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Beacons of Hope: A Scoping Review of Women's Role in Building Resilience to Climate Change in Kenya's Semi-arid Regions

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Abstract

This paper reviews the role of women in building resilience to climate change in Kenya's 22 semi-arid regions. Our analysis is based on qualitative thematic analysis of traditional narrative review and Arksey and O'Malley's five-step approach used in scoping reviews. Our findings reveal that women are at the forefront of resilience to climate change by being developers and adapters of local adaptation strategies, drivers and agents of resilience, stewards of local and indigenous knowledge, and drivers of transformative change in building resilience in semi-arid regions. Our findings show that women are innovative and resilient at the household and community levels, leveraging social networks, diversified livelihoods, and indigenous knowledge. We identify individual, community, and institutional strategies as components that determine women's resilience to climate change, and social and structural barriers as constraints on it. Additionally, constraints such as inequitable access to resources, gender norms, limited participation in decision-making, and inadequate service provision remain. This study contributes to an understanding of women's roles in enhancing resilience to climate change in semi-arid regions, providing insights into gendered resilience policy and governance that support and strengthen women's contributions to climate adaptation.

Key words: *Resilience; Constraints; Kenya; Policy; Role of women.*

1.0 Background

The current and future trajectories of women's roles in climate resilience in semi-arid regions are of significant importance not only in Kenya but across the globe. They depend on rainfed agriculture and limited adaptive capacity, while policies overlook women's role (Bryan et al., 2024; FAO, 2024; Rao et al., 2019). These extreme climate events increase women's vulnerability and constrain their role in climate resilience building due to limited access to land, inadequate skills, lack of capital, limited access to emerging technologies and access to markets, marginalisation in decision-making processes, limited education, and poverty (Lawson et al., 2020; Atela et al., 2018; Yadav & Lal, 2018). This affects women's mental health and constrains their resilience to climate change (Anjum & Aziz, 2025).

Furthermore, policies aimed at addressing the gendered vulnerabilities have failed to recognise the role women play, the interplay of relations and identities. This is because women's voices are overlooked in governance and policy formulation processes (Ragasa et al., 2023; Ragasa et al., 2022). According to the UN (2023) report, the vulnerability to climate change in semi-arid regions has been compounded by political, social, and economic factors that exacerbate its impacts in countries with weak governance structures. The IPCC (2022) report terms vulnerability to climate change as being intensified by inequality and segregation related to gender, inadequate sources of income and ethnicity.

Therefore, mapping the role of women in semi-arid regions of Kenya through a scoping review is not only crucial for understanding vulnerabilities and impacts of climate change, but also for identifying

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the role women play in enhancing resilience to climate change and food security at the household and community level. In addition, various studies underscore that socioeconomic disadvantage, limited access to land use, exclusion from decision-making, and limited skills and education exacerbate women's vulnerability, while their anticipatory resilient roles to deal with climate change are inadequately documented (Yadav & Lal, 2018). Although there is a growing body of empirical studies on resilience in Sub-Saharan Africa that call for the integration of people-centred social protection policies into their climate action activities, social networks, and support farmer-led projects such as irrigation in order to enhance the resilience of those most affected by the adverse effects of climate change (Shibesh & Nagabhatia, 2025; McLean, 2024; Tamasiga et al., 2024; McCarthy & Winters, 2023; Tenzing, 2020). Gaps in women's roles in resilience to climate change remain, as policies still overlook women's roles and focus on vulnerability, power dynamics, gender constructs, and decision-making power and document women's roles in terms of age, marital and social status rather than resilience contribution (FAO, 2024; Bryan et al., 2024; Lawson et al., 2020; Rao et al., 2019). Knowledge and data gaps also exist regarding the indigenous knowledge women have on how to preserve seeds for the next season and water management, and on limited studies with data that synthesise women's role in resilience to climate change are scarce (UN, 2023; Ciocco et al., 2024). In Kenya's semi-arid regions, there exist research and practice gaps as studies focus on and examine adaptation strategies, climate impacts in particular domains such as livelihoods in specific counties, without in-depth systematic mapping of women's resilience (Machio et al., 2025; Munyaka et al., 2025; Ogutu et al., 2025; Liru & Heinecken, 2021). The aim of this study, therefore, is to address these gaps.

In addition, mapping women's resilience to climate change through a scoping review is beneficial, as it reveals the adaptation practices women use, helps identify and document gendered vulnerabilities and challenges, and enhances targeting for effective interventions. This study, therefore, uses a traditional narrative review approach and Arksey and O'Malley's (2005) five-step scoping review approach, which involves identifying research questions and relevant studies, selection, data mapping, and results. It addresses two questions: How resilient are women in Kenya's semi-arid regions to extreme climatic events induced by climate change? What barriers do they face in enhancing resilience to the impacts of climate change?

This study contributes to the growing body of literature by mapping and documenting the role of women in building resilience to climate change in semi-arid regions. Specifically, it differs from other studies in various ways. First, most extant studies focus on the vulnerability and impacts of climate change. This study thus uses a scoping review to map the role of women in building resilience to climate change in semi-arid regions, through qualitative analysis of themes that discuss women's roles. Second, the documented roles underscore the need for policies that integrate women's roles in building resilience into adaptation efforts to enhance resilience and food security in Kenya's semi-arid regions and beyond. Generally, the findings of this study provide insights into existing and emerging policies that focus on women's roles in building resilience.

This study is structured as follows. Part two presents the literature review and the theoretical framework that grounds the study. Part three discusses the methods used to achieve this study's objective. Part four presents and discusses the results, while part five concludes.

2.0 Literature Review

Studies have shown that resilience to crises is achieved when an individual, household, or community is driven by characteristics, such as intellect, hardiness, hope, positive psychology, autonomy, access to information, family support and social support (Chongwo et al., 2025; Holmes, 2017; Csikszentmihalyi et al., 2014; Prince-Embury, 2014; Luthans et al., 2007; Connor & Davidson, 2003; McCubbin & McCubbin, 1996; Hawley & De Haan, 1996; Walsh, 1996). Extreme climate events are the modern crises that require resilience. The most affected are the communities living in semi-arid regions. According to Kipkemboi et al. (2025), resilience is the ability of households and communities to cope, bounce back, adapt to new strategies, manage natural resources, and transform systems to reduce risks. In this study, therefore, resilience refers to women's capacity to cope with climate-related events in Kenya's semi-arid regions. It is their ability to adapt to the adverse effects of climate change as described by Masten (2001). Recent studies have demonstrated that women are already coping with climate change by diversifying crops and using local and indigenous knowledge at the household and community levels (Flores et al., 2025;

Nyahunda & Tirivangasi, 2022; Walker et al., 2022; Yadav & Lal, 2018). This, therefore, explains that when women are equipped with skills and knowledge and are involved in actions that enhance their resilience to climate change.

The role of women in building resilience in semi-arid regions has either been largely overlooked or given little attention in empirical investigation. They have limited access to resources such as land, credit, water, agricultural extension services and are involved in decision-making (FAO, 2024; Bryan et al., 2024; Kosec et al., 2023; Clayton et al., 2023; Amoak et al., 2022; Njuki et al., 2022). However, compared with men, women are disproportionately affected in the following areas: food production, health, food and nutrition, water and energy, migration, climate-related disasters such as droughts and floods, and conflicts (Awiti, 2022).

2.1 Constraints to Women's Resilience to Climate Change

Studies have demonstrated that lack of involving women in climate policies and the inability of such policies to address gender inequalities, land tenure, and patriarchal culture (Bryan et al., 2024; Dasgupta et al., 2024; Mulwa et al., 2024; Mfitumukiza et al., 2020), the inability of most climate change policies to address gender inequalities hinders women's resilience against climate change. While there is a link between the adverse impacts of climate change and risks, such as violence against women, there is no integration of climate policies in insecure places, such as Baragoi, for instance, where the impacts of climate change have not yet been integrated into the analysis of women's peace dynamics (Zaid, 2024; Fruttero et al., 2023).

2.2 Kenyan Context

The drivers of food insecurity in Kenya, according to an analysis conducted by IPC (2021), are erratic rainfall, poor crop production, and unpredictable food and livestock prices, which are determined by demand and drought intensity. The most affected are women, children, those with special needs and older persons (IPC, 2021). The 22 semi-arid counties (highlighted in yellow and beige colours): Lamu, Kilifi, Kitui, Kwale, Taita Taveta, Kajiado, Makueni, Kitui, Machakos, Embu, Narok, Tharakanithi, Meru, Nyeri, Kiambu, Nakuru, Migori, Homabay, Laikipia, Baringo, Elgeyo Marakwet, and West Pokot, are distributed as shown in Fig. 1 below, with varying levels of aridity and high temperatures, and average annual rainfall ranging from 150 to 850 mm (RoK, 2018). The communities in these areas practice agropastoral farming.

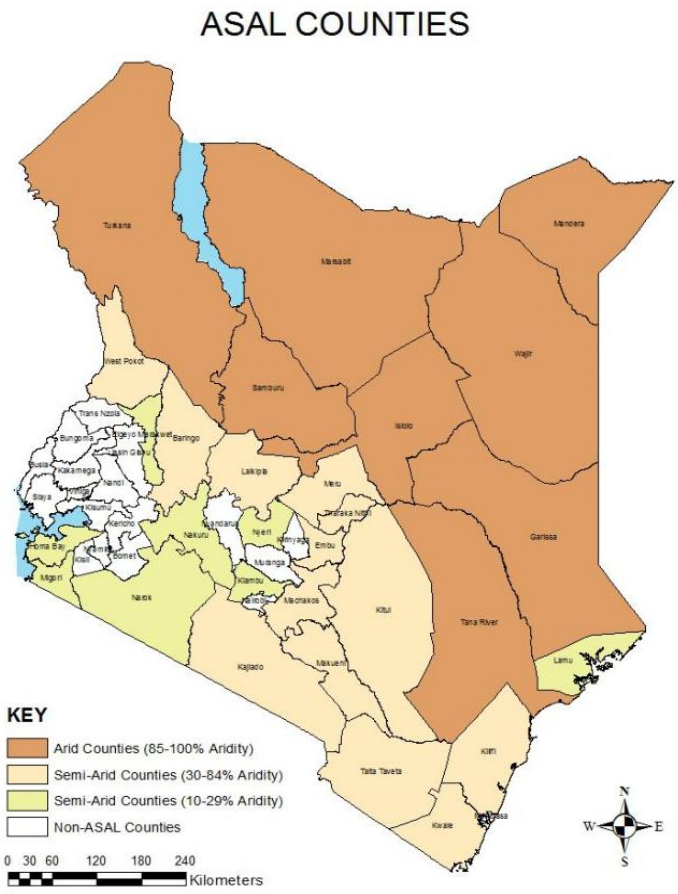


Figure 1: Asal counties in Kenya. Source: https://www.asalrd.go.ke/

Moreover, Kenyan semi-arid studies document climate-induced shocks in West Pokot and Kakamega (not semi-arid) counties (Munyaka et al., 2025; Liru & Heinecken, 2021). While other studies have documented evidence on adaptation in food security, livestock, water and soil conservation, there is a lack of structured mapping of women's roles and contributions in building resilience across semi-arid counties (Machio et al., 2025; Ogutu et al., 2025). For instance, in counties including Machakos, West Pokot, Makueni, Baringo, and Kitui, studies show that households still depend on rain-fed food production and livestock keeping as a source of livelihood, but have undocumented evidence of the role of women in building resilience (WFP,

2025; Kalele et al., 2024; GoK & FAO, 2024; Liru & Heinecken, 2021; MoALFC, 2021).

However, droughts and floods have exacerbated inequalities between women and men, with girls dropping out of school (Takeshima et al., 2022; Chestit & Rotich, 2025; Kosec et al., 2023). The most affected are women and girls. During drought and when water is scarce, they walk for long hours to fetch water that is used for both domestic and livestock use, risking themselves from dehydration, heat stroke and sexual abuse and violence (Chestit & Rotich, 2025; Zaid, 2024). The women also suffer from nutrient deficiencies due to inadequate nutritional food.

2.3 Theoretical Framework

This study is grounded on Garmezy's (1991) theory of resiliency. According to Garmezy (1991), resilience is determined by three factors: individual characteristics (a person's intelligence and character), family support during difficult times, and community and other external structures (such as government and other institutions). Masten (2001) defined resiliency in a more specific manner when he described it as "a class of phenomena characterised by good outcomes despite serious threats to adaptation or development". The three factors of Garmezy's (1991) theory, which include individual characteristics, entail the person's ability (intelligence) to critically examine the situation and devise ways (adaptation strategies) of countering the challenge (adverse effects of climate change). The second factor, which is family, refers to the household. It may be male-headed or female-headed. Lastly, the community is informed and influenced by culture, government policies, and other institutions. Garmezy's (1991) theory helps explain and interpret women's resilience to climate change in semi-arid regions.

3.0 Methods

This study used a traditional narrative review and Arksey and O'Malley's (2005) scoping review five-step framework: identification of research questions and relevant studies, selection, data collation, and presentation of results. The traditional narrative review was chosen to explore new ideas and fields related to women's resilience to climate change. In contrast, the scoping review enabled us to qualitatively analyse themes, thereby ensuring the study's precision and reliability. A traditional narrative review was used to determine patterns and gaps in the literature and to provide multidimensional findings that underpin policy and practice (Ahmad, 2025; Greenhalgh et al., 2018; Baumeister & Leary, 1997). Search terms "Women in semi-arid", "Women's resilience", and Barriers to women's resilience" were used to conduct searches in PubMed, Google Scholar, and Scopus databases on articles published from 2015 to 2025. A total of 104 peer-reviewed studies were identified. 88 were found eligible, while 16 were excluded after full-text screening. 13 studies were included after eligibility assessment. Themes were developed using thematic analysis. Three themes were therefore developed: components and forms of women's resilience, constraints on women's resilience, and classification of resilience themes in Kenya.

4.0 Results and Discussion

This study employed the traditional narrative review and Arksey and O'Malley's (2005) five-step scoping review approach of identification of research question and studies, selection, data collation, and presentation of results to map women's resilience to climate change through a scoping review. 13 studies were included for thematic analysis after an in-depth screening of peer-reviewed literature published over a period of 10 years (2015-2025) searched from PubMed, Google Scholar, and Scopus databases. The 13 included studies had nuances of women's roles in building resilience to climate change (Chongwo et al., 2025; Kiprop et al., 2025; Lentz et al., 2025; Ogutu et al., 2025; Omuria, 2025; de Jong et al., 2024; Mutune & Nunow, 2018; Ojango et al., 2023; Ong'are & Omambia, 2019; Omollo et al., 2017; Omollo et al., 2018; Kangunyu et al., 2017). Drawing on these 13 studies of Kenya's semi-arid regions and other empirical evidence from Sub-Saharan Africa, three thematic areas were developed: components and forms of women's resilience, constraints on women's resilience, and the classification of resilience themes in Kenya.

4.1 Components and Forms of Women's Resilience

The components and forms of women's resilience in Kenya's semi-arid areas comprise individual and household, community, and institutional strategies employed to adapt to climate change. Women in times of emergencies employ short-term coping mechanisms, such as crop diversification and the use of indigenous knowledge (Nyahunda & Tirivangasi, 2022), then transition to smallholder farming strategies,

which they learn from each other through social networks and are informed by indigenous knowledge that helps them recover from shocks such as food insecurity (Liru & Heinecken). In Samburu County, for instance, it was found that the adaptation strategies influenced women's cognitive dimensions, which are informed by the pastoral frameworks and gendered divisions of labour (Walker, 2022). In some semi-arid counties, households plan to use energy, water and food coping mechanisms to recover (Ogutu et al., 2025).

Gender-responsive approaches at the household, community and institutional levels enhance women's resilience to climate change, affirming Garzemy's (1991) theory. For instance, in West Pokot County, provision of drought-tolerant crops, education, and access to finance and agricultural extension services provided by community-based organisations informed livelihood choices and enhanced resilience strategies (Munyaka et al., 2025). Social capital provided by the government and NGOs supports women in semi-arid regions through gender-equity education that challenges patriarchal norms, thereby enhancing resilience (Liru & Heinecken, 2021).

4.2 Constraints to Women's Resilience

The constraints are the barriers women in semi-arid regions face in building resilience to climate change. They are in three categories: social barriers such as societal gender norms, gendered labour divisions, women and girls walk for long hours during drought in search of water and firewood, exposing them to the risks of dehydration, heat stroke and sexual abuse (Chestit & Rotich, 2025; Mutua et al., 2023). Additionally, most communities in Sub-Saharan Africa are patriarchal. Thus, there exist constraining gender norms, excessive workloads, and pittance remuneration, disenfranchisement from decision-making that weaken the resilience of women in semi-arid regions (Rao et al., 2019; Balehey et al., 2018). The structural barriers include limited access to land and financial resources, and their marginalisation to unproductive roles. Lastly, there are institutional barriers. This comprises women's decision-making capacity and priorities being sidelined, power relations, and a lack of skills, knowledge and incentives that mainstream gender into resilience (Atela et al., 2018).

4.3 Classification of Women's Resilience in Kenya's Semi-arid Regions

The classification of women's resilience is drawn from the 13 studies, which can be categorised as follows. Firstly, this study categorises women's resilience to climate change as routine adaptive practices and the use of indigenous knowledge, compared to other studies. This involves women's application of indigenous knowledge and use of available resources such as table banking, which enable them to diversify crop production, adjust planting dates, manage their harvests, access capital and enhance their resilience (Gichuki et al., 2015). In counties with high aridity, such as Turkana and Tana River, women are involved in daily resilience activities and serve on water boards and village climate committees (Walker et al., 2022).

Secondly, multi-faceted well-being and resilience outcomes. Here, resilience is not only based on adaptation strategies that significantly affect yields but also on power relations and control, stress, and the social-cognitive well-being of women in building resilience, as observed by Walker et al. (2022) in their study in Samburu. Most studies focus on vulnerability and the impacts of climate change on women. Other resilience outcomes result from gender-differentiated impacts of food insecurity, as was the case in Makueni County, where food production improved significantly among male-headed households compared to female-headed households (Machio et al., 2025). This, therefore, highlights the necessity to assess gendered impacts.

Thirdly, structural and institutional constraints to transformative resilience. They include patriarchal norms and power dynamics that constrain women's transition from coping to enhanced resilience, thereby ensuring food security and livelihood stability in the face of extreme climate events (Liru & Heinecken, 2021; Rao et al., 2019). Additionally, the limited synthesis of gender issues into climate research and policies risks overlooking women's roles in resilience (Bryan et al., 2024). However, most empirical studies have only documented these structural and institutional constraints in broad terms of sex, age, and social households' status (male-headed and female-headed), as observed in the FAO (2024) report, rather than determining women's contribution to building resilience.

Lastly, drivers and policy mechanisms for women-centred resilience. This concerns access to resources, such as extension services, land, credit, gender-transformative approaches, women's inclusion in governance, and synthesis of local and scientific knowledge, which can significantly enhance women's

resilience in semi-arid regions (Munyaka et al., 2025). This, therefore, indicates a need for more appropriate drivers and policy mechanisms that not only strengthen women as individuals, but also enhance the household and community's resilience to climate change.

4.4 Resilience of Women to Climate Change in Kenya's Semi-arid Regions

Notwithstanding the barriers to building their resilience to climate change, women in semi-arid regions are beacons of hope for many households amid extreme weather events. The findings of the study reveal that women play a role in resilience to climate change through their skills, understanding, decision-making power, and collective capacity. They are the developers and adaptors of local practical solutions that address their household and communal problems. Women in Kajiado and Narok counties use agroforestry and composite manure for food production, reducing their reliance on rain-fed crop production and significantly increasing yields by 20 to 45%, thereby ensuring food security. Women in semi-arid regions are stewards and repositories of local and indigenous knowledge on seasons (weather patterns) and ecological adaptation.

Moreover, women are drivers and collective agents of resilience within their households, communities, and governance structures. Most importantly, at the household and community levels, they organise themselves into groups to share knowledge and financial resources through the micro and small enterprises, which enable them to access funds and acquire farm inputs that enhance their resilience to climate change (Atela et al., 2018). Lastly, women in semi-arid regions are drivers of transformative change when they manage resources they channel toward household upkeep (UN, 2023). This, therefore, implies that the involvement, empowerment, and recognition of women's roles in building resilience to climate change not only make them beacons of hope but also enhance their livelihoods and improve livelihoods, thereby contributing to Sustainable Development Goal (SDG) 2 on zero hunger with emphasis on building resilient farming practices that enhance women's resilience to climate change, and SDG 5 on gender equality that gives women equal rights to resources such as land, financial credit and inheritance.

This scoping review therefore demonstrates that women contribute to building resilience to climate change in semi-arid regions. At the same time, while there is empirical evidence on the impacts, vulnerabilities, and barriers to climate change adaptation among women, there is a need to focus explicitly on their role in building resilience. This, therefore, affirms the existence of data, knowledge, policy implementation, conceptual, institutional, research, and practice gaps in Kenya's semi-arid regions (Ciocco et al., 2024). Additionally, barriers including structural, institutional, social and cultural should be studied explicitly to determine how they constrain the role of women in building resilience to climate change in semi-arid regions.

5.0 Conclusion

This paper reviews the role of women in building resilience to climate change. The study employed the traditional narrative review and Arksey and O'Malley's (2005) five-step approach. Thematic analysis revealed that women are at the forefront of building resilience to climate change by being developers and adapters of local adaptation strategies, drivers and agents of resilience, stewards of local and indigenous knowledge, and drivers of transformative change in semi-arid regions. Our findings show that women are innovative and resilient at the household and community levels, leveraging social networks, diversified livelihoods, and indigenous knowledge. This study identifies individual, community, and institutional strategies as components that determine women's resilience to climate change. However, social and structural barriers, including limited access to land and credit, gendered structural and institutional norms, weak policies, and exclusion from decision-making, constrain their resilience to climate change. We suggest that to enhance women's resilience to climate change, there is a need to enhance the capacity, skills, knowledge, and access to resources of individuals, households (family), and community in line with Garmezy's (1991) and Atela et al. (2018), who argue that resilience is determined by three factors: individual characteristics, family support, and community, and that when adaptive capacity of women is supported, their resilience to climate change is enhanced. The findings of this study, therefore, contribute to the growing corpus of climate studies by mapping and synthesising the roles women play in building resilience to climate change in semi-arid regions. It contributes to research, policy, and governance by highlighting the need to focus on how women's roles transform household and community resilience to

climate change, inform policies on women's participation and decision-making roles that can be integrated into climate strategies, and strengthen institutions of governance for gender-transformative climate-related actions.

6.0 References

Ahmad, M. N. (2025). Narrative literature reviews in scientific research: Pros and cons. Jordan Journal of Agricultural Sciences. 21(1). https://doi.org/10.35516/jjas.v21i1.4143.

Anjum, G., Aziz, M. (2025). Climate change and gendered vulnerability: A systematic review of women's health. Women's Health. Vol. 21.

Amoak, D., Najjar, D., Kyle, J. (2022). Gender and climate-relevant Agri-food systems governance: A strategic evidence review. Beirut, Lebanon: International Centre for Agricultural Research in the Dry Area (ICARDA).

Arksey, H., O'Malley, L. (2005). Scoping studies: towards a methodological framework, International Journal of Social Research Methods. 8(1), 19-32.

Atela, J., Gannon, K. E., Crick, F. (2018). Climate change adaptation among female-led micro, small and medium enterprises in semi-arid areas: A Case study from Kenya. A Working Paper. Research for Climate Futures. https://idl-bnc-idrc.dspacedirect.org/server/api/core/bitstreams/4888e939-49b7-4b5a-b651-2cf5ee217276/content

Awiti, A. O. (2022). Climate change and gender in Africa: A Review of impact and gender-responsive solutions. Frontiers in Climate.

Balehey, S., Tesfay, G., Balehegn, M. (2018). Traditional gender inequalities limit women's opportunities for adaptation to climate change: Evidence from the Afar pastoralists of Ethiopia. Pastoralism. 8, 1-14. https://doi.org/101186/s13570-08-0129-1

Baumeister, R., Leary, M. (1997). Writing narrative literature reviews. Review of General Psychology. 1, 311-320. https://doi.org/10.1037/1089-2680.1.3.311

Bryan, E., Alvi, M., Huyer, S., Ringler, C. (2024). Addressing gender inequalities and strengthening women's agency to create more climate-resilient and sustainable food systems. Global Food Security. Vol. 40. https://doi.org/10.1016/j.gfs.2023.100731

Ciocco, T. W., Miller, B. W., Tangen, S., Crausbay, S. D., Oldfather, M. F., Bamzai-Dodson, A. (2024). Indigenous knowledge in climate adaptation planning: reflections from initial efforts. Frontiers in Climate Change. https://doi.org/10.3389/fclim.2024.1393354

Chestit, L., Rotich, C. (2025). The Case of Women and Climate Change in Northern Kenya. Humanitarian Practice Network. Issue 86, Article 8. https://odihpn.org/en/publication/the-case-of-women-and-climate-change-in-northern-kenya/

Chongwo, E. J., Aoko, B., Kaniala, M., Huizink, A. C., Abubakar, A. (2025). Intersection between individual, household, environmental and system level factors in defining risk and resilience for children in Kenya's ASAL: A qualitative study. PLOS One. 20(1).

Clayton, A., Dulani, B., Robinson, A. (2023). Gender, deliberation, and natural resource governance: Experimental evidence from Malawi. IFPRI. Discussion Paper 02232.

Connor, K. M., Davidson, J. R. T. (2003). Development of a new resilient scale: The Connor Davidson resilience scale (CD-RISC). Depress Anxiety. 18, 76- 82.

Csikszentmihalyi, M., Seligiman, M.E., Csikszentmihalyi, M. (2014). Positive psychology: An introduction. Flow and the foundations of positive psychology. The collective works of Mihaly Csikszentmihalyi. pp. 279-298.

Dasgupta, A. (2024). Gendered vulnerabilities in climate shocks: The role of social protection interventions. Environmental Research. Vol. 3.

de Jong, M. V., Selten, M. P. H., Gitata-Kiriga, W., Peters, B., Dengerink, J. D. (2024). An overview of the Kenyan Food System: Outcomes, Drivers, and Activities. Foresight4Food. Oxford.

FAO. (2024). The unjust climate: Measuring the impacts of climate change on rural poor, women and youth. Rome. ISBN 978-92- 5- 138590-6.

Flores, E. C., Flores, A. F., Abarca-Diaz, B., Camizan-Castro, R., Mendoza-Lozada, E., Ortiz-Contreras, F., Kakuma, R. (2025). Fostering leadership and gender equality in climate action among underserved, rural indigenous women: A qualitative exploration of opportunities and limitations in Peru. The Lancet Regional Health Americas. 46, 101–109.

Fruttero, A., Halin, D., Broccolini, C., Coelho, B., Gninafon, H., Muller, N. (2023). Gendered impacts of climate change: Evidence from weather shocks. Policy Research Working Paper 10442. https://wrd.unwomen.org/sites/default/files/2023-07/WB-gendered-impacts-climate-change.pdf

Garmezy, N. (1991). Resiliency and Vulnerability to Adverse Developmental Outcomes Associated with Poverty. *American Behavioural Scientist.* 34(4).

Gichuki, C. N., Mutuku, M. M., Kinuthia, L. N. (2015). Influence of participation in "table banking" on the size of women-owned micro and small enterprises in Kenya. JECPPGE. https://doi.org/10.1108/JEC-11-2013-0036

GoK and FAO. (2024). Arid and semi-arid lands (ASALs) development report. Nairobi. Ministry of Devolution and Asals.

Greenhalgh, T., Thorne, S., Malterud, K. (2018). Time to challenge the spurious hierarchy of systematic over narrative reviews? European Journal of Clinical Investigation. Vol. 48. https://doi.org/10.1002/ca.23042

Hawley, D. R., De Haan, L. (1996). Toward a definition of family resilience: Integrating life-span and family perspectives. Family Process. 35(3).

Holmes, J. (2017). Roots and routes to resilience and its role in psychotherapy: A selective, attachment-informed review. Attach Human Development. 19, 364-381.

IFPRI. (2025). Building resilience in Kenya's Asals: Livelihoods, gender and adaptation. Washington DC: IFPRI.

IPC. (2021). Acute Food Insecurity and Acute Malnutrition Report. https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Kenya_Acute_Food_Insecurity_Malnutrition_2021Jul2022Jan_Report.pdf

IPCC. (2022). Summary for policy makers. [Impact, adaptation, vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. https://www.ipcc.ch/report/ar6/wg2/

Joyce, F., Shande, S., Tighe, J., Laurent, S. J., Bryant, R. A., Harvey, S. B. (2018). Road to Resilience: A systematic review and meta-analysis of resilience training programmes and interventions. BMJ Open. Vol. 8.

Kalele, D., Otieno, P., Onyango, J., Okoth, S. (2024). Smallholder farming systems, climate risks and food security in Eastern Kenya's semi-arid lands. Journal of Arid Environments. Vol. 219. https://doi.org/10.1016/j.jaridenv.2024.105024

Kiprop, B. Y., Machariah, L., Mailu, S. (2025). The role of golf courses in climate change adaptation by enhancing vegetation and forest cover in arid and semi-arid lands in Kenya. Archives. 6(2).

Kosec, K., Swinnen, J. (2023). IFPRI Global Policy Report 2023: Rethinking food crises responses. International Food Policy Research Institute: Washington DC.

Kosec, K., Hidrobo, M., Gartaula, H., Van Campenhout, B., Carrilo, L. (2023). Making complementary agricultural resources, technologies and services more gender responsive. CGIAR GENDER Impact Platform Working Paper No. 010. Nairobi, Kenya: CGIAR GENDER Impact Platform.

Lawson, E. T., Alare, R. S., Salifu, A. R. Z., Thompson-Hall, M. (2020). Dealing with climate change in semi-arid Ghana: Understanding intersectional perceptions and adaptation strategies of women farmers. GeoJournal. 85, 439-452. https://doi.org/10.1007/s10708-019-09974-4

Liru, P., Heinecken, L. (2021). Building resilience: The Gendered effect of climate change on food security and sovereignty in Kakamega, Kenya. Sustainability. 13(7). https://doi.org/10.3390/su13073751

Luthans, F., Avolio, B. J., Avey, J. B., Norman, S. M. (2007). Positive Psychological Capital: measurement and relationship with performance and satisfaction. Perspective Psychology. 60, 541-572.

Machio, P., Sallu, S., Waized, B., Mwanri, A., Duodu, K. (2025). A gendered analysis of adaptive capacity and food security in Makueni County, Kenya. Frontiers in Sustainable Food Systems. https://doi.org/10.3389/fsufs.2024.1494475

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. American psychologist. 56(3).

McCarthy, N., Winters, P. (2023). Building Resilience to Climate Change in Sub-Saharan Africa through Irrigation Investments. Pulte Institute for Global Development. https://pulte.nd.edu/assets/493736/merge_finalreport.pdf

McCubbin, M. A., McCubbin, H. I. (1996). Resiliency in families: A conceptual model of family adjustment and adaptation in response to stress and crises. In H. I. McCubbin, A. I. Thompson, M. A. McCubbin (Eds), Family Assessment: Resiliency, Coping and Adaptation: Inventories for Research and Practice. Madison, WI, University of Wisconsin.

McLean, J. (2024). The Role of social protection policies in enhancing climate resilience. Policy Briefing, 296, June 2024.

Mfitumukiza, D., Roy, A. S., Simane, B., Hammill, A., Rahman, M. F., Hug, S. (2020). Scaling local and community-based adaptation. Global Commission on Adaptation Background Paper. Rotterdam and Washington, DC.

MoALFC. (2021). Kitui County agricultural development profile. Nairobi. Government of Kenya.

Mulwa, R., Macharia, K., Musembi, E. (2024). Justice resilience in Kenya: Frameworks and perspectives for equitable climate adaptation. https://climatestrategies.org/wp-content/uploads/2024/10/Just-Resilience-in-Kenya-Frameworks-and-Perspectives-for-Equitable-Climate-Adaptation-2.pdf

Munyaka, J., Abdem, S., Gallay, O., Chenal, J., Lolemtum, J., Adier, M., Azmi, R. (2025). Integrating socioeconomic and community-based strategies for drought resilience in West Pokot, Kenya. Climate. https://doi.org/10.3390/cli13070148

Mutune, J. Nunow, A. (2018). Community participation in transformation of rural livelihoods and climate-smart farming technologies in the semi-arid lands of Kenya. International Journal of Peace and Development Studies. 9(4).

Njuki, J., Eissler, S., Malapit, H., Meinzen-Dick, R., Bryan, E., Quisumbing, A. (2022). A Review of evidence on gender equality, women's empowerment, and food systems. Global Food Security. Vol. 33.

Nunow, A. A. (2024). The Nexus between climate change and livelihoods in Arid and Semi-arid lands (ASAL) Areas of Kenya: Evidence from the literature. International Journal of Social and Human Research. 7(6).

Nyahunda, L., Tirivangasi, H. M. (2021). Adaptation strategies employed by rural women in the face of climate change impacts in Vhembe district, Limpopo province, South Africa. Management of Environmental Quality: An International Journal. 30(4).

Prince-Embury, S. (2014). Review of conceptual resilience and assessment issues. In resilience interventions for youth in diverse populations. (Eds) S. Prince-Embury and D. H. Saklafoske. Springer Science & Business Media, 13- 23.

Ogutu, E. A., Oza, H. H., Beun, M., Eppinga, R., Muga, R., Freema, M. (2025). Household resilience and adaptation strategies for enhancing access to energy, water and food during drought and floods: A qualitative study. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5381988

Ojango, J. M. K., Gitau, J., Ndiwa, N., Recha, J. W., Gachora, J., Muigai, A. W. T. (2023). Integration and adoption of climate resilient management practices for enhanced productivity of sheep and goats in pastoral communities of Northern Kenya. Pastoralism. 13(14).

Omolo, N., Mafongoya, P., Ngesa, O. (2017). Gender and resilience to climate variability in pastoralist livelihood systems: Two case studies in Kenya. Journal of Sustainable Development. 10(2).

Omollo, E. K., Wasonga, O. V., Elhadi, M. Y., Mnene, W. N. (2018). Determinants of pastoral and agro-pastoral households' participation in fodder production in Makueni and Kajiado counties, Kenya. Pastoralism. 8(9).

Omuria, J. N. (2025). Gender conflicts and climate change in pastoral communities in Northern Kenya. Gradus. 12(1).

Ong'are, D. W., Omambia, A. N. (2019). Building pastoral and agro-pastoral community resilience against drought in the context of the Paris Agreement: The case of Isiolo County, Kenya. Handbook of Climate Resilience. 14(2), 979-1000.

Ragasa, C., Kyle, J., Onoja, A. O., Adejoh, S. O., Onyenekwe, C. O., Koledoye, C. O., Ujor, G. C., Nwali, P. N. (2023). Women's Empowerment in Agrifood Governance (WEAGov) assessment framework. A pilot study in Nigeria. IFPRI Discussion Paper No. 02222. Washington, DC: International Food Policy Research Institute.

Ragasa, C., Kyle, J., Kristjanson, P., Eissler, S. (2022). Conceptualising women's empowerment in agrifood systems governance: A new framework. IFPRI Discussion Paper 2153. Washington, DC: International Food Policy Research Institute.

Rao, N., Lawson, E., Raditloaneng, W., Solomon, D., Angul, M. (2019). Gendered vulnerabilities to climate change: insights from the semi-arid regions of Africa and Asia. Climate and Development. Vol. 11, 14-26. https://doi.org/10.1080/17565529.20171372266

RoK. (2018). Ministry of Devolution and Asals. State department for development of arid and semi-arid lands. Strategic plan 2018-2022. https://asalrd.go.ke/sites/default/files/2024-02/State%20Department%20of%20ASAL%20Strategic%20plan%202018%2022.pdf

Shibesh, B. F., Nagabhatia, N. (2025). Addressing climate resilience in the African region: Prioritising mental health and psychosocial well-being in disaster preparedness and response planning for mainstream communities and migrants. Climate. 13(7).

Takeshima, H., Raghunathan, K., Kosec, K. (2022). Climate change and women's voice & agency beyond households: Insights from India. IFPRI Discussion Paper 2148. Washington DC: International Food Policy Research Institute.

Tamasiga, P., Mogomotsi, P. K., Onyeaka, H., Mogomotsi, G. E. J. (2024). Amplifying climate resilience: The Impact of social protection, social cohesion, and social capital on public support for climate change action. Environmental Resource Management. 10(1).

Tenzing, J. D. (2020). Integrating social protection and climate change adaptation: A review. Wire Climate Change. 11(2).

UN. (2023). A Study on women, gender inequalities and climate-induced migration in East Africa. Office of the High Commissioner, Human Rights. https://www.ohchr.org/sites/default/files/documents/issues/women/publications/OHCHR-UNEP-Climate-Mobility.pdf

Walker, S., Bruyere, B., Solomon, J., Powlen, K., Yasin, A., Laiyasa, E., Lolemu, A. (2022). Pastoral coping and adaptation climate change strategies: Implications for women's well-being. Journal of Arid Environments. Vol. 197. https://doi.org/10.1016/j.jaridenv.2021.104656

Walsh, F. (1996). The Concept of family resilience: Crisis and challenge. Family Process. 35(3), 261-281.

WFP. (2025). Kenya Country Strategic Plan 2023-2027: Climate and food security analysis. WFP. Rome.

Yadav, S., Lal, R. (2018). Vulnerability of women to climate change in arid and semi-arid regions: The case of India and South Asia. Journal of Arid Environments. 149, 4-17. https://doi.org/10.1016/j.jaridenv.2017.08.001

Zaid, O. R. (2024). Effects of climate change on women's security dynamics in Baragoi, Samburu County, Kenya. The Journal of Social Ecounters. 8(2), 259-290).