

Double Jeopardy: The Intersection of Climate Change and Gender Inequality

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Abstract

This essay explores how climate change exacerbates these vulnerabilities, with particular focus on the increased burden of unpaid care work, limited access to resources, and heightened health risks for women. The intersection of climate change and gender inequality presents a unique and pressing challenge, often referred to as double jeopardy. This concept highlights the compounded vulnerabilities faced by women, particularly in marginalized communities, who are disproportionately affected by climate change due to existing gender-based socio-economic and cultural inequalities. It also examines how climate-induced disasters and displacement further expose women to gender-based violence and mental health challenges. Despite these challenges, women, particularly in marginalized and indigenous communities, are key agents of change in climate solutions. Their leadership, knowledge, and inclusion in decision-making are crucial for developing effective, sustainable climate policies. The essay concludes by emphasizing the importance of integrating gender-responsive strategies into climate action, empowering women, and recognizing their central role in fostering resilience and driving transformative change in the face of climate change.

Introduction

Climate change is one of the most significant challenges facing the world today, yet its impacts are not equally experienced across populations (Schindel et al., 2023). Existing social, economic, and gender inequalities shape who is most exposed to climate-related harm, rendering certain groups disproportionately vulnerable. Among these groups, women—particularly those in developing countries or marginalized communities—face heightened risks as climate change intensifies existing inequalities (Anjum & Aziz, 2025). Extreme heat and climate-related

disasters pose serious threats to women's physical and reproductive health, while resource scarcity and displacement elevate risks of violence and economic instability (Sbiroli et al., 2022). This dynamic is often described as a form of "double jeopardy," in which gender inequality and the consequences of climate change intersect to compound existing disadvantages. This paper examines the disproportionate impacts of climate change on women, explores its implications for health and socio-economic stability, and argues for the critical need to integrate women's perspectives and leadership into climate solutions.

Women's Vulnerability to Climate Change

Women's vulnerability to the impacts of climate change is shaped by interconnected economic, social, and cultural factors that position them at a structural disadvantage. In many settings, women are tasked with most of the unpaid domestic and care work, including collecting water, gathering firewood, and caring for children and the elderly. All of which are tasks that heavily rely on the availability of natural resources, such as clean water and fertile land. When droughts, floods, or hurricanes disrupt these resources, time burdens and exposure to risk increase, with measurable consequences for livelihoods, income security, and physical and mental health (Tanou et al., 2022). For example, women living in informal settlements in Pakistan experience an increase in care burdens as a result of floods, exacerbating existing health and socioeconomic disparities (Anwar et al., 2021; Sawas et al., 2020). These impacts are magnified in marginalized contexts, where limited access to health services, lower incomes, and reduced participation in decision-making constrain women's capacity to respond (Levy & Patz, 2015).

Structural economic inequalities further intensify women's vulnerability to climate change by limiting their access to resources essential for adaptation and recovery. Gendered patterns of poverty and exclusion reduce women's capacity to prepare for, respond to, and recover from climate-related shocks, particularly in low and middle income countries where existing inequalities constrain access to assets and decision-making power (Demetriades & Esplen, 2010). For households dependent on agriculture, land represents the most important productive asset; however, statutory and customary land tenure systems in many regions restrict women's land rights, limiting their ability to access credit (Demetriades & Esplen, 2010). For example, in Africa, women receive less than 10 per cent of the credit granted to small farmers, an exclusion that undermines their adaptive capacity in the face of increasing climate variability (Randriamaro, 2006). This gender division of labor and ownership limits their ability to adapt to climate change, as limited access to land, credit, and productive resources reduces their ability to invest in climate-resilient practices such as drought-resistant crops, improve irrigation, or water conservation measures.

Climate change also exacerbates existing inequalities related to gender-based violence and displacement by destabilizing social structures and exposing weakness in protection and governance systems. Climate-induced disasters, such as hurricanes and floods, often force communities to relocate, leaving women and children in settings where existing gender hierarchies are often intensified rather than alleviated. In post-disaster contexts, protection and support mechanisms are often unavailable or inadequate, widening the gap between the prevalence of violence and access to effective protection in the aftermath of crisis (Le Masson, 2022). This gap reflects not only emergency conditions, but also deeper institutional failures to address gendered power imbalances in disaster response and recovery. Research on post-disaster contexts demonstrates how such displacement can heighten exposure to exploitation and abuse; following the 2010 earthquake in Haiti, women living in displacement camps faced male-dominated aid distribution system in which women were coerced into transactional sexual exchanges to meet basic needs (Horton, 2012). Taken together, these dynamics illustrate how climate-related displacement can intensify gender-based violence when protection systems are weak and gender inequalities are reproduced within disaster response mechanisms.

Health Implications of Climate Change on Women

The health implications of climate change are gendered, with women experiencing disproportionate risks due to both biological factors and structural inequalities in healthcare access (Anjum & Aziz, 2025). In many low- and middle-income regions, climate change interacts with already strained health systems, intensifying existing disparities in women's health outcomes. Rising temperatures, changing rainfall patterns, and altered ecosystems increase their susceptibility to diseases and worsen mental health, with particularly dangerous consequences for pregnant women (Anjum & Aziz, 2025).

These impacts are especially pronounced during pregnancy, a period in which physiological changes intersect with environmental stressors to heighten health risks for both women and their unborn children. Pregnancy heightens vulnerability to climate-sensitive health threats, including vector-borne diseases such as malaria and Zika, whose transmission is exacerbated by warming temperatures and changing weather patterns (Huyer et al., 2020). Exposure to these diseases and exposure to extreme temperature can affect birth outcomes such as gestation length, birth weight, and neonatal stress (Anjum & Aziz, 2025). Moreover, increased exposure to air pollution—intensified by climate-related environmental changes—is associated with higher rates of hypertension and further compounds risks to maternal and fetal health (Anjum & Aziz, 2025). Beyond immediate pregnancy outcomes, climate-related health stressors can have lasting and intergenerational

consequences, shaping maternal well-being and child health long after the initial environmental exposure.

In addition to physical health challenges, the mental health impacts of climate change on women cannot be ignored. Systematic and scoping reviews demonstrate that climate-related disasters, displacement, and chronic environmental stressors are associated with higher rates of depression, anxiety, and post-traumatic stress disorder among women, particularly in low-resource and crisis-affected settings (Anjum & Aziz, 2025; Stone et al., 2022). These psychological impacts are not solely the result of acute climate events but emerge from prolonged exposure to insecurity, loss of livelihoods, and uncertainty, which disproportionately affect women due to their social and economic roles (Anjum & Aziz, 2025). Qualitative evidence illustrates how women's mental health trajectories are shaped by the interaction of climate shocks with household-level coping strategies such as migration or early marriage, often undertaken in response to economic strain (Goudet et al., 2024). In particular, women affected by cyclone Sitrang in Bangladesh described profound sadness and regret after leaving children behind in rural villages as a survival strategies in order to migrate to urban areas, only to find themselves trapped in insecure living conditions with limited opportunities (Goudet et al., 2024). These experiences illustrate how climate change undermines women's mental health not only through exposure to environmental stress, but through gendered social and economic pathways that shape how women are expected to cope with crisis, often transforming survival strategies into sources of prolonged psychological distress.

Socio-Economic Inequalities Exacerbated by Climate Change

Climate change exacerbates gendered socio-economic inequalities through multiple, interconnected mechanisms that shape women's labor, livelihoods, and access to power. Rather than operating through a single pathway, climate-related stressors interact with existing gender roles and institutional structures to deepen economic vulnerability over time. One of the most significant ways climate change reinforces gender inequality is through the intensification of women's unpaid care and domestic work. Women perform a disproportionate share of unpaid care labor globally, often spending more hours on caregiving and domestic tasks than men (Razavi, 2007). In the aftermath of natural disasters, women frequently assume primary responsibility for caring for children, the elderly, and sick family members, absorbing the social and economic impacts of environmental crises (Anjum & Aziz, 2025; Goudet et al., 2024). This expansion of unpaid care work constrains women's ability to participate in paid employment, pursue education, or engage in livelihood diversification, thereby limiting their adaptive capacity and reinforcing cycles of socio-economic vulnerability (Anjum & Aziz, 2025). Rather than functioning as a neutral household adjustment, unpaid care labor

operates as a gendered shock absorber that enables communities to survive climate stress while deepening women's economic marginalization.

These socio-economic vulnerabilities are further compounded by women's systematic exclusion from climate governance and disaster recovery decision making. Empirical research demonstrates that increases in women's parliamentary representation are associated with higher levels of renewable energy consumption, suggesting that women's political participation can shape climate policy outcomes (Salamon, 2023). Importantly, this relationship neither immediate nor uniform across contexts. Evidence indicates that the positive effects of women's parliamentary participation are moderated by state capacity and development levels, with wealthier countries exhibiting more immediate policy shifts, while similar effects in middle-income countries take longer to materialize (Salamon, 2023). These findings highlight the importance of both institutional context and temporal dynamics in translating women's political inclusion into effective climate action. Despite this evidence, women remain underrepresented in climate governance, reinforcing socio-economic inequality by limiting their ability to influence policies that directly affect their livelihoods, labor burdens, and adaptive capacity.

Women as Agents of Change

Despite facing disproportionate vulnerabilities, women are also powerful agents of change in climate adaptation and mitigation. Research shows that women's participation in environmental governance, conservation, and community-based adaptation enhances both the effectiveness and equity of climate responses. Indigenous women, in particular, have long been stewards of biodiversity, employing sustainable practices such as organic farming, reforestation, and pollinator conservation (Balakrishnan, 2023). A study highlights that Indigenous women's, specifically in India, stewardship contributes to more sustainable resource use and strengthens community-level adaptation, especially in ecologically sensitive regions (Das, 2024).

Beyond Indigenous contexts, women's leadership in community-based adaptation initiatives has been shown to improve climate resilience and livelihood security. Women's participation in community-level adaptation decision-making is particularly important because their everyday responsibilities in managing water, fuel, and household resources position them as key knowledge holders in responding to climate-related environmental change. Research demonstrates that women-led adaptation strategies, such as conservation agriculture, water, management, and local preparedness, are associated with broader adoption of climate-resilient practices and more equitable outcomes at the community level (Patnaik, 2021). This evidence underscores that women's leadership enhances adaptation effectiveness by

aligning climate strategies with everyday resource management and community needs.

Moreover, women's inclusion in climate governance contributes to more effective and comprehensive climate policies by reshaping decision-making priorities and policy design (Salamon, 2023). When women participate in climate governance, policies are more likely to incorporate lived experiences related to resource management, caregiving responsibilities, and community-level vulnerability—factors often overlooked in male-dominated decision-making spaces (Salamon, 2023). This is important given that climate change disproportionately affects marginalized communities, whose needs are frequently underrepresented in formal policy processes. Women's perspectives and leadership in climate governance can improve both the responsiveness and equity of climate action, ensuring that adaptation and mitigation strategies address social as well as environmental dimensions of climate risk.

The Importance of Inclusion in Climate Action

To address the dual crises of climate change and gender inequality, it is essential to implement gender-responsive climate policies and actions. Key areas of focus should include:

1. **Empowering Women in Decision-Making:** Governments and organizations must ensure that women are represented at all levels of climate governance, from local communities to international negotiations. Ensuring women's participation in decision-making processes is critical to ensuring that climate policies reflect the needs of the most vulnerable populations.
2. **Enhancing Access to Resources:** Bridging gaps in land ownership, education, and financial resources can empower women to play a central role in climate adaptation and mitigation strategies. Access to these resources is essential for building resilience to climate shocks and promoting sustainable development.
3. **Investing in Health and Education:** Expanding access to healthcare, especially sexual and reproductive health services, is critical to building resilience against climate change. Furthermore, educating women about climate change and its impacts enables them to make informed decisions and actively participate in climate solutions.
4. **Supporting Women's Leadership:** Recognizing and amplifying the leadership roles of women in environmental conservation, disaster recovery, and sustainable development is essential for driving transformative change. Supporting women's leadership ensures that climate solutions are grounded in local knowledge and reflect the realities of the communities they serve.

Conclusion

The intersection of climate change and gender inequality presents a “double jeopardy” for women worldwide. Climate change exacerbates existing gender-based vulnerabilities and socio-economic, health, and governance pathways, including the expansion of unpaid care work, heightened exposure to health risks and violence, and persistent exclusion from decision-making processes. Evidence shows that women are not only disproportionately affected by climate change but are also central to the development of effective and equitable climate responses. Addressing the dual challenges of climate change and gender inequality requires more than recognizing women as a vulnerable group; it demands dismantling structural barriers that limit women’s access to resources, authority, and decision-making power. By integrating women’s perspectives, leadership, and knowledge into climate action, societies can not only advance gender equality but also build more sustainable and resilient communities in response to climate change.

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