

INVISIBLE STRUGGLES, VISIBLE IMPACTS: EXAMINING HOW HISTORICAL AND SOCIAL DISADVANTAGES RENDER FARM WOMEN MOST VULNERABLE TO CLIMATE CHANGE



Farm women, especially in developing countries such as India, are hit hardest by the negative impacts of climate change. In this blog, Apoorva Veldandi, Anil Kumar Reddy, Sanchita Garai and Sanjit Maiti explore how the historical and social disadvantages of farm women impact their climatic vulnerability.

CONTEXT

Have you ever considered how climatic fluctuations are intensifying the existing gender inequalities and discrimination against women in society? Women, especially in developing nations like India, are dealing with gender inequalities and inequities, and now climate change is adding further stress. Since the 1950s, we have seen a lot more of heatwaves, droughts, heavy rains and severe cyclones. This unpredictability varies with location, with India experiencing increased average temperatures, reduced monsoon precipitation, increased occurrences of extreme rainfall events, droughts, rising sea levels, and intensified cyclones. If climate continues to fluctuate this way, we could see a huge drop in crop yields. It also affects dairy animals, lowering their productivity due to reduced availability of fodder and water. Heat stress alone is predicted to cause significant losses in milk production. Additionally, climate-related health risks are a concern for farm women and livestock due to exposure to heat, extreme weather, pesticides, and pests such as mosquitoes and ticks. Furthermore, women tend to receive lower wages, particularly during times of climatic stress, and are more susceptible to fatalities during natural disasters. Numerous studies have indicated that the impacts of climate change differ between men and women, with women often being more vulnerable than men and having lower adaptive and coping capacities, exhibiting less resilience to the effects of climate change.



Even though men and women are exposed to similar climatic stresses, women's lack of access to productive resources and services, make things worse for them (Box 1). They are also more exposed to harmful chemicals, biological toxins, and diseases during activities such as food production, water and wood collection. For instance, [a recent study in the Andamans](#) revealed that women had low knowledge on pesticide use and application when compared to men due to illiteracy and lack of training facilities, which led to their direct exposure to harmful chemicals while assisting in mixing solutions, performing intercultural operations near sprayed fields, and cleaning men's pesticide sprayed clothing, and chemical containers or sprayers without any protective clothing.



Box 1. Unravelling Disparities

Have you noticed how women have historically been seen as less important than men in various areas? Be it religious, social, economic or cultural spheres, women were always given less recognition and fewer opportunities. Right from female foeticide and girl child school drop outs to lack of land rights and access to productive resources and services, they were always considered lower than men. Especially so in farming communities, where women cannot own or control land because it is usually inherited by men in the family. This hinders their economic independence and decision-making ability both within and outside the household. And, the existing cultural norms, socio-economic status and household practices compel women to be the last ones to have food, which is often less nutritious, which is why [60% of women in India suffer from anaemia](#). Alongside, patriarchy prevents women from holding leadership positions, be it political, social or economic domains, leading to gender pay gaps and poverty. This lowers their social participation due to which their opinion is never considered in community farm management decisions, and they are deprived of access to markets and do not have a platform to advocate for their own needs.

The girl child often ends up dropping out from school to reduce financial burden on the family and has to share domestic responsibilities. This reduces farm women's access to education, agricultural extension services, training programmes and skill acquisition. Also, they are primarily involved in household chores, childcare and agricultural labour, leading to higher workloads and little time to pursue education. Even with all the progress we have made in the twenty-first century, women are still dealing with marginalization. It is a never-ending cycle of inequality rooted in our cultural, social and historical settings guarded by traditional gender roles and norms. These roles and norms dictate women to take up domestic and caregiving responsibilities and men to take up financial responsibilities. These norms also

dictate how women should behave in public, expecting them to be polite, respect authority and avoid confrontations. They are also expected to seek permission or be accompanied by a male relative while leaving their home premises. These norms also support attitudes that justify gender-based violence such as domestic abuse, sexual harassment, and harmful traditional practices such as female genital mutilation, forced marriage, and child marriage. Notably, in India, [the rate of girls marrying before the age of 18](#) stands at 23%, surpassing the global average of 19% – as recorded during 2019-21.

FEMINIZATION OF AGRICULTURE OR DE-FEMINIZATION

With all these climate change issues impacting agriculture, a lot of men are moving to cities in search of better employment. [Based on the Periodic Labour Force Survey \(2020-21\)](#), the total migration rate in India was 28.9%, of which 10.8% of men migrated due to employment-related reasons.

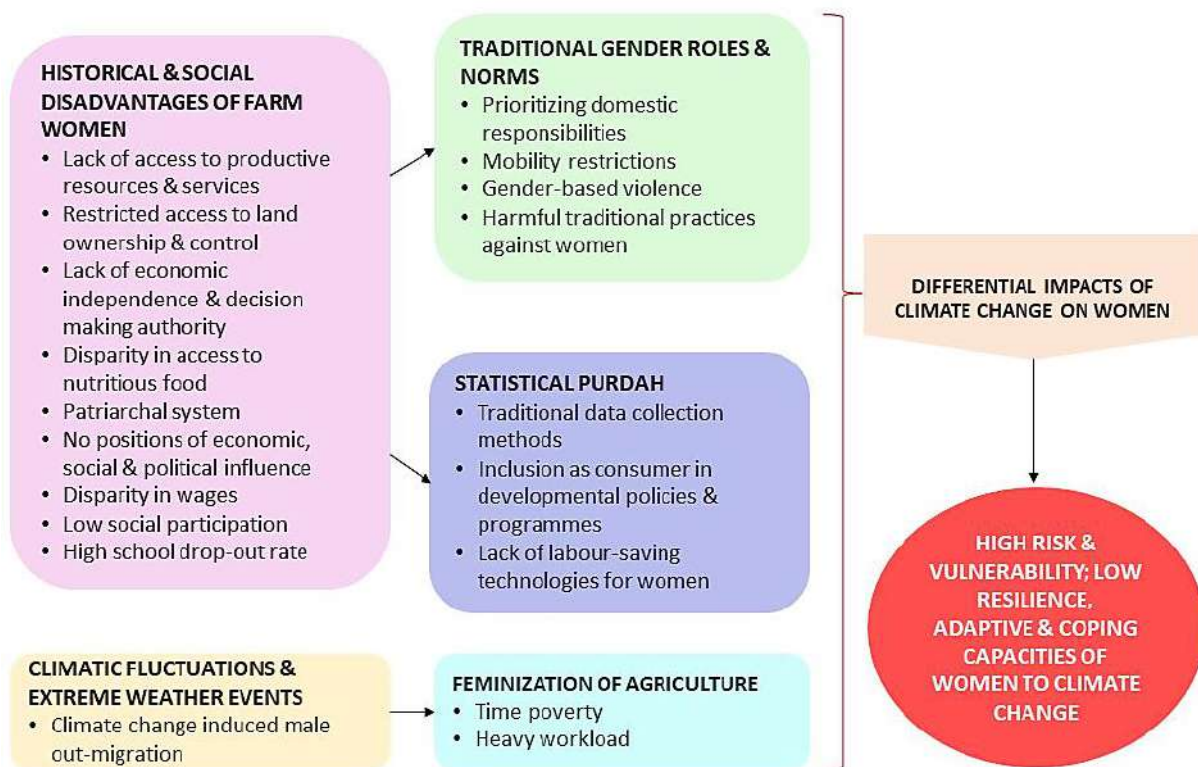


This shift is forcing women to take up additional agricultural workload from cultivating crops to working as labourers for wages and contributing to family farms without being remunerated for it. It is difficult for women to handle this workload as they still have to manage all the domestic and caregiving responsibilities at home, leading to their poor health and well-being. Back in 2011, [women made up 43% of agricultural labourers and 30% of cultivators in India](#). Livestock farming is another area where [women make up 69% of the workforce](#), with an estimated 75 million women compared to 15 million men engaged in dairy farming. Likewise, in fish farming, [women contribute 46% to the global workforce and 72% of the workforce in India](#).



This phenomenon of ‘feminization of agriculture’¹ and allied sectors sees more women participating in the public sphere. However, many women remain labourers on their own farms but are not recognized as farmers, due to lack of land rights. This absence of land ownership and limited access to credit forms an endless loop, where women are unable to secure loans due to the lack of collateral, consequently hindering their ability to acquire land. This ‘defeminization’ which marginalizes women from rightful entitlement, runs parallel to the ‘feminization’ of agriculture. Farm women face various obstacles such as restricted access to agricultural inputs, markets, extension services, leading to unfair distribution of roles and power. Despite the potential empowerment from feminization of agriculture, women are hindered by unpaid, repetitive tasks that limit skill development and decision-making authority. This increased engagement in monotonous, labour-intensive tasks hinders skill development and deprives women of decision-making authority, due to which, transition from ‘feminization’ of agriculture into ‘managerial feminization’ of agriculture remains uncertain with the prevailing gender-power dynamics. As farm women’s increased engagement in agriculture increases their workload and exacerbates their social, economic and cultural marginalization, it could be characterized as the feminization of ‘agrarian distress’ or ‘poverty’ instead of merely ‘agriculture’.

¹The term 'feminization of agriculture' describes the noticeable trend where rural areas experience a significant increase in women's participation and responsibilities within the agricultural sector due to male out-migration. This phenomenon encompasses a rise in women's engagement in various agricultural and allied tasks, including farm labour, decision-making processes, and resource management.



Interaction between numerous factors rendering farm women most vulnerable to climate change (conceptualized by the authors based on literature review)

Women: The Invisible Agricultural Workforce

Despite women playing a huge role in agriculture, their work often goes undocumented. Cultural norms and traditional gender roles discourage women from participating in surveys, census, and social gatherings, resulting in their under-representation in official statistics. Most of the women also hesitate to share personal information with male enumerators or data collectors due to privacy and safety concerns as well as fear of judgement. Limited mobility outside the home due to lack of transportation, safety concerns, and cultural norms, and lack of decision-making autonomy, further reduces their participation in surveys. As farm women primarily engage in preparatory, pre-production, and supportive work, which is typically not recorded, this leads to inaccurate and incomplete representation of their contributions. Due to this ‘statistical purdah’² women are seen only as consumers of social products and services rather than as producers. This perception often leads to their exclusion from development programmes in agriculture and related sectors. The lack of sex-disaggregated data also makes it tough to create gender-inclusive climate policies that could strengthen resilience and adaptive capacity of women farmers.

²‘Statistical purdah’ is a phenomenon in which women are excluded from the data collection processes, so their work goes unrecorded, due to which they are not included in developmental agriculture and allied sector-related policies and programmes, despite their significant contributions to those fields. This neglect results in poor understanding of their contributions and failure to address their unique needs in development planning, perpetuating their status as unseen partners in development efforts.

THE WAY FORWARD

As educated and empowered women are more likely to adopt climate-resilient farming practices, more investments for providing labour-saving technologies, tailoring climate information services, encouraging women's leadership and involvement in decision-making process can enhance their climate resilience. Many initiatives were launched to improve farm women's resilience to climate change – Box 2 highlights a few projects in India. Also, addressing women's caregiving time constraints, investing in social infrastructure such as creches, providing social safety nets, promoting dialogue and collective decision making and adopting a comprehensive approach to address power imbalances with sensitivity to local contexts can improve climate adaptation.

Box 2. Initiatives Focusing on Strengthening Women Farmer's Climate Resilience in India

Andhra Pradesh Community-Based Natural Farming: Focuses on empowering women farmers by promoting natural farming practices that are climate resilient. Women farmers were trained in natural farming techniques that include using locally available resources, minimizing chemical inputs and enhancing biodiversity on farms.

Atal Bhujal Yojana: Rural women were, or are, assisted in understanding and managing water resources, supported in water budgeting, and guided in building water retention structures and in adopting sustainable irrigation methods in seven states of India.

PRADAN's LEAP Project: Professional Assistance for Development Action - Livelihoods Enhancement through Market Access and Women Empowerment. This one seeks to empower smallholder women farmers in Jharkhand, Odisha and West Bengal. It aims to strengthen smallholder women production systems leading to a marketable surplus of cereal, vegetable/horticulture crops, also goat and backyard poultry in compact clusters, market systems, as well as government and multi-sectoral coordination for smallholder farmer development.

Gorakhpur Environmental Action Group (GEAG): Offers climate-smart agricultural training to help local people address climate change impacts in Uttar Pradesh. Aims to develop women farmers' skills, income, confidence and standing in the community.

A holistic approach that champions gender equality should focus on the following:

1. Educating farm women on land inheritance and registration processes, and providing targeted subsidies and grants to support their agricultural investments;
2. Conducting awareness campaigns to challenge and change restrictive social and cultural norms to improve farm women's access to resources;
3. Utilizing multimedia to disseminate information about farm women's rights, opportunities, and available resources;
4. Partnering with NGOs to focus on gender equality; and engaging the private sector in corporate responsibility programmes aimed at farm women's empowerment are also crucial;
5. Leveraging support from international funding agencies can significantly enhance farm women's access to resources;
6. Organizing community meetings and awareness campaigns to inform both men and women about the importance of farm women's involvement in data collection, scheduling data collection activities at convenient times for women, and ensuring institutions collect sex-disaggregated data;
7. Providing incentives such as stipends or transportation for participating farm women and conducting separate focus groups for them using Participatory Rural Appraisal techniques. Women also need to be involved in mapping and planning exercises that would enable them to overcome social and cultural barriers that hinder their participation in data collection efforts.

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