

Women's perspectives and experiences of climate change: The case of rural KwaZulu Natal, South Africa

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ABSTRACT

The world is currently seized with the problem of climate change and this manifests in different forms that include amongst others drought, severe heat and rising sea levels. In rural South Africa, inconsistent rainfall patterns have been the most notable manifestation of climate change. This is because it affects subsistence agriculture which poses a direct threat to food security. Since women are at the centre of food production through subsistence farming in rural South Africa, this study explores the challenges they face in rural KwaZulu-Natal using a qualitative approach. Two focus groups discussions (FGDs) were conducted with women whose livelihoods were mainly dependant on subsistence farming. Findings suggest that women have been experiencing a reduction in harvests owing to drought. In addition, diversification of livelihoods through fishing activities has been affected as water sources have dried up. Women are finding it difficult to adapt and cope to climate change.

INTRODUCTION

The effects of climate change are widespread and include drought, severe heat and rising sea levels. In acknowledging the gravity of the problem of climate change, the United Nations members states have signed international treaties aimed at reducing activities that lead to climate change. These international treaties include, the United Nations Framework Convention on Climate Change that was signed in the year 1992. In 1997 the United Nations member states adopted the Kyoto protocol which became effective in the year 2005. These efforts were aimed at ensuring that countries commit to certain standards as it relates to the reduction of greenhouse gas emissions. Drawing from the United Nations Framework Convention on Climate Change (UNFCCC), climate change is described as a change of climate which is attributed directly or indirectly to human activity (Onyeneke and Madukwe 2010). Researchers have found that greenhouse gases (GHG) such as carbon dioxide, methane, nitrous oxide, and fluorinated gases can be trapped in the atmosphere for several years before they cause climate change (Solomon et al., 2007). The greenhouse gases get trapped in the atmosphere and cause the earth to warm up, this is commonly referred to as global warming (Bast, 2010). Furthermore, Bast (2010) argues that the more GHG are released into the atmosphere, the greater the likelihood that climate change will occur.

Scholars further emphasize that as climate change impacts intensify, their effects are indiscriminate as they affect all human beings with no regard for their direct or indirect contribution to actions leading to climate change (Bast 2010; Warner and Van der Geest 2013; Powell 2015). Warner and Van der Geest (2013) also reiterates that the effects of climate change often alter people's socio-economic and environmental status. This usually results in increased livelihood vulnerability and thus calls for adaptation efforts to increase climate change resilience among the affected (Warner and Van der Geest 2013). According to Powell (2015) the negative impacts of climate change are more severe on economically vulnerable groups that have limited resources to cope and adapt to achieve resilient livelihoods. As such, the effects of climate change in poor rural communities are likely to be particularly dire, and poor women are often the worst affected. In most African countries the

livelihoods of rural women depend on subsistence farming. This is how they sustain their families by producing their own food and selling their surplus produce to generate income (Powell 2015). In rural South Africa, inconsistent rainfall patterns have been the most notable manifestation of climate change. Inconsistent rainfall and excessive heat affect subsistence agriculture which poses a direct threat to food security, and this is the reason why most people are quick to relate them to climate change.

Despite the role of women at the centre of food production through subsistence farming in rural South Africa, there has been a dearth of research that explores the challenges in climate change mitigation and adaptation. MacGregor (2010) point out that various studies on the socio-economic impacts of drought on the livelihoods of the poor have been conducted, however, women remain underrepresented. Denton (2002) argues that gender disparities continue to be on the increase and women remain amongst the poorest and most marginalised in poor communities. In addition, in the wake of climate change, women are often left out of discussions that seek to address the impacts of climate change and find viable adaptation strategies. This is seen as an act that further perpetuates the vulnerability of already marginalised groups in society (Denton 2002). Other scholars argue that there is clear ignorance of gendered power relations and structural inequalities in most research studies focusing on gender and climate change (Terry 2009; MacGregor 2010). The focus is often placed on the dichotomy of men versus women with little attention on the intersectionality of power relations between different social groups (Djouidi et al 2016). Thus, scholars suggest a more nuanced approach to gender and climate change that considers the differing context under which climate change is experienced as it relates to structural inequalities and gendered power relations (Djouidi et al. 2016). Despite the central role played by women in the household and in their communities in rural South Africa, the skewed power relations in society do not favour them when it comes to receiving the much-needed support. Women shoulder a lot of responsibilities in both the household and communities, as a result, issues affecting them need to be addressed through community-based adaptation activities with their full participation (Rawlani and Sovacool 2011; Mc Entire 2012). In a bid to find lasting solutions to the problem of climate change it is important to acknowledge the capabilities, experiences and expertise of all social groups (Terry 2009).

Following from the above, this study seeks to explore the experiences of women with regards to drought in Kwa-Ngwanase, KwaZulu-Natal Province. The study provides insights into how women's livelihoods have been affected due to the impacts of the recurrent droughts in the area. In addition, the study investigates the factors that make women susceptible to the effects of drought in the study area. The specific objectives of the study are to investigate the impact of drought among women, to explore the coping strategies of women affected by drought as well as the challenges and constraints experienced by women in relation to sustaining their livelihoods. It is envisaged that this study will assist in providing the relevant information on how disadvantaged women of Kwa-Ngwanase experience and cope with drought in their community. In addition, this study is timely as it provides a detailed assessment on how rural women, whose livelihoods are largely dependent of subsistence agriculture respond to environmental stresses. The findings of this study will assist policy makers and the local municipality officials in modifying the existing mechanisms to ensure that they are aligned to the relevant contexts.

RESEARCH METHODOLOGY

This study was conducted in the rural village of Kwa-Ngwanase that is located within the Umkhanyakude District Municipality in the province of KwaZulu-Natal, South Africa. Kwa-Ngwanase is about 15 kilometres South of the South Africa-Mozambique border. The study

area was selected because subsistence agriculture has been the main economic activity in this area for a long time. Also, women in this area have largely been the ones most involved in agricultural activities. In light, of the prevailing changing climatic conditions, there has been a significant reduction in agricultural activities in the area. As a result, there was a need to understand how the women understood and experienced climate change in this rural community.

The study used qualitative research to obtain an insider perspective of the experiences of women in Kwa-Ngwanase. Two focus groups discussions (FGDs) were conducted with women whose livelihoods were mainly dependant on subsistence farming. One focus group had eight participants while the other had seven participants. The size of each focus group was determined by the availability of willing participants in the selected areas. Focus groups were chosen for this study as they presented an opportunity to avert the problems of time and financial constraints. In addition, they provided a platform to explore different views of different women sharing and reflecting on their experiences with drought in the study area.

In this study, non-probability sampling was used as sampling procedure. A few initial participants were selected using purposive sampling in the two sub-villages. The criteria for selection were that, participants are females aged eighteen years or above, they also had to be residents in the sub-villages of Thengani and Endlondlweni. After selecting initial participants, other participants were identified through snowball sampling.

The focus group discussions were moderated by the first author, who is a young woman who shared the same cultural background with the participants. In addition, she is also from the study area. To avoid the distortion of data it was important for the moderator to be someone who shared the same culture with the participants to limit cultural misrepresentation of the data. Both FGDs were conducted in a central place agreed to by all the participants for their comfort and privacy. The FGDs lasted between 60 minutes to 90 minutes. Both FGDs were done in IsiZulu, the language that is widely spoken in the study area. Consent was sought and given, to digitally record the FGDs. These were later translated and transcribed into English. There was strict observation of confidentiality and anonymity. To protect the identity of the participants, there is no information that can possibly be used to identify the participants that is used in this paper. Additionally, researchers ensured that informed consent was sought from and granted by all study participants. The interviewers explained to the respondents that the information they shared was going to be kept strictly confidential and used only for academic purposes.

Transcriptions of FGD recordings were subjected to thematic analysis. These were read and reflected on by all the authors and the data were sorted according to themes. The themes were drawn from the recurrent ideas and topics that were detected in the interviews. The major recurrent themes identified during data analysis include, understanding and experiencing climate change, considering alternative water sources as well as efforts towards climate change adaptation.

FINDINGS

Demographic characteristics

This section outlines the demographic characteristics of the 15 women who participated in this study. The levels of education among the study participants were very low. Most of them reported to have only completed primary schooling. Only a few of the participants reported to have completed high school education. None of the study participants reported obtaining a tertiary qualification. Most of the women who took part in this study were above 40 years of

age with the oldest women being 60 years old. The rest were below 40 years of age with the youngest being 21 years of age. Most study participants who were above 40 years of age reported having at least one living child and were more likely to be living with their male partners even though they were not married. Among respondents below 40 years of age it was common for them to have children of their own and not reside with their male partners. All respondents of this study reported to have lived through a drought in their area at some point of their life.

Understanding and experiencing climate change

Women were asked about their understanding of climate change, their interpretation of the current weather conditions and the subsequent drought. FGD data shows that women were aware of the various manifestations of climate such as drought. They drew close association between climate change and drought. For most of the participants drought was synonymous to water shortages which were resultant from changing rain patterns in the area. The findings of this study suggest that women in the study area are mostly aware of the changing weather patterns over the years. The following excerpt from an FGD gives further illustration.

The way things are now, is very frightening. It is very frightening, because in the past you knew that during spring, it would begin to rain. It was during this period that planting of crops would begin. After planting, you knew it would continue raining, until the plants had fully grown. There would be enough water that shallow areas around the plants would be filled with water and you would be able to irrigate plants. This is the first time I am experiencing these kinds of conditions since I was born (FGD #1)

The findings of this study suggest that women in the study area have an awareness of the inconsistencies in the weather. The above excerpt illustrates that the changing patterns have immensely altered their farming patterns, and this has adversely affected their livelihood routines. Most of the participants indicated that this was a new phenomenon that they were not well prepared to deal with. The following excerpt illustrates how the new changes have altered the livelihoods.

There used to be plenty of areas with water, we were able to plant and catch fish. Now we have to buy fish from the butchery. The issue of climate change is terrible, as when there is no rainfall, food is also very expensive from retailers. Unlike in the past it was much better, the rainfall was enough to plant thus we were able to consume food from our gardens. Now it is worse than ever before, there are even no jobs; with no rainfall it is just bad. (FGD #2)

Even if we plant crops that can withstand the drought, they take a long time to grow and cannot help us meet the immediate needs to feed our families. Some of the plants get burnt by the sun, which helps us in no way at all "(FGD #1)

The findings of this study suggest that participants were ill-equipped and not ready to deal with the uncertainty brought about by climate change. While knowledge about ploughing the land had been passed on from previous generations, this knowledge did not include tips on how to deal with preparing for or coping with severe drought conditions. Therefore, there has been no clear model for them to follow in terms of what they needed to do. They indicated that when the rivers were full they would catch fish in the river and grow food to feed their families. However, with the recent severe droughts they are forced to buy food from retail shops and most of them can hardly afford it.

In addition, this study finds that some respondents were learning about climate change and its causes from their more educated family members. The following extract from an FGD gives further insight on knowledge acquisition for climate change awareness.

There is something I hear regarding layers. My son mentions the ozone layer in the skies and tells me that the drought is caused by me burning waste material. That is what I have knowledge about as they warn me about it most of the time. (FGD#1)

The above extract illustrates that knowledge diffusion within the household is playing a great role in climate change awareness among rural women. The above shows that the participant is aware that climate change is caused by gasses emanating from the smoke after burning certain materials and thus understands that her duty is to reduce the amount of gasses emitted to avoid destroying the ozone layer. As a result, the findings suggest that the women in the study area have an idea of the problem and their role in mitigating the problem thereof.

Considering alternative water sources

Faced with severe water shortages owing to severe droughts and excessive heat, the study participants indicated their desire to explore alternative water sources. The most commonly shared idea was that of tapping underground water by drilling boreholes. However, the findings of this study suggest that many of the women in the study area are too poor to afford the cost of drilling a borehole.

It has really become difficult to collect water from the river, let alone install a pump to extract water from the ground, therefore you cannot access it (FGD #1)

I do not have money to call people who drill boreholes, compared to the people who have the money to call these people to drill so they can have access to water. (FGD #1)

Most of the participants in this study indicated that the drought had forced them to give up cultivating crops as they have lost hope of accessing a constant supply of water. The participants emphasized that their income deprivation prevented them from engaging services of people who drill boreholes. Faced of a lack of financial resources to drill a borehole some women opt to manually digging a hole in the ground to extract water though this exposes them to danger. The following excerpt gives further insight.

When you end up digging your own water hole, you end up stopping, because there is the danger that the hole can cave in. (FGD #1)

The findings of this study suggest that the study participants perceive boreholes as the most viable option for mitigating water shortages that manifest as a direct effect of drought. However, their income deprivation further increases their vulnerability to climate change. While some neighbors with boreholes assist those, who have no other means of accessing water, this is a temporary measure to achieve climate change resilience. This calls for sustainable coping mechanisms that are beneficial and efficient. These could include communal boreholes that will strengthen climate change resilience for all including the poor.

Efforts towards climate change adaptation

Surviving off the environment

Faced with diminishing agricultural yields and having abandoned agriculture owing to drought conditions this study finds that some women look to natural resources for survival. The participants of this study reported that some women go out to the forest and chop down trees that they use in creating products that can be sold to generate income. They are using the resources from the environment to create alternative livelihoods. The following excerpt gives further insight.

We can chop leaves and roots for medicinal purposes, get crops, cook and cleanse ourselves from trees to sell. If trees are destroyed, we cannot get them back and benefit.
(FGD#2)

The above excerpt shows that while study women had found some new ways to generate an income, they were aware that securing their livelihoods through cutting down trees had a negative effect and was not environmentally friendly. However, they highlighted that they had no other choice as there were limited means of earning livelihoods.

This study found that a few women in Kwa-Ngwanase still rely on reeds which they use to weave baskets and other assorted crafts that they sell to earn income. However, the means of livelihood is no longer as viable as it used to be in the past because the availability of good reeds is dependent on rain water. The following excerpts illustrate women's reminiscence of the past in relation to the present.

In the past we could weave reeds and make items such as mats to sell but now we cannot. There are no easily accessible reeds now, we are unable to even weave reeds for our household's consumption, the reeds have become scarce due to drought (FGD#2)

In the past you could easily find healthy reeds growing on the riverbeds, you would collect them and come back to do the work of weaving to later sell your handwork (FGD#1)

Because of climate change, the findings of this study suggest that livelihood strategies that are heavily dependent on natural resources are no longer viable for the women of Kwa-Ngwanase. Women are no longer able to rely on natural resources to make a living. The terrible weather conditions in Kwa-Ngwanase have had a negative impact on the livelihoods of poor women in rural South Africa.

Informal trading

This study also finds that some women in Kwa-Ngwanase have resorted to informal trading as a strategy to offset livelihood risks. Some of the younger women indicated that they often went to nearby schools to sell edible products. They either prepare these themselves or buy them in bulk for resale to school learners. The following excerpt gives further insight.

The only solution I have is to go out and sell outside schools to school children. I sell small items, such as snacks and make small amount of money to be able to provide for my children (FGD #1)

While the informal trading did not provide enough means of a livelihood as did agriculture, women persevere and endure the competition for customers. The following excerpt shows that despite the difficulties women value that these gives them a chance to earn a living.

“Selling in schools is very helpful for me, although there is so much competition there, but at least I can have a couple of Rands at the end of the day, although I won’t say it is sustainable especially when schools are closed for vacation” (FGD#2)

Precarious employment

Women in Kwa-Ngwananse struggled to secure employment. Most of the old women mentioned that throughout their lives they have maintained their livelihoods through subsistence farming, which is their main economic activity. There was no other way they knew how to survive. Other factors such as low education and job scarcity also put them at a disadvantage when looking for employment. In addition, corruption also discouraged some participants from looking for jobs. The following excerpt gives further insight.

A problem I face when I go out and look for work is that when you get to the place where the job is being offered, you are told you have to pay a bribe. In most cases, I do not have cash and I come back and sit at home. (FGD #2)

The poor women whose livelihoods have been destroyed by severe drought, are further excluded from employment because they cannot afford paying bribes. Participants highlighted that the payment of bribe to secure employment is a very common practice even within government departments. Therefore, most women were pessimistic about securing employment and thus stopped searching.

Participants also highlighted that there are limited employment opportunities near them. As a result, they often must travel long distances to search for employment. For those who managed to secure employment, distance became a problem as they could not afford transport costs daily. In the following excerpt a participant gives an account of her experiences.

One of the problems I face is that you hardly find work close to your area of residence. The other problem is that you have to travel long distances that are physically demanding, when you get to work you are tired, because of the distance you have travelled by foot. When you finally get home, you are exhausted. You need to cook and it is very difficult. (FGD #1)

The above excerpt shows that women who secured employment had to walk long distances to work because they do not earn enough money to afford transport. Despite being tired after work women were still expected to perform their household responsibilities. This emphasizes that even though women had to adapt to new livelihood strategies, they still could not easily escape their gender roles.

Some participants also indicated that their partners were unemployed and thus could not provide financial support to their families. Most of the male partners used to be able to contribute to their family’s needs, which was now no longer the case as they got retrenched. The following excerpt gives further insight.

Most of our partners used to work at the cashew nut factory, some of us women also used to work there as well. It was even better because we had transport from work, unlike the jobs we are receiving now. Life was better, but ever since we were retrenched things have been tough. We could feed our children, now our husbands are not working, they are sitting with us as we are also not working. (FGD #1)

The low employment opportunities in Kwa-Ngwanase forced other women, especially the younger ones to resort to precarious employment such as looking after other people's children to raise an income.

I sometimes get piece jobs as a nanny, and I can say the money received there is not sustainable either, I often receive an income that can only pay my groceries and that's all, luckily I eat from the household I am an assistance in (FGD#1)

You cannot say you are sustained by money you receive as a nanny, in fact those people give you any amount they want, if they want to cheat you and give you below the average salary you will receive just that and they know you won't complain because a bread is better than nothing (FGD#1)

Faced with severe drought that has destroyed farming as the main livelihood activity, women are forced to adapt and do piece meal jobs. They do this despite the precarious income and unfavorable working conditions. What is important for these women is that they earn some income to put food on the table for their households.

Social grants

The study findings suggest that the government social grants have come as a major relief and provide a means to for climate adaptation and livelihood resilience. Women who participated in this study have acknowledged that social grants have assisted many vulnerable women to cope with drought impacts in their households. They emphasize that social grants in rural areas have become an important lifeline for poor households suffering from severe drought conditions. In the following excerpts women note that social grants provide them with a means of survival in tough times.

I could say that the social grants have come a long way in helping us close gaps, without social grants many of us would be in deep trouble, what would we be eating? (FGD #1)

Although the money is low, we have however managed to survive using social grants, it becomes better when there is an old age pensioner and children receiving the grant because that money is then pulled together to buy groceries and other necessities (FGD # 2)

Personally, I don't know what my situation could've turned out into without the grant assistance of government, in fact I don't know what my children would be surviving on (FGD # 1)

The above excerpts suggest that many women and their households depend largely on social grants for the survival of their families. In the face of severe drought, the social grants system has provided protection against climate change vulnerability among women in Kwa-Ngwanase.

DISCUSSION

As social scientists our understanding of the rapid changes in climatic condition is heavily reliant on scientific literature. In this study we sought to explore how women experienced climate change and assess their understanding of this phenomenon. Drawing from literature, the changing weather patterns that we are experiencing are caused by human activities such as deforestation and emissions of harmful greenhouse gases (Ragab and Prudhomme 2002; Solomon et al. 2007; Apraku et al. 2018). According to Apraku et al. (2018), when the harmful greenhouse gases are released into the atmosphere, they interfere with nature and the result is the disruption of weather patterns. The findings of this study suggest that women from poor rural communities in Kwa-Ngwanase have experienced the changing weather patterns. These have largely been experienced in the form of low and erratic rainfall and excessive heat. Some of the women understood the changes in climate conditions from a scientific perspective through information sharing with their more educated household members. However, others just noticed the climatic changes but could not find any explanation for them. In a similar study conducted by Apraku et al. (2018) in the Eastern Cape province of South Africa, community members attributed the climatic changes to religious, spiritual and political forces. As a result, while a few understood climate change from a scientific position, others felt it was either political sabotage from rich nations or a sign that the ancestors were not happy (Apraku et al. 2018). Other scholars argue that though several studies have been conducted on climate change, there is huge evidence that gender disparities remain pervasive (Ngigi et al. 2017). Most women who took part in this study had low levels of education, thus a lot of them just experienced changes and could not ascribe any explanation. Ngigi et al. (2017), argue that despite calls for interventions promoting gender equality, women still have limited access to information. Therefore, there is a need for interventions that help women to understand the prevailing climatic conditions through improved access to information so that they can be equipped with adaptation skills to achieve climate change resilience (Dube and Phiri (2013).

The results of this study suggest that women in Kwa-Ngwanase have experienced climate change largely through the destruction of their means of livelihoods. According to Ngigi et al. (2017) women's livelihoods in developing countries are mainly dependent on agriculture and natural resources. Since agriculture and natural resources are very vulnerable to climate change, the impacts of climate change exacerbate existing gender disparities particularly for women who are excluded from access to resources (Eastin 2018). The findings of this study suggest study women from Kwa-Ngwanase depended on agriculture and natural resources such as reeds. However, with changing climatic conditions leading to prolonged droughts, water scarcity became rife and this severely limited their livelihood options. In a study conducted in Matobo district in Zimbabwe, smallholder farmers also expressed concerns of severe drought conditions manifesting in excessive heat and erratic and unpredictable rainfall (Dube and Phiri 2013). The scarcity of water was found to be a major challenge as it compromised farming activities leading to increased food insecurity (Dube and Phiri 2013). Various scholars have emphasised that the people who suffer the most from the impacts of climate change poor people (Alston 2014; Eastin 2018; Chandra et al. 2016). In Kwa-Ngwanase, women fail to access underground water to mitigate their situation because they are too poor to afford drilling boreholes and thus their climate change adaptive capacity remain constrained.

When faced with severe impacts of climate change such as excessive heat and low rainfall that negatively affect farming and agricultural yields, people are encouraged to adopt climate change adaptation strategies (Solomon et al. 2007; Dube and Phiri 2013; Chandra et al. 2016). Previous studies have suggested the implementation of climate smart agriculture

solutions whereby farmers use climate resilient seeds, drip irrigation and other techniques to mitigate the effects of climate change (Chandra et al. 2016). In other areas, the cultivation of small grain crops as well as keeping small livestock has been reported as an adaptation strategy that leads to more resilient livelihoods (Dube and Phiri 2013). Findings from this study suggest that the changing climatic conditions have completely discouraged women from practising agriculture. There is no indication of climate adaptation strategies that are aimed at stabilising or increasing agricultural yields. Small grains have been reported to be needing minimal water and were found to be resilient to heat (Antle et al. 2004). However, the findings of this study suggest that women perceived them as taking too long to grow and that the heat was excessive leading to wilting. In addition, the difficulty in accessing alternative water sources created limited capacity to try other climate smart agricultural solutions like drip irrigation. In the Eastern Cape, Apraku et al. (2018) found that community members used traditional methods to adapt to climate change such as creating pools to trap water and using traditional methods to preserve food. In this study women emphasized that while farming practices were passed from previous generations, no information was passed on how to deal with erratic weather conditions.

What was more common among women in Kwa-Ngwanase were adaptation strategies that were more inclined to livelihood diversification. Previous studies have shown that other ways of adaptation could include livelihood diversification which entails shifting focus from agriculture as the only means of livelihood (Ngigi et al. 2017; Alobo 2015; Chandra et al. 2016). The findings from this study suggest that women opted for livelihood options such as employment, informal trading and harvesting plant material to sell for medicinal purposes. However, given the location of the study area, employment opportunities were limited as result women settled for piecemeal jobs with precarious incomes. Most employment opportunities in South Africa are found in urban centres and this was a challenge for women who still had household obligations to meet. However, government social grants proved to be a great relief and provided protection from hunger and thus improving livelihood resilience. Several studies in South Africa social grant recipients are often compelled to use their income to support many household members (Burns et al. 2005; Pauw and Mncube, 2007; Gutura and Tanga, 2014). However, in the long-term there is a need for interventions that capacitate rural women with skills for climate change adaptation. This includes access to adequate information and improved access to water supply which will allow them to expand their options in climate adaptation and livelihood diversification for more resilient livelihoods.

CONCLUSION

This study suggests that women in Kwa-Ngwanase understand and experience climate change in varied ways. Women's vulnerability to climate change is worsened by poor access to climate information which constrains their capacity to adapt and cope with climate change. They understand and experience changing climatic conditions in the form of excessive heat and unpredictable low rainfall. These calls for interventions that will equip vulnerable populations whose livelihoods are dependent on agriculture and natural resources. It is also important that when such interventions are crafted, women are not excluded as they are equally affected by changing climatic conditions. The study has also shown that there are limited climate change adaptation strategies that are aimed at improving agricultural yield. Therefore, there is a need for interventions that capacitate and equip rural communities with technologies and resources to implement climate smart agricultural solutions. In addition, there is a need for government to prioritise the quality of life of people living in rural areas, particularly women as they often take care of more than one person in the household. While the government social grants have gone a long way in providing relief for households in

Kwa-Ngwanase, there is a need for policies that focus on promoting and encouraging women's self-sustenance. Lastly, there is a need to ensure that the set plans and policies are monitored and evaluated over time to ensure effective implementation and that they reach their intended beneficiaries.

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