

Tribal Women in India: Addressing Climate Change Challenges

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ABSTRACT

Climate change is impacting communities worldwide, but its effects are often felt most acutely by marginalized groups, including tribal women in India. This paper explores the multifaceted challenges faced by tribal women due to climate change, focusing on how their lives, livelihoods, and well-being are affected. At the same time, this paper provides a snapshot of climate change in India, including its causes, effects, and the country's response to this pressing issue. It also illustrates the implications of climate change on tribal women in India, exploring their unique vulnerabilities and the urgent need for focused action. Through the analysis of secondary data, this study sheds light on the specific vulnerabilities of tribal women, such as increased water scarcity, loss of traditional knowledge, and heightened health risks. It also highlights the resilience and adaptive strategies employed by these women to cope with and mitigate the impacts of climate change. By bringing attention to this overlooked demographic, this paper aims to inform policy and advocacy efforts to better support tribal women in the face of climate change.

Key words: Climate change, Tribal women, India, Adaptation, Mitigation, Vulnerability

Introduction

Climate change is a global phenomenon with localized impacts, often exacerbating existing vulnerabilities and inequalities. In India, a country with a rich tapestry of cultures and traditions, tribal communities find themselves at the frontline of this escalating crisis. Among these communities, women bear a disproportionate burden, facing unique challenges and adversities due to their roles, responsibilities, and social status. This article delves into the multifaceted impacts of climate change on tribal women in India, exploring how their lives are intricately tied to their natural environment and how the changing climate is reshaping their realities.

The tribal populations of India, also known as Adivasis, comprise about 8.6 percent of the nation's total population, with a significant presence in forest

and mountain regions. These areas are particularly vulnerable to the impacts of climate change, including erratic rainfall, increased temperatures, and frequent natural disasters. For tribal women, whose livelihoods and cultural practices are deeply intertwined with the land, forests, and water sources, these changes are not just environmental issues but existential threats. Many tribal communities depend on subsistence farming, fishing, and foraging for their livelihoods (Gupta and Khatoon, 2022). With the onset of unpredictable weather patterns, women, who often lead in agricultural activities and resource gathering, face increased workloads and uncertainty in their daily lives. The stress on food security not only affects nutrition and health but also increases the risk of conflict within communities over dwindling resources (Pole, 2017).

The article explores how climate-induced dis-

placement and migration present specific challenges for tribal women. As traditional lands become uninhabitable due to droughts, floods, or deforestation, families are forced to move, disrupting social structures and exposing women to new vulnerabilities, including increased incidences of gender-based violence and exploitation in displacement and urban settings. The narrative then shifts to the cultural impact, highlighting how the erosion of traditional knowledge and practices due to changing environmental conditions is particularly disempowering for tribal women. These women are often the custodians of biodiversity, medicinal knowledge, and cultural heritage. As ecosystems transform, the loss of these traditions not only affects community identity but also women's social status and autonomy. Addressing these challenges requires nuanced and culturally sensitive solutions. The article underscores the importance of involving tribal women in climate action and decision-making processes, acknowledging their unique knowledge and expertise. Empowering women through education, capacity-building, and economic opportunities is critical for fostering resilient communities that can adapt to the challenges posed by climate change. In short, the impacts of climate change on tribal women in India are profound and multifaceted, touching upon every aspect of their lives. Tackling these challenges effectively calls for a concerted effort that recognizes the interlinkages between gender, climate change, and social equity. By elevating the voices and needs of tribal women in the climate dialogue, there is hope for not just mitigating the impacts of climate change but also for building a more just and sustainable future for all.

Objectives

- To assess the status of tribal women in India and their crucial role in climate resilience
- To analyse the impact of climate change on tribal women in India and explore their unique vulnerabilities
- To put forward some recommendations to reduce their vulnerabilities

Materials and Methods

The current paper is descriptive in nature. It was based on secondary sources of data that were collected from various published and unpublished

records, different reports, and the contributions of several organizations and institutions in India. More specifically, the secondary sources consist of Census Data released by the Government of India, the Annual Report of the Ministry of Tribal Affairs, Government of India, Economic Surveys, and other journals, books, and websites.

Results and Discussion

Tribal People in India

Scheduled Tribes in India are usually referred to as *Advises*, which literally means indigenous peoples. India has the second largest concentration of tribal population, after that of the African continent. As per the Anthropological Survey, a total of 4635 communities are now to be found in India. Out of these total, 'tribal' or Indigenous communities number 732.

Table 1. Tribal Population in India

Census Year	Total Population of STs	% of STs to Total Population
1951	1,91,19,054	5.23
1961	3,01,73,998	6.87
1971	3,80,15,162	6.92
1981	5,16,28,638	7.58
1991	6,77,58,380	8.08
2001	8,43,26,240	8.20
2011	10,42,81,034	8.60

Source: Census of India, Ministry of Home Affairs, Government of India

According to the 1951 census, 5.6 percent of the total population of our country was tribal. As per the 2011 Census, the number of tribal populations in India is 10,42,81,034. It constitutes 8.6% of the total population of India. A total of 9,38,19,162 people belonging to scheduled tribes reside in rural areas while 1,04,61,872 people in urban areas. The scheduled tribes are 11.3 percent of the total population of rural areas and 2.8 percent of urban areas. During 2001-2011 the decadal growth rate of India's population was 17.64 percent. During this period the decadal growth rate of the scheduled tribes in India was 23.7 percent. The decadal growth rate of the scheduled tribes in rural areas was less, 21.3 percent, whereas it was more, 49.7 percent, in urban areas.

Table 2. Population (STs) in India (in millions)

Sex	2001	2011
Persons	84.3	104.3
Males	42.6	52.4
Females	41.7	51.9

Source: Census of India, Ministry of Home Affairs, Government of India

As per the 2011 census, over 104 million tribal populations in India, 52.4 million and 51.9 million people are males and females respectively. About 89.97 percent of the tribal people live in rural areas and are engaged in agriculture and allied activities.

The largest concentrations of indigenous people or tribal people are found in the seven states of north-east India, and the so-called 'central tribal belt' stretching from Rajasthan to West Bengal. More than half the Scheduled Tribes population is concentrated in the States of Madhya Pradesh, Maharashtra, Orissa, Gujarat, Rajasthan, Jharkhand, and Chhattisgarh.

Status of Tribal Women in India

Education

Literacy rate among tribal women is generally lower compared to the national average. Access to quality education remains a challenge in many tribal areas due to remoteness and infrastructure limitations.

Health

Maternal mortality rates are higher among tribal women compared to the general population. Access to healthcare facilities can be limited in remote tribal

areas.

• Economic Status

Many tribal women are engaged in traditional livelihoods, including agriculture, forest-based activities, and handicrafts. Income disparities and limited access to formal employment opportunities are common challenges. Government schemes such as the MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) aim to provide employment opportunities for tribal women (Pujasree, 2014).

• Land and Resource Rights

Land ownership and resource rights are crucial issues for tribal communities. In some regions, tribal women have limited access to and control over land and resources, leading to land-related conflicts and insecurity (Ratha, 2006).

• Challenges and Vulnerabilities

Tribal women often face challenges related to displacement due to development projects, loss of traditional livelihoods, and the impacts of climate change. Gender-based violence and discrimination persist in some tribal societies. Limited access to basic amenities like clean water and sanitation facilities can also be a concern in some areas (Khan and Hasan, 2020)

Tribal Women: A Unique Vulnerable Group

Tribal women in India are particularly vulnerable to the adverse effects of climate change due to several factors:

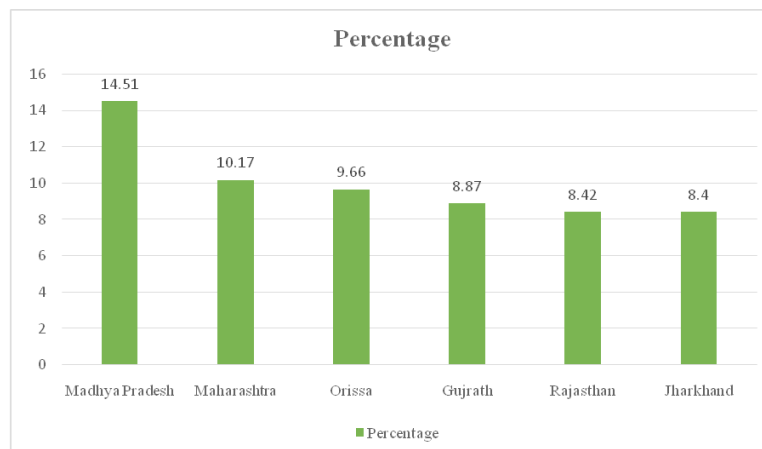


Fig. 1. State-wise Distribution of ST Population in India

Source: Census of India 2011, Ministry of Home Affairs, Government of India

- **Limited Resource Access:** Many tribal communities have inadequate access to essential resources such as clean water, healthcare, and education. Climate change exacerbates these resource scarcities, placing tribal women at a disadvantage when it comes to coping with its impacts.
- **Traditional Roles and Responsibilities:** Tribal women often play central roles in food production, water collection, and resource management. Climate change disrupts these roles by affecting agriculture and resource availability, adding to their workload and responsibilities.
- **Economic Disparities:** Economic disparities and discrimination faced by tribal women make them more vulnerable to climate-induced hardships. Limited income options and opportunities for economic advancement compound the challenges they face (Ramya, 2018).

Impact Categories: How Climate Change Affects Tribal Women

The impact of climate change on tribal women in India can be categorized into several key areas:

- **Food Security and Agriculture:** Changes in precipitation patterns and rising temperatures can result in crop failures, which, in turn, affect food availability and nutrition in tribal communities. Food security is particularly critical for vulnerable populations (Kumar, & Ritwika, 2020).
- **Water Resources:** Altered precipitation patterns and the melting of glaciers impact the availability and quality of water sources. This poses significant health risks, especially when clean drinking water is scarce.
- **Health Concerns:** Increasing heatwaves and changes in disease vectors raise health concerns among tribal communities. Limited access to healthcare facilities exacerbates these challenges.
- **Livelihood Disruption:** Traditional livelihoods such as agriculture, forestry, and fishing are under threat from climate change. These livelihoods form the economic backbone of many tribal communities, and their disruption can lead to increased poverty and vulnerability.
- **Displacement and Migration:** Rising sea levels and extreme weather events can force tribal communities to migrate, resulting in the loss of homes, land, and livelihoods. This displacement adds another layer of vulnerability to tribal women.

Role of Tribal Women in Climate Resilience

Tribal women play a crucial role in climate resilience, acting as both guardians of their communities' natural resources and innovators in the face of environmental changes. Their contributions are diverse, deeply rooted in indigenous knowledge, and essential for the sustainable management of ecosystems (Patel, and Manju, 2014). Understanding and amplifying their role is key to enhancing community resilience to climate change. Here's how tribal women contribute to climate resilience:

• *Knowledge Keepers*

Tribal women possess an extensive understanding of their local environments, including the medicinal properties of plants, sustainable harvesting methods, and the management of biodiversity. This traditional ecological knowledge is invaluable for developing strategies that enhance ecosystem resilience and reduce vulnerability to climate impacts (Yangandalwar and Indira, 2022).

• *Agricultural Innovators*

In many tribal societies, women are the primary agricultural workers, responsible for the cultivation and harvesting of crops. They have developed and passed down resilient farming practices such as mixed cropping, agroforestry, and the use of indigenous seed varieties that are more resistant to pests, diseases, and climate variability. These practices not only secure food sources but also maintain soil health and biodiversity.

• *Water Stewards*

Access to water is a critical issue that is being exacerbated by climate change. Tribal women often bear the responsibility for water collection and management, giving them a deep understanding of water sources, quality, and seasonal variations. They play a key role in managing water resources sustainably, employing traditional water conservation techniques such as rainwater harvesting and the construction of small-scale irrigation systems.

• *Agents of Change*

Tribal women are increasingly recognized as agents of change in their communities. They are leading efforts to combat deforestation, promote renewable energy sources, and implement community-based adaptation strategies. By mobilizing communities,

advocating for environmental protection, and participating in decision-making processes, they are pivotal in driving the adoption of sustainable practices and policies (Nayak, 2016).

- ***Custodians of Biodiversity***

The intimate relationship between tribal women and their natural surroundings positions them as custodians of biodiversity. They play a critical role in preserving genetic diversity through the conservation of indigenous plant species and traditional crops, which is essential for ecosystem resilience and adaptation to changing climatic conditions (Patra, 2020).

- ***Educators and Transmitters of Knowledge***

Tribal women educate their communities and future generations about the importance of environmental stewardship, passing down traditional knowledge and practices that are crucial for sustainable living. This intergenerational transfer of knowledge is a cornerstone of community resilience (Worrel, 2017).

To maximize the contribution of tribal women to climate resilience, it is essential to ensure their access to resources, education, and decision-making arenas. Empowering tribal women through policies that recognize and support their roles, rights, and knowledge can lead to more effective and inclusive solutions to climate challenges (Nisha and Asokhan, 2015). This includes integrating traditional ecological knowledge into climate adaptation and mitigation strategies and acknowledging the value of their contributions to biodiversity conservation and sustainable resource management. By centering tribal women in climate resilience efforts, societies can harness a powerful force for sustainable development and environmental protection (Yangandalwar and Indira, 2022).

Recommendations

To address the profound impacts of climate change on tribal women in India, several recommendations can be made:

- **Strengthen social safety nets** to ensure a minimum standard of living for tribal communities.
- **Promote climate-resilient agricultural practices** and sustainable resource management to enhance food security and livelihoods.
- **Develop gender-sensitive policies** and programs that consider the unique needs and roles of tribal women in climate adaptation and mitigation efforts.

- **Encourage active participation** of tribal communities, especially women, in decision-making processes related to climate change adaptation and mitigation.

Conclusion

The article illuminates the multifaceted adversities faced by tribal women in India due to the impacts of climate change. These women, integral to their communities as primary caregivers and providers of food and fuel, find themselves on the frontline, battling the repercussions of an increasingly volatile climate. The narrative underscores the disproportionate burden these women bear, from dwindling natural resources and increased agricultural failures to the exacerbation of gender inequalities and heightened risks of violence. Despite these challenges, the article also highlights the resilience and ingenuity of tribal women, who are leveraging traditional knowledge and sustainable practices to adapt and mitigate the effects of climate change. Their efforts, however, are often overshadowed by the lack of access to support systems, resources, and decision-making platforms, which hampers their ability to scale these solutions and secure their livelihoods and communities against the looming threat of climate disruption.

The conclusion of the article calls for a holistic approach that recognizes the pivotal role of tribal women in climate resilience. It urges the integration of gender perspectives into climate policies, enhanced access to education, healthcare, and economic opportunities for women, and the facilitation of their participation in environmental governance. By empowering tribal women, not only can their immediate vulnerabilities be addressed, but they can also serve as catalysts for sustainable development and conservation practices that are crucial for the health of the planet. Ultimately, the article serves as a poignant reminder that the fight against climate change cannot be won without ensuring the rights, voices, and expertise of tribal women are at the forefront of global and national climate agendas. Their traditional knowledge and lived experience are invaluable resources that can guide more effective and equitable solutions to the climate crisis, illuminating a path toward a more sustainable and just future for all.

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