

Published 1 February 2026 by the University of KwaZulu-Natal
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Journal of Inclusive cities and Built environment. Vol. 4 Issue 5

How to cite: B.N. Rumutsa and T.D. Malinganiso. 2026. The Effects of Patriarchy on Climate Change Adaptation among Women in Agro-Based Mukangamwi Communal Rural Area in Bikita, Zimbabwe. *Journal of Inclusive cities and Built environment. Vol. 4 Issue 5, Pg 64-75.*

THE EFFECTS OF PATRIARCHY ON CLIMATE CHANGE ADAPTATION AMONG WOMEN IN AGRO-BASED MUKANGAMWI COMMUNAL RURAL AREA IN BIKITA, ZIMBABWE

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Published 1 February 2026

ABSTRACT

Climate change poses significant risks to rural communities dependent on agriculture, with women often disproportionately affected due to entrenched patriarchal systems. This study examines how patriarchy influences climate change adaptation among women in Ward 9 of Mukangamwi Communal Lands in Bikita, Zimbabwe. Using a mixed-methods approach, the research relied on qualitative data collection through field observations and semi-structured interviews with 22 women participants. Quantitative techniques were applied only during data analysis to support the interpretation of results through basic statistical presentation. The study explored the gendered dimensions of climate adaptation, revealing that patriarchal norms limit women's access to land, resources, and decision-making platforms, thereby constraining their ability to respond effectively to climate impacts. Observations revealed that women are often excluded from participating in community meetings, with their involvement limited to supporting roles when sessions are being held, such as cooking and fetching water. In addition, they shoulder the majority of agricultural and household duties, often working considerably longer hours than their male counterparts. These intersecting vulnerabilities also have direct and indirect implications for women's Sexual and Reproductive Health and Rights (SRHR). The findings underscore the need for gender-responsive adaptation strategies that challenge patriarchal barriers in the Mukangamwi Communal area, promote inclusive participation, and integrate local knowledge with scientific approaches to strengthen community resilience, foster equitable climate governance, and ultimately improve Sexual and Reproductive Health and Rights (SRHR).

KEY WORDS Adaptation, Climate Change, Gender Inequality, Patriarchy, Resilience, Rural Zimbabwe, Sustainable Development, Women.

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1. INTRODUCTION

Climate change is one of the most pressing global challenges of the 21st century, posing a direct threat to ecosystems, human health, food systems, water security, and socio-economic development (Brauch *et al.*, 2017). The increased frequency and intensity of extreme weather events, such as droughts, floods, and heatwaves, have disrupted livelihoods across continents, with developing countries bearing the brunt due to limited adaptive capacities (Jha and Dev, 2024). Birkman *et al.* (2022) noted that while climate change is a universal phenomenon, its effects are deeply unequal and often exacerbate existing social, economic, and political inequalities. Within this landscape, gender has emerged as a critical dimension in understanding climate vulnerability and resilience. In addition, the impacts of climate change intersect strongly with Sexual and Reproductive Health and Rights (SRHR). Disruptions caused by extreme weather events often limit access to health facilities, compromise maternal and child health services, and increase vulnerabilities such as gender-based violence, early marriages, and unplanned pregnancies (Schaaf *et al.*, 2021).

Across the African continent, climate change has already begun to reshape patterns of rainfall, increase average temperatures, and alter growing seasons, posing significant threats to food security and water availability (Ofori *et al.*, 2021). According to Christiaensen (2017), families in rural Africa rely more on agriculture compared to other parts of the developing world. The continent's heavy reliance on rain-fed agriculture makes it particularly susceptible to climatic shocks (*ibid.*). Moreover, the consequences of environmental degradation, prolonged droughts, and flooding have placed immense strain on both ecosystems and human systems. However, within African communities, these effects are not experienced homogeneously. Rao *et al.* (2019) opined that gendered power dynamics significantly influence who has access

to resources. This opinion is supported by Mersha and Van Laerhoven (2016), who also iterate that those who cannot make decisions bear the burden of adapting to climate variability. Women, particularly in rural areas, often face structural barriers that limit their ability to respond effectively to climate induced stresses, despite their central role in water management and food production (Christiaensen 2017).

In the Southern African Development Community (SADC) region, climate change has intensified existing socio-economic challenges such as poverty, land degradation, and water scarcity (Nhamo 2019). Rural communities are increasingly experiencing the effects of shifting agro-ecological zones, erratic rainfall, and extreme temperatures, with many households struggling to maintain sustainable livelihoods (*ibid.*). Gender disparities remain pronounced, with women often lacking secure land tenure, access to extension services, credit facilities, and decision-making platforms (Shah 2022). These inequalities reduce their ability to adapt and build resilience, despite their wealth of local environmental knowledge and adaptive practices. Onwutuebe (2019) expressed the same sentiment and is of the notion that the persistent exclusion of women in climate discourse and governance structures reflects deeper patriarchal systems that govern rural societies, promoting women's marginalisation.

Zimbabwe, like many other countries in the SADC region, is highly vulnerable to the adverse effects of climate change. The country has experienced increasing climatic variability over the past decades, characterised by prolonged dry spells, declining rainfall, and recurrent droughts, particularly in its rural and semi-arid regions Frischen *et al.*, 2020). Agriculture, which remains the backbone of the Zimbabwean economy, is largely dependent on rainfall and is dominated by smallholder farmers, the majority of whom are women (Tekwa 2023). Yet, despite their significant contributions to agricultural production and household sustenance, women also continue to face

multiple layers of exclusion. Patriarchal norms deeply embedded in Zimbabwean rural communities limit women's access to land, financial resources, agricultural inputs, and extension services, thereby compromising their adaptive capacity and long-term resilience (Chigwenya and Ndhlovu 2016).

This paper focuses on Ward 9 in the Mukangamwi Communal Lands, a rural community in Zimbabwe's Masvingo Province. It examines how patriarchal structures influence the impacts of climate change and shape women's experiences in their efforts to adapt. By triangulating the themes of climate change, gender, and patriarchy, the study seeks to uncover the gendered dimensions of adaptation and the systemic barriers that hinder effective climate change responses among women. The study also highlights how these challenges intersect with Sexual and Reproductive Health and Rights (SRHR).

2. RESEARCH PROBLEM

In Mukangamwi Communal Lands, male dominance restricts the ability of women to implement effective climate adaptation strategies. Without targeted policies that address disparities, women will continue to face greater risks from climate change, hindering efforts to build equitable and sustainable resilience in rural communities.

3. RESEARCH AIM

The main aim of this study is to explore how patriarchal structures influence climate change adaptation among women in the agro-based Mukangamwi Communal Rural Area of Zimbabwe.

4. RESEARCH OBJECTIVE

To investigate how patriarchal norms influence climate adaptation strategies and resiliency in Mukangamwi Communal lands in Zimbabwe.

5. LITERATURE REVIEW

This section reviews existing literature on the intersection of gender, patriarchy, and climate change adaptation, with a specific focus on rural and agro-based communities. It explores how patriarchal structures shape women's access to resources, participation in decision-making, and overall adaptive capacity in the face of climate change.

6. THEORETICAL FRAMEWORK

The study is underpinned by Patriarchal Bargain Theory and Feminist Political Ecology (FPE) as the theoretical and epistemological framework to better understand the effects of patriarchy on climate change adaptation and resilience among women in the agro-based Mukangamwi Communal Rural Area in Zimbabwe.

6.1. Patriarchal Bargain Theory

This theory, introduced by Deniz Kandiyoti (1988), explains how women strategically navigate patriarchal systems to gain security, protection, and provision in the face of existing gender inequalities. Kandiyoti (2020) further asserts that women in deeply patriarchal societies often conform to traditional gender roles in exchange for stability, which includes access to resources, social approval, and economic support. These bargains, however, reinforce structures that limit women's agency, particularly in the context of climate change adaptation, resilience, and the realisation of their Sexual and Reproductive Health and Rights (SRHR). According to Ambjörnsson (2011), women who rely on male-controlled resources are unable to make independent climate adaptation decisions. Furthermore, patriarchal bargains exclude women from governance and decision-making spaces, leaving their specific vulnerabilities unaddressed in policy discussions.

The theory offers a valuable perspective in understanding how gendered power

dynamics shape climate vulnerabilities. While these bargains provide women with immediate security, they ultimately reinforce a system that limits their autonomy and resilience. Breaking away from these structures is essential to ensure that women have the power to make independent adaptation decisions, secure their livelihoods, and actively participate in shaping climate policies that affect their futures.

6.2. Feminist Political Ecology (FPE) Theory

FPE theory provides a critical lens for understanding how gender, power, and environmental issues intersect, particularly in the context of climate change adaptation and resilience. The multi-scalar framework is not attributed to a single author and was formally introduced in the early 1990s. It argues that environmental challenges are deeply embedded in social structures, where power relations shape access to resources, decision-making, and adaptive capacities.

One of the central arguments of FPE is that gendered vulnerabilities are not just a result of biological differences but are socially constructed through power relations that prioritise male dominance over resources. In many societies, men control land and economic resources, leaving women dependent on male relatives for access to livelihoods. This can be linked to women's ability to adapt to climate change, and the framework validates that their adaptation is thus constrained by laws, traditions, and social norms that limit their decision-making power. For example, while women are often responsible for agricultural work, they rarely own the land they farm. This lack of ownership makes it difficult for them to implement long-term adaptation strategies, such as investing in soil conservation techniques or accessing climate adaptation funds.

The theory further reveals how climate change exacerbates existing gender inequalities and how patriarchal power structures limit women's ability to

adapt. Addressing these challenges requires gender-sensitive policies that ensure women's secure access to land, resources, and decision-making platforms. By recognising women as key players in climate resilience and implementing policies that dismantle structural barriers, societies can move toward more equitable and effective climate adaptation strategies.

6.3. Gendered Impacts of Climate Change

The impacts of climate change at a macro level will extremely affect socio-economic sectors, with gendered consequences intensifying vulnerabilities for women (Brauch *et al.*, 2017). Evidence from terrestrial and marine ecosystems globally highlights how natural systems, critical to livelihoods, are deteriorating due to rising surface temperatures (Li and Thompson 2021). For instance, melting polar ice and permafrost in the Arctic have heightened flooding and coastal salinisation (*ibid.*), disrupting communities where women often bear primary responsibility for water and food provision. These environmental shifts exacerbate women's labour burdens, as they travel further to secure resources amid scarcity.

Climate change is projected to reduce arable land while increasing aridity, droughts, and desertification (Chappell and Agnew 2004). Njuki (2019) reveals that in Africa, women contribute an estimated 60–80% of labour in agricultural activities. Rural women also shoulder a heavier and more multifaceted labour burden compared to men, encompassing not only farm work but also unpaid household duties such as food preparation and gathering fuel wood and water, tasks that are intensified by environmental pressures (Njuki *et al.*, 2019). This unbalanced responsibility renders women acutely vulnerable to climate induced resource scarcity, as droughts, deforestation, or shifting rainfall patterns exacerbate their daily struggles to meet household needs. Declining crop yields and water scarcity amplify food insecurity,

deepening women's caregiving roles as they struggle to nourish households (Nhemachena 2020; Jha and Dev 2024). Simultaneously, extreme weather events like floods and droughts destabilise economies, heightening risks of displacement and poverty for women, who are overrepresented among the world's poor (Birkmann et al. 2022). Meeting the 70% increase in food production required by 2050, as mentioned in Dawson (2016), hinges on addressing gendered inequalities in land access, technology, and decision-making.

Biodiversity loss, driven by rising temperatures, further undermines women's resilience. Species and ecosystem declines (Schneider et al. 2007) disrupt traditional practices such as foraging for medicinal plants, a role often managed by women. Projections suggest 20–30% of species could vanish if temperatures rise by 1.5–2.5°C (Midgley et al. 2002), eroding natural resources women rely on for nutrition, income, and cultural practices. Thuiller et al. (2006) warn of 50% biodiversity loss by 2100, which could destabilise food webs and medicinal systems, burdening women with caregiving and survival responsibilities in degraded environments.

6.4. Understanding Patriarchal Norms

Patriarchy is a deeply rooted social system wherein men predominantly occupy positions of power and control in both public and private spheres (Sultana 2012). Sultana (2012) highlights that these include roles in political leadership, economic authority, religious instruction, property ownership, and decision-making at the household and community levels. In a patriarchal system, societal values, institutions, and norms are constructed in ways that uphold male dominance while systematically marginalising women and other gender minorities (Murray, 1990; Hooks, 2014).

The term "patriarchy" originates from the Greek word *patriarkhēs*, meaning "rule

of the father," which historically reflects how families and societies have been structured around paternal authority. Zeeshan and Aliefendioğlu (2024) disclose that patriarchy manifests in everyday life through unequal access to resources, restricted mobility, limited decision-making power for women, and reinforcement of gendered divisions of labour.

Murray (1990) conceived patriarchy as a system that is both private and public. The term "private patriarchy" describes male domination in the home, which is frequently typified by women performing unpaid domestic work, having control over reproduction, and having the final say in family decisions. In contrast, public patriarchy is observable in institutional contexts, such as governments, workplaces, and places of worship, where men predominate in leadership positions and influence laws in ways that support gender inequality. According to feminist scholars like Hooks (2014), patriarchy is a belief system that teaches men and women that male dominance is normal and acceptable, rather than just a system of men holding power. Internalised from a young age, this ideology is strengthened by socialisation, education, the media, religion, and the law.

7. CULTURAL, RELIGIOUS, AND INSTITUTIONAL REINFORCEMENT OF PATRIARCHY

In many societies, culture and religion have been key vehicles through which patriarchal norms are legitimised and sustained (Hooks 2014). Traditional gender roles often assign women to caregiving, domestic tasks, and reproductive responsibilities, while men are expected to be providers, protectors, and decision-makers (Kabeer, 1999). These expectations, although rooted in long-standing cultural values and moral guidance, can limit women's autonomy and justify their exclusion from leadership and public life.

Religious texts have also historically

played a central role in shaping gender roles. For instance, in the Christian tradition, the Bible in Ephesians 5:23 states, "For the husband is the head of the wife as Christ is the head of the church, his body, of which he is the Saviour" (New International Version). The authors believe that this verse was intended to promote mutual respect and responsibility in marriage, emphasising a model of loving leadership and partnership. However, over time, certain interpretations and applications of this and similar verses have been used to reinforce male dominance and female subordination in both private and public domains, as also supported by Phiri & Nadar (2009). This has, in some cases, led to systemic disadvantages for women, particularly when male leadership is no longer accompanied by the protective and supportive responsibilities originally emphasised.

In the modern context, especially in low-income and rural settings, socioeconomic changes have strained traditional gender roles. Many men, due to limited employment opportunities, are unable to fulfil the expected role of sole breadwinners (Akanle 2018). As a result, women have increasingly taken up economic responsibilities, often without corresponding shifts in power or recognition in decision-making structures. According to Akanle (2018), this mismatch has created tensions and further entrenched gender-based inequalities. Moreso, as women remain underrepresented in public leadership and land governance, even while bearing significant household and community burdens.

Globally, patriarchal norms have been institutionalised over centuries. In colonial Africa, systems of governance reinforced male dominance by formalising male land ownership and excluding women from decision-making platforms (Makoni et al., 2023). For example, the colonial administration in Zimbabwe centralised land distribution to male heads of households, thereby marginalising women from land rights. These systems not only entrenched

patriarchal values but also became embedded in post-colonial legal and governance frameworks (ibid).

Legal systems, even when outwardly neutral, often reflect these patriarchal assumptions. In many customary law contexts across Africa, including Zimbabwe, women are still treated as legal minors, unable to inherit property or represent their households in communal matters (Makoni et al., 2023). Similarly, economic institutions frequently undervalue women's contributions, particularly in the informal sector and subsistence farming, further reinforcing gender-based disparities in income and access to resources (FAO, 2021).

Moreover, education systems, which ideally serve as tools for empowerment and social mobility, often reproduce gender biases. In rural settings, girls are less likely to attend or complete school, particularly in the face of economic hardship, early marriage, or pregnancy. Even when girls attend school, societal expectations often steer them towards "feminine" subjects, limiting their participation in science, technology, engineering, and agriculture—fields critical for building climate resilience and economic independence (UNESCO, 2022). This further limits their opportunities to contribute meaningfully to adaptation strategies and decision making in their communities.

8. CONSEQUENCES OF PATRIARCHAL NORMS ON CLIMATE CHANGE ADAPTATION

Patriarchal norms deeply influence the way climate change impacts women, particularly in communities where gender roles are rigidly defined. These norms often limit women's access to resources, decision-making processes, as mentioned by Makoni et al. (2023) and Zeeshan and Aliefendioğlu (2024). This also excludes them from opportunities for capacity building, all of which are critical for effective climate change adaptation. Despite their central role in coping with climate-related stresses, women in some

communities are still being excluded from decision-making processes at local, national, and international levels. Patriarchal norms render women less visible in policy discussions, which are typically dominated by male leaders or representatives. This exclusion significantly undermines women's coping mechanisms, as policies and adaptation strategies are often designed without considering their specific needs, knowledge, and expertise (Djoudi et al., 2016).

In many societies, women are responsible for household tasks such as water collection, food production, and caregiving. These roles not only expose women to the immediate effects of climate change, such as droughts, flooding, and crop failure, but also limit their ability to diversify livelihoods or access adaptive technologies. For instance, when water sources become scarce due to changing rainfall patterns, women bear the burden of finding and transporting water, a task that becomes more physically demanding and time-consuming as climate stressors intensify (Agarwal, 2010; Nhemachena, 2020). Similarly, food insecurity, exacerbated by changing weather patterns, affects women, who are often the primary caregivers and food providers in their households (Kabeer, 1999).

Furthermore, women's limited access to education and financial resources further hinders their ability to effectively adapt to climate change. For example, without access to education or training in sustainable agricultural practices or climate-resilient technologies, women struggle to implement long-term adaptation strategies (Kabeer, 2012). Onwutuebe (2019) corroborated that patriarchal structures thus create a cycle of disadvantage, where women's vulnerability to climate change is compounded by their marginalisation from the very processes that could enhance their adaptive capacity. As a result, the consequences of patriarchal norms in the context of climate change are far-reaching. Women are not only disproportionately affected by climate

stresses, but they also face institutional and social barriers that prevent them from accessing the resources and opportunities necessary for effective adaptation (Phiri and Nadar 2009). This limits their ability to cope with climate change, not just in the short term, but in the long term as well, creating a cycle of vulnerability that is difficult to break. Addressing these gender disparities in climate change adaptation is critical, as empowering women and including them in decision-making processes can significantly enhance the resilience of communities as a whole (Bryan et al., 2024).

One of the more subtle but equally damaging ways that patriarchal norms hinder climate resilience is through the restriction of women's access to knowledge systems, training platforms, and adaptive technologies. Knowledge is a critical component of effective climate adaptation—whether it's information about early warning systems, sustainable farming techniques, or financial literacy related to crop insurance or disaster preparedness. However, women, especially in patriarchal and rural settings, are systematically excluded from such knowledge networks due to socio-cultural barriers, mobility constraints, and institutional neglect (Adeola et al., 2023).

In South Asia, for example, the intersection of gender, caste, and class has created multilayered vulnerabilities for women in the context of climate adaptation. In Bangladesh and India, it has been well-documented that women's participation in community-based disaster preparedness or climate training initiatives is often hindered by cultural norms that restrict their public presence and mobility (Rao et al., 2020). Rao further enlightens that in many rural villages, women are expected to remain within the domestic sphere, limiting their ability to attend village meetings, workshops, or training sessions held at community centres, spaces often dominated by men. As a result, women are less likely to receive early warnings about floods, cyclones, or

other environmental risks, and are often the last to evacuate or prepare (Cannon, 2002).

The exclusion of women from agricultural extension services which are often the main conduits of climate-smart practices is another key example of patriarchal norms curtailing adaptive capacity. Agricultural extension agents are typically male, and their outreach is primarily directed at male farmers, who are seen as the “heads of households” and main landowners (Mehtar *et al.*, 2016). This approach ignores the reality that women make up a significant proportion of the agricultural workforce in most developing countries, and are often responsible for the cultivation of food crops, livestock care, and household food security (FAO, 2021).

In many cases, even when women are present during training or outreach sessions, the format, content, and delivery are not tailored to their needs, literacy levels, or time constraints. Women’s domestic workloads often prevent them from attending long or distant sessions, and sessions conducted in male-dominated environments may discourage open participation due to fear of social sanction or embarrassment (Carr & Thompson, 2014). This silencing of women in knowledge exchange platforms ultimately leads to a gender gap in climate resilience and innovation adoption.

In addition to institutional barriers, the internalisation of patriarchal ideologies can also reduce women’s participation in adaptive strategies. In deeply patriarchal contexts, women themselves may not view their contributions or knowledge as valuable, which inhibits their engagement in adaptation planning or public discourse. This self-censorship, a product of generations of socialisation, diminishes the community’s overall adaptive potential by sidelining women’s experiential knowledge of the environment and their nuanced understanding of resource management (Rao *et al.*, 2020).

9. METHODOLOGY

This study adopted a mixed-methods approach by combining qualitative and quantitative elements. Qualitative methods were used for data collection, specifically through in-depth interviews with 22 women in Mukangamwi Communal Lands, to gather rich, contextual insights into how patriarchal norms influence climate adaptation strategies and resiliency. The women were selected using the snowballing technique, as the researchers aimed to interview women engaged in vegetable cultivation. Field observations further supported the qualitative findings. While no quantitative methods were used during data collection, quantitative techniques were applied during data analysis to support the interpretation of findings through basic statistical presentations. This approach ensured a comprehensive understanding of the research objective by linking lived experiences to measurable outcomes, highlighting the structural barriers women face in adapting to climate change. The data was collected from November 2024 to January 2025, specifically in Ward 9 Mukangamwi Communal Lands in Bikita, Zimbabwe.

10. ETHICAL CONSIDERATIONS

Participants were fully informed about the purpose of the study, selection criteria, and their rights through a letter of informed consent. Participation was voluntary, with the option to withdraw at any time. Confidentiality and anonymity were strictly maintained, and all data were accurately reported and properly referenced.

11. RESULTS AND DISCUSSION

This section presents and interprets the findings of the study on how patriarchal norms influence women’s climate change adaptation strategies in Ward 9, Mukangamwi Communal Lands. The results are drawn from in-depth interviews and field observations, with supporting analysis used to highlight key patterns. The discussion integrates these findings with existing literature to explore the gendered dimensions of climate vulnerability and adaptation, focusing on access to resources, decision-making, and the division of labour.

The results of the study reveal that polygamous family setups in Mukangamwi Village are common. Of the 22 respondents, 4 indicated that they were in polygamous marriages, while 12 were in monogamous marriages, and 6 were single. Of the 22 women, 16 were married, and only 6 had no spouses.

Grounded on the data collected in Mukangamwi, the authors consider that in the face of climate change, patriarchal bargains manifest in ways that shape gendered vulnerabilities. Women with husbands are generally less vulnerable than single women because their provisions are guaranteed, and they do not have to struggle as much to secure resources for survival. Married women in both polygamous and monogamous families rely on their husbands for land, food, and financial security, which provides a layer of protection against climate induced shocks such as droughts and food shortages. However, this reliance also means that their ability to make independent adaptation choices is restricted, as articulated by Ambjörnsson (2011). When crises occur, women who lack decision-making power must depend on their husbands’ choices, which may not always prioritise sustainable climate adaptation strategies.

In Mukangamwi, it is the man who has the decision-making power in both polygamous and monogamous households as well as in the

communities, and ultimately, climate adaptation strategies. For example, they decide which crops to plant, when to plant, and how to spend agricultural earnings. Women are expected to be submissive and not challenge what the household head has decided.

It can be deduced that women, despite their intimate knowledge of daily farming realities, are rarely consulted. One woman lamented that;

I am never allowed to decide what we should buy; the man, as the head of the house, decides on everything, and I just have to dance to his tune, even when the decision is not the best.

A poignant story emerged from another female respondent who indicated that she suggested her husband plant drought-resistant small grains instead of maize in the 2023 rain season, but was dismissed, and that year the area was affected by a drought. This illustrates the core of Patriarchal Bargain Theory: women in Mukangamwi have modulated their contributions within permissible boundaries, often deferring to male authority to preserve household harmony. Yet this deferment can be maladaptive, especially as climate shocks demand rapid behavioural shifts and innovation. The very hierarchies that have historically stabilised family roles now inhibit resilience.

Leadership roles in Mukangamwi are overwhelmingly male. Women are expected to serve in supportive roles, and speaking in public forums can be seen as a challenge to male authority. As one elder remarked,

"A woman who talks too much is not respected. Even her husband will be ashamed."

Such attitudes discourage women from asserting themselves in public decision-making spaces. This internalised patriarchy is a core component of the patriarchal bargain: silence and subservience are rewarded with social acceptance and perceived stability. FPE critiques this silence as not natural but

produced through generations of cultural conditioning and exclusion. The result is a community in which women know how best to adapt but are unable to shape the policies or practices that govern adaptation.

The findings paradoxically reveal that, despite women being at the forefront of managing household and environmental stresses, often working hands-on for extended hours while men retreat to socialise, their knowledge and daily experiences are undervalued. This reflects a disconnect between the critical roles women play in sustaining households and the recognition of their contributions. In the Mukangamwi communal lands, as in many rural settings across Zimbabwe, women possess rich indigenous knowledge systems that support local adaptation, and this is supported by Adeola *et al.* (2023). This includes expertise in food preservation techniques (e.g., drying vegetables and grains), water harvesting, soil fertility management, and natural resource stewardship (*ibid*). Unfortunately, these contributions are frequently overlooked due to such gendered hierarchies entrenched in both traditional leadership structures and local development committees.

The researchers also observed that community meetings are often male-dominated, with women either excluded from participation or silenced through cultural expectations of deference and submission. One of the respondents cited that;

As men hold meetings, we are supposed to be cooking and serving them; we are not even allowed to sit where men sit to discuss.

Education and capacity-building initiatives are vital for empowering women to take control of their climate adaptation needs. Training programs that equip women with skills in sustainable agriculture, water conservation, and renewable energy can enhance their autonomy and reduce dependence on patriarchal structures for survival. This

aligns with Carr & Thompson (2014), who noted that women's domestic responsibilities often prevent them from attending lengthy or distant sessions. Additionally, sessions held in male-dominated spaces may deter women from participating openly due to concerns about social sanction or embarrassment.

The absence of women from meetings, workshops, and decision-making platforms not only reflects deep gender inequality but also undermines community resilience, as highlighted by Chigwenya and Ndhlovu (2016). The literature review reveals that numerous scholars emphasise the importance of including women's perspectives in climate adaptation strategies to enhance interventions' sustainability, relevance, and local ownership (Adeola *et al.*, 2023). However, this principle is not being applied in Mukangamwi, where women's voices remain excluded mainly from key climate decision-making processes.

Institutional language around "household heads" frequently excludes female-headed households or frames them as deviations from the norm. This structural blindness reinforces gendered exclusions. FPE urges a rethinking of institutions not as neutral but as deeply political spaces where power is contested and reproduced. Integrating women's voices requires inviting them to meetings and reshaping the structures that define participation.

12. WOMEN'S VULNERABILITIES IN MUKANGAMWI COMMUNAL LANDS

Across most responses, women emerged as the most vulnerable group in the community. Gender-based disparities significantly contribute to this vulnerability, particularly in female-headed households, which are more exposed to the impacts of climate change. Limited access to education and information further constrains women's ability to adapt effectively, a situation compounded by cultural beliefs that marginalise women and deem them

less important in societal structures. In Mukangamwi, vulnerability is also widespread due to heavy dependence on rapidly depleting natural resources.

Rural communities have been among the hardest hit by economic hardships, with many households lacking formal employment and living below the poverty line. Poor soil quality further undermines agricultural productivity, increasing food insecurity and vulnerability. Orphans face a unique set of challenges, often losing access to family land due to intra-family disputes, leaving them without a stable means of livelihood. Similarly, widows experience land dispossession and social exclusion as a result of patriarchal customs, which prevent them from fully participating in community life.

Both widows and orphans are frequently excluded from knowledge-sharing platforms and community-based adaptation initiatives, leaving them ill-equipped to cope with the changing climate. The community's limited economic opportunities and lack of institutional support, particularly from government structures, further exacerbate their vulnerability. Prolonged dry spells and increasingly arid conditions have intensified climate impacts, leaving the already marginalised population in an even more precarious position. The interplay of social, cultural, political, and economic factors collectively heightens the community's exposure to climate-related risks.

Land and Financial Resource Rights Among Women

It was also noted that the customary land tenure governs Mukangamwi Communal Lands and is male-biased, allocating land rights through patrilineal inheritance systems. In the area, men are seen as the legitimate landholders, while women are expected to access land through their fathers, husbands, or male relatives. This echoes the conceptual framework of the Patriarchal Bargain Theory, which posits that women, operating under male-dominated systems, often accept subservient

roles in exchange for access to certain privileges or protections. The notion also converges with Machingura (2021), who discloses that such an arrangement severely limits the autonomy of widows, divorced women, and unmarried women, who often find themselves excluded from land allocation processes controlled by traditional authorities, such as village heads and chiefs.

In Mukangamwi, land and financial resource ownership are both fundamentally gendered, shaped by a matrix of cultural, historical, and institutional forces that render women disadvantaged. Land, as a critical resource for agricultural productivity and climate adaptation, remains firmly in the hands of men. The data collected from the study reflects this deeply entrenched gender inequality. The majority of the female respondents indicated that they did not own the land they cultivated. Instead, they accessed land through male relatives, fathers, brothers, husbands, or only upon widowhood when one has male children, and even then, access remains tenuous.

8 women indicated that they do not own land, while 14 own land. Among the 14, most indicated that they owned the land through their husbands, relatives, or children. In Mukangamwi, women comply with male land ownership as a means of maintaining their place within the household economy. However, this bargain becomes increasingly precarious in the face of climate change, where decisions over land use and adaptive strategies must be swift, flexible, and innovative—traits hampered by women's insecure tenure.

The significance of having a male child is also a crucial aspect of patriarchal bargains in Mukangamwi, particularly in land inheritance and climate resilience. In many societies, land is traditionally passed down through the male lineage, ensuring that the family name and ownership remain intact. Women who bear only daughters face a precarious future, as male relatives can take their land to maintain the family surname and

uphold patriarchal inheritance systems. Without male heirs, women risk losing access to land and resources, making them even more vulnerable to climate-related disasters. This uncertainty forces many women to comply with patriarchal norms, ensuring they align with societal expectations in hopes of securing long-term provision through their husbands or sons.

Financial resources are similarly restricted. Most women in Mukangamwi lack formal collateral and are excluded from mainstream credit systems or rotating savings and credit associations (ROSCAs), commonly known locally as *mikando*. This exclusion not only limits women's ability to invest in adaptation strategies but also silences their participation in climate-resilient development. Feminist Political Ecology (FPE) theory contextualises this marginalisation within a broader critique of how political and economic institutions reinforce gendered access to resources. FPE challenges the assumption that women are simply passive victims of environmental change, highlighting instead the institutional processes that actively produce and sustain their vulnerability.

Such insecure land tenure in Mukangamwi prevents women from making long-term investments in climate adaptation strategies, such as agroforestry, contour ploughing, or the establishment of irrigation systems. Without assurance of land control, the women are disincentivised from engaging in climate-resilient farming practices that require labour and capital. This dynamic reflects a broader pattern of structural disempowerment, where women's adaptation strategies to climate risks are jeopardised by their exclusion from formal and informal systems of resource governance.

13. TRADITIONAL GENDER ROLES IN RURAL COMMUNITIES

Gender roles in Mukangamwi are deeply rooted in traditional norms that assign reproductive, productive, and community responsibilities along gender lines. Kandiyoti (2020) supports this observation, noting that women bear the brunt of domestic and subsistence tasks such as water collection, food preparation, childrearing, and agricultural labour, roles that intensify under climate induced stress. These insights align with field observations in Mukangamwi, where rural women are overburdened with caregiving and household responsibilities, particularly during periods of environmental disruption. Tasks such as fetching water, collecting firewood, preparing meals, and caring for children and the sick are highly feminised. During droughts or periods of water scarcity, women often travel long distances to secure water, frequently putting their health and safety at risk (Nhemachena, 2020). These risks can have indirect implications for their Sexual and Reproductive Health and Rights (SRHR), particularly when women are pregnant, menstruating, or unable to protect themselves, making them more vulnerable to abuse, including the risk of sexual violence and rape.

Declining water levels and the premature drying up of wells before the onset of the next rainy season highlight the increasing unreliability of traditional water sources. Such trends are consistent with observed climate change impacts, particularly prolonged dry spells and erratic rainfall patterns, which are exacerbating water insecurity in vulnerable rural communities. It was noted that women often work longer hours than men, rising early to fetch water and working fields until dusk. The dual demands of reproductive and productive labour leave women with little time for participating in governance or training programs.

As one woman explained, “We do the gardening, we cook, we walk long distances for water, but when they call meetings, they don’t think we should be there.”

Despite systemic exclusions, women in Mukangamwi are central to household and community-level climate adaptation. The study found that 85% of households practised vegetable gardening, with women leading these initiatives. This is in tandem with Njuki (2019), who reveals that in Africa, women contribute an estimated 60–80% of labour in agricultural activities. These gardens, often located near boreholes or wetlands, provided essential nutritional and economic support during droughts. The following plates 1 and 2 show the gardens being manned by women in Mukangamwi.



Plate 1: Chomolia vegetable grown



Plate 2: Beans

Photographs showing vegetables grown in Mukangamwi Communal lands

The thriving vegetable gardens in Mukangamwi are a testament to the gardeners’ expertise and practical knowledge. Researchers observed that women are primarily responsible for watering these gardens. As highlighted by Agarwal (2010) and Nhemachena (2020), when water sources become scarce, it is women who shoulder the burden of sourcing and transporting water. Beyond irrigation, women are also implementing climate change adaptation strategies such as mulching to retain soil moisture and suppress weeds, as well as repurposing plastic water bottles to simulate drip irrigation systems—a low-cost, water-efficient technique. These practices reflect a deep, context-specific ecological knowledge, acquired through daily interaction with their environment rather than through formal education. However, despite their critical role in climate resilience at the grassroots level, women remain underrepresented

in formal climate governance in Mukangamwi. This exclusion is not due to a lack of interest or capability, but rather to persistent socio-cultural and institutional barriers that limit their participation in decision-making spaces.

14. CONCLUSION

In conclusion, the study highlights that patriarchy, manifested through cultural norms, institutional practices, and structural inequalities, significantly limits women's ability to adapt to climate change in the Mukangamwi Communal Area. Efforts to build resilient communities must dismantle these gendered barriers and intentionally centre women's voices, knowledge, and leadership in climate governance. Recognising and supporting women's adaptive strategies, along with safeguarding their Sexual and Reproductive Health and Rights (SRHR), is not only essential for equity but also critical for achieving sustainable and inclusive climate resilience.

15. RECOMMENDATIONS

To address these challenges and promote more equitable climate resilience, the following recommendations are proposed. These suggestions aim to dismantle structural inequalities, empower women, and integrate essential considerations such as Sexual and Reproductive Health and Rights (SRHR) into climate adaptation frameworks. By prioritising these areas, it is possible to enhance women's agency and ensure a more inclusive approach to climate resilience.

- Promote Gender-Responsive Climate Policies:
- National and local climate adaptation frameworks should be designed to be gender-responsive, ensuring that women's voices, roles, and needs are actively included in decision-making processes. This includes incorporating women's leadership in climate governance and acknowledging their unique contributions to climate resilience.

- To dismantle patriarchy in a community, there is a need for a multifaceted approach that combines education, policy, and cultural transformation. Communities should prioritise awareness and education programmes that challenge gender stereotypes from an early age, ensuring that both men and women are sensitised to equality and mutual respect.
- Empower Women with Access to Land, Resources, and Financial Services:
- To enhance women's capacity to adapt to climate change, policies should ensure equal access to land ownership and financial resources. This will allow women to invest in sustainable agricultural practices and climate resilience strategies, addressing the gendered barriers that limit their economic agency.
- Integrate SRHR into Climate Adaptation Strategies:
- Climate adaptation programs must incorporate SRHR considerations, ensuring that women's health, safety, and rights are protected during climate induced stress. This includes addressing issues like maternal health, gender-based violence, and ensuring women's access to reproductive health services in times of crisis.

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