

**Climate change and the livelihoods of elderly
female headed households in Gutsa village,
Goromonzi District, Zimbabwe.**

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ABSTRACT

This study examines the impact of climate change on the livelihoods of female elderly headed households in Gutsa village, Murape Ward, in Goromonzi District of Mashonaland East province in Zimbabwe. It is based on intensive ethnographic fieldwork that I undertook for close to nineteen months in Gutsa village. The key questions that I sought to answer in this thesis were: How is local knowledge about weather and climate change constructed? What is the nature of contestations surrounding this knowledge, and in particular surrounding the attribution of climate change to particular causes or events? How are livelihoods organized in response to the impact of climate change? I examined elderly women heads of households' perceptions and understandings of weather and climate change, issues of conflict and consensus regarding attribution and causality of weather and climate, the concepts that are used to refer to climate change, elderly women's struggles to make sense of, and respond to climate change and to organize livelihood activities in response to the ongoing impact of climate change. In order to answer my research questions I adopted the use of Participatory Rural Appraisal, participant observation, archival research, life-history interviews, narrative research and in-depth interviews as data gathering approaches. I focused on the situated experiences of ten elderly women heads of households in Gutsa village existing in a wider community. In doing so this thesis explored these women's complex understandings and interpretations of weather and climate dynamics as well as the relationship between climate change and their multiple and competing responsibilities. The thesis also analyses the implications of the Fast Track Land Reform Programme in the district, peri-urban development, resource commoditization and commercialization, rapidly shifting markets, changing property relations, social networks, livelihood opportunities, gender relations, changing household structure, the politics of local authority and governance and the dynamics of ecosystems and interspecies interaction. The thesis argues that there is a central vernacular climatological theory that is widely shared among the elderly as well as among other situated individuals in the village and the wider community.

Key Words

Climate change, weather, elderly women, households, vernacular meteorological theory, livelihoods, commoditization, governance, interspecies interaction

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LIST OF ACRONYMS

AFM	Apostolic Faith Mission
AIDS	Acquired Immuno Deficiency Syndrome
AN	Ammonium Nitrate
CABS	Central Africa Building Society
CBD	Central Business District
DVD	Digital Versatile Disc
EMA	Environmental Management Agency
ESAP	Economic Structural Adjustment Programme
FGDs	Focus Group Discussions
FTLRP	Fast Track Land Reform Programme
GMB	Grain Marketing Board
GRDC	Goromonzi Rural District Council
HIV	Human Immuno Deficiency Virus
IPCC	Intergovernmental Panel on Climate Change
LSCF	Large-Scale Commercial Farms
MDC	Movement for Democratic Change
Met Department	Meteorological Services Department
NGOs	Non-Governmental Organisations
PRA	Participatory Rural Appraisal
RBZ	Reserve Bank of Zimbabwe
SSCF	Small-Scale Commercial Farms
UNFCCC	United Nations Framework Convention for Climate Change

VIDCOs	Village Development Committees
ZANU-PF	Zimbabwe African National Union-Patriotic Front
ZRP	Zimbabwe Republic Police

DECLARATION

I declare that this thesis is my own unaided work. It is submitted for the degree of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg, South Africa. It has not been submitted before for any other degree or examination in any other university.

(IGNATIUS GUTSA)

_____ day of _____ 2017

Chapter 1

Introduction and Aim

This study examines the impact of climate change on the livelihoods of female heads of households in Gutsa village, Murape Ward in Goromonzi District in Mashonaland East province in Zimbabwe. The core of this ethnographic study is the experiences of ten elderly women heads of households in the village and other residents close to them. The study's main focus is to examine how elderly women households in Gutsa village understand, explain, experience and respond to the ongoing impacts of climate change. These elderly women heads of households' terminology to describe weather and climate as well as their explanations and understandings of climate change in Gutsa village are based on their experience, close association and observation of daily, weekly, monthly, yearly and seasonal variations of weather and climate in the village.

In this study climate change is not only examined in the context of changing temperatures related to global warming; rather evidence presented shows that in Gutsa village climate change is also about changing wind directions which also affect the direction from which rain that falls in the village is coming from. The nature of inter species interaction in the village is also examined to understand how it enables elderly women to cope with climate change as well as the vulnerability created by this stressor for the elderly women.

In this thesis I do not seek to attempt or provide statistical descriptions and or modelling to examine climate change in Gutsa village as in the mould of macro-level studies pitched at the general level demonstrating the existence of climate change in Zimbabwe (Unganai, 1996). In this thesis I also do not seek to assess the impact of climate change at a macro-level in Zimbabwe (Brown et al, 2012). Or even in the mould of micro-level studies focusing on adaptation to climate change in Gokwe, Zimbabwe (Gwimbi, 2009). Rather in this thesis I seek to assess the micro-level understandings of climate change by focusing on how situated individuals in a single rural community in Zimbabwe (primarily elderly women household heads) understand, experience, explain and respond to climate change at a local level. Furthermore in this thesis I have not even sought to document the global level *causes* of climate change but have rather focused on the importance of local level explanations of the causes of climate change (also see Boillat and Berkes, 2013). To achieve this I have focused on elderly women household heads that have lived in the study area for a number of years as

they have observed changes in the weather and climate as well as the transformations in the explanations of weather and climate phenomena.

In this thesis I have therefore made it important to focus on the sixty year old women and above as these older women have longer experience of weather and climate events over their life course. Due to this experience they have observed changes in the weather and climate and are more aware of experiencing it compared to younger residents (also see Nguyen et al, 2015). The focus on the sixty years and above elderly women in the study village is also important as even in climate change research climatic data is evaluated over several decades to explain climate change (Houghton et al, 1992).

In this thesis I therefore seek to make a significant contribution to the extension of the body of work on local knowledge, elderly women heads of households and interspecies interaction in the area of climate change. This research has been necessitated by the realization that there is now consensus at a global level that the climate is changing (Mongi et al, 2010, 372; (Reid and Huq, 2007) and that it will become worse with the poor being affected first and foremost. As early as 1996 the IPCC (1996a) noted that the world's climate had changed, is still changing and would continue to change regardless of what investments in mitigation are made. For Scheraga and Grambsch (1998, 86) some of this change will occur as the result of natural climatic variation. Some will occur as a result of human activities that have already altered the atmosphere and committed us to future climate change.

In focusing on Zimbabwe there is therefore no doubt that the climate is changing as studies by Mugandani et al (2013); Makarau (1999); Low (2005) have all acknowledged that over the years there have been strong pointers of the existence of climate change and variability 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 (Unganai, 1996; Brazier, 2015; Chikodzi, Murwendo and Simba, 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) as they observed that most meteorological stations in Zimbabwe have recorded a decline in rainfall over the past 100 years. The decline in recorded rainfall has therefore seen arid and semi-arid zones extending into natural region II and III with natural region I witnessing a reduction in its size. In some instances natural region II has shifted to natural region III while natural region III has shifted to natural region IV (Mungandani et al,

2013; Brown et al, 2012). These changes in Zimbabwe's natural regions have implications for agro-based rural livelihoods and crop production under rain-fed conditions.

Consequently climate change is affecting the livelihood options of individuals, households and communities. As the impact of climate change is ongoing and causing climate induced disasters in the form of floods, cyclones and impacting negatively on food production it is increasingly becoming important to focus on adaptation to climate change as mitigation efforts to reduce the greenhouse gas emissions will definitely take some time (Dankelman, 2002; Hassan and Nhemachena, 2008; Parry et al, 1999; Molua, 2011).

People with low incomes like elderly women affected by such disasters 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 dramatic events. Following cataclysmic events caused by climate change (extreme drought, floods, cyclones, heat waves etc.), poor people are exposed to death, injury, illness, as well as becoming homeless 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.

Writers such as Terry (2009) have acknowledged that social scientists are new to the field of climate change as over the years the monopoly of natural scientists essentially made issues to do with climate change incomprehensible to the lay person. As a result, most studies that focused on adaptation to climate change have mainly adopted a quantitative approach in both data gathering and analysis (see Nguyen et al, 2015; Crate 2011). Vedwan and Rhoades (2001) also pointed out that most of the studies on the impact of climate change have tended to focus on the large-scale without zeroing in on the micro-level. On the other hand most studies on climate change and gender have initially and by necessity been somewhat speculative in nature without necessarily being based on field research (Nelson, 2011).

Evidence regarding the impact of climate change is pointing to the fact that the impact of climate change is not consistent across population segments and regions (Scheraga and Grambsch, 1998). While the impact of climate change is ongoing and is being felt differently in different regions and by different population categories, the elderly people (especially female) have been omitted in general research and policy responses that have examined the impact of climate change on different population categories in different regions (see Ndiweni and Ndlovu, 2013; Mwangombe et al, 2011; Gwimbi, 2009; Mary and Majule, 2009; Skinner, 2011). This omission of the elderly in climate change discourse has been typical at global, regional and national levels. The limited studies that have recently focused on the impacts of

climate change on the elderly as a group have mainly focused on the impacts of climate change on elderly people's health.¹

My focus on elderly women heads of households is also influenced by Eriksen et al (2008) cited in Nhamo (2014) who pointed out that elderly women are more vulnerable to climate change disasters than any other group (also see Gandure, 2011). What also makes elderly 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 labour and expertise, elderly women are often guardians of seeds, plant varieties and even soils. They are further responsible for pumping, carrying, conserving and utilizing household water, and 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 climate change on elderly 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 II which experiences favourable climatic conditions due to receiving normal to above normal rainfall conditions). On the other hand most of the writings on the impact of climate change have mainly focused on the experiences of people living in arid and semi-arid regions (e.g. Mwangombe et al, 2011; Sivakumar, Das and Brunini, 2005; Mary and Majule 2009) without also focusing on regions which are not typically classified as arid or semi-arid as this study did. As a result this study took a multidimensional view of climate change by looking at it from the context of gender (women), age (elderly), agro-ecological zone (Natural Region II) and location (Gutsa village, Murape Ward in Goromonzi District).

In focusing on Gutsa village despite it being located in a climatically favourable agro-ecological region, I was distinctly aware of observations by Marimira (2014, 4) regarding Goromonzi District. Marimira's argument was that inasmuch as Goromonzi District is in agro-ecological region II there is the possibility of dynamic, strong and extreme micro-climatic variations (also see Worby's 1992 study in Gokwe) within the same agro-ecological zone as well as within different years. Prior studies in Munyawiri (another ward in Goromonzi District) by Zvigadza, Mharadze and Ngena (2010) showed that there were extreme climatic variations in the district. Despite Munyawiri Ward being in a favourable agro-ecological region II, it could easily be classified as semi-arid even though it is not in an arid/semi-arid agro-ecological zone.

¹ For example see Horton, Hanna and Kelly's (2010) study which focused on the impacts of climate change on rural elderly in Australia without even also focusing on female elderly as a specific group.

In this thesis I aim to do the following:

- Characterize the climate of Gutsa village in order to assess the nature and level of climate change.
- Document elderly women's environmental and climatological knowledge in Gutsa village.
- Examine the impact of climate change on the livelihoods of elderly female headed households in Gutsa village.
- Examine the nature of interspecies interaction in the study village to assess its contribution as a driver of vulnerability.
- Document elderly women's adaptation strategies in the face of climate change in Gutsa village.

These objectives are answered by the following research questions:

How is climate change manifesting in Gutsa village?

What is the nature of elderly women's environmental and climatological knowledge?

What factors do elderly women heads of households attribute to climate change?

What is the impact of climate change on elderly female headed households in Gutsa village?

How is environmental and climatological knowledge constructed in Gutsa village?

How are elderly female headed households experiencing climate change in Gutsa village, Goromonzi District?

What is the nature of interspecies interaction in the village and how is the interaction affecting elderly women headed households in Gutsa village in the face of climate change.

How do elderly women headed households cope with the impact of climate change in Gutsa village?

How is elderly women's environmental and climatological knowledge helping in adaptation strategies?

What are the socio-economic and political structures available to help elderly women headed households adapt to and cope with the impact of climate change in Gutsa village?

Significance

This study is important in the context of rural Zimbabwe as close to seventy per cent of people in the country live in rural areas where their agro-based livelihood activities are closely tied to rainfall activity (ZimVac, 2011). As rainfall activity is being affected by climate change due to increased incidences, severity and frequency of weather-related

hazards such as floods and droughts rural people's livelihoods are being disrupted in the process.

Furthermore women constitute the majority of the older populations in almost every country, and their majority increases with age (Kinsella and Phillips, 2005; Knodel and Ofstedal, 2003, 679). The primary reason there are many more women than men at older ages is that men have higher death rates than women at all ages (Kinsella and Phillips, 2005, 23). So as women increasingly outnumber men in old age it becomes increasingly important to examine their situation to understand the challenges they are facing (Knodel and Ofstedal, 2003, 679). For example the longevity of women compared to men means that women are more likely than men to be widows for many years (Cattell, 2009).

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 elderly women in the face of climate change are likely to be diverse in both space and time. Elderly women in Zimbabwe are also more likely to be living alone or with orphans and other vulnerable children, (see Foster et al, 1997, 155; Young, 2008; Madzingira, 1997, 16). In examining the impact of climate change on female elderly headed households in Gutsa village I reflect on Kimuna's (2005) conclusions regarding the living arrangements of elderly women in Zimbabwe as HIV and AIDS has hit the poorest elderly women in Zimbabwe hardest similar to other countries in sub-Saharan Africa. Elderly women now find themselves in situations where they have taken on the task of caring for orphans and other vulnerable children without any support from the state or from their immediate communities. Furthermore older women are more likely to need support than older men partly due to longevity and a history of poor nutrition and health care (Kimuna, n.d. 159).

Furthermore this study is important as I also seek to document local knowledge systems and their usefulness in adapting to climate change (see Boillat and Berkes, 2013). There is value in the historical observations of particular areas based on the cultural transmission of knowledge passed from generation to generation (Berkes, Folke and Gadgil, 1994). In this study I use the term local knowledge referring to place-based knowledge rooted in local cultures and associated with long-settled communities with strong ties to their natural environments (see Orlove et al, 2010).

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). This is making rural elderly women headed households' livelihoods precarious; furthermore it increases their vulnerability in the context of scarcity and limited

access to resources and hence increases their vulnerability. Therefore as argued by Antwi-Agyei et al (2012) it is critical to address this gap in knowledge as this is one way of increasing the understanding of how communities and households (elderly women in Gutsa village) are coping with the varied impacts of climate-related problems as well as providing critical insights and lessons into the structure and drivers of vulnerability in sub-Saharan Africa in general. This knowledge could therefore be used in adaptation strategies and in creating resilient communities in the face of the impact of climate change.

Definitional and conceptual issues

Understanding climate change

In this section on conceptual framework I explain the central concepts that animated me before I commenced my fieldwork, in the fieldwork process as well as finally as I present them in this study. The concepts I deal with here are climate change, gender, adaptation, rural livelihoods and agro-ecological zones.

Before proceeding with field work I had researched and understood climate change as:

“...change in the state of the climate that can be identified (e.g. *using statistical tests*) (emphasis mine) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity.” (IPCC, 2007, 30).

As well as:

“.....a shift of climatic conditions in a directional incremental mode, with values of climatic elements changing significantly” (Unganai, 1996, 137).

After my proposal was reviewed and passed I went into the field armed with the individual consent forms as well as the study information note and soon faced a hurdle. I realized I had not translated these two documents from English into Shona² language which I was going to use for explaining the study as well as the signing of the individual consent forms. I proceeded to translate these documents into Shona while trying to find the equivalent Shona

² This refers to a Bantu language spoken in Zimbabwe as well as people who speak the language. The language is referred to by linguists as “ChiShona”; however in this thesis I use the more common “Shona”, without the prefix.

names for what I was hoping to study. After translating climate change into what I thought to be the Shona equivalent, it read, “*kushanduka kwemamiriro ekunze*”³. After all, I reasoned that even the various media outlets in Zimbabwe which are responsible for disseminating the weather report as provided by the Meteorological Services Department (Met Department) were also referring to climate change as *kushanduka kwemamiriro ekunze*.

I soon realised the challenge of referring to climate change as *kushanduka kwemamiriro ekunze* when I tried to explain to the elderly women what I was researching during my initial contact with them. I soon realised how words and terms have different meanings. For example when I was chatting to Mai Mizhu about *kushanduka kwemamiriro ekunze* and going through introducing the purpose of my study she interjected and agreed that things have changed and for the worst as she was now finding it hard to feed the family. Here she had understood *kushanduka kwemamiriro ekunze* to refer to changes in the socio-economic and political conditions in Zimbabwe. I had to allow her to go on and gently mentioned once more issues to do with the environment.⁴ It was during my early conversations with Mbuya Ku she pointed out that the equivalent Shona term for climate change is “*kushanduka kwemwaka*”.⁵ This term went on to be adopted unanimously even in my initial Focus Group Discussions with the elderly women heads of households.

Gender and climate change

There currently exist powerful arguments for addressing gender issues in the debate on climate change. This is mainly driven by the realisation that women have generally been sidelined in climate change discourse even at the global level. A simple word search of the two most important treaties which relate to global efforts to combat climate change namely the United Nations Framework Convention for Climate Change (UNFCCC) and the Kyoto Protocol contain no references to women and gender (Skutsch, 2002, 30). On the other hand observations by Denton (2002, 10) show that seventy per cent of the 1.3 billion people in the developing world living below the threshold of poverty are women. As noted by Skinner (2011, 2) in many developing countries economic constraints and cultural norms restrict

³ Literally change in the weather.

⁴ Also see Mabika and Salawu (2014, 2397) regarding the meaning of the phrase *mamiriro ekunze* and the challenge of translating everyday Shona words into English.

⁵ Climate change as presented in this study is *kushanduka kwemwaka* (change in seasons) and not *kushanduka kwemamiriro ekunze* (change in the state of the weather) which could refer to the hourly, daily, weekly and monthly weather and not to seasonal or over longer periods. In focusing on *kushanduka kwemwaka* emphasis here is on the changes in the seasons per se as well as changes in the characteristics that are found in the specific season. These are wind patterns, temperature and rainfall patterns and their timing (commencement, length, cessation and frequency). Consequently *kushanduka kwemamiriro ekunze* is found in *kushanduka kwemwaka*.

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; 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 equally. This is mainly due to the practice of patriarchy in some societies which forces women to interact directly with their natural environment, while increasing their poverty and vulnerability to environmental change due to the unequal access to resources.⁶

For Demetriades and Esplen (2008, 24) most studies on climate change and women have largely homogenized 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 sum women are hardest hit by the impact of climate change as they are the primary managers of family, food, water and health (Wisner et al, 2007). Considering the above it is imperative to ensure that the consequences of climate change should not lead already marginalized sections of communities such as elderly women into further deprivation.

Gender inequalities in the distribution of assets and opportunities ultimately mean that women's choices are severely constrained in the face of climate change. For Antwi-Agyei (2012) female-headed households in Ghana without any reliable sources of income are more vulnerable to the impact of climate change than male-headed households even though the study was not focusing on elderly women per se. Furthermore constraints towards agro-based livelihood options for rural women in the face of climate change are mainly attributed to restrictions regarding land ownership for rural women as they lack productive land to farm (Skinner, 2011, 12). The burden of climate change 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 this 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

⁶ Aguilar (2008) quoted in Crate and Nuttall, (2009 12) showed that women's vulnerability to weather catastrophes is linked to the patriarchal nature of some societies. 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. This was attributed to the culturally specific devaluation of their gender, as many live in conditions of social exclusion, being excluded from survival skills learning (e.g. tree climbing and swimming which help during floods), to restrictions on women's movement in times of crisis, up to unequal allocation of food resources to girls and women, rendering them physically weaker in times of evacuation and crisis.

thus further entrenching unequal gender relations (Skinner, 2011). Skinner (2011, 3) 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. In line with Hassan and Nhemachena's (2008, 93) observations, I therefore postulate that it is naïve to assume that the experiences of female elderly headed households are uniform in both space and time.

Climate change, adaptation and rural livelihoods

As noted by Scoones (2009), the term livelihoods is essentially mobile and flexible as it is applied to development enquiry and practice ranging from focus on locales (rural or urban livelihoods), occupations (farming, pastoral or fishing livelihoods) and social difference (gendered and age-defined livelihoods which is the focus of this study). As a result in this study I have placed focus on understanding livelihoods from local contexts.

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). This becomes more so when looking at rural livelihoods in the context of climate change as most rural livelihoods are agro-based and mainly reliant on rainfall. The unreliability of the climate is also a significant cause of rural poverty due to its impact on local livelihoods (Hill, 1972, 190-191). Hill demonstrated that in rural Hausaland, Nigeria the unreliability of the weather in the context of its annual variations affected planting dates due to the erratic distribution of rainfall within the farming-season. As a result, long term planning is made difficult as in some instances seed is lost due to abortive sowing thereby affecting seasonal fluctuations of grain leading to the possibility of famine. In the case of Tanzania, Lyimo and Kangalawe (2010) observed that dwindling food security is increasingly becoming a manifestation of negative effects of climate change. Here food has been affected by persistent drought in the face of rising temperatures and crop failures which are becoming common particularly among seasonal food crops. This is compounded by the fact that climate modeling techniques are predicting an even worse food security situation in most semi-arid and arid pockets of Tanzania (ibid). As a result of this, climate change is bound to affect rural people's livelihoods (particularly elderly women) as their major economic activities are agro-based and therefore increasingly vulnerable in areas projected to experience erratic rainfall.

The definition of adaptation adopted in this study is the one put forward by Osbahr et al (2007). Here 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 and of concern in developing countries especially in Africa where vulnerability is high because the ability to adapt is low.

Reconciling the “old” agro-ecological zones and the “new” reality on the ground

Agro-ecological zones/natural regions are essentially the demarcations of regions based principally on climatic and soil properties. Mubaya (2010, 173) stated that the classification of agro-ecological regions in Zimbabwe from agro-ecological region I to V was based mainly on rainfall, vegetation and other agro-ecological factors on a continuum. This classification of agro-ecological zones in Zimbabwe was carried out by Vincent and Thomas in 1960 (Mugandani et al, 2013) with natural region I classified as having the highest mean-annual rainfall and region V the least. Characteristics of these natural regions are detailed below.

Table. 1 Natural Regions/Ecological Zones in Zimbabwe

Natural Region	Defining Characteristics	Rainfall	Type of agriculture practiced
Region 1.	More than 1000mm of rainfall per annum		Specialized and diversified farming and suitable for dairy farming forestry, tea, coffee, fruit, beef and maize production
Region 2.	750-1000mm of rainfall per annum		Suitable for intensive farming of maize, tobacco, cotton and livestock
Region 3.	650-800mm of rainfall per annum		Semi-intensive farming region. Suitable for livestock production, together with production of fodder crops and cash crops under good farm management
Region 4.	450-650mm of rainfall per annum		Semi-extensive region. Suitable for farm systems based on livestock and resistant fodder crops. Forestry, wildlife/tourism
Region 5.	less than 450mm of rainfall per annum		Extensive farming region. Suitable for extensive cattle ranching, forestry, wildlife/tourism

Source: Adapted from Vincent and Thomas (1960); FAO (2006)

Historically the demarcation of Zimbabwe into these five agro-ecological zones among other purposes served in classifying the nature and types of crops and livestock that could be cultivated and reared in those specific natural regions in the country. However one

of the major challenges of this natural region classification is that these agro-ecological regions as developed in the 1960s are still being used in Zimbabwe in their present state without any reclassification/modifications being done (Mugandani et al, 2013, 13).

In this study I argue that the continued use of the present agro-ecological zones in their current state is problematic as it potentially gives a misleading impression that the climate in Zimbabwe has not changed in contrast with evidence which points to the contrary. I also concur with Mugandani et al's (2013) observations that although these natural regions have not changed on paper, evidence on the ground points to the fact that they have changed in size. Furthermore Hussain (1987, 38) quoted in Worby (1992, 134) also acknowledged the inevitability of the process of redrawing the ecological map based on a closer scrutiny of rainfall distribution which may lead to upgrading or downgrading of some areas. This is necessary as the classification of Zimbabwe into agro-ecological zones does not seem to conform to the productive reality of some areas/regions that in Vincent and Thomas' (1960) classification had been classified as only suitable for livestock production (Region V).⁷ This therefore shows the potential pitfalls of classifying regions/areas into agro-ecological zones without also appreciating the possibility of local level climatic and regional variations. I argue that such a possibility is also present in Goromonzi District which has simply been classified as falling in agro-ecological region II. In drawing attention to this I appreciate the fact that the historical classification of agro-ecological zones did not consider the possibility of local, small-scale climatic variations and the micro-climates in a single natural region. This is crucial as these local level climatic variations have the potential to affect the choice of livelihoods that elderly women heads of households can engage in as most of their livelihoods are agro-based and mainly reliant on rainfall activity. Considering the evidence, reclassification of the ecological zones is therefore becoming a necessity as evidence shows the possibility of the existence of micro-climates (see Worby, 1992) and also the increasing impact of climate change (Mugandani et al, 2013).

⁷ For example Worby's (1992) study in Gokwe seemed to turn this natural region classification on its head. Gokwe which had been classified as suitable only for livestock production surprisingly had one of the best cotton outputs in pre and post-independent Zimbabwe.

Methodological Issues

A methodological approach that privileges a contextually rich and nuanced climate change research

This research is based on intensive fieldwork undertaken for close to nineteen months from the end of April 2014 to November 2015 in Gutsa village, Murape Ward, Domboshava in the Goromonzi District of Mashonaland East Province. My strategy of extended fieldwork in Gutsa village was influenced by Schumaker (1996, 238) who pointed to the need to adopt extended fieldwork as a data collection strategy. Extended fieldwork enables a researcher to collect various kinds of data through observing daily activities and offering the opportunity to understand the world view of the local people. This approach was important in order to “discover” how the elderly women heads of households in Gutsa village experience climate change. Furthermore it was important to understand how this is mediated by their cultural values, the avoidance of economic risk in their efforts to maintain their livelihoods (see Worby, 1992, 77-78).

As noted by Barnes et al (2013) anthropologists typically conduct research over extended periods of time in a single community or set of communities, gradually building relations of trust with research subjects (respondents), closely observing people’s everyday activities, interactions, conversations and conducting interviews. Therefore anthropology’s in-depth fieldwork methodology, long engagement in questions of society-environment interactions and broad, holistic view of society should yield valuable insights into the science, impacts and policy of climate change. This closely mirrors my experience in conducting my field research in Gutsa village. Going about my research I was embedded in the single community in Gutsa village which I belong to. This is an area that I know very well, with people that I know and who also know me.

In the early days of my research I moved around with my satchel strapped to my back. My visits and this satchel which contained my documents made me very conspicuous in some parts of the village especially *kuDongo*⁸ (an area I also refer to in this study as Lower Gutsa) because I rarely go there. I traversed the whole breadth of the village into places that I had last visited more than twenty years back then herding cattle during the December and April school holidays. Everyone then became curious about the frequency of my visits as well as my intentions, with word then already doing the rounds that I was doing research. The other

⁸ *Dongo* means abandoned dwelling place. When the village head Gutsa moved with his people from this place in the 1950s it was then simply known as *kudongo*. At present even though the area now has almost half of the total village population living there the name has not changed. I have discussed this in detail in Chapter Two.

day I had a hard time when I went to Mbuya Gone and Mbuya Tawira's places for the second time. Some women came through and they were very curious to know what I was doing. It appeared that no one wanted to be left out as everyone was unsure about what was happening despite my repeated assurance that I was simply doing *zvekuUniversity* (related to University studies). As a result I had to gently disappoint some who were suggesting their relatives who were above sixty years as well as being female heads of households to be included in the study.

Some of the advantages that were offered by the study site were that, before I formally commenced my fieldwork at the end of April 2014 I had already been living in the research site continuously for close to four years. This was after I had moved out of Harare in October of 2010 to stay in this place which is my rural home. This was mainly due to the convenience the village offered as a place close to the capital thereby enabling me to commute to Harare to work on almost a daily basis. This is a pattern common to the residents of Domboshava since the early 1990s.⁹ People have moved away from the hustle and bustle of living in the capital city of Harare almost forty kilometres away. Some of the advantages I sought to capitalise on by moving back to the countryside were the quietness, the cleanness as well as the relatively cheap lifestyle in the village. Gutsa village is the area that I grew up in and spent the first two years of my primary schooling in before moving to Harare for primary, secondary and then tertiary studies.

As noted by Mombeshora (2000) a district or a village settlement cannot be said to adequately represent the typical community of a country. This can truly be said of Gutsa village which in no way is representative of a true rural community in Zimbabwe or anywhere else. This is so because this is an area that has been in constant flux and therefore really been devoid of a simple common characterisation due to a multiplicity of factors. These factors which I examined in detail mainly in Chapter Two range from its proximity to the capital city Harare, the impact of the Fast Track Land Reform Programme (FTLRP), the population densification it is currently experiencing, the increasing heterogeneity of the population as well as the diversification of livelihoods being pursued, all on the backdrop of the impact of climate change.

What I can term as the official point where I commenced my research was end of July 2014 when I was through with my proposal and had finished all the paper work associated

⁹ Also see Hungwe (2014) and the increasing trend in Domboshava where residents increasingly prefer to commute to Harare for work and school on a daily basis.

with my "entry" into the formal phase of my research. Being a son of the village I could have easily capitalised on already being there and proceeded with my research by not seeking clearance from the Ministry of Local Government and Goromonzi Rural District Council (GRDC). However I decided to take the formal route. That is when I came across the hurdles of researching in a politically polarized rural Zimbabwe (see Mukeredzi, 2015). In April 2014 I first went to GRDC offices where I was advised to first seek clearance from the Ministry of Local Government offices in Harare. I traced my way back to Harare with the application package consisting of a four page brief of my research, proof of registration as a PhD student in Anthropology at the University of the Witwatersrand, my supervisor's support letter and a one page application. At the government complex I was transferred from one office to the other and was advised to leave my application. I went back home with the assurance from the officials that they would get back to me in less than two weeks. I was very disappointed as I did not receive a response from the Ministry of Local Government. With the two weeks passing and still having no response yet by end of July 2014 I decided to approach the Ministry of Environment, Water and Climate since my study was related to an area of concern to them. I approached them with the same package and advised them about my predicament. They wrote a letter directly to Goromonzi Rural District Council informing them that I will be doing my research in the district. I then went back to GRDC offices armed with the letter and they endorsed it and that marked the official phase of my research.

As a researcher it is important to reflect on the relationship between the respondents and my role as a researcher, a relative and also my position as the village head's son. My fieldwork experience breaks away from descriptions of the "Lone Ranger" ethnographer who rides off into the sunset in search of the "native" (Rosaldo, 1989, 31). All ten of the elderly women in this study were very familiar to me. I knew them before and they knew me too, some from as far back as the time my birth was celebrated in the village. So when I went to see Mbuya No to introduce my study she reminisced about years gone by heartily saying:

"Iwe Gnatsio ndaikupa porridge iwe uri kamwana kacheche.....Unofanira kunditengera loaf rechingwa".

"You Gnatsio (Ignatius) I used to give you porridge as a toddler.....So you should buy me a loaf of bread".

These elderly women except Mbuya Tawira had seen me growing up in the village and herding cattle during the December and April school holidays and over the weekends just like the other boys from the village. On a number of occasions the cattle we were herding had

strayed into their fields and we had been admonished by them for that. Therefore being from and living in the community I was already in the field. What I now needed to do was to enroll these elderly women in the study, gain their trust about my new role as a student somewhere in *Joni* (Johannesburg) and begin to closely observe the everyday activities that before registering for my PhD I had allowed to pass without noticing them. I always conversed with the majority of these women on different occasions.

Consequently from about mid-July to the 31st of August 2014 I was mainly concentrating on establishing rapport with these elderly women which involved me reinventing various relationships that spawned a wide spectrum which were all in a joking relationship (see Bourdillon, 1987). These ranged from them being *vazukuru* (grandchildren)¹⁰, *sawhira* (ritual friend)¹¹ (or all combined e.g. Mbuya Ku) and my *ambuya* (Mbuya Gone was also a *muzukuru*). Mbuya Gone had been born a *muzukuru* to my father. However she later got married into my mother's family in Mungate village and thereafter she became a true *ambuya* to me. My father was now supposed to see and give her more respect as his *Ambuya* (mother in law but he always insisted that he gave respect more to the relationship that was the first, which was her being a *muzukuru*.) This was compounded by the fact that Mbuya Gone later returned to the village into her family after her second husband passed away. These kinds of relationships therefore meant that the opportunity to freely talk with these elderly women was in abundance.

The ten elderly women whose life histories are recorded in this study are; Mbuya Tarai, Mbuya Ku, Mbuya Gone, Mbuya Mizhu, Mai Njere, Mai Chota, Mbuya Tawira, Mbuya No, Amai Cha and Amai Reni. I have classified these ten elderly women household heads into two main categories namely *vemuno* (those from here) and *vaenzi* (visitors).¹² I refer to *vemuno* as the original residents in the village as a consequence of them or their former husbands tracing their lineage through the village head Gutsa. *Vaenzi* are those who could not trace their ancestry in the village and had either bought land or been allocated land by GRDC in the 1980s or who had been "given" land by their relatives in the village. Inasmuch as I was the village head's son that was really not the primary identity that *vemuno*

¹⁰ Refers to any person descended from a woman of one's lineage as well as to any grandchildren (see Bourdillon, 1987, 24). *Vazukuru* is plural of *muzukuru*.

¹¹ This is a bond of formal friendship with ritual functions. The most important ritual function is handling of a corpse at a funeral. Here even the children of the primary *sawhira* are also referred to as *sawhira* by the family of the *sawhira* (also see Ibid, 24).

¹² I have discussed this classification (*vaenzi* and *vemuno*) in detail in Chapter Two where I have examined land allocation and sales in Gutsa village.

recognized as they called me *sekuru* (uncle),¹³ *muzukuru* or *sawhira*. Inasmuch as *vemuno* and *vaenzi* were in a joking relationship with me it appears there were differences as *vemuno* were more cordial in their joking relationship. *Vaenzi* such as Mai Mizhu, Mbuya Tawira and Mai Chota recognized my primary identity as “*Mwana waSabhuku*” (the village head’s son) and therefore they tried as much as possible to help me enjoy the latitude of my role. This was however not the same case with *vemuno* as they did not identify me with that primary identity of *mwana waSabhuku*. To them I was an ordinary *sekuru*, *muzukuru* or *sawhira* and these were therefore all joking relationships. Ultimately these relationships on multiple fronts in the village meant that when there were events like funerals or memorial services either in the village or in the nearby villages they had the potential to unite most of the people away from the village or together in the village. On such dates I could not go formally to speak to people in the village about my research; however such gatherings proved to be a good way to listen to and get news on the latest tidbits and gossips. As I discuss below in the section on ethics due to the spontaneity of such situations I could not ask for consent.

My identity as *mwana waSabhuku* was the reason that when Baba¹⁴ Maki (Mai Mizhu's eldest son) saw me he viewed me as someone he could approach to intercede for him to my father about the boundary dispute with his neighbour Mai Tawanda and also his need to have a place for open air worshipping. This was important for him because *vaenzi* also approached the village head as simply the village head even though they called him *sekuru* as a form of respect. My father was known to be very strict/formal in his interactions with *vaenzi*; either those who had originally settled in the village or their descendants. He was feared as a no nonsense man especially in his relationship with the newcomers and therefore in as much as they called him *sekuru* it was not a joking relationship with the adult or the young family members of the newcomers. Such a joking relationship was somehow possible though on a very constrained scale with the elderly ones among the newcomers sometimes attempting it. He always said that “*Ndikasadaro vanozondijairira*”, “If I don’t do so they will not respect me”. The result was that the interaction with the new comers in comparison to the native inhabitants was more formal and constrained and bordering on fear. *Vemuno* could shift roles ranging from the joking relationship to the very formal one when they would have come for meetings with the village head or attending village court sessions.

¹³ *Sekuru* generally refers to any male in one’s mother’s lineage irrespective of his generation and therefore also refers to grandfather, mother’s brother, mother’s brother’s son (see Bourdillon, 1987, 57).

¹⁴ In Shona means father.

As I proceeded with my fieldwork I realised that the village head was not easy to approach for most people especially those who were *vaenzi* as they were distant from him at a personal level compared to *vemuno*. For example in November 2014 two young men came to the village head's homestead towards sunset. When they arrived they politely declined my invitation for them to come indoors. Instead they sat on the bare earth outside and even refused my offer of chairs to sit on. Initially I did not understand why, I only got to know of the reason later. These two young men had come to see the village head and so they refused seats and sat on the ground as a sign of deference as it would not be appropriate to be sitting on the same level with the village head.

Therefore having grown up in Gutsa village, still living in the village and now studying elderly women heads of households in the village, I consider this research to be from the perspective not of an outsider but that of an insider. However I concur with Bourdillon's (1997) observations that superficially there are a number of advantages in studying one's own community, which range from studying familiar people, a familiar culture, having many contacts as well as having insider information. Equally important are Chawla's (2006) observations that:

“...any ethnographer, whether native or other, (re)enters the field ensconced in degrees of outsidership created by temporal, geographic, demographic, intellectual, or emotional distance from the field...”

By doing research in my own cultural backyard I was already an insider as well as an accepted and natural part of the social system (see Eriksson, 2010). In studying a village I grew up in, I can relate to Einarsson (2011) who as an anthropologist studying the Icelandic Fisheries indicated that his observations were based to a great degree on his experience as a participant in the fisheries from his early youth and also on a more systematic collection of ethnographic and other relevant information such as biological and historical accounts of seals and seal populations around Iceland and the North Atlantic. I also follow Malinowski's (1922) suggestion that ethnographers should be able to grasp the native's point of view and his or her relation to life. Consequently emphasis here is on understanding the elderly women heads of households' point of view and their experience of life in the context of climate change. The importance of my approach is further exemplified in Low and Merry's (2010) observation that anthropology insists on the importance of context, history, and particularity. This is what I have insisted on in this study. In this research I was a participant observer in the sense outlined by Roncoli (2006, 82) in the basic principle of ethnographic research and

referring to the process of experiential learning that occurs during fieldwork, as a function of 'being there'. Ultimately my methodological approach truly privileges a contextually rich and nuanced type of qualitative social research, in which fine grained daily interactions form the lifeblood of the data produced (see Falzon, 2009, 1).

Inasmuch as there is potential for bias the strengths of ethnography further derives from reliance on casual interactions, conversational and key informants interviews which all serve to enable a deeper insight into cultural meanings (Roncoli, 2006, 83). My focus on elderly women heads of households in Gutsa village is also consistent with observations by Roncoli (2006) that in the context of climate change, ethnographic research on local forecasting knowledge also highlights salient aspects of climate and common indicators used to predict it. Anthropology, in this respect, can serve as a form and activity of knowledge production (Einarsson, 2011). Barnes et al (2013, 541) stipulate that there are a number of factors that make anthropology important for the study of climate change. The most significant one is that, the discipline draws attention to the cultural values and political relations that shape climate-related knowledge creation and interpretation which form the basis of responses to continuing environmental changes.

Having grown up in the village as well as currently living in the village I soon realized that researching among my people they assumed that I was supposed to know the answers to the questions/issues I was raising. As a result I had to probe and ask what they thought I knew in order to be doubly certain. For example the position and location of graves of very important or widely known people in the village who had passed away, or the names of people who had been in the Village Development Committees (VIDCOs) in the village. Mai Njere pointed out that since I had grown up in the area too I knew what type of rains to expect in any given year by simply observing the fruiting patterns of *mazhanje*¹⁵ trees (*Uapaca kirkiana*) as this was general knowledge in the village. When I asked Mbuya Gone the number of children she had with her second husband in Mungate she was taken aback by my question as she said I was supposed to know the number since these were my aunts and uncles as my mother was from the Gone family.

Doing my fieldwork I realized that I preferred the simple Samsung GT-E1081T mobile phone that I was using because of a number of factors peculiar to my field experience in a rural area. It has a longer battery life, on full charge it can go for up to seven days and

¹⁵ *Mazhanje* is plural for *zhanje* (the fruit) with *muzhanje* being singular for *mizhanje* (the tree). In this thesis I use them interchangeably.

hence I do not miss any phone calls. Considering that there is no electricity in the village this is quite essential. It has a torch and is therefore useful in a village not connected to the electricity grid save for isolated generators and the ubiquitous solar panels. Moving through the village my Samsung phone proved equally handy as it became my jotter, writing into the compose message function which gave me close to a thousand letters to write down each message (notes). The issues I would write ranged from those needing further clarification, processes playing out or my reflections. Furthermore I liked this Samsung phone because it has privacy lock on the messages where I typed my notes ensuring everything was secure.

Specific methods of data gathering

Participatory Rural Appraisal

In this study I employed the use of Participatory Rural Appraisal (PRA) for data gathering. Since my study was about livelihoods in the face of climate change I also borrowed the use of PRA techniques from Ziervogel and Calder's (2003, 404) strategy. In their study Ziervogel and Calder successfully adopted this technique to examine the impact of climate variability on rural livelihoods in Lesotho. Participatory approaches have also been hailed by Scoones (2009) as crucial in attempts to understand complex local realities related to understanding local livelihoods as they involve negotiated learning between local people and the researcher. PRA techniques included conducting Focus Group Discussions (FGDs), timelines, ranking and mapping. Furthermore Cornwall and Jewkes (1995) were of the view that some participatory methodologies, such as Participatory Rural Appraisal (PRA) offer strategies for generating qualitative information in the course of fieldwork. The key strengths of PRA techniques is seen in their ability to help in exploring local knowledge and perceptions of people. Therefore the major advantage of adopting PRA techniques was that they gave me the opportunity to continually adapt my approach, learning cumulatively from my informants and understanding the categories or concepts the elderly women heads of households provided. This was crucial as my ultimate goal was to capture the impact of climate change on female elderly headed households by acquainting myself with the information related to the climate of Gutsa village and the responses to the impact of climate change by these elderly women.

I also conducted Focus Group Discussions (FGDs) with female elderly community members in the village. With the use of FGDs I sought to obtain further information on the

lived experiences of the elderly in the face of climate change and variability.¹⁶ That is a characterisation of the climate of Gutsa village from oral accounts from the elderly as they have lived in an area and an age in which they can relate how climate change has been taking place over the generations, their explanations of it and the coping mechanisms they have adopted.

In order to understand the experiences of elderly women with regards to climate change I collected data by documenting the life histories of the ten elderly women heads of households in Gutsa village. These life histories were important in helping me to understand the nature of climate change experienced in the area. Furthermore they helped me to distinguish the main categories of female elderly people whose livelihoods are being affected by climate change as well as documenting the adaptation strategies they are implementing to cope with the impact of climate change in the village. In selecting life histories as an approach I was influenced by Anderson and Jack (1991) quoted in Kakuru and Paradza (2007, 288) that using life history research methods are extremely valuable for generating new insights into women's experiences which are not easily generated through other research techniques.

In this study I actively made use of the approach highlighted by Backhouse (2006) of narrative interviews. These are interviews which are based on one or two main questions that invite a life story, and follow up questions. These follow up questions came about through closely listening to the elderly women's stories, rather than from any prepared questions I had. Using life histories proved a very useful tool to capture the experiences of female headed households in the context of climate change in Gutsa village. The life histories helped me appreciate how elderly women heads of households perceive climate change, explain it and adapt to it grounded on their experiences of living in an area for an extended period of time and their need for a source of income and secure livelihoods. Furthermore in life histories observations by Kakuru and Paradza (2007, 290) show that there are dimensions based on the magnitude of respondents' life experiences, which may include memories of trauma as well as of delight.

Commencing my fieldwork I soon realised the spontaneity of events and processes, the memories of trauma as well as the therapeutic nature of life histories as some of the elderly women respondents shared some of the most painful episodes in their lives. I realized

¹⁶ Using an ethnographic approach is useful for climate change research as it can capture lived experiences and the cultural meaning attributed to climate change (Roncoli, Crane and Orlove, 2009).

that I needed to learn to empathise with villagers as they narrated their experiences. For example Mai Chota, when she recounted how her children had passed away, Mai Reni's account of an episode she considers the most painful experience in her life when she was betrothed to a man she referred to as her aunt's husband without her knowledge or consent. Mai Reni pointed out that she had never told anyone about the suffering that she went through during her time in Chipinge nearly forty years ago when she gave birth to three children there. On this particular day I had gone to see her in order for her to sign the consent form. After she had signed the consent form I had bid her farewell but as I was leaving we kept chatting about general issues in the village. From then on she gradually moved to narrating her experience in Chipinge. What I had thought would be a meeting for less than thirty minutes stretched to close to two and a half hours as she talked about her life experiences (fortunately I had carried my voice recorder with me). She said sorrowfully that:

“Tete nemurume wavo vakanzwa shoko rwerufu rwababa vangu vakarega kundiudza kwemakore maviri!”

“My aunt and her husband heard about my father's death and they did not tell me for close to two years!”

She has never forgiven them for this. Mbuya No and Mbuya Ku also opened up on the painful accounts of their suffering during the war of liberation (almost half a century ago). Then, having to carry hot and heavy pots of *sadza*¹⁷ on their heads to the freedom fighter bases in the mountains in the village in the process burning their scalps as well as being beaten up by combatants from both warring sides and having some teeth knocked out. Finally they shared on their experiences of losing everything and having to start a new life as widows in a newly independent Zimbabwe.

I complemented the elderly women's life histories with participant observation. Use of participant observation was premised on Cornwall and Jewkes' (1995, 1667) observations that all researchers are by definition also participants in research activities. Furthermore Barayzarra and Puri (2011, 29) pointed out that:

“...participant observation is still the only way to discover how people truly engage with their environment on a moment-by-moment basis, using all of their senses and reacting almost instantaneously to rising contingencies.”

¹⁷ Zimbabwe's dietary staple made from mealie meal and taken with relish.

Participation in the everyday lives of the elderly for some time aside from facilitating observation enabled more meaningful and open discussions with informants. Being a participant observer over an extended period was equally useful in helping me to observe as fully as possible the daily routines of the ten elderly women heads of households. This was equally important so as to get a qualitative assessment of the impact of climate change on their livelihoods and in the process help in understanding and documenting the coping mechanisms they have adopted.

I noted the challenges of interviewing respondents at their homes with my voice recorder visible, as well as when visitors came or other people were passing by. For example one day in October 2014 when I was holding one of my interview sessions with Mbuya Gone at her homestead I was in the middle of my interview with her when three other elderly women passed by her homestead. These were Mbuya Tarai and her eldest daughter who stays in Nyakudya village as well as Mbuya Gone's elderly female neighbour who sometimes helps her with chores at her home and in her garden. During that interview the elderly lady who is her neighbor and had recently relocated from Mt Darwin pointed out that during the 1992 drought she was living in Mt Darwin and there they had survived by eating *derere* (okra). The situation in the area had been very bad as hunger and starvation was rampant with some villagers hallucinating and seeing visions in which they appeared to be cooking, dishing out and or eating *sadza*.

As I conducted the interviews I learnt that I had to be very patient with these elderly women who also had young people in their care. For example Mai Reni spends most of her time consumed by the need to earn a living for the children in her care. When I visited in order to conduct the second interview she had just returned from Chibvuti where she had gone to peddle her wares, she had also taken the opportunity to go and pay tuition fees for her two granddaughters' who were attending crèche in Chibvuti. When I arrived for the interview she had started to prepare a meal outside in the small thatched enclosure. I had to wait for close to 20 minutes sitting under one of the trees in the yard trying to escape the sweltering November sun. On this particular day I had been fasting as I went around the village and finally to Mai Reni's place for the interview. So when she was ready with tea for her grandchildren she offered me a cup of tea with *chimodho* (homemade bread) and I was at pains to politely decline the offered tea without telling her that I was fasting. I then realised that I needed to change my fasting habits in the course of my fieldwork resolving thereafter that I would not fast as long as I knew there was a chance of visiting a research participant. I also discovered that my methodological approach was somehow dividing the attention that

some of these elderly women had to give as there were other priorities, for example the meal preparation routines with the expectant mouths looking up to be fed. I was later to have my first meal in the course of my fieldwork at her home when I visited her on another day and found her about to prepare her lunch. I enjoyed a meal of *sadza* with green vegetables mixed with *kapenta* (small dried fish). On that day I had to stop twice in the middle of the interview as one of her young grandchildren soiled her pants. She was livid about this habit as she was disappointed that despite her teaching him not to do so, this lad continued to soil his pants.

Sampling

The initial steps to meet with the respondents proved very challenging as I had to make repeated trips to the homes of these elderly women as I found them away from home over and over. The main issues that tended to draw these elderly women away from their homesteads ranged from church meetings (evening, day or weekend meetings), funerals and visiting sick relatives either in the village or outside as well as spending time in the gardens mostly located some distance away from the homestead.¹⁸

In this study I purposively selected all the ten elderly women heads of households. The general criterion for inclusion in this study was that the participants were supposed to be elderly women who are above sixty years of age and are heads of households.¹⁹ I chose only those elderly women who were heads of households because major decisions about adaptation to climate change and livelihood processes are taken at a household level (see Thomas et al, quoted in Antwi-Agyei et al 2012, 6). Furthermore other writers such Ziervogel et al (2006, 4) who conducted studies on climate change at the household level acknowledged the value of choosing the household as the unit of analysis. They observed that it is at the household level that decisions about household production, investment, and consumption are made in most agrarian societies, particularly under long-lasting drought conditions. So for this study the aim was to examine the impact of climate change on elderly women headed households in Gutsa village in order to examine their understanding of climate change, its impact as well as to also document their coping strategies. However in line with Antwi-Agyei et al's (2012, 6) further observations, it is important to note that the rural household is not divorced from the wider community as the community can still greatly influence the decision making processes of a particular household, for example the time to herd domestic animals.

¹⁸ I have discussed these in detail in Chapter Three.

¹⁹ Observations by Knodel and Ofstedal (2003) show that the sixty year old benchmark has been used in most developing countries to define elderly people with Zimbabwe not being regarded as an exception.

As a result in this study inasmuch as my research was centred at the household level I was aware of the difficulty of trying to understand elderly women's experiences with climate change in Gutsa village without also situating it in the context of the wider community to which they belong. All the elderly women I approached for inclusion in the study accepted my invitation to be in the study. Some of the elderly women like Mbuya Gone said they were very happy to be in the study as it was also an opportunity for them to learn.

Ethical considerations

The nature of this study specifically involved an intrusion into the lives of elderly women in Gutsa village mainly their life histories and activities and generally other residents in the community. In this study I only proceeded with field work after my ethics application was approved by the University of the Witwatersrand's Human Research Ethics Committee (Non-medical). Getting ethics clearance was important as it is in line with the conduct of research at the University of the Witwatersrand. Even after my ethics application was approved I reflected on Bourgois' (2008, 288) observation that:

“The ethics of anthropological research are too complicated and important to be reduced to unambiguous absolutes or even perhaps to be clearly defined.”

This was equally important as even despite the clearly laid out ethical guidelines at the onset of my research especially the issue of informed consent I later found it equally challenging and perplexing to attempt to get individual consent at gatherings such as funerals. Such gatherings were important in getting some important background information about issues in the village without necessarily me having to interrupt the conversations in to ask for consent. As a result in public spaces I did not take notes but always recorded issues of interest which I saw and heard as soon as I left the public spaces (also see Bourgois, 2008, 297). I have concealed as much as possible the identity of those interviewed, with informants and respondents' anonymity and confidentiality protected through the use of pseudonyms so as not to divulge their identity. Furthermore the participation of respondents whose life histories are recorded in this study was predicated on the notion of informed consent as no one was forced into the study.

Structure of the thesis

Chapter 2 puts into perspective the history of Gutsa village, broadly locating it in the history of Goromonzi District where the study village is located. My purpose here is to bring the

study location into perspective while discussing the socio-economic background, historical and current processes that have had an impact on the study location and how these are shaping the livelihoods of elderly female headed households in Gutsa village. Here I demonstrate that the study village is in a state of flux mainly in the backdrop of increasing population densification. This state of flux has been accelerated by the Fast Track Land Reform Programme and increasing commoditization and commercialization of communal land stretching from pre-Fast Track Land Reform Programme days. This has seen the disappearance of former livelihood activities, emergence of, intensification, diversification and shifts into new livelihood options in response to the rapid changes in the village and the district.

Chapter 3 broadly focuses on aging, gender and generation by examining the lives of the ten elderly women heads of households whose situated experiences in the village in the context of climate change I examine in this thesis. The issues elderly women are grappling with are characterized by the challenge of the HIV and AIDS epidemic, its associated emergent burden of living and caring for orphans and vulnerable children and other young members of their immediate and extended family. I also examine how these elderly women are balancing multiple and competing responsibilities which tend to draw them away from their families, households, community, village and ultimately their sources of livelihoods. As they grapple with these challenges they are faced with social support mechanisms that are progressively collapsing or assuming new forms and meaning in the face of pressures on the immediate and extended family members. In this chapter I also examine what is referred to as the “typical” African widow. This is carried out in the backdrop of examining the highly subjective and flexible context in which elderly women interpret, negotiate and reimagine themselves as individuals struggling to survive and make sense of the ongoing changes around them. Here I have also demonstrated the intensification of the new pattern in the direction of the flow of remittances now originating from the countryside into the urban areas

Chapter 4 addresses the epistemological and ontological premises that structure the ways in which people understand and experience climate change in Gutsa village. In this chapter the emphasis is on understanding issues of perception and the conflict and consensus regarding causality and attribution of climate change in the village. I specifically examine the elderly women heads of households’ narratives regarding *kushanduka kwemwaka* (climate change) in Gutsa village. In this chapter I have also managed to provide an account of the changes in

weather and climate as experienced in the village. I discuss assessments of the local climate in the village, its seasonal variations, the nature of extreme events and the cosmologies that underpin these assessments. I go on to demonstrate that as climate is changing in the village it is important to understand issues of perception and attribution at the local level.

Chapter 5 examines the impact of climate change on the livelihoods of elderly female headed households in Gutsa village. In this chapter I address the following research questions: What is the impact of climate change on elderly female headed households in Gutsa village? How are elderly women-headed households experiencing the impacts of climate change in the village? I attempt to unpack the local understandings of climate change as experienced in the village. I also examine how elderly women heads of households' livelihoods appear to be mainly related to their close interaction with the natural environment where they get resources such as firewood, water for both household and vegetable farming all year round as well as crop production during the rainy season.

Chapter 6 examines the nature of interspecies interaction in Gutsa village in the context of the impact of climate change. Here I examine elderly women heads of households' relationships with fauna and how such a relationship exists in a wider community and contributes to the adaptation, resilience and vulnerability of these households. In this chapter I examine the nature of interspecies interactions that have emerged in the village ranging from elderly women heads of households and their relationship with domestic and wild animal, insects, pests as well as their relationships between domestic animals and wildlife. I further examine the close interactions between fauna as indicators and predictors of weather patterns in the village and how this interaction is shaping and determining the type of human action that corresponds with their behaviour and sighting in the village.

Chapter 7 examines the adaptation strategies that are being pursued by elderly women heads of households in Gutsa village. In this chapter the main questions that I answer are: How are elderly women headed households coping with the impacts of climate change in Goromonzi District? What are the socio-economic and political structures available to help elderly women heads of households adapt to and cope with the impact of climate change in Goromonzi District?

Chapter 8 revisits the main findings in this thesis, showing how they contribute to answering the key questions that motivated the research.

Chapter 2

The history of Goromonzi District

Introduction

This chapter specifically focuses on the history of Gutsa village and broadly on the history of Goromonzi District where the study village is located. In situating the study village I seek to bring the study location into perspective by examining the socio-economic background, historical and current processes that have shaped and are still shaping the study location inasmuch as these processes have worked and are still working to shape livelihoods of elderly women heads of households in the village. Consequently this chapter will not only provide a historical setting/background but is pivotal in examining the current processes as Goromonzi District and specifically Gutsa village appear to be experiencing rapid changes. Especially so in the backdrop of increasing population densification accelerated by the Fast Track Land Reform Programme as well as increasing commoditization of communal land leading to increased land transactions. The area has also seen the disappearance of former livelihood activities, the emergence of, intensification, diversification of livelihoods and the shift into new livelihood options in response to the rapid changes in the village and the district. In this chapter I also demonstrate the increasing commoditisation and demand for land in Domboshava and specifically in Gutsa village stretching from pre and post the era of the Fast Track Land Reform which led to the expansion of the capital city Harare's boundaries in a North-Eastern direction. As I examine these processes occurring in the district I demonstrate how they are acting as enablers as well as restrictors to the livelihood opportunities that elderly women pursue.

Domboshava the study location²⁰

Currently there are three chieftainships in Goromonzi District, namely Chinamhora, Rusike and Chikwaka. Domboshava communal lands falls under Chief Chinamhora's jurisdiction and is located thirty-five kilometres north-east of Harare. Goromonzi District has twelve wards with Gutsa village the specific study location falling under Murape Ward in Domboshava. Murape Ward is named after headman Murape who has close to fifty villages under his jurisdiction. Each village is headed by a *Sabhuku* (village head/kraal head) who administers the household under his jurisdiction.²¹

²⁰ For a detailed background of Goromonzi district and Domboshava communal lands (see Makombe 2013; Seed 1937; Chidziwa 1964; Taruvinga and Ndoro 2003; Chakona 2011).

²¹ See O'Flaherty (1998); Goldin and Gelfand (1975); Latham (1973); Bourdillon (1987) for a detailed analysis of the administrative powers of village heads, headmen and chiefs in Zimbabwe.

Domboshava communal land derives its name from the large granite rock called Domboshava. The name Domboshava (*Dombo-rock*) and (*shava-red*), literally translated, means 'red rock'. Local traditions say that a long time ago a local chief, Nyamhunga, gave chief Buru the area around Domboshava to rule. Nyamhunga later gave Buru his daughter Chishava, to marry. Thus the hill became Domboshava in honour of the chief's daughter (Chidziwa, 1964; Taruvinga and Ngoro, 2003). In 1936 Domboshava hill was declared a National Monument due to its spectacular rock paintings/San paintings. These rock paintings have since then become the major tourist attraction in the area. The physical boundary of the protected site was extended in 1996 to cover three hundred hectares which now encompass spectacular granite geological formations, rock paintings, Late Stone Age deposits, a geological tunnel and the sacred forest named Ndambakurimwa (Chakona, 2011). It is said the name Ndambakurimwa was given to this sacred forest at the base of the mountain as a result of strange events in that forest. Here those who tried to clear the land for agricultural purposes in the sacred forest would find the cleared and uprooted trees back in their same position in the morning.

Chief Chinamhora's people came from a place called Mahugwi beyond Masvingo province South-East of Zimbabwe before 1836. As pointed out by Chidziwa (1964) the name Chinamhora "*kumora* or *chinimuru huchi*" (refers to the process one undertakes when they want honey from a beehive). The person in need of honey has to first fight against the bees to take the honey and Chinamhora fought other chiefs before making their land his. According to Seed (1936) Derere-Godzonga who became the first Chinamhora succeeded his father Tingini. While on his way from Mahugwi, Derere-Godzonga had passed the lands of Gutu and the Vambire people who lived near Mount Wedza before settling in Seke for three years and later moved to Chikwakwa. Chief Chikwakwa gave him a place called paChikonde near Ruwa just outside the present day capital city of Harare. Derere-Godzonga came to a place occupied by the VaShawasha of the Rozvi tribe who also had the same totem Soko as him. He later decided to fight the VaShawasha whom he defeated and took their land. When Derere-Godzonga died he was buried near Ruwa and slaves were put to death for his body to rest on with two slaves being buried alive so that they could become his attendants in the afterlife. Chaitezvi the son of Chirimuhuta became the second chief Chinamhora when his grandfather died. Chief Chinamhora is not *muridzi wevhu* "master of the soil" and hence cannot eat the flesh of the pangolin found in his area but has to send it to Chief Musana who borders with Chinamhora on the north.

The last Chief Chinamhora passed away on the 21st of July 2015. By the end of November of 2016 no substantive chief had been installed yet due to bickering over which house was in line to assume the chieftaincy.

Domboshava as a peri-urban area

Gutsa village can in no way be said to represent a typical rural community in Zimbabwe and or anywhere else. As I later discuss, this is due to the area experiencing rapid changes and therefore devoid of a simple common characterization. Gutsa village has increasingly become nearer to the city of Harare, and in some respects can now be seen as lying within a peri-urban area, with all the implications this holds for land tenure, property, resource markets and livelihoods.

In examining the relationship between an urban area and a rural hinterland Nyassogbo (1997) acknowledged that the relationship between an urban area and a rural area are intensive and multiform. This relationship has created some of the benefits of urban expansion into a rural area as evidenced in Domboshava. Some of these benefits trickling into Domboshava include increased opportunities for farmers to market their produce as a result of the area's close proximity to the capital city Harare. Since Harare falls in a favourable agro-ecological region (Zone II), the communal areas²² located near the capital city are also located in a favourable agro-ecological zone. Generally Goromonzi did not experience resettlement before the year 2000 as it was considered a very fertile area suitable for Large-Scale Commercial Farming. Post-FTLRP the landscape of the area has seen drastic land use changes as some of the farms near Harare and close to Gutsa village (Rumani Estates) were turned into residential areas such as the low density residential area of Charlotte Brooke and Crowhill Views (also see Chakona, 2011, 70). Rumani Estates which measures 494.7 hectares was only incorporated into greater Harare in August 2012 as it had been under GRDC.

²² There are three broad land tenure categories in Zimbabwe: state, communal and freehold land (see Moyo, 1995; Cheater, 1990; Government of Zimbabwe Communal Land Act No. 20 (Chapter 20:04 of 1982 as amended by Act No. 13 of 2002). When Zimbabwe became a British colony in 1890, land was alienated from the indigenous black people. Thereafter black people were largely confined to communal areas with the remaining land designated as white-owned commercial lands, demarcated or other forest lands and national parks (see Vudzijena, 1998). These land and resource allocation arrangements were first established under the Land Apportionment Act of 1930 which set aside 51% of land for a few thousand white settlers and prohibited black people from owning and occupying lands in white commercial farming areas. This was furthered by the Land Tenure Act of 1969 with the indigenous reserves thereafter becoming known as Tribal Trust Lands. In the communal lands mixed farming is generally practiced with households cultivating small arable plots, producing subsistence food crops and sometimes cash crops such as tobacco and cotton. Small livestock herds kept by these households are grazed on nearby common land, returning each night to the owners' residential location (see Barret, 1991).

As Harare continues to expand outwards post-FTLRP, the rural areas (urban hinterlands) close to the city are therefore affected by the rapid expansion of the capital. For example the high demand for firewood in Harare especially in the face of crippling electricity shortages has seen trees being cut down beyond their capacity to sufficiently regenerate themselves.²³ In commenting on urban hinterlands Saul (1986) quoted in Freidberg (2001, 9) indicated that during colonialism the regions near administrative capitals were also the same regions which were preferred ‘retirement zones’ for African war veterans, who brought not only their pensions which they invested in homes, commercial farming, or trade but also ideas and practices they had learned during service abroad. In the case of Domboshava the pattern was that the area became a retirement zone not only for the African war veterans, but also for those farm workers who had reached the end of their prime in the former commercial farms mainly bordering the area as well as other individuals and families who were either relocating from Harare or from other rural areas in Zimbabwe. Initially these new people settled in Mverechena and Zimburu villages which by 1985 had a high population of people who were claiming their ancestry from either Malawi, Mozambique and to a limited extent Zambia.

There is no doubt that Domboshava has undergone rapid transformation as it increasingly appears to shed the label of it being a rural area (Hungwe, 2014; Makombe, 2013). This is as a result of factors such as increasing high population density, the movement away from the construction of houses that are mainly associated with rural areas (roundavel grass thatched kitchens) and the low number of livestock as in a number of villages it is now impossible to keep livestock such as cattle or goats mainly due to the lack of pastures. The lack of pastureland is related to the increased population densification as in a number of villages some former pasturelands are being parceled out and sold to outsiders. As a result when I tell most people that my rural home is in Domboshava, the general reaction is the common phrase:

“Aaah kuDomboshava kumusha here? Kwakangofanana nekwaSeke kuya”.

“Aaah Domboshava is not a rural area really. It is just the same as Seke communal lands”.

²³ The high demand for firewood in Harare in response to acute electricity problems as well as the need for an income in the village mirrors Barany et al’s (2005) observations that people usually resort to exploiting the forest and its products in response to contingencies.

Seke communal lands also near Harare, earlier witnessed most of the processes that are currently unfolding in Domboshava. For example a close examination of Gutsa village shows that the village is steadily moving away from the thatched roundavel hut in preference for roundavel huts with zinc roofs or “kitchens” with asbestos roofs on them. The shift away from the roundavel hut with its thatched roof is related to the increasing challenges associated with the thatched roof. These challenges range from the difficulty and the recurring costs of thatching with grass which is increasingly difficult to find, the availability and costs of poles which are increasingly scarce and still have to be paid for. The huge problem of rodents such as rats in roundavel huts is also contributing to the movement away from the grass thatched huts as rats find it easy to get inside as well have a rapid escape due to the huge gaps in the roof. As a result residents increasingly prefer the once off costs of zinc or asbestos for roofing their kitchens.

Livelihood activities in Domboshava

Massey (1994a) quoted in Freidberg (2001, 9) noted that even if the livelihoods and landscapes of African urban hinterland communities appear ‘traditional’ relative to those of the city, their traditions are products of extraordinarily ‘extroverted’ histories. For Tacoli (2002) population growth, urbanisation and declining returns from agriculture for small farmers makes rural-urban interactions to increasingly play an important role in local economies. In looking at Domboshava communal lands and Gutsa village this becomes evident as the area has a diverse livelihood landscape that is unfolding day by day while showing evidence of linkages with the nearby capital of Harare. These activities range from horticulture, brick making, vegetable hawking mainly by women in the Central Business District (CBD) of Harare during late afternoons or early evenings, vegetable vending during the day in the various low and high density suburbs in Harare and increasingly in the villages in Domboshava and the new suburbs of Charlotte Brooke and Sally Mugabe Heights.

As a result the close proximity and continued expansion of Harare towards the district has created and further reinforced existing non-farming economic activities in the village. Since Gutsa village now shares its southern border with Harare in the wake of the establishment of Charlotte Brooke suburb, brick moulding is increasingly becoming a lucrative livelihood option. This is attributed to the increasing demand for bricks in the communal area as well as in the nearby emerging suburbs of Charlotte Brooke, Sally Mugabe Heights and to some extent Crowhill Views.

Currently residents of Gutsa village are some of the major suppliers of pit sand and river sand to residents of these suburbs who are constructing their homes. Moving through the village one can see fields with deep and wide pits as evidence of the ongoing sand sales. The village has witnessed an increase in vehicular traffic as more and more trucks move sand from the village and into the ready market for sand in Charlotte Brooke and Sally Mugabe. Observations show that it is mainly during the dry season that villagers dig and scoop river sand from the dry river beds. During the rainy season they collect the sand as it is deposited along the road sides by runoff. However during the rainy season some still continue with the labour intensive process of scooping river sand from the river beds which will now be flowing with water. So instead of engaging in farming activities with uncertain returns in the face of climate change coupled by the increasingly poor price of horticultural produce, more and more villagers are diversifying to digging up their fields and selling sand attracted by the immediate returns.²⁴



Above a former field that has been turned into a sand extraction site.

Concurrent with the rampant sand sales is brick moulding which has seen a number of residents engaging in this activity. For villagers who have fields with sandy soils they are now the main suppliers of sand while those with fields with loamy soils are engaging in brick

²⁴ The downscaling and or shift from crop production with its unreliable returns now evident in the village in the face of climate change to exploitation of the natural environment with its immediate returns have also been reported in Tanzania (Lyimo and Kangalawe, 2010).

moulding supplying the village, Charlotte Brooke and Sally Mugabe Heights. For those villagers with a number of fields which have different soil types, they are comfortably engaging in both sand sales and brick moulding.



Brick kiln in a field ready for firing. In the background stacks of bricks fired and ready for selling.

The stretch of land in the area called Madhigi between Upper Gutsa and Lower Gutsa is currently reserved for grazing as it is also the place that has many *mizhanje* trees. This area experienced rampant sand poaching and cutting down of *mizhanje* trees over a very short period of time in 2012 before the village head restored order in Madhigi. Here trucks and scotch carts would ferry the sand from Madhigi in the evenings and early mornings. Some of the unemployed males without scotch carts were being contracted to ferry sand with wheelbarrows to houses under construction in the village as well as in Charlotte Brooke at a rate of US\$5 per day. Those with cattle usually charge at least US\$5 for a scotch cart load of sand which they equate with six wheelbarrows. Baba Shepa (Mbuya Tarai's grandson) is in the former category and Shame (Mai Reni's son) is in the latter category. Aside from ferrying sand, those with scotch carts also use them to ferry various "loads" such as firewood and building materials, crops being harvested, cow dung manure charging US\$5 per load/trip.

Brick making has also contributed to the rampant cutting down of trees in the village as well as in the former commercial farms of Chibvuti and Rumani as the brick moulders use

wood to fire their brick ovens.²⁵ Unlike brick making which is confined to between April and October when there are no rains, sand sales are almost an all year round activity. However the late commencement of rains in the village over the past years in the face of climate change has since 2014 resulted in brick moulding extending well into December. The intensification of these illegal activities which appear district wide as seen in the uncontrolled sand sales, brick moulding as well as parceling and selling of land have Goromonzi Rural District Council worried (Chakona, 2011; Hungwe, 2014). In response to this in September 2014, GRDC called a meeting of all village heads in the Murape Ward at the Showgrounds Shopping Centre. In the meeting GRDC officials pointed out that they were worried about these illegal non-farm economic activities being practiced in the district as they were detrimental to the environment. Therefore village heads were encouraged to report any one found engaging in illegal sand sales, cutting down of trees and starting veld fires to the Environmental Management Agency (EMA) of the Ministry of Environment, Water and Climate. At the meeting village head Gutsa informed the EMA that even if one did report to EMA it did not make a difference as the officials from the agency always said that they did not have fuel to go down to the village preferring to patrol villages close to the main road. He added that he was now tired of policing the environment. Furthermore he pointed out that besides considering the harsh economic environment where jobs are hard to come by, at least the young people in the village were seeking to make an “honest” living instead of waylaying people or stealing from people’s homes. He asked them:

“Saka vana vorarama nei?”

“So how should the children survive then?”

Later in our conversations he pointed out that:

“Ungatsingirwe ivhu hako”,

“You can’t be bewitched because of the soil”.

The enforcement by the authorities is evident when it is convenient for them. For example on the 30th of October 2014 a man with a five ton Toyota truck which he used to ferry different loads near the Showgrounds area was caught and fined by an EMA patrol car as he was

²⁵ Also see Njana, Kajembe and Malimbwi (2013) regarding the rampant cutting down of trees for brick firing in Urumwa, Tabora, Tanzania.

crossing the tarred road from where he had collected the sand for delivery. He was fined US\$100, “For transporting a load of sand of more than one ton without EMA approval”. Showgrounds is much closer to the main road to Harare and there is a hive of activity and hence EMA officials prefer to patrol the area. The distance from the tarred road works to the advantage of those who break environmental laws in the village as no one will police them.

The selling of firewood in Goromonzi District has emerged as a key livelihood strategy for residents in the district who mainly supply the nearby suburbs in Harare (also see Marimira, 2014). The intra district selling of firewood is emerging as another strategy as most residents in the area are increasingly finding it difficult to get firewood. In the village and the nearby A1 resettlement²⁶ area at the former Chibvuti farm there is rampant and unselective cutting down of trees. This is being driven by the rising demand for firewood both within and outside the village, the increasing demand for firewood to fire brick ovens, the need for and the substitution of coal for curing tobacco with firewood by the newly resettled A1 farmers at Chibvuti and, the demand for wood to create perimeter fences at homesteads, fields and building cattle pens. There is vast evidence of tree cutting shown by tree stumps with most of them having recently been cut. Mai Reni’s son Shame is one of the major suppliers of firewood in the village with a scotch cart load of firewood mainly being sold for between US\$18-20. Shame as with most firewood suppliers delivers the wood either early in the morning or in the early evenings. A number of newly resettled farmers in Chibvuti also deliver “*order yehuni*”, “the package of firewood” using the same method. There are sporadic reports from villagers who come to the village head’s residence with complaints of other residents who would have encroached into their fields to cut down trees. The village head has been known to confiscate the loads of firewood of those from outside the village caught poaching firewood in his territory. The loads are diverted to his homestead as a deterrent. The confiscated wood becomes the village head’s stockpile of firewood.

In the village it is still permissible for residents to cut down trees for various personal uses, like burning bricks, fencing of vegetable gardens and yards as well as building cattle pens. In these instances one can approach the village head with such a request; thereafter he

²⁶ Under the Fast Track Land Reform Programme the new resettlement areas consist of two main models, which are A1 and A2 farms. The A1 farm model has small farmers settled on pieces of land averaging six hectares with additional grazing land. A2 farm model has aspiring black commercial farmers who were allocated land of several hundred, sometimes several thousand, hectares. Beneficiaries of the FTLRP largely consist of the estimated 300,000 small-holder settlers who received land under the A1 model and the 30,000 black commercial farmers who had taken up land under the A2 model by February 2003 (Also see Scoones et al, 2012 and Sachikonye, 2003).

gives them a letter of authority valid for only three days. The village head would then point one to the trees/areas to cut down in order to avoid the uncontrolled cutting down of trees. Although this is a way of controlling the illegal cutting down of trees the problem now is that with the present levels of brick making and illegal cutting down of trees, the forests are disappearing fast. This problem is compounded by the fact that people continue to cut down trees without the village head's authority. This is a huge problem as Shame the major supplier of firewood also happens to be "*mupurisa waSabhuku*", "the village head's policeman" who is also responsible for policing the environment. Shame is also a member of the Zimbabwe Republic Police neighbourhood watch committee. Towards the July 2013 harmonised elections he wore the full ZRP uniform in the village as he was being deployed outside the village.

Mai Chota complained that she finds it increasingly finding it difficult to find firewood to use at her home. Since 2012 she has been buying firewood from the A1 farmers who are residing at Chibvuti farm for US\$10 for a scotch cart load. Things have really changed because when she settled in the area in 1985 she reported that she was really afraid to venture eastward from her homestead as then it was a dense forest and firewood was not a problem. Then she never went to look for firewood with an axe but would just carry *hata* (pad to place wood on the head) and thongs as she would pick *miunze* (*Brachystegia glaucescens*) dead wood which would have fallen to the ground. Now there are no trees standing in that former forest as trees have been cut down near her homestead as more and more people settled in an eastern direction from her home. People have in fact settled in all directions, and as they settled on their pieces of land what was important was clearing the forest in order to demarcate the boundaries of one's area as well as create fields by clearing trees.

When Mbuya Ku settled in Gutsa village in 1945, firewood was not a problem as the area still had very thick forests. Over time as the forests were cleared people from the village gathered firewood from the nearby farms and were allowed inside the farms, as long as they did not carry an axe and as long as they did not cut down trees. In the village the most sacred trees are *muzhanje*, *mukuyu* (*Ficus sycomorus*) and *muhacha* (*Parinari curatellifolia*) and these trees are not supposed to be cut down at all. *Muzhanje* would only be cut down if it never bore any fruit. Now there is evidence that *mizhanje* that are in full fruit are simply being cut down with *mazhanje* fruit left scattered on the ground. Mbuya No pointed out that:

“They would never cut down *mikuyu*, *mihacha* and *mizhanje* they were not allowed at all, nowadays you will not see *mikuyu*, you will not see *mihacha* trees they are just cutting them down as these trees are good for burning bricks.”²⁷

Despite the restrictions on the chopping down of these trees, there is evidence of the unselective cutting down of trees which have resulted in trees such as *muhacha* and *muzhanje* being cut down. As I will later on discuss in Chapter Four *mihacha* and *mizhanje* trees are very special in the village as they both act as local indicators to assess the favourability of the coming rain season as well as providing much needed fruit. The main reason *mizhanje* trees are being cut down in the village is because they are in demand by those who sell *migoti* (wooden cooking sticks). The wooden spoons range from the ones used for cooking *sadza* and relish as well as dishing up *sadza* and soups. These *migoti* are sold in Harare and as far as South Africa where they are in demand with a number of known male cross border traders specializing in making and selling *migoti*. *Muzhanje* is most preferred because the trunk can easily be split in half thereby making it easier to make *migoti* as compared with other types of trees. *Muhacha* is cut down by those who make bricks as they need it to fire their brick ovens. In the village, the *muhacha* tree is also important as *chipwa* (rain-making ceremony) is supposed to be held under this tree. It can also be argued that commercialization and commoditisation of byproducts from the environment are also contributory factors here. In Gutsa village these processes are playing out as a consequence of the expansion of the boundaries of Harare with the creation of Sally Mugabe Heights and Charlotte Brooke and the emergence of new livelihood options.²⁸

Livelihood activities in Goromonzi District

Before the Fast Track Land Reform Programme the main farming activities in Goromonzi District were subsistence farming by local black people in the communal areas and commercial farming mainly by white farmers on the large-scale commercial farms. Then the main crops grown in the large-scale commercial farms in the district were grown in mixed

²⁷ The Shona verbatim. “*Hayaitemwa mikuyu, mihacha nemizhanje vairambidza chaizvo, iye zvino hauchaona makuyu hauchaona mihacha, vari kungorikita hanzi ndizvo zvava kupisa zvidhinha*”.

²⁸ Looking at the above issues regarding the destruction of trees in Gutsa village as well as the degradation of the environment does not correspond with the observations by Risiro, Tshuma and Bhasikiti (2013, 20) and Huisman (2005, 256) who pointed out that urban expansion and population pressure on land as well as expanding markets (Kellert, Mehta, Ebbinn and Lichtenfeld, 2000) are some of the factors that are being attributed to the massive destruction of the biodiversity. As Huisman (2005) has further pointed out, marginalization has also played a critical role in accentuating environmental degradation in communal areas.

farming intensive, all year specialised set ups including maize (both seed and grain), tobacco, wheat, soya and sugar beans, horticulture products, sunflower, ground-nuts and sorghum. Farming of livestock, dairy and wildlife was also carried out (also see Marongwe, 2011).

Until the Fast Track Land Reform Programme in the year 2000 villagers in Goromonzi District mainly relied on rain-fed agriculture for agro-based livelihoods as well as all year round vegetable farming using water from the river, small dams and wells (see Chakona, 2011). Practicing all year round vegetable farming allowed communal farmers from Goromonzi District to be the major suppliers of horticultural produce for the main horticultural market of Mbare Musika in Harare. Of late two new submarkets have informally developed, one at the Showgrounds in Domboshava and another in Hatcliffe near Borrowdale known as *padust* (the dusty place because of the bare red soils which become sticky in the rainy season and are a nuisance during the windy months). These new markets have now been taken over by the local authorities under whose jurisdiction they fall with *padust* now under the control of Goromonzi Rural District Council who extract fees from the vendors and the farmers. These new markets have proved equally competitive in offering attractive prices for the farmers in the nearby villages compared to the taxing experience at the busy Mbare Musika market.

The newly resettled farmers at Chibvuti as in other parts of Goromonzi District also opened up employment opportunities for local residents (mostly women) from nearby villages to work in their fields. The most prevalent is working in the fields to either weed or harvest the vegetables or grain. Here *maricho* (working in someone's field for payment) takes the form of *mugwazo* (task based work where the wage/payment is based on completing the allocated task). *Mugwazo* was mainly practiced in the former commercial farms and has continued into the newly resettled farms. Payments are either in cash or in kind ranging from grain to used clothing.

Having grown up in the village I have noticed that there are now more and more vendors selling their wares in Gutsa village. These vendors are mainly selling products such as new and used clothing, lotions and perfumes with, the majority selling horticultural produce. The hawkers are mainly from the village or the nearby villages of Shumba, Ngwerume, Mashonganyika, Chibanda, Mutsvati, Musiiwa, Dandiro and Janhi with others coming from as far as Harare. The establishment of Charlotte Brooke suburb has been a welcome development as it has enabled more and more people from the various villages in Murape Ward to survive through vending in horticultural produce. Most of these vendors are not direct producers of vegetables; rather they buy from the main vegetable farmers settled as

A1 farmers in Chibvuti as well as from vegetable producers from Mashonganyika, Mutsvati, Dandiro and Musiiwa villages then resell the produce at a marked up price. Some residents in the village vend the produce in Harare selling vegetables on the streets and pavements of Harare's CBD mainly to workers returning back home in the late afternoons and early evenings. Due to the illegal nature of this activity in Harare, the vendors have to brave a cat and mouse game with the municipal police who sometimes arrest them, confiscate their goods and also fine them with some having experiences of having been detained overnight at Harare Central Police station. Previously vegetable farmers from Gutsa village did not move around the village with their vegetables. Those in need of vegetables would visit the gardens of the individual vegetable farmers to buy their vegetables. However in response to the increasing competition from the new vendors doing the rounds in the village one can occasionally see some vegetable farmers from the village selling their vegetables.

Life has not been the same for horticultural producers in the villages post-FTLRP as prices of vegetables have reduced drastically. Although writers such as Tacoli (2002) observed that production by small-scale farmers was affected by factors such as the high costs of agricultural inputs, this has not necessarily been the major driver of low agricultural production in the study village. Despite the challenge of climate change having contributed to low production the main reason is that the A1 farmers are crowding out the small communal farmers on the market by flooding the vegetable market with lowly priced produce. Most of the newly resettled farmers in Domboshava previously grew vegetables on a small-scale in the villages. Now they are growing vegetables on a large-scale on their new bigger plots. This has forced the prices of horticultural produce to go down as the market is perennially flooded with tomatoes and other vegetables. For example pre-FTLRP an 8kg box of tomatoes previously retailed at an average price of US\$8, post-FTLRP it is now retailing at an average of US\$2.50 per box all year round.

Most of the newly resettled farmers stripped the equipment on the farms and sold it. As a result most of the aluminum pipes previously used for irrigation by the former white commercial farmers found their way to the major informal market of Mbare Musika in Harare where the aluminium was in demand by scrap metal buyers who later fashioned it into coffin handles.

Most of the trees in the former farms have been cut down and sold in Hatcliffe and further afield in Harare as firewood with some being cut down to cure tobacco. Most villagers attribute the prevalence of these illegal activities to the economic challenges prevailing in the

country with limited formal job opportunities. As the economic conditions continue to impact on the lives of people it slowly became common to hear the phrase:

“Zimbabwe yakasunungukira vamwe vari kudya vachiguta”.

“Zimbabwe got its independence for others who are enjoying its fruits”.

Most people from the village still refer to Charlotte Brooke as *kupurazi* (the farm) as they see nothing special in the name. Residents from Charlotte Brooke do not like this at all as to them this appears to be a form of discrimination. Despite Charlotte Brooke being more than a decade old middle density suburb it still has no tarred road, no running water or reticulation services aside from the very good looking modern but dusty houses (some double storey) in the deep red soils. The residents have attempted to erect a boom barrier to control entry and exit into the area. However this was stopped midway as it was deemed practically impossible to restrict entry and exit in this huge swathe of land with no sense of security. The half-finished structures are evident of the residents’ hope that these barriers will be finished someday.

As the developer of Charlotte Brooke has not provided running water for residents in the area, some residents in the area carry twenty litre buckets of water on their heads just like the residents of the villages. These are some of the reasons that villagers in Gutsa laugh off as a big joke the notion that Charlotte Brooke is an urban residential suburb as there is no running water. Villagers say they are better off in the village because they are living under village conditions compared to people who consider themselves to be in an urban area but however are still living under village conditions. Residents of Charlotte Brooke fetch drinking water either from open wells in the suburb or from other residents’ homes that have managed to drill boreholes and therefore have running water. While other residents are fetching their own water on their heads or using wheelbarrows, others are paying people from the village to fetch the water for them. Others collect water by piling up a number of twenty litre plastic containers in their vans, bakkies or sedans. Due to the lack of running water in Charlotte Brooke there are a lot of pit latrines/blair toilets at a number of houses. Those who are constructing their homes in Charlotte Brooke also hire women from Gutsa village to fetch water from the dam in the area. The women spend the better part of their day fetching water using twenty litre buckets which they carry on their heads from the various communal water sources as well as boreholes at other residents’ places.

While writers such as Chakona (2011) pointed out that before the Fast Track Land Reform Programme the greater numbers of people in Goromonzi in formal employment were

working on the commercial farms in the area, this cannot be said of Gutsa village. Despite previously having a number of farms close to the village (Kanzota, Rumani, Chibvuti and Seed Co), most of the farm workers were either of Malawian or Mozambican origin. Before the FTLRP, the village supplied a stream of seasonal workers for the two farms of Rumani and Chibvuti as well as the Seed Co research station.

It was almost a rite of passage for those in the village who would have written and were waiting for results of their public examinations namely Grade Seven, Form Two (now discontinued former Zimbabwe Junior Certificate-ZJC) and Ordinary Level from October to March to work on these farms where they hired seasonal workers. This was an opportunity that the youths looked forward to as it would enable them to earn an income to use towards the eagerly anticipated Christmas holiday. Other women and young girls were also hired as seasonal workers at the Seed Co farm. It was an open secret that villagers would steal maize from Rumani and Chibvuti with some seed and fertiliser from these farms occasionally finding its way into the village through some underhand dealings.²⁹ Farm workers would also visit the village for *chikokiyana* (the seven day traditional brew) sold mainly on weekends and holidays in the village.

The majority of males from the village who were in formal employment were mainly working in Harare. Before the recent improvements in transport these males would only return to the village during weekends (mainly coming on Friday and going back on Sunday or very early on Monday mornings) some were only able to come back at the end of the month. With the vast improvements in transport and the road network most people working outside the village have slowly moved back to commute from the village on a daily basis as a way of cutting back on the costs of city life. Villagers in Gutsa village and other nearby villages in Domboshava at times mock those from the village living and working in Harare who visit the village after long periods. They say:

“Unoona munhu kuchona ari muHarare kunge akaenda kuJoni”,

“You see someone going for a very long period in Harare without coming back to the village as if they went to Joni (Johannesburg).”

²⁹ In Chapter Seven I will discuss in detail the link between Gutsa village, the former commercial farms and the Seed Co research station which acted as a source of legal and illegal products (including seed maize) for the village.

During colonial times labour migrants from the then Rhodesia (now Zimbabwe) to South Africa (Johannesburg) were known to either take months or years before coming back for a visit, some of these migrant workers never came back.

There is no doubt that the establishment of Charlotte Brooke has created more livelihood options for residents of Gutsa village. It seems there is a lot of money to be made by villagers from Gutsa village doing odd jobs here and there or supplying other products in the new suburb. However those doing odd jobs or supplying other products in the suburb complain that the residents are notorious for not paying on time or not paying at all. Before the FTLRP farm workers (either permanently residing at the farm or the few residing in Gutsa village) at Rumani estates (now Charlotte Brooke) were trapped in a vicious cycle of credit with the former farm owner through the small grocery shop on the farm. Post-FTLRP it is the local people from the village who find themselves trapped in a cycle of credit with residents of Charlotte Brooke. Before the FTLRP farm workers and some villagers from Gutsa were dependent on the farm for their wages and getting goods on credit from the farm store. Now villagers are dependent on the residents of Charlotte Brooke for an income even in the face of none or delayed payments of what is owed to them for odd jobs and vegetable supplies. Residents from the village cannot afford to stop doing the odd jobs or supplying the vegetables even in the face of none/delayed payments. They often console themselves with the reasoning that these are signs of the hard times the country is going through which limit disposable incomes. As a result they often console themselves by saying:

“.....iUSA ka iri. Harirohwe neinflation and mari inonaka mazuva ose”.

“.....this is the USA [meaning US dollar]. It is not beaten by inflation, besides money is sweet on any day”.

The emergence of this new credit system between Gutsa village and Charlotte Brook post-FTLRP signifies a reversal of the pre-FTLRP credit system as it is now the villagers who are giving residents of Charlotte Brook credit as they do not demand that they pay for goods and services upon delivery.

The Land Reform Programme in the district

In looking at the composition of people who settled in the former commercial farms in Goromonzi, Marongwe (2003) pointed out that the people who were resettled on the previously owned white commercial farms were previously residents of nearby communal farms. However his conclusions may not apply to the former commercial farms situated close

to the village as well as for residents of Gutsa village. Despite the village sharing borders with two former commercial farms of Chibvuti and Rumani Estates and to some extent Kanzota farm, it seems that not one resident from the village benefitted from the FTLRP. Rumani Estates was transformed into a medium density suburb (Charlotte Brooke bordering the village) and a low density suburb Crowhill Views was created further away from the village. The residential stands in both suburbs are sold on a commercial basis and residents in Gutsa village cannot afford these stands. The former Chibvuti farm was portioned into A1 farms and allocated to a number of “war veterans” from villages further afield such as Chibanda, Kadungure, Musiiwa, Nyakudya and Chiroodza. Sabhuku Gutsa pointed out that he was the first to occupy Rumani Estates with people from the village at the height of the FTRLP in 2000. Unfortunately together with his subjects they were promptly kicked out as the real FTLRP machinery composed mainly of “war vets”, “war collaborators” and Zimbabwe African National Union-Patriotic Front (ZANU-PF) stalwarts rolled into place at the farm, quickly established bases and parceled out the land among them. This was unfortunate as Sabhuku Gutsa had laid claim to Rumani Estates as this had been his grandfather’s area before he was removed in 1957 when it was turned into a commercial farm.

One Saturday we drove through Charlotte Brooke on our way to Chinhoyi with the village head, in a very animated way he pointed to one of the hills (Tsongubvi) on the northern side of Charlotte Brooke. Here he said was the place his grandfather used to stay and also lay buried in that hill. With the appropriation of Rumani Estates in the year 2000 by the government under the Fast Track Land Reform Programme he had hoped that at least his lineage would benefit from the FTLRP by having his land restored back to his lineage. Unfortunately this never happened. His lineage’s second displacement during the course of the FTLRP and failure to get land at the former commercial farms is not consistent with observations by Moyo (2011) that at the local level certain clans and lineage family groups, or extended families, gained more access to land. Rumani Estates was later to be transformed into a medium density residential area with Chibvuti farm being allocated to a number of “war veterans” from nearby villages. Villagers sometimes refer to these newly resettled farmers as “*kuma war vets*”, “the war veterans’ place”. Sabhuku Gutsa was always bitter at this as he referred to this as a very unfair arrangement where people living further afield managed to get plots under the FTLRP than people who lived in the area. He always maintained that everyone had participated in the war and his home like most of the homes in the village was destroyed at the height of the liberation war, leading people to flee the village.

Land allocation and sales within a context of rapid densification and business development

Before the Fast Track Land Reform Programme, the major land tenure and land-use categories in Goromonzi were customary, large-scale commercial farms (LSCF), small-scale commercial farms (SSCF) and state land. The four main customary lands are Chinamhora Communal Lands, Chikwaka Communal Lands, Chishawasha Communal Lands and Chinyika Communal Lands (also see Chakona, 2011). It is in Chinamhora Communal Lands that Domboshava and Gutsa village is located. Although observations by Berkvens (1997) indicate that communal land cannot be leased or sold with the land being lost if left unused, this is not the situation prevailing in Gutsa village. In the village residents are parceling out and selling their large pieces of land and those who are not using their land are not losing it. As a result new people in Gutsa village are being settled on water ways, seasonal wetlands and productive farming land leading to a number of trees being cut down to clear land that is being settled on. This has led some residents like Mai Cha to complain that this will definitely have an impact on the availability of water due to low infiltration rates and ultimately the early drying up of the rivers, communal wells and wells at homesteads. She further said that the settling of people in the “*water chan*” (the runoff passages) as villagers parcel out and sell their land will also have adverse effects in the long run. She pointed out that:

“Ana mudhomeni neGoromonzi havaimbozviterendera izvozvo kare”

“The agriculture extension officers and Goromonzi Rural District Council would never have allowed all this long ago.”

Nyanguru (2007) observed that most African communities were constantly migrating; a closer look at Goromonzi shows this to be the case as the area has a high number of foreign migrants amongst its residents. A number of people who have now settled in Goromonzi once worked on surrounding commercial farms which mainly relied on foreign migrant labour. A number of the residents are reported to be Mozambican refugees who were employed for low wages by villagers. Over time some of these older people married local women and subsequently settled in their wives’ villages (also see Nyanguru, 2007, 71). Mai Reni and a number of other women from the village whose life histories are not recorded managed to bring their husbands either from Malawi or Mozambique. The husbands worked in the nearby farms and settled with them in the village. Villagers joke about this unusual trend in this patriarchal society as husbands are coming to join their wives in the village. Having been

close to former commercial farms, Gutsa village has a very mixed population of local Shona people (from all over the country) as well as residents who can trace their origins from Malawi.

On moving to Gutsa village some of the former farm workers who were of Malawian origin or were *Nyau/gure/gule wamkulu* dancers (a secret cult and religious dance among the Chewa of Malawian origin) tried to continue with their Nyau dances every weekend. However they soon clashed with the village head who said that as a Christian he would not allow this to happen in his village. Furthermore he said the Nyau dancers needed to respect the ancestors who were the owners of the land. Therefore he would not allow them to run throughout the village naked, especially the *gure* known as *tumwimwi* (who would run throughout the village smeared with clay). Now in the village *nyau* dances are restricted and only allowed during occasions such as funerals to celebrate the life of a *nyau* dancer and also at *bonas* (ceremony to bring the spirit of the deceased into the home).

Consequently people who have settled in Gutsa village can be classified into three categories. These three categories appear to mirror the distinctive character of residents in Domboshava as a whole. In this study the ten elderly women heads of households also fall into these three main categories. These categories are namely;

- a) Those I have termed “*vemuno*” (“those from here”) whom I also refer to as the originals as they are resident in the village as a consequence of them or their former husbands tracing their lineage through the village head Gutsa. In this study elderly women who fall into this category are Mbuya Tarai, Mbuya No, Mbuya Gone, Mbuya Ku, Mai Cha and Mai Reni.
- b) Those who were allocated land by Goromonzi Rural District Council officials from about 1985 to about 1989. The elderly women in this category are Mai Njere, Mai Mizhu and Mai Chota. Those who were allocated land by GRDC subsequently did not experience problems in having their names in the GRDC residents register.
- c) Those who bought land either from individual residents, the village head, or had land “transferred” to them by relatives. Mbuya Tawira is in this category as she claimed she was given land by her sister who is married in the village.

Those in the last two categories above are also referred to as *vaenzi* (“visitors”) or *vauyi*³⁰ (“those who came”). In conversations with most people in the village and nearby villages it appears village heads and ordinary residents who have sold land to *vaenzi* say they gave land

³⁰ *Vaenzi* is the plural of *muenzi*. *Vauyi* is the plural of *muuyi*.

to someone in need of land (in the case of the village heads) or allocated land to a friend or relative (in the case of the ordinary residents). Selling land in the district is specifically banned by GRDC.



A Goromonzi Rural District Council billboard at Mverechena Shopping Centre warning on illegal sale of land.

A number of people now currently resident in the village were given land by GRDC in the 1980s. For example before moving to Gutsa village in 1989 Mai Mizhu had spent almost seven years living in Chirondo which is located close to Mverechena Shopping Centre in a westerly direction from Gutsa village. Her family had to leave Chirondo after the whole area was burnt down by Goromonzi Rural District Council in 1986 as it was an illegal squatter settlement. Chirondo was then full of people who had left the surrounding former commercial farms in Domboshava. After her home was burnt down she then returned to Crowhill farm for two years where her husband was working. She was then allocated the area she is currently living in Gutsa village by GRDC when council invited those who had their homes burnt down to come forward to be allocated “dzimba” (“places to build”). Mai Chota was also given land by GRDC after she had heard that council was going to give stands to those who wanted land in Domboshava. She was shown her *hoko* (peg/stand) by the officials

from the GRDC in Gutsa village. In the case of Mbuya Tawira the area that she is currently living at was one of the fields of her young sister's husband who passed away in 1990. Here she has built a roundavel thatched kitchen and two brick under asbestos rooms.

From conversations with Mai Reni she highlighted that GRDC repossessed some of the idle land in Lower Gutsa as people had moved from Lower Gutsa to Upper Gutsa. Hence Lower Gutsa is still called *kuDongo*. Even when people returned to the village after the war *vemuno* still did not want to move to *kuDongo* even after outsiders were allocated land in 1985. Although some sons from the originals in the village moved *kuDongo* the majority of the residents there are classified as *vaenzi*.

Previously residents in the village would lend each other those fields they were not in immediate need of. However this is no longer happening principally due to the increasing pressure on the land. Although some villages close to the main road such as Mverechena, Mungate, Zimbiru and Chiroodza had previously started selling communal lands (see Hungwe, 2014) it was only around the late 1980s that the documented selling of land in the village started. It became extensive post-FTLRP in the wake of the establishment of Charlotte Brooke suburb as people tried to take advantage and capitalise on the proximity of the new suburb. Indeed, the development of the new suburb represented a dramatic change in terms of the relative isolation of the village and consequent value of its land. Gutsa village was previously construed as the place most remote from civilisation and other related services to such an extent that the buses that travelled on the dusty road that joins the village with the tarred road in Showgrounds would only go as far as nearby Mashonganyika village. This was despite the villages lying less than three kilometres from each other. Goromonzi Rural District Council even did not want to develop further up the road as they would only rehabilitate the dusty road to as far as the nearby Mashonganyika village and on the rare occasions to Gutsa village. GRDC was not interested in crossing into Gutsa village. A number of delegations had repeatedly visited the GRDC to request that the road be rehabilitated as they would do with the other roads. However the delegations always came back empty handed as GRDC always said the road to Gutsa village was not on their map. It appeared as if the village did not exist!

On the first day that I visited Mai Cha to inform her about the study she started reminiscing on how Gutsa village had in times past been referred to as a backward village by those who were staying close to the main road and the shops (Mungate, Mverechena, Chiroodza, Mashonganyika and Nyamande villages). Then there were no stores or grinding mills and people had to go to Mverechena for grinding mills, stores or buses. Villagers had to

wait and go as a group because “*paNjedza paityisa*” (“Njedza was a scary place”). Njedza is the name of a mountain range on the way to Mverechena Shopping Centre and the place was notorious for robbers who mainly waylaid women. However this has changed as people have settled there. They also visited Mutsvati Shopping Centre close to seven kilometres away where there were two general dealer stores one owned by Reni (a local lady from Mutsvati village) and the other by Nziradzemhuka who also owned a grinding mill.

However with the opening up of Charlotte Brooke post-FTLRP things have changed very quickly for residents of Gutsa village as the old farms that previously shared borders with Gutsa Village (Chibvuti, Rumani and Kanzota) were appropriated by the Government. The services that used to be difficult to access are now very near. This has resulted in people from nearby Chibanda and Mashonganyika villages with fields near Gutsa village now becoming keen on settling in the fallow fields which for almost close to thirty years had been regarded as *mafuro* (pastures).³¹ Others are now parceling and selling their land.³²

As a result of the establishment of Charlotte Brooke, the village and its immediate environment are now prime land. For those who drive their own cars, the route through the village and into Charlotte Brooke is the shortest route to Harare for residents of nearby Mashonganyika, Chibanda, Musiiwa and Mutsvati as it is now a 30-40 minute drive into town. This is a significant difference to the previous roundabout trip that took close to two hours. Previously the first hour was spent navigating the dust roads from Gutsa, Mashonganyika and Chibanda villages to Showground. The other hour would then be spent travelling from Showground to Harare on the tarred road.

For villagers using public transport, Charlotte Brooke was still the nearby boarding point for pirate taxis before the new route from the village to Showground was opened up in April 2015 with completion of rehabilitation of the dusty road by GRDC. The road had been neglected and had been in a very poor state for a very long time. The route to town through Charlotte Brooke is the shortest and cheapest route into town but villagers prefer the longer and more expensive route (a difference of US\$0.50) through Showgrounds as they can board pirate taxis at their doorsteps instead of having to walk for close to thirty minutes to the boarding point for commuter omnibuses in Charlotte Brooke. In going through Charlotte Brooke one can sometimes get stuck there for close to an hour and half due to the irregular

³¹ Turning fallow land into pastures is also consistent with observations of Krantz (2015) who pointed out that under customary land tenure it is common for fallow land to be turned into grazing land.

³² This is consistent with observations by Woodhouse (2003) who found that in Africa there is evidence of commoditization of land which is increasingly being seen through the evidence of land sales involving monetary payment. Also see Hungwe (2014) regarding the rampant nature of land sales in Domboshava.

nature of the *kombis* compared to Showgrounds where one rarely spends more than five minutes at the commuter omnibus rank.

In response to the increasing attractiveness of Gutsa village, and the increasing demand for land, a corresponding increase in the prices of pieces of land has been witnessed. Consequently, villagers are parceling and selling their pieces of land privately and coming with the token US\$50 *kunosuma* (“to introduce”), new residents to the village head. *Kunosuma* is important to acquaint the new resident with the village head (also see Murisa, 2008 about this practice). So even when private transactions take place it is still the village head who gives finality to such (also see Chimhowu and Woodhouse, 2010). The *Sabhuku* is also the one who is in a position to give a burial place when there is bereavement in the family of the new resident. The village head pointed out that he has since stopped discouraging land sales in his village as people needed the money. When residents sell their land, he benefits financially when the new resident is introduced to him.

The increasing attractiveness of Gutsa village has also led to the emergence of tenants in the village who are renting rooms in the village. This phenomenon can be traced back to 2009 when Charlotte Brooke witnessed an increase in the uptake of stands and the associated construction. Most of the people who are tenants in the village are mainly working in Charlotte Brooke with one or two individuals renting in the village and working in Harare. The main driver for this has been the rising demand for accommodation by those working in Charlotte Brooke and the attractiveness of the rentals in the village at US\$10 per month for a single room compared to an average of US\$40 in the suburb. Some villagers who had built big houses seized this opportunity and began letting some of their rooms in their homesteads. Others from the village who reside in Harare have gone to the extent of letting out their entire homesteads. Previously it was common for absentee landlords to find someone to remain in a caretaking role at their homesteads. However nowadays absentee landlords prefer finding a tenant to rent their homesteads and hence earn an extra income. On the other hand some relatives of deceased former property owners with no surviving children have capitalized on this new development by renting out the homesteads.

Before the ongoing parceling and selling of land in the village and in Murape Ward people used to have unrestricted movement in the area as a lot of the fields had been left fallow. Growing up in the village I recall fields which I never saw cultivated. People regarded them as part of “*mafuro*” (pasture) in the village. In the wake of the increasing parceling and selling of land, movement in the village is now constrained forcing people to use roundabout routes as the new settlers secure and fence their yards with perimeter fences. Fencing is

proving to be a good strategy as it is a good way to avoid future claims and counter claims of where one's yard starts and ends. Headman Murape recently complained that his court is now inundated with children who are trying to claim portions of *vaenzi's* yards saying that their deceased fathers never sold these big stands for so cheap a price. Some of the land was sold as long ago as twenty years. So wanting to benefit too from their father's lands these children are trying to get more money by taking the land from *vaenzi* and parceling it again to sell to others.³³

Despite the diverse nature of the population composition in the village, there was a burial society which was established in 1998 where all residents were united in monthly contributions to help bury each other. Then the burial society opened a bank account with the Central Africa Building Society (CABS) where money from the monthly contributions was deposited. Unfortunately the burial society died a natural death at the height of the hyperinflationary period in 2008; thereafter no one resuscitated it in the post-Zimbabwe dollar era. In conversations with most villagers it was evident that a number of factors were being cited for the lack of interest in resuscitating the burial society post-Zimbabwe dollar. It appeared a lack of interest and lack of collective will were the major contributors for the failure of the resuscitation of the burial society in the village.

Inter household and village boundary disputes

Early into my fieldwork I was suddenly drawn into land allocation/village politics. In September as I was passing the homestead of Baba Maki, Mbuya Mizhu's eldest son called out when he saw me passing. I stopped and we exchanged some pleasantries, as we continued chatting the conversation moved to the issues that he said were troubling him. Since he belonged to one of the white garment *vapostori*³⁴ in the village he requested that I talk to my father to allocate them a place of open air worship. He said:

“imi munenge munonzwisisa”,

“You may be more understanding than your father!”

³³ These contestations of previous land sales in Murape Ward by sons of late fathers are also consistent with Krantz's (2015) observations. Krantz acknowledged that in Africa there are increasing incidences of younger male family members contesting land sales that were done by their late fathers as they feel deprived of their legitimate rights to land.

³⁴ A term that refers to mainly white garment followers in Independent African Churches, mainly Johanne Marange and the different variants of Johanne Masowe and other variants of offshoot Independent African Churches.

I had grown up playing with and herding cattle with his young brothers when his parents moved to the village in 1989. The urgent need for a place to worship had emerged as his neighbour Amai Tawanda had recently approached him and told him to stop worshipping in the corner of his stand that they had been using for a very long time. He was surprised by this new development as this specific corner they had been using is fenced under Baba Maki's yard. He found this to be ridiculous as all along it had been his stand and so he was trying to avoid trouble with quarrelsome Mai Tawanda. The twist in this case was that Mai Tawanda's husband was one of the "originals" and Baba Maki was classified as belonging to *vaenzi*. I gently advised him that since there is another open air church worshipping in the nearby Mhinorombe mountains near his home (still under Gutsa village) he needed to approach the church members for advice on how they were allocated that piece of land to pray. It would then be easier for him to take the same route they also used to be allocated the place to worship by the village head. He then proposed that it may have been Munya (the eldest son of the village head's brother) who sold that piece of land to the other church. Before moving back to Harare in February of 2014, Munya had allegedly been notorious for parceling out and selling pieces of land without the village head's permission. However in conversations with people from the village, they claim that Munya was a front for the village head to sell land because he was very bold and went untouched in his land transactions.

While the above shows some of the intra village boundary disputes in Gutsa, there are waves of inter village boundary disputes going on in Murape Ward. Currently Sabhuku Gutsa and his village are under siege from the various village heads he shares borders with as they claim that some of his land belongs to them. The village head acknowledged that this contestation started after the FTLRP when the former commercial farm of Rumani Estates was transformed into the new suburb now known as Charlotte Brooke. Gutsa village is the only village which shares a boundary with Charlotte Brooke. Considering the parceling and selling of land that has intensified in the backdrop of the establishment of Charlotte Brooke, Gutsa village is now prime land. To the east of Gutsa village there is Ngwerume, north-east there is Mashinge, to the North there is Mashonganyika, to the West there is Chibanda and to the south lies Charlotte Brooke and through it the shortest gateway into Harare. As a result Gutsa village is engaged in a constant tug of war with these village heads who are claiming some pieces of his land on its various sides.

The contested land between Gutsa and Mashonganyika

Mashonganyika claims that a piece of land in the middle of Gutsa village, deep inside the valley called Madhigi which appears to separate *kuDongo* and Upper Gutsa belongs to him. This stretch of land has dimensions of two and half kilometers (length) and approximately four hundred metres (width). This land which has mainly been reserved for pasture and *mazhanje* fruits (almost all the trees here are *mizhanje*) has been the location of a hive of sand poaching and tree cutting. Mashonganyika has been trying to strengthen his case by the fact that sometime in the early 1990s the Veterinary Science Department at the University of Zimbabwe constructed paddocks in the area as part of a project they had with villagers from Mashonganyika. This was part of an arrangement that the previous village heads had made but currently Mashonganyika feigns ignorance of the arrangement. Mashonganyika wants to sell the land or settle people from his village there and Sabhuku Gutsa disputes this.

Chief Chinamhora sent his emissary in the form of Headman Murape to adjudicate the dispute in August 2014. I attended the session which was held in the middle of the contested swathe of land (there is no one settled here yet). During the session elderly people from both sides gave evidence attempting to lay claim on this land for the benefit of their village whilst trading vicious accusations in the process. The final judgment was that both Mashonganyika and Gutsa should engage each other when they want to settle their people there. However Gutsa told headman Murape in no uncertain terms that he will not bother to do so because it is his place and therefore he cannot consult another village head to decide what he wants to do with his land. Mashonganyika has subsequently not attempted to venture into the area as during the session Gutsa villagers were pointing out that:

“Idzi ndidzo nyaya dzinoisirwa munhu demo manje”

“These are the kind of issues that one can easily be killed for”.

Perhaps it was the force of the threats that led Mashonganyika to realise that he was fighting a losing battle. The relationship between the two is strained although cordiality is displayed from time to time. What makes the relationship very interesting is that Sabhuku Gutsa married a *muzukuru* of Mashonganyika and is therefore a son in-law. On the other hand Sabhuku Gutsa’s now deceased eldest sister was married to Mashonganyika. So they are both sons-in-laws to each other and fathers-in-law to each other and their children are *vazukuru* to each other. So when in Mashonganyika, village head Gutsa is a son in-law when in Gutsa village Sabhuku Mashonganyika is a son in-law. Despite the disputes these village heads take time to pass information to each other about wide ranging issues from notices of deaths to

government programs amongst others. In some instances when Sabhuku Gutsa has a case before him in the village court he invites Mashonganyika and Mashonganyika also does the same when he has a case before him. So the village heads still have cordial relations even though they contest each other's claim over the piece of land.

The boundary dispute between Gutsa and Shumba

In another dispute on the eastern side, villagers from Shumba threw sand into the wells near Gutsa's border with Shumba as well as in some wells which are deep inside Gutsa village in mid-October 2013. They reported that it was their territory and hence the people who were living close to their border were squatters who were supposed to move out. They had further attempted to extort US\$20 from Gutsa residents living there for example Mbuya Tawira. The villagers living there reported the incidents to Sabhuku Gutsa who promptly made a report to the police in Charlotte Brooke and the matter was referred to the civil court. Chief Chinamhora had tried to have the case brought before his court but Sabhuku Gutsa refused because in recent disputes with people from Ngwerume and Mashinge villages, the Chief had appeared to rule in their favour amid allegations of having been corruptly influenced to do so.

The boundary dispute between Gutsa and Ngwerume

Living on the edge of Gutsa village Mbuya Tawira said she constantly lives in fear that the people from Ngwerume may come any day to chase her away. As a woman living alone she said there was really nothing she could do if they used force as they had told residents living on the edge of the village that they were coming to burn down all the houses that had been built on the land they claimed to be theirs. As a result looking for firewood was now a big challenge for her and for a number of other villagers living close to the border as their only source of firewood was towards the east and into the area that Ngwerume claimed. The people from Ngwerume had said they did not want to see anyone living close to their boundary looking for firewood in their territory. However this has not stopped Gutsa residents from looking for firewood in the disputed zone.

Mbuya Tawira's granddaughter looks for firewood after returning from school with the other small girls from nearby homes. As I will discuss later in Chapter Six, Mbuya Tawira said she cannot afford leaving her home to look for firewood as she also had to be on the lookout for the marauding baboons. If all the various claims by village heads are to be taken into consideration it appears Gutsa village does not exist at all. Those who have a rich oral history of the area indicate that long ago village head Mashonganyika was given *huSabhuku*

(village headship) by Ngoro. Ngoro had been given *huSabhuku* by Gutsa as Gutsa was the *matangakugara* (the first settler) during the early settlements of the white men. It appears that these boundary disputes do not end easily. Once again on the 22nd of August 2015 the people from Ngwerume were in dispute with the people of Gutsa. Sabhuku Gutsa accused Ngwerume of trying to be belligerent in the wake of the death of chief Chinamhora who appeared to have been siding with him.



One of the elderly women sitting outside her kitchen with her grandchildren. In the background are the mountains which mark the boundary with Ngwerume. It is also in these mountains that the chiro (baboon's abode) is located.

A subject trying to wrestle control from his Sabhuku

Meanwhile Sabhuku Gutsa has also had to deal with a very problematic subject Baba Cha who moved from Upper Gutsa to settle in Lower Gutsa when he separated from his wife Mai Cha in 2002. On moving to settle in Lower Gutsa he began to clash with the village head as he claimed he was the village head. The village head moved swiftly to consolidate his powers by summoning every resident of Lower Gutsa to his homestead including Baba Cha. Baba Cha had attempted to extort money from folks who had recently settled there. Now this issue was resolved after Baba Cha was severely admonished publicly by the village head.

Water supply in the village

There are a number of water sources in Gutsa village from which residents draw their water for domestic and other livelihood purposes. Villagers draw their water from the four communal wells and the borehole on the border with Chibanda village. Water is also drawn from the three dams on the former three commercial farms of Kanzota, Rumani and Chibvuti as well as Munhenga River which courses through the former three commercial farms. Villagers also fetch water from the borehole on the border with Chibanda village, Nyaure River on the border with Mashonganyika village, the very small water reservoir/*dhamu* (villagers call it a dam) that was dug in the early 1990's by one villager who came to settle in Lower Gutsa and the three rainy season streams which originate in the village. The borehole on the border with Chibanda village had not been working for close to four years and it was only repaired towards the July 2013 elections by one of the aspiring parliamentary candidates. However by October of that same year it had broken down again and no one seemed to care. The borehole was repaired in November of 2015 by the Movement for Democratic Change (MDC) councilor and is serving as a good watering point for livestock and other domestic needs except cooking as the water is very rusty.



The only borehole in the village

Growing up I knew that people in the village did not cook with water which had been left standing overnight. Water which had been standing overnight was mainly used for doing the dishes and general laundry in the household. Then people used to keep their water in

metal buckets which were equivalent to twenty litres buckets. These were mainly empty metal paint containers as well as the metal buckets fashioned and peddled by tin workers who were mainly *Vapostori*. These metal buckets would show evidence of rust in the mornings if water was left standing overnight or for longer periods of time. This was therefore considered dirty/contaminated water which would only be fit for doing the dishes or other household chores, but not for cooking. Nowadays people have resorted to using twenty litre plastic buckets being sold for US\$3 to fetch and store water instead of the former metal buckets. The popular twenty litre plastic buckets are mainly empty cooking oil or paint containers mostly originating from South Africa as well as from local sources. There is now a ready market for these twenty litre plastic buckets as people no longer exhibit a preference for the metal buckets. This has therefore cut into the income of the *vapostori* who make the metal buckets.

Conclusion

This chapter has situated the study in its location by providing a historical and current overview of processes that have shaped the study area. The main themes that I have explored here are related to the history of land allocation and sales within the context of rapid population growth, increasing commoditization of land, authority over land, access to and contestation of household and village boundaries and the effect of the Fast Track Land Reform Programme on elderly women.

The increasing commoditisation of land in the study area has seen the collapse of local level governing and policing systems leading to the uncontrolled selling of land, sand extraction, brick moulding and rampant cutting down of trees such as *muzhanje* and *muhacha* which are useful for local weather forecasting. Forests are also being cleared for settlement in the face of increased land sales and commodification. This has arisen as villagers increasingly seek to take advantage of the poor local policing and governance structures. Those at the local village policing system are also engaging in the same activities although they are supposed to be policing. It is becoming increasingly difficult for village heads to discourage private land sales by residents as they get an incentive from the land sellers to legitimise the land transactions.

The Fast Track Land Reform Programme clearly opened the door to the widespread commoditisation of land in the study area leading to an increase in demand for land by outsiders seeking to maximize on the advantages of commuting from the village. These ongoing processes around access to land have had a significant impact on women's access to and control over land (and its management and uses). Furthermore the increasing diversity of

the population in the study area including former farm workers from Malawi and Mozambique with the rich histories of movement and intermarriage increasingly make “pure” lineage claims to the land a complicated and difficult matter.

In the wake of the FTLRP there has been a noticeable negative impact on the livelihoods of elderly women practicing vegetable gardening in their small gardens. Here elderly women have now been pushed out from their garden based livelihoods by the newly resettled farmers who are practicing vegetable farming at a large-scale instead of grain production as the former white commercial farmers did. This in a way has also led to the creation and perpetuation of a form of vicious cycle of credit as elderly women are forced to supply vegetables on credit thereby increasingly making their livelihoods precarious.

Instead of the Fast Track Land Reform Programme in the district restoring land to the owners this has not been the case as the originals were denied land in the farms they had invaded. As these processes are playing out, new non-agro-based livelihood opportunities have emerged which have also helped in the diversification of livelihoods of elderly female headed households.³⁵

³⁵ Also see Scoones et al (2011) and Scoones (2016) on the diversification of and emergence of new livelihood opportunities in Zimbabwe post-FTLRP.

Chapter 3

“We elderly women need to be taken care of.” Age, Gender and Generation in Gutsa village

Introduction

In this chapter I examine the issues of age, gender and generation in Gutsa village by specifically focusing on the lives of ten elderly women heads of households whose situated experiences in the village in the context of climate change I examine in this thesis. Nine of the elderly women heads of households are widowed with one officially confirmed by the village head court as separated from her husband.

By examining the issues of age, gender and generation of these elderly women in the village I explore the issues these elderly women heads of households are grappling with on an everyday basis. As is common with most elderly women and specifically elderly women heads of households in most developing countries there are a number of issues elderly women in Gutsa village are experiencing on an everyday basis. These issues range from living through the challenge of the HIV and AIDS epidemic and the associated emergent burden of living and caring for orphans and vulnerable children and other young members of their immediate and extended family. The elderly women household heads also have to source and secure livelihoods in the face of multiple and competing responsibilities that tend to draw them away from their family, households, the community, the village and ultimately their sources of livelihoods. The elderly women heads of households are also grappling with social support mechanisms that are progressively collapsing or assuming new forms and meaning in the face of pressures on the immediate and extended family members in a non performing Zimbabwean economy. In this chapter I allow these elderly women’s life histories and their situated experiences to emerge while examining the various themes in this chapter related to their position in the village in the broad context of climate change. As I present this chapter I therefore reflect on Catell’s (2003) conclusion that there is no “typical” African widow. Consequently each and every one of the elderly woman in this study’s experiences are uniquely her own, and even within a given socio-cultural framework and being situated in Gutsa village, these widows have very different lived experiences. These elderly women interpret, negotiate and reimagine themselves as individuals struggling to survive and make sense of the ongoing changes around them in the context of a highly subjective and flexible environment.

In this chapter I also demonstrate that there has been an intensification of the new form in the direction of the flow of remittances. While most writers have written about the

“normal” flow of remittances from urban to rural areas (Thomas et al, 2005; Tacoli, 2002), or from the young to the elderly there has been intensification in the new flow of remittances from rural to urban areas despite the impact of climate change in the village and associated poor harvests. This has been characterized by the flow of agricultural produce (mainly maize) originating from the village and being transported to support other family members outside the village and mainly living in urban areas.³⁶

The elderly women heads of households in the study

The ten elderly women heads of households living in Gutsa village whose life situations are explored in this chapter are namely one separated elderly woman (Mai Cha) and nine widowed women; Mbuya Tarai, Mbuya No, Mbuya Ku, Mbuya Gone, Mai Mizhu, Mai Reni, Mai Njere, Mai Chota and Mbuya Tawira. Some scholars such as Catell (2003) have pointed out that with widowhood and divorce a woman’s social status may drop significantly. In such instances this leads to women’s diminished claims to resources and family support when their husbands die. In this study only two of the elderly women Mbuya Gone and Mai Reni were born in the village and also remarried before coming back permanently to the village upon dissolution of their second marriages. The remaining elderly women moved to Gutsa village upon marriage or later in life with the exception of Mbuya Tawira who settled in the village in the year 2000 when she was already widowed. At the time of my field research it was Mbuya Gone who had lived in the village the longest, having lived in the village for close to fifty five years. Born in 1942, she grew up in the village and was only away for about twenty non-consecutive years twice married before coming back to the village in the early 1980s.

The position of the elderly women in the village was that of being pillars of wisdom and knowledge. This was even more evident when looking at these elderly women (especially *vemuno*) and their relationship with the village head. I noticed that on a number of occasions when there were some very critical issues that needed to be decided on in his family and in the village, the village head would call upon these elderly women for counsel. He frequently called for Mbuya Ku, Mbuya No and Mbuya Tarai and to a lesser extent Mbuya Gone. There are no living males who are of equal age to these women in the village. As I discussed in

³⁶ The history of remittances in Goromonzi district as in most rural areas in Zimbabwe showed a directional flow from urban to rural areas (Makombe, 2013). However this remittance trend was reversed in the wake of the adoption of Economic Structural Adjustment Programme (ESAP) in the early 1990s. As economic conditions worsened in the country in the wake of the implementation of ESAP and urban living conditions deteriorated this led to a reversal in the flow of remittances with remittances originating from rural to urban areas (see Chimhowu, 2002; (Tawodzerwa, 2010; Potts and Mutambirwa, 1990).

Chapter One these women were *vazukuru* with the exception of Mbuya Gone who was a *muzukuru* and *ambuya*, they had seen and had a vast knowledge of matters pertaining to the village. They were also the ones who lived close to the village head's homestead which also doubled as the village court. For other meetings presided by the village head such as ones to make arrangements to receive food aid, or *inputs* (agricultural inputs known simply as "inputs" in the village), villagers would meet *pamutowhe* (*azanza garckeana* tree) close to six hundred metres away from the village head's homestead.

Putting ageing into perspective

As discussed in Chapter One I only selected the elderly women household heads from those who were sixty years and older in the village. Here I took the chronological definition of elderly person as anyone sixty years and above as defined in the Zimbabwe Elder Persons' Act of 2012. Observations by Makiwane, Ndinda and Botsis (2012) have shown that this sixty year benchmark appears to be popular in most developing countries with South Africa also using this chronological age marker. Early into my fieldwork I noticed the challenge of reconciling physical and chronological ageing in the village.



An elderly woman holding her grandchild.

After having scouted for and identified the study participants I was talking to the village head and mentioned the elderly women in the village that I was going to talk to in the coming months. When I mentioned that I was including Mai Reni in my study he pointed out that there was no way that Violet (Mai Reni) could be over sixty years of age:

“Violet akakura ndichiona”,

“Violet grew up in my eyes”.

Chronologically she was well above the minimum age for inclusion into the study which was sixty years. However Mai Reni, Mbuya Tawira and Mai Cha did not look as physically as old as were chronologically.

Most ethnographies still pay little attention to African widows, despite the fact that women appear to have greater longevity than men as women are more likely than men to lose their partner and to be widows for many years (Catell, 2003, 53). For Knodel and Ofstedal (2003) the life course perspective recognizes changes in statuses and roles as persons age and highlights how changes such as from married to widowed can differentially affect men and women as they pass through their older years. McMullin (1995, 30) quoted in Knodel and Ofstedal (2003, 679) noted that there is a “lack of theoretical development concerning the relationship between gender and ageing”. According to the United Nations (2004) many older people are increasingly rejecting the stereotypes of old age as they seek to pursue more active lives while they receive greater recognition for their important ongoing contributions to their families and communities. The rejection of these stereotypes is sometimes not by choice but is the consequence of circumstances that draw them once more towards an active life. This perspective is very appropriate as I focus on the ten elderly women heads of households in Gutsa village. Despite the advanced age, all the elderly women are saddled with multiple and competing responsibilities in the household and community as they seek and attempt to secure livelihoods, take care of orphans and vulnerable children while also grappling with health challenges that tend to militate against their role as household heads, all these in the backdrop of ongoing climate change.

Having started my life history interviews in August 2014 in the dry season I had hoped to take advantage of the dry season as I assumed the elderly women had much “free” time on their hands. I was afraid the rains would affect my progress as people would be busy in the fields. However I soon found out that the elderly women were very busy in their vegetable gardens watering or guarding against livestock roaming freely in the dry season or pests, attending funerals, visiting friends and family or engaged in traditional practices like

kurova guva (a ceremony to accept and bring the wandering spirit of the dead back into the home), attending church or hawking. As acknowledged by Kakuru and Paradza (2007, 293), the nature of rural livelihoods in Africa today means that women who are household heads have to juggle many activities to make ends meet. In their research on women's experiences in Uganda and Zambia, the researchers noticed that in the process of doing their research more often than not the women they intended to interview were not present in the village when they went for their interviews. I experienced the same difficulty as on a number of occasions during my fieldwork I missed out the elderly women who were part of the study as they were always away from home for one reason or the other when I went to their homesteads. All this happened despite having set up and then confirmed the appointment with the elderly women.

All the ten elderly female household heads who were study participants in Gutsa village 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.³⁷ In Latin America, the Caribbean and Africa due to the challenges of diminished incomes in old age most elderly (women) continue working until they die (Nyanguru, 2007). Nyambedha et al (2003) quoted in Oburu (2009, 7) noted that in pre-colonial Africa, the existence of a large pool of close relatives and well established welfare structures within clan-based three-generation families ensured that elderly people's basic needs were taken care of. However under colonial rule in Africa the situation of elderly people became precarious as colonialism altered the social security situation of elderly people. Colonial Rhodesia (now Zimbabwe) was marked by a lack of formal social security for black elderly people as the colonial administration viewed rural areas as a social safety net for urban migrants. The assumption then was that security in old age for Africans was to be derived from subsistence farming as well as from remittances from their children. As a result of this approach, the marginalization of elderly people and the challenge of lack of social security and the vulnerability it creates among elderly people is more pronounced in rural areas where the social protection of older persons has been eroded.

The absence of social security for the elderly (especially black elderly) in post-independent Zimbabwe has not changed for the better. As a result ageing in Gutsa village for

³⁷ The situation of the elderly women in the study village is consistent with observations by Makiwane, Ndinda and Botsis (2012) as they noted that evidence from various settings is increasingly showing that elderly people far from being inactive are very active in the household whilst also using their incomes to support the household.

the elderly women documented in this study comes on the backdrop of deterioration of social and family support systems which formerly sustained the older persons. This deterioration is caused by multiple factors such as the challenge of the HIV and AIDS epidemic, migration and a very poor and non-performing Zimbabwean economy as well as the care giving roles elderly women are now assuming. This is despite the meaningful active roles they are supposed to play in the complex family patterns of reciprocal care and assistance among the generations, (see Paradza, 2009; Bigombe and Khadiagala, 2004).

Table. 2 Characteristics of the elderly women in the study

<i>Name</i>	<i>Livelihood activities</i>	<i>Crops grown</i>	<i>Religious Affiliation</i>	<i>Livestock Ownership</i>	<i>Origin/How she settled in Gutsa village</i>	<i>Number of Children</i>	<i>Number of people currently in household and relationship to household head</i>
Mbuya Tarai (does not remember year of birth)	Mainly relies on rainy season farming	Maize, sweet potatoes	Not going to church anymore	Never owned any livestock	<i>Vemuno</i>	Had five children, two are deceased three are alive (one female and two males)	Four (her grandson, his wife and their two kids)
Mbuya No (does not remember year of birth)	Mainly relies on rainy season farming	maize, groundnuts, roundnuts	Roman Catholic	Used to own cattle however lost cattle when she fled the village at the height of the liberation war in the 1970s. Used to own goats and still owns some chickens	<i>vemuno</i>	Had seven children and only two females are alive	Three (her two grandsons and single granddaughter)
Mbuya Ku (born in 1928)	Mainly relies on rain-fed farming, <i>mukando</i> ³⁸ and the small stall outside her home	Maize, sweet potatoes, ground nuts, round nuts, previously planted rice in her garden	Apostolic Faith Mission (AFM)	Used to own goats however they were all stolen. Used to keep her sister's cattle under	<i>vemuno</i>	Had nine children and six are still alive (three males and three females)	Four (two grandsons and two granddaughters)

³⁸ In Gutsa village *mukando* is an informal savings group where each member contributes money into a pool and then has to borrow from that pool and then repay at a nominal interest of ten cents for every dollar at the end of the month. At the end of specific period ranging from six months to a year the members sit down to decide on what to buy with their money.

		which is no longer as wet as before		trusteeship			
Mbuya Gone (born in 1948)	Practices rainy season farming as well as all year round vegetable farming. Sells the vegetables in the village, Charlotte Brooke and Sally Mugabe	maize, sweet potatoes, leafy green vegetables	Salvation Army	Goats and chickens. Her cow which was part of a dairy pass on project died.	<i>vemuno</i>	Four children, all are deceased	Three (her grandson, his wife and child)
Mai Cha (born in 1950)	Mainly practiced rainy season farming as well growing some chillies for sale	maize, sweet potatoes, chillies	Any church of interest	Her husband took away all the cattle when they separated.	<i>vemuno</i>	Had eight children and six are alive	Nineteen (her son, his wife and three kids, brother in law and thirteen grandchildren)
Mai Mizhu (does not remember year of birth)	Previously practiced all year round vegetable farming, rainy season farming	maize, sweet potatoes	Zviratidzo Apostolic Church	Still keeps some cattle and goats.	<i>vaenzi</i>	Had eleven children and two are deceased.	Thirteen (two sons and one daughter, three stepdaughters and seven granddaughters)
Mai Reni (born in 1951)	Rainy season farming of maize, sweet potatoes, groundnuts. Sells body lotions and second hand clothing in the village as well as outside the village.	Maize, sweet potatoes, roundnuts and sweet potatoes	None	Only keeps chickens	<i>vemuno</i>	Five children and all five children are alive	Five (her son, wife and three grandchildren)
Mai Njere (born in 1960)	Rainy season farming of maize, vegetables as well as seasonal selling of <i>mazhanje</i>	Maize, sweet potatoes and groundnuts	None	None	<i>vaenzi</i>	Had eleven children and seven are living	Three (her daughter and two grandchildren)
Mai Chota (born in 1945)	Rainy season farming, all year vegetable farming.	Maize, groundnuts and sweet potatoes	None. However last went to Madzibaba Isaiah's Church	None. She sold all her cattle to see her two grandchildren through school	<i>vaenzi</i>	Had four children and only two girls are alive	Two (her grandson and granddaughter)

Mbuya Tawira (born in 1954)	Rainy season farming, <i>maricho</i> (working in someone's field for payment), all year vegetable framing	Maize, <i>zviyo</i> (finger millet), groundnuts and sweet potatoes	Salvation Army	None as they were all burnt in a suspected arson attack	<i>vaenzi</i>	Two children and both are alive	Three (all her grandchildren)
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The elderly women heads of households documented in this study are grappling with a number of issues ranging from the experience of being twice widowed (Mai Reni and Mbuya Gone), a loss of personal autonomy, a loss of status and poor access to productive resources and social support (all the elderly women). Mbuya Ku and Mbuya No entered independent Zimbabwe in 1980 already widows and had to start afresh without husbands after losing everything when they fled the village at the height of the war. They had to grapple with seeing their children through school now again with seeing their grandchildren in their care through school again. Therefore as I focus on these elderly women in this study I reflect on Cliggett's (2001) observations that when speaking of the "elderly" we cannot be speaking of a single group, but rather a collection of individuals. Consequently some of these elderly women have similar characteristics and strategies in their day to day lives while others have different preferences and options available to them. As a result of this, the experiences of the elderly cannot be viewed as the same in both space and time.

For Ogwumike and Aboderin (2005) elderly people's experiences in developing countries are shaped by a number of factors as compared to the experiences of young members of society. Some of the factors affecting elderly people's experiences are related to diminishing physical capacity and poor vision (all the women in the study), an earlier lack of education, restrictive agricultural sector conditions, the challenge of HIV and AIDS, dealing with pests and now climate change. These factors are exacerbated by policies directed towards younger age-groups which limit elderly people's access to services.

Elderly women as heads of households in the village

There is no doubt that the traditional living arrangements where elderly people lived with the rest of the family have been severely affected by increasing rural-urban migration and the emerging tendency towards nucleated families (Muia et al, 2003). In this study I use the definition of a household and household head 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). More recently 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 elderly headed households taking care of homesteads on their own both in rural and urban areas (see Muia et al, 2013). However, this research found the contrary as all the elderly women heads of households in the study were not living alone. Rather the number of members in the household ranged from two (Mai Chota) to the highest being nineteen (Mai Cha).

In a survey of a number of Sub-Saharan African countries, Zimmer and Dayton (2003, 18) concluded that women without spouses are more dependent than men and may need to rely more on the extended family. Ordinarily this should be the prevailing situation but my findings were contrary to this as the extended family appears to increasingly rely on these elderly women in Gutsa village. In putting the notion of female headed households into context I reflect on Moghadam’s (2005) observations that female headed households may be permanent or transitory or they may be embedded in a wider kin network of support. In Gutsa village these elderly female heads of households appear permanent in their nature as depicted by the examples of Mbuya No and Mbuya Ku who have been widows for close to fifty years now.

Elderly women heads of households in the village stretched thin with competing social responsibilities

Commencing my fieldwork I soon realised that elderly women in Gutsa village are stretched thin with multiple and competing demands on their time as they have to fulfill obligations by virtue of them being situated in the village and also having kin outside the village. As they try

to pursue and secure their livelihoods they may have to be away from the village for extended periods attending funerals (e.g. Mbuya No, Mai Chota, Mbuya Tarai), or nursing relatives who are not feeling well, as well as attending *kurova guva*³⁹ ceremonies. Mai Njere the noted traditional beer brewing expert had to shuttle between Gutsa and Ngwerume villages soaking the sorghum and helping in brewing the traditional seven day beer at the end of August 2014 as August to September is the time for *kurova guva*. Even among those of Malawian origin she is also sought after for *bona* (the Malawian name for the equivalent of *kurova guva*).

Mai Njere pointed out that *gule wamkulu* (a secret cult and religious dance among the Chewa of Malawian origin) had been banned in most villages as the village heads said it was supposed to be confined to the farm where those of Malawian origin came from. The reasoning was that the ancestors were not pleased with them performing as if the villages had no “*varidzi*” (owners). This was affecting the pace at which *bonas* were being held due to the need to make a special request to the village head for *gule wamkulu* to be allowed for the full ceremonies. The *kurova guva* ceremonies which usually stretch over a period of two to three weeks are also done during the peak of the dry season (August to October). These are also the same dry and hot months that the elderly women like Mbuya Gone who are into all year vegetable gardening need to take extra care of their gardens due to the almost daily irrigation required.

The same elderly women are called upon to perform midwife roles (e.g. Mbuya Mizhu is the certified midwife in the Zviratidzo Apostolic Church she attends), to visit sick relatives and to seek medical treatment (most of the elderly women). They also take care of their grandchildren, attend funerals and still tend their vegetable gardens. Mbuya No also had to attend her son in-law’s funeral when he passed away in August 2014; thereafter she had to spend close to a month consoling her daughter. Initially Mbuya No had gone to her daughters’ home to be near the health centre where she was receiving treatment for her legs. Unfortunately 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 consoling her daughter.

At the start of my fieldwork Mbuya Tarai was in Nyakudya village visiting her grandchildren. Of all the elderly women I interviewed in this study, it was Mai Chota and Mbuya Mizhu who were the most elusive to meet initially. In the case of Mai Mizhu even

³⁹ A ritual ceremony to bring home the spirit of a dead person usually held one year after his/her death. In Shona culture it is believed that from the time of death to the date of the settlement of the deceased’s spirit, the spirit is wandering in the forest. *Kurova guva* ritual is held to settle the spirit of the dead by introducing it to older spirits and ultimately Mwari (God), as well as welcoming it back home (See, Rutsate, 2010; Mpofu, 2001; Vambe, 2009).

after repeated confirmed appointments and repeated phone calls to her eldest son Baba Maki I would visit her place and still find her away from home. She was always away from home for various reasons. These reasons ranged from visiting her children and grandchildren, attending church meetings or attending births of members from her apostolic church going as far as Nyakudya village close to fifteen kilometres away to attend to births.⁴⁰ Mai Mizhu also indicated that she usually spent some time on her own in the nearby mountains close to her home *kumasowe* (prayer retreat in the mountains).

It took me a long time to get hold of Mai Chota as she was frequently away from home. Her eldest sister passed away in Harare in August 2014 and she had to extend her stay a few days longer to welcome those who were still coming to pay their condolences as well as *kugova nhumbi* (dispersal of the deceased's property). The ceremony was delayed due to the acute water shortages in Harare then as the clothes had to be washed first. When I went to her place again on the 4th of September 2014 to specifically pay my condolences she was not yet back again. She had returned again for a few days and had to rush back *kugova nhumbi*. Over the previous months she had been constantly visiting this sister at her home in Harare to provide care for her which also partly explained her absences. When she came back vegetables in her garden were almost wilting in the hot September sun as her grandson had not irrigated them despite her prodding. Meanwhile Mbuya Gone in August and September of 2014 had to balance visiting a sick relative with tending to her vegetable garden which is almost two kilometres away *kuDongo*. As a result these social obligations have the propensity to draw elderly women heads of households away from their homes and hence their care giving role as well as their sources of livelihoods. This therefore has the potential to militate against the elderly women heads of households as these activities are not compensated for and do not have a monetary attachment to them.⁴¹

Elderly women and caring for grandchildren

In the village there are a number of people who have passed away and are suspected of having succumbed to AIDS with some elderly women in the study confirming that their children died of AIDS (Mbuya Gone, Mai Cha and Mbuya No). As noted by Smith (2002),

⁴⁰ Mai Mizhu's role here of attending births of members from her apostolic church is consistent with observations by Obioha and T'soeunyane (2012) in Morija, South of Maseru in Lesotho. In their study in a rural area they found out that elderly women were also sought out for their skilled labour during childbirth. Their role was not only restricted to child births but involved equipping the pregnant women with health precautions and information during pregnancy.

⁴¹ Observations by Knodel, Watkins and VanLandingham (2003, 156) show that social obligations which draw elderly 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.

older parents of children who are suffering from HIV and AIDS or have died from AIDS are sometimes afraid to disclose the true nature of the illness for fear of the stigma from other family members and the general public. Consequently Knodel, Watkins and VanLandingham (2003, 153) observations are particularly true that:

“The greatest impact of AIDS on older persons occurs not on older persons who are HIV infected but rather on those who are affected when their adult children and younger generation relatives become ill and die of AIDS.”

This is truly reflective of the elderly women heads of households in this study as they are now left with and have to live with orphans and vulnerable children in their care.⁴² These elderly women have to take care of orphans, feed, clothe, educate as well as take care of them when they fall sick. The phenomenon of grandparents raising grandchildren is not new as grandparents have always stepped in to take over the care of their grandchildren in times of family crisis (Backhouse, 2006). Inasmuch as the grandmothers cared for their grandchildren this was done through a sense of collective and shared responsibility for the well-being of all community members (see Thabethe and Usen, 2012, 117). Before colonialism this was mainly possible through living in closely knit communities. However colonialism and the increasing geographical spread of relatives has significantly impacted on the ability of the family to take care of orphans (see Hampson, 1982; Dixon, 1987).

In this study all ten elderly women heads of households were living with their grandchildren, nephews and or nieces from their immediate and extended families as these elderly women have become their first point of care. The children under their care range from those of separated or divorced parents (e.g. the grandchildren under Mai Njere and Mai Mizhu’s care), remarried parents, where the new husband was not willing to take care of the additional family (e.g. Mbuya Tawira). The elderly women also have children of either their daughters or granddaughters who are single mothers under their care (majority of the children under these elderly women’s care). They also have orphans of these elderly women’s sons and daughters under their care who had passed away mainly due to HIV and AIDS (the majority of them) and the unknown *vana vemusango*, “literally children from the bush/illegitimate children of sons or daughters” (e.g. Mbuya No’s grandson who suddenly appeared at his father's funeral). Lastly they also live with these elderly women’s nieces and

⁴² For Williams and Tumwekwase (2001) the HIV and AIDS epidemic has created and multiplied the challenges that grandmothers face in Africa regarding their orphan care giving role.

nephews (e.g. Mai Mizhu, Mbuya Tawira). The addition of these new members into these elderly women's households placed additional strain on these already strained elderly women.⁴³

Mbuya Tawira's household was living with three children, namely two of her deceased sister's children as well as her grandchild from her youngest daughter's first marriage who got divorced and later remarried in Mozambique. Mai Njere was living with three grandchildren, namely one grandchild from her eldest single daughter, another one from her son who passed away as well as one from her other son who divorced his wife. A number of elderly women in this study looked after children from their daughters who were either single mother, divorced or widowed.⁴⁴ Of all the elderly women in the study it was Mai Cha and Mai Mizhu's households which had the highest number of mouths (nineteen and thirteen respectively) to feed during the course of my fieldwork.

In counting the number of people in her household Mai Cha included her youngest son who lives across the road from her and sometimes comes to eat in her home together with his wife and three children. This is often the case as he is not working and relies on odd jobs which are few and far between. The challenge of keeping orphaned grandchildren therefore means that elderly women are stretched thin to do good as they try to provide comfort and avoid the orphans saying: "*dai vabereki vangu vari vapenyu*" "I wish my parents were alive". These are the issues that were highlighted by Mai Cha and Mbuya Chota who are keeping orphans at their homesteads from their respective late children.

The majority of grandchildren in Mai Mizhu's household were in their late teens and were either looking for jobs or working "*mupurazi*" (meaning "on the farm", but generally in the village this refers to Charlotte Brooke suburb and former Chibvuti farm) and not looking forward to moving out in the near future. One of her grandsons had recently moved in with his wife and three children. So Mai Mizhu said:

"Pamwe vakawana pekugara, vachabuda. Ndava munhu awungamuti tsvaga nzvimbo ka",

"Maybe if they get a place to live in they might move out. You see you cannot just say to someone find your own place."

⁴³ See Table 2 above where I show a breakdown of the number of people in the various elderly women's households in this study.

⁴⁴ The absences of the children's parents in Gutsa village as their parents leave them with their grandmothers in order to free themselves from the hassles of caregiving as they look for work is also consistent with observations by (Zimmer and Dayton, 2003, 26) regarding elderly women in Sub-Saharan Africa.

She pointed out that at one time she was living with fifteen young girls excluding the males in her household. All these were from her various relatives who had passed away, or in some cases the parents of these children were alive.

Mai Cha always had a large number of dependents in her home from the time her mother in law passed away in the early 1990s. Since then she had begun to live with her young brother in-laws as well as her husband's other relatives as she was the oldest daughter in-law. She said:

“Ini handina kubvira ndaita poto diki yesadza, nekuti bhagedhi raibikwa pasvondo chaipo”,

“I never had a small pot to cook *sadza* in, as a twenty litre bucket of mealie meal never lasted a week”.

At that time, the nearest grinding mill was at Mverechena Shopping Centre approximately six kilometers away. In order to avoid multiple trips to the grinding mill she was forced to carry two buckets of maize on her head on each trip. Things have changed for the better now as the village has two grinding mills, one in Upper Gutsa and the other in Lower Gutsa. Currently in her household a bucket of maize does not feed the family for longer than four days. Early in the morning she cooks porridge for her grandchildren, then makes tea around eleven o'clock then *sadza* in the evening.

Widespread orphan hood as in the case of the high number of children under Mai Cha's and Mai Mizhu's care therefore bodes poorly for them as such elderly women often become surrogate guardians when parents are unavailable to raise their young children (see Knodel, Watkins and VanLandingham, 2003). In the context of modernity and the impact of HIV and AIDS grandmothers are therefore being faced with the challenge of taking care of orphans and vulnerable children at an individual level without the community support mechanisms that were traditionally in place at the village, extended family and community level (Thabethe and Usen, 2012). Ordinarily social networks for elderly female-headed households should range from relatives, friends and, neighbours, to organised formal and informal groups. In most instances these social networks are often based upon an elaborate series of reciprocal arrangements that provide a safety net for their members as a form of insurance against risk, mishap and threat (see Huisman, 2005, 260). Such networks are supposed to be important for the survival of the elderly and their family members. Unfortunately this is not the case in Gutsa village as the various elderly women heads of

households are struggling to make ends meet as well as feed the people in their household, often in the face of their increasing incapacity to work adequately.⁴⁵

So in addition to caring for their terminally ill adult children and grandchildren older persons become the best and often only realistic solution to meeting the needs of their grandchildren and other orphans in the community (International Longevity Alliance, 2009, 3). Inasmuch as the situation of grandparents taking care of their grandchildren in Gutsa village is not new what is new is the apparent dramatic increase in the number of children being raised by their grandparents due to changes in family structure and social conditions which have taken place over the last few years (Backhouse, 2006). In Shona culture, the elderly are expected to be taken care of by their adult children and therefore this partly explains why most elderly people are interested in living near their children (Berkvens, 1997). Mai Mizhu decried the hard times facing the country which had led the parents of the grandchildren in her care not to play any part in sending foodstuffs for their upkeep.

The impact of the HIV and AIDS epidemic on families and communities has therefore meant that elderly people are deprived of any support in their old age that their children might otherwise have provided to them (see Williams and Tumwekwase, 2001). Mai Chota and Mbuya Tawira acknowledged that the presence of grandchildren in their households have increased their burden. Were it not for them they would have been living alone without having to worry about other mouths to feed in their households. Therefore the provision of care to orphans by elderly women is somehow consistent with Moller's (2012, 3) observations that the mutual support between the generations in Africa ensures the well-being of a person born into the African family throughout the life cycle. In the village unfortunately the care that should be mutually extending to the elderly is not forthcoming because they have watched their children pass away and this is compounded by the reluctance of those they have cared for to reciprocate when they become of reasonable means. However becoming of reasonable means is increasingly difficult in a non performing Zimbabwean economy with high unemployment rates.

⁴⁵ The elderly women heads of households in Gutsa village have not accumulated any surplus income on which to draw in their old age (see McNay, 2003) to shoulder the burden of supporting large numbers of dependents. These elderly women in the village are socially isolated and therefore lack the broad social networks that would make it possible for them to call upon others to either share the burden of support, or assist with the provision of resources that make such support possible. The situation of these elderly women heads of households is also further compounded by the lack of extensive government safety nets unlike in some developing countries such as Brazil and South Africa (see Faye, 2007).

Elderly people and their diverse livelihoods

Berkvens (1997) pointed out that for most elderly people in Zimbabwe retiring from formal or informal jobs where pensions are scarce has meant communal farming is increasingly seen as a form of pension.⁴⁶ Retiring to the countryside for elderly Africans is not new as even under the colonial governments elderly Africans working outside their rural areas upon reaching the end of their productive life were expected to retire to the communal areas (see Makombe, 2013). The elderly people therefore depend on having access to a small amount of land for crops, gardening (sometimes called “horticulture”), pasturing livestock either for subsistence, or for income from sale, which they can control independently. All the elderly women in the study practiced rain-fed farming. Mai Chota pointed out that her main source of livelihood was her vegetable garden. Although her granddaughter was working things were not any better as she told her that:

“Ndakangoti zvishandire iwewe, kudya hakuna nebasa rese”,
“I told her that just work for yourself, food is not everything”.

Her daughter is working in Epworth as a domestic worker and occasionally comes down to visit her when she has saved enough to bring her some groceries.

In 2013 Mai Njere grew maize and managed to harvest only three fifty kilogram bags. She attributed this poor harvest to the lack of money to buy fertilizer as she did not apply any in her field hence the poor yield. Though still practicing communal farming, Mai Cha stopped vending in Borrowdale low density suburb when her first born son passed away in 1997 and left two very young orphans who needed care. As noted by Knodel, Watkins and VanLandingham (2003), the impact of HIV and AIDS on elderly people’s livelihoods is more profound where the infected person is the breadwinner. Such a situation may lead to serious financial challenges if the caregiving roles by the elderly compete with the time needed to earn a livelihood. For example in Zimbabwe, elderly women’s livelihoods and security have not been spared by the impacts of HIV and AIDS (Paradza, 2009). This has led to households already affected by HIV and AIDS or households headed by elderly people facing serious challenges in accessing food aid because of impaired mobility, ostracism, or stigma (Garbus and Khumalo-Sakutukwa, 2003). Since it is mainly grandmothers who bear the brunt of caring for their orphaned grandchildren they are finding themselves adopting new roles of concurrently caring for their children, their grandchildren and other extended family members

⁴⁶ See Footnote 22 in Chapter Two where I have outlined the land tenure categories in Zimbabwe.

(Smith, 2002). This has forced grandmothers to earn an income and to work the land in order to fend for the people in their care. Elderly people are being forced to once again rely on their own labour to make ends meet, even though their capacity to rely on their labour is more limited compared to the younger members of society (see Ogwumike and Aboderin, 2005, 8).

“I have a very big family”: Elderly women struggling to cope with fending for the family

In Gutsa village elderly women’s responsibilities towards their family members both immediate and extended stretch and continue well into their old age. They are increasingly finding it difficult to be productive mainly due to the challenge of physical ageing and their limited ability to secure livelihoods. This on its own is a very difficult situation for these elderly women who are forced to shoulder household responsibilities from earnings derived from trading, wage work and low paying subsistence economies (also see Oburu, 2009, 7). The money that Mbuya Tawira gets from *maricho* from the newly resettled farmers helps her to buy the items she needs in her household. However she only works during the dry season and occasionally gets paid with fertiliser which she stocks up for the coming rainy season to apply in her maize field as well as in her vegetable garden. Sometimes she gets paid in foodstuffs such as grain (wheat or maize), cooking oil and sugar which are all handy in the house.

Due to low disposable incomes, elderly women in the village have resorted to barter trading their grain for commodities and selling maize to cover critical needs in and outside the household. The exchange value of their produce is usually very low just after the harvest season as there appears to be a surplus harvest during these times. It is also during this time that prices of grain are very depressed. Mai Chota had to sell her maize to raise money for bus fare to go to Murewa to the funeral of her sister’s husband who had passed away in June 2014. As people had just finished harvesting at the end of May she had to sell her maize at very low June 2014 price of US\$3 a bucket. Before harvesting in January 2014 a bucket of maize had reached a high of US\$8 a bucket. She also exchanged some of her maize for cooking oil, sugar, lotions (Camphor Cream) as well as bath and laundry soap. The typical exchange rate was five hundred grams of Camphor Cream (costing US\$2 in the shops) being exchanged for a bucket and half of maize (average June 2014 price of a total of US\$5). However Mbuya Tawira said that she could not afford to sell or exchange her maize for other products as she had a sizeable number of immediate and extended family members living in Harare. When they visit the rural areas she packs some produce for them, which is usually maize as she said a visiting relative cannot go empty handed.

“I have a very big family because there are my young sister’s children who passed away. Sometimes there in Harare things get really tough so they come here and I give them maize as they were orphaned as children”.⁴⁷

In 2013 she gave one hundred kilograms of maize out of her total harvest that year of close to a ton of maize to the four young children of her sister who passed away in 2011. By September 2014 she had given them fifty kilograms of maize to take to Harare.

As a mother Mai Mizhu said she had to provide maize for her daughters and other extended family members who would have fallen on hard times. So she occasionally provided buckets of maize for her two daughters who were married in Harare and for the other daughter in Mrewa. By October 2014 she had given two buckets of maize to her other daughter married in the village as well as one bucket each to her brother’s families in Mufakose and Mabvuku (all in Harare). Due to this she pointed out that she had lost count of the number of bags of maize she had given out but she was certain that the remaining maize would see her through to the next harvest in April 2015. Over the years she has never really had to buy maize to supplement her harvest as she always had enough to see her through to the next harvest. She pointed out that because of her large family she has never sold her maize.

“I don’t want to lie in front of God, I have never sold maize. I cannot sell maize when I have a big family, we will die of hunger. My family which is always visiting will die of hunger. I do not sell maize, as all is consumed”.⁴⁸

Having been married twice Mbuya Gone has a very big extended family and therefore has a lot of grandchildren and is currently living with one of her grandsons together with his wife and three year old child. Mai Njere pointed out that inasmuch as her sons were now working they were not helping her as they now had their own families to look after. Her eldest daughter who is a single mother survives on doing odd jobs and she was the one helping her more than the sons. As a result the grandchildren in her care had to drop out of school as she was finding it increasingly difficult to pay school fees for them.⁴⁹

⁴⁷ Shona verbatim, “*Ndinowandirwa nemhuri, nekuti kune vana vemunin’ina wangu akashaya. Pamwe dzimwe nhambo kuHarare zvikanyanya kuoma vanouya kuno ndovapa nekuti vakasiwa vachiri vadiki.*”

⁴⁸ Shona verbatim, “*Andidi kukunyeperai pamberi paMwari, inini andisati ndambotengesa chibage. Ndakati ndikatengesa chibage inini ndinemhuri, ndinofa nenzara. Mhuri yangu inowuya, inofa nenzara. Anditengese, changu chinopera nekudya chete.*”

⁴⁹ Mai Njere’s situation is consistent with Adeniyi-Ogunyankin’s (2012, 34) observations that elderly women who are heads of households and are caring for orphans and vulnerable children end up spending most of their incomes on feeding, clothing and paying the school fees of their grandchildren.

Elderly women disposing livestock to cover critical issues in the household

Lack of draught power appears to be a significant challenge for the elderly women and this affects their capacity to till their fields as well. No cattle mean that the elderly women are deprived of the much needed manure to spread in their maize fields in place of compound D fertiliser.⁵⁰ The lack of draught power among the elderly in the village can be traced over extended periods of time. It is only Mai Mizhu who still owns some cattle as the other nine women do not have cattle. Mbuya No's cattle all died when like most villagers she fled the village at the height of the war of liberation in 1979. The unattended cattle in the village died from swollen stomachs as a result of feeding on maize which was ripening in the fields as their owners fled the village. Other cattle and household goods were looted by farm workers at Chibvuti farm who took advantage of the fleeing villagers who fled with nothing but the clothes on their backs.

Mai Cha no longer has any draught power because when her husband separated from her, he took all the cattle and moved to Lower Gutsa. Mai Chota bought her first two cows in 1985 when she moved to Gutsa village; at one time her cattle had increased to sixteen head of cattle. However her herd of cattle was gradually diminished as she progressively sold the cattle over the years to raise money for school fees for her two orphaned grandchildren who have been in her care since 2004 when her daughter and son in-law passed away. She also sold two of her cattle to buy asbestos sheets for the "bedroom" (four roomed house) she was building in 1999. Her last cow was slaughtered at her husband's funeral in 2013 "*kuitira husavi hwevanhu*", "for relish for the mourners". She emphasised that the cattle were very handy as they had helped her to see her two grandchildren through school from the time they were in Grade Two until they finished Ordinary Level in 2013 (a period of ten years).⁵¹ Although they passed their Ordinary Level exams, it was not well enough. Her granddaughter managed to pass five subjects; unfortunately she could not proceed to Advanced Level as Mai Chota no longer had any cattle to sell to raise fees to see her through. She is now working as a domestic worker for one of the newly resettled farmers on the Chibvuti farm. The grandson only managed to pass four subjects and he spends most of his time relaxing at home playing loud music or watching DVD movies on his home theatre. Despite Mai Chota being the main

⁵⁰ Compound D fertiliser is a basal fertiliser mainly used for growing maize in Zimbabwe. The chemical formula for Compound D is NPK 10-20-10+6.5%S and is equivalent to manure which is also widely used as a substitute by people in the study village.

⁵¹ Also see Cheater's (1983) study in Musengezi, Zimbabwe regarding the usefulness of cattle ownership in rural Zimbabwe. Here Cheater demonstrated that livestock (especially cattle) are a form of accumulated capital which can be converted at any time to realise cash for school fees, or uniforms. I have also examined livestock ownership in the study village in detail in Chapter Six.

provider in her household her grandson does not help her in her garden despite her constant prodding. She is therefore forced to be very active in order to earn an income and support the household.⁵² She expressed hope that maybe one day her grandchildren might see her sacrifices and at least buy her a cow each to show their gratitude for her sacrifices. At one time when Mai Chota was left with one cow before it was slaughtered at her husband's funeral she would team up with another neighbour who had one cow and they would plough together. Now she never bothers to plough as she just digs up holes in the field and plants her maize after making sure she has removed all the maize stalks in her field.

Despite spending so much raising someone else's children Mai Mizhu and Mai Chota lamented that the sacrifices of raising someone else's children are never reciprocated when these grandchildren are now grown up and independent. Mai Mizhu pointed out that in the village it was well known that,

“At Mizhu's place they raised a lot of kids there. But the same children have forgotten who raised them. Your child is the only one who remembers you. If it is someone else's child it might be a problem”.⁵³

Mai Chota also pointed out that despite her sacrifices and the role she had played in raising her grandchildren the likelihood of these children remembering her when she becomes frail and not so active as at present are very slim indeed.⁵⁴

Elderly women missing out on free products distributed in the village

The various products that come through to the village from the ruling ZANU (PF) government as well as from various Non-Governmental Organisations (NGOs) operating in the district appear to miss the elderly in the village.

Talking to the elderly women heads of households, they lamented the fact that even when there are *inputs* or food aid coming to the village the distribution of these is not friendly to the elderly women. These products are usually distributed on the basis of “*Asipo haapo*”, “first come first served”. Of the inputs that were distributed in the village in 2014 Mai Reni managed to get a bag of “D” fertiliser. She was promised that she would get seed later during

⁵² Also see Makiwane, Ndinda and Botsis (2012) how elderly women headed households in South Africa are using their incomes to support the household.

⁵³ Shona verbatim, “*KwaMizhu kwakachengetwa vana. Asi vanavacho kuti vazokuziva manje, apana. Wako ndiye anokuziva. Manje mwana wemumwe anonetsa.*”

⁵⁴ In pre-colonial Zimbabwe elderly people had a role to play in their respective communities with the community in its wider caring networks having an obligation to support these elderly people in their later life. The impact of urbanization, industrialization and the increasing geographical spread of relatives have however impacted on both the immediate and extended family's ability to take care of elderly people (See Nyanguru, 1990; Rwezaura, 1989; Clarke 1977).

the course of the rainy season. However when she later sent her grandson to collect it he was simply told that, “*Asipo haapo*”. She complained that it was very rare for her to get both the seed and maize as she only got one of each here and there even though some very young members in the village received both yearly. The challenges that elderly women heads of households face in accessing these products is mainly related to the challenge of physical mobility as well as the political/social capital that surrounds their distribution in Gutsa village.

Mbuya Tawira lamented the fact that she cannot leave her home when the call for distribution of these products is announced as she will be guarding her field from marauding baboons.⁵⁵ Sometimes she gives her neighbour Mai Lavhu her national identity card so that she can collect on her behalf. She pointed out that the *Sabhuku* is well aware of this arrangement and is sympathetic of her plight with the baboons.

“Baba venyu vanoqviziva, ndinopa Mai Lavhu chitupa, vototambirira inini, ndikatongobva ndatorasa vana”.

“Your father knows about this, I give Mai Lavhu my ID then she collects on my behalf, if I leave here I will lose my children”.

She still lamented that of the inputs that regularly come to the village she has only received a single bag of compound D fertiliser since she settled in the village. However she lamented the late distribution of the inputs in 2013:

“Vakazouya nefertiliser iyi nguva yacho chibage chedu change chatokandwa fertiliser chatoibva.”

“They came with the fertiliser when during that time our maize had fertiliser already applied and was at ripening stage.”

At one time Mai Chota was the secretary of a committee in the village responsible for overseeing the distribution of various donated goods coming to the village. She left the committee disappointed by the gross corruption in that committee as she was never called to attend the various donation ceremonies. She highlighted an incident where blankets were supposed to be donated to orphans in the village. As secretary she wrote down the names of the intended beneficiaries but unfortunately all this was changed. As a result of these kinds of

⁵⁵ In Chapter Six I examine in detail elderly women heads of households’ experiences with both wild animals and domestic animals and Mbuya Tawira is the one most troubled by the marauding baboons as she lives close to their abode.

trickery all goods now have to be distributed in the presence of the village head even if they are party (ZANU-PF) goods or not. Furthermore due to the corruption involved in distribution of various goods, most villagers had lost hope in going to the distribution points because they would not get the goods. Things only changed when in 2013 village heads in Murape Ward were invited to be involved in the distribution of inputs and various goods that would periodically be donated to the village.

Finding the elusive market for horticultural produce

The major constraint faced by the elderly women in the village who are into all year round market gardening (Mbuya Mizhu, Mbuya Gone, Mai Chota and Mbuya Tawira) is the limited market for their produce. These constraints which restrict the selling of their garden produce is related to the low levels of produce from their gardens which make it uneconomical to ferry their produce to the main markets in Showgrounds, Hatcliffe and to a limited extent Mbare Musika. This has led to Mai Chota sometimes going into nearby Charlotte Brooke with her wheelbarrow and selling to individual residents there. On average she would go there with about twenty six bundles of vegetables (measured by opening up wide one's hands and bringing the thumb and middle fingers together) once every fortnight selling the vegetables at US\$0.50 a bundle. Mai Chota pointed out that she used to grow rainy season *rape* that would grow as high as knee level. The problem was that now everyone was into vegetable farming:

'Nekuti kurima maveg ndiko kwakabata Domboshava, saka inenge yava rand seven''.

“Now growing vegetables is what holds Domboshava, so it will be one rand for seven bundles”.

The situation appeared hopeless but still nothing could be done but to continue farming vegetables because “*kurima injuga*”, “farming vegetables is like a game of poker”. At least the market in Charlotte Brooke is stable as the price of a bundle of vegetables never goes below US\$.50 but it never goes up either. When demand outstrips supply she reduces the size of the bundle of vegetables. *Kumusika* (at the marketplace) the price of a bundle of vegetables can become as low as US\$1 for five bundles. Producers celebrate when a bundle of vegetables goes up to as high as US\$3 a bundle. In order to avoid this constant shift in price, these elderly women prefer the market in Charlotte Brooke with its stable prices, no transport costs and the short time taken to and from the market. With the poor returns from the

vegetables it is increasingly risky to go to Mbare Musika or Hatcliffe or Showground as chances are high that the transport costs would be so high that all of the income would be used and one could also get into the transport debt when proceeds from the market are below the transport costs. There are many examples of villagers who have had to sell goats or chickens on returning from Mbare Musika in order to pay the transporters as transport, overnight accommodation costs as well as gate charges at the market would have eroded all the returns.

Generational conflict

In January I was coming from Harare and had disembarked from a *kombi* in Charlotte Brooke with Baba Si (Mbuya Ku's youngest son). As we made our way towards the village he was complaining that his mother was unnecessarily asserting control over his farming decisions. In the past few days she had employed people to do "*maricho*" in his field without consulting him but still expected him to bear the costs of the labour. Her reasoning was that she had noticed that he was neglecting his field by not weeding it when it was long overdue. Baba Si had not weeded the field as he was not satisfied with how the rainy season was progressing. So not wanting to waste his time and money weeding the field and buying fertilizer respectively and tending a hopeless maize crop he had just left it as it was. Baba Si had then concluded that he would rather buy maize to stock in anticipation of a bad harvest than pay people to do "*maricho*" or buy fertilizer. Therefore he was very angry that his mother was asserting control over his farming decisions.⁵⁶

However Baba Si and Mbuya Ku's case is not consistent with the experiences of other elderly women headed households in the village asserting control in the household. One day on my way from Mai Njere's home on Sunday the 21st of September 2014 I passed near Mai Chota's garden and noticed that her vegetables were almost wilting in the dry and hot September weather. Despite the vegetable garden being one of the major sources of income for her household and also the source of her grandson's school and exam fees to rewrite his Ordinary Level Mathematics, her grandson does not help her in the garden. Mai Chota further complained that even when she is at home the grandson is still very reluctant to help her with watering the vegetable garden.

⁵⁶ These decisions by Mbuya Ku over her son's farming activities are also consistent with Cligget's (2001) observations among the Gwembe of Zambia where the domestic setting was also seen as also the primary stage for elderly people to assert their identity.

Ageing and ill health

There are a number of health challenges that elderly women in the study are grappling with on a daily basis as a consequence of the normal ageing process. As noted by the International Longevity Centre Global Alliance (2009, 6) ageing itself is a risk factor for a variety of chronic diseases with the accumulation of normal aging characteristics creating a threshold beyond which a person becomes increasingly susceptible to an array of pathological outcomes. The most notable conditions affecting the elderly women in this study were painful legs, increasingly poor sight and hearing problems. The leg conditions were either periodic or constant. Of all the elderly women it was Mai Mizhu, Mbuya Ku and Mbuya Tarai who experienced hearing problems. Regarding eyesight problems, Mai Reni, Mai Cha and Mbuya Tawira still had very sharp eyesight while the rest of the elderly women were grappling with eyesight problems. One of the other elderly women whom I had looked forward to including in the study Mbuya Nyoni was away in Mutare when I was scouting for participants to include in the study. When I went over to her home the person who was looking after her home during her absence indicated that she had travelled those three hundred kilometres to seek treatment for her legs which were causing her serious mobility challenges. These multiple health challenges that come with ageing are daily struggles for these elderly women.

As a result of increasingly poor sight since around May/June 2013 Mai Mizhu has had to withdraw from the task of cooking and dishing food in her household as she had become a laughing stock in her home. She said it pained her to hear her grandchildren laughing at her when she missed the pot or missed the plate dishing out food with the food falling on the cow dung smoothed floor in the kitchen. Since she could do nothing about this she simply withdrew from these delicate tasks that needed her close supervision especially with regards to balancing dishing out food due to the large number of grandchildren in her household. Her right ear was also becoming a problem as she had difficulty hearing conversations with this ear. As a result during our interviews I was either seated on her left side or when sitting facing each other I always made sure that I would be inclined towards her left ear. She had been relying on faith healing from her church as at her church they do not rely on medical treatment but exclusively faith healing and holy water. Now she was not sure whether the eyesight problems were a result of advances in age or a result of having been bewitched by those jealous of her hard work in the fields. So she advised me that sometimes if I failed to find her at home I should know that she will be spending time in prayer in the nearby mountains.

The health challenges affecting the elderly also have the effect of impacting on the elderly women's livelihood activities. For example despite being given permission by the former village head's son to farm in his late father's idle garden Mai Reni failed to do so as a result of her painful legs. She never farmed in that garden as she found it a challenge to frequent the garden almost two kilometres away due to the legs which started to give her problems in 2012. Both her legs would occasionally swell above the knees and though they appeared not swollen, the right one had a boil for the greater part of the time. Nurses at the clinic told her that she had low cartilage levels and advised her to eat *mazondo* (cow hoofs) and chicken feet as a remedy. In the case of Mbuya Tawira her struggle with her legs is also limiting her capacity and frequency to do *maricho*. Doing *maricho* for the newly resettled farmers in nearby Chibvuti farm has been very handy for her over the years as the payments ranging from cash, food items to fertilizer help her to cover critical issues in the household.

Mbuya Tarai struggles with increasingly poor sight and this becomes worse in the evenings when visibility is limited. On the 23rd of December 2014 on my way from town while it was getting dark I saw her at the crossroad which is less than 200metres from her place. She had been here for a couple of minutes trying to figure out which path she was supposed to take to get home. So I helped her and made sure she was well on the road to her home, I told her that I had passed her grandson Baba Shepa a few minutes ago while he was chatting with his friend. Thanking me she said she could have spent a few more minutes there trying to figure out which road to take despite the fact that she was just a few metres from her home and in a place she had been living for close to fifty years now.

The full realization of the state of Mbuya Ku's sight and hearing came to light one Sunday afternoon as I passed close to her place. I had shouted a greeting whilst waving my hand as she appeared as if she was looking towards me. She appeared not to hear or see me as I waved my hands. These illnesses/diseases have the tendency of also drawing the elderly away from their homes/immediate locations as well as their sources of livelihood.

I discovered that a number of elderly women had since reduced their hectareage as well as stopped farming some types of crops due to old age. Mbuya No pointed out that due to old age and ill health (her left side leg and arm were giving her sleepless nights) she had stopped growing a number of crops that she used to grow when she still was young as well as reducing the size of her hectareage for some crops. As she lives in Upper Gutsa she had stopped farming in her main field in Lower Gutsa as she was increasingly finding it difficult to move back and forth to her field. She had also now reduced the size of her groundnuts fields even though she used to make a lot of money from selling peanut butter. She had

completely stopped growing *zviyo* and had also reduced the size of her hectarage as she pointed out that she could no longer manage because of old age and ill health. Mbuya No lamented that:

“Simba racho rava shoma rekuti ndiwanze mbeu”,

“The power is no longer there for me to grow a lot of crops”.



One of the elderly women sitting in her kitchen.

Even though her grandchildren do some times visit her during the holidays and even during the rainy season she could not expect much help from them in her fields. As a result ill health can affect efforts by elderly women towards crop diversification which is essential in enhancing food security at the household level.

Elderly women living with climate change

As this study is examining the impact of climate change on female elderly heads of households here I examine the situation of elderly women in the backdrop of climate change.⁵⁷ In line with Hassan and Nhemachena’s (2008, 93) observations I argue that it will be naive to assume that the experiences of female elderly heads of households in the face of

⁵⁷ I take up their observations and interpretations of climate change in much greater depth in the next chapter.

climate change are uniform in this study. These households differ significantly in their ability to adapt to climate change mediated by the households' differences in accessing assets, access to gardens with fair water supply and other critical services such as credit and input supply.⁵⁸

The impact of climate change in the backdrop of increased population densification and rampant cutting down of trees in the village is affecting elderly women heads of households' ability to carry out their responsibilities. For example the burden of climate change on rural women is further compounded by the fact that if climate change leads to reduced rainfall this will mean a drop in the water tables thereby affecting access to well and borehole water in the village. Furthermore this will also lead to decreases in the seasonal volume of flowing water in rivers and streams. This therefore means that elderly women end up walking increasingly further and further to look for water for general household use. These elderly women are also forced to wait long periods at the wells during critical moments of the dry season.

In Gutsa village it is not all elderly women who have to walk some distances in search of water for domestic use. Other elderly women like Mai Mizhu, Mai Njere and Mbuya Tarai have their water fetched by their grandchildren. Mbuya Ku's eldest daughter who lives in the village has to leave her home at four in the morning to fetch water for her mother and one can hear some of the village dogs barking at her as she makes her way from her home to her mother's place. It is elderly women such as Mbuya Gone, Mai Cha and Mai Reni who have to walk for long distances to fetch water as most of the time they are living with very young grandchildren in their households. This increased burden on women to fetch water from wells that are increasingly dry from October through to December ultimately means that these women are burdened with the task of fetching water. So they end up having limited time to devote to income-generating activities or participation in community decision-making processes thereby further marginalizing them as elderly women. In the context of climate change adaptation processes Skinner (2011) pointed out that climate change policies often treat women only as vulnerable beneficiaries rather than as rights-holding citizens who need to be recognized for the experience, agency and skills they can contribute.⁵⁹

⁵⁸ 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.

⁵⁹ In the case of Ghana, Antwi-Agyei's (2012) study though not specifically focusing on elderly women per se demonstrated that female-headed households without any reliable sources of income are more vulnerable to the impact of climate change than male-headed households.

Mbuya Tawira pointed out that if she had draught power she would have asked for a portion of unused land from the newly resettled farmers to grow more maize.⁶⁰

“If you had draught power you see you could ask for a field in the farm there, they might give you a portion to plant you see. You would grow food and it will be many again, then you could take your maize and sell at the GMB. Now if you have maize less than a tonne would you go with it to the GMB (Grain Marketing Board)?”⁶¹

A new form of extended care in the household for the elderly

It appears there is a general expectation among the elderly in the study that they should be taken care of as they advance into old age. This was also echoed by Mai Njere who pointed out that:

“Isu takura tinoda kuchengetwa manje”.

“Us who have grown old need to be taken care of”.

The elderly women indicated that they expected to continue receiving care in the comfort of their home or with other members of their immediate and extended families in the event that they could no longer fend for themselves. Some of the elderly women in the village had been relying on remittances from across the border like Mbuya No who used to be well provisioned when her daughter was living in Botswana with her husband. Sons in laws of the elderly women in the village (exception of Mbuya Gone) sometimes assume or are given the responsibility of being de-facto heads of households if they are of reasonable means. This was so in Mbuya No’s case where she revealed that her son in-law who passed away in August 2014 and had been the one mainly providing for her had really been “*baba mumba muno*”, “the father in this home”.

Even though elderly women are living directly with their grandchildren, nephews or nieces in their household in the village it appears there is intensification in the new phenomenon of extended and remote care which has emerged. This is a situation where the elderly women in the village after harvesting “remit” maize to Harare periodically to some orphans and even some relatives of their immediate and extended family that rely on this

⁶⁰ Here Mbuya Tawira’s case does not conform to Skinner (2011) who singled out restrictions regarding land ownership and lack of productive land to farm for rural women as being one of the factors limiting diversification and intensification of livelihoods.

⁶¹ Shona verbatim, “*Kuri kuti dai uine zvirimiso handiti, unogona kukumbira minda imo mupurazi umu, vanogona kukupa pekurima handiti, worima chikafu chowanda zve, unozogona kutora chibage uchitengesa ku GMB. Zvino kana uine chibage chisingakwani kana tonne ungaende nacho here kuGMB?*”

gesture to make ends meet.⁶² As a result inasmuch as elderly women may be living with for example three orphans in their direct care at their home they might end up supporting an additional number living in urban areas. During my fieldwork this was the case for Mbuya Tawira who was supporting her sister's four children living in Harare by periodically remitting maize to them. This is also the same with Mai Mizhu who is supporting numerous members of her extended family living in urban areas with maize. All this is happening in the face of poor, stagnating or declining harvests whilst the family size is increasing.

Elderly women experiencing the war of liberation in the village

For the elderly women who were living in the village during the course of the war of liberation (1970s to 1980) this was a very painful experience. Having been in the village then they have both physical and emotional scars from the war. It is Mbuya Chota, Mbuya Tawira, Mai Njere and Mai Mizhu who were not in the village when the war was ravaging the countryside. Though Mai Njere was living at Chibvuti farm she still recounts the war experience as she had close relatives from her mother's side who were in the village then. All the remaining elderly women experienced the war very closely ranging from cooking and ferrying food for the "*comrades/guerrillas*" (Zimbabwe's war of liberation fighters) to their bases in the mountains; being beaten; having their homes burnt; crops, livestock and household property destroyed and or looted by farm workers from Rumani and Chibvuti farms; crops in the field being destroyed by unattended livestock and finally having to flee the village with only the clothes on their backs at the height of the war.⁶³

Mbuya Ku and Mbuya No are the only two elderly women who entered independent Zimbabwe already widows as their husbands died during the war due to natural causes. Residents had to flee the village to go to nearby Mashonganyika village (which was no better), Mbuya No went as far as Chirambahuyo in Chitungwiza. Mbuya No had to start a new life after the war in 1980 with seven children. At the time of my fieldwork she had been a widow for close to 45 years. As mentioned earlier during the war she also had some of her front teeth half knocked out by the *comrades* after being suspected of being a sell-out. Mbuya Ku described getting burnt on the scalp as she had to carry hot *sadza* in pots on her head for

⁶² This current practice in Gutsa village where people from urban areas or such other areas outside the village are coming down to the rural areas to get grain for consumption is also reported by Chimhowu's (2002) study in Hurungwe. In his study he found out that two of the sons in one of the households he was studying would on different occasions come from Harare to get grain from their father in the village.

⁶³ While some commercial farms in Zimbabwe stopped working during the war of liberation as they were targeted by the guerrillas (see Sadomba, 2008) this was not the case with the commercial farms near Gutsa village as the farms continued operating throughout the war.

approximately two kilometres from her home to the bases in the mountains a number of times. She also entered independent Zimbabwe having to struggle with raising nine children on her own. For all the suffering and losses these elderly women report that they never got any consolation or acknowledgement. They feel betrayed as they are not seeing the fruits of their struggle as those who did not suffer are the ones who are enjoying the “*huchi nemukaka*”, “honey and milk” of the country.

Conclusion

In this chapter I have demonstrated that the experiences of elderly women heads of households in the village cannot be viewed as uniform. Inasmuch as these experiences are not uniform there are also instances where these experiences appear to coalesce. As this thesis is focusing on the impact of climate change on elderly female headed households there are a number of issues that the elderly have to face which tend to have a bearing on their livelihoods and experiences in the village. Being situated in the village these elderly women heads of households are stretched thin with multiple and competing responsibilities. They have to fulfill obligations and assume responsibilities within and outside the village. As highlighted by some of them, having lived through and still going through the challenge of the HIV and AIDS epidemic they are faced with the responsibility of caring for orphans having watched their children and siblings succumb to AIDS (for example the cases of Mbuya Gone, Mai Cha and Mbuya No). As a result these elderly women have to care for these children either in the village or outside the village. Consequently their care giving role is affecting their ability to secure diverse livelihoods. As elderly women take care of these children, it marks a role reversal in their expectations of being taken care of in their later years by their immediate and extended family members.

In this chapter I have also demonstrated that there has been intensification in the new form of the direction of the flow of remittances. Most writers have written about the “normal” flow of remittances and the usefulness of extensive familial and social networks that reach beyond a community helping farmers to deal with the risk of harvest loss in adverse climatic conditions (e.g Boillat and Berkes, 2013). However there has been intensification in the new direction in the flow of remittances from the village outwards despite the impact of climate change in the village and associated poor harvests. The intensification of this new form of informal safety net has now seen remittances of agricultural produce (mainly maize) originating from the households of elderly women in the village to support other family members falling on hard times outside the village and mainly living in urban areas. However

for the elderly women heads households this new arrangement does not buffer them against or reduce the risk of harvest loss in the face of climate change.

Despite their advanced age all these elderly women are saddled with multiple and competing responsibilities in the household and community as they variously seek and attempt to secure livelihoods, take care of orphans and vulnerable children while also grappling with health challenges that militate against their role as household heads, all happening in the context of ongoing climate change. So living through climate change the elderly women are struggling with their vegetable gardens which are being affected by increasingly low water levels in the wells. Furthermore the challenge of finding a market post-FTLRP to sell their vegetables is also impacting on their income sources in the household. This is also coming in the backdrop of serious health challenges that are impacting on their ability to adequately work in their gardens, *maricho* and vending which for the majority of women are proving to be their main livelihoods sources.

In the face of poor harvests elderly women are being forced to exchange their grain for critical foodstuffs when the exchange regimes are not in their favour. They are forced to do so due to the limited availability of disposable cash even though this arrangement affects their ability to go through the lean times before the next harvest. This despite the fact that they have to remit their grain to relatives outside the village in a context of poor harvests mainly attributed to unfavourable rain, lack of draught power and access to free agricultural inputs. These inputs are often distributed along party politics and often exclude elderly women as a group as they lack the political/social capital needed to access these. Consequently disregarding these elderly women in distributing the goods that come to the village is also being pointed out as one of the factors related to poor rains as it appears the ancestors are withdrawing rains to chastise their children.

The scars of the war of liberation are visible for some of the elderly women who lost livelihoods and suffered visible and emotional wounds without any compensation. The loss of homes, livestock and the inability to restock as well as health problems that can be traced to the war of liberation are significantly affecting their present livelihood options. This has seen the lack of access to draught power at the household level affecting the ability of the elderly women to work the land as well as providing manure which acts as a substitute for basal fertilizer.

There are increasingly incidences of generational conflict as elderly women attempt to assert control over their son's farming decisions. In the village more and younger families are moving away from growing maize for consumption and preferring to buy maize and stock

their maize reserves when prices are generally depressed after harvesting. This has been brought about by the increasing unreliability of rains and the limited chances of getting a harvest after substantially investing in an uncertain maize crop.

Chapter 4

Understanding perceptions of climate change in Gutsa village

Introduction

This chapter examines elderly women heads of households' narratives regarding *kushanduka kwemwaka* (climate change) in Gutsa village.⁶⁴ The emphasis here is on showing these elderly women's understanding, knowledge, experiences, anxiety and explanations about climate change in the village. Whilst mainly focused on elderly women's narratives this chapter also provides accounts of the changes in climate as they are experienced by other villagers in order to show how climate change issues are experienced among different age and gender categories. Furthermore the emphasis is on understanding elderly women's beliefs regarding the climatic changes they are experiencing in the village. By so doing this chapter provides an assessment of the local climate in the village, its seasonal variations, the nature of extreme events and the cosmologies. As this chapter demonstrates, evidence shows that in Gutsa village there are increasing incidences of less predictable seasons, increasing events of erratic rainfall and prolonged droughts. This chapter is important as it portrays how the climate has been manifesting itself, 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 happening in the village. Consequently this chapter will provide a structure of the climate processes that are affecting elderly women in their day to lives in the village. This is very important in attempts to understand how these processes coalesce to affect the lives of these elderly women in their households and their associated livelihoods in the face of climate change. As climate change is manifesting in the village the emphasis is also on understanding the factors that elderly women attribute as causes of the change in climate as experienced in the village. I achieve this by showing the perceptions and conflict in explanations of causality in *kushanduka kwemwaka*, especially rainfall as put forward by the elderly in general conversations among themselves as well as from my interactions with other individuals in the village.

Experiencing 2014-2015 weather patterns in the village

In Gutsa village the seasons are mainly differentiated into three main ones “*zhizha*” (rainy season) from October to April, “*chando*” (winter) from May-August and “*chirimo*” (dry season) running from July to October. Research has shown that during the different seasons,

⁶⁴ See Chapter One where I have provided a conceptual framework for understanding climate change and weather.

local people expect natural phenomena such as temperature changes, wind, clouds, and rain to conform to a certain pattern that is defined as the norm (Muguti and Maphosa, 2012; Mararike, 1996; Roncoli, Ingram and Kirshen, 2002). Such expectations are important because whilst conventional climate science is pointing to a gradual warming as temperatures increase (Low, 2005; IPCC, 2008). As I detail below, Gutsa village is having a mixed climate experience as the normally hot days are getting cold with the winter experience extending well into summer. The general consensus in the village is that the numbers of days that are cold have gradually been increasing.

As Gutsa village experiences climate change and its impact there have been a number of changes in the daily, weekly, monthly and annual weather patterns. Reflecting on the August of 2014-2015 and the September of 2014 and 2015, the famous winds which are characteristic of August which led that month to be called *Nyamavhuvhu* (the windy month) were not experienced and calm conditions prevailed. The normal expectation of wind activity in August is that the wind blows from different directions, and the village at times experiences *chamupupuri* (whirlwind). During 2014, the expected winds only started to blow well into the middle of September and I never saw any *chamupupuri* during my fieldwork. As temperatures were still low in August and September 2014 some villagers were saying “*chando charamba kuenda*”, “the cold is refusing to go away”. On a number of days in September 2015 it was still cold, windy and overcast which led people to spend time outdoors *vachidziya mushana* (basking in the sun). This was unexpected as from late August temperatures are generally expected to start rising marking the transition from winter into the hot dry *chirimo* period. In September 2015 the weather anomalies continued with ground frost being observed along the Nyaure River. Although consensus in the village was that the winter period had extended over the past years, experiencing ground frost in September was a first experience for these elderly women. As a result of these changes a number of elderly women pointed out that the lack of *chamupupuri* in August as well as the uncharacteristically low temperatures in those months was a significant marker that the weather had really changed.

As Mbuya Gone pointed out in September the wind had not yet blown the old leaves away to pave way for *pfumvudza* (the new and tender leaves) by October. The appearance of *pfumvudza* is also used as an indicator that the rainy season is about to commence. In October and November of 2014, villagers still wore their warm winter clothes that they usually discarded of in the middle of August. Mbuya Ku pointed out that in times past, the villagers used to sleep outdoors during these months as it would be too hot to sleep comfortably

indoors. The elderly women highlighted that although the *chamupupuri* winds were necessary and that if these came they would be assured that the weather was not changing but if the winds came too late, they were unwanted during the rainy season. Mbuya Tarai stated that this same wind during the rainy season could chase the rains away and hence reduce the number of rain days in the village. These elderly women in this study could easily trace the changes in their local environment based on their long stay in the village.

In 2014 the dry season continued to stretch beyond its 'normal' period (up to mid-October) with no signs of rains. Most of the people I would come across in the village would jokingly say that since I was given my grandfathers' name (Ignatius-pronounced by most elderly women in the village as *Geni/Ginatsio*) they should talk to me as the rains were not coming. My grandfather whose name I was given was the one "*aiva nemudzimu wemvura*" (had the rain-making spirit). After his death on the 7th of July 1974, no one was possessed by the *svikiro* (spirit medium) and with the war ravaging the village people just lost interest in this matter as they fled the village. In times of crisis like the lack of rains any option becomes attractive. So when the first light rains fell in late October a few villagers who dug holes and a few who had done "*winda plough*" (winter ploughing) in July and August took time to plant in their yards. Unfortunately the planted seed maize "*yakaora*" (rotted) and never germinated thereby forcing them to replant when the rains fell again in November. This was a significant loss considering the seed, labour and time lost.

By the beginning of November 2014 there were still no rains in the village as well as in other nearby villages and districts. In everyday conversations in the village as well as in nearby Harare there was the consensus that the rains should have fallen down to signify the end of the dry season and the commencement of the farming season. On 8 November 2014, I was in the Central Business District of Harare when a very heavy downpour fell in the city for an hour. The rains forced traffic to almost grind to a halt due to poor visibility and flooded roads. On that day rains also came down in most villages in Mashonaland East. Sheltering from the rain in the veranda of a shop most people's conversations confirmed that the rains that day marked the start of the rainy season. Looking out towards the direction of Domboshava from the veranda of that shop I was convinced that the rains had also pounded the village as the thick rain bearing clouds appeared to be coming from that North-eastern direction. However on getting to Gutsa village early in the evening I was really surprised to find that not even a single drop had fallen in the village. Thereafter in the village for the greater part of November it became a common sight to see clouds forming and just disappear without precipitating. The clouds would look promising as if they would bring rain. However

the clouds would disappear paving the way for a totally clear blue sky and leaving people with unanswered questions regarding the rains. Villagers were now asking whether the whole country was really preparing for a drought year.⁶⁵

Even though the rains fell again in mid-November 2014 (evening of 16th of November) the rains were light and not sufficient for planting. However other villages appeared to have received fairly good rains then as they had planted their maize. I remember the sound of the rain on the asbestos roof as I lay awake on the night of the 16th of November 2014 relishing the arrival of rains; it felt as if it was a very heavy downpour. However with the coming of dawn on 17th of November, it was a huge disappointment stepping outside and noticing that the rain had not watered the ground deeply. It was not sufficient for planting, let alone to replenish the water table for the benefit of the wells or even for the rivers to start flowing. The same thing happened on the night of 18th of November. The rains were still too light even though some people had dug up holes in their fields in preparation to plant a few days before the rains fell, it was only a few who dared to plant their maize. However other villages appeared to have received fairly good rains which allowed planting of maize to commence. Planting in the village only began at the end of November 2014 when the rains that fell had made the ground wet enough to plant maize.

As the 2015-2016 rain season was about to begin, the first thunder in the village was heard late afternoon Thursday 28th of October 2015 as I was leaving the village on my way to Chinhoyi. There was a lot of thunder and it was windy and appeared to be building up for a heavy downpour. However it did not rain that day. On the 3rd of November 2015 it had been very hot like most days before it with clear blue skies. Suddenly in the late afternoon the weather took a dramatic turn when it suddenly became windy with thick clouds covering the village. This looked like a sure sign of coming rains as it appeared that the rains were about to fall again. In the distant villages one could see signs of rainfall activity thereby giving hope to people in the village. However there was no sign of rainfall even though there were still thick promising clouds in the skies with temperatures dropping and becoming very cold and windy. By morning there was no rain and villagers complained that the wind was chasing the rain away.

⁶⁵ In Gokwe, Worby (1992) found that such scenarios in which rain bearing clouds come and disappear were attributed to the power of rival *svikiros* (spirit medium) or claimants to recognition as *svikiros*, who were trying to demonstrate their capacity to make the rain clouds come or go as a sign of their power and legitimacy. However there being no *svikiro* or rival *svikiros* in the village elderly women attributed the lack of rain to the ancestors who were punishing their children for disrespecting the laws of the land.

On the 15th of November after a number of days with clear blue skies and extremely uncomfortable high temperatures, clouds appeared by midday and by late afternoon the sky was overcast with signs of rains in Harare and in some distant places. One could smell the scent of soil that had been soaked in rain as the wind was blowing from a South-west direction. On Monday 16th of November 2015 there were still some signs of rainfall in Harare as one could easily see some sections of Harare from a vantage point in the village. However there were no rains in the village, only a noticeable drop in temperatures and another overcast sky. It was only around mid-day on 22 November 2015 that it started raining and went on raining well into the morning of 23 November. Those rains appeared to mark the beginning of the farming season as some people got into their fields to plough and to a limited extent to plant.

The early drying of water bodies as evidence of climate change

Generally elderly women in Gutsa village agree that the various water sources in the village are drying up faster than in previous years.⁶⁶ The main reasons attributed to this early drying up of these water sources are mainly that the rains are starting late and ending early, that there is a lack of observance of customs regarding use of these water sources (especially communal wells) as well as more intense heat in the dry season which is acting as a pointer that the climate is changing. According to the elderly women these water sources are drying up earlier and faster now than they did before thereby pointing to climate change; the village has been receiving less and less rainfall. Some elderly women acknowledged that inasmuch as the rainfall pattern was changing it was important to understand that increasing temperatures in the backdrop of increasing demand on these water sources was also causing the early drying out of these water sources. By early June 2015 the level of water in the communal well near Mai Cha's garden was already getting lower and lower and by November it was dry. Early in November of 2014 one of the three wells from which people in upper Gutsa village draw their water from had completely dried up and people were now queuing for between ten minutes to close to an hour at the well on the border with Mashonganyika village. This same pattern was repeated in 2015.

Despite having three wells in Upper Gutsa most people prefer the well on the border with Mashonganyika as they say that the water there tastes better than the other two wells near Mai Cha and Mbuya Ku's gardens. Some villagers were going to the well near

⁶⁶ I provided a breakdown of the various water sources in the village in Chapter Two.

Mashonganyika as early/late as midnight to collect water. People had begun to exchange nasty words and relations were getting strained at the well. The strain in the relationships was due to the varied levels of demand either for domestic use or an income source (semi-commercial poultry, pig rearing and brick moulding). Those keeping broilers, pigs and those engaged in brick moulding were also drawing water from the remaining two wells and carrying the twenty litre water containers either on their heads or using wheelbarrows as motor powered water pumps are not allowed near the wells. It was believed that bringing motor pumps to the wells would cause the wells to dry up as that would disturb *nyoka dzemvura* (snakes for water). The rationale was that if the snakes were disturbed by the noise from the *engines* they would move away causing the wells to dry up. Mai Cha pointed out that at the well close to her garden the snake was often seen hanging from one of the trees beside the rock looking into the well from where people scooped water for domestic use. Though I never saw the snake it is said it never harmed anyone. Mai Cha said some newcomers and visitors in the village always had a hard time summoning the courage to fetch water from the well while a snake was hanging from a tree branch.

As communal wells are increasingly drying up early and causing serious water challenges and conflict in the village, a number of wells located at people's homes have been drying up early in the village too. The walls of some of these wells have over the years collapsed when there are incidences of intense rain for example; Sabhuku Gutsa's well collapsed in January 2015 when the village received incessant rains over a few days. Mbuya No's daughter who previously lived in Botswana dug a well for her in 2010, unfortunately the well collapsed in 2011, she rebuilt it and this too collapsed in 2013. She said:

“Eeeh my daughter who used to stay in Botswana had once dug a well for me now aaah, it just collapsed in 2011 as if caused by evil spirits or maybe it was not built well I don't know”.⁶⁷

The village head said there are no evil spirits that should be attributed to the collapse of these various wells' walls, rather he said the incessant rains, the unstable walls and the poor quality bricks used in the construction of the inside of the wells could be a cause. Some factors that could be singled out as leading to the early drying up of these wells at household level is related to the accumulation of mud residue at the bottom of these wells which tends to restrict

⁶⁷ Shona verbatim, “Eeee mwana aigara kuBotswana akambenge andicheresera mugodhi manje aaah, kungodhirika muna 2011 kunge zvine mweya yetsvina kana kuti wakatadza kuvakwa handisi kuziva.”

the seepage of water into the well. Residents have contracted the well-known diggers in the village during the dry season to go down and scoop the mud at the bottom of the wells as well as further extending the wells by a few feet. However some have stopped this as the increasingly aged unstable walls in these wells which can go as deep as eight metres down, make it increasingly risky to go down the well as the wells can cave in and bury someone alive if they as much as dare go down. The other option would be to dig a new well just like what some households have done in the village, the average cost being US\$10 per metre.

Although the elderly women/villagers are concluding that the early drying up of the water sources is direct evidence of the change in climate which is caused by decreased rainfall activity it is important to point out the following critical variable: The various water sources such as rivers, streams and dams are drying up earlier due to the siltation of the rivers, streams and dams mainly attributed to the rapid rates of deforestation experienced in the village. Cutting down of trees can potentially affect the depth of the water table and subsequently causes the early drying up of the rivers, communal wells and private wells. Trees can help in preventing soil runoff and the siltation of rivers and streams. Mai Cha pointed out that the settling of people in the *water chan* (channel for runoff) is also contributing to the early drying up of water sources in the village. Even though the elderly women pointed to various issues that had a hand in the drying up of the various water sources there was no mention of the siltation of these water bodies. It is also important to point out that the introduction of diesel and petrol powered water pumps in the village has led to efficiency as it has increased the water extraction capabilities of their users whilst at the same time also introducing high levels of wastefulness. These water pumps are being used to draw water from the water sources by villagers engaged in market gardening especially those who supply horticulture products to Showgrounds, Hatcliffe and now to a limited extent the distant Mbare market.

Although some of the elderly women household heads acknowledged that the early drying up of wells was caused by the changes in the levels of rainfall received, there were also some issues which these same women acknowledged as contributory. Mai Reni pointed out that the breaking of customs related to the use and preservation of wells was a major contributor as the customs related to springs/wells had guaranteed that these wells did not dry up even in the harshest dry conditions. These customs/taboo which are no longer respected were that no black containers were to be used to fetch water at the wells/springs; no soap products were allowed near the well and that no laundry was to be done at the well. In very extreme circumstances one should fetch water and do their laundry some distance from the

well. *Kukupu tsime* (cleaning of the well) is only supposed to be conducted by young girls who are not yet menstruating as well as elderly women who have reached menopause. Those young women who are now menstruating as well as those who are breastfeeding are not supposed *kukupu tsime* as they are considered unclean. No one should drink directly from the well/spring, ideally one should use *mukombe* (gourd) or a cup or should use leaves from *mikute* (*Ilex mitis*) trees to scoop water to drink. All these customs are no longer observed in the village. For example with the early drying of the rivers women in the village have been going to the wells to do their laundry near the wells than having to engage in the laborious task of carrying water to their homes and doing laundry there.

The early drying up of these various water sources was also said to be a sign of the changes in the rainfall patterns which have been seen as a consequence of changes in morality ranging from *makunakuna* (incest), lack of respect for *chisi* (rain season day of rest designated by the recognized *svikiro* who has authority over the area) and rampant casual sex. Desecration of once holy places, the ubiquitous presence of *moskens* and *manyasarandi* (derogatory names of people of Mozambican and Malawian origin respectively who had mainly come from the nearby former commercial farms)⁶⁸, the low rainfall now being received and the failure to hold *chipwa* (rain-making ceremony)⁶⁹ is also being blamed here. Blame has also been pointed to the settling of people in the *water chans* (water channels), the rampant cutting down of trees, the use of black/prohibited materials near springs or wells and the use of the ubiquitous motor water pump to extract water from these sources.

As most elderly women singled out these issues (mainly violations of customs) as related to the increasing drying of water sources, Mai Mizhu also pointed out that the early drying up of the wells in 2014 was because the rains had not been very good in the 2013-2014 farming season. Mbuya Gone was of the view that the early drying of the wells could also be attributed to pressures on those wells as a result of increased population numbers in the village. As the population numbers in the village increase some of the high water demanding activities (brick moulding and the building of homes) are carried out only during the hot dry season in the village when there is no rain. As a result of the high water demanding construction related activities going on in the village the water sources are drying up earlier than normal. There is therefore no doubt that the increased number of people in the

⁶⁸ Villagers who trace their origins from Malawi are also referred to as *mabrandaya* (derived from Blantyre, Malawi's second largest city). Also see Makombe (2013) on the use of the term *mabrandaya*. In this study I use the commonly used term *manyasarandi*.

⁶⁹ In a study in Mwenzezi district in Zimbabwe, Gandure (2011, 165) also observed that climate variability in the district was attributed to the lack of rain-making ceremonies and disrespect for elderly people.

village drawing water from the same water sources for household and non-household needs is a major contributing issue.

In 2015 in the wake of serious water shortages in the village conflict emerged between those who were drawing water from the same sources for different uses. At the communal well in Upper Gutsa on the border with Mashonganyika village those who wanted to draw water for domestic use began to claim that they had primary rights over water from the well compared to those who were building homes, brick moulding, doing laundry or keeping poultry/pigs. Those “*vari kushandisa mvura kutsvaga mari*”, “those who are using water to look for money” should look for water from the river or the dam in Charlotte Brooke. As this well belongs to Mashonganyika village one of the three villagers from Mashonganyika who resides close to the village began to police the well. Since his vegetable garden in which he spends most of his time during the day is located near the well he began to discourage those who were coming with scotch carts, wheelbarrows and those with their laundry to fetch water from the well. He made the rule that each person could only fetch one *mugomo* (container) at a time to encourage fair use and access to everyone.

Are there any changes in the rainfall pattern in the village?

The final arrival of the rains and the unrelenting rains received in January 2015 made a lot of people to heave sighs of relief that at least the ancestors had heard their prayers. However this excitement was mixed with the fear that as the rainy season was yet to reach the half way mark it appeared the unceasing downpours had made the village to receive the "total" rains for the season in just a few days of torrential rainfall as all dams in the nearby former farms were overflowing. As the rains continued to fall through January and into early February 2015, villagers began to express their fears about the distribution of the rains. The fear was that instead of the rains being spread over a number of months in a normal agricultural season the rains were spread over two months; mid-December to early January.

In examining whether there have been any changes in the rains being received in Gutsa village elderly women were worried about the onset of the rains, their distribution over the course of the rainy season, their quantity and their cessation patterns. For the elderly women it was important that a sufficient quantity of rains fall in and beyond the village in order to replenish the various water sources which were used by both humans and livestock to guarantee that the next rain season could be reached without experiencing water problems. The timing of the rains was also important as it allowed people to plant on time to ensure that a good harvest could be reasonably attained. The spread of the rains over the rain season was

also an important issue for the elderly women as rainfall evenly distributed over the farming season in the village would allow crops to reach full maturity and hence increase the likelihood of a good harvest enhancing food security. For example even if the right quantity of rainfall was received in a year and it was enough to replenish water sources till the next rainy season, that was not sufficient on its own if there were episodes of severe moisture stress or severe water logging. These factors would destroy the prospects of a good harvest thereby pointing to the need to have a balance in rainfall onset, distribution, quantity and its cessation.

By the 5th of January 2015 all the rivers and small streams in the village were now flowing while the seasonal wetlands had also become saturated with water. This is not usually the case under “normal” conditions when the wetlands are usually thriving in mid-February when “*mubvumbi*” (drizzle/the incessant rains) are generally received. This new development has been attributed to the incessant rains that were received from late December to early January. As I talked with Mai Cha she was worried that:

“Yekunwa mvura neyevipfuyo yakwana. Ko yechikafu?”

“Rains for drinking and livestock are now enough. What about for food?”

When there has been an abundance of rain, Nyaure River becomes impassable at the usual crossing point to Mashonganyika village. This usual crossing place is also the shortest route that is used by children from the village going to Nyamande Primary School. When it becomes impassable villagers take the roundabout road from Gutsa village to Mashonganyika and further afield through “*kuBridge*” (crossing at the bridge that separates the villages). Seeing a lot of water everywhere in January 2015 people who were new to the village or living in nearby Charlotte Brooke did not seem to understand why villagers in Gutsa were complaining that this was a bad farming year. These questions were probably based on their assessment of the rain conditions in the village and their places of origin which probably were dry regions/places.

On the evening of the 20th of February 2015, I was at one of the funerals in the village sitting around a fire with most of the males in the village. I had to spend the night at that villager’s funeral as was the custom for males in the village. As the conversations swung from one end to the other they finally moved to the once more common thread in most conversations in the village at that time. This was a discussion of the weather and specifically the rains and how they appeared to be changing over the course of time. One of the middle aged men indicated that truly things were changing regarding the intensity and pattern of rain.

One of the factors he pointed to as a reflection of how the rains had changed was the absence of a certain grass strain he called “*jeka cheka*” which had sharp hard edges.

“Near the father of *Izi* (Isabelle)’s residence there used to grow a grass called “*jeka-jeka*” which was sharp as a razor. This grass would grow because it used to rain then and now it is no longer raining like before”.⁷⁰

I noticed that while some elderly women could point to some exact years that they indicated as having shown the turn in the general weather patterns (Mai Njere pointed to the onset of the FTLRP), others like Mai Chota indicated that this change appeared to have been gradual over time and hence it was difficult to pinpoint the exact year with certainty. There is also confirmation that the rains appear to have changed the direction they were known to come from (mainly East and South).

For Mai Njere:

“These days there is nothing, the way it is raining is not the way it used to. If you step on this soil here it is no longer cool as it used to long ago. All over in this “*bani*” (veld) here it would have been water and water, right now aaah there is nothing. You would be walking in mud right now, aah there is nothing now. Rainfall no we left it behind long back”.⁷¹

She said the changes in the rains had made the village to get drier and drier as she was certain that the water table had significantly lowered.

Though over the years it was raining well, Mbuya No pointed out that nowadays the rains could no longer be trusted as the rainfall pattern seemed to have changed recently. She said nowadays the rains would stop altogether sometimes when the maize in the fields was just tasseling and that would be it. So Mbuya No said:

“The rain is no longer doing what it used to long back, the way it really used to rain where you would know that we are in the summer period, right now it is constantly changing. Sometimes you say maybe since it has come early we also plant early, then it might stop raining and then it will be dry just like that. Long

⁷⁰ Shona verbatim, “*Kwaana baba Izi kwaita sora rainzi jeka jeka raicheka. Sora iri raivako nekuti muno mainaya mvura chaiyo kwete iyezvino.*”

⁷¹ Shona verbatim, “*Mazuvaano hakuna, kunaya kwayo kwairi kuita hazvisiri izvo. Kana mukatsika pasi apa, hapachatonhora zvapaiita kudhara. Mese mubani umu, dai iri mvura yega yega, zvino aaa, aaah, hakuna. Maitofamba mumatope iye zvino aaah, aaah, hakuna. Mvura aiwa aaah, takasiyana nayo kudhara.*”

back you would know that once the rains came down, you just planted and proceeded with work”.⁷²

Mai Reni also pointed out that the year that ended with a “2” was really a problem in terms of the likelihood of a drought/a poor rainfall year. As she said, her conclusions were based on the fact that the years 1982, 1992, 2002 and 2012 were drought years.⁷³

After a long dry spell from early March which destroyed some maize in people’s fields due to severe moisture stress it was only on the 24th of March 2015 that rains began to fall almost daily and these were very heavy rains. Villagers began to complain that the rains were no longer of any use as the rains had lost their timing. For those who had planted early the rain was coming when the poor maize in the field was drying therefore if the rains were to continue some of the maize was going to rot and germinate before harvesting rendering them unfit for human consumption. On the other hand there was some maize which had seemed a write off which slowly began to show signs of recovery and the taste of the cooked green maize cobs which had received these rains had also improved.

According to Mbuya Ku in times past, the onset of rainfall in the village was in October with people planting their crops in November. However this had changed as the rains were now coming very late in November and forcing people to plant in December. As a result of the late onset of the rains it was now very difficult to have a good harvest as the rains were disappearing early too. Since settling in Gutsa village in the 1940s Mbuya Ku was confident that there had been substantial changes in the rainfall pattern in the village. Although she could not point to a specific year when rainfall had changed, she indicated that the quantity of the rains had gradually declined over the course of time. These changes in rainfall were related to changes in its onset, distribution, cessation and quantity.

“Rain is no longer falling down as it used to long back, right now when it comes down to mark onset, if you fail to plant with it you will only be able to plant with December rain. Now food planted in December is not of much use”.⁷⁴

⁷² Shona verbatim, “*Mvura haichaita zvayaiita kudhara manaire ayo chaiwo chaiwo ekuti maiziva kuti tiri muzhizha, izvozvi zvava kuenda zvichingosiyana. Pamwe unoti zvayakurumidza kunaya tokurumidza kudyara, yobva yamboti gwaa, zvotooma futi. Zvino kudhara maiziva kuti ikadzanga yaturuka yaturuka, kungodyara nekutoenderera nebaso mberi.*”

⁷³ Observations by Nangombe (nd) from the Meteorological Services Department, Harare, Zimbabwe show rainfall data for these years indicated them as drought years in Zimbabwe (also see Kinsey, Burger and Gunning, 1998).

⁷⁴ Shona verbatim, “*Mvura haichanaya manairo ayaiita kare, izvozvi iri kuti ikanaya ikaturuka, mukatadza kurima neiyoyo motozorima December. Zvino chikafu chaDecember hachina basa.*”

This is also the consensus shared in the village that the onset of the rains is at the end of October with the rainy season coming to an end in April. The rains would come down in November and people would plant that November and by December people would be weeding their fields for the first time. Therefore as a result of the erratic rains being received this was now affecting the harvest in the area. Mbuya Ku pointed out that the lack of *jawhi* (rusty waters which accumulate in waterlogged areas) in the village was evidence that the rains were now poor compared to previous times. This was also supported by Mbuya Gone who pointed out that the area is now receiving less and less rainfall every year to such an extent that:

“For the rivers to spill over, it’s not happening. Last year (2013) Nyaure River had river sand, broke in half and you could not find a place with water, what only remained were low volumes of water up there (pointing to near Mashonganyika village)”.⁷⁵

As a result in order to irrigate their vegetable gardens some villagers from Mashonganyika would extend their hose pipes further up the river to where there was water remaining until they stopped irrigating their gardens when the river completely dried up.

Having been born in the village *kuDongo* Mbuya Gone appeared to remember a long history of the village and the rainfall changes it had experienced. She indicated that growing up in the village she recalled that some of the years it had rained well, consequently she pointed to 1950 as the year that she recalls having had the most rains in her living memory. Now as indicated by Mai Chota most of the moisture that used to be in the gardens all year round in the village has since gone away as a result of poor rains and rising temperatures:

“My capacity to work in the garden is getting less and less, what used to happen sometime back is now different with today. This place used to be full of moisture, you see. Most of the crops used to be watered by rainfall”.⁷⁶

She indicated that although some areas had been full of moisture with people planting vegetables, it was no longer the case as these places were now very dry. Talking to the elderly women it appeared there was the consensus that just after the war of liberation the

⁷⁵ “*Kuti hova dzimbofashukira, hakuna. Gore rakapera (2013) Nyaure akaita jecha, kudimbuka nepakati kushaya pane mvura, kusara tumvura tushoma kumusoro uko (pointing to near Mashonganyika).*”

⁷⁶ “*Kushanda kwacho kwava kuita kuchiderera, zvaitika kare zvakasiyana nezvanhasi. Maimboita kahunyoro ka muno umu. Saka zvinhu zvacho zvaiwanda zvaingodiridzwa nemvura yemudenga.*”

country received good rains like never before.⁷⁷ In Gutsa village it is this wealth of knowledge about environmental indicators related to changes in rainfall patterns which is based on these elderly women's rich history of living in this village.⁷⁸

Concerns about the weather and the climate cutting across age and gender

As I proceeded with my fieldwork into the 2014-2015 farming season I soon realised that most conversations in the village during the rainy season revolved around production and performance of *zvirimwa* (crops which generally refers to maize) in the fields. The light rains that fell on the night of the 16th October 2014 caught me when I had just disembarked from a *kombi* (taxi) from town in Charlotte Brooke at the place called RBZ (Reserve Bank of Zimbabwe houses). This section was given this name as the RBZ bought stands here and built some houses hence the name RBZ. As I walked home with two younger men from the village they expressed surprise that the rains were very unusual as they were not coming from the "traditional direction". The rains were coming from the Western side of the village and I soon discovered that in Gutsa village the direction of the wind is also an important marker from where the rains would be coming.

During fieldwork it became evident that villagers (even young ones) knew that rains would come to the village from the East and South, however there were a number of days when the rains were not coming from the "normal" direction.⁷⁹ In the village the central vernacular meteorological theory among both the young and the elderly was that since the rain for the village mainly comes from the Eastern and Southern sides it is therefore the winds that blow from these directions that usually drive rain bearing clouds towards the village and ultimately rain to the village. Talking to Mbuya Ku she pointed out that when the wind comes from these directions, then the village will receive rain; however when the wind blows nonstop from East or South then the wind can also send the rain bearing clouds much higher up into the sky and the rain would not fall in the village. It also emerged that when the wind changed direction to blow from the West or the North then if rain bearing clouds are approaching the village the rain bearing clouds would be blown away together with their rain from the village.

⁷⁷ In Chapter Five I have examined in detail the incidences of heavy rains that were received in Zimbabwe just after independence from British colonial rule in 1980 and the factors that were attributed to those heavy rains.

⁷⁸ It is therefore important to reflect on Roncoli, Ingram and Kirshen's (2002, 413) observations that environmental indicators are based on experience.

⁷⁹ In their study among the Bonam in Burkina Faso, Roncoli, Ingram and Kirshen (2002, 414) found that the direction of the wind points to where favourable rains should be coming from. In their study they found that during the rainy season, farmers expect rain after a sultry day and if winds blow toward the east.

On another day as I was walking from *kuDongo* to Upper Gutsa in January 2015 returning from an interview with Mbuya Tawira I was chatting to a young lady from the village. Once more our conversation after the usual banter drifted towards the weather. Her concern was that the rains in 2014-2015 were making it difficult to plan and apply fertiliser in the fields. She pointed to how the delayed application of fertilizer could contribute to poor crops and hence increase the likelihood of a poor harvest which was becoming a reality every day.

“Maize will spend more time without fertilizer while time for maturity will be approaching. So the maize will mature without the right nutrients to aid growth”.⁸⁰

The rains delayed coming down in November 2015 in the village while other areas in Mashonaland East received sporadic rains. As I was driving from the village to Showgrounds I gave a lift to one young man from the village. Just like most young boys in the village this young man had also grown up occasionally herding cattle in the former nearby commercial farms especially Chibvuti farm. He said that this dry period late into November was uncharacteristic as this would not have been the case had the white commercial farmers remained on the land. He specifically singled out Chari (the name of the former commercial farmer at Chibvuti) who would have sent his small plane into the sky by then to do cloud seeding and the village would have been experiencing a normal rainy season. His observations revolved around the impact of the Fast Track Land Reform Programme as the village would not have been so dry as it was had Chari remained on his Chibvuti farm. Among the villagers there is a very strong consensus that the former commercial farmer used his small plane to practice cloud seeding in the face of prolonged dryness. This practice of course would also have eased the challenges of lack of rain in the village and provided some much needed relief.

Sources of forecasting for the coming rainy season in the village

Using fruiting patterns of wild fruits as indicators of coming rainy season

As observed by Smith (2007) and Elia, Mutula and Stilwel (2014) indigenous (local) people show us that there are alternative ways of knowing about the environment. These sources of rainy season forecasting include indicators such as flora and fauna. Just like among the

⁸⁰ Shona verbatim, “*Nekuti chibage chinotenderera chisina fertilizer apa time yekuibva inenge ichifamba. Saka chibage chinozobva chisina zvakakwana.*”

Bonam in Burkina Faso who 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) in Gutsa village elderly women rely on wild fruit tree indicators in the form of wild fruits *mazhanje* and *hacha* for forecasting the coming rain season. Consequently there are multiple sources of weather forecasting among the villagers in the village.⁸¹ The sources of weather/farming season forecasting used in the village are mainly local indicators based on observing flora and fauna, the nature of the preceding winter period and prophecy from Independent African Churches.⁸²

With the 2014 rain season approaching, villagers had begun to assess the favourability of the coming rain season by comparing the situation in the village with that of other villages and various places in other parts of the country. The common conclusions in the village are that when *mazhanje* is 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.⁸³ The opposite is true; when *mazhanje* are not in abundance it therefore means that the rainy season will be a poor one with expectations of a poor harvest.⁸⁴ If *hacha* is in abundance it is believed that the rainy season will be a very bad one. In a year where *hacha* is not in abundance it therefore means that the rainy season will be a fairly good one. During these instances *hacha* trees will only flower with the flowers eventually dropping in February.

As pointed by Mai Njere changing rainfall patterns in the village are also a result of the disrespect shown by villagers in gathering wild fruits especially *mazhanje* which are important for forecasting the coming rain season. *Mazhanje* usually ripen from early October through to early February; *Hacha* usually ripen from late August to early November. Of the two fruits *mazhanje* is the one which is harvested on a semi-commercial scale. Previously villagers would sell *mazhanje* in Harare. However nowadays outsiders with trucks come to the village to buy *mazhanje* at US\$3 for a twenty litre bucket. This has resulted in the harvesting of *mazhanje* at an unprecedented rate as people try to harvest the most from these trees and make as much money as possible in a short space of time with even children of

⁸¹ The existence of multiple coming rain season forecasting mechanisms in the village also appears consistent with Roncoli's (2006) conclusions that African farmers do not generally rely on a single forecasting indicator.

⁸² As in Gutsa village among the Mwingi in Kenya longer winters also indicate poor rainfall in the coming season (see Mwadime, 1996).

⁸³ Studies by Mapeta (2000); Mapara (2009); Muguti and Maposa (2011); Mararike (1996); Risiro et al (2012); Ndiweni and Ndlovu (2013) indicate that fruiting patterns are a reliable indicator of the coming season's rains.

⁸⁴ Mapara (2009) and Muguti and Maposa (2011) suggested an inverse relation between the abundance of fruit (especially *mazhanje*) and the abundance of rain. However just as in Mararike's (1996) study in Buhera, people in Gutsa village believe that there is a direct (rather than inverse) correlation between fruiting patterns of *mazhanje*, *hacha* and rainfall.

school going age participating in the *mazhanje* rush in order to get money. In the village it was taboo to climb *muzhanje* trees, in order to collect the wild fruit. One was supposed to pick *mazhanje* off the ground only, failure to do so would mean that *mhondoro* (lion spirit) would visit you. As a result of this *mazhanje* up in the trees would stretch to almost end of January with people picking the fruit from October when they began to ripen. However nowadays with the indiscriminate harvesting for commercial purpose which is being practiced once *mazhanje* are ripe in early October by end of November there will be nothing in the trees as people harvest even the unripe ones. The unripe *mazhanje* are then ripened by storing them in an enclosed container, a practice known as *kupfimbika*. This early harvesting of *mazhanje* over a short period of time has also meant that baboons become a menace as previously they would feed on this delicacy over a number of months.

As I moved through the village between October and November 2014 I noticed that *mazhanje* had not been as abundant as in other seasons. In fact there was not even a single *zhanje* in the forest. Strangely though one could only sporadically find *mazhanje* at trees located in people's homesteads! I noticed that for the very first time since I was a child the *muzhanje* tree at the far corner of our yard which produces very sweet *mazhanje* had no *mazhanje* 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 any *mazhanje*. This was difficult for me to conclude and reconcile as most of the *muzhanje* trees in the forest had nothing on them. Just like most villagers I began to wonder whether it was an indicator of the coming poor 2014/2015 farming season. On the radio the weather reports and forecasts had consistently been saying the rains were going to be favourable. I assured myself that I had a lot of time on my hands to watch the passage of the rainy season to carefully check for consistencies or inconsistencies.

As I was also going to Harare on Sunday the 26th of October the other passengers in the vehicle that I boarded from Tsatse (in Shumba Ward still in Goromonzi District) remarked that the *mizhanje* trees in Tsatse were very bare this season and the chances of a normal rainy season were therefore slim. These observations were in contrast to the weather forecast from the Met Department as local people were providing their own reliable forecasts based on their understanding of the environment and their tried and tested predictors of rain activity.⁸⁵ So Mbuya Gone pointed out that:

⁸⁵ For Roncoli, Ingram and Kirshen (2002, 413) just like scientific inquiry, local rainfall forecasts rely on observation and interpretation of specific phenomena in the surrounding landscape, including trees, animals, and the sky, or they may be spiritually manifested in the form of divination, visions, or dreams. Muguti and Risiro (2012) have gone on to show the conflict between science and tradition in rural Zimbabwe in weather forecasts.

“Lack of *mazhanje* shows that uumm this season it might not rain for us well. Because it is those fruits which sometimes help us expect whether we will get rains.”⁸⁶

As I talked to the village head in October 2014 he was worried too that this year could be a drought year as there were no *mazhanje*. He was saying that this could be the sign that tough times lay ahead just like in 1947, “*munguva yaHitler vanhu vakapona nehwenya*”. (Just like during the time of Hitler’s reign where people survived on eating *hwenya* (baboon flower). Though Hitler’s reign had come to an end at the end of World War II in 1945, in the village most elderly people still referred to the 1947 drought as having occurred during “*nguva yaHitler*”.

I remember one day in November one of the young man from the village had gone to a church meeting in Chinhoi approximately two hundred kilometres West of Harare. He was lamenting the absence of *mazhanje* and the apparent abundance of *hacha* in that particular part of the country as well. For him this was also a clear forecast that the 2014-2015 farming season reflected a very bad season one for normal crop production. The mango trees at people’s homesteads also had very poor signs of fruiting which was also seen as pointing to a poor rainy season. As the rainy season commenced and people planted their crops and as harvest time approached it was evident that the 2014-2015 rainy season had been a very poor one.

The role of weather forecasts from the Met Department in the village

It became apparent that elderly women just like most people in Gutsa village do not rely on the weather forecasts that filter through to the village through the various media outlets as supplied by the Meteorological Services Department (Met Department). The forecasts provided by the Met Department were never taken seriously in the village as the elderly women pinpointed that for a number of years (e.g. 2012, 1997 and 1995) these forecasts had not been accurate in their predictions.⁸⁷ Rather the forecasts are a laughing stock in the village due to their “unreliability”.⁸⁸ Villagers are always saying:

⁸⁶ Shona verbatim, “*Kusavako kwemazhanje kunotaridza kuti uumm mwaka uno uyu hameno kuti kunotinaira zvakanaka here. Ndava michero iyoyi ndiyo inomboita kuti titarisire kuti tine mvura here.*”

⁸⁷ As pointed out by FAO (2004) most rural farmers in Zimbabwe do not use information from the meteorological services for planning purposes. The main reason for this is that the information from the meteorological services is never trusted as most of the time it has been unreliable in its forecasts (Mwando, 2012, quoted in Mudombi and Nhamo, 2014). Observations by Manatsa et al (2012) in Chiredzi in Zimbabwe also showed that since 1997 the local farmers have complained about misleading seasonal rainfall forecasts

“Hatitedzere zveve kuweather. Ikangonaya kudyara chete”,

“Here we do not follow what the weather forecasters say. If it rains we simply plant”.

Mai Reni indicated that she sometimes listens to weather reports on the radio as well as forecasts for the rainy season every year. As I was talking to her in September 2014 she pointed out that the weather reports on the radio had been saying that whenever the rains fell late in 2014 it was advisable to plant with those early rains. However she said that:

“I remember one year, these radio people are guess, guess people. There is one year when they said rain is not there, plant early your seeds. Rain was a problem when it did come, maize that was about to be harvested rotted in the fields as the rain were not stopping”.⁸⁹

Mai Reni however acknowledged that sometimes the weather forecast was accurate but that it was never to be relied on. When I asked her how she would plan her 2014-2015 farming after she had heard the weather forecast in September 2014 she simply said that she does not plan her planting on the weather reports. Rather her main concern was to find money to buy maize seed first before October so that she could plant whenever the rains fell. She indicated that she intended to dig planting holes and plant with the first rains rather than waiting to plough her fields with an ox drawn plough and then planting.

Using prophecy to forecast the coming rainy season

Reliance on prophesy also appears to be the strategy now being used in the village by some elderly women to provide forthcoming rainy season forecasts.⁹⁰ This became evident when I was chatting with Mai Mizhu before the rains in October 2014 and she indicated that since the year 2012 at the apostolic church she attends prophecy has now been used as a weather forecasting technique. This prophecy has mainly been used to predict the rains of the

provided by the Met Department. For Manatsa et al, the seasonal forecasts provided by the Met Department are not useful due to high levels of climatic variability even at the micro-level of a single village. Furthermore as noted by Roncoli, Ingram and Kirshen (2002, 423) local farmer’s forecasts differ from scientific ones in that they address a local rather than regional scale and crop-climate interactions rather than precipitation per se.

⁸⁸ Also see Crane et al (2010); Moran et al (2006); Patt, Suarez and Gwata (2005) on perceptions of farmers to such forecasts in providing accurate forecasts for any coming rain season in southeastern United States, Amazonia and Zimbabwe respectively.

⁸⁹ Shona verbatim, “*Ndichiyeka rimwe gore, veRadio ivava ndivana fembera fembera. Kune rimwe gore ravakatiti mvura hakuna, fanodyarai mbeu. Mvura ikagombonetsa ikazoti youya, chibahwe chaida kukohwehwa chakaorera muminda mvura isingakase*”.

⁹⁰ As pointed by Roncoli, Ingram and Kirshen (2002, 413) among the Bonam in Burkina Faso local rainfall forecasts also rely on spiritual manifestation in the form of visions.

forthcoming farming season. Regarding the forecast for the 2013-2014 season she confidently said:

“Now this year the Holy Spirit, I don’t know about yours (referring to the Apostolic church I go to), it has said this year there is need to plant early as rain for this year is limited. It has been said the early rains when you see them having fallen, plant. Not the rain that will come in the next few days, no. It will rain, when it has rained, put your seeds into the ground. Even if there is a lot of sun later when you have put your seed into the ground, when it rains while the seed is in the ground it will grow”.⁹¹

When I asked her whether she had confidence in what their Holy Spirit had said regarding the rainfall predictions for the 2014-2015 rain season she pointed out that at her church they accept it because since 2012 they had been hearing from the Holy Spirit. It tells them when it will be a good season with lots of rain as it also tells them when it will be a bad season marked by lack of rains. Mai Mizhu pointed out that previously her church mates used to plant and were content with whatever they reaped as the Holy Spirit at their church never used to say anything related to the coming rainy season. The Holy Spirit had begun to prophesy precisely about what the coming rainy season would be like in 2012. In that year it said the rains were not very good and that is what happened. In 2013 it had said the rains would be fairly good and that is what happened. In 2014 it had said the season would be a bad one and people needed to plant early as failure to do so would lead to hunger and this too had happened. As I kept watch over the span of the rainy season, prophecy from Mai Mizhu’s church was proved correct as the rains were very poor, this was the common consensus in the village. Mai Mizhu had planted with the first rains and she managed to get a reasonable harvest as she got nine fifty kilogram bags of maize.

Talking to other members of different apostolic churches in the village there seemed to be the consensus that prophecy at their churches had indicated that there would be low rainfall levels for three consecutive years starting in 2014. From the different apostolic churches it appeared this prophecy on rain season forecasting had been a recent phenomenon which had started in the year 2010. At my church, (Johanne Marange) there had never been

⁹¹ Shona verbatim, “*Asi gore rino, hanzi neMweya, ameno kwenyu, hanzi gore rino, panoda kukurumidza kudyara nekuti mvura yegore rino ishoma. Hanzi mvura yekutanga, mukaona yanaya, dyarai. Haikona iyi ichanaya manje manje iyi, aiwa. Ichazonaya, ikanaya, ibvayi maisa mbeu pasi. Kana kukaita zuva imimi maisa mbeu pasi, ikazonaya mbeu iya iripasi, inobva yakura.*”

any prophesy regarding the rains. However the other day some young boys in the village were laughing at one of the young man in the village who had continued to mould bricks well into late November. This young man goes to one of the apostolic churches Johanne Masowe yeNgunwo Tsvuku and he continued with his brick moulding as he said *akapinga mvura* (locked the rains). Although at his church there had not been any prophecy regarding the rains he simply pointed out that he had locked the rains as he had been praying that they should only fall down after he had fired his brick kiln. However he was extremely disappointed when two nights after he had finished preparing the brick oven which had approximately eighteen thousand bricks and was about to start firing his oven, it rained so hard destroying a large proportion of his unfired bricks. Other villagers laughed at him saying “*ungatongere zvemvura kuti ndiwe Mwari here?*”, “Can you really judge on when rains should come, do you think you are God?”

Although this young man had his bricks destroyed by the rains despite claiming that *akapinga mvura*, Mbuya Ku revealed that there are instances when humans could intervene and prevent rain from falling in the village. These instances are namely when young boys are herding cattle or at funerals if heavy rains appear imminent. She detailed that in the event that young boys are herding cattle with rains about to come there is a bright orange rainy season flower called *nyamaradzo* which can be placed in a fire to stop the rains from falling. Furthermore when someone is to be buried and there are signs of rain that might disturb the burial, elders can place an axe into the fire, and then they will give ashes to the eldest child to place on the roof of a thatched kitchen. Alternatively they can place the deceased’s clothing item on the roof of a grass thatched kitchen and the rain will not come down until after the burial ceremony. On the other hand villagers could also plead to the ancestors for a cessation in *mubvumbi* (drizzle/the incessant rains) for a day to allow people to weed their fields.

As I continued talking to the elderly women it became apparent that they are generally very wary of giving definitive conclusions and predictions regarding the seasonal weather forecast despite the accumulated tried and tested local knowledge. The weather forecasts provided by the elderly women in the study appear to have a fifty-fifty chance. This is almost in line with what the forecasts from the Met Services stipulates as there is an element of probability which is however grounded on certainty derived from past experiences. For the elderly women this is not proper because you cannot judge for God regarding what the weather will be like. In conversations with Mbuya Ku regarding weather forecasting using local indicators that have been passed from generation to generation she pointed out that it is possible to predict the weather over a weekly or monthly period of time. However she

cautioned that, “*Ungatongere Mwari?*” “Can you judge for God?” To her the understanding is that inasmuch as elderly women can use their stock of knowledge it is ultimately God who has the final say on what the weather would be like over a certain period of time.

Weather prediction techniques (specifically coming rain season forecasts), from the Holy Spirit appear to be based on high levels of “certainty” compared to the Meteorological Services Department and local weather forecasting using flora and fauna as these appear to be based on “probability”. For example as pointed out by Mai Mizhu, the Holy Spirit predictions that she had been using since 2013 were not based on probability but were exact in fulfillment. For her the Holy Spirit would predict the rainfall with absolute certainty. The result is that the new weather/rainfall forecasting approach (using the Holy Spirit) is based on high levels of confidence from those who get the chance for these to be availed to them.

The rampant destruction of trees used as weather indicators in the village

A forest is used for different purposes by different people (Conca and Dabelko, 2009). Some people regard it as a stock of timber to be exploited for economic gain. On the other hand others see it as a complex ecological system that holds the soil in place, stabilises the local water cycle, moderates the local climate and fosters biological diversity, as well as contributing to the food and nutritional security of rural households (Conca and Dabelko, 2009, 2; Campbell et al, 2002; Njana, Kajembe and Malimbwi, 2013; Barany et al, 2005). Focusing on Gutsa village these are the processes which are evident as local people appear to have different perspectives about the local forest and its by-products depending on what value they can extract from it. *Muzhanje* and *muhacha* trees are the trees that elderly women in Gutsa village use for local forecasting of any coming rainy season. Despite the crucial role these trees play in forecasting the rainy season, both the trees and their fruits (*mazhanje* and *hacha*) are being destroyed through ongoing rampant, commercialised and unselective cutting of trees as well as the almost yearly veld fires that sweep through the village.

For residents like Shame, Mai Reni’s son as well as Eden, Mbuya No’s grandson the local forest is a source of livelihood and an income source as this is the area where they obtain the firewood that they have been selling over the past years both in the village as well as outside the village especially in Charlotte Brooke. In the village the wood is mainly for domestic and non-domestic use (mainly brick firing and fencing), while in Charlotte Brooke the wood is used as firewood by some households throughout the year and during winter in fireplaces. Others who are into brick moulding like Baba Shepa, Mbuya Tarai’s grandson the local forest is also a source of wood which is used to burn the bricks he moulds from April to

October every year. However it is important to understand that the extraction of wood from the forest is not uniform all year round. This is the case as some of the driving factors behind the cutting down of the trees are seasonal demands. For example the need for firewood in the households seems to be throughout the year whilst peaking during winter with the additional demand also coming from Charlotte Brooke.

The need for wood for the brick moulders in the village is normally between April and October and now increasingly due to the late onset of the rains, stretches through to mid-November. Considering the above, the commoditisation/increased extraction of common property resources like forest products is exacerbating the impact of climate change on elderly women in Gutsa village. For Mai Mizhu the rapid and uncontrolled cutting down of trees is creating serious problems as these trees acted as wind shields for her crops as well as facilitating the infiltration of rainfall by preventing runoff. Consequently the lack of forest cover is now creating high incidences of supposedly windy days in Gutsa village. This could also be seen in a positive way as the unfettered movement of wind is also acting to cool down the increasing temperatures by allowing the free flow of wind.

Over the years especially just after the year 2000 until 2012 people who were not resident in Gutsa village would come down late at night or early in the morning to cut down trees for various purposes in the area called *Madhigi*. These people were mainly coming from other villages such as Mungate, Mvarechena, Zimbiru and Chiroodza. In these respective villages the forests have been destroyed as a result of the increased population densification due to parceling out and selling of land. As I discussed in Chapter Two the introduction of community policing in Gutsa village around 2013 worked to prevent outsiders from cutting down the trees as those caught with their load of wood were taken to the village head's homestead where the load was confiscated with the offenders being sent away empty handed. However inasmuch as the community policing approach managed to deter outsiders from coming down to the village to cut down trees it did nothing to stop those from Gutsa village cutting down trees for sale in the village and to some extent selling them outside the village. This challenge, as I mentioned before in Chapter Two has been created by the fact that the village head's security detail Shame (Mai Reni's son) who is also a Zimbabwe Republic Police (ZRP) Neighbourhood Watch Committee member is a well-known major supplier of wood in the village. Furthermore the long drawn boundary disputes between Gutsa village and village head Mashinge as well as Gutsa village and Shumba village have also made those living on either margins of the village to compete in destroying and exploiting the various forest products en masse. Consequently it is not just outsiders who are the desecrators but the

locals have been complicit and active in creating the current scenario because of the increased demand for various forest based products in the village as well as outside the village. It seems local people in Gutsa village especially the originals are currently the ones involved in the rampant cutting down of sacred trees such as *muzhanje* and *muhacha* as people seek out livelihood options. As people seek out their livelihood, villagers and outsiders appear to compete to destroy the known tree indicators of general weather patterns in Gutsa village despite the presence of taboos to that effect.⁹²

Consequently this rampant cutting down of *muhacha* and *muzhanje* is creating a crisis situation not only for the elderly woman in the village but for people who rely on these trees in predicting and understanding the coming rainy season. This is so because for the hard of hearing like Mai Mizhu they cannot rely on the radio reports for weather forecasts provided by the Meteorological Services Department. For the elderly with visual impairments, (most of them) they cannot rely on reading the newspapers for weather forecasts. The situation is made worse as some of the elderly are totally illiterate.⁹³ Besides as I mentioned above the weather forecasts from the Met Department are a laughing stock of the village as the villagers claim that these are famous for their near and total misses.

In the village towards October each year in preparation for the new rainy season, one begins to see a number of veld fires as people begin to prepare their fields, as well as to kill ticks, snakes and for pasture improvement.⁹⁴ By the time rain comes, all the grass would have been burnt with some big trees and small shrubs also not spared. Consequently the forest's regeneration is to some extent affected by these yearly bush fires which do not give the small shrubs enough time to grow. As a result veld fires were a very serious problem in 2014 as there were a lot of these in the village that year despite the warnings of fines and possible imprisonment by EMA. On the evening of Monday the 27th of October 2014, I was helping the village head to burn grass in one of the fields in preparation for the planting season and to destroy the rodents and snakes. I had heard him saying that EMA is against this and they

⁹² Risiro, Tshuma and Bhasikiti (2013, 22) argue that taboos have been used to preserve fruit trees in Zaka district. However this is not the case in Gutsa village as despite the presence of taboos there is still evidence of the extensive destruction of fruit trees which are also the known indicators of general weather patterns in the village.

⁹³ Manatsa et al, (2012) also found out that for most farmers in rural Chiredzi, Zimbabwe the seasonal weather forecasts disseminated through the mass media are not of much use as most farmers in the area neither own a radio nor a TV set. Furthermore the weather forecasts are further rendered useless by challenges in accessing newspapers timely with some unable to read the newspapers.

⁹⁴ Under the Environmental Management Act, Chapter 20:27, no person is allowed to light a fire outside of residential or commercial premises during the period 31 July to 31 October of each year (Government of Zimbabwe 2002a).

could either: Fine people who start veld fires or fine people who live nearby to where a veld fire was started for negligence/failure to put out the fires even if they were not the ones who started the fires. So I asked the village head why we were burning the grass then when EMA is against this practice, besides the fact that he is also a custodian of the law. He casually replied that:

“*EMA haina basa. Makonzo, nenyoka zvinonetsa izvi nekuti nyoka nevana vadiki pamba hazviite*”

“EMA is not a problem. Rodents and snakes are a menace here and besides I cannot have snakes nearby when there are small children at home.”

So I was left wondering who was going to be the guardian of the environment in the face of indifferent enforcement by the local level custodians (the Sabhuku) of the environment, the village police, GRDC and EMA itself. This therefore marked a huge gap between policy and reality as the local level reality is different from paper. In 2015 however there appeared to be a very big change as there were very isolated and localised incidences of veld fires in the village.

Understanding factors attributed to climate change in Gutsa village

Proceeding with my interviews with the elderly women and in general conversations in the village it began to emerge that there is no single factor attributed to the ongoing changes in the rains.⁹⁵ Rather there are a number of factors that are attributed to the changes in the rains being received. These are cessation of *chipwa*⁹⁶, the general loose morals in the village ranging from *makunakuna* (incest) to women who are going about naked in the village, defilement of previously sacred places, lack of respect for *chisi* (farming season day of rest) and the presence of *moskens* and *manysarandi* in the village. Of the above it was the failure to conduct *chipwa* which was singled out as the leading cause of the changes in the rainfall being received in the village.

During the rainy season I soon noticed that day to day banter and also at gatherings of different types and sizes conversations generally drift towards “*mamiro ekunze*” (state of the weather). By focusing on *mamiro ekunze* during the rainy season villagers during this time are simply referring to the rain, its onset, frequency, duration, amount and cessation.

⁹⁵ As I continued with my fieldwork I reflected on Pettenger’s (2007, 3) observations that climate change must be understood in the context of social settings.

⁹⁶ As pointed out by Mandaza (1970) in the history of Zimbabwe rain-making ceremonies were annual events just like they were supposed to be in Gutsa village.

People pay a lot of attention to the weather and its fluctuations as it is tied to crop production and the availability of water for domestic, livestock and other livelihood activities. During the course of my fieldwork, depending on what was desired at a point in time, it was common to hear villagers saying:

“Tii zuva rapisa wena. Asi mvura yaramba kunaya. Hameno Mwari”.

“Hey the sun is now so hot. But the rains are not coming down. We leave it up to God”,

“Mvura yanyanya kunaya”,

“Rain has fallen too much now”

“Mvura yaramba kunaya”,

“Rain does not want to fall”

Regarding the rains the questions villagers were always asking revolved around: When would it arrive? How and where would it fall? How much will there be? The questions were also segmented and reflective of the season of the year thereby conforming to general questions that are asked in each season. For example during the onset of the rainy season and also during the course of the rainy season conversations easily and swiftly shifted to concerns about the rain and also projections of the coming winter season based on rainfall intensity. During the dry summer period conversations shifted towards heat and the prediction of the coming rainy season based on the heat and the fruits in season such as *mazhanje* and *hacha*. During the winter period after general banter conversations and concerns would shift towards the severity of the winter and the likelihood of rains again. Concerns in conversations on weather all year round mostly had a bearing on forecasting rains.⁹⁷ In the case of Gutsa this can be said to be a reflection of the reliance of most livelihoods in the village on rainfall activity.⁹⁸

Cessation of chipwa impacting on rainfall patterns in the village

Having settled in Gutsa village in the 1940s Mbuya Ku was very confident that there have been substantial changes in the rain fall patterns in the village. Though she could not point to specific years when the rains had showed changes, she was confident that there had been a

⁹⁷ Similar to the findings in Gutsa village Sanders (2000) researching among the Ihanzu in northernmost Iramba district in semi-arid North Central Tanzania noted that questions on rain appeared to be a topic of discussion all year long.

⁹⁸ In the study village it also appears that conversations about the weather act as icebreaker topics in many cultures (see Barayzarra and Puri, 2011, 22).

gradual decline over the course of time. *Chipwa* was supposed to be held before rain had come down and before people had planted their crops and it was meant to be a plea for good rains from the ancestors to ensure that the rains fell on time, in the right quantities and spread adequately over the rainy season. The cessation of *chipwa* in the village is related to a number of factors. According to Mbuya Tarai the war of liberation partly played a part in the disruption of *chipwa* in Gutsa village when people fled the village. At the height of the war of liberation in 1978, people from Gutsa village fled and settled in Mashonganyika village with others moving to as far as Chirambahuyo (Chitungwiza). On returning to the village people's interest in *chipwa* had significantly diminished because the rains had continued to fall in the village despite *chipwa* not being conducted in the village. The village rain-maker had also passed away at the height of the war and with the subsequent displacement from the village; there was just no one to continue with the rain-making ceremonies.

As noted by Mai Cha the *muhacha* tree was not supposed to be cut down as it was important for *chipwa* as the ceremony was supposed to be held under a *muhacha* tree. Due to the increasing demand for wood the entire forest where *chipwa* was carried out was progressively cut down over a number of years from 1980 to early 2000s. Finally most *mihacha* in the village have now been cut down as people look for firewood. Although there has been and there is still rampant cutting down of trees on the former commercial farms, there are still a number of *mihacha* and *mizhanje* trees there. Furthermore the specific site at which *chipwa* was held has now been parceled out and sold to some outsiders who have since settled on the specific site that *chipwa* was held.

What previously made the rain-making ceremony in Gutsa village unique is that this was carried out not because the rains had failed to come but because it was an annual practice that was supposed to be done towards the start of the rainy season.⁹⁹ However despite *chipwa* being held every year there still were years that had very poor rains. Mbuya Ku said that if this was the case people would just comfort themselves and say,

“Aaaa, inguva igore rinowo nekuti rainzi gore renzara”.

“Aaah, it is time, it is this year because it would be referred to as a year of hunger”.

She recalled that even as she was growing up and for a long time after her marriage, there were a number of years that were considered *makore enzara* (years of hunger). During those

⁹⁹ Among the Ihanzu in northernmost Iramba district in semi-arid North Central Tanzania villagers held their rain-making rituals to request for rain after it had failed to come. After the rain-making ritual the rains would come down to signify acceptance of the request (Sanders, 2000). This is different from Gutsa village where the rain-making ritual was an annual event that had to be held before the start of every season.

years they had survived on eating “*kenya*” (imported yellow maize). However Mbuya Ku recalled that even in Gutsa village sometimes *makore enzara* were not caused by poor rains but were caused by the scourge of the locusts.¹⁰⁰ In Gutsa village these locusts would appear and devour all the maize in the fields especially at the time that the maize was tasseling. She recalled the 1992 drought which she survived through with rice she received from her grandson *Jefure* (Jeffrey) who had ready access from his connections in Harare. As a result her household managed to go through that lean year reasonably well compared to other households in the village which survived on *hacha* in abundance that year.

Previously the uncertainty of the rains despite holding the *chipwa* ceremony and the number of years declared hunger years revealed that the villagers did not have total control of the weather or the rains. Even when they made pleas for rain from the ancestors they might still not get the rain.¹⁰¹ In the case of Gutsa village it appears that cessation of *chipwa* has been singled out for the poor rains being received. The consensus among the elderly women was that the most severe hunger in the village was in the 1990s when villagers had long stopped conducting *chipwa*. Consequently rain-making ceremonies are no longer performed due to a change in people’s belief systems (also see During, 1995, 88-89).

Attributing poor rains to loose morals

Loose morals in the village are also believed to be the reason the village is receiving poor rains as well as leading to the early drying up of water sources as the ancestors are said to be angry and are therefore withholding rains as punishment. Mbuya Tarai pointed out that previously water in the rivers and wells never used to dry up like what is currently happening in the village.

“Rivers used to flow now this is changing maybe this is because of evil things people are doing, you never know as people are no longer respecting each other like long back. People are changing the world, they are now just having casual sex

¹⁰⁰ Also see Barayazarra and Puri (2011) on crop failure caused by pests (bush crickets) among *Kenyah Badeng* farmers of Sarawak, Malaysia and Angara (1996) regarding the appearance of locusts among the Linga as a sign of a pointer to famine. Ndiweni and Ndlovu (2013) also pointed out that the appearance of locusts in large numbers has also been used to predict a drought year in Southern Zimbabwe.

¹⁰¹ For example Vijfhuizen (1997, 31) studying among the Mutema chieftaincy in Chipinge, Zimbabwe pointed out that men and women believe that ancestors keep away rain if chiefs have conflict and do not worship their ancestors together.

there, (pointing to Domboshava caves on the west of the village), and the world will definitely change”.¹⁰²

This was supported by Mbuya No who lamented the fact that people were taking photos of their naked friends and partners in the sacred Domboshava Mountains. The mountains are a popular tourist attraction and weekend outing place because of the caves and the bushman paintings there. The mountains had in years past been used for rain-making rituals by the villagers from Zimbiru who are the custodians of the mountain. Mbuya No pointed out that those things that were considered holy “*zvakapinginurwa nevanhu*”, (“they were made profane by people”). She also confirmed that in the early 1990s a number of young women in Domboshava had gone to Borrowdale suburb to have sex with dogs in exchange for money.

“Kwakaitwa makunakuna ekuti vanhu vairara nembwa, saka ingaite nyika ine hunhu”,

“Disgraceful things were done here as people had sex with dogs so can that be a country with virtues?”

As late as December 2014 with no meaningful rains having been received in the village I was making my way into town (Harare) from Charlotte Brooke in an eighteen seater *kombi*. On that day the animated conversation in the *kombi* was centred on the poor rains that had been received up to December 2014. The consensus in the *kombi* was that the lack of rains in the village was due to the defilement of the land as evidenced by the lack of morals among people (especially women). Some of the women were saying that they had seen a group of young women over the weekend of the 30th of November 2014 at the dam in Charlotte Brooke posing naked for photos. The group of women had come from the entertainment complex called Ochi City in Sally Mugabe Heights on the border with Charlotte Brooke. Ochi City houses a Lodge and the conversation turned into how Ochi City has become the hive of immorality. One elderly woman pointed out that:

“Vakadzi vasina kupfeka vanotengesa miri yavo kuvarume ikoko”

“Women who are naked sell their bodies to men there”.

¹⁰² Shona verbatim, “*Marukova aierera aya kasi zviri kuenda zvizichinja manje kana kuti zvitadzo zviri kuitwa nevanhu here, hameno vanhu havachatyananaka zvataiita kudhara. Vanhu vava kushandura nyika, vava kungonyengana nyengana munhingi umu nyika inochinja ka*”.

One chain smoking young woman from Charlotte Brooke was singled out as the most notorious one to frequent Ochi City. The conclusion was that women were selling their bodies and *vadzimu* were not happy and therefore there would be no rains until people changed their ways. Furthermore some elderly women in the *kombi* said it was surprising that women or these young girls would take a bath in an enclosed area, they would dress in the privacy of their bedroom. Surprisingly they would then emerge half naked into the public sphere. So they were saying it was better that these same women who preferred going around semi-naked would just bath and dress where everyone would see them! Despite these elderly women showing concern about dressing, covering up and morality, in my conversations with elderly women in the village they had indicated that they had grown up swimming naked with young boys in their villages. No one seemed to have been bothered about that at all. However Mbuya Tawira said nowadays that would be impossible due to the sex crazed young generation fed on a diet of pornographic material available everywhere.

Makunakuna in the form of incest has also been singled out as one of the major factors behind the changes in rainfall in the village. Mai Cha pointed out that *makunakuna* is a sign of the breakdown of the moral fabric. An example would be very close relatives in the village going to the extent of having sex with each other, impregnating each other and even becoming as bold as to marry each other. She went on to point out six examples of close relatives in the village that had married each other and were either continuing to live together or had married each other and had since divorced. She observed that it was traditionally known that:

“If there was incest the rains would not come. The remedy was to pay *mombe yechekaukama* (cow paid to dissolve an existing relationship).”¹⁰³

Even if the *mombe yechekaukama* was paid the incestuous couples were not allowed to live together. Mai Cha was of the opinion that nowadays things had changed as once the *mombe yechekaukama* is paid the incestuous couple insist on living together as they will be arguing that a sort of part payment for *roora* (bride wealth) has already been made. Furthermore, previously the offspring from the incestuous relationship would not survive but nowadays the same offspring grew up healthy. Due to this Mai Cha believed that the change in the weather and climate was a direct punishment from the ancestors and God. She stressed that the punishment should really strike people hard because God and the ancestors are simply

¹⁰³ Shona verbatim, “*Kukaitwa makunakuna mvura hayizonayi. Paifanirwa kubviswa kana cheka hukama.*”

watching the wayward behaviour of people. The best that the deities could do was to strike their people so hard by denying them rain so that they could repent from their evil ways as villagers had succeeded in making the sacred profane. The defilement of previously sacred places in the village and surrounding areas is also being blamed on the white garment apostolic churches. Members from these churches are known to frequent sacred mountains for prayer in the wilderness thereby making these areas profane.

Blaming the advent of Christianity on poor rains

As more and more people turn away from traditional religion and profess to be Christians, Christianity in the village is increasingly being blamed for the change in weather patterns in the village as people disregard the usefulness of traditional rites.¹⁰⁴ In Gutsa village due to Christianity, traditional observances such as *chipwa* and *chisi* which were supposed to be observed and were in a way responsible for favourable rains as well as giving deference and acknowledging the power of the ancestors/owners of the village over people's lives are being shunned and denigrated. In a way *chipwa* (rain-making ceremony) which was responsible for making the rains come on time is no longer held because of these churches which according to Mai Cha, "*ari kungonyuka kunge hohwa*" (are sprouting up like mushroom). Mbuya Tarai pointed out that if you tell people that we need to conduct *chipwa* to ask for the rains as it is responsible for the rains they will tell you that:

"You are lying there is nothing like that. Let's just pray, yes that will also come to an end, they (the ancestors) will say now let the rains come down then. Because you say *vadzimu* are not there, spirit mediums you disrespect, the one who is making the rains come do you know them?"¹⁰⁵

According to Mbuya Tarai since 1974 when my grandfather Ginatsio who had the rain-making spirit died, *chipwa* has virtually stopped in Gutsa village. So when my grandfather passed away no one continued with the practice as people had simply lost interest. With a voice that was full of emotion she recalled the power of the village who was so powerful to such an extent that first when *zviyo* (finger millet) which was to be used for brewing the beer for *chipwa* was spread on the rock he would come over there and the rains

¹⁰⁴ For During (1995, 88-89) drought can be associated with the changing culture and the impact of Christianity as people no longer worship their ancestors.

¹⁰⁵ Shona verbatim, "*Kunyeba hakuna zvakadaro. Ngatinamatei chete, ehe zvinogumawo ka zvinonzi chiinaisai tione. Nekuti munoti vadzimu hakuna, vadzimu muri kushora ka, ko ari kunaisa mvura munomuziva kuti ndiyani?*"

would fall down from the sky “*kunyika zviyo*”, “soak *zviyo*” even if the sky was clear! Having witnessed the power of the village rain-maker, Mbuya Tarai lamented the fact that *chipwa* is now history in the village as most people are now claiming to be Christians. However considering Christianity to have played a significant part in the demise of *chipwa* in the village is problematic as even those who say Christianity has played a part in the demise of *chipwa* were also noted beer brewers for *chipwa* and they still attended church/es e.g. Mbuya Tarai who attended the Salvation Army Church. Having settled in the village when the rain-maker had already passed away Mai Mizhu and Mbuya Tawira observed that they had never witnessed any rain-making ceremonies. Although Mai Njere came to settle in the village when the rain-maker had died she had previously attended some rain-making ceremonies in the village as she had been living at Chibvuti farm on the border in close proximity to the village. However some of the elderly women (e.g. Mai Mizhu) who came late for the ceremony recalled being asked to contribute towards the ceremony by giving mealie meal when villagers from Mashonganyika were holding their *chipwa* in the time after Ginatsio had passed away.

The elderly women in the study pointed out that nowadays lion spirits are no longer there. If you tell the young generation that “*kare kwaiyera*”, “long back it was sacred”, they will tell you that you are lying. The advent of Christianity has brought about the thinking that demons and evil spirit manifestations are the root of these beliefs and that they need to be liberated through prayer. Most villagers are now of the view that it is only God who is responsible for letting the rains come down when they are due and *chipwa* is a big lie. As Mai Cha put it:

“*Kare kaive kare zvino ndizvinowo ka zvava zvechirungu*”,

“Long back it was long back nowadays is nowadays, it is about being modern”.

When I asked Mbuya Ku why people were no longer holding *chipwa* despite the fact that there was evidence that the rains had completely changed from before, her response was that:

“Right now I don’t think there is anyone interested in *chipwa* all people now have rules from churches. So to find anyone willing to stand for it here there is no one.”¹⁰⁶

¹⁰⁶ Shona verbatim, “*Iye zvino handifungi kuti pane achada chipwa nekuti vanhu vese vava nemitemo yemachechi. Kuti pawane anozvimiririra ipapa hapasisina.*”

As a result of Christianity people are no longer interested in engaging in rain-making ceremonies because there is no one prepared to do it in the village as most people now profess to be Christians.

Lack of observance of chisi resulting in poor rains

Changes in rainfall patterns in the village are also being attributed to the lack of observance of *chisi* in the village. *Chisi* as noted by Mbuya Tarai was proclaimed many years ago in the village by the *svikiro* on the day that the elder of the area had passed away. In the village *chisi* is on Thursday and this day is announced by the village head when maize would have reached knee level, usually in January in a “normal” rainy season. In the 2014-2015 rainy season by mid-January 2015 I observed that the majority of the maize in the fields had not yet grown to the height of fifteen centimeters and therefore had not yet reached knee level. This was unusual as people had planted late due to the village having received rainfall late. If people had planted early in mid-November/late November or early December, by January most of the maize in the fields would at least have reached waist level or above and *chisi* would have been proclaimed early or in the middle of the month. Now since this was not the case, the announcement of *chisi* was delayed until the start of February. This then shows that in Gutsa village *chisi* is not fixed on its date but is rather dependent on when the rains have fallen and an “assessment” of people’s maize crop.

Regarding the concern about respect and observance of *chisi*, the elderly women in the study observed that progressively villagers had begun to disregard *chisi* as they had begun to regard it as backward and unproductive. This was compounded by the fact that there appeared to be no punishment befalling those who broke the *chisi* taboo when they worked their fields on that specific day. Previously punishment for those breaking *chisi* could come in the form of ravens chasing the errant villager from the field, crops being destroyed by *udyi* (pests that destroy crops) or as they were called by Mai Mizhu “*nezvikara*” (wild animals) as well as harmless lightning strikes that would strike objects like trees at the person’s homestead. For Mbuya Ku those lightning bolts that struck or killed people were not the *chisi* caution but they were brought by, “*vanhu vari kutsvaga mari nemishonga*”, “people who looked for money using harmful medicine.”. On her part Mbuya Tarai pointed out that:

“We used to keep *chisi* holy, we would not weed the fields, we used to follow the laws of the land, now others you hear them saying there is nothing we just weed

our fields, there are now too many churches around and there are some people who are hard headed”.¹⁰⁷

Mbuya Gone said that on *chisi* they were not allowed to weed maize but they could work the field very early in the morning to weeding ground nuts and round nuts and then leaving the field “*dova rapera*”, “when dew has disappeared”.

Speaking to elderly women who had come to settle in the village from other places (Mai Chota, Mai Njere, Mbuya Tawira and Mai Mizhu) their concern was that it is mainly the new comers to the village who are observing *chisi* more vigilantly than the originals. Having come to settle in the village Mai Mizhu said she never broke *chisi* in the manner that she had seen others around her doing as she did not want to break the laws of her new found home. Mai Njere said that the *Zezuru* (locals) were not afraid of breaking *chisi*. To her the foreigners had more respect for taboos compared to those who are the originals in the village. She said they would never behave like *maZezuru* who had the liberty to break laws because they are “*varidzi vemuno*”, “Owners of the place”. Since her place is located on higher ground *kuDongo* she has a vantage point as she sees the Western side as well as the greater part of Southern and Northern part of Lower Gutsa village. This way she can see who has got into their field on *chisi*.

Having grown up in Mhondoro village Mai Chota pointed out that on settling in Gutsa village she was surprised that in Gutsa village villagers would work in their fields on Friday which she described as the day for *chisi* for the whole country. She said Mhondoro was the place where the *svikiro* for the whole country lived and they had set aside Friday as the day of rest in Mhondoro. As a result of *chisi* being observed on a Friday in Mhondoro Mai Chota said this day was to be respected in the whole of Zimbabwe. Consequently she would respect the Thursday *chisi* for Gutsa village and the Friday *chisi* from Mhondoro where she had originated from.¹⁰⁸ She was further surprised to note that even on the Thursday *chisi* for the village some were so daring as to go to work the fields disregarding the village proclaimed *chisi*. Her concern was that as a result of the failure to respect the laws of the land people would die of hunger because it was taken by the ancestors as an indication that “*waguta*”, “you are now full”. So hunger would stalk the village gradually due to unfavourable rainfall until people moved away from their bad ways. Mai Chota pointed out that she would rather

¹⁰⁷ Shona verbatim, “*Taieresa chisi isu, hataisakura isu, taiteedza mitemo yacho, zvino vamwe unonzwa vachiti hapana tinongosakura chete, chechi dzawanda ka idzi kune vamwe vakaoma musoro*”.

¹⁰⁸ *Chisi* days differ according to regions and areas. In other regions in Zimbabwe *chisi* is observed on Wednesday, others observe Thursday while in other regions *chisi* is observed on Friday (see Makombe, 2013).

work continuously for two days in her fields than disobey *chisi*, specifically the one from Mhondoro. So she only goes to the garden when *chisi* is proclaimed in the village. Since she goes to an apostolic church which holds its church services on their *Sabata* (Sabbath day) on Sunday she has to rest on this day too. As a result in every farming season she cannot go into her field for three days, the *chisi* in Gutsa village (Thursday), “*chisi chepasi rese*”, “*chisi* for the whole country” in Mhondoro (Friday), and *Sabata*/church day (Sunday). The fact that she was left with less days to work was not a problem as she takes advantage of the long summer days by waking up early and coming back late from the fields to make up for lost time. As a result of their religious practices (especially the apostolic sect churches) with their Sabbath day (Friday, Saturday or Sunday) Mai Mizhu and Mai Cha do not work their fields on this day. Consequently they are left with only five days to work in their fields after observing *chisi* and their respective Sabbath days during the rainy season.

Poor rains attributed to removal of white farmers from commercial farms during the FTLRP

Another factor that has been attributed to general changes in the rainfall being received in the village is the removal of the white commercial farmers from their farms during the year 2000 Fast Track Land Reform Programme. Mai Njere indicated that since the departure of the white commercial farmer at Chibvuti just like with most of the white farmers throughout the district the rains have never been the same as there has been a noticeable drop in the quantity and quality of the rains being received. Furthermore there has not been any rain-making ceremony in nearby Ngwerume village which was perceived to partially explain the very drastic changes in the timing, quantity, distribution and cessation of the rains. Mai Njere who was born at, grew up in and was married and spent most of her married life at nearby Chibvuti farm before moving to Gutsa village in 1985 witnessed a number of *chipwas* over the years in the village. She pointed out that Chari the former white commercial farmer at Chibvuti was actively involved in *chipwa*. Chari would ask village head Ngwerume when he was holding *chipwa*. He would then buy a blue cloth, white cloth, black cloth and the *retso* cloth (cloth with red, black and white pattern) for the rain-maker in about October, thereafter he would be heard saying that he was going to request rain. She said the other farmer who was Chari’s neighbour to the East:

“*Aitobvunzawo kuti muri kuita riiniko Sabhuku hwahwa hwemvura*”,

“He would ask village head, when are you going to conduct the beer for rain?”

Mai Njere said she could testify to this as she had witnessed this when she had lived on Chibvuti farm. Ngwerume would then send someone to move through the farm with a sack collecting a cup of *zviyo* or maize from every household in Chibvuti farm and the nearby farm for the beer. He would request that villagers be fast in their contributions as the rain may run away from the villagers if they were tardy. The farmer at Chibvuti was confirmed to have on most occasions visited the sacred hill known as Madzimbawhe on his farm early in the mornings. A spirit medium from the area is believed to have been buried on this hill a long time ago. As the farmer approached that hill *kunopira vadzimu* (to plead with/worship the ancestors) he would remove his watch and shoes and approach barefoot.

Mai Njere indicated that:

“*Aaa, varungu vakaenda nemvura nekuti vaichengeta chivanhu*”,

“Aaah, the whites went away with the rains because they used to respect traditional practices”.

She believes that had it not been for the FTLRP the village could still have been receiving normal rains as the former white farm owners (especially the one at Chibvuti farm) made it a point to consult the local spirit mediums on rain. She attributed the manner in which the rains always came on time and in sufficient quantities to satisfy a normal farming season to the reverence given.

Poor rains blamed on presence of moskens and manyasarandi in the village

It is also evident that in instances where the rains do not come at the expected times residents in Gutsa village also begin to shift the blame onto certain segments of the population in subtle conversations.¹⁰⁹ However the original villagers would discuss this in private blaming other people (the outsiders) for bewitching the rains (but not the sun or the severe winters). This was done in private conversations as labelling someone a witch would surely mean having to face the law (either the traditional court or the common law). After a long stretch without rains in the village whilst other nearby villages were receiving rains in December 2014 villagers began to say that this was because there are a lot of people with *mushonga* (medicine for bewitching others) in the village. They highlighted that *manyasarandi* and *moskens* who had now settled in the village in large numbers compared to other nearby

¹⁰⁹ Whereas in Gutsa village residents would only accuse others in private for having caused the rain not to fall, Sanders' (2000, 477) however pointed out that these accusations were done in public among the Ihanzu in northernmost Iramba district in semi-arid North Central Tanzania.

villages (Mashonganyika, Chibanda and Ngoro which were getting rain) were desecrating Gutsa village rains.

In 2014 villagers were pointing to the fact that most of the time it would rain up to Nyaure River (the main boundary between Gutsa and especially Mashonganyika as well as the villages mentioned above). What made this worse were reports and observations of villagers who would see rain clouds forming in some other villages and stories of rain and people in those villages having started to plant for example in Makumbe village. Even the young people had begun to talk about this very unusual new trend. There had been light showers and the ground had been wet but people said they needed rains because they could not plant with these rains. Furthermore these light showers could not replenish water sources such as rivers, dams, boreholes and wells.

While his subjects were attributing the lack of rain to the presence of “*manyasarandi*” and “*mamosken*”, the village head was saying:

“*Kusanaya kwemvura haisi nyaya yemamoskeni. Ko kumosken hakunaye here?*”,
“Lack of rainfall in the village is not because of the “*moskens*”. In *mosken* (Mozambique) does it not rain there?”

Some elderly women in the village attributed the general change and unpredictability in the weather and climate to:

“*Zviratidzi zvenguva zvekuguma kwenyika*”,
“Signs of the times the world is coming to an end”.

Sabhuku explained that the poor rains being received were expected as the world was coming to an end and therefore “*kuzadzisika kwemagwaro*”, “fulfilling of scriptures” as the world was going to be destroyed by fire as had been prophesied in the Bible.¹¹⁰ He reasoned that since the world would be destroyed by fire there is no way people could expect rain to cool the world when fire was coming. So it was normal that the rains would reduce in quantity and the temperatures would rise as they were doing now (I discuss in detail general weather changes in the village in Chapter Five).¹¹¹

¹¹⁰ Schipper (2010) showed that religion (Christianity) was used to attribute climate change related events and changes to a chastising God among settlers in the lower valley of the Lempa river in eastern El Salvador.

¹¹¹ Attributing changing climate in Gutsa village as signs of a coming apocalypse and the response by God to inappropriate human behavior is also consistent with Boillat and Berkes’ (2013) observations among the Quechua farmers of Bolivia and Orlove et al (2010) in Uganda.

The rainy season forecast for the 2015-2016 season in The Herald edition on the 2nd of September 2015 was showing normal to below normal rains. The forecast which was on the main news bulletin on most radio channels and the TV station from the 3rd to the 4th of September 2015 indicated that the rains expected for the 2015-2016 season would be normal to below normal. The Meteorological Department office advised farmers that they should plant short season varieties of crops, small grains and spread their planting whilst practicing irrigation in areas with irrigation facilities. As villagers prepared and waited for the coming 2015-2016 rainy season on the 2nd of November 2015 some areas close to Domboshava received some very good rains. However there was no rainfall recorded in Domboshava and none in Gutsa village specifically. Although there had been very promising clouds in the skies no rain fell in the village. Some villagers began to blame the residents of Nyakudya who had held *chipwa* in October for lack of rains in Domboshava. I remember Mbuya Ku's eldest son expressing concern about the villagers in Nyakudya who had conducted *chipwa*:

“Why would they conduct *chipwa* in this day and age, things that were left long back? Right now the rain is not falling. Where they did not hold *chipwa* it is raining”¹¹²

As we were chatting with my elder brother and my father, my father said he had an argument with village head Chibanda recently regarding *chipwa*:

“I had an argument with village head Chibanda when he said your father (Ginatsio) was the one who used to make the rains fall, so why don't you conduct *chipwa*. I told him that I don't want to hear that because I am now a Christian”.¹¹³

As the village appeared to be readying itself for late onset of the rains in 2015, by 18 November no one had planted, Mai Njere reflected on the need to consider developing policing mechanisms in the village of customs and taboos. She said this was important considering the challenges (lack of rain) that the village was experiencing. This she said was important because villagers were not individually adhering to and respecting customs that had been put in place. It has mainly been the originals in Gutsa village who have been active in

¹¹² Shona verbatim, “Vangaite chipwa mukore uno zvinhu zvakasosiwa kare. Iye zvino mvura yaramba kunaya. Kusina kuitwa chipwa mvura yakanaya wani”.

¹¹³ Shona verbatim, “Ndakanetsana naChibanda achiti baba vako ndivo vainaisa mvura wadii kuita chipwa. Ndakumuudza kuti handidi kuzvinzwa izvozvo ndava kunamata”.

desecrating sacred places, taboos and cultural beliefs as they disregard the local taboos like *chisi*¹¹⁴, *chipwa*, incest taboos as well as retreating to pray in sacred mountains.

Conclusion

This chapter examined climate change in Gutsa village as experienced in the village by focusing on the narratives regarding *kushanduka kwemwaka*. In this chapter I have also demonstrated that there is a central vernacular meteorological theory in the village which is shared by both the young and the old as well as across the gender divide. The central vernacular meteorological theories seem to be different in their relevance compared to the ones offered by the detached Meteorological Department in Harare. In the village there is consensus that there are noticeable changes in wind direction, rainfall quality and quantity as well as temperatures. This is buttressed by the consensus that post-FTLRP the rains have been poor as the former commercial white farmers also practiced *chipwa* and cloud seeding with their small planes.

I have demonstrated the need to understand the relationship of people in their environment and how their actions (ranging from breaking of taboos to population densification) are the cause of the change in the climate of the village. As has been shown in this chapter it is those subjective explanations of the changes in the climate that are important in understanding issues of causality and attribution. However there is disagreement and conflict in attribution as people attribute climate change to a number of factors. In the face of this uncertainty, residents are increasingly shifting the blame for the lack of rains to outsiders (*moskens* and *manyasarandi*)

Elderly women as situated individuals in the village have an experience of their environment spanning a number of years and this has afforded them an opportunity to accumulate knowledge and an understanding of their local environment. Furthermore this chapter has demonstrated that conflict and perceptions about climate change in the village cuts across gender and age. Consequently as shown in this chapter in understanding climate change it is important to focus on the local level understanding of social reality and the contestation, contradictions and attributions about explanations of causality regarding climate change as experienced in the village.

¹¹⁴ *Chisi* as part of local knowledge systems is supposed to enjoin members of the community in Gutsa village to act within rules of thumb to maintain security and assurance, or else risk isolation from their community (see Nyong, Adesina and Osman Elasha, 2007). However this is not happening in the village as villagers (especially the originals) are losing respect for *chisi*. Lack of respect for *chisi* has also been cited by Risiro et al (2012) as a leading cause of change in rainfall patterns in Chimanimani district in Zimbabwe.

The chapter has further demonstrated the existence of diverse understandings and conflicting interpretations of weather-related phenomena. This diversity can be attributed to conflicting and incompatible ways of attributing causation to changes in climate, a result of adherence to Christianity, tensions caused by in-migration and increasing pressure to harvest commoditized resources for immediate sale and gain. On the other hand this chapter also points to the larger methodological and epistemological challenge faced by scholars to presume consensus in “traditional beliefs and customs” regarding the causes of weather patterns or climate change, the complexity and variety of understandings. This becomes equally problematic in the face of individuals’ struggles themselves to reconcile competing propositions.

Chapter 5

“We never used to have ground frost in September”: Impact of climate change in Gutsa village.

Introduction

This chapter examines the impact of climate change on the livelihoods of elderly female headed households in Gutsa village. The main research questions addressed in this chapter are: What is the impact of climate change on elderly female headed households in Gutsa village, Goromonzi District? How are elderly female headed households experiencing climate change in Gutsa village, Goromonzi District? As the chapter unfolds the key questions that are answered are related to understanding whether the climate has changed in the village, how it is experienced in the village and its impact on livelihoods of elderly female headed households. This is important as elderly women heads of households' livelihoods appear to be mainly related to their close interaction with the natural environment from where they get resources such as firewood, water for household use and vegetable farming perennially as well as crop production during the rainy season. Since the research question related to perceptions of climate change and causality has been addressed in Chapter Four this chapter will therefore not engage in that debate. In examining the experiences of rural female elderly heads of households with climate change I am aware that it is not only climate stressors that are affecting and will increasingly affect poor rural communities. These other stressors and pressures ultimately limit the adaptive capacity of these communities.¹¹⁵

Climate change impacting on rainfall patterns in the village

As I discussed in detail in Chapter 4 in Gutsa village there is consensus that the climate has progressively changed over the past years. As with most people in the village the indicators that these elderly women are relying on as pointing to evidence of climate change in the village is mainly that there is ample evidence of changes in rainfall in the village regarding its onset, distribution, quantity and cessation;¹¹⁶ changes in the wind patterns and direction of rainfall as well as changes in temperature. Regarding the rains, Mbuya No confirmed that these have gradually been becoming less and less over the years as rains currently being received in the village were markedly different than the ones received before independence in

¹¹⁵ See Nelson (2011).

¹¹⁶ Also see Orlove et al (2010) regarding knowledge of indigenous indicators of climate change in southern Uganda.

1980. To her in times past, when it rained one could easily see that these were good rains and there were no stories that the limited rain would make people hungry. She pointed out that:

“When we were coming from the war it rained rainfall which was described as scouring the blood. It rained so terrifyingly that people thought the rains would never come again. It was cleaning this blood”.¹¹⁷

When it rained in 1980 the rain washed away all the grass and it was good that it came when people had not yet planted because if that had not been the case then all the maize would have been washed away. Spirit mediums reported that the rain was washing the blood that had been spilt in the war as this was important in order to avoid people stepping on the spilt blood as this would have caused more diseases in independent Zimbabwe.¹¹⁸ Her account was consistent with other accounts from elderly people who were already in the village. The elderly women said they had never seen rain like the rain that fell at the start of the rainy season just after Independence in 1980. Although it rained well over the years, Mbuya No said that nowadays the rains could no longer be trusted as they seemed to have changed. Nowadays the rains were erratic as they would go away before their time sometimes even when the maize in the fields was just tasseling. Mbuya No pointed out that:

“The rain is no longer doing what it used to long ago, the way it really used to rain where you would know that we are in summer, right now it is constantly changing. Sometimes you say maybe since it has come early we also plant early, then it might stop raining and then it will be dry just like that. Long back you would know that once the rains came, you just planted and went ahead with your work”.¹¹⁹

Consequently the poor rainfall being received in the village is affecting food security and livelihoods of households headed by elderly women. The impact on food security due to poor harvests for these female elderly heads of households is related to changes in rainfall, water availability all year round as well as changes in growing seasons causing shifts in the

¹¹⁷ Shona verbatim, “*Kubva kwatakaita muhondo kwainaya mvura inonzi iri kupara ropa. Yakanaya zvakatyisa mvura iyoyo vanhu vakafunga kuti hatina ichanaya futi. Yaive yekugeza ropa iri.*”

¹¹⁸ Also see Lan (1985, 151) on the spirit mediums’ desire to avoid spilling blood as blood would have caused droughts.

¹¹⁹ Shona verbatim, “*Mvura haichaita zvayaiita kudhara manaire ayo chaiwo chaiwo ekuti maiziva kuti tiri muzhizha, izvozvi zvava kuenda zvichingosiyana. Pamwe unoti zvayakurumidza kunaya tokurumidza kudyara, yobva yamboti gwaa, zvotooma futi. Zvino kudhara maiziva kuti ikadzinga yaturuka yaturuka, kungodyara nekutoenderera nebasa mberi.*”

planting and harvesting cycles in response to the rainfall.¹²⁰ The disappearance of *jawhi* (rusty waters which accumulate in waterlogged areas) and the low levels of water in temporary rainy season ponds were also cited as examples of the impact of low rainfall levels in the village.¹²¹ Mbuya Ku pointed out that the rains had definitely changed as the rivers were no longer flooding and this was a positive development as previously it had been rare to go through the rainy season without hearing that someone had been swept away by the river, now this was no longer the case. Mai Chota also pointed out that the change in the rainfall pattern that was being witnessed had led to cessation of the rains called *maorera* and *mvumira mutondo*. *Maorera* would fall to make the maize stalks rot after harvest and *mvumira mutondo* would fall when *pfumvudza* (the new and tender leaves) was beginning to show. Mai Chota was concerned that now since *maorera* was no longer falling this was creating a lot of problems for the cattle as they could not get any water and even the maize stalks would be hard to chew compared to if *maorera* had fallen to soften the maize stalks that are used as a food supplement during the winter months.

Changing temperatures in the village

The elderly women confirmed that in the village temperatures were no longer predictable as there have been noticeable changes which have seen the winter period extending as the number of cold days increase. The numbers of hot days have also been becoming less although there has been a noticeable increase in temperatures in the village. As I pointed out in Chapter Four, increasingly lack of vegetation cover in the village which could have been working as a windshield is viewed by some as a positive development as the lack of trees is enabling the wind to blow unfettered and hence helping to cool down the increasingly high temperatures. On the other hand longer winters in the village have meant more cold days with cold days extending as far as September the month in which traditionally temperatures showed a noticeable increase. As a result for the very first time in 2014 in the village there was ground frost in September. Mbuya Ku pointed out that:

¹²⁰ 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.

¹²¹ Regarding the disappearance of *jawhi* and low water levels in seasonal ponds it is also important to reflect on Nelson's (2011) observations that the contribution of localized environmental degradation (e.g. cutting down of trees and building on *water chans*) also needs to be appreciated in assessing the pointers of the changes in rainfall in the village. For example the disappearance of *jawhi* could still be attributed to increased runoff due to the ongoing rampant cutting down of trees in the village. Consequently localised environmental degradation processes are on-going and would occur whether or not climate change was occurring.

“We used to say frost would be last seen in July, August would be shaking the leaves, now this year (2014) we got into August still in cold weather, and September is still cold again.”¹²²

Ideally in September people would be hiding from the increasingly intense sun by spending more time in the shade, surprisingly it was still cold late in September 2014 and 2015 with no sign of the normal hot weather. October of 2014 was also singled out by Mbuya Gone as uncharacteristically cool as people were still wearing jerseys in the mornings with most people still sleeping whilst fully covered with blankets. This she said was not typical of October as most people used to sleep without any blankets whilst also avoiding cooking indoors but preferring to cook outdoors avoiding the heat indoors. However during the Octobers of 2014 and 2015 people were still wearing warm winter clothes that they would normally have discarded at the end of July.

Impact of climate change on agro-based rural livelihoods

In Gutsa village where livelihoods of elderly women heads of households are mainly dependent on the weather, very close attention is paid to the vagaries of nature as it determines whether there will be hunger or not and whether people would have an income or not.¹²³ Currently the village is witnessing significant shifts which are seeing the rains arriving several weeks late, and the usual mid-season dry spell increasing from two or three weeks to about six weeks. In the village elderly women pointed out that there are increasing incidences in which the rains failed to come on time. Furthermore there was evidence that for a number of years the mid-season dry spell had shifted too and appeared to have extended with more days beyond the normal two weeks. For example in 2015 the mid-season dry spell extended for close to four weeks in March in the village with most maize suffering severe moisture stress beyond recovery point.

Elderly female headed households in the village are increasingly facing food insecurity due to reduced harvests mainly caused by poor rainfall. Over the past years the unreliability of the rainfall received in the village is increasingly affecting the capacity of the elderly women to adequately make plans for farming activities contributing to reduced harvests. For example Mbuya No in the 2012-2013 farming season harvested only six fifty

¹²² Shona verbatim, “*Taiti chando chinopedzisira kurova muna July, August anenge ava kutanga kuzunza mashizha, zvino gore rino takasvika muna August tiri muchando chete, September ari kungotonhora futi.*”

¹²³ Observations by Mushita and Andrews (2013,2) show that in Zimbabwe, the current rain-fed arable land will need irrigation from diminishing surface water sources due to the impact of climate change.

kilogram bags of maize which she attributed to the poor rains received that season as well as a lack of inputs. During that period she had more people living in her household than at present as her recently divorced granddaughter had moved with her two young children to live with her. As a result that year's harvest failed to see her through to the next harvest forcing her to buy maize later to cover the shortfall.



An elderly woman taking a break from sowing maize in her ploughed field.

The lengthy rain season dry spells being experienced in the village are also affecting the taste and quality of the maize in the fields. In March 2014 on my way from town I passed through Mbuya Ku's homestead to exchange some pleasantries. As I was leaving she gave me some cobs from her field located behind her grass thatched kitchen while resignedly saying:

“Ndizvo zviru mumunda”,

“This is what is in the field” (referring to the poor cobs from the field”).

During that time the maize was showing evidence of severe moisture stress as the rains had not come down for close to three weeks. The maize in the village was just firming up now but

the lack of rains was affecting its taste with some maize already drying up as if in preparation for harvesting even though it had not grown through the process of firming.¹²⁴ This had an impact on the yields from the fields of elderly female heads of households whilst also affecting the quality of the harvest. This has meant that climate change is affecting food security in female elderly headed households in Gutsa village just as in most households.¹²⁵ As a result existing inequalities in the village will see the impact of climate change playing out onto existing patterns of vulnerability in the village thereby making patterns of inequality more pronounced. This is evident in the case of female heads of households who are already strained by factors such as poor health which limits their productivity. Productive capacity is further affected by the challenge of perennially missing out on the free agricultural inputs that come to the village and obligations that draw them away from their homes and ultimately their livelihoods. All this is working to increase elderly women's vulnerability to the impacts of climate change in the village. For example where elderly women heads of households fail to acquire and apply fertilizer which is sorely needed in the village considering some of the sandy soils in the fields (majority of the fields of the elderly women) this will definitely affect the yields from their fields. In such instances the yields will be very poor whether there is climate change or not.¹²⁶

The year 1992 drought was described by some elderly women as having been a total disaster in the village due to the poor rains received that year. Having settled in Gutsa village in 1985, Mai Mizhu took time to reminisce on this drought year. She said due to poor rains received that year and as the maize wilted in the sun, her household survived by eating "*muboora*" (pumpkin leaves) and pumpkins which she would cook in a small ten litre drum. Her relish was the *muboora* with the pumpkins replacing the staple *sadza*. Unfortunately most of the pumpkins in the field were stolen but she also shared them with others who would come to request the pumpkins. She was glad that no one died because of the severe

¹²⁴ 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 a climate change induced situation as similarly experienced in Gutsa village is bound to affect rural elderly women heads of households as their major livelihood activities are agro-based and therefore increasingly making them vulnerable in the face of projected erratic rainfall activity.

¹²⁵ Just as in Gutsa village, Nelson's (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.

¹²⁶ By drawing these conclusions I am also aware of Nelson's (2011) argument that by focusing on climate change it is not always easy to separate the climatic and non-climatic factors at work and which are creating change in a particular place. This is very important as by focusing on the impact of climate change on elderly female headed households in the village there are other multiple factors that could be contributing to their vulnerability in the face of climate change.

hunger and also that none of her livestock died as the cattle managed to survive that lean year despite the lack of pasture and water. She 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 she always planted with the first rains despite it being a big gamble which somehow always paid off. As the impact of climate change continues to be felt, elderly women heads of households increasingly have to shift planting dates in response to changing rainfall patterns and the unreliability of the rains.¹²⁷

Elderly women like most villagers prefer to plant maize when the village has received “enough” rain. However over the past few years waiting for “enough” rain is increasingly proving to be a challenge due to the unreliability in the commencement as well as in the quantity of the rains. Having lived in the village since the 1940s Mbuya Ku was very certain that the rains which had changed in their onset, cessation, distribution and quantity had significantly affected the timing of planting in the village. She pointed that:

“Rain is no longer falling down as it used to long back. Right now when it comes down to mark onset and if you fail to plant with the onset rain, you will only be able to plant with the December rain. However the crops planted in December are not of much use”.¹²⁸

In 2014 a number of households were affected by the unreliability of the rains leading to some households losing seed after being forced to replant their maize as maize planted with the October rains failed to germinate.¹²⁹

The high levels of rainfall variability in the village have led Mai Njere to point out that the rains are no longer predictable and follow no observable pattern as before. She pointed out that people in Lower Gutsa did not have cattle and generally found it difficult to find money to pay to have fields ploughed. Villagers therefore adapted and planted early with

¹²⁷ Studies by 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 climate change. In rural Hausaland long term planning for households affected by climate change is made difficult as 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).

¹²⁸ Shona verbatim, “*Mvura haichanaya manairo ayaiita kare. Izvozvi iri kuti ikanaya ikaturuka, mukatadza kurima naiyoyo motozorima December. Zvino chikafu chaDecember hachina basa.*”

¹²⁹ Observations by Iglesias et al (2007) cited in Murali and Afifi (2014, 28) show that dwindling agricultural productivity interacts with a range of escalating stresses on rural livelihoods ranging from land pressure, soil erosion, deforestation and depleted water resources that would not otherwise exist regardless of climate change. In the case of Gutsa village the dwindling agricultural productivity that the elderly female heads of households are grappling with could also be related to these associated stressors. For example depleted water resources would still have come in the wake of siltation as well as a depletion of water resources due to limited infiltration of rainfall caused by loss of vegetation cover in the wake of the rampant cutting down of trees.

the first rains or by either practicing dry planting or zero tillage for maize planting. As a result she pointed out that generally maize for people in Lower Gutsa matured earlier, affording them the chance to eat green mealies earlier than people in Upper Gutsa who mainly waited to plough their fields. As a result of this it was the norm that people from Lower Gutsa were the first ones to harvest and spread their not yet dry maize on the rocks to dry so that they would send it to the grinding mill for mealie meal. Despite this known advantage, people in Upper Gutsa have not imitated this practice of dry planting or zero tillage practiced by people in Lower Gutsa.

Mbuya Gone could not forget the 1992 drought and the hunger that followed as people ate “*Kenya*” (yellow maize). She recounted how during that year people would wake up very early to go and buy cabbages and buns at Tichas’ shop at Showgrounds. Then Tichas preferred baking buns and not bread at his bakery. Mbuya Gone noted that:

“People would wake up very early in the mornings to go and queue there and buy buns and cabbages. The buns would replace *sadza* and then use the cabbage as relish with the buns”.¹³⁰

Impact of climate change on flora and fauna

In Gutsa village the impact of climate change is depicted by the changing behaviour patterns as well as sightings of both flora and fauna. The fruiting patterns of some flora have been the predictors and markers of the weather. In the case of fauna climate change has affected the migration, behaviour patterns as well as sightings of birds and insects which are seen during the rainy season. These range from the late sightings of birds such as *nyenga nyenga* (swallow), *shuramurove* (Abdim Stork) birds to the confirmed increasing challenge of *zvipfukuto* (weevils), and to late sightings of insects which are considered delicacies in the village namely *ishwa* (flying termites), *dzambarafuta* (flying ants) and *mandere* (chafer beetles).

The elderly women complained that the increasing temperatures in the village have contributed to the challenge of weevils in the village. When I first visited Mbuya Ku’s homestead she was busy moving her maize from the grass thatched kitchen to the asbestos roofed bedroom. She complained that the kitchen was now a bit warmer because of the fire in the hearth as well as the gradually increasing temperatures of August. Therefore it would be

¹³⁰ Shona verbatim, “*Vanhu vaimukira kuenda kunoforera ikoko votenga mabuns nemacabbage. Mabuns ndorava sadza voseva buns necabbage.*”

better if the maize was to be placed in the cooler bedroom. In addition she planned to buy *Chirindamura* (Actellic Super Dust) regarded as one of the best insecticides used by most villagers against weevils. Previously like most villagers she had stored her maize in an outside granary which was built on stilts. Unfortunately like most villagers she had to stop the practice of storing her maize outside around the early 1990s due to increased risks as more and more people were having their maize stolen from these outside granaries.

Birds which are seen in the village as the rainy season approaches are namely *haya* (yellow-breasted barbet which is known as a rain bird and is said to only drink water from tree trunks) is usually heard singing as the rainy season approaches, *dendera* (ground hornbill) migrates and sings with the approach of the rainy season), *nyenga nyenga* is seen in the village with the approach of the rain season, *shuramurove* is seen in the village during the rainy season when *mubvumbi* (incessant rains) are about to begin. *Shuramurove* means (*shura*-harbinger) and (*murove*-moisture on the walls), *shuramurove* becomes the harbinger of moisture/incessant rains.¹³¹

There are also a number of signals in the village that the elderly women rely on to mark the changes in the seasons. One of them as pointed out by Mbuya Gone is the wind that is characteristic of August which resulted in the month being named *Nyamavhuvhu* which had not yet begun to be felt in September 2014. According to her this was also the case in 2013 and the August of 2015 was no different as it was also very still and calm. Mbuya Tawira said that one of the markers that they use to know during the normal August was that all the dead leaves would have been blown off the trees until the trees are just bare twigs. Thereafter when *munhondo* (*Julbernardia globiflora*) and *misasa* (*Brachystegia spiciformis*) have *pfumvudza* (the new and tender leaves) then you know that the seasons have gone and the rainy season is now near. Mbuya Gone pointed out that it is firstly the *mikute* trees that will begin to show green leaves.

In the village some wild fruits are disappearing as a result of the impact of climate change as well as the rampant cutting down of fruit trees and the yearly veld fires which affect the regeneration of the young trees. Mai Reni noted that the partial disappearance and lack of *nhunguru* (Indian plum) in the forests was also a sign that the weather had changed towards increased aridity indicating that the “*hunyoro*”, “moisture” was not moist to the deep levels that it previously had been.

¹³¹ Also see Mararike (1996) regarding knowledge of birds and animal behaviours that correspond to different seasons in Zimbabwe.

Table. 3 Birds which indicate the weather

<i>Bird</i>	<i>Time seen</i>	<i>Meaning</i>
<i>Dendera</i> (ground hornbill)	<i>Rainy season</i>	If you hear it crying/calling out <i>mubani</i> (veld) then you know the rains are very near
<i>Haya</i> (yellow-breasted barbet)	<i>Rainy season</i>	<i>Marks the onset of the rains.</i>
<i>Nyenga</i> (<i>Nyenga</i> swallow)	<i>Rainy season</i>	<i>The rainy season has commenced</i>
<i>Shuramurove</i> (Abdim Stork)	<i>Rainy season</i>	<i>Mubvumbi is about to commence</i>
<i>Tsodzi</i> (Yellow-bellied sunbird)	<i>Onset of the rain/Rain about to come</i>	<i>The mouth of its nest is always made away from the direction of intense rain.</i>

Table. 4 Insect/Animals which indicate the weather

<i>Animal/Insect</i>	<i>Time seen</i>	<i>Meaning</i>
<i>Dzvatsvatsva</i> (sun spider)	<i>Rainy season</i>	<i>The rains are now near</i>
<i>Zongororo</i> (millipede)	<i>Rainy season</i>	<i>Only sighted during the rainy season</i>
<i>Hamba</i> (tortoise)	<i>Rainy season</i>	<i>Only sighted during the rainy season</i>

Water sources impacting on elderly women looking for water for domestic use

As a result of the early drying up of the various water sources it has become increasingly difficult for both humans and livestock to get water in the village. Communal wells and wells located at people's homesteads are increasingly drying up earlier and faster in the village as a result of the impact of climate change. This is related to poor rainfall as well as the late commencement of rains. Mai Reni pointed out that the poor rains being received in the village are sufficient to keep people and livestock alive but not sufficient to allow crops to reach full maturity. When Mbuya Tawira's well had unusually dried up at the end of September 2014 she had to endure the task of drawing water from her neighbour's well. She had to do so as she could not afford to allow her vegetables to wither as she had children to feed.

Before Mbuya No's two wells that had been dug earlier in her yard had collapsed she never had problems in accessing water for use even in the severe heat of the dry season. Most villagers would come to her homestead to fetch water from her well. Now Mbuya No's newly dug well is drying up earlier although its depth is the same (eight metres) as the previous two wells. In 2013 the new well dried up in November while in 2014 it was dry by mid-October. When this happened she was forced to fetch water at the communal well. As the grandchildren she is currently living with are very young she is sometimes forced to go to the well with a small jug which she carries in her hand as she can no longer bear the weight of a twenty litre water container on her head. Even fetching water using this small jug is a big challenge for her when she goes to the well as she still has to carry her walking stick due to her leg which is always in pain. She is only spared this task when her grandson who lives nearby is around as he goes to the well with a wheelbarrow to fetch water for her.

Mbuya Ku is no longer able to go to the well at all with the standard twenty litre buckets that are used in the village. On the rare occasions she goes to the well she can only go with a five litre container. As a result Mbuya Ku's eldest daughter has to leave her home every day very early in the morning to fetch water for her, usually fetching two twenty litre buckets. Around four in the morning one can hear dogs barking along the route that she uses to her mother's house. Her granddaughters who are living in her yard also fetch the other buckets of water needed in the home when they return from school during school terms. During interviews in September 2014 Mbuya Ku pointed out that water had increasingly become a problem as people were returning from the well with unwashed buckets of laundry. Mbuya Ku pointed out that:

“Long back if you saw water from the well showing signs of getting finished, onset of the rainfall would be around the corner. You would hear people saying water is now being enticed by the rain in the sky.”¹³²

Mbuya Ku recalled the 1992 drought season; she recalled that people from Gutsa village ended up going to fetch water at the wells in Mashonganyika village as the village wells in Upper Gutsa had all dried up. To maximize on drawing water from the well, people would fetch water and hide it in the nearby bushes and then ferry it home later. She also pointed out that in 1973 water was a problem; as a result the water that people used at her husband's

¹³² Shona verbatim, “*Kare waiti ukaona mvura yoda kupera mutsime mvura yemudenga yava kuuya. Wainzwa zvichinzi mvura yava kutorwa moyo neyekudenga.*”

funeral that year was fetched from Mashonganyika village. By November of 2014 during the course of my field work and officially marking the third time in Mbuya Ku's living memory, residents from Upper Gutsa were using this well, as the wells in the village were almost dry. The nearby well then was the one located on the banks of Nyaure River at the crossing point that separated Gutsa and Mashonganyika villages.

While other communal wells were drying up the communal well that Mai Njere draws her water for domestic use from has never dried up since she settled in the village in 1985. Mai Njere and Mai Chota said the wells in Upper Gutsa are drying up faster than those in Lower Gutsa as people residing in lower Gutsa are mainly *vaenzi* and hence still observing customs related to the wells compared to the originals in Upper Gutsa who appear to disregard these. Mai Njere pointed out that wells are not cleaned by young girls, those with children or those who are breastfeeding as they are only supposed to be cleaned by elderly women.

In October 2014 the well she draws water from was cleaned by one of the elderly women who live in Lower Gutsa. Unfortunately the gourd that was used to scoop water from the well was broken by baboons about eight months before my first interview with Mai Njere and no one had replaced it. Living in Lower Gutsa, Mai Njere noted that there was really no one who was responsible for policing whether people were following these customs at the wells or not. However people policed themselves due to the fear that the wells might dry up if they failed to respect long standing customs related to their use.

In Mai Mizhu's household, usually when the well near her home dries up around October they fetch water from Barwo's place who lives in Charlotte Brooke as she takes advantage of the proximity of her home to the border of the suburb. Barwo drilled a borehole at his residence in 2013 so a number of villagers living close to his home usually fetch water from there. The boys in her household are responsible for fetching water from this borehole using a wheel barrow which she bought in response to the water challenge.

As water bodies in the village are increasingly drying up early due to the impact of climate change it is also important to point out that there are some factors that could be contributing to this early drying up. These range from the increased siltation of rivers attributable to the ongoing deforestation in the village and the loss of grass cover due to the veld fires which sweep through the village in about October as people prepare their fields. This siltation has also resulted in the increased drying up of water bodies and all this is happening and being compounded by climate change.

New gender relations emerging in response to access to water

In the village there has emerged a new trend which is now widely gaining traction in response to the experience of villagers failing to get water on demand from the communal wells. This has seen wheelbarrows being used to ferry water for domestic as well as other uses by residents. Previously it was mainly women who would fetch water from the wells and carry the water in twenty litre buckets which they would delicately balance on their heads as there was no strain on the communal wells almost all year round. Now with the increasing strain related to accessing water from the communal wells and in the backdrop of the availability of wheelbarrows (mainly cheap Chinese models) at people's homesteads, more and more women are using wheelbarrows to fetch water from these same wells. Women are using this as a strategy to avoid making multiple trips to fetch water where ordinarily one is forced to wait longer at the well for water.

Growing up in the village a wheelbarrow was a luxury asset as there were only about three in Upper Gutsa with almost the same number in Lower Gutsa. Currently almost half of the households in Gutsa now own a wheelbarrow. The ubiquity of wheelbarrows in the village has therefore meant that women or households with access to wheelbarrows either through direct ownership or borrowing from neighbours are slowly changing their water fetching techniques. As a result women no longer carry one bucket at a time on their heads, but can now carry up to three buckets or *zvigubhu* (water containers) simultaneously using a wheelbarrow. This has greatly helped to reduce the number of trips that these women make to the wells. Furthermore fetching water for domestic use is now no longer solely a woman's task as men are now helping from time to time as they find it increasingly easy to help to push the wheelbarrows compared to carrying these same buckets on their head. The elderly women I talked to indicated that when they grew up it was unheard of to see men fetching water from the well, let alone carrying buckets of water on their heads as this was a task reserved for women. As a man being seen carrying a bucket of water or a load of firewood on one's head is seen as reflecting that one "*akapfuwhirwa*" (who had been given a love potion).

As the water challenges deepened by end of October 2014, some residents in the village were now fetching water from the dam in Charlotte Brooke every day for their poultry and pigs with cars or scotch carts rather than having to wait for water at the wells. Therefore the ubiquity of wheelbarrows in the village has worked to transform gender relations as men and young boys are helping their women to push buckets of water in wheelbarrows for domestic use. In some instances men accompany their wives to the wells to help push the wheelbarrows. However I have also seen a number of men and young boys going on their

own to fetch water for domestic use with some women completely withdrawing from this chore. I have also seen some of these elderly women's grandsons Shame (Mbuya Ku's grandson), Eden (Mbuya No's grandson) and Baba Shepa (Mbuya Tarai's grandson) using wheelbarrows to fetch water for their grandmothers. When men use wheelbarrows to fetch water for domestic use it is not regarded as feminine in the same way that carrying these same buckets on their heads would be for the same uses in the household.

Low water levels in the village affecting vegetable production

It appears female-heads of households tend to have fewer resources to cope with and adapt to the different stresses they experience, they are more prone to suffer from the impacts of climate change as they rely more on climate sensitive resources and livelihoods.¹³³ This is more the case in the study village as elderly women rely more on rainy season farming and vegetable gardening both of which are sensitive to the performance of the rainy season as well as the continued availability of water throughout the year. Mai Mizhu used to actively grow vegetables in her garden located almost eight hundred metres away from her homestead. The area where her garden is located is very fertile as it has dark grey clayey soils with a lot of *mikute* trees which are regarded as a sign that indicates a lot of water close to the surface in the village. She has however stopped farming in her garden in the dry season and has allowed one of the ladies from the village to use a portion of her garden. In the dry September of 2014 the water level was very low making it labour intensive and close to impossible for her to extract water from the well in the garden to grow vegetables. She even pointed out that one of her sons Misheck gave up the hope of growing vegetables in that garden:

“Even my son Misheck grew tomatoes; however the water is not there. The wells are dry in the garden, there is no water. Tomatoes are maturing, but there is no water”.¹³⁴

Her other grandson who attempted to grow onions was also disappointed as these wilted due to the lack of water in the same garden.

From the study it appears that due to the impact of climate change there have been some changes in the cropping patterns in the gardens that elderly women grow their crops in outside the summer period. For example Mbuya Tarai pointed out that aside from planting maize in her field she previously used to plant maize in her garden early and thereafter would

¹³³ See Nelson (2011).

¹³⁴ Shona verbatim, “*Kana mukomana wangu Misheck akatoisa madomasi, manje mvura yacho hakuna. Matsime awoma mugarden, hakuna mvura. Madomasi akabereka, asi hakuna mvura.*”

water the maize to be consumed early during the rainy season. In the same garden Mbuya Tarai would also grow some vegetables to be eaten by the family throughout the year. This was a huge advantage as she would be eating green mealies earlier than other residents in the village. However she pointed out that planting maize early in the garden around the end of September to early October was a double problem as the maize would ripen early thereby forcing her to guard the crop from the baboons. This on top of watering the crops that was necessary to keep the maize going until the rainy season had begun. The well at Mbuya No's home never used to go dry thereby affording her the chance to cultivate some vegetables for own consumption all year round and therefore not having to worry about money to buy vegetables for relish. Now this has become a big problem as she has to constantly look for money to buy vegetables.

Mbuya Ku also used to grow tomatoes and leafy green vegetables in her garden which was located close to her home. However this garden has been parceled out by her sons and sold to some outsiders who have now settled in her former garden despite the fact that the area was previously waterlogged in the rainy season. When her children were growing up the garden was very useful as it helped her to raise some of the fees for her children. As time passed the well in her garden dried up and she ended up growing the vegetables in the garden of her late husband's elder brother opposite her garden. Her well also dried up as the *jawhi* was drying up there. This is the same place that she used to grow rice which she has now stopped growing. Unfortunately the well that had been dug at her home had dried up in 2012 forcing her to stop growing vegetables there too. Now she has to buy vegetables as and when she needs them.

Mbuya Tawira pointed out that she does not grow vegetables solely for consumption but that she has to sell most of the vegetables to make ends meet. However she pointed out that the low water levels and no water in the well at her home attributed to poor rainfall in the village has meant that she has to significantly reduce the amount of vegetables she grows between September and late November. During the rainy season she grows vegetables for sale too.

“When it is raining onions like those ones over there you can uproot them and go and sell at those tuck shops in Charlotte Brooke.”¹³⁵

¹³⁵ Shona verbatim, “*Kana mvura ichinaya semaonion arimo ayo, ayo unogona kudzura uchienda kunotengesha, kune mashops apo muCharlotte Brooke*”.

She usually stops selling her garden produce in August when there is still some lingering moisture in her garden as the well will be dry by the end of September. When the green vegetables are in excess she usually dries them to later consume as *mufushwa* (dried vegetables). This is consumed as relish when later during the course of the year the low water levels force her to stop growing vegetables in her garden. For Mai Chota her all year round vegetable gardening is progressively being affected by low water levels which since 2013 and through to 2015 forced her to reduce the number of vegetable beds in the intense heat from September through to November. Although Mai Njere does not have a garden separate from her main field to grow vegetables, she still grows vegetables in her field during the rainy season taking advantage of the rainfall. For the greater part of the year she has to rely on buying vegetables at the standard village price of five rand/US\$0.50 a bundle. The delay in the onset of the rains, its early cessation as well as uneven distribution and the amount of rainfall forces her to pay more money when having to buy vegetables in response to the erratic rains.

For Mbuya Gone who is perennially involved in vegetable gardening, water in the well in her garden is also becoming a problem. She complained that those with gardens near hers were using petrol powered water pumps to draw water from the wells in their gardens. This she said was affecting her access to water in her garden. Consequently she had to reduce the number of vegetable beds she had in response to the early drying up of her well which she said was being caused by the poor rains as well as the *engines* near her garden. Despite facing these challenges Mbuya Gone pointed out that in comparison to others she was better off as she could still draw water from the small dam just outside her garden. However she still complained that:

'Idzo engine idzi manje dzikadhonza dhonza mvura inobva yapera mudhamu macho'.

"These "engines" (the name for petrol water pumps in the village) when they draw water it ends up being finished in the dam".

Previously many of the villagers who were not growing vegetables at a large-scale were using *chitsoka tsoka*, (treadle pumps/foot pumps) or using the labour intensive and time demanding procedure of hauling water from the wells in the gardens or along Nyaure River using twenty litre buckets. However the introduction of these cheap Chinese motorised water pumps in the face of climate change has meant the intensification of water extraction as villagers become

more efficient at extracting water from the various water sources in the village. Before the introduction of the motorised water pump it was possible to practice all year round farming. However now it is impossible as the efficiency in extraction has ended up drying the water sources earlier (September/October) as people intensify extraction of water while increasing the areas under cultivation of garden produce. Even if these water pumps help their owners they are still a problem for Mbuya Gone as she cannot compete with these *engines* by manually drawing water with a twenty litre plastic bucket from the well in her garden. So she reasoned that if everyone was using a “jug” (the twenty litre plastic containers) to draw water there would be no shortages.

“Ikapera mvura nezvigaba zuva rodoka inenge yavamo asi neengine dai yakapera kare”.

“If the water is finished by drawing with those buckets towards sunset there will be water again, but with these *engines* the water would have been long finished.”

In response to low water levels the elderly women who are into perennial vegetable gardening have now shifted from selling their vegetables in Hatcliffe, Showgrounds and Mbare Musika markets due to the progressive decline in output over the years. Because of the lower output it is no longer making economic sense to transport the vegetable produce to these markets further afield. Their major market is now Charlotte Brooke suburb which borders Gutsa village. Mbuya Gone however lamented the fact that the development of Charlotte Brooke has really been a curse to her efforts to make a living as the residents in the suburb do not pay cash on delivery as they create a credit tab and only pay in their own time. Mbuya Gone pointed out that if one has a lot of vegetables it makes a lot of sense to go *kumusika* as you will come back with all your money in a single trip. The problem now is that in Charlotte Brooke when one has gone around selling their vegetables they are assured of coming back with no vegetables as all the vegetables will have been bought, but the cash will not be in hand. So after delivering her produce to individual residents she collects her money on the dates she would have agreed with individual residents. As I discussed in Chapter Two Mbuya Gone is forced to supply these same residents on credit again even when they still have not settled their accounts. She justified the situation by rationalizing it with the statement that these are signs of the hard times people are living in the country as money is hard to come by these days.

Changing crop patterns in the fields

In the face of climate change the practice of parceling and selling of land in Gutsa village is also affecting access to land by elderly women headed households as this leads to a reduction in the size of productive land under their ownership. An example here is the case of Mbuya Ku's field which previously used to be her all year round vegetable garden which was parceled and sold by her sons. Unfortunately she never got a single cent from the land transaction.¹³⁶ However such practices in the face of climate change can potentially affect elderly women's productivity as productive land is taken away from them.¹³⁷ This impact on agricultural production is set on a backdrop of changing temperatures (higher or lower temperatures) as well as significant changes in precipitation. The staple crop grown in Gutsa village is maize which is then made into *sadza*. As a result the concern among elderly women was related to the poor production levels of maize in the village in the face of climate change. With the backdrop of poor rainfall and low production levels of maize in the village in mind, Mbuya Gone resignedly said that:

“It is God only who knows what he will do. We will not die though. *Sadza* is important because if there is no relish we can eat it just like that.”¹³⁸

Mbuya Tarai recalled that in the village life had been extremely difficult for those without maize before the dollarization to such an extent that a bucket of maize was going for the equivalent of US\$25. Mbuya Gone also pointed out that between 2006 and 2008 newly resettled farmers at Chibvuti had been going to Mt Darwin where they had exchanged a fifty kilogram bag of maize for one cow or bull. At that time a goat was exchanged for a ten kilogram bag of maize with a gallon of maize (a five litre container) being exchanged for a chicken. The typical barter equivalent is usually one cow or bull for at least six fifty kilogram bags of maize while a goat is usually exchanged for at least a fifty kilogram bag of maize.¹³⁹

Mbuya Tarai lamented the fact that most of the crops that used to be grown in the village are no longer grown as villagers prefer growing maize despite it being a high water demanding crop. She pointed to a number of crops that do not require a lot of water to reach full maturity which previously used to be grown in the village. These crops like *zviyo*,

¹³⁶ Observations by Gaidzanwa (1994, 15) show that due to the patriarchal nature of Zimbabwean society, widows sometimes have to put up with disadvantages related to land rights entitlement.

¹³⁷ See Molua (2008).

¹³⁸ Shona verbatim, “*Iye Mwari ndiye achaziva zvaachaita. Asi hatife hedu. Sadza rakakosha nekuti muriwo ukashaika tinongoridya zvakadaro.*”

¹³⁹ Evidence shows that in areas that have experienced crop failures, the exchange value of livestock also tends to go down in crisis sales (Brown et al, 2012). Disposing of livestock as a coping strategy is also a blow to livelihoods (Chimhowu, 2002) as livestock is an important store of wealth for rural farmers.

mhunga (bulrush millet) and *mapfunde* (sorghum) were no longer grown in the village despite *sadza* from these crops being regarded as very healthy. Villagers also used to eat *nhopi* (mashed pumpkin), *rupiza* (roasted cow peas), *sadza rezviyo* (*sadza* made from finger millet) and *sadza remapfunde* (*sadza* made from sorghum). Now people were only eating *sadza* made from maize without consideration given to *sadza* made from *zviyo* or *mhunga*. For Mbuya Tarai the movement away from these crops has also meant that the local seeds have been lost as there are no longer any local seed banks making it difficult if not impossible to obtain small amounts of *zviyo* locally to brew beer for traditional ceremonies such as *kurova guva*.

“Tava kungomirira chibahwe chete. Kana mbeu yese yataisiita yese hakusisina yakarova.”

“We are now growing maize only. Even seed that we used to have we no longer have any as it is now non-existent.”

All the elderly women heads of households in the study are no longer growing *zviyo* with the exception of Mbuya Tawira *muuyi* who still grows *zviyo*. She grows *zviyo* on a very small-scale at the end of her maize field and managed to harvest twenty kilograms in April 2015. She pointed out that she mainly uses her *zviyo* to brew *mahewu*¹⁴⁰ for her grandchildren as well as sending it to Harare when her relatives want to brew beer for traditional ceremonies. Planting *zviyo* in her maize field during the crop growing season is also very strategic for her due to its low height relative to maize. During this time baboons will give her less of a difficult time when she plants *zviyo* at the end of her field because of its low height it becomes easy for her to spot baboons if they try to move into her maize field.¹⁴¹

¹⁴⁰ A traditional non-alcoholic drink made by fermenting flour made from *zviyo* or other cereals such as maize or sorghum.

¹⁴¹ See Chapter Six where I detail the experiences of elderly women with pests as well as with both wild and domestic animals in the village.



An elderly woman harvesting maize in her field.

Considering the disappearance of the local seed varieties it is important to reflect on the difficulty of restoring the way things were in the past for these elderly women.¹⁴² This is especially so regarding the lost seed banks as well as the movement away from growing other crops to mainly maize as more and more people move away from the “traditional” crops.

On the other hand the impact of climate change has affected the production of sweet potatoes in the village. These are in high demand in the village as people have them with tea for breakfast. Mai Mizhu, one of the best sweet potato farmers in the village indicated that the 2013-2014 farming season had been a bad one for sweet potatoes because of the poor rains received as well as the difficulty in securing the seed for sweet potatoes locally. Because of the size of her family she does not sell sweet potatoes and if other villagers want to buy, she simply gives them a small dish of sweet potatoes to cook rather than sell them.

¹⁴² Crate and Nuttall’s (2009, 10) observed that in the context of climate change environmental and cultural change is occurring and the threshold has been crossed such that it is no longer possible to revert back to the way things were in the past.



An elderly woman shelling her maize.

Mbuya Ku no longer grows rice as the areas that had *jawhi* during the summer period in her garden have disappeared over the past few years. Her sons took advantage of the drying up of the *jawhi* and parceled out the garden and sold it from about 2013.¹⁴³ Mbuya Ku recalls the sequence for the disposal of a large portion of her garden as firstly being the disappearance of *jawhi* caused by the impact of climate change in the village. Later the land was sold by her sons in response to the increasing commoditisation of land in the village due to the close proximity of Charlotte Brooke suburb. The proximity of Charlotte Brooke has in a way led to increased fragmentation and selling of land as people take advantage of the opening up and increasing attractiveness of the village for residential purposes. Slowly the village is witnessing a dramatic shift in land use brought about by the market demand for residential stands.

Shifting planting dates in the village

Rains in the village are usually referred to by their local names by elderly women; these names are *bumharutsva* and *gukurahundi*. *Gukurahundi* are the rains that fall in July and or

¹⁴³ Writers such as Shiferaw et al (2014) have pointed out that in Sub-Saharan Africa unsustainable use of land and other resources increases the vulnerability of people as land degradation is related to poverty.

August and *bumharutsva* are the rains that fall in September and are generally not used for planting. However others use *bumharutsva* to plant maize although the probability of germination failure is high. Mbuya Tarai pointed out that with *gukurahundi* others carry out winter ploughing and then just plant when the rains come down in October.¹⁴⁴ Over the years the rains that have been coming down and used for rainy season ploughing in the village have been the November rains. Mbuya Tarai pointed out that for her what was important to determine rain season planting was that the rains had fallen in November. Once rains were received in November they could be used for planting. For Mbuya Tarai the rains that were now being received in the village were very different than the ones that used to be received in the village. Her perspective was that normally by September at least *bumharutsva* would have been received. Unfortunately this had not been the case for a number of years as *bumharutsva* had not been coming down in the village.

Mbuya Ku questioned and wondered why the rains had changed over the past years. She further pointed out that in the past, the village used to receive *bumharutsva* and *gukurahundi*, however now it was difficult to tell which rains are *bumharutsva* due to the erratic nature of the rains which seemed to have lost their timing. According to Mbuya Ku *gukurahundi* would come down after people had finished harvesting and threshing their harvests (maize, *mhunga* or *mapfunde* etc.) Then the rains that would come would be called *gukurahundi* as they would be cleaning the threshing floors around July. *Bumharutsva* would then come when the rainy season was about to commence as it would be sweeping away all the ash that would be on the ground after people had burned grass and their fields.

The soil types in the village are not uniform; the differences in soil types mean that in instances where there is intense rainfall over a short period of time, the impact of the rains is experienced differently in the fields. For example most people with clayey soils complained that the rains received over a short period of time in February 2014 made their fields water logged and hence stunted growth. However Mbuya Ku did not complain as her field has some sandy characteristics leading to sufficient drainage. However these soils were also a cause of concern for her when there were extended periods of dryness as the soil easily lost moisture leading to her crops more easily showing signs of moisture stress than others' crops.

Timing and quantity of rainfall and its effect on access to food resources

¹⁴⁴ Observations by Molua (2011, 122) show that ploughing in winter in Zimbabwe is important in conserving moisture especially if it is done just after the winter rains as it helps in the increased germination rates of dry planted cereals.

There is no doubt that the impact of climate change is ongoing in the village especially regarding the timing and quantity of rain and this has impacted on access to food resources. This is mainly related to access to relish for the villagers. The relish depended upon is *ishwa* (flying termites), *dzambarafuta*, (flying ants), *derere* (okra), *hohwa* (mushroom), *muboora* and the fish from Clan Dam.

Usually after Clan Dam and Chibvuti Dam have overflowed villagers from Gutsa village and those from nearby villages (Mashonganyika, Chibanda and Ngoro and before the FTLRP also farm workers at Chibvuti, Rumani and Kanzota farms) would go to the dam as well as follow Munhenga River's course early in the morning to pick up dead fish that would have dropped over the dam wall. The dams would usually overflow during the evenings when incessant rains are usually received in the village. Villagers would later follow Munhenga River's course whilst also picking up the dead fish. I remember growing up villagers filling up close to ten kilogram sacks with dead fish which would then be left to dry and thereafter provide relish for weeks to come. However since 2013 this has not been the case as the dams overflowed just after the rains had started in December 2014. According to the villagers there were no fish in the dams when the dams overflowed. For example Kanzota/Clan Dam went from being dry to overflowing in the space of less than three weeks after incessant rains at the start of the rainy season. For the elderly women this was very unusual as the dam generally is expected to overspill from late January to mid-February. Despite the consensus in the village that the rains received during this period were highly unusual and thereby causing the dam to overflow in December, it is also important to note that reduced capacity of the dam due to siltation could also be attributed to this new development.

Ishwa and *dzambarafuta* in the village are delicacies for many and they have shifted in their timing as their appearance is dependent on the commencement of rain. Usually *ishwa* and *dzambarafuta* appear when rains have reduced and this is from about November. However the late commencement of the rain has therefore meant that these insect delicacies have also shifted in their appearance and this has had an impact on access to food resources in the village. *Howha* in the village has also shifted in its appearance dates as *howha* is also dependent on the quantity of rains with the favourite *howha* in the village being *huvhe* (*Termitomycete*).

Derere which grows in the wild mainly in unploughed fields and contours is also being consumed late in the village as it only sprouts with the appearance of the first rains. *Muboora* which is planted together with maize in maize fields in the village is also being consumed late in January instead of from mid-November the normal time as it too is

dependent on the commencement of the rains. As a result the timing and amount of rainfall is affecting access to food in the village as households are stretched thin in accessing vegetables.

Unusual 2014-2015 rains and the trail of destruction in the village

As the rains continued to fall in the village one late afternoon on the 5th of February 2015 they left an unprecedented trail of destruction as a number of “*hunde yemiti*” (huge trees) were uprooted while some people were rendered homeless after some gusty winds blew off roofs (asbestos and corrugated iron sheets of a couple of homes in the village). These unusually gusty winds had come from a northern direction from which rain bearing wind does not usually come. Strangely there were no grass thatched houses that were damaged that afternoon except for an isolated bolt of lightning which struck a grass thatched house in another nearby village in Ndoro. The result was that villagers began to invoke different explanations for this very rare occurrence in the village. These ranged from: “*Vadzimu vatsamwa*” (“the spirit mediums are upset”), to the very religious saying that these were obvious signs that the world was coming to an end! The village head acknowledged that the rains were destructive and reported some people’s perspectives:

“Some are saying that is punishment as people are not keeping “*chisi*”. I don’t think so. That is just trying to attribute blame on anything.”¹⁴⁵

Being religious, he quoted the Bible and said that:

“*Mazuva ekupedzisira muchiona zvishamiso pasi nekudenga.*”

“Towards the end of the world you will see signs and wonders in heaven and on earth”.

However some villagers believed that the trail of destruction which saw a few houses collapsing could be attributed to poorly built structures which ranged from poorly secured roofs, to extremely poor quality bricks as well as the tendency by most villagers to build houses without cement.

In the aftermath of this misfortune in the village word began to spread that the councilor and the Member of Parliament were going to source aid for those who had been affected by the hailstorm. Meanwhile villagers took time to comfort those whose homes had

¹⁴⁵ Shona verbatim, “*Vamwe vari kuti ishamu nekuti hamusi kuchengeta chisi. Kwaaniko? Kutsvaga honzero.*”

been destroyed by the rains. Just like with funerals no one wanted to be the odd one out by not visiting and comforting those who had been affected and hence being labelled as the one:

“Asingauye kunhamo dzevamwe”,

“The odd one who does not console others in their misery/misfortune.”

Although the councilor came to console the villagers, the MP did not visit and the aid never came and those who had been affected had to repair their homes from their own resources.

Multiple factors intersecting to impact on elderly women in the face of climate change

Talking to elderly women about the levels of production in their various farming activities (especially the vegetable gardens and the maize fields) it appears that there somehow appeared to be the consensus that the output from these had generally been impacted by climate change leading to a progressive decline over the years. Inasmuch as the low levels of production and low levels of productivity from these farming activities was being singled out as a significant contributor to low output a number of factors could also be contributory.¹⁴⁶

These factors ranged from increasing health challenges which all the elderly women were experiencing and hence could be contributing to constraining their production and output due to the limited capacity to adequately work the land. However this is very problematic to draw a distinction from as somehow in some of these elderly women’s households there has been added labour as a result of living with their grandchildren which ideally should have meant more hands to work the land. However it can still be seen that the addition of these hands has not translated into more labour in the fields. For example even when his grandmother is at home, Mai Chota’s grandson is not interested in helping her water the vegetable garden, rather preferring to spend time relaxed at home. When she is away from home for a few days to attend to various issues the young man will leave the vegetables to wilt.

Another factor related to low output levels in the face of climate change is the failure to acquire fertiliser which is very useful to aid growth in the generally poor soils in the village. The free agricultural inputs that reach the village are not distributed to the elderly women as they are distributed on the basis of “first come first served”. On the other hand commercialisation, commoditisation and diversification of economic activities and population densification are exacerbating the impacts of climate change in the village. As a

¹⁴⁶ Observations by Ziervogel et al. (2006a) quoted in Miller et al (2010) and Adger et al (2009) show that climate change is a complex problem and its impact cannot be adequately understood without also reflecting on the contribution of other multiple stressors on local people.

result the increased economic/livelihood activities which draw heavily from the same dwindling water sources is acting to affect the elderly women.

As I have discussed in Chapter Two, brick making is a thriving livelihood activity in the village. This has come about as residents from Charlotte Brooke, Sally Mugabe Heights as well as local residents in Gutsa village are buying bricks from the village thereby resulting in an added strain on the water sources. People in the village usually mould bricks from April to October/early November and hence those keen on building usually prefer to build during this dry season. The rate of drawing water from the rivers has been made more efficient through the use of either diesel/petrol powered water pumps. The cheap Chinese made water pumps have flooded the market and in the process increased the water extraction rates in the dry season.

Therefore it can be observed that among other categories female-heads of households are disproportionately represented in groups experiencing climate change and are affected by different kinds of pressures ranging from the lack of labour to work the land, population increase and land fragmentation to localized environmental degradation. All these pressures playing out in Gutsa village in the backdrop of climate change mean that elderly female heads of households are being affected by multiple pressures. These multiple pressures range from the challenge of caring for orphans, health challenges limiting mobility and productivity to social obligations which draw them away from their livelihoods.¹⁴⁷ Therefore it can be seen here that these elderly women heads of households are witnessing a multiplicity of factors that collectively make life very difficult for them.

Conclusion

As this chapter has shown, among the elderly women heads of households in the village the consensus is that the climate has progressively changed over a number of years. There is evidence of conflict of attribution related to the weather and climate variations in the village. The major concern among the elderly women in the study is that the rains have shifted in their general pattern and hence have significantly impacted on agricultural production during the rainy season as well as throughout the year due to the general low water levels in the wells that elderly women use for vegetable production as well as for domestic use. This has

¹⁴⁷ In examining the impact of climate change on agro-based rural livelihoods in Gutsa village I adopt the same caution as exercised by Nelson (2011). Nelson observed that it is not only climate stressors that are affecting and will increasingly affect poor rural communities, but other trends and pressures which limit the adaptive capacity of these communities.

significantly affected the planting dates and the harvesting times in the village. Consequently these processes are coalescing to affect food security and the livelihoods of female elderly headed households in the village both at the household and community level.

Due to the change in temperature, the village has experienced longer winters which have resulted in unusual incidences such as ground frost in September when this was usually experienced during the winter in July. On the other hand the village is also witnessing an increasing tendency towards more hot days as the dry period is extending to November and as in 2015 into mid-December. The ongoing shifts in what has been known as the traditional wind direction has also seen a shift in the direction from where the rains for the village are coming, with the consensus and concern being shared by both the elderly and the younger people in the village. The shift in the commencement of rains is making it difficult for the elderly women to plan their planting as it is increasingly difficult to know which rains to plant with. This is compounded by the shift in the behavior patterns of both flora and fauna which traditionally have been used in the village as markers of the seasons as well as weather forecasting mechanisms in the village.

As highlighted in this chapter it is important to understand that inasmuch as these climatic changes are contributing to poor food security at the household level there are also other multiple non-climatic factors that are coalescing to increase the vulnerability of elderly women in the village. These multiple factors range from poor health which limits elderly women's productive capacity coupled with the challenge of perennially missing out on free agricultural inputs especially fertiliser which is much needed in these poor soils. Furthermore competing social obligations that tend to draw elderly women away from their households over extended periods of time are also affecting their capacity to work in the fields and their gardens hence intersecting to affect productivity in the face of climate change. As the impact of climate change continues to be felt regarding access to water for domestic use there has emerged a new form of gender relations as men and young boys are increasingly fetching water for domestic use using wheelbarrows. On the other hand the introduction of new technology in the form of petrol powered water pumps has led to significant drops in the water table level thereby affecting the ability of the elderly women to practice perennial irrigation.

Chapter 6

Interspecies Interaction

Introduction

This chapter examines the nature of interspecies interaction in Gutsa village in the context of the impact of climate change. This is important in order to understand elderly women heads of households' relationships with fauna and how such a relationship contributes to the adaptation, resilience and vulnerability of these households. This chapter will therefore examine the nature of the relationships that have emerged which range from elderly women heads of households and their relationship with both domestic and wild animals, to the relationships between domestic animals and wild animals. Examining such interactions is important as studies by Lamarque et al (2009) show that there are serious implications for the food security of communal farmers in Africa if crops are damaged by wild animals. Furthermore such losses can generate other costs to household members such as the increased need to guard fields which create labor bottlenecks in certain seasons and the disruption of schooling for children assigned to keep guard over fields (Hill, 2004). In Gutsa village this is set on a backdrop of the encroachment, fragmentation and destruction of natural habitats and increasing conflict over food (see Hannah et al, 2005; Ladan, 2014). Furthermore since fauna has also been used as an indicator of weather patterns in the village, understanding such an interaction helps in shaping and determining the type of action/s that corresponds with their behavior and sighting in the village.

Domestic animals in the village

In the village, the concern for good rains is not just in relation to favourable rains for a good cropping season but adequate rainfall should result in good pastures for livestock as well as the filling up of the all year round livestock watering points. The concern about good rains and the need to fill up the watering points is related to the struggle and losses of livestock that usually come in the face of a drought year. For example in the 1992 drought many villagers lost their cattle as they got stuck for days in the mud in the dry Nyaure River bed while searching for water. The main livestock watering points are mainly Nyaure River, the small dam in *kuDongo* and a number of seasonal ponds in the village.

In Gutsa village when people make reference to “*zvipfuyo*” (livestock), they are mainly referring to cattle. Previously all the cattle kraals in Gutsa village were situated at one site at an area that is still referred to as *kumatanga* “kraal places”; here each villager with cattle had built their own kraal. However in the late 1980s all cattle owners in the village

moved their cattle kraals closer to their individual homes or inside their yards in response to the increasing challenge of stock theft in the village. The challenge of cattle rustling was assumed to be related to the increasing number of *vaenzi*. This had appeared to have been a new development in Domboshava as people from outside the district were increasingly buying small plots of land or “squatting” in Njedza near Mverechena. Cattle rustling initially became a problem in Mverechena and Zimbiru villages which were very close to what was previously the last suburb in Harare (Hatcliffe) on the way to Domboshava before the development of Sally Mugabe Heights.

In the village, cattle and goats are left to roam freely after harvesting is complete in June. It is almost tradition that the 1st of June is the date when cattle are left to roam freely as villagers are assumed to have finished harvesting their maize. This date is kept in mind as villagers plant and harvest their maize. It is the village head’s responsibility to remind villagers every year about this date. However in respect of goats there is a marked delay in letting them to roam freely in the village as they are considered a real menace due to their habit of nibbling on anything and their behavior can be a source of conflict among villagers. As a result goats are only left to roam from August when all harvesting of sweet potatoes, groundnuts and round nuts from the fields in the village is expected to have been completed. Residents have often complained to the village head that goats eat their sweet potatoes which are consumed as breakfast by many, as well as eating the small trees in people’s yards. Those who plant small trees as well as flowers in their yards do not want to see goats roaming near their homesteads. They cover the small trees (mainly fruit trees) with thorns or alternatively surround the small trees with poles/grass to keep the goats at bay. Goats can eat these trees while they are still young, denying the fruit tree owners a chance to have fruit trees at their homesteads and hence becoming a source of conflict. Cattle are not left to roam free from November onwards as the farming season is assumed to be well on course then. Before the FTLRP free roaming cattle went far and wide in Gutsa village and at times found their way into the former commercial farms of Chibvuti and Rumani Estates.

As maize shoots began to be visible in the fields, on Wednesday the 10th of December 2014, the village head announced that all goats should now be tied up. The goats are tied on long ropes which allow them to graze as far as the ropes can allow them or alternatively they have to be herded together with cattle. For the first time in October 2015 I saw goats with bells tied around their necks. These bells are usually tied around the necks of at least one highly mobile/troublesome bull or cow in a kraal to aid in tracking especially during the time

they are left to roam. Some villagers have begun to tie up their goats on long ropes throughout the year; however this new practice is leading to goats getting thinner and thinner.

Due to the late onset of the rains in 2014, some villagers were forced to plant their maize late, as a result by mid-May in 2015 villagers were still in the fields frantically harvesting their maize hoping to beat the end of May deadline when they are expected to have finished harvesting. However talking to the village head mid-May 2015 against the backdrop of the late onset of the rains and the frantic harvesting then taking place he pointed out that even though he had reminded people of the looming 1st of June date to let cattle roam, it was very highly unlikely that cattle would be left to roam then. He pointed out that some of the maize in the fields in the village was still green and therefore not yet ready for harvesting. For the first time the 1st of June date passed as villagers had not yet finished harvesting their maize. It was only towards the end of June that the village head made the announcement that cattle were now free to be left to roam, when everyone had finished harvesting their maize.

The fences that had separated the village from the former commercial farms were vandalised in the wake of the FTLRP. There previously seemed to be an unwritten understanding between the former white commercial farmers, the villagers and the young boys who herded cattle in the village. During the dry season and before the FTLRP, cattle from the village could stray into Chibvuti and Rumani estates to feed on the banna grass on these farms when fields close to the village were not under crops. This was not a problem for the old white farmers as long as the cattle did not stray into their planted fields.¹⁴⁸ It always happened that the fields close to the village were either left under fallow during the dry season or they had banna grass. This marked a relationship of coexistence between the white commercial farmers and the villagers. During the rainy season villagers would sometimes herd their cattle in these farms when the fields were not under crop. Growing up in the village, there had been a number of days when we had herded cattle during the December school holidays in Chibvuti farm. There were also times we would come across the farm guards and we would exchange greetings while deep in the farm herding our cattle. On a number of occasions we also saw the white farmers riding on their motorbikes as we herded our cattle and they never bothered us. In the wake of the FTLRP things completely changed

¹⁴⁸ While some writers such as Wells (2000) have pointed out that some former white commercial farmers would impound cattle from nearby communal areas which would have strayed into their farms this was not the case in Gutsa village.

as the newly resettled farmers in former Chibvuti farm did not entertain seeing cattle from the village near their unfenced plots.

A number of residents have stopped keeping cattle in response to the increasing population densification which is making it difficult to find *mafuro* (pasture) as well as the need to avoid conflict caused by livestock either in the village or in the former commercial farms.¹⁴⁹ Of all the elderly women in this study it is only Mai Mizhu who still had cattle. Mbuya Ku, Mbuya Gone and Mbuya No previously had cattle and Mai Cha's husband took all the cattle with him when they separated. Despite previously owning cattle, Mbuya No entered independent Zimbabwe with no cattle at all as the cattle were either looted or died due to swollen stomachs as people fled the village at the height of the war of liberation. The cattle that Mbuya Ku was previously keeping were her elder sister's cattle which have since been returned to nearby Ngwerume village.

I had my first interview on the 10th of November 2014 with the village head as he was tending his six head of cattle in the fields which were not cultivated near his home. He was very concerned that it is now becoming increasingly difficult for people from Gutsa village to let their cattle roam freely in this dry season. While cattle should be left to roam, the proximity of unfenced small A1 plots in Chibvuti as well as unfenced residential stands in Charlotte Brooke was straining relations as the cattle from the village had been known to stray into fields and residential stands. The roaming cattle were troublesome for Charlotte Brooke residents as they always grazed on their lush green lawns, small vegetable gardens as well as sometimes devouring clothes left out to dry on washing lines. Some of the residents in Charlotte Brooke managed to keep their lawns green by using water either manually drawn from wells in their yards or from boreholes with electric or petrol powered water pumps. The main option to avoid the strain and the possible fines is for villagers to tend their cattle all year round. This means that there is no rest for the herd boys as well as the cattle owners who do not have herd boys. Due to this new practice of herding cattle all year round, a number of young males from within and from outside the villages who have been working as herd boys are increasingly opting out. The main reason being that they cannot spend the whole year:

'musango uchingotevera miswe yemombe',

“in the bush following the tails of cattle”.

¹⁴⁹ Maitima et al (2010) observed that across sub-Saharan Africa increasing population pressures had led to increases in cultivation and grazing intensity. However in the case of Domboshava broadly and specifically in Gutsa village increasing population pressures had led to a reduction in cultivation and a lack of pastures as people settle in formerly agriculturally productive lands either in the former Rumani estates or in the village.

As it becomes increasingly difficult to herd cattle in the village due to population densification, *kuronzera* (livestock trusteeship) is increasingly becoming popular in the village as a number of villagers have sent their cattle to be herded by friends or relatives either in other villages or in the new A1 resettlement area in Chibvuti.¹⁵⁰ This helps the new farmers with draught power, milk in the home and manure for the fields.¹⁵¹ The village head pointed out that Baba Deb had become tired of tending his own cattle perennially and had sent his cattle to be tended in Chibvuti by an A1 farmer (*kuronzera*). By April of 2015 Sabhuku had also become tired of having the cattle at his home. As a result he had sent his six head of cattle to be tended by his *sawhira* (close friend) in nearby Kavhu village.

As the rains began to fall in earnest in December 2014 which appeared to mark the beginning of the farming season, villagers slowly began to herd their cattle back home that had been roaming in Charlotte Brooke. Despite the conflict villagers still prefer to keep their cattle roaming in Chibvuti and Charlotte Brooke as cattle also prefer grazing in Charlotte Brooke due to the proximity of the dam which in the dry season had been the sole watering hole. Due to proximity to the water source, the green lawns in Charlotte Brooke inadvertently became the favourite grazing ground for the cattle and also a source of friction with the owners of the lawns who invested many resources into the appearance of their places of residence.

The removal of the perimeter fences in the wake of the FTLRP has allowed cattle to roam further, making the task of looking for and herding cattle back home each evening an arduous task. As a result more and more people from the village are not taking their cattle home in the late afternoons, preferring to do so only as summer approaches or when they want to use the cattle. As the rains began to fall in December 2014 it was now important to herd the cattle back home as villagers needed to use their cattle to plough their fields as well as other people's fields for a fee.¹⁵² Bringing back the cattle was also important in order to avoid further trouble with people in the village, in Charlotte Brooke and with the new farmers at Chibvuti farm. Stories abound of how some new farmers in Chibvuti, angry about the

¹⁵⁰ This is increasingly becoming a common practice in the village in the face of challenges of livestock keeping in the face of rapid population densification, poor pastures and water sources against the backdrop of poor rainfall and the challenge of livestock theft. In the village, when a cattle owner entrusts his/her cattle, the herder will have usufruct rights over milk and manure and can even use the cattle to plough in other people's fields for a fee. Also see Fergusson (1985, 658) regarding livestock trusteeship in Lesotho.

¹⁵¹ In Tanzania livestock trusteeship was also found by Naess (2013) to be an effective way to minimize the risk of livestock theft in the face of climate change for livestock owners.

¹⁵² As pointed out by Chaumba, Scoones, and Wolmer (2003) ownership of draught power in Zimbabwe's rural areas is a financial asset as the draught power can be hired for a fee.

destruction of their crops by cattle from the village, had driven cattle to as far as Stondon (close to 15 kilometers away) and left the cattle to get lost and never to be found. Other more brutal farmers have been known to hit the cattle with an axe on their backs and then to leave the cattle from the village to suffer and then die from the wounds. As cattle are left to roam during the dry season villagers hope that their cattle will not stray into the visible green fields in Chibvuti because of experiences of past encounters with the new farmers; by contrast they are not as concerned about Charlotte Brooke.

It was not surprising then that towards the end of the rainy season in May 2014, residents of Charlotte Brooke constructed a cattle grid and fenced the length of the boundary with Gutsa village. All this was in attempts to prevent cattle from the villages straying into their suburb and eating their lush lawns; vegetable gardens and clothes left out to dry on washing lines. However, in a very short space of time the cattle grids filled up with sand as they were too low and hence were not effective at all. It seems the residents in Charlotte Brooke had double standards as in October 2014 I observed that they were using cattle from the same villages to plough their small stands in preparation for the rainy season. If their plan had succeeded then where would they have obtained the draught power to plough their fields/plots/stands as it would have been impossible for cattle to pass from the village into their suburb due to the cattle grid? On the other hand the presence of domestic animals in Charlotte Brooke has led some residents to mock the place as being very backward. In a *kombi* to town I encountered a young woman from the area who said that Charlotte Brooke was really a rural place because if a person went out with a hoe they could dig up mice or if they wanted, they could hunt for animals like hares there. She reasoned that if other people could keep goats at their residences, this had effectively turned the area into a rural area; therefore she was planning to also keep her goats there.

Sometimes in order to avoid the challenge of looking for their cattle during the dry periods as well as the need to prevent conflict with the new farmers in Chibvuti and residents in Charlotte Brooke, some villagers also tied up the calves. Living close to the fields in Chibvuti and Charlotte Brooke, in September of 2014 Mai Mizhu had a cow that had a young calf. She would tie the young calf to a tree in the morning in order to force the cow not to roam too far and hence avoid the challenges of having to look for it towards sunset as well as avoiding potential conflict. Despite her cow having a young calf she pointed out that she was not interested in milking it as powdered milk was now cheap in the shops.

It is mainly during the rainy season that cattle are a source of conflict between residents and villagers who sometimes take each other to the village head's *dare* (court) to

resolve cases and seek compensation when cattle have broken out during the evenings and destroyed neighbours' crops.¹⁵³ During a favourable rainy season cattle pens in the village have to either be changed mid-rainy season or one has to dig a trench to empty the almost liquid dung from the cattle pen. This is usually the case due to *mubvumbi*, with oftentimes the filling up of cattle pens being used to assess how favourable the rainy season would have been. During this time cattle find it difficult if not impossible to lie down in the liquid dung during the night. If the cattle are able to withstand the fourteen hour rigour of being on their feet throughout the night, they usually find it difficult to graze during the day spending the greater part of the day lying on the ground. Sometimes those herding cattle do not give cattle the chance to lie down during the day as they have to constantly move in search for increasingly scarce pasture. As a result cattle suffer from serious fatigue either from standing in liquid dung all night long, constantly moving in search of pasture as well as the added strain of ploughing in the fields and carrying other loads during the day and evening. The cattle pen size and number of cattle affects the rate at which the pen fills up with dung. However most of the pens in the village are not very big measuring approximately six metres by six metres and generally holding not more than five head of cattle. Getting out individual cattle for milking and yoking can be a strenuous task as sometimes the young boys have to wade in knee deep dung to get the cattle out. It is also during this time that troublesome cattle become difficult to shut in during the evening as they sometimes run away as one nears the cattle pen fearing spending another night standing or lying in the liquid dung forcing the young boys to run after them.

Residents say it is much better if the cattle break out and destroy your own field rather than having to go to the village head's *dare* to negotiate compensation when the cattle destroy a neighbour's fields. When times are hard this causes an added strain to relationships. A responsible farmer therefore has to take care of his/her livestock to avoid causing trouble. To avoid trouble villagers with cattle have to watch when to shift the cattle pens. In January 2015 the cattle pens were only affected briefly in the face of incessant rains; however no one shifted their cattle pens. During the dry season when cattle are left to roam and they break into someone's garden during the day it is not considered an offence as one is expected to keep watch over their gardens during the day. However when cattle break into these same

¹⁵³ Observations by Hill (2004) show that in Uganda there are culturally mediated mechanisms to deal with cases in which neighbour's domestic animals would have destroyed a neighbour's crop. This is also the case in Gutsa village as cases where neighbor's cattle would have destroyed neighbours' crops have to be brought to the *Sabhuku's* court.

gardens in the evening it becomes an offence as people are expected to look out for their cattle towards evening and drive them into the cattle pens. Since Mbuya Tawira's garden is at her homestead, during the dry season she has to spend the day at home guarding against baboons, monkeys as well as cattle which will be freely roaming then. Failure to do so will mean her source of livelihood will be destroyed.

When Mai Chota owned cattle during the rainy season she would get into a two week *zoro* (taking turns) with her neighbour Baba Mercy to herd cattle. Due to the challenge of the baboons she would herd the cattle near her fields when it was her turn to herd the cattle. As I discussed in Chapter Three Mai Chota no longer has any cattle as she progressively sold them over the past years to see her grandchildren through school. Mbuya Gone was once given a cow in the early 2000s as part of a cattle pass on project which was being overseen by the Salvation Army church in Domboshava. Unfortunately her cow died after ingesting plastic and left a young calf which also died a year later after ingesting a towel. Mbuya Gone would herd her cow during the rainy season and during the dry season she allowed the cow and calf to roam freely although this was against the wishes of the donors. Since the cow and calf all died in the dry season she regretted that maybe if she had not allowed them to roam freely they would not have died. By contrast it is only the pass on cattle in Chiroodza village that are the only ones surviving. Due to increasing population densification (a result of parceling and selling of land), the cattle owners there do not let the cattle to roam freely as they have built paddocks for their cattle.

Poultry and goats in the village

Free range chickens known as "*huku dzechibhoi*"¹⁵⁴ also affectionately referred to as "road runners" in the village and "*matoki*" (Turkeys) are a menace in the small vegetable gardens that most villagers cultivate at their homesteads during the rainy season. In these small gardens at homesteads, villagers usually cultivate beans and leafy green vegetables (covo, rape and viscourse). In this study most of the elderly women heads of households take advantage of the rains to plant some vegetables in their yards. Chickens are mainly left to roam perennially except in instances when their owners or neighbours have planted green vegetables in their yards as they are a problem with these. As for *matoki* they are usually not left to roam freely during the rainy season as they are notorious for feeding on anything green

¹⁵⁴ Literally translated as "the black person's chickens", these are contrasted with hybrid broiler chickens which are raised commercially for their meat in the village and referred to as "*huku dzechirungu*" literary translated to (the white men's chickens).

within reach. *Matoki* have been a source of friction in the village as they eat people's green vegetables and maize planted in their yards. Their owners resort to closing up *matoki* and chickens during the day with or without any feed in the runs only to be released during the late afternoons. This way they do not run into the vegetable gardens but roam briefly before finding their way back into the runs at sunset. This works as a strategy to keep the poultry from the green vegetables and hence guarantee relish for consumption or an income for those who sell the vegetables either in the village or in Charlotte Brooke as well as avoiding conflict.

During the course of my fieldwork I noticed the ubiquitous blue mosquito nets hung outside people's homesteads in the village and beyond. These mosquito nets were donated by the government towards the 2013 harmonised elections to almost every household in the district. The villagers had now resorted to using these mosquito nets to shelter the small road runner chicks from the notorious *tuhovo* (weasels) and *rukodzi* (hawks) which preyed on them. The mosquito nets were donated to villagers despite the fact that Goromonzi and specifically Domboshava and Gutsa village are not malaria areas, and mosquitoes are very rare in the village.

Despite the challenges experienced in keeping livestock, most elderly women are of the view that it cannot be a normal homestead without any chickens. Unfortunately Mbuya Tawira's eight chickens, four goats and seven *matoki* were all burnt in her fowl run in a mysterious fire one evening in November 2002 when she had just settled in the village. She suspects it was people from Ngwerume village who were responsible for the suspected arson attack as they tried to scare her into leaving her new residence. Since then she stopped keeping *matoki* and goats, however when she tried to keep chickens she was also forced to stop after they were eaten by baboons. If it had not been for the baboons, she would have been still eager to try keeping chickens:

“Haungaita musha usina huku, ungaite munhu asingazive kubata zai muruoko.”

“It cannot be a homestead without chickens; you cannot be a person who does not know how to hold an egg in your hand”.

Furthermore she pointed out that she could not live without any livestock as owning goats, *matoki* or chickens was a true reflection that someone was living in a rural area. Of all the livestock in the village it was mainly chickens that elderly women were keen to keep especially the traditional road runner. The concern was related to the question posed by Mbuya No:

“Ko muenzi akauya unoita sei, unomupei?”

“If a visitor visits what will you do, what will you give them?”

A meal with chicken is considered a feast/treat for any visitor. These were the same concerns that were raised by Mai Chota as she said there was no way a respectable homestead could afford not to have chickens roaming freely. Unfortunately all her chickens were wiped away by a mysterious disease in early 2014. Mai Mizhu stopped keeping chickens in 2013 as it no longer made any sense to keep them as the baboons would eat them. At one time she had twenty chickens at her home and had to stop keeping the chickens after the baboons increasingly preyed on them. The last ten chickens she had in 2013 were eaten by baboons one Sunday afternoon when she had gone to church.

Of all the elderly women it is only Mbuya Tarai who had never kept any livestock and had never had a fowl run. Mai Cha stopped rearing goats and the traditional road runner chickens in 2011 at her homestead. Her reasons being that:

“Ndaiti ndikaita huku kana mbudzi nenguva yezhizha iya, zvange zvinemitauro, saka ndakasiyana nazvo”.

“Whenever I had chickens or goats during the rainy season I always had trouble with my neighbours, so I just stopped keeping them”.

She pointed out that if ever she wants to keep chickens she will consider keeping broilers or the layer chickens which are never allowed to roam. Previously she had the highest number of chickens in the village with most people who now have their own chickens in the village having borrowed chickens from her to start their fowl runs. She pointed out that the last chickens at her home in 2011 appeared to have been poisoned as they all died in a very short space of time; thereafter she gave up rearing chickens. The goats she had also died after one of them had given birth to two offspring which later died after their stomachs had swollen, again in a case of suspected poisoning. She regretted it because one of the goats died the evening before she was going to sell it. She does not eat food from animals that would have died on their own, so she just gave the goats to some villagers who consumed them. She pointed out that residents were very jealous of other people’s goats as even one of Mbuya Gone’s goats was killed one evening and was placed near her kitchen in the morning. According to her a lot of goats died in the village during that time as a result of these mysterious deaths.

In November 2014 Mbuya Gone bought three chickens after all her chickens had been wiped out by a mysterious disease. One of the hens she bought for US\$5, another one for US\$6 and a cockerel for US\$7. Unfortunately it seems a number of factors are coalescing to affect the long held belief in the village that, “It cannot be a homestead without chickens”. These factors range from depredation mainly by baboons and *rukodzi*, the cases of suspected poisonings, the suspected arson attacks as well as the challenge of untreatable poultry diseases wiping away elderly women’s poultry stocks. So with poultry keeping increasingly being affected by these multiple challenges in the village this is therefore affecting the ability of elderly women household heads to diversify livelihoods, withstand and recover from the shocks of climate change on rain-fed crop production.

Of all the elderly women heads of households it is only Mai Mizhu who still has some goats at her home despite the problem of baboons. The challenge of stock theft is a problem that haunts families in the village and therefore works as a threat to livelihoods of elderly women heads of households in the village.¹⁵⁵ For example Mbuya Ku’s goats were all stolen in 2009 and as a result she no longer has any goats. Some elderly women in the village are disposing of their goats as part of a conflict avoidance strategy. Mai Chota sold all her goats trying to avoid conflict with her neighbours as her goats ate small fruit trees and broke into neighbours’ fields and vegetable gardens. On the other hand Mbuya No had problems with her goats as they tripped her on a number of occasions while she was trying to tie them up. Living in Lower Gutsa where baboons are a major problem Mai Njere as with most residents is not interested in keeping goats. Since goats have to spend most of their time tied up to graze, they become easy prey for the baboons. As a result some villagers have stopped keeping the goats in response to the challenge of the baboons.

In Gutsa village wild animals are a perennial problem as they cause a lot of trouble both during the day and at night. There are different wild animals that come out during the day as well as some that come out during the evenings. During the day wild animals that are a major problem in the village are baboons and monkeys, with *mhembwe* (duiker) to some extent causing problems in the round nut fields during the evenings. Birds such as *horwe* are a problem during the day as they dig up newly germinated maize seed.

Of all the wild animals in the village it is mainly baboons and monkeys that are menaces and they cause a lot of havoc in the village perennially. Noticing that the baboons

¹⁵⁵ Also see Ulrich et al (2012) regarding some of the challenges posed by stock theft to the livelihoods of small-scale farmers in the semi-arid Laikipia region in Kenya.

were increasingly becoming a problem from the early 2000s, the village head and his committee settled the children of *vaenzi* who now needed land near the border with Shumba, Mashinge and Ngwerume villages. On these borders is where the *chiro* (baboon's abode) is, therefore settling people there was a very deliberate strategy to make sure that these "foreigners" would act as a buffer against the marauding baboons for the comfort of the "originals". Some people in the village refer to this area as *kumastands* (stands) as most of the people there with the exception of Baba Cha are "foreigners" who were allocated/bought land at the border with Ngwerume where the baboons reside. The stands in this area are less than an acre.

The challenge of wild animals in the village

While monkeys are a problem in the village it is mainly the baboons that are more daring and troublesome. The troublesome baboons range from the lone baboon known as *chiverero* (literally the one able to slip unnoticed) to complete troops. The baboons dig up newly planted seed maize in the fields, eating maize from the time it is almost maturing, they also eat the pumpkins, *mapudzi* (squash), tomatoes and green vegetables. At homesteads they prey on small livestock such as goats, chickens and *matoki* and also eat the harvested maize and pumpkins previously stored in the *dara*.¹⁵⁶ In the village baboons are called "*mbavha*", "thieves". It is reported that on one occasion, the baboons got into Mai Reni's kitchen and picked up a pot full of *sadza* and ate the *sadza* from a vantage point on a small hill near her home. The baboons also eat fruits such as mangoes, *mazhanje*, avocados and bananas. As the *chiro* is located in Lower Gutsa, elderly women who are mainly affected by baboons and monkeys are Mai Njere, Mai Reni, Mai Chota, Mai Mizhu and Mbuya Tawira. For elderly women in Upper Gutsa it is mainly Mbuya Gone, Mbuya Tarai and Mai Cha who have to face the problem of the baboons as they have fields located near Mhinorombe Mountains where the baboons usually climb to the top in order to have a view of the whole village when they reach Upper Gutsa.

Mbuya Tawira's homestead is located on the Eastern boundary of Gutsa village which borders Ngwerume village. This area is in lower Gutsa and this is also where the mountain ranges which stretch in an eastern direction start. These mountains are reported to have *chiros*. When Mbuya Tawira settled on her plot of land, hers was right on the edge of the village and therefore was the home most troubled by the baboons as she was living on their

¹⁵⁶ Outside granary built on stilts with the top left open.

territory. However increasing population densification over the years has resulted in more people settling near Mbuya Tawira’s homestead. It has lessened her burden as the problem of baboons has now been spread amongst the other residents. She also said that at least if everyone living close to the baboons grew maize then it would mean people would help each other to chase the baboons away from the fields.

Table. 5 Interspecies conflicts

Animal/Pest	Type of conflict	Season
<i>Tuhovo</i> (weasel)	<i>Prey on poultry</i>	<i>All year round but more problematic during summer taking advantage of the dense cover of maize.</i>
Warthogs	<i>Troublesome in the maize field</i>	<i>Summer</i>
<i>Rukodzi</i> (hawk)	<i>Preying on poultry</i>	<i>All year round</i>
Baboons	<i>Troublesome in the field, eat poultry and goats and to some extent breaking into people’s homes</i>	<i>All year round</i>
Monkey	<i>Troublesome in the field</i>	<i>Mainly summer time</i>
<i>Matoki</i> (turkeys)	<i>Troublesome in the field</i>	<i>All year round</i>
Chickens	<i>Troublesome in the field</i>	<i>All year round</i>
Duiker	<i>Troublesome in the sweet potato, round nut and ground nut fields.</i>	<i>Summer time</i>
Cattle	<i>Troublesome in the fields and vegetable gardens</i>	<i>All year round</i>
<i>Horwe</i> (Coqui francolin)	<i>Troublesome in maize fields</i>	<i>Summer time</i>
Goats	<i>Troublesome in the fields, eating anything green in the fields, at homesteads and in vegetable gardens.</i>	<i>All year round</i>
Weevils	<i>Damage to maize stored up</i>	<i>All year round</i>

Of all the elderly women in this study it is Mbuya Tawira who is the most affected by the baboons as her home is on the very edge of the village near the *chiro*. One day in October of 2014 while seated outside her kitchen during an interview the baboons came into her yard looking for bits and pieces to eat. The baboons seemed unmoved by her small dog which barked at them. One of the *horombas* (male baboon) slapped the small dog when it had come close to it. The dog came back rushing to where we were seated whining. The baboons went on to eat *mhonda* (the tender branches of small *mizhanje* trees) unmoved by the presence of humans; in the village people also sometimes eat *mhonda* when they are hungry. Although Mbuya Tawira has two *mizhanje* trees in her yard she never gets the chance to eat the fruit from them as the baboons devour all the fruit. Although monkeys do visit her home in search of food, they are less daring than the baboons and are more afraid of the dog. Mbuya Tawira's daily struggles are mainly a consequence of her living on the edge of the village where the mountain range with the *chiro* is located.¹⁵⁷

Since the early 2000s baboons have developed a new strategy, they enter into newly planted maize fields digging up the newly planted individual maize seeds. It is very easy for the baboons to see where the individual seed grains are deposited, especially when the people have practiced zero tillage by digging up holes in the soil. Most residents in Lower Gutsa plant using this strategy as they do not have cattle and hence cannot afford the price of ploughing using an ox drawn plough or tractors. This makes it easy for the baboons as they simply follow the line of freshly dug holes where the maize has been planted and then dig up the seeds. This new practice by baboons has been attributed to the early disappearance of wild fruits (especially *mazhanje*) attributed to the massive harvesting of *mazhanje* for sale in Harare as well as the rampant cutting down of the *muzhanje* trees over the years. Previously *mazhanje* would still be in the forests until the end of January, however except at people's homesteads, it is increasingly hard to find *mazhanje* in the forests by mid-December due to the commoditisation and commercialisation of this wild fruit. However it can also be seen that the commoditisation and commercialisation of woodland resources such as *mazhanje* in Gutsa village is providing rural households with market-oriented woodland livelihood opportunities.¹⁵⁸

¹⁵⁷ Hill (200) made observations similar to those in Gutsa village in the Budongo Forest Reserve in Masindi district, Uganda. Hill's observations showed that not being surrounded by neighboring farms between one's land and the forest tends to increase the challenge of crop raiding by baboons.

¹⁵⁸ The commoditisation and commercialisation of *mazhanje* in the village is also consistent with observations by Barany et al (2005). In their study in Malawi they found out that commercialization of woodland products was providing rural households with market-oriented woodland livelihood opportunities.

With the commencement of planting in November 2014, the marauding baboons were already a problem in the fields, digging up the newly planted maize seeds from the ground whilst still preying on people's goats and chickens at homesteads. Residents have now devised strategies that are meant to reduce the likelihood of baboons digging up their newly planted seed. Mbuya Tawira pointed out that after planting maize either using zero tillage, ploughing and then making furrows to plant, or simply making furrows to plant it is important to make sure that the holes where the maize seed would have been planted are sufficiently covered so that the baboons will not notice where the maize seed is. This can be accomplished by cutting tree branches with leaves then dragging these branches in the field in order to erase the evidence of footsteps and the holes dug up. This way it becomes difficult for the baboons to locate where the maize is and so it helps to ensure that the maize is not dug up and hence can germinate. Villagers are also keeping watch over their fields daily from the day they plant (to keep the baboons away from picking on the newly planted seed maize) until harvesting. Since in 2014 *mazhanje* was not in abundance, elderly women were saying it meant that the baboons would be a menace due to the poor fruiting of this wild fruit. Now instead of the baboons spending more time in the wild searching for food they spend their time in the village scrounging for food, this has resulted in serious conflict between humans and baboons.¹⁵⁹

As elderly women spend more time at home keeping pests at bay their social networks are affected as they withdraw from society to spend more time at home fending off wild animals from their fields which are also their main sources of livelihood. On the other hand the conflict between elderly women and pests has also in a way affected their productive capacity. Due to the perennial challenge of baboons and warthogs Mbuya Ku had to stop farming at her more fertile field further from her home close to the border with the former Chibvuti farm as these wild animals were destroying her maize crops. For Mai Reni living close to the *chiro* it also becomes extremely difficult for her to move around when the rains have come and she has planted her maize. This significantly affects her capacity to go out to sell her wares as well as also impacting on her social networks. Speaking to Mai Reni in October 2014 she was worried that because *mazhanje* were not going to be in abundance, the baboons would be marauding near homesteads as they did not have anything to feed on

¹⁵⁹ As discussed earlier in Chapter Four as residents elbow out the baboons in search of *mazhanje* which baboons feed on coupled with the early and rapid harvesting of this wild fruit, it signaled serious conflict between baboons and people. This conflict would lead to the increased likelihood of baboons destroying people's crops as well as getting close to homesteads to feed on anything they could find (also see Mapara, 2009).

during the rainy season until they could start feeding from people's fields. Mbuya Tawira always sends apologies if Sabhuku Gutsa calls a meeting during the week as she cannot leave her home unattended because of the baboons. Mai Reni reported that:

“Sabhuku anogara achiti iwe haudi kuuya kumsangano sei?”

“The village head is always asking why is it that you do not want to attend the meetings I call for?”

Due to the challenges posed by these baboons she cannot afford to attend the various meetings called by the village head during the rainy season. The baboons do not give elderly women a chance as long as they have crops in the fields or livestock at home.

Sometimes to fend off the baboons, Mai Reni used to place a radio at the top of the small hill near her home with the volume loud with one of her young grandchildren, the noise would act as a deterrent to the baboons. However it appears the baboons soon understood the tactic and they now ignore the noise from the radio and still get into the field. The baboons are especially problematic when it is raining during the day as they know that people would be sheltering from the rain thereby making it easier to slip in and out of the field unnoticed. Even though the baboons are a menace in the village, Mai Reni indicated that having baboons in an area is good as this is an indicator that the area has abundant food. Early one evening in late July 2015 I was surprised to hear the cry of the baboons. In the morning I asked Mbuya Tarai why this was so as I previously had heard that baboons do not cry in the evenings. She said that it is very rare for the baboons to cry in the evening. When they do so it is a sign that they have been disturbed, usually by a leopard. Stories still go round in the village that leopards are still roaming in the village with different people recounting close encounters with them.

Some elderly women heads of households in Gutsa village as well as some residents living in the valley in Lower Gutsa have completely given up hope of keeping livestock and growing crops in response to challenges such as depredation by wild animals.¹⁶⁰ This is especially the case for residents or at homesteads where there is usually no one at home during the day. Villagers need to wake up very early in order to prevent the baboons from

¹⁶⁰ In the face of climate change livestock can be considered to be the backbone of agriculture for subsistence farmers and also an asset which can be used during periods of distress, as well as providing draught power and manure (Ranganathan et al, 2010). Ranganathan et al further point out that farmers in India are adapting to climate change by shifting to livestock rearing as a secondary source of income. Like farmers in the Cheha Woreda of Guraghe Zone, Ethiopia (see Mojo, Rothschild and Alebachew, 2014), elderly women in Gutsa have given up hope of keeping livestock and growing livestock in response to challenges such as depredation by wild animals.

having a field day with the crops. A young man living in Lower Gutsa resolved not to waste his time planting as it was simply “*kurimira makudo*” (growing crops for baboons). He does not keep goats or chickens either as they are preyed on by baboons. This is made worse by the fact that even so early in the agricultural season there is need to keep watch over the baboons as they still pick up the germinated maize seeds for food. Another option taken by the villagers is that if one wants to plant maize where baboons are a major problem then it is important to have a very good dog that can chase the baboons and the monkeys away. In view of these challenges some villagers have opted not to plant and wait to buy the maize from others who have planted. Some villagers like Mai Reni in Lower Gutsa have responded by planting early as a strategy to minimise the damage that baboons cause in the field.

Despite the rampant harvesting of *mazhanje*, the increasing population densification as well as the early planting of maize is somehow helping to spread the cost of the damage caused by baboons over a number of households as well as reducing their impact. Some elderly women like Mbuya Tarai who used to plant maize early at the end of September or early in October have been forced to stop this practice. She is no longer planting maize early as this has become a problem as she was increasingly being forced to keep watch early over her maize when it ripens early. This had become doubly burdensome for her as she was also forced to water the maize to keep it thriving until the rainy season began whilst also keeping watch over the marauding baboons. In October 2014 Mbuya Gone pointed out that since there was no *mazhanje* it signaled serious conflict with the baboons at homesteads. She said:

“*Ana horomba vava kuvinga huku manje*”,

“The male baboons are now coming for the chickens”.

Mbuya Tawira pointed out that due to the marauding baboons at her home:

“If I leave this place I have killed my garden, right now for me to go to a funeral I can’t go. I wait for one of the schoolchildren to come then I leave them here watching the garden then I go out. If you go out as if you do not know what you are doing you will cry, you will find everything finished by baboons.”¹⁶¹

Even when Mbuya Tawira goes *kunobata maoko* (to pay condolences) in the evening she has to come back early in the evening as she cannot leave her grandchildren to sleep alone for

¹⁶¹ Shona verbatim, “*Ndikangobva chete ndatouraya garden, kana izvozvi kuti ndiende kunhamo handitoendi. Ndinotomira posvika one wechikuru ndiye wondosiya pano osara achichengeta garden ndombobuda. Ukabuda usingazivi zvaunoita unowana wachema, unowana zvinhu zvese zvapera nemakudo.*”

fear of the thieves which are causing havoc in the village. At times she has no option but to go over weekends to pay condolences when her grandchildren are not at school. Although Mbuya Tawira goes to the Salvation Army church, she has been forced to completely stop going to church since 2011 because of the baboons which take advantage of her absence. So she said:

“I go to Salvation Army but I had to stop because of the baboons. I saw that I might go to church to Salvation but when I come back I see that my garden has been ravaged by baboons, so what will I do then with my grandchildren I look after?”¹⁶²

Although Mbuya Tawira is involved in *maricho* on the nearby farms, due to the baboons and free roaming cattle during the school term, she can only leave her home during weekends when her grandchildren are at home.¹⁶³ She can only go for *maricho* during the week when her grandchildren are home for the school holidays.

Mai Njere lives close to the edge of Lower Gutsa near the mountain range; she lamented the havoc that is caused by the baboons as they prey on chickens, goats and eat maize in the field. She pointed out that if one really wanted to keep goats near their area they had to herd them instead of tying them up as is the norm in the village as they would be easy prey for the baboons. Since she cannot afford to pay someone to herd the goats then it means she cannot keep goats at her homestead. Mbuya Gone's home is close to Mhinorombe Mountains on the edge of Upper Gutsa village in an Eastern direction. When baboons reach Upper Gutsa they usually climb to the top of the mountain, thereafter using it as a vantage point to look over sections of Upper Gutsa. From this vantage point they have an undisturbed view of the whole village. As a result of the location of her homestead, her goats have been attacked by baboons on several occasions. In August 2014 she was very worried by the lack of wild fruits which indicated that the baboons no longer had food in the wild. As a result they had begun to come closer and closer to the village looking for food:

“Iyezvino mbudzi dzikanzwa kwati huu-uuh, dzotosimuda musoro”.

¹⁶² Shona verbatim, “Ini ndinoenda kuSalvation Army asi ndakaokona nenyaya yemakudo. Ndakaona kuti ndingaende kuchurch kuSalvation ndodzoka ndoona garden rakadyiwa nemakudo, vazukuru ava wandakatora ndozodii?”

¹⁶³ Observations by Mojo, Rothschuh and Alebachew (2014), show that in Ethiopia women are also kept away from productive work when trying to keep wild animals at bay from their fields.

“Now when the goats hear the cry of the baboons, they raise their heads to look for where the sound of danger is coming from”.

As I highlighted above, previously people in Gutsa village used to store their harvest in a *dara* built in their yards. However this practice was stopped in response to the increasing incidences of thieves who found it easy to steal maize in these outside *daras*. It was also easy for baboons to steal the pumpkins that were also part of the harvest placed in these *dara*.

Although baboons and monkeys are a menace in the village, duikers and warthogs are also a problem. Before the FTLRP warthogs were a big problem in the village especially during the rainy season as maize ripened in the fields. The warthogs were mainly coming from the former Chibvuti and Rumani estates and destroyed maize fields on a nightly basis. Then villagers had to spend nights in the fields located further afield from their places of residence. Here they would spend the night with bonfires lit, and occasionally beating drums or tins to scare the warthogs away. During the day it was the birds, baboons and monkeys and in the evenings it was the warthogs and the duikers. Before the FTLRP there were perimeter fences which were either electric or barbed wire fences which had restricted access and hunting in these commercial farms. However with the vandalism of the perimeter fences post-FTLRP all the warthogs were hunted down by villagers and the newly resettled farmers over a very short period of time.

The hunting down of the warthogs has helped in freeing residents from the evening threat of the warthogs. This is also the same with most small game which appear to have been hunted down as the old fences were pulled down in the former commercial farms. This was also the same fate that befell Kanzota farm which used to be a game reserve; now there is no game as the villagers hunted all the game, taking advantage of the absence of the electric fence which was also pulled down.¹⁶⁴ Mbuya Ku pointed out that the challenge of warthogs was one of the factors that had forced her to stop planting in her fields further away from her residence and had resulted in her concentrating only on the field at her homestead. Initially warthogs would not come near homesteads; however they ended up coming very close to homesteads. Post-FTLRP villagers from Gutsa village as well as other nearby villages sought to maximise their gains on the game that now no longer had restrictions regarding its hunting.

¹⁶⁴ The disappearance/extinction of wild animals post-FTLRP in the vicinity of the village which had found some refuge in the former commercial farms mirrors Hardin's (1968) "tragedy of the commons".

The result was the near extinction of game in the village and also on the former commercial farms.¹⁶⁵

Since wild animals caused problems in the village by destroying crops and also preying on small livestock, Mbuya Ku pointed out that some time back before the new levels of densification; some of the fields were still in deep forests. These forests have been cleared as people cut down trees to clear fields and also to sell firewood. During those days, one of the strategies used to keep the marauding animals at bay was to offer the maturing crop to the guardians of the field before one could consume it. Here Mai Cha said this would involve the farmer taking some of the best crops in the field and then going to the end of the field where they would place the crops in a *tswana* (reed bowl) and leave it there. Thereafter it would mean that the farmer would have been freed from the hassles of having to worry about the major destruction of his/her crop by *udyi* (pests that destroy crops). Although pests would still destroy some crops in the field the difference was in the magnitude of the destruction. However nowadays this practice has stopped as it is no longer practiced as villagers have lost interest.

So while warthogs have been hunted down this cannot be said for duikers which are still a problem as they are known to feed on people's round nuts, ground nuts and sweet potatoes. Since duikers have not been hunted down, occasionally during the day it is said that there is a duiker that runs through the village when crops are beginning to ripen in the field. In the village it is believed that this duiker is associated with someone who has *divisi* (medicine for taking food from other people's fields to produce a bountiful harvest) and when people shout out trying to chase it, and then it will be taking food from people's fields. As a result of this belief when villagers see a duiker running through the village during the afternoons when crops are ripening people do not shout at it or try to chase after it but rather ignore it for fear of having their crops taken from their fields.

Of all the elderly women in this study, Mai Cha and Mbuya Tawira are the only ones who keep dogs at their homes. Mbuya Tawira's dog is very small and does not do a good job at keeping outsiders, baboons and livestock at bay. Mai Cha's dogs are well known and respected for their ferocity throughout the village; they do a good job to keep outsiders at bay either during the day or at night. When I went over for my first visit to her homestead in the morning the dogs had to be chased away as they were really not keen to entertain my

¹⁶⁵ The slaughter of wild animals in the wake of the FTLRP is also consistent with Chaumba, Scoones and Wolmer's (2003) observations in South Eastern Zimbabwe where the settlers were practicing a "scorched earth" policy regarding wild animals in the area.

intentions of getting close to her gate even after calling out my presence by shouting “*Tisvikewo*” (A phrase which is used to call out one’s presence as they approach someone’s homestead). At the time, two of the dogs had young puppies and they were really intent on keeping me out of the yard even as she escorted me to her main house. One of the very vicious dogs is called “*Porongi*” (The real messer) by the young boys in the village.

Increasing incidences of theft of crops from fields and of foodstuffs from homes in the village has the potential to impact on the food security of households. As I reflected on the increasing incidences of theft in the village, I realized dogs and deterrent witchcraft were a deterrent to would be thieves. However the apostolic church members (Sabhuku Gutsa, Mai Mizhu, Mai Cha and to some extent Mai Chota) who are not allowed to keep dogs or practice deterrent witchcraft to keep thieves at bay are targeted the most by thieves in the village. For example Sabhuku Gutsa’s roundavel kitchen was broken into twice in the space of less than two months in 2015 with the suspect getting away with various foodstuffs. In September 2014 a case of one young man from the village who had stolen maize from one of the gardens of a male elderly *muuyi* of Malawian origin was brought before the village head’s court. The young man after stealing the maize and stuffing it in his pocket failed to remove it from his pocket when he got home. In fear, the young man approached the village head who later called the elderly owner of the garden and advised him of the predicament the young man was in. The garden owner demanded to be compensated by a cockerel so that he could remove the deterrent witchcraft. The family of the young man promptly paid and the maize was released from the pocket of the young man.

Age and gender based responsibilities for keeping pests at bay

There is a long held belief in Gutsa village that baboons generally are not scared of women and small children to the extent that they appear more daring and unmoved when they see women trying to chase them away as compared to men.¹⁶⁶ This has shaped the age and gender based responsibilities for keeping these pests at bay. For example due to the perennial challenge of baboons at her place it is mainly Mbuya Tawira who spends her time keeping watch for baboons with her small dog. She pointed out that during the times that she has to be away from home during school times she is forced to withdraw her grandson from school so that he keeps the baboons and monkeys at bay. Although she is also staying with her young

¹⁶⁶ Also see Mojo, Rothschuh and Alebachew (2014) study in Ethiopia where findings showed that baboons are not scared when they are chased away from fields by women.

granddaughter she pointed out that she never withdraws her from school as she knows she will not match up to the baboons.

As a result of the intense conflict between humans, domestic and wild animals as well as pests in the village all year round villagers with crops/horticulture produce, goats and poultry have to keep watch to keep wild animals at bay. This has resulted in elderly women in the village having to struggle with keeping watch over these wild animals whilst also trying to source and secure their livelihoods. At the times when they are not able to keep watch over these wild animals, it is the young males in their households who are tasked with keeping watch over the baboons. At times this means being withdrawn from school in order to keep watch while the young ladies in the household are spared this task. This arrangement tends to put the boy child at a disadvantage compared with the girl child when they are withdrawn from school in order to keep wild animals at bay.¹⁶⁷ In instances where the boy child is withdrawn from school as in the case of Mbuya Tawira's grandson this seems contrary to common observations that from infancy through old age females have lesser access than men to resources such as education.¹⁶⁸

However, despite the seemingly gendered nature of keeping watch over pests I have on a number of occasions seen elderly women from the village as well as those who previously were residing at the nearby former commercial farms guarding maize fields. They will be guarding maize fields of some of the newly resettled farmers in Chibvuti and the small maize plots of residents of Charlotte Brooke against baboons and monkeys. In the case of Charlotte Brooke the fields these elderly women will be guarding are the ones where residents would have cultivated on open spaces where the owners have not yet taken up their stands. Also on a number of times I visited my sister who stays at Seed Co farm I have noticed elderly women guarding fields at the farm keeping pests at bay ranging from keeping quelea birds from wheat fields to guarding against monkeys and baboons in the maize fields.

Insects, bird sightings and weather patterns

The usefulness of interspecies interaction in the village is seen in how sightings of certain insects and birds affect people's understanding of the weather. As I have discussed in Chapter Five the birds that are specifically seen in the village as the rainy season approaches are *haya* and *dendera*. When these birds are seen in the village it signals that the rainy season is about

¹⁶⁷ Observations by Mojo, Rothsuh and Alebachew (2014) in Ethiopia show that children are also sometimes kept away from school in order to keep wild animals at bay and also Hill's (2004) study in Uganda.

¹⁶⁸ See Catell (2003, 51).

to begin and therefore preparations for the rainy season should well now be on course. This is very important in the face of climate change as these markers help elderly women to know the onset of the rainfall and hence help in forecasting the probable planting dates. If these markers appear late then it signals that the rainy season will also commence late and this might help in selecting the types of crops to be grown, e.g. short season varieties.¹⁶⁹ Alternatively when these markers appear early it might signal the likelihood of a normal rainy season marked by the onset of rainfall during the normal period.

Elderly women say that *mashuramurove* and the *nyenga nyengas* are only seen during the rainy season. In the 2014-2015 farming season I saw the first *shuramurove* in the skies on the 13th of January as *mubvumbi* was about to start. However, it appears that the impact of climate change as manifested by the late onset, distribution, quantity and cessation of the rains is affecting the migratory and behavior patterns of fauna in the village. As I have pointed out above when *shuramurove* is sighted it marks the commencement of *mubvumbi* (incessant rains) and not the beginning of the rainy season; *mafudzamombe* (cattle egret) is seen in the village all year round and not related to the beginning of the rainy season let alone related to weather phenomena.¹⁷⁰ Infact *mafudzamombe* is considered a useful bird by the young boys when searching for cattle during the dry season when they are left to roam as these birds point to where cattle are browsing. In the village the young boys looking for their cattle chase these birds when they notice them near cattle which are not theirs. As a result *mafudzamombe* will fly high and land at another site where cattle are grazing; the boys will then move to that site again and use the same strategy until they locate their cattle.

Evidence of *majuru* (termites) along foot paths as well as signs of fresh earth on *churu* (anthill) indicates that the onset of the rains is very close. As pointed out by Mai Mizhu the swelling of anthills with earth is a sign that the rains are around the corner as *majuru* will be busy making the anthill by moving new soil to the top of the anthill. In 2015 I noticed the evidence of *majuru* turning up the earth from beneath along one foot path in the village on the 1st of October. This soil was wet with moisture as it was being moved from underground to the surface by *majuru*. Though rain did not fall specifically in the village, other areas in Goromonzi District as well as some areas in Domboshava received some light rains that day marking the onset of the rainy season.

¹⁶⁹ Also see Orlove et al's (2010) study in Uganda and the role played by local traditional climate indicators on farming decisions.

¹⁷⁰ Muguti and Maposa (2011) argue that birds such as *shuramurove* and *mafudzamombe* are generally seen in Zimbabwe when the rainy season is about to begin, however in the case of Gutsa village this is not the case.

The elderly women in the village detailed a number of insects that are considered delicacies in the village. These insects are mainly seasonal in their appearance ranging from *hwiza* (locusts), *ishwa*, *gurwe* (large, edible sand cricket), *dzambarafuta* (edible flying ant), *mandere*, *madora* (mopane caterpillars), *harati* (*Cirina forda*), *magandari* (*Lobobunaea*). There is also *mbeva* (mouse) a pest as well as a delicacy which is trapped by the young boys in the “*gandiwa*” (contour ridges) or in the fields using *mariwa* (mouse trap). However interest in trapping mice by young boys seems to have become unpopular as this is no longer a favourite past time for the young boys in the village.¹⁷¹ Mai Reni said at one time in the early 1990s her round nuts and ground nut fields had unusual signs of *magurwe* as seen in small mounds of freshly dug soil in the field. As a result her fields of round nut and ground nuts were dug through and through as people hunted for the delicacy. This really contributed to the poor performance of her round nuts and ground nuts as people dug up her field then looking for *magurwe*.

Mbuya Ku pointed out that there were some years that residents almost went hungry as a result of *udyi* (pests that destroy crops). She said that in those years even if the rains were very good as long as there was *udyi* then that year could easily become a year with a poor harvest leaving the villagers in danger of starvation. As pointed out by Mbuya Ku the edible insects that usually appeared during the rainy season could easily become *udyi* if they destroyed crops in the field on a very large-scale. In the village it seems interests in eating the various insects is slowly fading with most young people in the village indicating that they have never eaten and are not interested in eating these various insects. The increasing challenge of pests in the village such as weevils as well as the timing and appearance of other insects is very important in the village as it is related to access to food and mainly relish for villagers as well as being markers of the seasons.

Conclusion

This chapter has examined the nature of interspecies interaction in Gutsa village in the context of climate change and its impact on female elderly headed households. I have examined this at the level of elderly women heads of households and their relationship with both domestic and wild animal, as well as the relationship between domestic animals and wildlife. There are a number of animals (domestic and wild), insects and birds that are creating a lot of problems for elderly women either in the field or at their homesteads in

¹⁷¹ Also see Chimhundu (1980) regarding the increasing lack of interest among young rural boys on trapping this delicacy.

Gutsa village. The nature of interspecies interaction in Gutsa village ranges from conflict (wild animals destroying crops and preying on livestock), to interdependency (dogs helping to keep wild animals and thieves at bay) as well as being predictors and markers of the seasons and weather to a source of food. The conflict is not only confined to the village but also extends outwards to Charlotte Brooke suburb and into the newly resettled farmers' fields at former Chibvuti farm.

Consequently the nature of the relationships appears to create challenges for the food security of elderly women headed households as crops and livestock are raided by wild animals. All this has led to the creation of labour bottlenecks at household level, the inability to secure livelihoods as well as the evolution of age and gender based responsibilities for keeping wild animals and pests at bay. Increasingly the challenge of pests and livestock in Gutsa village can be attributed to the destruction of wildlife habitats due to encroachment, fragmentation and destruction of land. This has been a result of commoditization and commercialisation of natural resources going hand in hand with increasing population densification and competition for food.

In the wake of the FTLRP some of the wild animals such as warthogs which used to wreak havoc in people's fields have been hunted down thereby freeing elderly women from some of the associated challenges. Even though warthogs have been hunted down, the challenge of other wild animals such as baboons and monkeys in people's fields and at homesteads has reinforced elderly women heads of households' vulnerability as they have been forced to avoid keeping livestock and to reduce the size of their fields under crop. Elderly women's social networks and other non-farm livelihood activities are also being constrained as they spend more time at home guarding against the pests. The nature of interspecies conflict has also led to the emergence of gender and age based responsibilities for keeping wild animals at bay in the village.

In this chapter I have also demonstrated that there is a central vernacular meteorological theory that is grounded on the relationship between people and fauna in the village. This helps in household level decision making related to agro-based livelihoods for elderly women headed households based on the certainty and confirmation of behavior patterns of these fauna.

Chapter 7

“We no longer give names to rains. We just plant”: Adaptation strategies in the village.

Introduction

This chapter examines elderly women heads of household’s adaptation strategies in the face of climate change in Gutsa village, Goromonzi District. The main questions that this chapter addresses are: How are elderly women headed households coping with the impact of climate change in Gutsa village? What are the socio-economic and political structures available to help elderly women headed households adapt to and cope with the impact of climate change in Goromonzi? This is important in order to understand strategies that elderly women are relying on to create a buffer against the impacts of climate change

Religion as an adaptation strategy

It appears that religion is increasingly becoming an attractive adaptation strategy in the face of climate change. This ranges from traditional religion in the form of *chipwa* to Christianity as seen in the increasing use and assurance through prophecy in Independent African Churches to cope with the impact of climate change. With traditional religion, villagers are yearning for the return of *chipwa* ceremonies in the village despite the last ceremony having been held in the village in 1985. Talking to villagers it appears no one was prepared to directly take part in *chipwa*. However in the face of climatic uncertainty villagers increasingly view it as an attractive option to plead for rains as those who were familiar with it in the village fondly reminisce on the powers of the late village rain-maker. As the rains appeared uncertain by November 2015 some villagers were comforting themselves after they had heard that people in Nyakudya had held *chipwa* to plead for rains for people under chief Chinamhora. However with no rains by December 2015 some residents began to shift the blame to those same people who had held *chipwa* in Nyakudya for the lack of rains saying people are now Christians.

While others have shifted their hope to traditional religion, it appears some villagers are also shifting their adaptation towards belief in Christianity. This has been the case in the village over the past few years as those attending Independent African Churches (for example Mai Mizhu) have now resorted to prophecy from these churches in forecasting the favourability of the coming rainy season in order to determine planting dates and the type of maize to be grown in order to maximise on the erratic rains. In conversations with a number of residents who are members of various Independent African Churches either in the village or outside it was acknowledged that recently prophecy has become important in advising

them on the nature of the coming rainy season. This has in a way shaped their adaptation behaviours over the past few years in their preparations for the coming rainy season. In December 2015 Mai Chota said that the leader of Bethel church in Showgrounds requested all village heads in Domboshava to accompany him to the nearby Ngomakurira Mountains to pray for the rains. On the first occasion in November he went alone and on the second attempt he was joined by the village head from Chiroodza. After the prayer retreat, Mai Chota said the leader of Bethel church told Chiroodza that since he had been courageous enough to accompany him, the rains would first fall in his village twice before spreading to others. This seemed to come true, and by December people from his village had better maize as they had planted in mid-November. As a result the use of prophecy is increasingly becoming attractive in the village to respond to the uncertainties of climate change. In the village prophecy is being used to forecast the favourability of the coming rain season as well as the type of crops to be grown to ensure food security.

Shifting markets in response to reduced quantities of produce from the vegetable gardens

The growing of vegetables in gardens perennially in Gutsa village has been a fairly recent development which started in the mid-1990s as this was previously mostly confined to people from nearby Mashonganyika, Chibanda and Mutsvati villages then derogatorily referred to as:

“vanhu vasingabude mugarden”,

“people who never stepped out of the garden”.

Then residents of Gutsa village used to make fun of these vegetable farmers and mocked their children who they said wanted to grow up and be like their parents. In the village, growing vegetables was mainly done during the rainy season and mainly at people’s homesteads. Currently a number of people are now growing vegetables perennially in the village. It was approximately at the same time that the impact of climate change was beginning to be felt that people ventured into this new livelihood option.

As water levels in the vegetable gardens of elderly women are progressively getting lower and lower between the dry months of August to October (and now as far as December of 2015) elderly 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 elderly women who are into perennial vegetable gardening namely Mai Chota, Mai Mizhu, Mbuya Gone and Mbuya Tawira.

The vegetable markets for farmers in Domboshava with a steady and significant output are mainly Mbare Musika, Hatcliffe and Showgrounds despite their constantly fluctuating prices. The breakdown of Mandaza's lorry in 2010 also forced villagers from Gutsa village to avoid going to Mbare Musika as it was no longer cost effective to do so. Mandaza's seven tonne lorry previously did the rounds carrying vegetables from Gutsa village and other nearby villages to Mbare Musika in a single trip with transportation costs spread between the farmers. Now vegetable producers in the village either have to have significant output to make it possible to hire the now ubiquitous one ton pick-up trucks to ferry vegetables to the further afield markets of Mbare Musika or Hatcliffe or alternatively hire a scotch cart to go to the nearby Showgrounds market. For one to afford going to these lucrative markets they should have very reasonable quantities of vegetables or get together with others to make a full load. However getting others to make a full load is sometimes problematic for those with limited quantities of vegetables.

As I discussed in Chapter Three the increasingly attractive option now is to sell in the new market in the nearby new suburbs of Charlotte Brooke and Sally Mugabe Heights although the price is static. At the other markets a standard bundle of vegetables can be sold for as much as US\$3 a bundle to as little as US\$1 for five, six or seven bundles. In Charlotte Brooke and Sally Mugabe the same bundle is sold at a steady and increasingly standard all year round price of US\$0.50 per bundle. The elderly women complained about the poor returns from the market as it was now crowded by the newly resettled farmers in the district who are farming vegetables on a large-scale instead of cultivating cereals as the former white commercial farmers did. As I discussed in Chapter Two these newly resettled farmers then send their vegetables to the small markets thereby crowding out the small farmers with cheap prices. In Charlotte Brooke when demand outstrips supply, it is only the size of the bundle that is reduced and there is no increase in the price. Mbuya Gone pointed out that usually demand outstrips supply during the latter parts of every month when people are stretched thin in their budgets as well as the greater part of the of the dry season when the number of vegetable beds are reduced in response to low water supply.

Mai Chota was concerned that the FTLRP had turned the small-scale vegetable farmers from other villagers who were fortunate enough to be given pieces of land in the former farms into large-scale vegetable farmers. She suggested that these new farmers concentrate on feeding the country with maize rather than growing vegetables like the small

farmers *kumaruzevha* (in the reserves). All the elderly women in the study have stopped supplying the other markets now only preferring to sell in the nearby Charlotte Brooke market. Therefore in response to the impact of climate change as manifested by the low water levels in the wells, elderly women have responded by reducing the number of vegetable beds which has ultimately led them to shift the market for their vegetables in preference for the steady but not very lucrative markets in Charlotte Brooke and Sally Mugabe Heights. As Mbuya Gone resignedly put it, “*Hazvizoenzane neasina*”, “At least it’s better than the one without”. As times have changed Mai Mizhu pointed out that in the past it was not a challenge to go to the main markets as returns from the market were sufficient for general living purposes. However these days the returns from the market are so poor and with her big family of grandchildren they are not sufficient for daily living.

Mbuya Gone pointed out that she preferred planting rape vegetables in October as she was usually guaranteed good returns from the market in later months after the challenge of the dry and hot October month. In order to reap a harvest, Mbuya Gone goes through the labours of watering the individual vegetables with a cup on each vegetable stem throughout October in anticipation of the profit to be derived from the pain. Still the main challenge is when the new markets are flooded with produce especially during the rainy season when even those who do not farm vegetables perennially take time to try growing vegetables taking advantage of the rains. Consequently Mbuya Gone could not help but lament the progressively reduced returns from her vegetable garden over the past few years. Some time back when she was still very strong she had been one of the main vegetable farmers in Gutsa village. The capacity of these elderly women to recover from the shocks of low water levels leading to reduced output, the flooding of the market with vegetable produce from the newly resettled farmers, the lucrative but highly fluctuating vegetable prices in the main markets and finally the shift towards the stable but not so profitable Charlotte Brooke market demonstrate an element of resilience.¹⁷² In this case the shock and stresses that are affecting these elderly women heads of households in Gutsa village are the low water levels, the newly resettled farmers, the reduced output as well as the depressed prices on the market.¹⁷³

¹⁷² The notion of resilience adopted here is the one provided by Nelson (2011) that reflects the capacity of a household or community to cope with and recover from shock and stresses.

¹⁷³ This is consistent with observations by Molua (2008) that climate change has the potential to affect agricultural production which will force farmers to adopt new practices in response to altered conditions.

Adopting new farming practices to minimize the impact of climate change in the village

Since 1997 most women in the village have been taught by NGOs operating in the district advising villagers on permaculture/conservation agriculture with the most notable one being KAITE Trust. Mai Reni pointed out that they had been taught that using the ox drawn plough is not recommended as maize planted under such conditions is easily affected by moisture stress. As a result one of the adaptation practices now widely used in the village is zero tillage or dry planting to maximise on the late debut of the rainy season, the uneven distribution and the early cessation of rainfall. Furthermore people are adopting the practice of making furrows in preparing their fields for planting. Increasingly adopting these new approaches is also very useful for elderly women as waiting to plough with an ox drawn plough when the rains have come is a substantial problem. Trying to jump the long queues of potential customers needing the services of those with the ox drawn ploughs is a feat in its own regard. This becomes a disadvantage for elderly women as potential planting days will be passing by thereby creating a crisis situation in response to late planting in the face of erratic rains.

Mai Cha was full of praise for the advice some villagers have been getting from Non-Governmental Organisations like KAITE Trust that are sporadically operating in the village. Elderly women are receiving knowledge on these new farming practices either directly from the NGOs (in this study Mai Reni is the only one in the KAITE Trust permaculture initiative) or indirectly from other villagers who are directly involved in the NGO initiatives. Mai Reni pointed out that they were taught that maize stalks should never be burnt or destroyed. Rather they can be spread in the fields as a “*gumbeze*” (blanket) when one has planted their maize. This is important in order to retain moisture and hence increase the likelihood of maize reaching maturity even if the area receives poor rainfall as has been happening in the village over the past years. Alternatively they can cut grass during the dry season, store it and then spread it in the maize field with the same results as using maize stalks. Mai Reni pointed out that if you dig planting holes without ploughing then add manure in the hole with the maize it would mean that there would be limited runoff as the rain would runoff directly into the hole and hence stay there longer.¹⁷⁴ According to her:

“In the hole where you would have planted the maize the rain will remain there.

You might think it is dry, but the grass will retain the moisture whilst nourishing

¹⁷⁴ This is also consistent with indications by Hassan and Nhemachena (2008) and Shiferaw et al (2014) who pointed out that some of the adaptation strategies being used by farmers in Africa include increasing shading and shelter as farmers take advantage of activities that are less sensitive to drought and/or temperature stresses taking full advantage of beneficial climate conditions.

the maize. In this way the maize will appear as if it is being watered because it has been mulched.”¹⁷⁵

Initially when Mai Reni settled in Lower Gutsa in 1982 she would dig planting holes in the soil to plant her maize. However when her father saw her doing this he told her that:

“My own daughter cannot be seen to be ploughing with bare hands because that would be a disgrace to the family as it will be seen as a sign of poverty.”¹⁷⁶

Thereafter her father always made sure that he would plough her fields early for her as he knew that baboons at her homestead were a menace. She would also practice winter ploughing with the rains that came after harvesting, “*kuodza mashanga*.” (to make the maize stalks rot). She said that then in the village they also used to practice *majangano* (taking turns to plough and plant in each other’s fields).¹⁷⁷ However she stopped this when they delayed to plant in her field and her field was only ploughed on the 22nd of December in 1984. To make matters worse those she had helped to work in their fields did not come to help her. Though she had been practicing zero tillage since the 1990s she pointed out that she got the most when she started practicing zero tillage with the NGO KAITE Trust in 2012. The NGO would provide inputs in the form of fertiliser and seed which the farmer had to pay back with eight bags of maize. That year after returning the eight bags of maize Mai Reni was left with thirty nine fifty kilograms bags of maize without counting the green mealies she consumed during the course of the rainy season. Unfortunately the 2013-2014 farming season was not favourable for her as she only managed to harvest twenty bags of maize before she had returned the eight bags to the NGO. She further said that the NGO had allowed them to do their own experiments by having the main field under zero tillage with a small section ploughed with an ox drawn plough (This is not really an ox drawn plough as even cows with some young calves are pulling it too) in order to compare the yields.

My observations showed that most of the elderly women heads of households in the study do not wait to plant after ploughing with ox drawn ploughs. Rather most of them are practicing zero tillage/dry planting mainly as a cost cutting measure in comparison with

¹⁷⁵ Shona verbatim, “*Mugomba muye manje, mvura iya, icharamba yakadaro. Imimi munenge muchiti mawoma ka, huswa huya uchabata hunyoro, hucharamba huchikwidza uchifidha chibage chiya. Saka chinoita fanike chirikudiridzwa nekuti chakamaushwa*”.

¹⁷⁶ “Shona verbatim, “*Mwanasikana wangu haangaonekwe achirima nembama, nekuti zvingava manyadzo kumhuri nekuti tingaonekwe setinotambura*”.

¹⁷⁷ For a detailed discussion of *majangano* see Worby’s (1995) work in Gokwe regarding such work parties and the systems of reciprocal obligations that a household acquires when others agree to work collectively in its farming activities.

having to pay to have their fields ploughed with ox drawn ploughs. Of the ten elderly women in the study it was only Mai Njere and Mbuya Tawira who had consistently practiced zero tillage from the time they settled in the village. All the other eight elderly women would alternate between zero tillage, ploughing the whole field and making furrows, ploughing the whole field or simply making furrows with an ox drawn plough.

Whilst other elderly women are moving away from ploughing their fields towards zero tillage or simply making furrows in the field as a cost cutting measure others are moving away from these same practices. Though practicing zero tillage from the time she settled in the village, however since 2010 Mbuya Gone has begun to prepare her field using an ox drawn plough as she said she was increasingly finding it difficult to do zero tillage. She could no longer withstand the toil of the labour of zero tillage as well as the equally taxing process of weeding the hard fields planted under zero tillage. Mbuya Tawira who practices zero tillage does not wait to plough her field as she plants as soon as the rains have fallen by simply digging up holes in the ground. She further pointed that villagers in Lower Gutsa are always ahead of those in Upper Gutsa when it comes to planting.

“Here we make it get ready and go to plant. If you see someone holding a hoe you know that time for planting has come because if you are late you will be forced to harvest your maize before it has fully matured because of the baboons.”¹⁷⁸

As a result most people close to her homestead planted their maize late in October 2014 while some in Upper Gutsa planted in early to mid-November with the majority planting late in November or early in December. Despite her advanced age Mai Mizhu still prefers growing her own maize after ploughing since she has cattle:

“Begging for mealie meal is not good, tomorrow give me a small plate, and tomorrow give me a small plate. It is better if people see you ploughing they can say at least the harvest was not good”.¹⁷⁹

Of all the elderly women I talked to none had begged for mealie meal. However I noticed the existence of a system of reciprocal borrowing in the village where it was common for

¹⁷⁸ Shona verbatim, “*Kuno totoita get ready go kudyara. Ukaona mumwe atobata badza wotoziva kuti nguva yekurima yatosvika nekuti ukanonoka unozotema chibahwe chisati chaita nekuda kwemakudo.*”

¹⁷⁹ Shona verbatim, “*Kusunza hakuite, mangwana ndipei kaplate, mangwana ndipei kaplate. Zviri nani vanhu vakakuona uchirima vanoti zvakarambawo.*” *Kusunza* involves travelling distances in search of grain in times of crisis (mainly drought years) either through barter trade or by asking for grain. However in the village as I talked to the elderly women it appeared none of them had really engaged in *kusunza*. Also see Mapfumo, Mtambanengwe and Chikowo (2016) on the practice of *kusunza*.

households to lend and borrow food items from each other such as cooking oil, sugar, salt and mealie meal when these had run out in the household. These would later be returned in the same quantities at a later date.

While some elderly women heads of households such as Mbuya Gone are moving away from zero tillage to ploughing their fields with ox drawn ploughs as they struggle with the labour intensiveness of zero tillage farming, others like Mai Reni now prefer zero tillage as a result of the training they received in conservation farming, the benefits of increased yields as well as a cost cutting measure. Adoption of these new farming practices is proving to be effective in the village in the face of the impact of climate change. However zero tillage is to some extent condemned by the same elderly women that are practicing it as they say it is problematic as the land will be very difficult to weed with a hoe. Furthermore there is the increased likelihood of weeds in the unploughed land as the weeds tend to grow faster in the zero tillage fields compared to fields tilled by cattle.¹⁸⁰ As villagers began to weed their fields in January 2015 some who had planted their fields using zero tillage for the first time complained that it is very hard to weed these unploughed fields as the soil was very hard. As a result their weeding progress was slow compared to those who made furrows with ploughs or fully ploughed. This was made more difficult as by early January 2015 there was an abundance of weeds in most fields due to the incessant rains that had been received before and after Christmas in December 2014. As it was increasingly becoming difficult to weed using hoes in the fields some people began to use modified ploughs to weed their fields.

Having grown up in the village I noticed that most people in Upper Gutsa are now digging holes to plant maize in the ground. Instead of ploughing the whole field, others are simply making furrows and then planting. In 2014 Mbuya No dug holes in her field and planted her maize while Mbuya Ku had furrows made in her field and thereafter she planted her maize. Mbuya Tarai had her whole field ploughed and did not furrow her ploughed field as that would have been an additional cost, so she later dug up holes to plant. All these are part of cost cutting measures that the elderly women have adopted to avoid ploughing the whole field. These approaches used to be very common practices for people in Dongo as most of the people who had settled there were from the farms and did not have cattle except for Mai Mizhu and were therefore generally considered not as well off as the “originals”. A number of residents in the village expressed the opinion that the increasing trend to planting without ploughing is a sign of the hard times people are facing in the country making it

¹⁸⁰ Also see Vogel (1994) on the challenges related to zero tillage in Zimbabwe.

difficult to find money to pay for tillage. On the other hand these now popular farming trends in the village have unfortunately been a disadvantage for those who have cattle as they charge a fee depending on the size of the area to be ploughed in other people's fields. It is usually big business for those with cattle as they can earn an income ploughing, making furrows or weeding in other people's fields.

Knowledge of local crop varieties, crop production and adaptation to climate change

Crop production in Gutsa village appears linked to nearby Seed Co's Rattray Arnold Research Station owned by the leading seed producer in Zimbabwe. The station is simply known as Seed Co by villagers. The research station shares connections with the village as a number of men from the village have married women from the research station while a number of women from the village have also been married by men from the research station. Often times during the rainy season when there is a lot of work at the farm some people from the village have been employed to work as seasonal workers in the fields (mainly women). In the process there are a lot of products from Seed Co that have found their way into the village and vice-versa. For example workers at Seed Co usually give (mainly to their relatives) or sell their monthly allocations of maize meal to people in the village when it is more than they need to consume. Soya beans, groundnuts and wheat which are in demand in the village for baking homemade bread also come from Seed Co. During the farming season workers from Seed Co sell or give fertilizer and seed maize to the village which they would have obtained through various means (some legally, others illegally) from the workplace.

When we were at one of the funerals in the village in December 2014, one of my "*mukoma*" (cousins) Inno who was officially the deputy village head recounted the experience of villagers having bought "*mikono*" (male) maize seed from Seed Co employees a few years ago. Inno said that during the 2008 farming period the village received very good rains. However there was almost hunger in the village as most people had been given or had bought the cheap seed maize from workers at Seed Co. Unfortunately this seed was later discovered to be "*mukono*" the rejects from the seed trials which are not supposed to be planted but are meant for consumption. Gutsa villagers "*nekuda zvemikoto*" (need for cheap deals) bought this seed unsuspectingly and as a result the crop in the village was a disaster as the cobs were so small despite the liberal application of fertilizer and "*manyowa*" (cow dung, goat or chicken droppings) or "*mupfudze*" (the almost decayed leaves from the nearby hills) or compost manure from the pits used to dump home waste. Since that year most villagers have stopped buying seed from the informal channels at Seed Co.

As the rainy season commenced late in 2014 it was increasingly said that the year could also be a replication of the 2008 scenario when people had planted *mikono*. Their reasoning was that the seed from Seed Co which was bought formally from the stores (in Harare or at the stores all over the district) was not doing well compared to “*garabha*” (the locally bred seed maize from the village which is derived from the best individual maize grains from the previous harvest). The seeds are meticulously selected by villagers and passed on to each other from year to year. Some villagers believed that the packaged maize seed from Seed Co was fake due to its poor performance compared to *garabha*. *Garabha* in the village has mainly been used by the poorer residents over the years because some cannot afford the money to buy the hybrid maize seed from the stores.

Village women are also known to share special seeds which mainly range from *garabha*, groundnuts, round nuts and *zviyo* to sweet potatoes. Observations in the village show that it is not only seed from *garabha* that is used and carried over from the previous harvest. Elderly women in the village do not buy seed for groundnuts, round nuts, *zviyo* and sweet potatoes as these are kept from last year’s harvest or obtained from other villagers as well as from outside the village especially in the case of sweet potatoes. It therefore appears that elderly women’s knowledge related to crop production is very critical for adaptation due to their extensive knowledge of local crops which are best suited to their immediate environment and the prevailing agro-ecological conditions. The use of local bred seed varieties appears to be thriving in all seasons and it is indicative of the traditional knowledge that elderly women in the village call upon in order to overcome the challenge of the questionable quality of seeds from the formal shops as well as the uncertainty of climate change.

As a result of the poor performance of hybrid maize in the village during the 2014-2015 farming season in comparison to *garabha* the other explanation offered was that since the FTLRP, Seed Co has been contracting black farmers to plant some of their seed maize in the country. Villagers are saying that Seed Co has always subcontracted the growing of seed maize even when there were white farmers on the former commercial farms. Mai Njere also confirmed this as she also used to work seasonally as a seed maize grader when the former white commercial farmer was still at Chibvuti farm. The conclusion seemed to be that you ought not to subcontract this task to a black farmer because:

“*munhu mutema haavimbike*”

“A black person cannot be trusted”

It is suspected that in order to cut costs and maximise on profit, due process was not followed in growing seed maize seed by these new black farmers who knowingly made available hybrid seed maize that they knew to be deficient in quality. The result was the poor performance of maize in the field which was bought from the authorized outlets in 2014. This was further reinforced by villagers' observations that those who planted from seed carried over from last year's seed from Seed Co had better crops. Villagers were therefore condemning the 2014 seed maize from the authorized outlets as fake in the process praising *garabha*. However, some villagers have not lost hope in maize seed from Seed Co as in their preparations for the 2015-2016 farming season and in light of an increasingly poor rainfall year villagers are also buying the short season varieties/early maturity maize such as *Tsoko* SC-400 from Seed Co. As a result villagers are moving towards growing *garabha* and the short season seed varieties as an adaptation strategy to cope with the unpredictable rains.¹⁸¹

Diversifying into non-farming and multiple livelihoods to adapt to climate change

Despite farming being the main source of livelihood in the village for elderly women heads of households, these women are increasingly diversifying and pursuing multiple livelihoods in the face of climate change.¹⁸² In Gutsa village the elderly women heads of households are diversifying into non-farm related livelihoods activities as well as pursuing multiple livelihoods ranging from renting out their rooms to outsiders, to trade and *mukando* in order to generate additional income. In the village livelihood diversification is increasingly becoming an important component in the face of linkages between different economic sectors in the area as well as between different areas enhances productivity.¹⁸³ Adaptation strategies by elderly women heads of households in the village have increasingly led to the pursuit of multiple non-farm economic activities as elderly women pursue their economic independence.¹⁸⁴

The proximity of Charlotte Brooke and Sally Mugabe Heights as well as the parceling and opening up of the former commercial farms in the area during the FTLRP has resulted in

¹⁸¹ This is also consistent with observations by Mushita and Andrews (2013, 2) who pointed out that locally cultivated open pollinated varieties (OPVs) of maize are more tolerant to extended dry spells than the hybrids.

¹⁸² Diversifying into non-farm livelihood activities has also been seen as important for rural households in order to generate additional income (Ulrich et al, 20102).

¹⁸³ Also see Berkvens (1997, 1) 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.

¹⁸⁴ As noted by Nelson (2011); Batterbury (2008); Hassan and Nhemachena (2008) many rural households are engaging in off-farm livelihood activities and livelihood diversification including trade to make a living in the face of climate change to buffer crop failure.

an increase in the number of people settling in the village. These new residents either purchase land or rent houses in the village. As a result of the proximity of Harare to the village a number of villagers are now renting out their houses. Of the ten elderly women in this study it was only Mbuya No who since 2013, has been renting out an outside bedroom to a tenant who is working in Charlotte Brooke. Due to the decline in output and income from agro-based livelihoods some elderly women heads of households in the village have therefore found a new income source in the rental market.¹⁸⁵

Mai Reni's daughter provided the initial capital for her to start a lotion and soap selling business in 2012. Her daughter realized that it was becoming more difficult for Mai Reni to provide for her daily needs as well as those of the grandchildren in her care. For her this is important, "...*nekuti handizoshaya yesipo*", "...at least I will not fail to get money for soap". Before the new venture she sold peanut butter and now she has diversified into selling lotions and soaps as well as used clothes that she buys from Mupedzanhamo the main market for second hand clothes in Mbare, Harare. She is very meticulous as she writes down every customer's name who takes her products on credit with payment expected at month end. She lamented that sometimes those who take her products on credit do not pay on time, she pointed out a number of villagers who had given her problems and were still giving her payment problems. Once a customer fails to pay on time she usually refuses to give them her products on credit. When she wants to restock she gives money to her daughter who buys for her in Harare. She sells her wares in the former Chibvuti farm, Seed Co, nearby Ngwerume village as well as in Charlotte Brooke suburb. She also exchanges her products for grain (wheat, maize, beans, cow peas, or soya beans) or basic commodities such as cooking oil and sugar. She said that some wives in the village exchange these commodities which might be surplus in the household without the husband's knowledge.¹⁸⁶ For example a lotion costing US\$1 she exchanges either with two cups of beans, or two cups of sugar or three cups of cowpeas. It is mainly in Chibvuti and Seed Co where she exchanges her wares with wheat

¹⁸⁵ Though writing focusing on income from urban rentals and not incomes from rural rentals, Paradza (2009, 423) observed that in the backdrop of a deteriorating Zimbabwean economy which has affected the livelihoods and security of elderly people, other sources of income for the elderly not linked to agriculture and not dependent on the health of the owner like incomes from rentals are providing a cushion for the elderly from the impact of a non performing economy.

¹⁸⁶ Writing on Northern Ghana, Apusigah (2009) pointed out that unauthorised sale of household staples was almost taboo for women as they could only make such sales when authorized by men. However in Gutsa village women are engaging in the unauthorised sale of household staples and other food items thereby demonstrating the gendered politics that exhibit control over household resources. As they engage in this practice they do not seek to visibly contest male control while at the same time being able to satisfy their own consumption needs and desires, even if objectively they are taken advantage of by other women who they sell to in relation to the value they get for items they dispose.

and soya beans as these are in abundance on these farms. Wheat and soya beans are very useful for her as she uses them to bake *chimodho*. In September 2014 she exchanged a five litre container of maize with a lotion costing US\$1. At this rate it meant she was buying a twenty litre bucket of maize at US\$4 which was below the village average of between US\$5-6 on a cash basis. As a result of this she pointed out that she had managed to raise seventy five kilograms of maize which she had added to the maize she already had in a space of less than three months. She however pointed out that she was very careful as she never exchanged her maize with any wares:

“Right now I do not exchange products with maize, I see that if I exchange my maize with any product I will kill myself with hunger, I have grandchildren living with me you see *sekuru*”.¹⁸⁷

Before becoming an all year round producer of vegetables Mbuya Gone used to buy and sell vegetables from Mashonganyika village while also knitting and selling doilies in Borrowdale as well as supplying doilies to a number of women from Mungate who were cross border traders in South Africa. She had learned to knit doilies while living in Mungate with her now deceased second husband as Mungate village is well known for doilies. Mbuya Gone together with other women from the village also previously used to go to Mashonganyika on those days that the farmers were picking up their vegetables for the Mbare market. After helping the farmers to pick their vegetables they would then be paid with vegetables for their labour. They would then parcel the vegetables into small bundles which they would hawk in nearby Borrowdale low density suburb. For her this used to be mainly a dry season venture as during the rainy season she would shift her focus to working in the fields.

In November 2014 one Saturday on my way to church, I passed near Mbuya Ku’s homestead and saw her busy breaking down some boulders into small gravel stones with a hammer whilst seated under one of her mango trees. I saw two heaps of gravel as pointers of evidence of her handy work. I had seen these boulders in September when I went to interview her and they appeared to have been transported from somewhere. Previously I had seen a number of young males and females in the village engaged in this activity and never thought an elderly woman would be able to perform this activity. There is now a ready market for this

¹⁸⁷ Shona verbatim, “*Izvozvi handitengi zvinhu nechibahwe, ndinoona kuti ndikatenga nechibahwe ndinozviuraya, ndine vazukuru ka ini sekuru*”.

gravel/quarry in Charlotte Brooke due to ongoing construction activities. Mbuya Ku is very old, to put her age into perspective one of her daughters Mai Reni is one of the study respondents and is more than sixty years old!

I was to later learn that Mbuya Ku was in a group of ten women of various ages in the village and they each paid US\$10 every month for *mukando*. There are other savings groups in the village such as *maround* where each member contributes a fixed amount with the cumulative amount passed on to one member either at weekly, fortnightly or monthly intervals depending on the arrangement. These groups in the village are mainly composed of women.¹⁸⁸ In Gutsa village members from *mukando* borrow from their *mukando* and sometimes provide the money as *chimbado* where they charge interest of thirty cents for every dollar to other villagers. *Mukando* is popular among women in the village with various testimonies abounding on how they have been very handy to members instead of the *chimbado* which is also practiced in the village.¹⁸⁹ With *chimbado* the highest interest rate in the village is fifty per cent per month with the favourable rate being thirty per cent per month. Of all the elderly women in this study it was only Mbuya Ku who was involved in *mukando*. Mbuya Ku in September 2015 opened a stall just outside her home taking advantage of the people who wait just outside her home for the pirate taxis that come from Showgrounds to Gutsa village. The last stop for these pirate taxis is outside her home and this is where people come to wait.

As I have discussed in Chapter Six as the 2014-2015 rainy season progressed and maize and other crops in the field were maturing I noticed that old women were being contracted by those who were living in Charlotte Brooke and Chibvuti to guard against baboons and monkeys.¹⁹⁰ The women involved in this activity are mainly elderly women who previously had been farm workers in the former commercial farms with some coming from the nearby Seed Co farm.

¹⁸⁸ Also see Ulrich et al, 2012's study in Kenya where evidence showed such groups to be mainly composed of women.

¹⁸⁹ The availability of *chimbado* and *mukando* especially for women in the village is also consistent with Huisman's (2005) arguments that most rural households in Africa do not make use of formal credit facilitating services, but prefer to borrow small amounts of money from friends, neighbours or relatives. However here I argue that it is the same women who are in a position to extend credit facilities amongst themselves as well as in the wider community (village).

¹⁹⁰ However of all the elderly women heads of households whose life histories are recorded here, none were involved in this activity.



One of the elderly women outside her stall selling various items such as onions, sweet, snacks and sugar.

A number of elderly women in the village as well as those previously residing at Chibvuti and Rumani estates are also working as child minders in Charlotte Brooke as a result of the high number of working mothers in the suburb who require care for their young children while they work. These families with working mothers do not have grandparents living with them who are able to look after their children. Elderly women are preferred here as they are viewed as more trustworthy as well as generally being good with children.¹⁹¹

Due to the ongoing rampant cutting down of trees for various purposes in the village, many villagers are also shifting into seasonal economic activities that are heavily dependent on these trees. The key question on most people's lips is related to what the future of brick making in the village would be like since this activity is so heavily dependent on firewood and the forests which are rapidly dwindling. Mbuya Tarai whose grandson is heavily involved in brick making expressed her fears:

¹⁹¹ None of the elderly women in this study are employed as child minders.

“We really do not know how these young boys will earn a living as the trees they use to fire their brick ovens are fast disappearing in the forest”.¹⁹²

The rapidly disappearing trees have also led people to question the future of the seasonal activity of selling *mazhanje* practiced by most villagers. In 2013, 2014 and 2015 *mazhanje* were being harvested and sold to middle men who were mainly coming from Harare at the price of US\$1 per bucket. One can travel to Harare and sell *mazhanje* on the streets for a much higher but risky profit margin of between US\$3 and US\$5. The risk here is the municipal police who confiscate goods from unlicensed vendors. As *mazhanje* began to ripen in October 2015, the village head was very concerned:

“*Mazhanje* will be finished in one day when they are ripe because people will just harvest them, allow them to ripen at home and then sell them to close the chapter. However this will also mean more trouble with the baboons”.¹⁹³

Of all the elderly women in this study it was only Mai Njere who was engaging in the seasonal trade in *mazhanje* by gathering them and selling them to the trucks that came to the village.¹⁹⁴

Narrowing crops grown, shifting into small grains and poultry in the face of climate change

Findings show that in response to dwindling capacity, the lack of inputs, as well as in response to the impact of climate change elderly women heads of households are narrowing crops grown, diversifying into poultry as well as reducing their hectareage under crop as part of coping mechanisms.¹⁹⁵ Farmers also reduce exposure by diversifying their cropping practices by combining both drought resistant and non-drought resistant plants as well as shifting into poultry rearing. At the time that I carried out my field work, Mbuya Tarai had stopped farming in Mhinorombe Mountains as she could not cope with the demand for inputs, and this was also an adaptation strategy in the face of climate change. One of the

¹⁹² Shona verbatim, “*Manje hatizive kuti vakomana vachararama nei nekuti miti yacho yavanopisisa zvidhina zvavo yava kupera musango umu*”.

¹⁹³ Shona verbatim, “*Mazhanje anopera neone day kana oibva nekuti vanhu vachangomhanya kukurura mazhanje oibvira mumba votengesha zvopera. Asi nemakudo inenenge yava hondo*”.

¹⁹⁴ In considering livelihoods diversifications by elderly women in Gutsa village into non-farming activities this is consistent with observations that adaptation to climate change helps farmers to achieve their food, income and livelihood security objectives (see Kandlinkar and Risbey, 2000).

¹⁹⁵ Observations by Mushita and Andrews (2013, 2) and Hassan and Nhemachena (2008) show that in the face of climate change crop diversification is key and central to sustaining crop productivity, containing rainfall variability and ensuring food sovereignty in Africa.

crops no longer grown in the village is rice due to the disappearance of conditions conducive to its growth. Of all the elderly women in the village it was only Mbuya Ku who used to grow rice. Now she is no longer growing rice as a consequence of the disappearance of *jawhi* conditions under which rice used to flourish. Furthermore her sons parceled out and sold the specific piece of land she used to some outsiders. As the water table increasingly gets lower due to poor rains it means these former *jawhis* are no longer suitable for rice production as they are no longer water logged.¹⁹⁶

All elderly women in the study planted ground nuts on different scales. Mai Chota who is regarded as one of the best ground nut farmers in the village is intensifying the cropping of small grains especially groundnuts in response to the poor rainfall progressively being received in the village. Since 2013, she has harvested her ground nuts and made peanut butter which she sells in the village for US\$1 for 400grams. In 2013 she managed to harvest eighteen fifty kilogram bags of ground nuts after selling four fifty kilogram bags of “*nzungu nyoro*” (fresh groundnuts), at the Hatcliffe market. Some of her groundnuts are taken by those who come to request seed, as she resignedly believes there is nothing much she can do. People in the village make the requests to her for seed as they know that she always has it. In 2014 she managed to harvest twenty seven fifty kilogram bags of groundnuts:

“Dziri kupera nevanhu vembeu, vanenge vachiti ndoda mbeu, saka unongomupawo, handisi kutengesa”,

“They are getting finished by those who want seed; they come saying they want seed, so I just give them. I am not selling.”

Having harvested in April 2014, by October 2014, Mai Chota had given away almost four fifty kilogram bags of ground nuts as seeds to other villagers. Some say they will pay back with groundnuts when they have next harvested, others promise to replace the seed before the next harvest while others say they will give money but nothing is returned most of the time.

Mbuya Gone also pointed out that for her groundnuts, she never has to buy seed but gets her seed from her previous year’s harvest as well as being given by other villagers that she is

¹⁹⁶ Observations by Shiferaw et al (2014, 77) show that in the face of climate change, farmers generally diversify their production systems by employing activities that are less sensitive to drought and/or temperature stresses. In semi-arid rural Tanzania observations by Lyimo and Kangalawe (2010) indicate that farmers have also stopped growing rice as the previously swampy areas where rice was grown are drying in the face of climate change induced rising temperatures and poor rainfall.

in good books with.¹⁹⁷ In the case of Gutsa village the elderly women are not planting very diverse crops; rather they have reduced the number of crops they are growing in response to the associated impact of climate change.¹⁹⁸ It has been noted that the movement away from growing some crops like rice, *zviyo*, *mhunga* and *rapoko* has meant that the locally bred seeds for these crops are non-existent as they have been consumed as people gradually shifted away and stopped growing these crops in the village. This was lamented by Mbuya Tarai as she said some of these crops are known to be drought resistant and nutritious. She said growing these crops would definitely have been very important in the context of climate change with the high likelihood of drought periods as well as in the face of HIV and AIDS as these are some of the recommended foods by health practitioners.

While the majority of elderly women heads of households are keeping chickens at their homesteads it was only Mai Reni who appeared to attempt a significant shift towards poultry by rearing the local “road runner” chickens. She always made sure that once the hens hatched she would immediately remove the chicks from the hens and that way the hens would not take long before they started laying eggs again. As a result she indicated that she was never short of relish and that visitors to her home were guaranteed the welcoming chicken treats.

“Zvehuku zvaibatsira asi ndakazoregera nekuti gore iroro kwakanga kusina kuibva”.

“Keeping chickens used to help me a lot but I had to stop it because that year (2012) it was a bad harvest”.

However the perennial challenge of the marauding baboons forced her to discontinue with her chicken rearing as they were always being raided by baboons when they were left to roam in her yard. Unfortunately in the face of climate change diversification into livestock is not happening comprehensively in the village. Only Mai Mizhu had four head of cattle as well as three goats during my fieldwork. She would slaughter her goats for relish as well as for sale:

“Taitengesa kuti tiwane kurarama, dzimwe tichitengesa kuti tiwane fertilizer”.

“I would sell the goats so that we could survive, some I sold so that I could get money for fertilizer”.

¹⁹⁷ Mushita and Andrews (2013, 2) pointed out that generally in Southern Africa the planting of diverse crops is proving to be a useful adaptation strategy that farmers are using to sustain their food production through planting highly diverse crops (fifteen to twenty on one hectare) at different times, some very late.

¹⁹⁸ Also see Hassan and Nhemachena (2008) study regarding farmers’ responses in Africa in the face of climate change.

Although she did not sell any livestock in the year 2014, in 2013 she had sold one cow as she was planning on building another house in her yard. Unfortunately the sale of the cow was fraudulent as the butcher who claimed to operate a shop at Mungate Shopping Centre did not pay her what was due. She only received US\$150 of the US\$300 she was supposed to receive for the transaction. Unfortunately when she sent her son to collect the balance he never found the man and even her trip also yielded nothing as she could not locate the man. She reported that she had left everything to God as she had lost any hope of recovering the balance.

In the year 2002 Mbuya Gone had joined a dairy cattle pass on project organised by the Salvation Army church and attended a one week course in Basic Dairy Husbandry which was organized by the National Farmer Training Board from the 14th to the 18th of October in 2002 near Boka Tobacco Auction Floors on the Southern outskirts of Harare along the Harare-Masvingo road. During one of our interviews in October 2014 she took time to show me the various certificates she had from participating in the dairy project as well as the log sheets for the daily incidences for the dairy cow she had. Unfortunately the first time “*zamu rakasvodza*” (“the cow had a miscarriage”). Then it later bore a *tsiru* (cow) which she passed on to another member in the group after 9 months. It then bore another calf and she began selling the milk at Z\$0.50 per cup (250ml). The cow later ate some clothes that had been left out to dry at another homestead in the village, thereafter it became ill and was later slaughtered with the meat being sold in the village and earning her Z\$300 Zimbabwe dollars. Unfortunately the calf became ill after devouring a towel and Prince (Mbuya Tarai’s grandson) was tasked with slaughtering the calf. After selling meat from the calf she earned Z\$100 Zimbabwe dollars and also exchanged some of the meat and got two buckets of maize meal. It was only Mbuya Gone and the village head that were given these cattle in the village and unfortunately all their cattle died. Mbuya Gone said that maybe it was because these cattle generally were poor in health. Surprisingly the cattle in other villages as well as those that had been passed on to other members in other villages are still surviving and appear to be multiplying and were passed on. Mbuya Gone saw some of the cattle in Chiroodza village when she had gone to pay Mai No condolences in August 2014. She expressed that she used to make a comfortable living and it was difficult now to quantify what she was getting then but that on an average day she would milk close to five litres from the cow. She reported that she would get milk for her tea, sour milk for eating with *sadza* as well as having a surplus to give to relatives. The people who had donated these cows had advised them that they should not let their cows roam in the dry season as one needed to keep an eye on these cows. The cows died during the dry season when they were left to roam as she complained that one

could not really afford to keep watch over cattle all year round. Mbuya Gone pointed out that these cows would eat rags, clothes and plastics unlike the hard *Mashona* cattle. These cattle were supposed to be milked twice a day but Mbuya Gone only milked her cow once in the mornings. She resignedly said “*Ini nava Gutsa zvakatiramba izvi*”, “Me and Gutsa it appears this was not for us” as even Gutsa’s cow also died in the same way after it had devoured clothes.

“We no longer give names to rains. We just plant”. Shifting planting dates as an adaptation strategy

In the village, rains have been given names by villagers in response to their understanding of the weather and the farming cycles. Understanding these rains shape elderly women’s adaptation actions in response to the impact of climate change in the village as this determines the appropriate action/s to be taken when such rains fall.¹⁹⁹ As with most elderly women in the study, Mbuya Tarai pointed out that rains have got names.

As I explained in Chapter Five these names are *bumharutsva* and *gukurahundi*. *Gukurahundi* are the rains that fall in July and/or August and are not to be used for planting maize. Rather villagers practice “*winda prau*” “winter ploughing” with these rains and prepare the land in advance for the summer rains. This is important as a way to have a head start in planting once the rains are received. Usually farmers will need to mark planting holes with a hoe in the field or make furrows with a plough. Those with draught power usually prefer marking the furrows with their cattle than having to go through the labour intensive process of marking holes on the ground. When the summer rains are received water usually accumulates in the furrows or holes making it easier for farmers to plant as they rely on the accumulated moisture there. *Bumharutsva* are the rains that can be used for planting maize. Mbuya Tarai pointed out that over the years the rains that have been coming down and mainly used for rainy season ploughing in the village have been the rains that come in November. Due to the nature of the uneven distribution and unreliability of rains in the village, Mbuya Tawira pointed out that for her what was important to determine rainy season planting was that the rains had fallen in November. Once November had begun rains received would be the ones to be used for farming. As a result she noted that:

“*Ikange yanaya kutomira kumanikidza vazukuru vangu ivavo kuti basa rifambe*”,
“Once it rains I have to be on my feet urging my grandchildren to work”.

¹⁹⁹ As pointed out by Jerstad (2014, 402) knowledge of weather shapes people’s actions.

As elderly women heads of households shift planting dates by planting with the first/early rains as an adaptation strategy this is being influenced by prophecy from Independent African Churches. For example Mai Mizhu used the 2014 prophecy from her church and planted with the first rains as their spiritual leader had prophesied that the 2014-2015 rainy season would be a bad one and therefore people had to plant with the first/early rains. She managed to get a reasonable harvest of nine fifty kilogram bags of maize. She said that since the rains have really changed it was important to plant with the first rains because if you delay saying the first rains are not the ones to plant with then you will die of hunger.²⁰⁰

Waiting for the rains to adequately make the soil wet enough to use an ox drawn plough has some disadvantages as one has to make sure the rain has seeped deeply into the ground. This affects the quantity of the harvest as compared to those who dig and plant in this era of late onset and poor rainfall.²⁰¹ In Gutsa village it is mainly those who plant early through practicing dry planting and zero tillage as the first rains usually did not go deep enough to allow an ox drawn plough to plough the soil. As a result those practicing zero tillage had nothing to wait for; previously this was the case in *kuDongo* with the residents there known to plant and harvest their maize early and hence ensure food security much earlier than those in Upper Gutsa. Observations in the village show that it is mainly those with cattle that plant late as they will be busy ploughing other people's fields and small plots either in the village or in Charlotte Brooke rather than their own fields.²⁰²

For Mbuya Ku when the first rains fell in the village on the 15th of October 2015 she planted, digging holes in her field while most residents were hesitant to plant with those rains. When the rains fell again on the 27th of October they were not deep again but this time a number of people dug up holes and planted their maize. As the impact of climate change continues to manifest itself in the village Mbuya Ku pointed out that her harvest in 2013 was so poor that she only managed to get five kilograms of maize. However in 2014 there was an improvement and she managed to get ten fifty kilogram bags of maize attributing the improvement in the harvest to having made furrows only with a plough and planting with the first rains. This was different from the previous years when she would wait for the rains to

²⁰⁰ Such an approach is supported by Knox et al (2012) and Hassan and Nhemachena (2008) who pointed that in Africa in the context of climate change some of the adaptation approaches taken entail shifting planting dates.

²⁰¹ Writers such as Roncoli (2006, 90) have pointed out that in the face of climate change farmers who have plows or tractors can plant earlier, thereby getting a head start on a farming season that promises to be drier than normal.

²⁰² This is contrary to observations by Gambiza and Nyama (2000) who pointed out that those farmers with cattle are usually the ones to plough and plant early.

come down and then plant when the soil was wet enough to allow a plough to go through. Over the years waiting for “enough” rain had proved a challenge as the rains would come briefly, when they resumed it would be well into the “normal” rainy season. Mai Reni pointed out that she does not rely on the unreliable weather reports and rainy season forecasts by the Met Department. Since she does not have cattle she plants and she does not wait for anything. Mai Chota who always plants early pointed out that the maize planted early is usually strained by the scorching sun that follows the early rains and it is difficult to ignore the maize in the field:

“Tubage twacho tune nharo, tunongokura zvakadaro”,
“The small maize is stubborn, they just grow like that”.

If the maize manages to weather the scorching sun it is usually a guarantee of a fairly good harvest.

Mbuya Gone pointed out that the rains that marked the beginning of the rainy season came down in October. Since the rains were no longer coming at the expected time, whenever they came in October then it was important to plant as one could no longer afford to take chances with the rains by giving the rains names. By giving them names it means that one will be assuming that the rains will serve the purpose that similar rains with that name have served in the past. As a result by not naming or classifying the rains, it deters one from making a bad prediction as to their timing, purpose, intensity, volume as well as their effect on the soils and the crops. So in order to assess whether the rains are adequate to plant with after they have fallen down, Mbuya Gone goes outside with a hoe to dig in order to assess how deep the rains have seeped. After being satisfied that the rains have indeed gone down to assure planting she puts her seed in the soil.²⁰³ So she said:

“Now it rains, so you go outside with a hoe to dig up the soil to see its depth. You know if I plant, crops will germinate.”²⁰⁴

As a result of the poor performance of the maize in people’s fields by end of February 2015 villagers were increasingly pointing to the need to plant early with the early rains in order to at least have hope of getting something from the field. This conclusion was based on assessments of the maize in Lower Gutsa which had been planted with the first rains as they

²⁰³ Orlove et al (2010) also found that in Uganda digging with hoes to examine soil moisture after the onset of the rains to determine when enough has fallen for viable planting was a very common practice.

had ample evidence of having had a reasonable head start. These good crops in Lower Gutsa had been planted either using zero tillage or dry planting compared to Upper Gutsa where the fields were first ploughed before planting.²⁰⁵ So as the farming season drew to a close in comparison with people from Lower Gutsa most people in Upper Gutsa who had planted with the first rains had poor maize produce.

Cloud seeding as an adaptation strategy

In Gutsa village residents say that before the Fast Track Land Reform Programme, Chari the former white commercial farmer at Chibvuti farm used to practice cloud seeding when the area was experiencing prolonged dry periods. With the village experiencing prolonged dry spells between October and November of 2014 at the start of the 2014-2015 rainy season as well as the abnormally long mid-season dry spell in March of 2014, villagers were saying by then the former white commercial farmer at Chibvuti would have sent his small plane into the sky to do cloud seeding. This would have allowed the village to experience at least a normal rainy season. Such observations shared among the villagers were also reinforced by the general consensus among elderly women in the village who were pointing to the departure of the former white commercial farmers from the farms in the district as also having signified the main turning point when rains became highly erratic and unpredictable in the village. In the wake of the impact of climate change in the village manifesting itself in the form of erratic rains most villagers yearn for the times when Chari was still at his farm then as the village would not have been dry.

The need to practice cloud seeding in the village is reinforced by the claim in the village even among elderly women that some white people living on small plots of land and practicing farming in Borrowdale and near Hatcliffe have always been practicing and are still practicing cloud seeding in that area as every rainy season that area has good rains. As a result of these favourable rains in this area even when other nearby areas are not receiving rain, villagers in Gutsa are convinced that the white people with these plots of land keep their small planes at Charles Prince Airport in Mt Hampden, Harare where they take off and land when they are practicing cloud seeding. The Meteorological Department is lambasted in the village as it is viewed as a useless entity that cannot forecast rains with accuracy. It is accused

²⁰⁴ Shona verbatim, *“Handiti mvura inonaya, wobuda nebadza wonochera woona hudzamu hwayaita. Kuziva kuti ndikadyara zvinhu zvinobuda.”*

²⁰⁵ As I mentioned in Chapter Three, Chapter Four and Chapter Six people in Lower Gutsa do not have cattle as compared to people in Upper Gutsa. Therefore they always take advantage of their situation to plant with the early rains thereby increasing their chances of getting a reasonable harvest compared to people in Upper Gutsa who have cattle and wait for the soil to get adequately moist.

of only forecasting rains during the period or days that they know they will be practicing cloud seeding.²⁰⁶ In conversations in the village, people were increasingly pointing to the need for the government to practice cloud seeding as a way of overcoming the dry spells in the country.

Escaping the challenge of firewood in the village

In the face of increasing challenges in accessing firewood for cooking purposes in the village, Liquid Petroleum Gas (LPG) is becoming an attractive option to use for cooking in the village. This has become an attractive option in the face of the continued reduction in the price of LPG from US\$3.50 per kilogram in November 2014 to the present US\$1.80 at the nearby LPG retailers in Charlotte Brooke and Sally Mugabe. The reduction in the price of LPG locally has been attributed to increased competition among retailers. In July 2014 there were only four retailers with the number rising to nine by the end of June 2015. However in Harare one can buy LPG for US\$1.60 per kilogram. Compared to scarce firewood which is expensive to buy with prices ranging from US\$15-20 per scotch cart load depending on the type of wood, LPG is increasingly becoming attractive. Previously LPG used to have an elite tag to it with most people in the village being afraid of using it due to a lot of misconceptions about safety. However this has slowly been changing as people increasingly accept it as an alternative to firewood with the use of paraffin not common in the village. The acute LPG shortages which were experienced in the country from early August to end of August 2015 saw the price of LPG at the local retailers rising to US\$5 per kilogram. This stimulated thought about energy sources in the village. In Charlotte Brooke in most sections with no electricity, LPG is an attractive alternative.

In response to the gradual shift from firewood to LPG, the price of a scotch cart load of firewood has reduced from US\$20 per load in March to US\$10 per load by the end of July 2014. Previously those in need of firewood would contact the suppliers with the suppliers supplying the firewood on cash on delivery basis. Due to the depressed demand for firewood it is now common to see the major suppliers of firewood approaching potential buyers soliciting for “orders” with negotiable payment terms. These terms range from supplying now and payment at the end of the month or staggered payments over a period of time. In the early 2000s villagers got together to work in the newly created suburb of Charlotte Brooke

²⁰⁶As a result cloud seeding in the village as part of strategies which have been termed “*non-traditional adaptations*” by Boillat and Berkes (2013) is increasingly being viewed as an adaptation strategy in the face of climate change that villagers are pinning their hope on.

moulding bricks and crushing stones for the main building contractor in the suburb who was constructing houses for those outside the country. Villagers were moulding bricks and crushing stones hoping to raise money for the electrification of the village. However the project was never completed due to accusations and counter allegations that the committee members for the project had swindled the money that was being saved. The evidence of the hard work is the poles that were erected around the same time to kick start the electrification process in the village although nothing ever started.

Also facing the challenge of firewood on the 21st of September 2014 I had a nasty experience when I had gone to gather firewood. I had climbed a *muzhanje* tree trying to remove the dead branches for firewood, when I was high up in the branches trying to move from one branch to the other, the one I was shifting my feet from suddenly snapped and I was left hanging precariously up in the tree. I managed to get hold of another branch with my right hand while shifting my weight to another branch. I was lucky then as I could have fallen to the hard ground below. In the village small boys are always discouraged from climbing *muzhanje* tree because “*hauna gavi*”, “it has no bast fibre” (strong woody fibers in inner side of tree bark) and it is therefore considered a risk to climb this tree. So if a branch snaps under one’s weight the chances of regaining grip are very slim because of the lack of bast fibre which can act as a retainer.

For her firewood requirements Mbuya Gone collects firewood, gathering small branches from the trees that would have been felled in the village. She pointed out that growing up in the village and finally returning to the village when her second husband passed away, firewood was not a problem at all as she would just go to nearby Mhinorombe mountains to pick up branches which would have fallen on their own and were beginning to rot as no one cut down trees for firewood then. Population pressures and the increasing demand for firewood have made the previously simple task of looking for firewood an arduous one. For her firewood Mai Mizhu now relies on her son in-law who works at Seed Co who occasionally brings her a truckload of firewood. Before the FTLRP and before the construction of houses close to her home on the border with the former farm she used to go into Chibvuti farm and gather firewood there although this was illegal. Now with the increased number of people who have settled in the former farm most of the trees have been cut down as people cleared land to build houses. This has further created a huge problem in getting firewood for domestic use.

Mbuya Ku sometimes has to resort to using cow dung to cook her meals. For her getting cow dung is easier in the dry season when cattle are left to roam in the village as she

can easily get the dung from her yard from the roaming cattle. During the rainy season getting cow dung is difficult as she has to visit cattle kraals to gather cow dung and thereafter leave it to dry in the sun before using it.

For these elderly women just like as with most villagers the village head sometimes gives special permits on request to cut down trees. These permits are usually given to those who want to cut down trees for uses such as construction of houses, fencing of gardens and homesteads. The village head always urges those he gives these permits that if ever they are to cut down fruit trees they should only cut those trees that never bore any fruit or had stopped bearing fruit.

Social networks and inputs distribution in the village

In focusing on climate change and adaptation strategies by elderly women heads of households in Gutsa village it is also imperative to reflect on the contribution of social capital in efforts by these elderly women to adapt to the impact of climate change in the village.²⁰⁷ Social capital is therefore very important in order to understand elderly women and the distribution of free agricultural inputs that find their way to the village mainly coming from the ruling ZANU-PF party. For elderly women, access to these free agricultural inputs has the potential to affect their productivity as well as affect their adaptive capacity. In the village the soils are now so poor and tired due to a number of factors with mono-cropping of maize in the village being singled out as the main contributor. As a result of the poor soils it is very difficult to get a reasonable harvest without applying fertiliser to the fields. On the other hand cow dung is applied in fields in the village in place of fertiliser as well as in vegetable gardens with chicken and goat droppings also being used in the small vegetable gardens. The challenge is for those without cattle as they have to buy cow dung manure at the price of US\$20 per scotch card load from those with cattle or else they have to buy fertilizer on their own or wait for the free inputs which are difficult to get in the village.

Chatting with my brother in March 2015 he casually pointed out that those who planted in fields they had bought and settled in during 2014 had a very good maize crop compared to those who had grown maize in fields they have been farming for a number of years. His reasoning was that these fields were rich as they had not been cultivated for a long time with some going back as far as twenty years. These areas therefore had rich soils and

²⁰⁷ Here the concept of social capital is borrowed from Pierre Bourdieu (1985:248) where *social capital* refers to the “aggregate of . . . resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition”. Also see Boillat and Berkes (2013) on the usefulness of social networks in adaptation to climate change among the Quechua Farmers of Bolivia.

produced a good harvest whether or not one used fertilizer. As a result the new settlers in Gutsa village had a good crop compared to the originals who were farming in their now very tired soils. The long dry spells that were experienced in the village in the 2014-2015 rainy season affected the application of fertiliser in the village and hence affected the health of crops as villagers adopted a wait and see approach. Villagers were very cautious as they did not want to waste their fertiliser by applying it on a maize crop that one would not harvest when it failed to reach full maturity. As people increasingly became cautious in the face of the prospects of a poor harvest by the day a new phrase was adopted in the village:

“Iyi inzara takarima”,

“This is still hunger even though we planted”.

Villagers were saying this is worse than:

“Nzara uchiziva hako kuti hauna kurima”,

“Hunger when you really know that you did not plant”.

Here *“nzara wakarima”* is bad because you would have wasted resources (time, labour and money) instead of labouring by looking for money to buy maize or saving money to buy maize after others have harvested when the price of a bucket of maize can be as low as US\$3.

Many young families in the village prefer not to plant maize on a “large” scale. Rather they prefer buying and stocking up maize after others have harvested as the prices would be lower then. They have done the calculations and seen that growing maize appears not to make economic sense. According to Baba Si, Mbuya Ku’s youngest son one would need almost US\$70 for an acre to be ploughed, then \$120 for fertiliser, US\$30 for a ten kilogram seed pack, \$50 for *“vanhu vemaricho”*. This is a total of \$270 with a fifty-fifty chance of getting a harvest of less than two tonnes from the field. However with the same amount one could buy almost two tonnes when “others” have harvested. The phrase:

“Ndorima kwaOK.”

“I grow my maize at OK stores.”

is popular among the young male heads of households in the village. OK is one of the major retail stores in Zimbabwe.²⁰⁸

²⁰⁸ These young families had access to cash to purchase maize mainly through wages earned while pursuing non-farm wage earning activities in and outside the village. In the village those who grew maize would after harvesting sell their produce in order to get the much needed money to buy foodstuffs in the home as well as *inputs* in preparation for the coming rainy season (also see Worby’s 1995 study in Gokwe, Zimbabwe).

Despite the hesitant approach in the application of fertiliser I noticed that the maize in front and at the back of houses in the village would usually be very healthy even in instances where the rest of the field would be showing signs of lack of fertilizer. The maize in these places would be good as these are the places where people usually relieve themselves (urinate) during the evenings rather than going to the toilet, or in the mornings they empty the containers used for urine disposal during the night and also disposing ash from the cooking fires.

Seed and fertilizer input distribution in Gutsa village was still ongoing late in March 2015, well into the 2014-2015 rainy season. Unfortunately in Murape Ward (where Gutsa village is located) villagers did not get any agricultural input aid compared to other wards (e.g. Shumba and Munyawiri) under the same Member of Parliament who was sourcing and providing the inputs although in these wards the packages came late. For the lucky villagers the MP was saying:

“Zhizha haripere”.

“Summer time does not end”.

In Gutsa village (Murape Ward), the consensus was that the ZANU-PF MP did not provide the same inputs as she had done in other wards such as Shumba, Pote and Munyawiri wards as Murape Ward was a strong opposition MDC stronghold. Besides, Murape Ward was not as “rural” when compared with the other wards. For example in Gutsa village it was only the village head and his committee who were each given one bag of Compound D fertilizer. In the other wards every household was given ten kilograms of seed maize, a bag of Compound D fertiliser and a bag of AN fertilizer. In Gutsa village people were complaining that this was also the same trend even during the 2013 election campaigns as villagers in Murape Ward did not receive any products. However in the other wards people were liberally given food hampers by the same MP during the campaign period. Those with more than one wife (especially among the apostolic sects) took the lion’s share of the inputs as these were being given to the individual wives than to the husband. Consequently at some homesteads in different wards there were others who had close to sixteen bags of both compound ‘D’ and Ammonium Nitrate (AN) fertiliser (top dressing fertilizer) while others only had two or none at all. This was also said to be a way that ZANU-PF councilors were trying to buy votes from the white garment apostolic sects who are fairly visible in these wards.

Mai Mizhu usually gets her maize seed from her son in-law who works at Seed Co as well as occasionally getting it from the inputs provided by the government. Getting the inputs

provided by the government appears easy whenever they come as her “*mukurungai*” (her daughter-in-law’s mother) is one of the most visible ZANU-PF party members in the village and at district level. As I was interviewing Mbuya Gone in December 2014, Mbuya Tarai passed by with her eldest daughter and they joined in the conversation. They all pointed out that they were very disappointed by “*vanhu vemusangano*”, “people from the party” in the village who always took goods meant for the elderly and widows to such an extent that even those who were not widows would claim that they are widows as they wanted the inputs. There is the consensus that those with very strong links to *musangano* (the ruling party ZANU-PF party) are the ones who appear to benefit more than others with not so strong links.

Talking to Mbuya No in August 2015 as people were beginning to make early preparations for the coming rainy season, she was complaining that she has not been able to get free inputs that have been availed to the other villagers over the past years:

“*Vanombotiona here isu machembere*”,

“They never bother to look out for us elderly women”.

The unequal and selective distribution of inputs and other products in Gutsa village means that elderly women fail to benefit from the inputs that are made available in the village. Mai Chota was very angry that those who brought inputs always started by giving the young villagers instead of giving the elderly. She believed that disregarding these incapacitated elderly people was therefore bringing about ancestral retribution in the form of “misfortune” like the poor rains being received in the village. Furthermore she was also very bitter about the corrupt leaders, who were taking up everything in the district justifying their actions by simply saying:

“*Isu takarwa hondo. Ko ini handina? Tirisu taigadzira kuti zvifambe.*”

“We fought the war. So did I not too? After all we were the ones who made things smooth”.

Mai Chota said that at one time one of the most active and allegedly corrupt ZANU-PF female members in the village had accused her in 2002 of supporting the MDC. She told the woman that she had played a leading role in the war of liberation and there was no way that she would stoop so low like her who was busy stealing goods meant for elderly people in the name of being a ZANU-PF party member.

Mbuya Tarai also claimed that those who were responsible for agricultural input distribution were abusing the elderly as they always wrote their names in a register every year promising them that they will be given inputs but nothing ever came their way. It was only with the exception of 2013 that she got a single bag of “D” fertiliser. She simply said she was tired of being used by the women in ZANU-PF who were responsible for inputs distribution in the village.

“Fertiliser and maize seed there are others who never got it, me I at least got one, so I was grateful because people never used to get these because this was ZANU-PF; I think our names were used to get these inputs.”²⁰⁹

In focusing on input distribution it appears that elderly women’s competing responsibilities also take them away from the input distribution points, as when the inputs do come they are given on the basis of “first come first served”. As I mentioned in Chapter Three in 2013 Mai Reni could not get her seed maize after she had sent her grandson, as those giving the inputs simply said we only deal with those physically present. This also becomes a challenge for these elderly women heads of households as the time of distribution of the inputs is also the time they are drawn closer to the household as a result of their rainy season farming activities, care giving roles, the limited mobility brought by age as well as the need to keep the marauding baboons at bay.²¹⁰ Since the 2013 harmonised elections with the new strategy of posting the individual results at each and every polling station people in Gutsa village voted for the ruling ZANU-PF party. As a result villagers are angry that the MP forgets them even though they voted for her. They point out that they will vote for ZANU-PF, “*nekuti unofira mahara*”, “you will die for nothing” pointing to the political violence before the July 2013 elections.

Deriving new livelihoods from the land by moving away from crop production

The lateness in onset of the rains seems to get villagers very worried as it forces people to do cost of living calculations and adjustments based on the prevailing and seemingly projected weather patterns. In 2014 this was very important as the rains delayed coming until late November leading to the general talk shifting towards the fear of the possibility of a

²⁰⁹ Shona verbatim, “*Zvefertiliser nechibage kune vamwe vasina kumboiwana, inini ndakawana ranguwo saka ndakatotenda nekuti hakuna vakambenge vachiwana yaiva iri yeZANU ka, ndofunga mazita edu aishandiswa kunotora*”.

²¹⁰ Also see Smith’s (2002, 67) observations that worldwide elderly women’s care giving role leads to greater isolation and a rupture of social networks which are critical for their survival.

continued increase in the price of maize meal for *sadza*. By mid-November the price of a standard measure of a 20 litre bucket of maize cost anything between US\$4-5 dollars. Before harvesting in April 2014 maize cost US\$10 a bucket. After harvesting in April it had reached a low of US\$3 a bucket with some enterprising people exchanging a bucket of maize with various commodities ranging from two bars of soap (costing US\$2.60) or one bar for a standard measure of a half 20 litre bucket. Before the rains fell in mid-November 2014 projections in the village had begun to show that if the rains did not come on time and in sufficient quantity the price of maize could easily reach the US\$10 mark before end of January. When the rains finally came towards the end of November 2014 by mid-January maize was costing between US\$6 and US\$7 a bucket.

In Gutsa village there is clear evidence of livelihood diversification in the form of brick moulding and rampant sand sales in the village evidenced by deep pits/gullies. Due to the increasingly perceived risky nature of farming on the land, the village is witnessing a new trend where productive fields for crop production are being destroyed as people diversify into these non-farm economic activities in the face of the uncertainty of crop production due to the impact of climate change as well as the low prices for horticultural produce. As discussed in Chapter Two life has not been the same for horticulture producers as prices have been depressed after the FTLRP as most of the newly resettled famers who used to grow vegetables at a subsistence/small-scale level after being allocated land at Chibvuti farm are now practising on a larger scale while continuing to supply vegetables to the same markets they used to supply before. This has made the prices of the vegetables to be so depressed most of the time aside from occasional increases as the market is always flooded with tomatoes, green leafy vegetables and other produce throughout the year.

Because the rains came very late in 2014, people continued to mould bricks late in the month of November. Brick moulding so late is a fairly new development in the village as from mid-October onwards it is no longer considered safe to produce bricks as these can easily be destroyed by the rains during this time. Now since the skies have been so dry, business continues. It is very difficult to extricate the brick making business by young males and to some extent some women from the livelihoods of the elderly in the village. This is because this activity is somehow tied to the livelihoods of these elderly female heads of households.²¹¹ For example in the case of Mai Reni this is important as her son Shame who is

²¹¹ Observations by Batterbury (2008) show that in the face of climate change, responses to drought may also include livelihood diversification to buffer crop failure.

also a grandson to Mbuya Ku is considered one of the major transporters in the village as he uses his scotch cart to transport the firewood he sells to the brick makers. Furthermore he also transports the water they need for moulding the bricks from the wells and is sometimes hired to transport bricks to their final destination in the dry season. Shame like others with scotch carts in the village also makes money ferrying loads of grass for those who want to thatch their homes (mainly roundavel huts now). Shame transports the quarry stones that his grandmother breaks down in her yard from the nearby mountain to his grandmother's home and sometimes to the buyers. As a result the delayed commencement of the 2014 rainy season meant that he was still earning an income from the brick makers as well as from those who were building their houses. This was the same for Mbuya Ku who had the potential to keep earning an income well into November as people were in need of quarry stones which she was breaking down in the village. As construction activities in the village are mainly carried out during the dry season it therefore meant its extension was by default an extension of livelihoods being pursued by the villagers.

By mid-November 2014, Nyaure River was totally dry forcing those keeping poultry to either drive to the dam in Charlotte Brooke (approximately three kilometres away) to fetch water or to use scotch carts to fetch water from the dam in Charlotte Brooke.

Conclusion

This chapter has examined the adaptation strategies being pursued by elderly women headed households in Gutsa village in the face of ongoing climate change. There is the consensus that climate change is a reality despite the village being located in a favourable agro-ecological region that is assumed to have favourable climatic conditions. As elderly women try to survive in the face of climate change they are adopting a number of alternatives at the household level to cope with the impact of climate change.

It appears seeking out assurance from religion in the face of increasing uncertainty of the weather and climate is becoming an attractive option for those practicing traditional African religion as well as those professing to be Christians. This ranges from the use of *chipwa* by those subscribing to traditional African religion and prophecy for those belonging to Independent African Churches. The role of religion is increasingly becoming significant in providing direction towards planting dates as well as the types of crops to be grown in a season. Evidence shows that in the face of climatic uncertainty in the village, increasingly there is conflict in attribution of causality especially in the wake of the apparent collapse of *chipwa*.

Increasingly elderly women have to shift their planting dates while also narrowing the types of crops grown as they adapt to the impact of climate change. This has also seen an increasing shift towards dry planting/zero tillage in the village as an adaptation strategy in order to maximise on the erratic rains being received in the village. In this chapter I have also demonstrated the impact of the transformation of the former commercial farms from large grain suppliers to regular vegetable suppliers post-FTLRP, and its impact on elderly women engaged in vegetable farming as a livelihood. Consequently a number of elderly women who are into all year vegetable farming have had to reduce their production levels as well as shifting away from the traditional markets for garden produce.

There is no doubt that elderly women's local knowledge of 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 climate change elderly women to some extent prefer growing the local bred seed varieties such as *garabha* as a response to the increasing uncertainty of the normal farming season. In the face of increasing uncertainty of agro-based livelihoods, elderly women are shifting into other non-farming economic activities such as breaking down boulders into gravel that is in demand in Charlotte Brooke as well as relying on informal savings such as *mukando* and trading.

Chapter 8

Summary and Conclusions

In this last chapter in this thesis I provide a summary of the work undertaken so far while drawing conclusions and demonstrating the contribution of this work to scholarship. Having adopted the use of an anthropological approach grounded in ethnographic field work over a long period of time (that covers all seasons of the year) the key questions that I sought to answer in this thesis centred on; the local constructions of knowledge about weather and climate change, the nature of contestations surrounding this knowledge, and attribution of climate change related events. This methodological approach proved important in understanding the patterns and differences in elderly female headed household's response to climate change in Gutsa village (also see Vedwan and Rhoades, 2001).

As I outlined in Chapter One, this thesis is not about the relationship between global climate change, the factors that are causing it or how local villagers are affected by and respond to it. Rather the thesis establishes the existence of a central vernacular meteorological explanations based on local level understanding of local weather and climate change, the concepts that are used to refer to climate change, issues of conflict and consensus regarding attribution and causality of changes in weather and climate, how it is explained and experienced. Furthermore how are elderly women heads of households in a single rural village in rural Zimbabwe struggling to make sense of, respond to and organize their livelihoods in the face of the lived reality of ongoing climate change? This approach I adopted is therefore important in demonstrating the significant contribution of anthropology as a discipline to the climate change debate (see Roncoli, 2006; Crate, 2011)

This thesis has therefore significantly moved away from the relatively simplistic generalisations of and understandings about climate change to significantly more complex understandings of climate change. In this thesis I achieved this by focusing on the situated lives of ten elderly women heads of households in Gutsa village, Domboshava in Goromonzi District. Existing in a wider community this study explores the existence of and importance of a central vernacular climatological theory that is shared amongst elderly women as well as among other individuals in the village and the wider community. This thesis therefore makes a very significant contribution to research on the local level explanations of climate change, the experience of it, how it is understood and how situated individuals respond to it. This is important as I have mainly avoided reaching macro-level conclusions about Zimbabwe's experiences with climate change but have rather focused on the micro-level perceptions, understandings and explanations of climate change in one locality.

This thesis has therefore demonstrated the importance of not just focusing on explanations of the global level causes of climate change but the importance of local level explanations of the causes of climate change along the lines of Boillat and Berkes' (2013) study. Just as they found in their study, elderly women in Gutsa village do not seek nor mention the global level causes of climate change, but rather they place emphasis on seeking out the local causes and associations of climate change such as the direct relationship between loss of values and climate change (also see Crate, 2011). As I demonstrated any change in what is perceived as the normal has local explanations that are perceived to have caused the local consequences. Consequently in understanding climate change in the village emphasis is on showing how local actions or inactions have made a significant contribution to the deviation of the weather and climate from what is regarded as the norm.

Conventional science based on macro-level statistical modelling indicates climate change in the direction of gradual global warming in the face of temperature rises (IPCC, 2007; Low, 2005), however evidence at a micro-level in the village is pointing to temperatures which are going down as evidenced by more and more cold days with longer and colder winters. This shows the importance of understanding climate change at a micro-level based on intimate and long term association with the study village to explore similarities and divergences in the explanations of climate change as a phenomenon.

In this thesis I was also aware of the realization that there could be a number of factors that are coalescing to affect elderly women household heads in the face of climate change (Nelson, 2011). Evidence shows that climate change is working with a number of stressors such as the Fast Track Land Reform Programme in the district, peri-urban development, resource commoditization and commercialization and rapidly shifting markets to become significant threats to female household heads' livelihoods. All this in the face of changing property relations, social networks, livelihood opportunities, gender relations, changing household structure, politics of local authority and governance, the dynamics of ecosystems and interspecies interaction. I have also demonstrated that elderly women household heads' multiple and competing responsibilities are also working as a stressor on their livelihoods.

Since local perceptions can be used to explain and understand the experience of climate change they are therefore important in shaping behaviours of those experiencing climatic changes. This is also consistent with observations by Moran et al (2006) that for local people this is important in helping them to make decisions about likely weather conditions based on local signals in their immediate environment learned through time.

Ultimately such strategies reduce vulnerability by enabling local people to make a variety of adaptations to climate change, such as adjusting the timing of their crop plantings or even changing the types of crops they plant in response to their local level forecasting of the weather.

As I discussed in Chapter One I use the term local knowledge to refer to place-based knowledge rooted in local cultures and associated with long settled communities with strong ties to their natural environments (see Orlove et al, 2010). In focusing on elderly women and their knowledge of natural resources in specific socio-ecological systems I appreciate the role they play in retaining and passing on biodiversity-related traditional knowledge to the next generation. These elderly women can therefore adequately be regarded as “living encyclopedias” (Singh, Rallen and Padung, 2013; Flintan, 2003). Here the knowledge of the elderly women related to long-term local climate variability is grounded in the historical and contemporary understanding of their environment.

As I demonstrated in this thesis, I sought to historicise the present based on past experiences in order to understand context, history and particularity (see Eirnasson, 2011). This proves to be a useful way of revealing the local level understanding of climate change in the absence of the statistical measures and modellings that have mainly characterized the climate change field. By focusing on elderly women in order to examine the impact of climate change I have demonstrated the usefulness of the value of a series of historical observations about particular events and practices based on cultural transmission of knowledge passed from generation to generation. However as I examined this I was aware of the challenges of local knowledge held by specific categories of the populations in an environment experiencing rapid population movements and increasing population diversity in the wake of population densification. As a result elderly women living in Gutsa village are in an environment where they have to grapple with understandings of the weather and climate that are once static and fast changing. These understandings are variously being affected by multiple and competing forecasting mechanisms, commoditization and commercialization of natural resources, destruction of flora and fauna and population densification. In the face of all this elderly women have to live with the reality of the cessation of the rain-making ceremonies and the lack of respect for *chisi* days identified with the past, both of which provide relatively greater certainty regarding weather and climate.

As a result of the new uncertainties of the weather and climate increasingly religious belief (prophecy) is being used as a weather forecasting mechanism and adaptation option. This is more in line with Schipper (2010) who demonstrated the role of belief systems in

perceptions of climate change as well as determining the associated behaviours. In the wake of this now in the village there has emerged a new phenomenon of predictions based on the Holy Spirit that is now being used to a greater degree than the Meteorological services and even the traditional weather prediction indicators that are flora and fauna based. Considering the above, the level of certainty of new weather prediction techniques (specifically the coming rainy season by the Holy Spirit) appear to be based on high levels of certainty and predictability. The level of certainty provided by these new weather prediction techniques appear markedly different from forecasts by the Meteorological Services Department, which appear to be based on high levels of chance and probability and are in any case pitched at the macro-scale (Ziervogel and Opere, 2010). This has seen the Met Department increasingly being shunned as it is associated with contradictions regarding its forecasts of the weather and climate in the village.

In the village the importance of local knowledge in respect of rains is evident in the names which are given to rain ranging from *bumharutsva* to *gukurahundi*. These rains with their names are also associated with corresponding behaviour in the village when these rains are received. However in the face of the unpredictability of rainfall, elderly women are increasingly finding it difficult to plan and proceed with agro-based livelihood activities based on the rains' names. Meanwhile in the face of increasingly erratic and poor rainfall, consensus in the village is that had the former commercial farmers remained on their farms the rains would not have been as poor as they are. Villagers point out that these former white commercial farmers used to provide the much needed material for *chipwa* to plead for rains from the ancestors as well as following customs of the land. Furthermore when all appeared to fail they would send their small planes into the sky to seed cloud and therefore directly influence the course of the rainy season.

In this thesis I have demonstrated that the impact of climate change and food insecurity has resulted in elderly women moving away from agro-based livelihoods into non-farm based livelihoods. All this has been compounded by the existence of multiple stressors (such as depredation by wild animals, social obligations, poor returns from the vegetable market and the impact of the FTLRP) that are coalescing to affect their ability to work the land. Furthermore there are also the challenges of multiple and competing responsibilities that also draw elderly women away from the home and ultimately their sources of livelihood, thereby creating vulnerability. In the wake of multiple stressors in the face of climate change elderly female household heads' experience with pests is also creating vulnerability which is also consistent with Mary and Majule's (2009) study in Tanzania.

An intersection of elderly women's multiple and competing responsibilities demonstrates the gender dimension of climate change (see Skinner, 2011). It is therefore important to understand that ageing, widowhood, divorce/separation and female household headship in rural Zimbabwe has serious implications for elderly women in the face of vulnerability created by factors such as resource commoditisation in the face of climate change. All this in the backdrop of serious health and mobility challenges which affect the ability of elderly women household heads' ability to lead an active and productive life to secure food security at the household level. This therefore demonstrates the danger of homogenizing the impact of climate change on women as this fails to account for the complex interactions between gender and other forms of disadvantage based on class, age and ethnicity. In sum elderly women household heads are hardest hit by the impact of climate change as they are the primary managers of family, food, water and health (see Wisner et al, 2007).

From my findings I have demonstrated the need for a revision of the old macro agro-ecological zones in Zimbabwe as these appear almost irrelevant and static especially in the face of the local level understandings of the dynamic nature of climate change. Therefore considering the wide variations intra season and inter season in Gutsa village I argue that my study makes an important contribution to understanding micro-climates and the need to remap the agro-ecological zones. I have achieved this by drawing attention to the challenge of macro-level classifications and weather forecasting which fails to recognize the issues of micro-level/local level weather and climatic variations.

My findings have also shown that it is mainly those elderly women lacking cattle who do not wait to plant their crops (mainly maize) after ploughing and therefore always have a head start in planting. They are assured of food security much earlier than those who have access to or wait to have fields ploughed. Consequently some of the actions such as the above by elderly women cannot be seen as deliberate actions towards adaptation but that they have enabled such adaptation.

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 is in a way helping elderly female headed households to withstand and recover from the impact of climate change on their livelihoods. On the other hand this resource commoditization is leading to the overexploitation of the local indicators that the community relies on in making coming rain season forecasts which are crucial in selecting the type of crop grown. Consequently as resource commoditization is going on it is also important to

point out that in efforts to understand the climate change experience other factors also need to be taken into account as contributory. These include factors such as settling of people in wetlands. The disappearance of *jawhis* is evidence of both climate change and of the settling of people on wetlands, which has brought about a reduction in the water table

In this thesis I have demonstrated the intensification in the new practice in the flow of direction of remittances. Here evidence shows that those residing in urban areas or outside the village are coming down to the village to get grain for consumption in times of need. Remittances are therefore changing direction: instead of flowing from the urban to the rural area, it is now flowing from the rural to the urban, in line with O'Connor's (1991) observations of the rising importance of rural-urban linkages in Southern Africa. This reversal of remittance flows has serious consequences for the food security of elderly women household heads who are grappling with limited agricultural productivity in the wake of climate change, as well as multiple and competing responsibilities and health challenges which are limiting their productive capacity.

Focusing on a single Gutsa village (see also Mombeshora, 2000), I argue that increasingly it is increasingly difficult to arrive at a general characterization of a rural area, as any particular district and village settlement cannot be said to represent a "typical" community of a country. This can truly be said of Gutsa village which in no way can really be said to represent a "typical" rural community in Zimbabwe and or anywhere else for that matter. The area has been in constant flux, having been affected by a number of factors ranging from its proximity to the capital city Harare, to the impact of the FTLRP, the population densification it is currently experiencing, and the heterogeneity of the population as well as the diversification of livelihoods options being pursued, all against the backdrop of the impact of climate change. This thesis has also demonstrated that lack of ownership of land and restrictions regarding access to productive land for rural women are also some of the factors limiting diversification and intensification of livelihoods in the face of climate change.

Livestock and insects (pests) are important for increasing or limiting opportunities for adaptation and creating resilience among the elderly women household heads inasmuch as they may also cause vulnerability. For example ownership of livestock helps elderly women to widen the livelihood options by allowing for diversification of livelihoods. Insects are also classified as delicacies when villagers feed on them ranging from mice to *madzambarafuta*, however they are also causing vulnerability inasmuch as insects such as *zviphukuto* become pests. The challenge of pests and insects has demonstrated that even in the face of climate

change, not all episodes of hunger and vulnerability can necessarily be attributed to weather variations. Such hunger and vulnerability has also been related to issues such as the challenges of the insects and depredation by wild animals. On the other hand the harsh economic environment where there are no jobs on the formal market has meant that villagers are exploiting 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.

This thesis has also demonstrated how livelihoods of elderly women who are dependent on all year vegetable farming are being affected by the post-FTLRP transformation of farms close to Domboshava from being large grain supplies to being regular vegetable suppliers. However in the face of climate change and associated poor rainfall, the introduction of new technology related to water extraction is in a way also leading to the early drying up of the various water sources that some of the elderly women use for their garden activities.

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