

The Inequality of Climate Change

A within-case study on the impact of drought on violence
against women in South Africa



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Abstract

The world collectively stands before an environmental crisis that will further challenge overcoming inequalities and poverty. The purpose of this study is to trace and explain the relationship between climate change and increased violence against women. By studying the case of the South African drought crisis in relation to the increased violence against women, the study sets out to explain the relationship by conducting a within-case analysis by applying Jacqui True's theory "The Political Economy of Violence Against Women". After having constructed the hypotheses based on three main mechanisms; economic stress; toxic masculinities and political response, empirical evidence to support, and contest, the hypotheses are found. The findings of the hypotheses are further analysed based on a pre-drought and post-drought comparison that exposes what prerequisites enable drought to have a disproportionate effect on women. Lastly, it is concluded that drought has affected the increased violence against women by exacerbating existing structures that are discriminating towards women.

Key words: *Climate change, violence against women, political economy of violence against women*

Words: 9783

Abbreviation

AgriSA	Agriculture South Africa
SAPS	South African Police Service
StatsSA	Statistics South Africa
VAW	Violence against women

Provinces:

EC	Eastern Cape
FS	Free State
GP	Gauteng
KZN	KwaZulu-Natal
LP	Limpopo
MP	Mpumalanga
NC	Northern Cape
NW	North West
WC	Western Cape

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1 Introduction

“Gender-based violence is one of the most pervasive but least talked-about barriers that face us in conservation and climate work” (Cate Owren, 2020)

Climate change is today one of the largest political topics on the global agenda. Nations have come together to fight the forthcoming climate crisis. However, there has been little effort in tackling some of the consequences that affect vulnerable groups of society. Regular living environments have been drastically changed as a result of climate change, challenging current societal structures and systems, and creating demanding living situations, often affecting already vulnerable groups of society the most. In 2015, South Africa suffered one of the worst droughts in its history, and the drought has persisted in many of the country's regions since (Ellis 2019). The severity of the drought forced the government to restrict water use for individual and industrial use, caused water reserves to fall to all-time lows, and caused enormous stress on the country's agriculture and rural population (Hornby et al. 2016, p. 16). In the midst of this prolonged water crisis, women all over South Africa took to the streets, in 2019, to protest against the rising violence against women, calling it a ‘war on women’ (Merten 2019).

South Africa, although its many successes in eliminating apartheid and becoming a democracy, is still highly influenced by its violent past. The violence inherited by apartheid can still be found in today's society, characterised by race, gender and class divide. Attitudes and norms of gender roles are rooted in patriarchal structures that have dictated and prevailed in spite of societal changes (A/HRC/32/42/ 2016, p. 4). In the last decade, the country has had a positive trend in decreasing crimes in general, pointing to a positive societal change (SAPS 2019a). However, following the drought, the violence against women has seen a sharp increase, with percentual changes significantly higher than most other crimes. How can climate change, in the form of drought, cause an interruption in a positive societal trend? What are the mechanisms that enable this relationship?

1.1 Purpose and Research Question

The world today collectively stands before an environmental crisis that will challenge aspects of the world as we know it. Overcoming inequalities and poverty will be further challenged by the consequences of global warming. It is within this context, this study aims to understand the mechanisms that allow for already vulnerable groups, such as women in unequal societies, to become even more exposed. By conducting an intense within-case study, the aim is to trace the process

behind the relationship between climate change and violence against women and highlight actions and structures that enable for the said relationship to exist. The study will focus on the rural and agricultural regions of South Africa, as this is where I expect to find the most dramatic impacts, as the agricultural sector is highly dependent on water supply. The process-tracing method is applied through the theoretical framework of Jacqui True's '*The political Economy of Violence Against Women*', and further its explanatory power will be tested throughout. The purpose is to improve the understanding of what implications climate change can have on society and societal structures, notably, on women.

The research question is as follows:

- *How has climate change affected the increased violence against women in South Africa?*

1.2 Previous Literature

The previous research relevant in this study is that of climate change and its impact on societal structures and violence, together with the specifics on violence against women (VAW) in South Africa. This contributes further understanding of the consequences of climate related issues, together with the specifics of VAW in South Africa.

Violence against women, or gender-based violence against women, has in recent years become a huge academic field of study. Whether quantitative or qualitative, there is an interest in finding patterns and explanations as to why violence against women is still such a widespread phenomenon. In the recent publication 'Gender-based violence and environment linkages: The violence of inequality' (Castañeda et al. 2020), developed by the International Union for Conservation of Nature, the authors present and argue for environmental and gender-based violence linkages ranging from global resource conflicts, large-scale infrastructure projects and environmental crimes, to weather-related disasters and climate change. The studies collected in this publication demonstrate the vulnerability of women as a consequence of environmental issues by presenting empirical evidence from a variety of cases. However, there is no thorough analysis as to why these linkages seem to occur in a majority of cases. Nonetheless, this study highlights the causal relationship between environmental issues and increased gender-based violence and calls for further research on what enables this relationship to exist.

Furthermore, The National Bureau of Economic Research has conducted extensive research by compiling and analysing numerous academic papers dealing with environmental issues and their effect on violent conflicts. They conclude a correlation between warmer temperatures and conflict, on smaller scale as domestic violence, ranging to larger scale as civil wars. They find that there are many factors that have to be taken into account when analysing this relationship, some of which are more emphasised than others; the economic aspect and the behavioural one.

They refer to studies such as Hendrix & Salehyan (2014), who signify the relationship climate shocks and increased political violence, and Anderson et al. (2000) who concludes there is a correlation between higher temperatures and dryer conditions and escalating aggressive behaviour. Though these studies are not explicitly studied to examine VAW, they conclude that climate has a significant effect on human behaviour.

Moreover, on the topic of deviations in average rainfall and temperatures, Björkman-Nykvist has written about the correlation between income-shocks in Uganda, as a result of reduced rainfall, and the effect on gendered gaps in education. Female students are taken out of enrolment in a much higher rate than male students, often as a result of social expectations of women bearing the responsibility in caring for the household. The result of this study shows the volatility of female security and how female prosperity is compromised with when households are faced with economic struggles (Björkman-Nykvist 2013, p. 252).

The literature regarding VAW in South Africa is extensive, and there is a dominant field on the study of VAW and links to the prevalence of Human Immunodeficiency Virus (HIV) by examining patriarchal structures and gender norms (True 2012; Strebel et al. 2016).

In essence, and for the relevance of my paper, there exists empirical evidence in previous research that establish links between environmental changes and increased violence in general. As the research has been primarily based on violent conflicts such as civil war and conflicts between groups, this opens up for a discussion on how this affects gender inequalities and the vulnerability of women. With this paper I intend to narrow the literature gap on climate change and violence against women, by tracing the mechanisms behind this relationship and describing the factors that enable this phenomenon to persist. The greater understanding of the linkages between climate change and violence against women is essential for future measures taken to battle climate change, as this calls for the consideration of vulnerable groups. Understanding how climate change affects different parts of society and different social settings will enhance the strength of policies on a broader scale than solely tackling one issue area.

1.3 Disposition

The study embarks by describing the theoretical framework, which lays the foundation for the analysis, and a presentation of the hypotheses and mechanisms of the study (Chap. 2). Then follows a detailed presentation of the methodology, where I explain the chosen method, case selection and limitations of the study, followed by an operationalisation of the variables studied (Chap. 3). Then follows a presentation of the empirical evidence found, which will be presented in accordance to the theorised mechanisms (Chap.4). Finally, the study will revisit the hypotheses, analysing the theory's explanatory power and the case specifics (Chap. 5), resulting in the concluding chapter where the answer to the research question will be presented (Chap. 6).

2 Theoretical Framework

This chapter describes the theoretical framework that will lay the foundation of the study by guiding the research following the theorised mechanism that will be presented below. Further, the hypothesis based on this theoretical framework is introduced and explained.

2.1 The Political Economy of Violence Against Women

Jacqui True's '*The Political Economy of Violence Against Women*' has had a notable influence on the academic field of violence against women and gender studies. This theoretical framework embarks from a feminist political economy approach in order to analyse the phenomena of violence against women as a global issue that takes place in a global context yet varying depending on what local context is being studied (True 2012, p. 13). General assumptions made throughout the theory are that regardless of what case is being analysed, it is all part of a bigger global context that plays a critical role in how we weigh and prioritise gender related issues, e.g. in relation to economic growth. When going from a macro to a micro analysis, True recognises this global context, but puts further emphasis on structural and agential factors, local processes and material dimensions to explain power divisions between genders that facilitate violence against women (True 2012, p. 29).

In order to be able to understand how external shocks, war, and societal change will impact violence against women, True argues that one must analyse the society in question during 'peacetime' in comparison to a society post-external shock. This meaning that depending on what the premise has been during periods of stability and normality, the outcome of the phenomenon, depending variable, will vary (True 2012, p. 13). To clarify, in a country with high development and high equality, it is less likely that there will be a high increase in violence against women, than it will in a less developed country with low equality. In the latter case, embedded structures that depict men and women will be amplified, causing for more vulnerable situations for women (True 2012, p. 183).

It is from this foundation that the theory analyses structural and agential factors, before and after a phenomenon, to be able to understand why and how these patterns in violence against women persist. The feminist political economy approach analyses economic, social and political factors, enabling the analysis to highlight the relationship between the different factors and within their structural context, whilst also analysing actors' behaviours (True 2012, p. 30).

Throughout her book True exemplifies different external factors that can cause further strain on women's vulnerability. In relation to environmental issues, True concludes that natural disasters have a disproportionate impact on women, as a result of power imbalances and cultural gender norms that leave women more vulnerable to such events (True 2012, p.161-178). As True puts it, natural disasters are social disasters, where decisions taken by individuals and governments within a structural context often affect women in consistently disparate ways (True 2012, p. 161). On the basis of this theoretical standpoint, the study will be analysed through the three main interacting factors of feminist political economy of violence against women; *economic, social and political factors*, described in the following sections.

2.1.1 Economic Factors

In the analysis of economic factors, True states key variables to be regarded as income inequalities; female dependency on male wages, property, employment rate and labour divide within public and private spheres. According to True, inequalities within these variables best explain high prevalence of violence against women. Poor women with less access to land, property, high income and employment, are more vulnerable to being exposed to violence (True 2012, p. 18-19). This does not mean it is only applicable to poorer countries. Women in all different socio-economic situation are exposed to gender-based violence, but the likelihood of it increases when they are dependent on their partners, unable to leave relationships, or are forced to take employment where they are more exposed. The economic analysis can be seen as two-sided. On the one hand there is the perspective of women remaining in their primary setting i.e. families and cultural settings, being exposed to violence. On the other hand, the perspective takes into account women who leave their primary setting to find employment etc., who are more vulnerable to becoming victims of trafficking, or unsafe employment where there are heightened risks when going to, or returning, from work (True 2012, p. 65-67). This factor will be referred to as the mechanism *economic stress* and will be further explained in chapter 3.

2.1.2 Social Factors

In regard to social factors the main interest here lies in the structural relation between men and women, and what societal gender norms that rule the general discourse. True emphasises toxic masculinities, as a result of societal and external changes, as a detrimental cause of violent behaviour towards women (True 2012, p. 36). There are different types of masculinities described, and for the purpose of this study I will focus on *Breadwinner masculinities* and *Recreational masculinities*. *Breadwinner masculinities* is the result of the male identity being directly connected to men being those who provide for their families. When these roles are challenged by either women becoming equally providing in households,

or by challenges for men to be able to uphold this identity, the frustration is often likely to be taken out on women (True 2012, p. 39-42). *Recreational masculinities* on the other hand are the result of limited numbers of recreational opportunities, making the competition of domination of women an affordable and available option, whilst ‘boosting’ the male dominance. This has been a common masculinity in rural areas where the unemployment rate is high. The masculinities takes form in the beating, raping and other sexual assaults of women (True 2012, p. 44).

In addition to looking at behavioural patterns, there is a great interest in highlighting the structures and norms that are prevalent within societies. Is there a general acceptance of men being superior to women, are the general or cultural customs accepting of violent disciplining? True states that, in the case of economic backlash and external shocks, the threat of violence against women elevates, as they are most often exposed to the outlet of societal anger (True 2012, p. 37). This factor will be referred to as the mechanism *toxic masculinities*, and further explained in chapter 3.

2.1.3 Political Factors

True argues that political structures and actions are a great part of what enables, or hinders, VAW to increase. In the event of external shocks and financial backlash, government responses often overlook gender issues that may arise as consequence, and instead concentrate efforts centred to financial aspects. When response is absent of a gendered approach, and more in line with sustaining economic growth, poorer women are often disproportionately affected (True 2012, p. 104). When there is a higher rate of political action in general to gender issues and inequalities, the effects of external shocks are likely to have less of an impact than in the case of lower response. This is closely connected to the previous statement in 2.1, regarding the degree of equality in relation to the force of the impact from the external shock. The political factor will be referred to as *political response and* will be further defined in chapter 3.

2.2 Hypothesis

In my general hypothesis I suggest that that the study will show a causal relationship between climate change and the increase of violence against women *by exacerbating existing structures that are unfavourable towards women*. In order to prove that drought increases the likeliness of this outcome, I have constructed specific hypotheses between the different mechanisms (the tracing of this will be explained in the following chapter). The hypotheses are derived from the existing theory and adapted for the circumstances of this case. Below I present the hypotheses, following a presentation of the causal graph, clarifying the relation between the mechanisms.

The first hypothesis in the chain of events is based on the evidence between drought and economic stress. Has the drought affected the agricultural and rural areas to the extent that it has caused apparent strains for sustaining livelihoods? The first hypothesis reads as follows:

H1: Drought causes economic stress as a consequence of failing agricultural production

The economic stress is expected to have two implications. The first being the necessity to migrate to urban areas for alternative sources of income (H2). As according to the theory, this migration causes heightened risks for women being vulnerable to exploitation and human trafficking. Due to the limitations of this thesis, and restricted information regarding the extent of trafficking and victims of trafficking, this hypothesis will be seen as further evidence for economic stress, albeit depicted in the causal graph.

H2: Migration from rural to urban areas causing exposed labour positions for women

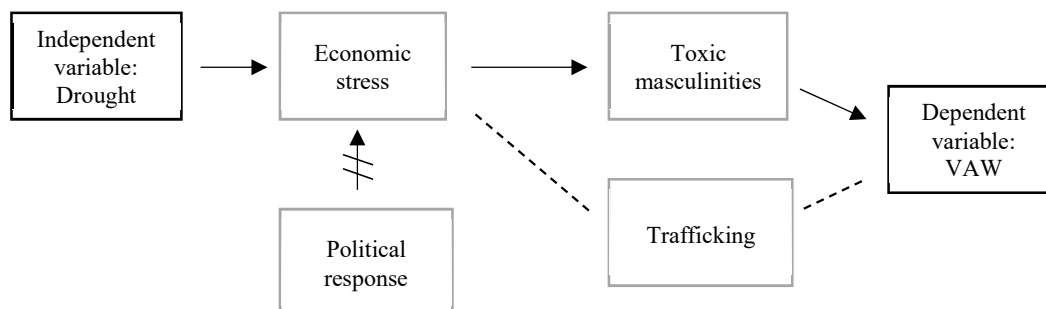
The third hypothesis (H3), and the focal point out of the two causal consequences of economic stress, is the emergence of toxic masculinities. It is expected that the financial strains of loss of income and/or loss of employment challenge men's ability to live up to the male identity of being the provider, i.e. breadwinner. Further, loss of employment is expected to bring forth recreational masculinities, as according to Ture's theory.

H3: Societal anger and inability to fulfil successful male gender roles are taken out on women

The final hypothesis is that of political response, or rather the absence of adequate political response. Has there been active drought response? And if so, has the drought response taken into account how the consequences of drought may disproportionately affect women? This mechanism is not to be seen as a direct cause of drought, but rather an enabler or disabler of the effects of drought on increased VAW. The broken arrow in the graph signifies the *lack of* political response.

H4: Inadequate political response directed to tackle the social consequences of drought

Figure 1: Causal graph



To summarise, the three focal points regarding the mechanisms are economic stress, toxic masculinities and political response. Where the causal relationship lies between the independent variable, H₁, that in turn causes H₂ and H₃, that results in an increase in the dependent variable, VAW. Political response can here be viewed from its counterfactual aspect: would we have seen the same relationship between the drought and increased VAW, had there been adequate (gendered) political response?

3 Method

In this chapter, the methodological foundation of the research will be presented and the chosen method will be explained, accompanied by the limitations that follow. Further, the case selection will be motivated, and the variables will be defined.

3.1 Epistemological Foundation

In this qualitative study I have assumed a positivist position and therefore presume that it is possible to find the answer to my research question by observing and collecting evidence based on materialistic ontology (Hollis 2002, s. 42). Given the complexity of violence against women, and the variety of ways this phenomenon can be perceived by different individuals, there is the possibility to assume a more relativistic positioning regarding the epistemology (Teorell & Svensson 2007, p. 217). However, in the interest of my research, I am interested in what can be measured and observed in reality, to be able to study patterns and societal changes.

In the process of this paper, there has been a constant awareness of the complexity of the research question, and this is a fundamental reason for not aiming to reach a deterministic conclusion. Measuring and evaluating VAW is heavily dependent on what is reported and documented. Hence, the reality I describe is the one that is available given my epistemological approach, but this cannot fully be accepted as the whole truth (Teorell & Svensson 2007, s. 41).

Furthermore, I have asserted a hypothetico-deductive method, where the construction of the main hypothesis is derived from the theoretical framework, to be tested on empirical evidence in order to strengthen or weaken the hypothesis (Teorell & Svensson 2007, p. 48).

3.2 Process-Tracing

Quantitative studies exploring environmental and gender-based violence have previously been conducted, but more intense studies on why and how we find these linkages are sparse. The purpose of my research is to explore the causal relationship between my dependant variable; VAW, and my independent variable; drought, and describe and understand the process that lies behind this relationship. In order to analyse the underlying mechanism and ways that climate change causes increased VAW, I will employ a process-tracing method based on a Bayesian model (Beach 2017; Collier 2011; Box-Steffensmeier et al. 2008). By analysing the

correspondence between hypothetical and observable mechanisms of a selected case, this method allows to outline and elicit the process behind a relationship (Beach 2017, p. 9). The mechanisms themselves are not causes, but the causal links, triggered by the cause in order to reach a certain outcome. According to the Bayesian logic, the research is conducted by asking; *where and how can we find the empirical evidence for our mechanisms; and when found, are there any other plausible explanations for finding this mechanism?* (Beach 2017, p. 10).

Process-tracing is a primarily qualitative and fundamental tool in describing and explaining social phenomena. It can be described as the systematic examination of evidence that is collected and analysed based on the hypotheses and questions posed by the researcher (Collier 2011, p. 823). By theorising the activities that are expected to leave traceable ‘fingerprints’ for our mechanism, process-tracing enables the research to study each part empirically. If each part of the mechanisms can be found empirically, and as expected according to the theory, a strong causal inference can be drawn (Beach 2017, p. 6). If the results point to the contrary, the theorised mechanism cannot explain a process, this calls for a revision of the theoretical framework.

In order to reach an exhaustive result when process-tracing, it is essential the method be applied on a foundation of careful description, exploring all plausible explanations to the variations in the studied mechanisms (Teorell & Svensson 2007, p. 247). By exhausting other probable explanations in the chain of events in the hypothesis, it is possible to evaluate the strength of the evidence in its isolation, and in the context of the causal chain (Beach 2017, p. 10).

The limitations of process-tracing are also its strengths. When analysing on an intense level, this involves searching for the specifics of a certain case. This enables more nuanced explanations but, consequently, this may cause difficulties for the generalisability (Box-Steffensmeier et al. 2008, p. 3-4). Careful consideration regarding the case selection is therefore needed.

3.2.1 Evaluating the Evidence

The Bayesian model calls for careful consideration regarding the type of evidence that is collected. Firstly, it must be decided whether the study has a minimalist or a systems approach, to determine what type of evidence is needed to support a hypothesis. In this study, a minimalist approach will be used as the systems approach is better applied on studies centred to data-generating processes. The minimalist approach asks what observable parts of a mechanism are expected to leave traces in a case, and if found, are there any alternative explanations for finding them (Beach 2017, p. 7-9).

Secondly, when found, the evidence must be evaluated in relation to the theory. In accordance to the Bayesian logic, evidence can never fully confirm nor disconfirm a theory. The evidence is instead based on its likelihood to be found according to the theory, if the theory were true (Beach 2017, p. 13).

3.3 Case Selection and Demarcation

As mentioned in earlier, the case selection is important when process-tracing. To be able to enhance the possibility of generalising the results of this study, I have chosen the case of the South African drought and the increased VAW.

Firstly, the independent variable; drought, can be seen in a bigger context, namely a case of the climate phenomenon el Niño Southern Oscillation. This phenomenon has affected not only South Africa, but regions all over the world (FAO 2018, p. 3-6). This enables studies to be conducted on similar cases, hence increasing the potential of generalisation. Furthermore, for the purpose of testing the theoretical framework, the case of drought is a slow-onset event, as opposed to more drastic natural disasters where the theory has previously been applied. Allowing it to be possible to study changes over time and testing the theory on a case with new preconditions.

Secondly, in regard to the dependent variable, the reversed trend in reported cases of VAW following the drought calls for further investigation, especially in light of the social movement which has been sparked as a consequence of increased violence.

Regarding the decision to focus my study on the rural and agricultural regions, it has been made as the agricultural production has a national importance of ensuring the food security, whilst also being one of the main employers in rural communities. A climate-shock in a heavily rain-dependent sector such as the South African agricultural industry (Tibesigwa et al. 2015, p. 193), is therefore expected to have visible, and traceable effects on the rural communities.

In terms of temporal demarcation, the study will be limited to the years 2010-2019 in terms of data analysed. This to be able to analyse the pre-drought conditions to the post-drought. However, the historical context of South Africa will also be taken into account to be able to understand structures and societal norms.

3.4 Operationalisation

As process-tracing is based on finding evidence for parts of the different mechanisms, it cannot be entirely known what the evidence will be. The operationalisation will therefore be definitions of the dependent, independent and intervening variables. The intervening variables being the theorised mechanisms. Throughout the study there will be a comparison of the factors before drought and after, this refers back to Trues comparison of ‘peace-time’ and ‘state of crisis’. I will refer to ‘peacetimes’ as *pre-drought* and the time during and after as *post-drought*.

The *dependent variable*, VAW, is defined according to the UN General Assembly’s Declaration on the Elimination of Violence Against Women (1993), stating that VAW is “*any act of genderbased violence that results in, or is likely to*

result in, physical, sexual, or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life[...]physical, sexual and psychological violence occurring within the general community, including rape, sexual abuse, sexual harassment [...]; trafficking in women and forced prostitution; and physical, sexual and psychological violence perpetrated or condoned by the state, wherever it occurs.”.

When applying this theory on my case, the external factor of climate change is operationalised to drought, *independent variable*, that complicates financial circumstances and current societal structures that can cause increased VAW. Drought is defined by below average precipitation according to the South African Weather Service’s Standardised Precipitation Index (SPI) and above average heat (SAWS 2019, p. 10, 17). Within the scope of the drought, I also include low levels of groundwater and water reserves, as the drought has resulted in excessive use of these resources (WWF 2016).

The economic factors have been operationalised to the mechanism *economic stress*. This is the negative aspect of economic circumstances, meaning the economic degradation in community and individual economy, causing difficulties to sustain normal livelihoods. It will be measured by analysing the economic factors of employment, income, food-inflation, general inflation and the state of GDP in relation to GDP/capita, to receive an indication of standards of living.

Social factors have been redefined to the mechanism *toxic masculinities*. The core of this mechanism is to find evidence that societal anger, caused by drought, is being directed at women. To be able to trace this kind of behaviour, I will examine the nature of the crimes reported, the percentage in different crimes, comparing the crimes against women in relation to crimes in general. This indicator will be based on the statistical data and crime reports and general household surveys released by the South African Police Service (SAPS), complemented by news articles, NGO reports and existing literature on gender roles in South Africa.

Lastly, political factors have been operationalised to the mechanism *political response* which regards what has been done by the government to tackle drought, but most importantly, if the response has been constructed with the intension of minimising the social impacts that follow. This will be compared to the general government efforts on VAW-issues.

3.5 Ethical Considerations

When studying violence against women, one must take into careful consideration how data and other material have been collected, and especially, what has not been collected. The number of reported cases is usually a misrepresentation of the actual total of VAW cases (Jewkes et al. 2000, p.93). According to the South African Police Service, only one in nine sexual assaults are reported to the police (Strategic plan. South African Government 2018, p. 16). In this case there is strong sentiment to be critical to these statements, as many NGOs working for the safety of women contest these numbers, meaning the unrecorded cases are much larger (Jewkes et

al. 2000, p. 96; Vetten 2014, p. 72). This causes limitations to the scope of the issues, realising the picture presented in this paper can only be a reflection of what is recorded.

Studying violence against women in South Africa calls for careful consideration of what groups and regions are being studied. The country has a diverse population with regional cultures that date back to before, during and after Apartheid. I can therefore in my paper not view South Africa as a homogeneous entity without taking this into consideration, as this would portray a false picture of the country in general. I will however not be able to take into account all different cultural settings within the regions I am studying. I therefore refer to the term rural as it is portrayed in reports released by the South African government and statistical services, complemented by previous studies.

It is also important to mention that this study is aiming to highlight the negative impacts of climate change on violence against women, which can portray a picture of women as unable to fend for themselves. This is naturally not the case, however, women in many aspects have a disadvantage to men due of the structures of society that women and men function in, and it is within the context of these structures I conduct my study.

3.6 Material and Information Evaluation

The material used for this study is composed by primary and secondary sources. The primary sources include statistics, official documents and the South African constitution. The secondary sources are a collection of reports, articles and books.

In the collection of material an extensive research has been conducted to find evidence to support the hypotheses, and additionally contesting evidence to be able to secure the validity of my findings. I have throughout the process evaluated my sources according to the four principles of source criticism: authenticity, proximity, tendency, and dependency (Svensson - Teorell 2007, p. 106-107). Since most of my collected material originates from governmental sources, peer reviewed journals and non-governmental organisations, I do not consider proximity or authenticity to be a risk. Moreover, by searching for alternative explanations, the information has been evaluated in comparison with what other sources have stated on the same topics, to reduce the risk of dependency and tendency.

4 Empirical Evidence

In this chapter the results of my findings will be presented. This will be done by giving a ‘pre-drought’ description of the rural South African context, that will be compared to the ‘post-drought’ evidence of the theorised mechanisms. In addition, the alternative explanations for the variations in the evidence will be presented.

4.1 The Pre-drought Rural South Africa

To be able to analyse the impacts of drought and the mechanisms in play that cause for the increase in VAW, a ‘baseline’ description of the pre-drought context is needed. The post-Apartheid South Africa is built on a constitution that guarantees equal rights, freedom and protection for all individuals through the Bill of Rights (Constitution of the Republic of South Africa, Act 200 of 1993, p. 5-20). However, the violence inherited from its historical context is omnipresent, and the inequalities are seen in race, gender and economic divides (ISC 2019, p.18). The divides can further be seen in the differences between the rural and urban areas. The majority of South Africa’s poor population reside in the rural areas, characterised by high population densities, high levels of poverty and under-developed labour markets (Tibesigwa et. al. 2015, p. 194). Regarding statistics on the incidence of poverty, Western Cape and Gauteng have the least percentage of poor population within the provinces. However, when regarding the total share of the national percentage of poverty, the provinces that have the highest share of the total poverty are KwaZulu-Natal at 20.6%, Gauteng at 19.0%, and Eastern Cape at 14.2% (StatsSA 2018a, p. 18-19). The difference regarding Gauteng can be explained by the fact that it is the most populated province and therefore the incidence in relation to the provincial population is lower than when looking at the total of the poor South African population. Common for all provinces, however, is that women are significantly poorer than men (*see Appendix 1.1-1.3*). This places women as the poorest group of the population, and consequently according to the theory, the most vulnerable to societal shocks. Furthermore, within many of the rural areas, there is a hierarchy between men and women, where women are expected to be the main caretakers of the household in male headed households (Hornby 2016, p. 12). In the rural areas, male-headed households make out 69%, meaning they are the breadwinners and ‘in charge’ of the households (StatsSA 2018a, p. 8). Consequently, this indicates there is a norm of the male identify as the breadwinner.

The agriculture is of great importance in the rural setting, and is not solely a source of income, but for many, the main food source. It has been estimated that there are 1.3 million small-scale farming units, and that the majority of those are

food self-reliant. The dependency on agricultural activity as a main food source varies, where Western Cape, North West and Limpopo are the least dependent provinces (Stats SA 2016, p. 63).

There exists a large proportion of female farmers, the difference to men, however, is that they do not own their land to the same extent, therefore also leaving them more dependent on the owner of the land or male partners (StatsSAa 2015, p. 14). The dependency is further sparked by women not being employed as full-time workers, but as seasonal ones, causing income uncertainty (WoF 2019). There is in other words inequality within the agricultural and rural setting.

In order to understand how the patriarchal structures have existed in South Africa, and the way in which women have been the most vulnerable group in terms of societal issues, the epidemic of HIV presents a clear picture. South Africa has the world's largest share of HIV, and the percentage of women has been significantly higher than men, in 2014 the percentages were 14.4% amongst females, and 9.9% amongst men, translating to women bearing over 60% of all cases (Mabaso 2019, p. 3). The geographical mapping of HIV shows a higher prevalence in rural areas, and specifically, black poorer women. This has shown to be the result of unequal power dynamics between genders, further permitted by social-economic and cultural norms, where women in many cases have been victims of the outlet of anger from men bearing HIV. The prevalence of HIV, and the ratio between women and men is the result of patriarchal norms and gender identities according to True (2012, p. 47). Furthermore, Jewkes and Abrahams (2002, p. 1240-1242) studied masculinities in South Africa and concluded that there exists a tradition of men punishing women for their own misfortune and failure to live up to the 'successful' male identify (*breadwinner*), and the gaining back respect from other men by dominating women (*recreational*).

The political response in terms of VAW has historically been slow and fragmented. The question of VAW has not been prioritised by government nor by the SAPS, albeit, the country has a progressive legislation in ensuring women's rights such as the *Domestic Violence Act 1998 (DVA)*, and the *Sexual Offences Act 2007 (SOA)* (ISC 2019, p. 23). The realisation of this progressive legislation in many aspects has failed to fulfil its purpose when regarding the high statistics of VAW, notwithstanding, the trend of decreasing reports of VAW has been positive since the years following the SOA (SAPS 2014, p. 11-13).

This positive trend regarding decreased VAW since 2010, alongside the general decrease of overall crimes in general, indicates a positive societal trend, moving away from violence. Furthermore, The South African economy experienced an increase in Gross Domestic Product (GDP) per capita in the years leading up to the drought (Trading Economics 2019a), and the agricultural sector was experiencing an upward trend in terms of production and contribution to the national GDP (Trading Economics 2019b). Based on this encouraging development, the post drought evidence will highlight what impacts the drought has had on society, and how this has affected women.

4.2 Economic Stress: A Consequence of Drought

In 2016 following the first year of drought, South Africa declared all but two provinces, Western Cape and Eastern Cape, to be in a state of disaster (AgriSA 2016, p. 7), however, the two undeclared provinces followed shortly after (BBC 2017). The drought report from Agriculture South Africa (AgriSA) shows the economic impact is apparent already in the first year following the initial drought. Failing crops and loss of livestock led to a decrease in agricultural output (and predictions of output), consequently causing the need for increased import of normally domestic agricultural products. This in turn caused for increased food prices and inflation. The decrease in agricultural production further led to the reduction in on-farm employment, inevitably, resulting in farmers experiencing a loss of income in combination with higher prices for basic food products (AgriSA 2016, p. 9). The overall inflation rate in the country during 2016 peaked at 6.3% causing for the economic growth of the country to fall (Plecher 2019). The same year the country's GDP fell, which has since managed to recover, however, the GDP/capita has not experienced the same recovery. Pre-drought, the GDP/capita fluctuated at around 7000 USD, in 2015 it fell to 5700, and following in 2016 down to 5200 (World Bank 2020a). Indicating that the general standard of living has not recovered.

Food prices in rural areas are generally higher than in urban areas in South Africa, which makes raised food prices and inflation an even greater issue when food self-sustaining households are faced with drought. In 2017 there was a further increase in food prices of basic wheat products of 4.5% (NAMC 2019 p. 48). *Statistics South Africa* (StatsSA), indicated that the amount of all households in South Africa that are agricultural households have decreased from 20% to 13,8% in 2016, due to the drought in 2015, and has since continued to drop. Within these agricultural households a large proportion conduct agricultural activities to secure their main source of food (StatsSA 2016, p. 3- 18).

The unemployment rate has increased in the years following the drought. Before 2015, the unemployment rate had fluctuated between 24-25%, today it has reached 28% (World Bank 2020b). Employment in agriculture in the Northern Cape and Free State has declined by 22.5% and 24.8% respectively on a yearly basis since 2016 (AgriSA 2019b, p. 3). Furthermore, Western Cape has experienced a worrying trend, where the number of farms has been decimated, resulting in a huge loss of commercial agriculture losing 13-20% of export, and over 30 000 jobs lost (WWF 2019)

In a survey conducted by AgriSA in 2019, a sample of 18 000 respondents from 25 farming organisations from different provinces showed that 70% of the respondents struggled financially as a result of the drought. Moreover, the increased financial strain, due to unemployment or carry-over debt, has caused employees within agriculture to migrate to urban areas to search for alternative incomes (AgriSA 2019b, p 16).

In conclusion, the drought has had an immense impact on the agricultural sector in the form of the loss of crops and cattle, increased unemployment, raised food

prices and increased food-insecurity for those unable to farm their own food. The necessity for people to relocate in order to find an income brings me to the following section, namely, the heightened risk for women when relocating for employment.

4.2.1 Trafficking: A Consequence of Economic Stress

A report from the US Department of State raises the awareness of the declining situation on human trafficking in South Africa 2019. The report states that trafficking is on the rise in the country, and the US criticises the South African Government's handling of the situation (US Dept of State 2019). Moreover, the Africa Centre for Strategic Studies (ACSS) states in their 2019 report that 62% of trafficking victims are South African, and the majority of these victims are women. Further, the most common exploitation in regard to women are sex labour and forced labour, most often resulting in women being exposed to violence (ACSS 2019). NGOs such as A21, a global organisation fighting human trafficking, and the South African National Human Trafficking Resource Line, have alarmed that the increase in trafficking victims from rural areas is the consequence of poverty and unemployment (Naidoo 2019). Renee Luus, organiser for the A21 in South Africa stated that: "*Human trafficking is a crime, but it is also caused by other crimes such as; financial problems; climate change, people not being able to live rurally anymore, having to come to the cities[...]people coming from poorer communities, farming communities moving into the big metropolises*" (Luus in eNCA News Report 2019). This presents strong predicament that the drought has had detrimental effects on poorer women in rural areas. Furthermore, the trafficking industry is highly based on supply and demand, raising the question if there has been a raised demand of the exploiting of women.

4.3 Toxic Masculinities: A Consequence of Economic Stress

As seen in the pre-drought description of South Africa, the complex history of the country shines through in its violent crime statistics. The crime statistics are some of the highest in the world, but as described earlier, the trend of decreasing incidents of violence and crimes has been consistent from 2010, up until the drought occurred (SAPS 2019b, p. 5). When analysing the post-drought crime statistics in general, there has been a slight increase ranging from 0,5-2% in most areas of crime (SAPS 2019b, p. 3). However, when comparing these statistics with the reported crimes against women, there is a significantly higher increase.

From the year of 2015/2016 there has been a constant increase in VAW, initially with a slow increase of 0.9%, accelerating to 8.2% and 9.6% the two following years respectively. Reports of sexual assault increased significantly in most provinces in 2019 compared to 2018 (SAPS 2019, p.114). The 2019 figures

per province in terms of reported rape and sexual assault are demonstrated below (see Figure 1). The statistics demonstrate the high increase of sexual offences, with increases of sexual assault and rape in the majority of provinces, the exception being NW in both accounts, and LP and WC deviating in one account. When analysing the increase of VAW in the light of other crimes, it indicates that the societal anger is directed considerably more towards women than men. This indication is further strengthened when examining the ‘Addendum to the SAPS Annual Report’ for the years studied in this paper. The report is a further evaluation of the individuals behind the crimes and those who fall victim of crimes. Of the cases annually reported, there is a strong majority of male perpetrators, approximately 85-95% of all perpetrators have been men (SAPS 2018 p.78 ; SAPS 2019a p. 14).

Furthermore, it can be seen that the increased VAW corresponds to the poverty rate of provinces as presented in table 2. What can also be seen based on the agricultural dependency, is that the provinces with the least increase in VAW, are also those that are the least dependent on agriculture; WC, NW and LP.

Table 1: Sexual offence per province 2018/2019

	EC	MP	LP	KZN	GP	FS	NC	WC	NW
Rape (% Change)	+ 7.1	+ 7.0	+ 6.1	+ 5.9	+ 4.4	+ 2.8	+ 1.9	- 2.0	- 3.0
Sexual Assault (% Change)	+ 10.6	+36.2	-3.6	+10.3	+14.7	+18.9	+ 4.1	+ 2.7	-1.2

(SAPS 2019, p. 109)

Table 2: Poverty and increase of VAW per province

	Poverty Incidence (%) All Households	Poverty Share (%) All households	Increase of VAW
EC	54.0	14.2	High
MP	45.9	8.4	High
LP	55.0	13.1	Moderate
KZN	48.4	20.6	High
GP	26.0	19.0	High
FS	43.1	6.1	High
NC	45.6	2.4	Moderate
WC	25.3	7.2	Low
NW	49.0	9.1	Decrease
Total	40.0	100	

(StatsSA 2018a)

4.4 Political Response: Enabler or Disabler?

To evaluate the government response post-drought, the evidence will examine the response to drought, and to what extent it has taken into consideration what groups are mainly affected by the consequences of drought, considerably in the rural areas.

There was major criticism during the initial stages of the drought, as the government was passive in its response. Agri SA stated in their 2016 report that the aid from the government had up until then been unsatisfactory (AgriSA 2016, p. 16). They further set up a risk analysis complemented with recommended actions and financial plans for the government to undertake. The ‘best-case scenario’ required approximately 7 billion rand (380 million USD), ranging to the ‘worst-case’ scenario where the total fiscal outlay mounted to 16 billion rand (AgriSA 2016, p.26). As it played out, the scenario that became reality was the worst-case scenario, when the drought persisted. Following up on this report in 2019, AgriSA directed harsh criticism of the government's efforts to tackle the drought stating that *‘the government has failed to recognise the drought as a national crisis’* (Moubray, 2019). However, there have been financial efforts made. The Department of Agriculture, forestry and Fisheries (DAFF), allocated and dispensed a total of 212 million rand in the financial year of 2016/2017, in addition to that of 263 million in 2015/2016, by reprioritising the Comprehensive Agricultural Support Programme (CASP) (DAFF 2016, p.1).

The main issue, however, in relation to this case study, is whether a gender aspect has been taken into account when planning the response. The CASP’s main focus is financing and permitting loans to the agricultural sector. The design of their drought relief was based on previous spells of drought, which have been a reoccurring event in the South African climate (SAWS 2019, p. 10). However, the severity of the continuous drought has not been adapted within CASP, and the loans granted to farmers has caused for great debt, as the prerequisites are based on the drought relieving and production returning to normal (Dep. Environmental Affairs 2017, p. 65). Furthermore, the majority of the drought relief has been granted to the commercial producers, and geographically, the concentration has been in close connection to urban areas, with emphasis on the WC commercial production, leaving the rural population with more challenging circumstances, as water resources generally have been more scarce in rural areas (AgriSA 2019b, p. 7).

Overall, the South African government has been consistently met with criticism that their policies, in general, and in regard to crisis response, lack the incorporation of strategic plans on how to minimise impacts on vulnerable socio-economic, and gender groups (ISC 2019, p. 26). Researching their released reports and strategic plans on battling the drought has shown an absence of incorporation of gendered aspects, and the general strategy has been, as noted, financial loans, which have caused for great debt for those who are unable to afford water to be able to save their crops as the drought has persisted.

4.5 Alternative Explanations

Throughout the process of finding evidence for the mechanisms, a parallel search has been conducted, to find alternative explanations. The main rivalling evidence, and that of most plausibility, is one explaining the economic fluctuations. During 2016, the sitting presidency of Jacob Zuma experienced an internal crisis as consequence of financial mismanagement, economic degradation and speculations of government corruption (Karodia–Soni 2016, p. 24). This caused for downgrading ratings of the South African economy and its growth (Plechler 2019). This however does not explain the food inflation and food insecurity that has worsened ever since the drought but can be seen as the explanation in the general economy and inflation, albeit important to take into consideration and view as a contributing factor.

The alternative explanation to the evidence found to support the toxic masculinities has been reduced to that of the breadwinning masculinities. Women in South Africa have throughout the past years become more empowered, with an increasing workforce within managerial positions (StatsSA 2018b, p.11). There are still, conversely, huge gender divides that are unfavourable to women, but the changes may be an indication of challenged male identities as the household and societal authority. However, this is more applicable on a national level, as the inequality is still very much present in more rural areas. Furthermore, the establishment of women farmer associations, that have focused on empowering women, and informing them of their rights. In a video released by the Women on Farms organisation, Colette Solomon, founder, emphasises the importance of women's safety and rights on farms, and the female right to be breadwinners in their families (WoF 2019). This may be an alternative explanation for an increase in toxic breadwinner masculinities.

A factor that must be further investigated is that of the increased reported crimes of VAW. The crime reports speak for themselves, there is an increase of reported crimes against women, but how can it be decided whether this is the result of an actual increase in violence, or a changed attitude on reporting crimes? The South African Human Rights Council states in a research brief from 2018 on the challenges in addressing gender-based violence, that the main challenge remains changing the attitude on addressing VAW, both for victims being encouraged to report, and especially on the officers within the South African Police Service (SAPS), to address reports with active response (SAHRC 2018, p. 13). What has been found by the SAHRC, is an overall negative and passive response from the SAPS in regard to VAW-issues. This has caused women to become reluctant to report crimes, and part of the protests against VAW have been centred around the increased VAW from police employees and state officials (IPID 2019 p. 28).

5 Revisiting the Hypotheses

There now follows an analysis and discussion of the evidence that has been found through the process-tracing, based on the theorised mechanisms. The evidence will be evaluated according to what has been expected to be found according to the theory, and in comparison, to alternative explanations for finding the evidence. Finally, a conclusion regarding the strength of the overall hypothesis; *drought exacerbates existing structures that are unfavourable towards women*, will be reached.

5.1 Evaluating the Evidence

Hypotheses

H₁: *Drought causes economic stress as a consequence of failing agricultural production*

H₂: *Migration from rural to urban areas causing exposed labour positions for women*

H₃: *Societal anger and inability to fulfil successful male gender roles are taken out on women*

H₄: *Inadequate political response directed to tackle the social consequences of drought*

Hypothesis 1:

As found in the empirical evidence, drought has had an enormous impact on the overall agricultural production, both in terms of commercial production and small-scale production for domestic use as main food source. The volatile state of the rain-fed agriculture has caused not only economic stress for those within the agricultural sector, but also for the broader provincial state of food-security. The need to import otherwise domestic products, and the uncertainty as to when the drought will abate, caused for increased food-prices on basic food products on a national level. Regarding this in the light of the heightened unemployment rate and the closing of farms, the financial struggle for households that are dependent on an agricultural income and production has been devastating. Weighing this to the alternative explanation of the governmental crisis in 2016, the supporting evidence still stands strong as the governmental crisis explains fluctuations in the overall financial state of the country, but it cannot explain the significant struggles in the rural and agricultural regions. Therefore, the first hypothesis (H₁) is considered to be true.

Hypothesis 2:

Further strengthening the mechanism of economic stress, the second hypothesis regarding the need to migrate (H₂), is seen as the direct extension of H₁. The raised alarms by both the US Department of State and the NGOs stands as evidence, but the strong confirmation of the droughts impact on rural areas comes from the statement from the A21 organiser Renee Luus, stating that there is a direct link between the increased number of trafficking victims and the rural migration as a consequence of the climate change, drought. The weight of this evidence stands as direct confirmation of the hypothesis, and consequently a confirmation of the economic stress, as expected by the theory.

Hypothesis 3:

The third hypothesis calls for great caution, due to the abstract nature of toxic masculinities. By analysing the raised VAW in relation to the theory, the heightened economic stress of income loss and loss of employment are factors that provoke both forms of toxic masculinities. Breadwinner masculinities, as this role cannot be fulfilled, and recreational masculinities, as the high unemployment rate causes less scheduled time, thus more free time 'dwelling'. The evidence of increased rates of VAW in relation to other crimes is a strong indicator that there is a societal aggression due to the economic stress, that is proportionally more directed on women. As stated in the alternative explanation, the evidence cannot be seen as a direct confirmation, however, considering the reports of more or less unchanged priority of the police and government in handling and highlighting VAW, there is little to support the idea that there has been increased trust for the SAPS, or a change of attitude on reporting VAW, specifically in reporting domestic violence. I therefore conclude that H₃ is highly supported by the evidence of economic stress, and that the proportions of reports of VAW in comparison to other crimes should be seen as sufficient evidence.

Hypothesis 4:

Finally, the hypothesis regarding political response must be seen in regard to two aspects; what has been done to tackle the drought; and what has been done to tackle the socio-economic consequences of drought. It is problematic to establish what is considered as enough in terms of response, however, viewing the outcome of the higher levels of drought relief concentrated to the commercial agricultures in Western Cape, and the low increase of VAW, this could be seen as counterfactual evidence, demonstrating that had the response been more evenly distributed to rural areas, the increase of VAW might have been significantly less. However, this is also problematic in the light of Western Cape also deviating in all other accounts that have shown to be connected to the increase of VAW; high poverty and dependency on agriculture.

Nevertheless, the absence of measures to counter the social impacts of drought translate according to what is expected by the theory; absence of gendered-political approach allows external shocks to disproportionately affect women.

5.2 Strength of the General Hypothesis

What does the strength of the hypotheses regarding the existence of the mechanisms mean for the general hypothesis' assumption that '*drought exacerbates existing structures that are unfavourable towards women*', imply?

The post-drought evidence must be put in relation to the pre-drought context. Even though South Africa had experienced a positive trend with respect to the crime statistics, the many rural areas were still characterised by income inequalities and poverty. Furthermore, the historical context of gender stereotypes and norms, albeit, less apparent in the years before the drought, were still existing within the rural setting, as seen in the divide of labour and authority between men and women. When drought hits, the preconditions are what will allow or prevent the impacts of climate change to be unfairly directed towards women; financially and physically. As the theory states, poorer women are at a higher risk of being exposed to violence, and what has been seen in the post-drought evidence, is higher increased rates of VAW in provinces where there is a large share of poverty, and where there is a high agricultural dependency; Gauteng, KwaZulu-Natal, Eastern Cape, Free State and Mpumalanga. This confirms the theoretical assumption that women within poorer areas are more likely to be vulnerable, and disproportionately affected by external shocks.

I therefore conclude that the evidence that has been found in the case of rural South Africa, corresponds to what is supported by the theory. However, recognising the fact that drought (climate change) is not the sole cause of VAW, it does nevertheless cause circumstances that enable the exacerbation of existing structures that puts women in danger of being exposed to sexual crime and assault, within the private and public sphere, as well as exposes them to exploitation, as has been seen in the case of trafficking.

6 Conclusion

The purpose of this study has been to provide an explanation and understanding of how climate change can cause increased violence against women by applying and testing Trues theoretical framework and answering the research question: *How has climate change affected the increased violence against women in South Africa?*

The theory has been strengthened as it has been able to explain the causal relationship between the slow-onset climate change of drought and the increased violence against women, extending on its explanatory power as it has solely been tested on post-conflict and natural disasters.

By analysing the issue from economic, social and political perspectives, before and after the drought, the study has been able to highlight the interplay between the theorised mechanisms on the empirical case of rural South Africa. Tracing the impacts of drought on the climate-dependent agricultural sector highlighted the many ways in which climate change affects the financial stability of individuals, and how it is particularly unfavourable to women who already experience income inequalities. Further, it has highlighted the reactions that follow economic stress; the need to migrate from rural to urban areas to secure incomes, heightening the risk for women getting exploited and caught in trafficking; and the emergence of toxic masculinities, as the result of loss of income and employment, leaving men unable to live up to the norm of male identity as the superior breadwinner. This process is further enabled by inadequate political response to the social impacts of drought and has furthermore been enabled by the low priority of VAW, particularly in the rural areas.

What has been established is that provinces with higher poverty rates and dependency on agriculture have seen a higher increase of VAW, drawing the conclusion that it is those who are already vulnerable in the pre-drought context, that also experienced more severe consequences in the post-drought era. Climate change has in other words caused for increased violence against women by exacerbating existing structures and behaviours that are discriminating towards women.

6.1 Further Research

Recognising the limitations of the generalisability when conducting a within-case analysis, the findings reached in this study call for further testing on similar cases to be able to strengthen the causal relationship. Furthermore, regarding the findings in this specific case, a comparative study between provinces that have experienced high versus low outcomes of violence against women would further enhance the

understanding of what prerequisites in detail, allow or prevent climate change to have a disproportionate impact on women. The understanding of this would be of great importance in future efforts to tackle climate change.

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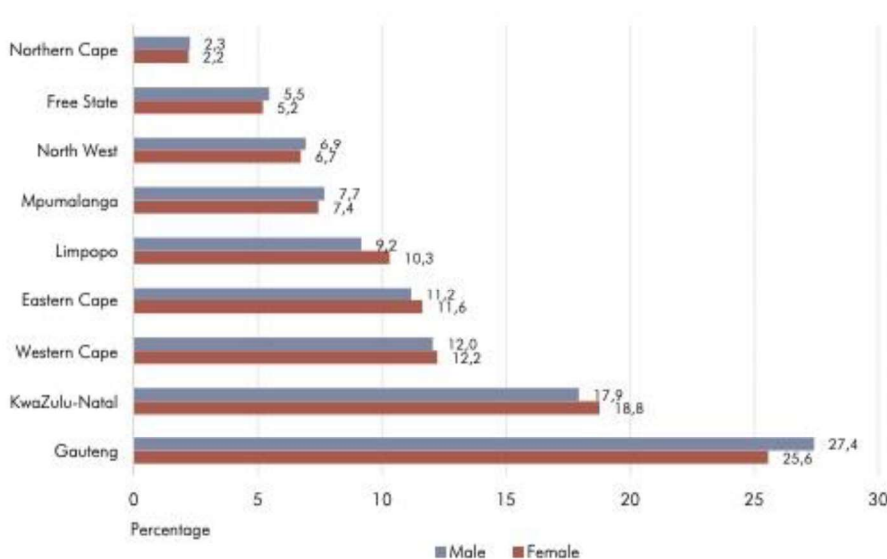
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1 Appendix

1.1 Percentage distribution of adults by province and sex, 2015



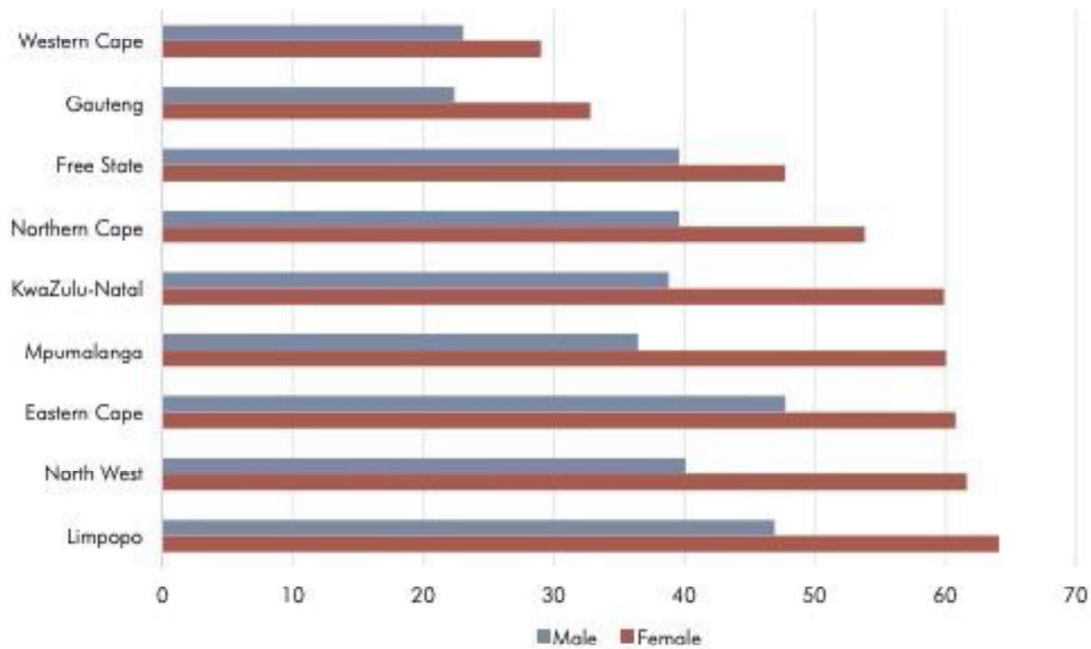
(Source: StatsSA 2018a, *Men, Women and Children Findings of the Living Conditions Survey 2014/15*)

1.2 Poverty incidence and poverty share of households by province 2015

Province	All households	
	Incidence (%)	Share (%)
Western Cape	25,3	7,2
Eastern Cape	54,2	14,2
Northern Cape	45,6	2,4
Free State	43,1	6,1
KwaZulu-Natal	48,4	20,6
North West	49,0	9,1
Gauteng	26,0	19,0
Mpumalanga	45,9	8,4
Limpopo	55,5	13,1
Total	40,0	100,0

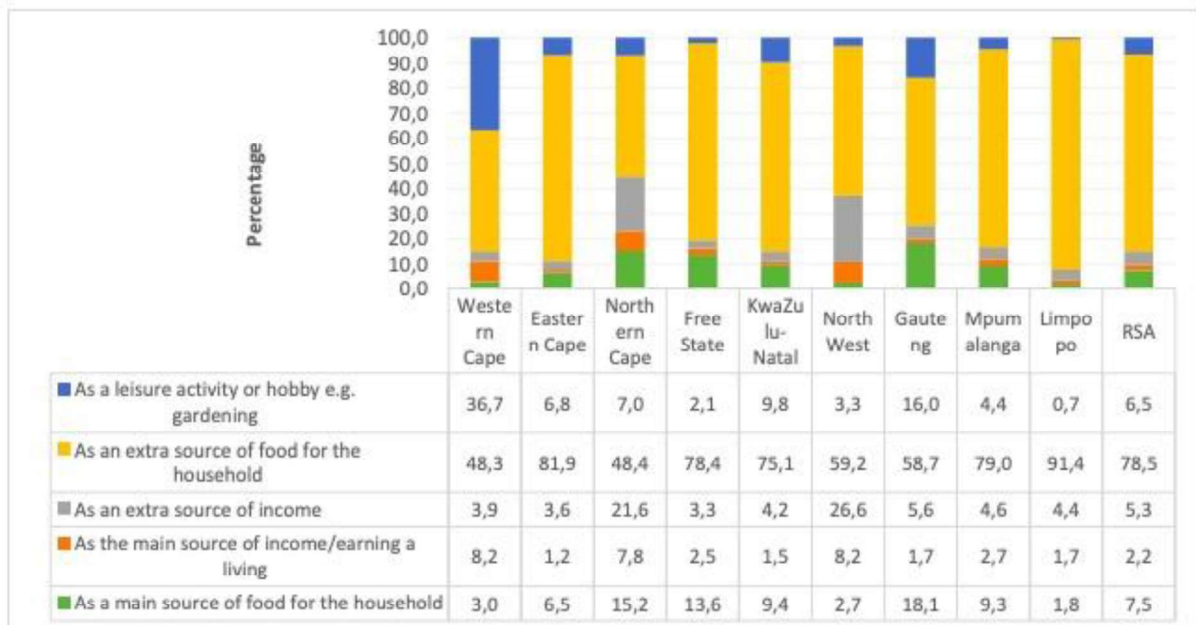
(Ibid.)

1.3 Poverty incidence of households by province and sex of household head 2015



(Ibid.)

1.4 Percentage distribution of households involved in agricultural activities by province and reason for involvement 20



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