movement is influenced by pressure patterns such as the Botswana high (Unganai and Mason, 2002).

Climate variability has surfaced in quite a number of research issues such as the nature and extent of climate change globally. Its related effects, disasters, vulnerabilities and coping mechanisms have been the focus of a number of researches. In Zimbabwe, there has been a lot of research on climatic risks, especially floods and drought (Brown *et al.*, 2012; Chagutah, 2010; Madzwamuse, 2010; Mudzonga, 2012). Focusing on Zimbabwe, the climate is changing as studies by Mugandani *et al.* (2013); Makarau (1999); Low (2005) have all agreed that over the years there have been strong pointers of the existence of climate change in Zimbabwe. As a result, climate change in Zimbabwe has manifested itself in the form of increased variability of rainfall, reduction in the number of rain days, changes in wind direction and temperature changes (Brazier, 2015; Chikodzi, et al, 2013; Mapfumo, Mtambanengwe and Chikowo, 2016). This has led to some parts of Zimbabwe getting drier and warmer (Low, 2005) which are all strong signs of climate change. In terms of changes in rainfall activity, this is supported by research carried out by Mugandani *et al.* (2013) who observed that most meteorological stations in Zimbabwe have recorded a decline in rainfall over the past 100 years.

Furthermore, Southern Africa is characterized by frequent severe droughts. According to Unganai *et al.* (1998), droughts have become a major climatic disaster throughout the region. In Zimbabwe, drought accounts for 6 out of 10 top disasters between 1982 and 2011 (Zimbabwe National Contingency Plan Committee, 2013:8). Extreme weather events have been a persistent phenomenon over Africa. However, recent research informs that they have become more frequent. Kandji *et al.* (2006:8) noted that droughts are diverting from the normal 10 to 20-year frequency. Mudavanhu and Chitsika (2013:29) also noted a steep rise in drought frequency in semi-arid parts of Zimbabwe of a 3-year interval. More so, inasmuch as most households depend on rain-fed agriculture in Southern Africa, this is still a risky activity with low returns (Ziervogel and Calder, 2003; Gwimbi, 2009). The unreliability of the climate is thus a significant cause of rural poverty due to its impact on local livelihoods (Hill, 1972:190-191).

Most research associate drought to the El nino-Southern Oscillation ENSO patterns that is regional sea surface and global atmospheric circulations. According to Clay *et al.* (2003), during El Niño events, South Eastern Africa becomes a bit drier and too wet during La Niña. Hence Southern Africa experiences drought during the onset of El Niño. Anyamba *et al.* (1996) using the Advanced High-Resolution Radiometer (AVHRR), noted a periodical variability over Southern Africa which correlates with the ENSO Index derived from Pacific atmospheric pressure systems. This is also supported by Mason *et al.* (1997) who linked the quasi-

periodicities in rainfall in Southern Africa over an 18-year cycle to variations in sea surface temperatures in the Eastern Pacific and Central Indian Oceans.

Globally, the effects of climate variability and change are becoming more visible, for example heat waves, recurrent floods and droughts. Brown *et al.* (2012:14) point out to continuous floods in the Caribbean-Pacific Islands and the rapid destruction of the mangroves and coral reefs. Stehlik *et al.* (2000) discusses recurrent droughts in the eastern parts of Australia. Musyoki *et al.* (2012) note the escalating droughts in Kenya, Uganda and Rwanda while Benson and Clay (1997) contend that most parts of Sub-Saharan Africa are vulnerable to droughts. As acknowledged by Scheraga and Grambsch (1998), the effects of climate change vary by and across demographic groups. As a result of this observation, the experiences of women in the face of climate change are likely to be diverse in both space and time. Most women in Zimbabwe are also more likely to be living alone or with orphans and other vulnerable children (Young, 2008).

There is a general consensus that, Zimbabwe has, of late, been characterised by erratic rainfalls and extreme events (Brown *et al.*, 2012; Mudzonga, 2012; Chifurira and Chikobvu, 2010). According to Unganai and Mason (2002:1092), the country's entire rainfall seasons show a high inter-annual variability coefficient of 26% in the North and 36% in the South. The Zimbabwe Meteorological Services (quoted in Brown *et al.*, (2012) concur that the dry spells are also persistent. Furthermore, Scoones (2013) observed that rainfall patterns have been closely linked to maize production patterns. Climate variability and change has compromised maize production (World Food Programme, (WFP) 2014). Mugandani (2012) argue that shifting Agro-ecological regions due to climatic changes has resulted in maize production viable regions shrinking and semi-arid regions expanding. However, maize production trends emanate from a plethora of factors such as structural changes, shifts in political, social and economic environment (Anseeuw *et al.*, 2012). The underlying factors included promotion of agricultural production between 1980 and 1990, structural changes such as Economic Structural Adjustment Programme (ESAP) in 1991, the Fast Track Land Reform in 2000 and hyperinflation. National policies such as monopolisation of the Grain Marketing Board (GMB) and its later liberalization, as well as poor farmer payment models have hampered food crop production (Lyddon, 2013). Monopolisation of GMB meant no competition and this crippled service quality. Farmers would not get inputs on time and their returns would be minimal, unable to profitably sustain their agricultural activities.

According to Zvishiri (2013), small grains are tropically adapted C4 crops, characterised by effective water use and an ability to tolerate hot environments, low water retention soils and early maturity. There is a general consensus that small grains are the closest option for semi-arid regions in Zimbabwe (Mudimu, 2003; Mukarumbwa and Mushunje, 2010; Zishiri, 2013).

However, small grains remain unpopular in most areas across Zimbabwe, judging from its hectareage over the years. The farmers lack efficient post harvesting technology whilst the small grains are labour intensive and vulnerable to Jessa and Quelea birds (Mukarumbwa and Mushunje, 2010). Sukume *et al.*, (2000) concur and adds that small grains are not the only option but that short time maize varieties are a potential substitute. Research and innovation on maize varieties as well as technical support on Conservation Agriculture (CA) have been noted to increase maize production.

More so, HIV/AIDS has also had its fair share in declining maize production trends. UNAIDS in Mudimu (2003:34), estimate that of the 2.3 million HIV positive Zimbabweans, 2 million were the active population between 15 to 49 years while 60% were women. Mudimu (2003:34) added that Zimbabwe lost 9.6% of its agricultural labor force to HIV/AIDS in 2000. HIV/AIDS, being a chronic disease, does not only wipe out the labor force, but it takes agricultural productivity time in caring for the sick and has high medical bills.

1.7.1.2 Vulnerability concept in Climate change

Vulnerability forms an integral part of climate change. In the field of climate and climate change studies, the concept of vulnerability centres on the Intergovernmental Panel on Climate change (IPCC) 2001, 2007, 2014 definitions (Olomos, 2001; Chaudhuri, 2003; Taylor and Butterfield, 2011). The initial and second IPCC assessment reports defined vulnerability as the magnitude to which the system is exposed to the impact of climate change. The Third Assessment Report (TAR) revealed a paradigm shift in concept from hazard or risk oriented to a social science focus (Olomos, 2001). Brooks *et al.*, (2003) concede that the IPCC's initial and the TAR definitions are very different and inconsistent. The initial definition conceptualised vulnerability as a function of the system's sensitivity, while the TAR views it as a subset of sensitivity. Vulnerability was defined as the magnitude of exposure and sensitivity and the system's incapacity to adapt to climatic risks (Olomos, 2001).

Shambel (2012: 32) highlighted that in Ethiopia, conditions such as drought, deforestation and erratic rainfall are affecting women's ability to carry out their primary responsibility for food security, household water supply, and the provision of energy for cooking and heating".

Africa has become more vulnerable to drought (FAO, 2007). IPCC (2007) notes that the continent suffers various severe climate change related risks. A number of countries have been heavily affected by drought. Kandji *et al.*, (2006) note that the Zimbabwean GDP fell by 11% in the 1992 drought, South Africa recorded 0,4-1,0% in economic growth while the Zambian GDP fell by 2,8% during the same period. Droughts are not restricted to Southern Africa only as millions of Kenyan and Sudanese pastoralists have been displaced by droughts (Yonetani,

2014). However, the link between droughts and climate change in Africa remains a grey area. Moreover, enormous climate variability and extreme events are already visible in African weather patterns (Dube, 2008; Uganai, 2009).

Extreme weather events, notably droughts, have a devastating impact on food security and livelihoods. However, climatic risks pose gendered experiences as well as responses and, in worst case scenarios, they exacerbate gender inequalities (Chagutah, 2010; Mudavanhu *et al.*, 2013). There is a general consensus that women and children are more vulnerable to drought than men. Cultural gender roles tend to give women more household duties including full time caregiving. According to Musyoki *et al.*, (2012) and Turnbull (2013), women organize day to day meals for their families, making them primary users of natural resources. They are mostly affected in the aftermath of any climatic disaster. Being custodians of almost all household chores, women are more household bound than men. UN Women Watch (2004) notes that due to these gender roles, women barely travel far off compounds to find employment or socialize. This restrictive nature of gender roles exposes women to drought and other climatic risks.

Demetriades and Esplen (2008:24) indicate that most studies on climate change and women have largely regimented the experiences of women as a group. However, they argue that it is crucial that women's experiences be disaggregated. Homogenizing the impact of climate change on women is problematic as this fails to account for the complex interactions between gender and other forms of disadvantage based on class, age, race/ethnicity and sexuality (Skinner, 2011). In summary, women are hit the hardest by the impact of climate change (Wisner *et al.*, 2007).

More so, rural populations are more prone to drought. According to the World Bank (2010) and FAO (2007), over reliance on natural resources and poverty exposes these communities to drought risks. These are the same communities with higher percentages of females (Zimbabwe Statistics (ZIMSAT), 2012; Madzvamuse, 2010). UN Women Watch (2004) substantiates this view and alludes that to the over-representation of women in vulnerable areas as climatic risks often strike traditionally female working environments). According to Mudavanhu and Chitsika (2012), 60% of farmers in Zimbabwe are female. Besides demographic imbalances in rural areas, gender relations also expose women to drought.

Patriarchal systems in many African countries tend to exclude women from decision-making, as well as policy making. FAO (2006) notes that gender relations have, over the years, molded a culture and social systems that marginalize, impoverish and leave women economically insecure. The exclusion of women from decision-making, especially in development or climatic risk reduction plans, derails the whole aim and often leads to unsustainable policies and programmes. UN Women Watch (2004) notes such exclusion of women from decision-making

leads to a portrayal of them as “needy victims” in many disaster experiences, overshadowing their capabilities and resilience. This gender bias is due to second part narratives from men discussing disasters through the eyes of women. As the African proverb states, “until the lion tells his side of the story, the tale of the hunter will always glorify the hunter”.

Social inequalities also make women more vulnerable to climatic risks such as drought. According to FAO (2011) and Dankelman (2010), women are more susceptible to climatic stresses because of their gender roles which prohibit them from engaging in modern jobs and activities. In Zimbabwean rural areas, women travel long distances to fetch water and firewood (Mudzonga, 2012; Madzvamuse, 2010). This does not only affect their time but has a health implication. WHO (2011) notes that this causes malnutrition and health risks, which further expose them to drought risks.

Women, in most African rural areas, have no control over vital resources. Musyoki *et al.*, (2012) note that women lack control over livestock, land and houses in countries such as Kenya, Botswana and South Africa. Chagutah (2010) points that Zimbabwean women also lack control over essential assets. Women, in most cases, own limited crop fields, small vegetables gardens and even smaller numbers of income generating livestock such as goats and chickens, which cannot boost them during drought seasons. This draws research back to (Erickssen and Naess, 2003)’s view that drought vulnerability cuts across the social fabric and is divided or shaped by age, ethnicity, physical ability and gender. Hence, the socially excluded and economically insecure are worst affected.

Furthermore, according to Chindarkar (2012) in his reference to the Intergovernmental Panel on Climate Change (IPCC), climate change affects human settlements by impacting on health, food security and natural resources that enhance economic growth. The largest population to be affected is the poor and vulnerable groups, especially women (Chindarkar, 2012). In his argument, Chindarkar clearly indicates that there has not been much research about climate-induced migration that has been done. However, its impact on women is underexplored. It must also be noted that although climate change may not only impact women through environmental changes, the socio-cultural factors come into play whereby if there is a situation of scarce natural resources caused by drought, unequal gender relations emerge in which access to resources may only be available to men (Masika, 2002:4).

Buckland *et al.* (2000) have indicated that, “about 70% of Zimbabwe’s population live in rural areas and derive their livelihoods from subsistence agriculture and other rural activities” (Buckland *et al.*, 2000:101). This aforementioned assertion shows how detrimental drought has been in the rural areas such as Madziva. Mushore, (2013) indicate that rainfall in Zimbabwe generally is erratic, poorly distributed and falls predominantly for some few months each year.

This has then resulted in livelihood insecurity since water scarcity and food security are non-negotiable and interrelated problems. This research was conducted in order to comprehend these problems that emerged because of different factors, anthropogenic and natural.

1.7.2 CONCEPTUAL FRAMEWORK

1.7.1.1) Slow violence: “Victims of extreme weather conditions in Madziva.”

Slow violence is a concept that helps to understand the vulnerability of people and other species to geographical calamities that are invisible and intangible Nixon, (2011). The author describes it as, “violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, a violence that is not perceived as violence at all,” (Nixon, 2011: 23) . Due to its invisible characteristics, its victims tend to turn a blind eye continue to be its victims. The author describes it as not just attritional but also exponential which means that slow violence does not simply cease to exist but instead, its effect continues to increase and expand. It operates as a major threat multiplier and can also fuel long term conflicts in situations where conditions for sustainable life becomes degraded, (Nixon, 2011:3). Slow violence uses different tools which are largely geographical calamities that include floods and drought inter alia. In some instances, it can be anthropogenic influenced whereby humans inflict violence to other humans through rules and regulations that violate people’s well-being. Capitalism and privatization of public goods are also other examples.

Michael Watts quoted by Nixon (2011:15) said that, “we must attend to the violent geographies of fast capitalism, we need to supplement both these injunctions with a deeper understanding of the slow violence of delayed effects that structures so many of our most consequential forgettings.” Less attention is given by those who have power and financial muscle to curtail its effects and, in this case, the advocates for capitalism and privatization of public goods. “The insidious workings of slow violence” emanate from the “unequal attention given to spectacular time” (Nixon, 2011:14). The reason why minimum attention is given to slow violence could be that “the modern age is fossilized at heart, built on discards and relics it has no real future, we are living in a fossil economy” (Boyer, 2011:30). So, for those that are benefiting from fossil economy they can never challenge it. Narrowing this down to Madziva rural area, the current situation is of great significance as it helps one to understand how the geographical calamity in the form of drought has had a detrimental effect on the people, especially women.

The present situation in Madziva can be best described by Nixon (2011) in what he terms slow violence. From a personal point of view, I remember when I was still a child. We used to go to

my rural home for holidays in December and I have always known that it is during this time that the area receives large amounts of rainfall. So, as I was growing up, I noticed some changes whereby sometimes when we arrived for December holidays, there was still no rain. It took me sometime to realize that there was a shift in the seasons that was happening in the country at large. Drought is a calamity and its effects cannot be seen at once, thus it should be taken seriously and addressed carefully. Turning a blind eye on it will eventually have detrimental effect on the people. This assertion coincides with what Nixon, (2011) writes about throughout his paper that slow violence occurs gradually and out of sight, and it is a violence of delayed extensive destruction. In the case of Madziva, most farmers there depend on agricultural produce. However, due to drought they are left in a state of hopelessness because they do not have other consistent sources of income.

More so, Nixon (2011:53) indicates that “we need to account for how the temporal dispersion of slow violence affects the way we perceive and respond to a variety of social afflictions, from domestic abuse to post-traumatic stress and in particular environmental calamities” (Nixon, 2011). Although much had not been done from the time the rain patterns had started changing, it is never too late to mitigate and introduce different measures in curtailing challenges that have emerged. However, because of political power dynamics and disagreements between the ruling party and the opposition party pre-elections and post-elections, little to no attention has been given to socio-economic lifestyles of people especially in the rural areas. The majority continues to suffer while leaders continue having squabbles over power.

Furthermore, the situation in Madziva is an eye opener for everyone. It teaches that, invisibility does not mean absence of harm. Although drought is invisible and the time it started creeping in remains vague and a mystery, one needs to understand that its implications are now being felt at large. In backing up the previous assertion Nixon, (2011) quotes Edward Said (1990) who says that struggles over geography are never reducible to armed struggle but have a profound symbolic and narrative component as well (Nixon, 2011). As indicated above, farmers still had not planted because there was no rain to enhance the growth of their crops. It clearly shows the intensity and effect of the struggle over geography. Farmers’ indigenous knowledge in Madziva rural has become irrelevant in predicting when to start their farming activities. The following concept on hyper objects helps one to understand why it’s still a challenge to deal with these invisible geographical calamities.

1.7.2.2: Hyper objects: “The elephant in the room”

I have chosen to describe this concept as the elephant in the room because it is a problem that everyone knows about, but no one wants to deal with it. Morton (2013) describes hyper objects

as “things that are massively distributed in time and space, relative to humans,” (Morton, 2013:1). Examples of these things include fossil-fuel induced global warming, plutonium and Styrofoam (Morton, 2013). Just like the invisibility of slow violence, hyper objects are real and intrinsically difficult for humans to fully experience or understand them. They are too close and too far to be easily understood. Hyper objects bring forth a narrative that time and space are not just containers for objects, but they are affected by those objects. Their intangibility makes them acquire a pervasive characteristic which does not allow one to rationally divide and resolve them. The more people try to focus and deal with them the more they get confused. More so, as Morton puts it across, “hyper objects are objects with spatial and temporal properties that make it impossible for a human being to grasp them theoretically (Morton, 2013:2). Because of their unpredictability and invisibility in nature, it could be safe to say people in Madziva rural area have become vulnerable to extreme weather conditions such as drought and heat waves because these are some of the components of hyper objects that act invisibly.

Applying the concept of hyper objects in Madziva rural area is quite pragmatic as it unravels and helps one to understand factors that have influenced weather conditions experienced in this community of late. Studies on climate change confirm that the impacts are severe and have created serious and detrimental conditions to humanity (Intergovernmental Panel on Climate Change, 2007). The commonly noted disasters include drought, disease outbreaks and, sometimes, floods. Violent extreme weather disasters have devastating impacts on farmers who solely depend on climate sensitive rain fed agricultural produce. Vulnerability of farmers is worsened by lack of assets, technology, climate information and lack of knowledge to buttress their resilience. Farmers in Madziva, the majority who are women, have become victims of extreme weather conditions. It still remains a mystery for them to understand the real cause of these weather patterns.

This concept of hyper objects helps one to reach a conclusion, although it is difficult to point at the hyper objects and touch them. They are somewhat responsible for the extreme weather conditions that have been experienced in Madziva and some parts of Zimbabwe. The residents in Madziva are coming up with different adapting strategies to survive these extreme weather conditions. In this regard adaptation is viewed as the adjustment of a system to moderate the effects of climate change in order to take advantage of new opportunities. As noted by Hassan and Nhemachena (2008:86), adaptation is therefore critical in developing countries especially in Africa where vulnerability is high due to low the ability to adapt.

1.7.1.3: Decency: “Making a plan”

Emanating from Ross’ (2010) perspective on making a plan, a plan helps one to understand the life dynamics of people who are living precariously. Ross (2010) mentions that the ways in which people who lived in “the park” (an informal settlement in Cape Town) were to fulfil the prerequisites of being considered prosperous and decent. These ways are measures to encounter the socio-economic barriers that impede and puncture the lives of the residents and subjects them to loss, violence and abjection.

“Material property counts in making respectable persons. Appearance matter and material investments’ being seen to be proper is an important component in people’s imaginings of living decent lives” (Ross, 2010:130).

The unpredictability of living in squatter camps and in deep poverty is deeply connected with lack of decency and respectability (Ross, 2010). Residents are forced every day to make a plan as a way of procuring a better status in the society. Ross calls this social dexterity where residents get skilled in cultivating networks and social situations. Conferring the concept of making a plan in Madziva is quite relevant because as much as people are suffering from the political, socio-economic instability and extreme weather conditions, women who are left in charge of the rural homes by their husbands, work hard to send their children to school and provide food and other basic resources.

Challenged with absolute poverty and severe extreme weather conditions, women have no choice but to embrace whatever they are given. For instance, during the time I was in the field, farmers were given red sorghum which is toxic if consumed by livestock but not harmful to humans. Loss of livestock aggravates suffering due to loss of lifelong savings which stand in as alternative assets crucial in resilience building and adaptation. Despite farmers' cognitive inconsistencies with what they want and what they are given, food insecurity and poverty make them susceptible to multiple shocks and stresses in the face of drought. When accepting such offers like red sorghum, they do so in a bid to survive and provide food for their families so that they do not appear as failures to those who depend on them. This earns them respect and a sense of decency. For a broader discussion with regards to the concept of decency and making a plan, see chapter four.

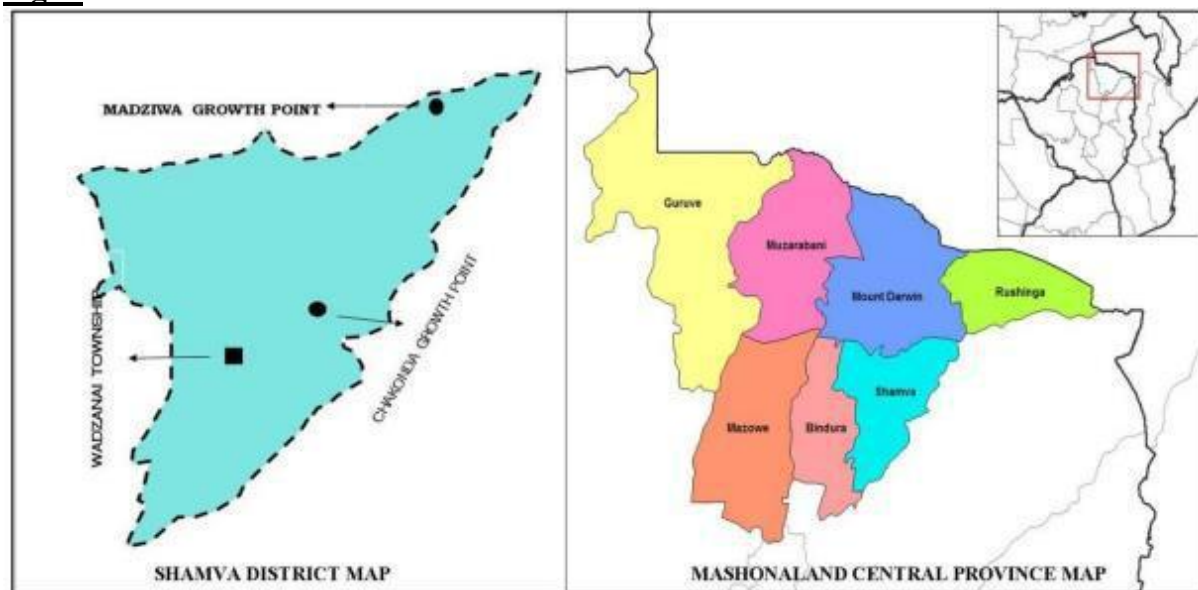
1.8 The journey through the research; Methodology and ethical considerations

1.8.1 The field: Madziva rural area.

The research was conducted mostly through auto ethnography, an ethnography which include participant observation and engagement with activities in the field, as well as in-depth, semi-structured interviews conducted mostly as formal and informal discussions. I was more of an insider who relied not only on verbal cues, but also non-verbal cues in reading of people within the context. However, the researcher also engaged with men who were available at that particular time.

Study area

Fig: 3



Source: Parliamentary Survey, 2010

On the left is the Madziva map in particular, indicated by a dot right at the top, while the map on the right shows Mashonaland central province in which Madziva is located.

1.8.2 Ethnographic approach

I used an ethnographic approach which is the key method in Anthropology. “An ethnography is a positivistic method used by psychologists, sociologists and anthropologists-it is added on to measurement and experiment as a means of recording data” (James, 2000:88). Ethnography requires “direct and sustained contact with agents and richly writing up the encounter, respecting, recording and representing, at least partly in its own terms, the irreducibility of human experience” (Willis and Trondman, 2000:81). In executing this approach, one must do fieldwork. Gupta and Ferguson (1997:101) mention that “it is fieldwork that makes one a real anthropologist and truly anthropological knowledge is largely understood to be based on

fieldwork.” As a way of collecting information in the field, I made observations and did interviews with the people of Madziva rural area.

1.8.3 Interviews

“The language of the interview is determined by the language that the natives use for conducting their business in the cultural domain(s) of interest to the ethnographer (Werner and Schoepfle, 1987). However, it should be noted that is not always the case. Sometimes the ethnographer might not be speaking the language that his respondents speak. That should not stop him or her from carrying on with the interview. If a language barrier occurs, an interlocutor who understands both the languages of the natives and the ethnographer, may be used (Nayaran, 1993). I did not have language issues with the people of Madziva because Shona is also my first language.

In-depth and semi-structured interviewing methods were used because they “are flexible, accessible and intelligible, and more important, capable of disclosing important and often hidden facets of human and organizational behavior” (Sandy, 2011:246). This ensured that questions that needed clarity were asked. I chose to interview people based on their age range simply because I wanted to have different perceptions across all the age groups. The interview schedule was structured in a very sensitive manner in order to deal with issues that affected people on a daily basis. The interviews were used together with participant observation as the main methods.

Fig 4: Shows an image of me pumping a manual borehole in Madziva rural area



1.8.4 Participant observation

I employed an ethnographic approach through observing and participating where it was necessary. Through participant observation, I was able to participate and observe at the same time. As part of the fieldwork, I would sometimes go and fetch water from a long distance simply because the water bodies that were nearer to her homestead were dry. In so doing, I actively participated in and observed directly, the phenomenon I set out to investigate. This lived experience of walking for a long distance made me realize the depths of some of the predicaments that women and children experience daily. During my entire fieldwork research, no man was seen going to fetch or look for water.

I also helped my neighbors to plant beans using water that they had to fetch from a water spring. I experienced the pain of simultaneously travelling and sowing. At some point, I attended a political meeting in order to gauge women's sentiments about an array of issues. Although personally apolitical, I had to chant the participants' political slogans to gain trust and convince them that I was loyal. I realized after the political meeting that community had invested their trust in me because after the meeting, I had a very successful focus group, comprised mostly of women.

1.8.5 Networks in existence

Since I am partially known in the Madziva area, I used pre-existing networks as a strategy of selecting respondents. I approached potential study participants whose husbands work in urban areas and send them remittances. As mentioned earlier, I was so confident that my childhood friend whom I had met earlier during my first phase in the field would be my interlocutor. Unfortunately, by the time I went back in December, my friend was no longer available. The following day, I went to the council offices.

After waiting for 30 minutes for the receptionist to come back from lunch and joining the long queue of people waiting to see her, I finally presented my ethical clearance form to her. She said that there were so many wards in the area, but the closest wards were wards 5 and 27, and the councilors were Mr. Munetsi and Mr. Kufinya respectively. As a researcher my rural home is in ward 27. Unfortunately, the receptionist did not have the councilors' contact details. She advised me to ask the villagers for the councilors' contact details or just to go directly to where they reside. My father had to help out to look for their contact details, and he eventually got them.

The initial plan was just to focus on one familiar village. However, I got more interested in doing a multi-ethnography study when I realized that ward 5 was not far from ward 27. As indicated by Marcus (1995:72),

“ethnography moves from its conventional single-site location, contextualized by macro-constructions of a larger social order, such as the capitalist world system, to multiple sites of observation and participation that cross-cut dichotomies such as the ‘local’ and the ‘global,’ the ‘lifeworld’ and the ‘system.’”

Although these wards are in the same area and have the same topographical structures and experiences, the political and social demarcations make them different. The formulation of wards and ward councilors is to represent the people who live in it and provide the bridge between community and the council which is mostly done on socio-political levels.

I contacted Mr. Kufinya of ward 27. He asked me to buy him airtime, which I did, so that he could contact the headman of the village. He later gave me the greenlight to start the research fieldwork whenever I was ready. It turned out that in ward 5, the councilor is related to sister-in-law, and the way in which their society is structured is based on clanship. Having relations with the ward councilor gave me an advantage as I easily gained trust from the people. Existing networks were thus used to facilitate the research work.

Every chance was taken to create rapport. I could randomly walk in the village, talking to people, helping them to pump water from the boreholes to make myself part of the community. I familiarized with the people and got used to the environment so that it would be easier for me in December visit when I come back for a more in-depth research and data collection. And from the small talk I used to have with prospective respondents, it clearly showed that they were beginning to open up to me without fear of being spied on.

1.8.6 Positionality and reflexivity

I stayed at my rural home so that my positionality as an ethnographer could be visible. Participant observation was done by simply adjusting and observing how people in that particular area lived. Nyamnjoh (2012:66) argues that reflexivity is, “the ability to determine, surface and factor in the extent to which our dispositions, social backgrounds and social positions influence, in often veiled and subtle ways, the perspectives we hold on how different or similar to us those we study are.” According to Nyamnjoh (2012), reflexivity should be intrinsic to the study, right from the moment of commencement throughout the anthropological research.

I sought to be reflexive throughout my research, from fieldwork to the process of writing up my findings. During fieldwork, I asked myself how my personal history and the way I presented

myself could convey certain meanings to the people I was working and living with. I also wondered if this could affect the social truths that I anticipated from the field.

Being a student at a foreign university and introducing myself to the people in a poor rural setting, at some point at the initial stages felt like it inhibited my ability to get the information that I needed. I felt that my respondents had already positioned themselves as inferior to me by treating me as an esteemed university student coming from South Africa. However, I had to deal with their preconceptions by dressing like them, talking and laughing with them. This created a sense of trust which worked well for my research. Conducting a research in an area where women are silenced by normative pressures while at the same time, they are expected to execute duties that are undermined, made me reflect on how my life is different as a woman who lives in a different context.

1.8.7 Data collection tools

Most of the times, the digital recorder could not be used as most people were not comfortable with its use. Every time I suggested recording them, they would immediately stop, and some would temporarily withdraw from participating. In a country riddled with political persecutions, people are afraid to say anything on record. I resorted to a very informal way. I would engage with people during the day and before going to sleep, I would do the write up of everything my respondents had said. Sometimes I would walk with my diary as some respondents were getting comfortable with me writing down what they were saying as long as they were not recorded. Both English and the dominant vernacular language, Shona, were used.

1.8.8 Data analysis

I transcribed the few recordings I had and translated all the scripts, paying particular attention to the cues made by respondents, as these have a strong meaning and essence behind them. Categories were created by associating issues that fall under the same themes, through coding. In collecting data, I was very shrewd to all the movements, words and action that people made. This also showed the imperativeness and the need to make the voices of women heard and to make everyone realize that women are not second-class citizens. Sometimes during field discussions with the female respondents in the presence of their husband, they would direct my questions to the husband first and then the women would only add on to what the husband would have said.

It should also be noted that in such scenarios where women are silenced yet experiencing difficulties in the face of drought caused by climate change, they communicate through their cues and body language. There are certain movements that one makes, and those movements carry important messages. With the help of Geertz's (1973) work, I applied thick description in which most women who shook their head during a discussion or in response to a question meant that things were hard, and not going the way they wanted. Holloway (1997) states that thick description refers to a detailed account of field experiences in which the ethnographer makes overt the patterns of cultural and social relations and put them in a context. I analyzed these cues which I had noted down during interviews. Thick description and painstaking observations made it possible to record and collect non-verbal conversations.

1.8.9 Ethical considerations

The ethical guidelines and Principles of Conduct for Anthropologists on the website of Anthropology Southern Africa guided this research throughout. I presented my clearance form to the council that gave me the permission to contact the councilors who also gave me the permission to do my research in their respective wards. Every respondent was informed that his/her participation was voluntary, and they were free to withdraw from participating at any given time if they felt uncomfortable. Respondents were assured of identity protection by using pseudonyms. Thus, confidentiality was guaranteed which boosted the research participants' confidence.

A rapport was created with respondents during my June-July visit to Madziva. The issue of consent was negotiated with them verbally to establish if they would be comfortable with their issues getting published anonymously. They were informed of the purpose of the study. Their concerns were welcomed without compromise. However, due to upcoming elections that were going to be held in 2018, their fear of not wanting to be recorded was understandable. I was also aware of the sensitivity of the timing of the research as it could be misunderstood and raise false alarm of being perceived as someone who is doing political campaigns. I spoke to the district officer for a legitimate consent to conduct a research in this area, and it was granted verbally. The interviews were as semi-formal as possible, so as not to raise any suspicion.

As an anthropologist, I did not want to misrepresent or to misinterpret the research findings. To avoid this, I made sure that I remained accountable to the respondents and answerable to not only myself but to anyone who would come across my final paper. Some of the respondents mentioned that they would want to see the final product. I committed to supplying them with copies once all the academic protocols are met.

1.9 Conclusion

Chapter one explored the justification and the importance of the study. It gave the background story of the study area and different life dynamics of people of Madziva rural. It also described the conceptual framework in relation to Madziva which include hyper objects, slow violence and decency. In supporting the research focus, I also infused literature review which explores the issues of migration of men and vulnerability of those that are left behind in rural areas. An ethnographic approach was discussed. Some of these methods include participant observation, the core component of ethnography. The chapter also explored methods used in procuring information and gaining a deeper understanding of the lives and experiences of people studied.

1.10 Organization of the thesis

Chapter two focuses on drought as a hyper object in Madziva. This chapter gives previous and current conditions of the climate. It also focuses on the effects of drought in the area under study.

Chapter three examines gender dynamics in Madziva. It focuses on how women in Madziva have been slowly violated by geographical catastrophes such as drought. More so, it focuses on the issue of poverty and precarity. This chapter explores some of the challenges that they are encountering as they try to fend themselves.

Chapter four presents some mitigation measures that could be or have already been implemented in curtailing challenges that have emerged because of drought. Since these challenges are mostly affecting women, different ways to ensure that the already burdened are not overburdened are discussed as well as how justice and gender equity can be implemented.

Chapter five is the executive conclusion. It discusses the key objectives, findings and conclusions of the research. It also discusses the recommendations to address the research problems emanating from the findings as well as offer some recommendations for future research.

CHAPTER 2

2.1 Drought as a hyper object in Madziva

Box 2

I had an opportunity to interview Ranga, a young man I bumped into when I was in the field. Ranga mentioned that, “we do have springs and that’s where we usually get water for domestic use and consumption, but since we are in drought it is really hard as they are running dry. It is even hard because right now we are in summer where rain is supposed to be pouring but look now, there is nothing, and we do not know how we are going to live on because it is through this rain water that we get to grow our crops that sustain us throughout the season.

From this assertion by Ranga, I saw and deduced that although they understand that the seasons have shifted and there is a drastic change in the way they are now receiving rain compared to how they used to, they do not know what is influencing such changes. This is substantiated by Ranga as he mentioned that, “we really do not know what is happening. Sometimes we think, the weather patterns have changed, this is not the Madziva that we grew up knowing. because of lack of rain everything has changed and gone really bad.”

The droughts in Madziva between 2017 and 2018 overlapped, and rainy seasons were short but intense which did not allow for the recovery of the plants and soils to be productive and produce a harvest.

This chapter discusses hyper objects, on a local and global level. Unpacking the impacts that this hyper object has had especially on the people of Madziva rural, women in particular. The concept of hyper object is discussed in greater detail in the main body below. Drought, which in this case is the hyper object, has slowly violated not only human beings but other species such as insects, soil microbes and other animals that need enough water for survival.

Hyper objects according to Morton (2013) are things that are massively distributed in time and space relative to humans. In Madziva, because of the intensity of the droughts between 2017 and 2018, soils were depleted by soil erosion from heavy rains over short time whilst overgrazing by animals left the soils bare and vulnerable to harsh weather conditions. Furthermore, collection of traditional seeds was compromised because planted indigenous crops barely reached maturity. However, this does not impact just one generation. The effects of the current drought will be felt for generations to come in Madziva.

Morton (2013) argues that hyper objects are clear products of the Anthropocene, which means human activity has had a significant influence on changing the climate and the environment. And these climate and environmental change inducing activities and products include fossil-fuels, deforestation and increasing consumption of natural resources by a growing population. Industrialization happens at a global level whereby gases responsible for climate change such as carbon dioxide are largely being felt at local levels.

People with low incomes have very little to fall back on due to their limited access to resources. As noted by Dankelman (2002:22) poor people affected by climate change have no insurance, no savings, or adequate social welfare structures to cope with such events. Following cataclysmic events caused by climate change (extreme drought, floods, cyclones, heat waves.), poor people are exposed to death, injury, illness, as well as homelessness or being forced to live as refugees. It is subsequently imperative to closely examine how individuals, households and communities are coping in the face of the current and projected changes in the climate.

The predicaments that these people experience because of this hyper object is what Nixon, (2011) terms slow violence which is discussed in more depth in chapter 3. People's right to an environment that accommodates their livelihoods to thrive is undermined gradually by geographical calamities such as drought. Drought in Madziva is an occurrence that people are struggling with yet cannot do anything about it. It has become part of their lives. This resonates with Morton's sentiment which says, "The more I struggle with hyper objects, the more I discover that I am stuck to them, they are all over me" (Morton, 2013:28).

2.2 Experience of drought as a hyper object on a global level

Global climate change impacts which precipitate extreme weather conditions in most cases are particularly felt by the world's poorer countries and especially those with poor governance (Muchadenyika, 2015:9). Zimbabwe is one of the countries in Africa that has poor governance, and this comes in the form of political and economic instability. Klein argues that "climate change has never received the crisis treatment from our leaders, despite the fact that it carries the risk of destroying lives on a vastly greater scale than collapsed banks or collapsed buildings" (2015:5).

Using the Marx's metabolic rift, Clark and York (2014) argue about capitalism's destructive metabolic relation to nature. They mention that the development of capitalism whether through colonialism, imperialism or market forces expands the metabolic rift to the global level and disturbs the metabolic interaction between man and the earth. Nature has been seen sorely as a resource for extraction. This extraction of minerals does not even benefit people in rural areas, yet their soils are being depleted through deforestation that paves way for mining activities

which only benefits the elite. There is mining and large-scale agriculture which happens around areas that surround Madziva. However, the lives of people living in Madziva tell a very different story and show a different relationship to nature. Memory, one of the respondents mentioned that;

“Zimbabwe is one of the countries that we grew up knowing to be resourceful in terms of minerals, so I do not understand why we are suffering. On news we have heard them so many times saying that China has partnered with some government mining companies in ensuring economic growth, but look at us, we are miserable. After those mining activities they leave our land degraded and unusable”.

This statement exposes the negligence that the government has towards the environment, humans and other species. It also shows the total commitment that it has towards capitalism and environmental exploitation. This negligence is caused by the drive to ensure that capitalistic expectations are met. Drawing from Marx’s theory of metabolic rift, Clark and York (2014), argue that the expansion of capitalistic industrialized operations have increased the scale of exploitation and environmental degradation by subjecting nature to the logic of capital. This has caused natural resources such as water to be viewed as commodities that one needs a good financial standing to access it. As long there is no payment made to access it, no one has access to it.

As a result of this commodification of the natural resources, poor people feel hopelessness and most developing countries could be heading towards the next world war because of the increasing poor quality and quantity of water, the “blue gold” of the 21st century” (Barlow and Clarke, 2002:321). If people cannot access basic resources to fend for themselves, they will resort to protest and activism as a way of getting authorities to act promptly. For those women in Madziva who depend on rain water for the agro food industry, they are left stranded because there is nothing to depend on.

Furthermore, studies have confirmed unprecedented increase in climate change impacts world over (Dinar *et al.*, 2008). It is believed that Sub-Saharan Africa will be the worst affected. Extreme climatic events like heat waves, hot temperatures and unreliable rainfall patterns have considerably affected rain dependent livelihoods. Perennial droughts have threatened food security. In many smallholder farming communities, it is of paramount importance to note that effects of climate change are not gender neutral (Nelson, 2014). As such, adaptation strategies also need to be gender sensitive. Sensitivity of strategies will avoid further increment of gender inequalities. Embracing one-size-fits-all approach in coping with extreme weather conditions’ effects is disastrous to women. This is driven by unbalanced arrangements of domestic and public social roles between men and women.

One of the main things that need to be looked at in social order is the stepping stone towards gender neutral solutions in arresting multiple extreme weather conditions. More so, the government and NGOs need to be hands-on in dealing with the challenges that emerge because of drought. However, the challenges faced by the Madziva community cannot be separated from the political, economic and ecological decisions made at a global level.

2.3 Experience of drought as a hyper object on national level: Zimbabwe

Fioramonti (2014) quotes the United Nations Framework Convention on Climate Change (UNFCCC) which states that, the most negative impacts of climate change will be felt in agriculture and tourism where nations will lose on average, about half a percent of GDP each by mid-century. This assertion depicts what has been happening in Zimbabwean rural areas, Madziva rural in particular. The poor rainfall being received in Madziva is affecting food security and livelihoods of households headed by women. The impact on food security due to poor harvests for them is related to changes in rainfall, water availability all year round as well as changes in growing seasons. The increasing incidences of water shortage in the village are also in line with current projections by the IPCC (2007:50) which show that increasing numbers of people are likely to be exposed to water shortages due to climate change.

Not only has drought affected the economic sector of the people, it has also affected their political and social lives. Politically, people are angry with their Member of Parliaments (MPs) and respective governing political parties for not delivering. Socially, they can no longer strengthen their relationships because the resources (crops) they used to reciprocate with are scarce and in some instances no longer available. Naomi (2015:7), backs this up, she indicates that, “climate change can be a catalyst for a range of very different and far fewer desirable forms of social, political and economic transformation.”

More so, Buechler (2009) is quite instrumental in articulating how water scarcity has caused so many constraints from a household level, to societal level and up to a national level. He mentions that, “competition for water from urban centers, industry and agriculture is putting pressure on water resources,” (2009:55) which this research confirms. As argued by Nangombe (2014:1) the run off in the country has decreased drastically and the hydrology system that most people count on is running dry. According to the Zimbabwe Meteorological Service, daily minimum temperature has risen by approximately 2,6 degrees Celsius over the last century, whilst on the other hand the daily maximum temperature has risen by 2 degrees Celsius during the same period, (Nangombe (2014:1). This is believed to have created more arid environments which have then perpetuated social hardships especially for those who have no constant source of income, and who mostly depend on farming.

Drought in Zimbabwe has occurred in different forms. Nangombe (2014:2) categorizes drought as extreme drought, severe drought and mild drought. As indicated by Brown et al, (2012) Climate records demonstrate that Zimbabwe is already beginning to experience the effects of climate change, notably rainfall variability and extreme events, such as drought. Due to the drought that has stricken most Sub-Saharan nations, sources of water in Zimbabwe have decreased whilst others have gone dry (Fisher et.al, 2015).

As a way of curtailing or minimizing these challenges that are ushered by drought, Latour, (2002) introduces the “three goddess sisters of reason”; technical efficiency, economic profitability and scientific objectivity. Latour (2002) argues that when disputes occur, there is a need to increase the relative share of scientific objectivity, economic profitability, technical efficiency, and democratic debates and all the disputes will cease to exist. This foster universality where everyone’s contribution is put into consideration, a measure which is essential for tackling the challenges that people in Madziva are facing in the face of drought. Latour, argues,

“Through the mediation scientific objectivity, economic profitability and technical efficiency, anybody could join this fatherland without ancestors, this ethnic group without rituals, this country without borders this country of reason, able to access unifying nature, through the hard work of criticism and rational discussion” (2002:13).

Scientific objectivity demands that people must only see and not imagine. It advocates for a universal view without partiality. It is an ideology that fits in accurately to the Zimbabwe’s situation in addressing the issue of climate change. By being objective, it enables one to see beyond and find where the problem is emanating from and thereby enabling people to find solutions that curtail the challenges such as drought. The economic profitability ensures the economic growth which everyone is expected to benefit from through the solutions that are found by being scientifically objective. It is through this economic growth that the technical efficiency in people’s operations are increased. However, what’s ignored when this is the only focus to address the issue of drought in Zimbabwe is that, the three factors enable neoliberalism to appropriate for itself the scientific claim to universalism making financialized enumeration the new universal truth. (Green, 2017:2). This continues to disadvantage the poor people who have always been subjugated and disadvantaged by neoliberalism.

2.4 Women’s experience of drought a hyper object on a local level: Madziva rural area

Women are forced to make choices about the water they collect and often they must decide between a water source that is “distant but safe and that is not distant but not safe,” (Nyong and Kanroglou, 2002:122). Women in Madziva are expected to travel long distances to access water as a result of drought. More so, domestic work is gender-specific and as a result of normative

pressures, most women in Zimbabwe are seen as domestic workers. Women who are heads of households are also grappling with social support mechanisms that are progressively collapsing or assuming new forms. This means facing pressures from the immediate and extended family members in a non performing Zimbabwean economy. As acknowledged by Kakuru and Paradza (2007:293), the nature of rural livelihoods in Africa means that women who are household heads have to juggle many activities to make ends meet.

All female household heads who were study participants in Madziva are still actively engaged in the household economy and have the primary responsibility over the household. This is important as most observations generally view elderly women as not very actively engaged in the household economy. The situation of the women in the study is consistent with observations by Makiwane, Ndinda and Botsis (2012) as they noted that evidence from various settings is increasingly showing that women are far from being inactive. They are very active in the household and are also using their incomes to support the household. In Latin America, the Caribbean and Africa due to the challenges of diminished incomes in old ages, most women continue working until they die (Nyanguru, 2007). Consequently, these pressures and responsibilities are passed on to girls who might want to balance between their school and domestic responsibilities. To substantiate this, “in some areas in the developing world women spend as much as 25 percent of their productive time collecting water,” (Sullivan, 2001), and girls collect “double the amount of water per annum as men and boys,” (Neto and Tropp, 2000:233). Time spent by women and young girls on domestic responsibilities affects the time they should be investing in education and paid work. In substantiating the assertion Mai Kevy pointed out that:

“Mostly it is us women and young girls who are involved in farming and looking for different ways to have a better financial standing. As a parent I feel like I have failed my children because I’m not always able to provide for them. My children have to work for their school fees, food, and books. Men and boys do the technical work . . . ploughing and spraying the crops. This work is not as difficult as the work women do”.

Hyper object which in this case has emerged in the form of extreme weather conditions, with drought causing enormous damage, has led to the exclusion of women in formal economic structures as they spend more time looking for water. Buechler, (2009) states that, women’s economic autonomy from climate change is also at risk and because they cannot have enough water to grow fruits and vegetables that they can retain for household food consumption. More so due to normative pressures, women are inhibited to control the means of production, especially those who live in patriarchal societies. Adding on, one of my respondents Mai Kay pointed that;

“In Madziva women and children work hard whereas men do the planning. However, the only problem that we have as women is that most of our men are very spiteful. After working hard with your children, they go and sell the produce, and they use the very same money that we all have worked for to marry other women or spend the money with other women. This has resulted in high mortality rate for women, because out of anger and desperation some commit suicide or take some stupid measures.”

Toxic relationships among family members have also developed due to water scarcity that has been caused by drought. Some of my informants indicated that water scarcity has caused relationship constraints because when water was available, they used to grow vegetables and maize on their plots and would exchange with others who had different crops. . However, now that water has become scarce, they can no longer grow these crops; hence relationships of reciprocity can no longer be sustained. Buechler substantiates the previous assertion:

“due to water depletion and climate change, social networks that have been maintained in part by extended family members working together and exchanging or gifting these agricultural products within the community will be weakened, and weaker social networks will translate into reduced community cohesion and community development processes” (2009:66).

The understanding of water interlinked with society has given rise to the term ‘hydrosocial’. The hydro-social cycle is a socio-natural process by which water and society make and remake each other over space and time,” (Linton and Budds, 2013:174). Drawing from this, it means that if one of the aspects malfunctions it goes on to affect the other. In Madziva, water scarcity results in personal and extra-personal conflict, the relationship between citizens and the state. Water is a symbol which represents a number of things besides being a liquid of necessity to earthly creatures.

“Water is rarely a medium of rigid social structures, because water moves, it erases and makes social boundaries, it changes landscapes, provides the basis of new claims and threatens established orders” (Linton and Budds, 2013:174).

2.5 Conclusion

Chapter two has explored the concept of drought as a hyper object in Madziva rural area, focusing on the experiences on global, national and local level. Hyper object at global level is felt at local level, and that ushered in a sense of hopelessness to those that are hit hardest by drought, especially farmers. Through the experiences that the people of Madziva rural area have had, one can deduce that drought have caused detrimental effects on the people of Madziva, especially women that are left behind by their husbands. This has then made drought not to be gender neutral in the sense that women are more affected than men. As a result of predicaments that have emerged because of drought, there has been scramble and partitioning of resources such as water and wild life which has then resulted in relationship constraints. Relationship constraints have also been experienced at a household level, whereby a husband and his wife expect each other to provide, and failure to do so has resulted in infinite altercations. However, the idea that three goddess sisters will fix everything gives a ray of hope that it is possible to curtail climate change challenges. Nevertheless, relying on this type of knowledge gives neoliberalism a room to appropriate itself as the new universal truth. And this neoliberalism continues burdening the overburdened. In the following chapter, the concept of slow violence will be explored to understand the detrimental effects that drought has had on women who are left behind by their husbands in charge of their families.

CHAPTER 3

3.1 Introduction

The previous chapter discussed the dominance of certain knowledge in the discourse around climate change. The peripheralization of other knowledges can be seen as a form of violence, as it fails to acknowledge the lived experiences of the communities (Kassie *et al.*, 2017). This chapter explores the issue of violence and slow violence in the context of climate change, particularly in relation to the experience of drought by the Madziva women.

3.2 Slow violence: Women's experience of drought in Madziva

Slow violence is a violence that has its destruction dispersed across time and space (Nixon, 2011). It is a violence that is not spectacular, instant nor equally visible, but a violence that is incremental and accumulative which causes calamitous repercussions that are felt for a long period of time across a range of temporal scales (Nixon, 2011:22). Nixon (2011:41) adds:

“falling bodies, burning towers, exploding heads, avalanches, volcanoes and tsunamis have a visceral, eye-catching and page-turning power that tales of slow violence, unfolding over years, decades, even centuries cannot match. Stories of toxic build-up, massing greenhouse gases and accelerated species loss due to ravaged habitats are all cataclysmic, in which casualties are postponed, often for generations.”

The above quote shows how often people get subjugated to environmental calamities, and yet less/no action is taken until a tragic spectacular scene occurs, for instance images of children with swollen bellies and flies in their eyes and bodies of emaciated or dead cattle next to dry river beds. The portrayal of this drought event ignores or erases the other events, such as poor drought management planning strategies, deforestation, reliance on chemical fertilizers and overgrazing, that led up to what becomes even more visible. For Klein (2015), people especially those that are poor have been victims of climate change because the leaders have never paid attention to the crisis that emerge because of it.

“But I am hungry mama,” says little Chiedza⁹ to her mother who had just finished sweeping the yard. “But Chichi you just had food, times are hard, we got to eat sparingly,” Chiedza’s mother responded. Chiedza’s mom is our neighbour at my rural home in Madziva.

Mai Chichi is a prominent member of the village, she invited me to attend a meeting. At the gathering when she was done addressing people, she introduced me to the public. She said, “With me today is my young sister, she studies in South Africa, so she is doing a research on gender and climate change, Myste, can you please stand up so that people can see you (I did), I would really appreciate it if all women can stay behind and chat with her a bit about this matter, Thank you.” Everyone clapped their hands and people started packing up. I moved to an open space where about fifteen women came and convened at where I was. We chatted for about an hour. It turned out to be a focus group which I had not planned and expected to have. I thought people were going to snub me since they barely knew me, but they were open and receptive. It was at that moment that I realized that drought had damaged the livelihoods of people especially women and children.

Some of the issues that came out include the following;

“Although we both work in the fields, men and women, it is us women that face quite a number of problems because due to normative pressures, women are expected to do all the domestic chores without the help of men. Which then overburdens women intensively, and leaves them exposed to issues of water which they will be expected to provide irrespective of its scarceness, irrespective of all these burdens, children will always look up to us for provisioning of food and other basic stuff” Mrs. Take;

“It is really hard for us tobacco growers. You will find that in the process of growing this cash crop the woman does the most, but when it comes to selling of the crop the man will decide to sell the crop in another person’s name when he does not want to use his name due to excessive debt, I mean he could use my name why not? But because he does not want me to go near the money, he chooses a stranger,” Mrs. Gura

These findings showed that women are going through the toughest situations just to provide for their families. Women ensure that food is served sparingly so that their children can have a next meal. It is no longer about eating to fill the stomach, but it is about eating to survive. This is substantiated by what Chiedza’s mother did. If she had plenty of food, she would have just given her child again, but because food was limited, she could not do so.

However, through it all, women are still expected to provide for their families in their rural homes irrespective of the hardships. Neria, a respondent mentioned that;

“The truth is, life is hard for us women, it is a challenge to get access to clean and portable water, sometimes we walk for about three to five kilometers just to have access to clean water, so that we can at least provide clean and proper food for our children. If the government could only intervene by at least drilling more boreholes for us rural people, we would be grateful”.

Furthermore, drought in Madziva rural is undoubtedly one of the most natural factors that has slowly violated the inhabitants. Dudzai, a woman who in her late forties stated that;

I used to go to Chinmine, but now I cannot go there because there is no water to clean the gold and separate it from the residual. There is absolutely no water in the rivers and dams, and you see me seating on this chair, that is all I can do now.”

The need for important household resources like firewood, water, and grass for thatching and wild fruit, inter alia, increases their burdens. Nevertheless, the more the environment is degraded, the more women are exposed to high demanding daily responsibilities and also becomes visible in their bodies

3.3 On eating and being eaten: The story of survival for women in Madziva

The argument in this section is not only about not having enough food to eat. Due to the kinds of demands being made on women and the stress caused by the expectations that they conjure plans to alleviate drought challenges, women are socially, emotionally and economically stressed. Nochi, one of the respondents said that,

“because of food scarcity sometimes we go to sleep on an empty stomach because there is not enough food to eat, and the little food that we might be having we give it away to children, kuwonda uku (getting thin) it’s not because this is how I am, it is lack of food. Tapera nenhamo (poverty has finished us)”.

This is an act of slow violence on its own that is caused by drought a hyper object. Drought ushered hardships which penetrated other facets of life. Faced with hardships, Zimbabweans were acutely divided along political party lines, gender, ethnicity and age. Along these lines, citizens have cannibalized each other through looting of property and physical harassment where people who belonged to the opposition party were beaten up (Nyamnjoh, 2018). This havoc has resulted in people focusing on political power acquisition and not finding ways on how to deal with their day to day challenges such as poverty.

In Madziva rural area, women’s vulnerability to poverty is quite high because of their total dependence on men. Mai Gosa ¹⁵lost her husband in 2011. Although she is a hard-working woman, her life has never been the same after the death of her husband. She narrated;

“Since the death of my husband, life is really tough for me. You see this bedroom (as she pointed at it), you see it does not have a roof. This is the same state that my husband left it in. I do not have money, even if I try to do my hustles, the money is not enough because I have children that go to school, they need school fees, books and uniforms. It is hard for me. It would have been better if the government gave people loans especially during these times of rain water unpredictability, so that life can be much bearable.”

The statement above shows that people in Madziva depend on the state but now their trust in the government is slowly wearing out because of the broken promises made by those in power, so they are now living with uncertainties. This is in line with Shaw and Byler’s (2016:1) argument that “the social existence itself depends on interdependency through the care of others.” In this case, the other is the state, and other members of the wider community. Water scarcity has exacerbated precarity because of the relations of reciprocity that it makes untenable. These women can no longer grow crops that usually sustain reciprocity flows.

Women's limited mobility potential is caused by their inclination to the domestic sphere. Men as breadwinners are destined to escape from disasters in the name of providing for the family. Men’s mobility in search of “greener pastures forces women to face disasters without the help of men which is sometimes overwhelming. Vast evidence of disaster driven male migration has been noted in Mozambique (Ossario, 2003) and Zimbabwe (Mtisi, 2010 and Nhamo, 2003). Perennial occurrence of droughts and floods in the former, and droughts and unemployment in the latter are the major push factors. Most men from Mozambique and Zimbabwe have found themselves in better environments in countries like South Africa, than their wives who remained at home.

3.4 Migration and Family Fragments in a time of drought

Slow violence is experienced by women and children who are not only reliant on what the dwindling ecosystem can provide but are subjected to dominant male masculinities in patriarchal contexts. However, the men should know better since they cannot provide for family in the ways that they used to. There needs to be distribution of labor in the home. Family dynamics have been affected with the heads of the families travelling to urban areas looking for greener pastures. In most cases the anticipated greener pastures by their husbands tend not to be so green, which then becomes a triple burden for the women and their families back home.

More so, when men migrate to towns, fragmentation of family dynamics are bound to happen whereby the woman who is left with children is supposed to reconfigure how she is going to be the mother and father to the children concomitantly. On the men’s side, there is a risk of

culture disruption when they migrate to these urban areas. In some instances, they are forced to assimilate and embody the urban culture so as to blend in in the society. This becomes problematic when they decide to go back to their families as there is likely to be an antagonism between the men and the family on how they understand cultural dynamics differently. Rumbi mentioned that;

A lot of men have migrated to urban cities in search of greener pastures, and most of them are married, but now the problem is when they get there, they totally forget where they came from. Some will actually remarry, some will start to sleep around and in doing so, they end up contracting HIV/AIDS. This is very problematic because one day if this man decides to come back to the village, he is going to transmit HIV/AIDS to the wife who has been working very hard and taking care of the family. So just imagine, the pain a woman has to go through.

This finding highlights the “bright light syndrome” in which the change of scenery from rural areas to the fast-paced cities and the new discovery of a lot of freedoms and lifestyles creates problems. Since women are regarded as the bedrock of the home, their migration to urban areas in Madziva is very low. More so, lack of education limits them from going beyond places they already know. A lot of work in urban areas requires skills and education, which they lack. However, some do have ordinary education but are just conservative. They do not want to work in urban areas. They believe that being a woman that has her own home in the village bestows value on them and gives them a sense of belonging and identity. This way of thinking is not peculiar to this research area only.

Besteman (2014) did an ethnography on refugees, migration and fragments. During her fieldwork, she interviewed some women who preferred to stay in refugee camps because they did not want to go to United States of America for the fear of change of their culture and religion. Besteman (2014:85) quotes one respondent who mentioned that, “we were wondering who we were going to become”, statement which shows how socio-cultural issues and, religion, inter alia, are linked to identity formation and bestowment of value and respect on a person. In Madziva most women highlighted similar sentiments.

Incremental trends on rain scarcity and excessive heat waves have a multiplying effect on women’s workload than men. Drying of water sources like rivers and aquifers introduces a further burden for women. Cases of women travelling long distances to fetch water by foot are documented in studies conducted in sub-Saharan Africa. Rural women in Dodoma district of Tanzania spend much time looking for domestic water (Nelson and Slather, 2009). These trends are also common in Daure districts in Namibia (Africa, 2011). This is the same situation most women in Madziva are going through which shows that women have been subjugated and suppressed even at a regional level. Adding to the water problem, firewood is

also noted for further straining women in rural communities. Firewood problems are worsened by deterioration of environmental quality, due to excessive dry springs and over exploitation of forest resources. Dependence on firewood as a source of fuel forces women to travel longer distances than they had to before. Unavailability of alternative sources of energy like electricity, gas, and solar worsened their plight in meeting domestic power needs. Dependence on firewood and farming has negative environmental consequences. Over exploitation of environmental resources generates intense competition. Results of such competition are environmental degradation and depletion of non-renewable resources. Notwithstanding the fact that a degenerating environment increases social inequality, it should also be noted that scarcity of resources causes outbreak of social conflicts (Dinkelman, 2010). Conflicts over common pool resources like pastures, water reservoirs and land boundaries have negative impacts on women's livelihoods. They face serious problems in fulfilling their routine duties amidst climate disasters and social unrest.

3.5 More than human socialites: Slow violence on plants, critters and soils

The problem with the idea of women being close to nature is that it reinforces the idea that women and nature must be controlled because they are wild and hysterical (Plumwood, 1993:47). Perceiving women as people who lack agency fosters subordination and victimization.

However, not only human beings have experienced slow violence. Other species such as plants and soils have gone through violations. Excessive erosion and application of non-organic fertilizers have depleted soils. Chemical processes were initiated in agriculture to duplicate or to replace natural operations of soils (Clark and York, 2014:19). Fertilizers have been over used, and they have destroyed the soil by disrupting the natural functioning of microbes, which means the women need more fertilizer to grow crops. This also means they need more money to get fertilizer. This is a form of violence which creates a debt laden society and dependence for the women (Shiva, 2008:28). More so, for indigenous crops that most women in Madziva have grown, most of them were infested by insects. Chimbikitori said that;

Insects prefer hot temperature and the application of insecticides requires a lot of water. Now that there is no water, our handful produce that have managed to sprout through bucket irrigation are likely to become unmarketable due to them being insect infested. This is our main source of income as women; we are devastated because of a lack of government's intervention in dealing with our grievances.

3.6 From adaptation theory to matters of care: On a politics of well-being in Madziva

Adaptation theory has been presented as a solution to improving the resilience of rural communities. The framework suggests that there is need to widen the scope of inquiry beyond social processes and action since the relation to the environment is of great significance. Within the framework, there are two types of adaptation, namely planned and autonomous adaptation. According to Eisenack and Stecker (2012), planned adaptation produces information on future expected conditions, such as measures put in place by government to deal with extreme drought, whilst autonomous is mainly about ecological changes in the natural system.

Whilst the theory presents an opportunity to think about future and impacts on the environment, it continues to separate humans and the environments. The process of adaptation is human-centered and underplays the reliance of one on the other. Humans and other species are expected to adapt irrespective of brutal characteristics of the environment. Smith (2017) argues that when the species are unable to adapt, the result is that they die or becoming extinct. This is one of the reasons why people in Madziva chose to adapt by growing drought resistant crops such as rapoko and sorghum, and to rear drought resistant animals such as goats. These measures enable them to continue surviving though life is difficult for the majority.

The predicaments which people endure are what the theory of adaptation fails to outline. Irrespective of the challenges that come with adapting, people are expected to just adapt. The adaptation theory is problematic because it presents a one fit all approach in dealing with climate change. It shuns the idea that people are affected at different degrees, which underplays the daily experiences of local communities. The adaptation theory places the burden of adapting on the locals, yet they contribute the least to the depletion of the environment. This theory of adaptation is violent especially to the already disadvantaged. The politics of well-being in Madziva is utterly shunned by the adaptation theory in the sense that, instead of the focus to be driven towards the root cause of the problem, it is projected towards those that are already suffering. They are expected to adapt. In most cases small-scale farmers are failing to do so, for their crops succumb to harsh weather conditions of high temperatures.

Fig 5: shows how drought destroyed some of the farmers' crops in Madziva



For people that have solely depended on crops like maize in this period of drought in Madziva, poverty became inescapable. Not only were crops affected, livestock has relied on mud and dirt water not suitable for drinking.

Fig 6: The picture below shows the type of water that cattle in Madziva have been drinking due to water scarcity, which usually hinders a high adaptive capacity which then leads to diseases and death.



3.7 Government's irregularities and uncertainty leading to poverty in Madziva rural

Zimbabwe's economy is struggling as it stands right now. I travelled to Bindura, a nearby city and was shocked when I was informed that I could not access my money in the bank because the country is experiencing cash crisis and they were not sure when it would be available. Poor performing economies (violent economies) are detrimental to human livelihoods as they increase vulnerability through lowering adaptive potentials especially among poor small holder farmers. The troubled economy and skyrocketing inflation in Zimbabwe between 2000 and 2008 eroded many people's lifelong savings and investments, leaving them susceptible to chronic poverty (Pasteur, 2011). Many people have not yet recovered who have be and are impoverished to the extent of failing to buy food and other basics.

Furthermore, a combination of unstable economic and political conditions left people failing to cope up with increasing threats from extreme weather conditions and variability. The

unfavorable political atmosphere in Zimbabwe hindered many local and international organizations as NGOs from helping the vulnerable masses (Bornstein, 2004).

3.8 Lack of knowledge's contribution to poverty in Madziva rural area

Low adaptive capacity caused by lack of resources was worsened by overdependence on climate sensitive rain-fed subsistence agriculture. Failure to access adequate weather and seasonal information crippled people's potential to detect disasters and devise pragmatic strategies of improving dealing with the challenges. Access to important weather information is the bedrock of informing sustainable autonomous and planned adaptation and mitigation of poverty. They could have looked for alternative sources of income in time. Grassroots based strategies of adaptation give smallholder farmers the strength to deal with idiosyncratic and systemic shocks and stresses. Reducing vulnerability to disasters such as drought and loss of livestock is integral in safeguarding human security and dealing with poverty which has wracked most households in Madziva rural.

Unavailability of modern technology, climate change information, valuable assets and capital worsened farmers' adaptive capacity. Placing indigenous knowledge as a starting point is highly considered in the area. Nevertheless, a lot of change in social, political, religious and climatic conditions impacted negatively on the continuity of indigenous knowledge in resilience building against harsh weather conditions such as drought. People in Madziva rural area have different beliefs, sometimes even contrasting. What others consider realistic, others perceive it to be superstitious. Rufaro does not believe in spirit mediums and their power to bring rain, whereas Vimbai believes in such traditional ceremonies.

Poor availability of modern technologies hinders gathering of adequate climate change information as well adding more coping and adaptive alternatives. Gathering climate change and seasonal information is crucial for early detection of the magnitude of impending hazards and risks and crafting well-planned adaptation models (Dinar, *et al.*, 2008). Due to the lack of such mechanisms in Madziva, people continue to be victims of drought, which then makes it almost impossible to deal with poverty.

3.9 Poverty leading to health issues in Madziva

Terrifying climatic conditions which involve drought does not only affect women's productive potential but has reproduction and serious health problems. Prevalence of heat waves, too much rain or lack of it thereof exposes women to diseases like malaria and sleeping sickness, among others (United Nations Development Programme (UNDP), 2007). For example, pregnant women are more vulnerable to malaria than men (UNDP, 2007). Absence of functioning clinics

and hospitals exposes women to vulnerability. High morbidity and mortality rates of women due to weather related problem are prevalent in sub-Saharan African. One respondent, Mai Kuda, mentioned that;

“Dysmenorrhea (severe period pain) is sometimes exacerbated by these extreme hot temperatures. Even young children can contract runny stomach because of these hot conditions.”

Naturally the body of a woman is vulnerable and sensitive to the external environment. Memory mentioned that,

“As things stand, here in Madziva there is no water as a result of drought, and we are forced to go and bath at the rivers, and also due to a deficit in rain water, the water does not flow, it is just stagnant. The water is in open space, unsafe and has bacteria but because there is no water we are forced to use it. When we use this water, germs get stuck on our private parts. I am saying so because after using this water, my private parts get so itchy, and by continuing doing this we are exposing ourselves to viruses like cancer and others.”

Pamela, another respondent I met at the market also pointed out at the health threats that have emerged as a result of water scarcity. She mentioned;

“Water is so scarce that we have to travel for long distances just to access it. And we ensure that this water is used sparingly, and sometimes you find that a twenty-liter bucket can cater for services like washing, bathing, cooking and gardening. As much as it may sound unrealistic, this is what exactly is happening. This means that the food will not be adequately cooked, a threat to one’s health. As a result of water scarcity and lack of access to clean and portable water, diarrhea, cholera, and bilharzia hit us hard often times. People also need to bath to look presentable but because there is not enough water to do so, personal hygiene is not thriving at all here in Madziva rural. For girls it is even worse, because when they are on their monthly periods, they cannot go to school, first of all they do not have money to buy pads or cotton. Secondly, at the school there is no water to use.

At one focus group comprising of women, one woman said;

“Dams and unprotected wells that we draw water from are hazardous to our health; the water causes bilharzia and cholera. Since land redistribution program kicked off, there has not been even one borehole that got drilled. And when we get to the clinics it is a problem again because they also do not have enough water sources. Again we do not have money to get us treated and sometimes we are asked to go back home untreated. So sometimes we end up taking any pills which might not be good for us, we do that without prescription hoping that these pills will take the pain away. Although we have health workers in the village, due to economic hardships they do not have any medication, and

the only option that we are left with sometimes is to look for spiritual healing. Furthermore, newly born babies are dying from poor unhygienic practices, happening both at clinics and at home. There is no water to clean up the child and the mother after delivery. Some mothers do not even go to the clinics because they do not have money. Their sources of income which is agriculture has been deprived to thrive as a result of drought.”

3.10 “Making a plan” in times of drought in Madziva rural area

Women in Madziva are so into gardening which helps them to generate income as they sell their produce along Bindura and Mt Darwin road. However, their source of income has been disrupted badly by the drought. As hard as it is, women still strive to provide for their children. They travel for long distances just to access water for gardening purposes. Other women have ventured into honey bee farming. Jane is one of the women interviewed who farms bees. Her main concern was the lack of equipment to harvest honey. She mentioned that bees are very dangerous as they can kill if they attack as a swarm. She is struggling to pursue this project due to lack of funds to purchase the equipment needed.

Selling livestock and borrowing become rampant in an attempt to make ends meet; school fees, food and health costs. Between 2000 and 2015, most families survived on selling livestock for food due to perennial droughts. In most cases, the vulnerable households in Madziva also depend on food aid from the Member of Parliament from their constituency who usually comes when he wants to be voted for. Noted challenges were that in most cases food supply by local institutions was not always consistent but erratic, and that has resulted in malnutrition of young people and adults alike. And for children that go to school, it has been hard for them to focus and concentrate when they are hungry or not in a good health.

As water levels in the vegetable gardens are progressively getting lower and lower in December, the month water is expected to be running in rivers, women heads of households are being forced to adapt by reducing their levels of vegetable production. With the reduction in the levels of output from the vegetable gardens, the elderly women are also being forced to shift the market for their garden produce. This is affecting women who are into perennial vegetable gardening.

3.11 Conclusion

This chapter focused on how women have been constantly victimized by hyper object which in this case is drought. As a result of drought, women in Madziva rural who were left by their husbands as the heads of their families are struggling to make ends meet. As drought coping mechanism, women in Madziva have been highly depended on the natural environment for resources such as firewood that they sell to people travelling to urban areas. Using adaptation theory in relation to Zimbabwe is somewhat violent because it does not address the root cause but often burdens the overburdened by expecting them to adapt. The poor suffer the most, yet they contribute less to the dilapidation of the environment which leads to global warming. The violence has not only been experienced by human beings, but other species such as soil microbes. These challenges have compelled migration mostly by men causing fragmentation of families.

CHAPTER 4

4.1 Facing the giant: Justice, gender equity, and mitigation measures in time of Drought and precarity in Madziva

Box 4

On my way to the borehole which was some distance from where I was staying, I met Patricia. As we were walking and talking, I ushered in my research questions. Since I had spent some time in Madziva rural, everyone knew who I was, and I think they were ready to engage with me. She said that it is actually better that some people like me who do not live in Madziva rural think of the community and the challenges they face. She indicated that this shows that there are still people who care out there. Furthermore, as we continued chatting, she pointed out that;

Some of the challenges are human-induced and this stems from the societies that we grew up in and the ideologies that we still possess. The government must introduce programs that empower a girl child. Educational facilities must be provided in which patriarchal ideologies and subordination of women will end. If things are done this way, equality will prevail, and people will better tackle challenges that emerged as a result of drought. More so, because of the persistent drought, there is famine which is being experienced by almost every household in this area. However, we would appreciate it if the government could drill boreholes especially for us rural dwellers so that we can at least be able to provide for our families.

If we can have access to adequate water, I am sure issues of early child marriages will also be eradicated as we will be able to provide for our children. More so, the government must find ways of creating jobs. Most of us have struggled to send our children to school, from primary to university, the main goal being that if this child excels, he/she will be able to provide for us when we get old. However, right now these children are just stuck at home doing nothing because there are no jobs. We know things are hard but be rest assured that those government officials and their children are living large while we here are suffering.

There are several individuals whose opinions I shall discuss in the main body of this thesis. These individuals pointed out at the need for different organizations to intervene in alleviating the challenges that have emerged as a result of drought and patriarchal ideologies which has led to the subordination of women in Madziva rural.

4.2 Global perspectives on gender justice through legal reforms in time of drought and precarity

The general consensus is that attainment of gender justice in the global world is possible. In part, this can be achieved by ratifying legal and gender based international treaties at local contexts. Gender justice motive is fully recognized in human development discourses (Dankelman, 2010). To achieve equal benefits and risks amidst extreme weather conditions, gender mainstreaming should be prioritized (Vainio and Marilla, 2001). Gender equality on climate change is achievable by considering gender justice as a 21st century objective and a strategy (Chambers, 2006:34). Global unity collective attempts and social networking will lead light in non-discriminating and sensitive approaches to climate shocks and stresses (Brown et al., 2012).

Through global mapping, collective minds promise equal participation and reciprocity amongst nations (Brown et al., 2012). Good political implementation of these ideas will guarantee equitable sharing of financial capital, human capital, technology, and information to all global nations (Brown et al., 2012). Mutual dependence promises spreading of benefits and doubts to all participating nations. Sharing of climate information and multiple gender-based calamities should be shared and well explained in all social forums (Neumaj and Plumper, 2007).

The global world helps in making gender one of the serious human security issues. In safeguarding human security, international policies need to be streamlined along gender perspectives. Dankelman (2010) attempts to mainstream gender in national and global forums need not to be hurriedly done. Serious considerations will ensure formulation of error free or less complicated solutions. This will help in reducing problems on already trained interpersonal relationships between men and women. Generating policies and strategies with bias may worsen the plight of women facing climate-induced shocks and stresses. Thus, gender policies need to be sensitive and providing relief to underprivileged social categories which are mainly comprised of women.

Furthermore, production of international conventions has influenced responses from other United Nations related forums to push gender as a top agenda in climate change debates (Otzelbecker, 2011). For instance, in 2007 more than 25 members of the United Nations and other development actors formed the Global Gender and Climate Alliance (GGCA). The agenda of the alliance focused on incorporation of gender sensitive policies in response to extreme weather conditions problems. Provision of climate information to all people was also a priority. Propagation of gender mainstreaming conventions and watchdogs promises collective results. More so, collective efforts help in influencing the speeding up of the formulation of gender-neutral policies by national and international public officials.

Nevertheless, great concern has been noted regarding speeding up of global gender justice. Silence of giant climate change actors like UNFCCC and the Kyoto Protocol on gender equality leaves a lot to be desired. Non-consideration of gender justice by the former meant that other agreements lack solid foundation when it comes to implementation of gender policies. Likewise, the absence of gender agenda on the latter signifies the peripheral treatment of the issue. Furthermore, silences of giant practitioners in gender and climate change have a direct bearing on the model, magnitude, and direction of gender justice. Availability of funds or lack thereof also contributes to success or failure of gender sensitization initiatives. Such funds and other resources enable smooth facilitation of gender mainstreaming campaigns and workshops. Availability of local solutions can be pushed to global forums, awakening the slow actors through conferences and international summits. Equally important is the need to create harmony between projected international policies and treaties vis-à-vis local initiatives to ensure correct detection of inequalities and subsequent prescription of the correct remedies. Nationally based instruments will address downscaled horizontal social problems at the same time going in tandem with vertical international standards. Availability of such harmony will ensure immediate solutions to constantly emerging socio-economic problems in adaptation to violent climate disasters (Chindarkar, 2012).

4.3 The role of local institutions in mitigating extreme weather conditions impacts such as drought

Complexities associated with the interaction between communities and their institutions are besieged with both progressive and retrogressive forces (Dhemba *et al.*, 2002:6). It has been argued that the increase in intervention by the local rural institutions is not an end itself but perforated with challenges like the need for support and innovation (Scherr *et al.*, 2001). Presence or absence of support at grassroots level is one of the key indicators of sustainable mitigation and adaptation strategies amongst vulnerable farmers.

The probability of success is high in cases where there is harmony between local farmers and their institutions (Chetri, 2011). For instance, the presence of conflicts between locals, local institutions and government derailed the projected sights of adaptation to disasters in countries such as Mali and Senegal (Vincent, 2015). Absence of harmony on the grassroots is a noted impediment to successful adaptation and mitigation. In order for these local institutions to thrive, the people must also be willing to work with them for the betterment of their livelihoods.

Apart from conflicts as inhibitions between local institutions, other evidences have been provided for malfunctioning of local institutions in reducing poverty and vulnerability. It emerged that in rural areas of Kenya adaptive strategies like pooling resources and small-scale credit schemes introduced by NGOs collapsed due to differences in social class. Research by

Gugerty and Kremier (2008) indicate the dysfunctions of small-scale micro-credit schemes due to diverse social classes and extensive conflicts. It was noted that the rural elites bulldozed the poor and vulnerable which resulted in massive withdrawal from the projects. Elsewhere, collaborative participation by vulnerable local farmers in rural Nepal was dented by strong ethnicity, gender and caste dividing lines (Selvaraju, 2014). Presence of these identity markers forced locals to disintegrate in combating challenges that are brought by extreme weather conditions.

On adaptation to disasters like droughts which are frequent in Mashonaland province where Madziva is located, men and women's experiences are different. Women's adaptive strategies are significantly different from those of men. Their duties are usually characterized by demanding opportunities at the same time yielding very minimal benefits. Women in Madziva during the wild loquat and bird plum or "African sweets" fruits season, gather these fruits and sell them along Bindura-Mt Darwin road. Similarly, other projects like bricklaying are also labor demanding to most vulnerable women. In most cases women participating in these activities have no other assets and receive little to no help from men. Women's participation in these extra duties to cushion themselves from suffering does not exonerate them from performing other 'normal' duties like participating in small scale credit schemes, burial societies, community gardens and domestic chores.

4.4 Women as actors and indigenous knowledge in extreme weather condition mitigation.

To devise grassroots adaptation solutions driven by indigenous knowledge, it is crucial to tap women's ideas. Women have better knowledge on environment due to their proximity to it. Through experiential knowledge, they possess less gender insensitive solutions like those offered by men (Dankelman, 2010). Through their painful experiences, they developed agency in daily negotiation with livelihood problems like droughts, diseases, and deciding crops to grow (Eriksen, 2000 cited in IPCC, 2007).

4.5 Non-governmental Organizations and Societal approach in dealing with drought in Madziva

Whilst contemporary scholarly views understand social capital as an integral component on poverty reduction and disaster adaptation, critics voice that it needs not to be over romanticized. Although the poor and vulnerable groups possess strong bonding and bridging capitals, they are weak in creating the linking capital. Linking helps them in enhancing vertical relationships which will add new knowledge apart from what they know (Bernier and Dick,

2014). Thus, groups and associations which are hard hit by climate change impacts will succumb if no external interventions like food relief are given during severe droughts.

In Madziva most indigenous crops farmers are seen collaborating through farming groups and other associations as a reaction to threats like droughts and environmental degradation *inter alia*. This stands as a remedy to disasters which pose threats to both human life and livelihoods strategies. Prevalence of local level-based farm groups and associations are a common feature in indigenous communities of Africa. Farming groups have also been observed in rural Kenya (Gugerty and Kremier, 2008) and Rwanda (Narayan and Nyamwaya, 1996) among others. Many groups without external connections and with limited adaptive capacity have collapsed (Di Gregorio *et al.*, 2012). Unity among farmers is praised for bringing them together and indiscriminately sharing benefits and losses.

On bridging capital, social networking extends to connections made between different groups, villages and communities themselves. The possibility of forging relationships is usually pushed by similar interests being pursued by different groups (Putman, 2000). In the farming communities, farmer associations or villages can share climate change information, water reservoirs for livestock, pastures, and markets among others. The interdependence of communities and villages help in curtailing uneven distribution of resources. Therefore, bridging capital joins bonding capital in strengthening adaptive approach. Aggarwal, (2009) suggests incentivizing farmers that conserve and use resources efficiently.

Furthermore, according to the newspaper Herald on 26 June 2018, the then minister of environment Oppah Muchinguri-Kashiri mentioned that adaptation in the agricultural sector should focus on strategies that conserve moisture, promotion of conservation agriculture, improved short season seed varieties and use of drought resistant small grains such as sorghum and rapoko (Herald, 2018:2). She added that agricultural adaptation usually benefits small scale farmers in rural areas in the sense that it allows them to protect their crops, to manage their practices and to adapt their methods and choices.

4.6 The role of the government in mitigating the effects of drought in Madziva rural area

Dealing with the issue of water scarcity in Madziva is not only a matter of accessing more water as most water bodies have dried up as a result of drought. It is about conserving and rendering safe the amount that there still is. Throwing of rubbish, dirt objects and dead bodies of animals into the water bodies that still have water must stop and anyone found doing that must be heavily punished by the law of the community.

Mukuhlani and Nyamupingidza (2013) indicated how cost-effective it can be if the government initiates plumbing training programs to ensure water preservation. They mentioned that the training of communities in simple, practical skills is a cost-effective way to ensure sustainable,

well-maintained systems, for example skilled plumbers ensure water efficient distribution networks with minimum leakage, (Mukuhlani and Nyamupingidza, 2013). It would also save the community if the government designs programs that educate people on how to use water sparingly in the face of drought.

4.7 The gendered adaptation and mitigation measures

Poverty variances and vulnerability conditions between men and women require different adaptation strategies. For vulnerable women in Madziva with limited assets (livestock, property and other resources), resilient strategies need to be pragmatically crafted depending on available resources. Indeed, reliance on indigenous knowledge systems and social capital remains viable alternatives. Since women's livelihood activities are centered on subsistence agriculture and environmental exploitation, tapping their indigenous experiences can be of great importance. This ensures food security, availability and the ability to deal with negative effects of climate disasters (Merchant, 1980). Nevertheless, embracing women's indigenous knowledge has been receiving the least attention in mainstream debates and policies. Such initiatives suffer from pervasive patrimonial hegemony which considered women as insignificant others. Elimination of discriminatory tendencies, violence and subordination of women promise an equal sharing of benefits and hazards as well as formulation of holistic resilient measures which are significant in dealing with challenges ushered by drought. In substantiating this claim Portia indicated that;

“Men need to change their behavior, especially when it comes to selling the produce that we both worked for. As a woman, I must know where each and every cent has gone to. My decisions must also be put into account. There must also be a law that embraces gender equality in each and every facet of life.”

Increase of international conventions has influenced responses from other United Nations related forums to put gender as a top agenda in climate change debates (Otzelbeger, 2011). For instance, in 2007 more than 25 members of the United Nations and other development actors formed the Global Gender and Climate Alliance (GGCA). The agenda of the alliance focused on assimilation of gender sensitive policies in response to climate change problems. Provision of climate information to all people was also a priority. Proliferation of gender mainstreaming conventions and watchdogs promises collective results. Collective efforts help in influencing the speeding up of the formulation of gender-neutral policies by national and international public officials.

Availability of financial capital combined with technocrats (human capital) will ensure the smooth impartation of equality everywhere in the world (Otzelbeger, 2011). Irrespective of public outcry of lack of political will by giant climate change actors, sympathisers acknowledged that public debates on gender injustice marks the beginning of the gender justice revolution in climate change platform (Enarson, 2000). Klein, (2015) points out that the

initiators of the neoliberal principles are the same climate change actors who are making it almost impossible to deal with climate change issues.

Furthermore, the frequency of disasters has opened chances for farmers to employ more strategies for survival apart from agriculture. The main adaptive strategies emerge from fully exploiting natural capital and their human capital (labour). In this study, a comparison between men and women depicted varying levels of vulnerability and adaptive strategies used. It emerged that agriculture (crop farming and animal husbandry) is a common strategy for all categories. The escalating climate problems and absence of men makes women embrace a wide range of adaptive options. Relying on these forms of capital is disastrous for women.

Selling firewood used to be a responsibility reserved for men but energetic women in Madziva are heavily involved in cutting down trees and selling firewood. The business of selling firewood does not pardon them from other domestic chores. In areas such as Madziva, the business does not really thrive because almost everyone knows where to find the firewood. The only option they have is to sell this firewood along the main road where they target people traveling back to urban areas, experiencing power load shedding problems.

Women are also active in piece jobs. Most active women are those comprising of widows and other female headed households without or with less help from men. Such households are more vulnerable and possess low adaptive capacity. Likewise, women in the Gaza province of Mozambique are very active in commercial charcoal production (Ribeiro and Chauque, 2010). They participate in the full processing and selling of charcoal. Unfortunately, in both cases, women are less beneficiaries of selling firewood and charcoal. Most of the proceeds are insufficient and, in some cases, amassed by men. Men's power is enjoying women's sweat in driven by patriarchal beliefs which considers women and their outputs as men's personal property (McFadden, 1999).

As part of coping with climate change impacts, women engage in selling wild fruits common in Zimbabwe like wild loquat and African sweets. Whilst women acknowledged that little income from selling these fruits, the worrying problem was disappearance of the trees that bear those fruits. As a result, women are forced to travel long distance searching them. After harvesting and processing them, women face challenges like accessing markets. Along the highway there will be more than ten people selling the same product, which makes it even difficult to secure a consistent market. It is survival of the fittest principle.

Some travel approximately 20 km in search of the fruits and of the marketing places. Some complain about the pricing of the fruit. It was discovered that a 20 kg tin is sold at \$5.00 (US dollars) in the rural areas and resold in urban areas for \$15 or more. The price which women get is different when compared to those that sell them in urban places. As a result, women have complained that this disadvantages them. Their wish was to get their men to get educated so that they allow their wives to travel to urban areas to sell their products at better prices.

Beer brewing, participation in projects like community gardens, small scale credits and poultry projects, among others, remained available income generating options for women although they pointed out that it is not easy to secure the resources. Women blamed cultural role allocation which hinders men from joining them in activities that add value to their troubled livelihoods. They suggested the need to discourage patriarchy and embrace gender equality through communal education. Chambers (2006) mentions that with the help of both government and non-governmental organizations, vulnerable groups must be given the opportunity to develop simple and sure methods that enable them to analyze their conditions and identify their priorities.

It emerged that men usually partake roles in piece jobs in local and distant areas to cushion families from succumbing to occasional droughts. They were engaged in labor demanding agricultural piece jobs in the neighboring irrigated areas like Matepatepa to supplement household food and income. They also scavenged for any leftover produce in already harvested fields. According to Coleman (1990), engaging in temporal and seasonal work is necessitated by pragmatic utility of available bridging capital. Taking advantage of the area's proximity and viable irrigation schemes has been the answer to critical disasters like droughts.

Men's adaptive roles are regarded by women as more flexible and simpler than those of women. It was argued that men spend more time in urban areas hence avoid problems which are faced by women every day. Nevertheless, responses from men and women contrasted. Men believed that they play more demanding roles than women. They lamented that their available adaptive strategies are riskier than those of women. They cited that illegal boarder jumping, poaching and diamond and gold panning are rated amongst dangerous acts compared to domestic roles of women. Though both genders could not agree on whose roles were more important or exposes them to greater vulnerability, there is need to understand that they must help each other in carrying out these activities.

Differences in age and personal experiences are the common factors in explaining men and women's perceptions on gender vulnerability. Most female respondents below 60 years of age complained that changes in agricultural output and general livelihoods affect women immensely more than men. Working in the fields and other domestic chores were projected to double. Men in these areas have strict adherences to culturally ascribed roles. Most women work in the fields with or without help from men.

4.8 The imperativeness of indigenous knowledge in adapting and mitigating the impacts of drought in Madziva rural area

In the climate change discourses, observations have been made that poorest communities are vulnerable to climate change but with limited capacity to adapt. As such, relying on family members, kinsman and other social associations ensures strong bases for strong social protection and improved welfare for the members (Portes, 1998). In the farming communities,

the majority of the members would rely on the elderly in the prediction of seasonal information using ethno-science. In closely-knit groups, with vibrant networking, trust and reciprocity, members will take advantage of human capital (elders for indigenous knowledge) for procurement and transferring knowledge and seasonal information.

Indigenous knowledge indicators remain critical in cases where scientific seasonal forecasting is minimal. Interpretation of symbolic meanings from trees, birds and astronomical events by elders help societal members in creating dependable farming calendars. In such a scenario, farming calendars are generated by adequate information on planting time lines, coming of rainfall and dry spells. In execution of rituals like rain making ceremonies, community collectivism remains integral while expertise and guidance is guaranteed from elders. With collective minds it is easy for farmers to pool resource and participate in fighting problems like food insecurity, perennial crop failure multiplication of pests and diseases.

4.9 Conclusion

This chapter explored some of the adaption and mitigation measures implemented in Madziva rural area. Water scarcity in Madziva is one of the mystifying issues that are baffling the dwellers. Because of drought, poverty has been ushered into this area. Poverty levels and vulnerability conditions between men and women require different adaptation and mitigation strategies. Basing on the researcher's own observations, women in Madziva rural area are more impoverished as compared to men. Urban migration in search of greener pastures has been seen to be dominated by men whilst women are left in rural areas to tackle drought with limited resources. However, in dealing with all these predicaments that have emerged because of drought, resilient strategies and justice for both genders need to be rationally constructed depending on available resources. Presence of wider connections is a corrective measure for bringing positive results through sharing and exchange of knowledge and resources. The following chapter concludes this thesis report. In summative form, it addresses the key findings, conclusions and recommendations of this research.

CHAPTER 5: EXECUTIVE SUMMARY

5.1 Introduction:

This chapter presents a summary of the research project. It highlights the main objectives of the research, discussing if these have been met. It also discusses the main findings and conclusions of the project. Informed by the research findings, the chapter also makes recommendations to various stakeholders in order to ameliorate the plight of these rural women. Areas for further research are also highlighted before a conclusion is presented.

5.2 Objective of study

Women in Madziva rural area experience severe challenges as a result of drought. The livelihoods of these women have become precarious as they struggle to fend for themselves and their families. They cannot continue with their agricultural practices, their main source of income. Nevertheless, these women are expected to provide and “make a plan” for their families to survive. A lot of women have resorted to growing of indigenous crops which are drought resistant. They also work in nearby farms. This study shows the resilience of Madziva’s women during this time of drought. It also demonstrates how women have managed to navigate their lives in societies where they suffer not only from challenges that are brought by climate change, but also from masculinity oppression in a predominantly patriarchal rural environment, as argued by Pease (2010). Using Nixon’s (2011) framework of slow violence, a critical analysis of how women in Madziva have been violated by drought was used, which Morton (2013) describes as a hyper object.

The study has shown that women in Madziva have many struggles as compared to their male counterparts. Findings from the study have shown that the hyper object, which in this case is drought, has had detrimental effects to people’s livelihoods. However, people are overwhelmed, cannot fully comprehend how drought works and how to deal with it as they lack the skills and resources to deal with it.

5.3 Summary, conclusion and findings

By focusing on women in order to examine the impact of climate change which has ushered in drought, the researcher sought to demonstrate the usefulness of the value of a series of historical observations about particular events and cultural practices and knowledge passed from generation to generation. However, the researcher was aware of the challenges of local knowledge held by specific categories of the populations in an environment experiencing rapid population movements, population diversity and population densification. As a result, women

living in Madziva rural are in an environment where they have to grapple with understandings of the fast-changing weather and climate patterns. These understandings are being affected by multiple and competing forecasting mechanisms, commoditization and commercialization of natural resources, destruction of flora and fauna and population densification.

The findings have shown that the dynamics of resource commoditization in the face of increasing population densification is leading to the emergence and reinforcement of non-farm livelihood activities. This, in a way, helps female headed households to withstand and recover from the impact of climate change on their livelihoods. On the other hand, resource commoditization is leading to the overexploitation of the local indicators, such as vegetation, that the community relies on in making rain season forecasts. Such forecasts are crucial in selecting the right type of crops to grow. It is important to point out that in efforts to understand the climate change, other contributory factors also need to be taken into account. These include factors such as settling of people in wetlands. The disappearance of vleis is evidence of both climate change and of the settling of people on wetlands, which has brought about a reduction in the water table.

More so, this thesis sought to demonstrate the importance of not just focusing on explanations of the global level causes of climate change but also on the local level explanations of the causes of climate change. Women in Madziva rural do not seek nor mention the global level causes of drought. Rather, they placed emphasis on seeking out the local causes and associations of climate change which causes drought such as the direct relationship between loss of values and climate change. The research showed that women household heads are hardest hit by the impact of climate change as they are the primary managers of family, food, water and health.

The research also found that local perceptions in explaining and understanding the experience of drought are important in shaping behaviors of those experiencing climatic changes. Their perceptions helped them to reduce vulnerability by making a variety of adaptations to climate change calamities. These include adjusting the timing of their crop plantings and changing the types of crops they plant in response to their local level forecasting of the weather. The research showed that ageing, widowhood, divorce/separation and female headed households in rural Zimbabwe have serious implications for women in the face of vulnerability

The research found that the availability of livestock and insects (pests) are can increase or limiting opportunities for adaptation and creating resilience among the women. For example, ownership of livestock helps women to widen the livelihood options by allowing for diversification of livelihoods. Insects, ranging from mice to other small insects, are also classified as delicacies when villagers feed on them. The challenge of pests and insects has demonstrated that even in the face of drought, not all episodes of hunger and vulnerability can

necessarily be attributed to weather variations. Such hunger and vulnerability were also attributed to issues such as the challenges of the insects and depredation by wild animals.

This thesis has also demonstrated how livelihoods of women who are dependent on all year vegetable farming are being affected by climate change and associated poor rainfall. The introduction of new technology related to water extraction leads to the early drying up of the various water sources that some of the women use for their garden activities. On the other hand, the harsh economic environment where there are no jobs on the formal market has left villagers with no option but to exploit the natural resources in their vicinity. This is significantly impacting on the ability of villagers to continue using local level weather and climate forecasting mechanisms which are flora and fauna based.

5.5 Recommendations

The following recommendations will be useful to the people of Madziva rural, and the whole country at large, the government, and NGOs. There has been a clear indication that young girls and women are particularly vulnerable to drought. As such, there must be a focus for further research in order to explore how best to support them to lessen their water-duties and their struggle for education. In the absence of water and proper sanitation at school, they are often forced to stay home when they menstruate. The researcher recommends government and non-governmental organizations' intervention in providing free sanitary towels in schools and hospitals. Drilling of boreholes in vleis around schools and villages where water barely runs out could be a measure that can be used to contain the issue of water scarcity in Madziva rural area.

To mitigate the water-use of agriculture, farmers are urged to employ methods of sustainability. Herbertson (2001:9) explains such methods:

“...The largest savings can be made by reducing the water which evaporates directly from the soil surface, through mechanisms as closer row spacing, mulching, correct timing of irrigation at different stages of a crop's life cycle, and well-designed sub-surface drip irrigation that does not wet the soil surface,”

Drawing from the findings, there has been a clear indication that wives and girls are responsible for searching and fetching water. Minimal attention was given to those that are physically challenged. A crucial ethnographic research must be done on the predicaments of the disabled and elderly in dealing with water scarcity and other challenges that have emerged because of drought. It is very fundamental to look at the duties and expectations of men.

Furthermore, relationships have been shown to be vital in the mitigation of water scarcity in Madziva, and how they can be constrained due to lack of resources. It will be very fundamental to foster relationships where people can be reciprocal in terms of resources they may have can

be re-established and sustained in dealing with water scarcity caused by drought a hyper object. Good relations ensure that people can depend on each other in the face of such predicaments such as drought where one may have one thing and one may not have.

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