

WOMEN, POLICY, AND CLIMATE-RESILIENT AGRICULTURE: AN INDIAN PERSPECTIVE

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India's climate-affected agriculture faces policy gaps that limit women farmers' access to climate-smart practices. This paper identifies the barriers which limit the accessibility of women farmers' to information and extension services, hindering the broader adoption of climate-smart agriculture. It reviews the agriculture and climate policies and attempts to introduce suggestions for designing gender-responsive policies to promote adoption of CSA practices.

Introduction

In India, rural women's entrepreneurship transforms the Climate change has an impact on agriculture which ranges from the onset of India's monsoon¹, delayed sowing, to concentrated precipitation events and an increased incidence of pests, eventually leading to increased pesticide application². Other impacts include a lack of water resources, reduced seed viability, and yield potential. Beyond the impacts mentioned above, they also relate to issues of food security³. Farmers with better accessibility of credit and information⁴ and other resources are more resilient to climatic shocks⁵, but marginal and small Indian farm households are more vulnerable to these impacts⁶. Enough literature exists to suggest that women are disproportionately and adversely affected in comparison to men, and this makes the need for integrated, locally suited practices linked with adaptation and mitigation of vulnerability to strengthen resilience.

In 2009, the concept of climate-smart agriculture (CSA) was introduced by the Food and Agriculture Organization. This strategy will aim at informing the actions required to change and reorient agricultural systems in a manner that will enable them to boost development and ensure security of food in the changing climate. It focuses on the support of context specific policies, but the adoption

is quite low⁷. With the difference in vulnerabilities of men and women farmers, gendered considerations must be a part of climate-smart practices and other related constraints. This article begins with an overview of climate-smart agriculture with emphasis on policy interventions in India. It highlights constraints that impede widespread adoption of CSA, analyzes the visibility of gender in these policies, and puts forward suggestions to address the same.

Climate-smart Agriculture in India

CSA represent agricultural activities that deliver a three-fold set of advantages ("Triple-wins"), such as sustainability, increase agricultural, hence incomes, and resiliency, and enhancing food security, sustaining climate change, and mitigating greenhouse gases. Any farming practice which makes progress at least one of these goals can be assigned to be "climate-smart"⁸. Nonetheless, such practices do not understand the high disparities in access to resources and they are therefore disparaged as a sham, owned and ruled by a corporate oligarchy⁹.

In the India context, it is broadly defined as "a range of agricultural practices that transform agricultural systems to support food security in the face of climate change". It is a concept inclusive of "all environment friendly agricultural approaches like integrated farming systems, conservation agriculture, natural farming, organic farming, precision agriculture, regenerative agriculture, reclamation of degraded soils and reduced food loss and waste to achieve sustainable agriculture"¹⁰.

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Climate-smart Policies in India

Agricultural programs and policies in India are funded by both central and state governments. The National Action Plan on Climate Change (NAPCC), launched in 2008, is a significant step towards reducing climate change. The National Mission for Sustainable Agriculture (NMSA) is one of the eight core national missions under the NAPCC that focuses on achieving the “triple-wins” envisioned under CSA by reducing emissions, increasing productivity through integrated farming, crop diversification and boosting nutrient management of soil. It is also closely linked to other national programs on agricultural development and food security¹¹.

The National Food Security Mission (NFSM) (2007) and the National Mission on Natural Farming (2023) to encourage chemical-free agriculture, play key roles in advancing CSA goals. Additionally, the (NMSA) aims to build the capacities of all stakeholders through the NMAET, the National Mission on Agriculture Extension & Technology.

The Indian Council of Agricultural Research’s National Innovation on Climate Resilient Agriculture studies adaptation and mitigation, demonstrates innovation, and spreads awareness to mitigate the effects of climate change on agriculture. The other important national programme, which is the Pradhan Mantri Krishi Sinchayee Yojana, is focused on the improvement of water resource management, the increase in dependable irrigation, especially the micro-irrigation, and the encouragement of efficient water use. To strengthen the resilience of farmers to climate-related risks, the Pradhan Mantri Fasal Bima Yojana, which was launched in 2016, offers a broad based insurance cover of crops losses or damages caused by unpredictable or accidental occurrences, including the climate change related events. Moreover, states were also required to come up with State Action Plans on Climate Change (SAPCCs) that align to (NAPCC) framework in 2009.

The insufficient emphasis on strengthening the resilience of weaker farmers is a key criticism levelled against India’s CSA policies, particularly the NMSA. A Centre for Science and Environment study¹² shows that many state SAPCCs lack robust vulnerability assessments and sufficient budget allocations. Another major concern is the weak coordination, convergence, and coherence among relevant departments of water, rural development etc. and implementing agencies¹³.

Gender-responsiveness of Agriculture Policies

Women are responsible for performing a wide set of critical activities including production, livestock management and thus, addressing their needs and preferences is essential for the success of CSA¹⁴. The Government acknowledges that integrations of such contexts would be beneficial in reducing vulnerabilities¹⁵ and hence, it is essential to guarantee that both women and men have equal opportunities to advance the cause of SDGs, including sustainable agricultural growth by 2030.

The Krishi Vigyan Kendras by the government supports and empowers women farmers. The Mahila Kisan Shashaktikaran Pariyojana, by the Ministry of Rural Development, is a step to enhance women’s participation and productivity in agriculture. Several other national programmes include special provisions to promote women farmers’ representation, such as the Agriculture Technology Management Agency (ATMA) under the NMAET Sub-Mission on Agricultural Extension, the Agri-Clinics and Agri-Business Centres scheme, dedicated mass media coverage for issues relevant to women farmers on All India Radio and television, the Mission for Integrated Development of Horticulture, subsidies for farm machinery, equipment and marketing, as well as initiatives like NFSM, NMSA, the Sub-Mission on Agricultural Mechanization, and agricultural insurance.

Gender budgeting and audits serve as key mechanisms to integrate gender concerns and ensure policies and budgets are responsive to women’s needs. States such as Gujarat, Kerala, and Odisha have since made comparatively stronger progress in embedding gender considerations into agricultural development efforts.

Gender and CSA Practices

Men have wider and easy accessibility to information and extension services as compared to women who tend to have lower awareness of CSA. The existing extension system often overlooks women because they are assumed to have limited influence over decisions related to purchasing, adopting, or using farm inputs and equipment, and less control over hiring labour or household spending¹⁶. Male-dominance in extension services leads to systematic exclusion of women farmers. Rural areas demonstrate a limited interaction of women with other men due to societal gender norms.

Suggestions

Climate-smart agriculture remains invisible in India’s agricultural adaptation measures. However, certain

associated practices could be found. The experiences highlight indicate toward measures to strengthen the institutional arrangements while improving engagement process. This could be implemented by being more gender-responsive, wise and systematic budgeting, public-private partnerships, and coherence and coordination of policies.

Another key focus should be on social and economic empowerment of women. They should be viewed as “agents of change” instead of “victims of climate change”, initiating a shift to more gender-responsive agriculture policies¹⁷.

The backing of community in any cause is significant. Similarly, community interventions on climate-smart agriculture can go a long way to identify its contextual vulnerability and measures to address the same. This involvement will eventually lead to more sustainable practices.

The definition of “farmer” needs a revisit so that women farmers are equally included. The benefits of the government must reach this section of vulnerable community. Alternative forms of farmer registration could be explored, legal frameworks must also be reconsidered to improve women’s status in terms of land ownership, public services, information services and credit.

It is also essential that women’s access to resources and information be improved. It is one of the biggest hindrance that women smallholders face. With their comparative lower education level, they are excluded from technical trainings, mechanized systems leading to more consumption of time.

Conclusion

India has shown strong commitment to climate-smart adaptation. In its Nationally Determined Contributions (NDCs), India has pledged greater investments in climate-vulnerable sectors. The government needs to further focus on robust agricultural services accompanied with

accessible credit insurance. Also, promotion of gender-inclusivity and responsiveness to climate-smart agriculture will strengthen resilience of small women farmers. Focus on social protection, research and development and collaborations will play a decisive role in the implementation and achievement of “triple wins”. □

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