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Trends and Patterns of Scheduled Tribe Female Agricultural Workers in India, 2001-2011

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Abstract

Tribal female workers are known for their contribution in agriculture all over the world. But scheduled tribe female workers in India are experiencing unparalleled marginalisation, which has resulted in widespread underemployment. Over the years scheduled tribe female cultivators are decreasing while the percent of agricultural labourers is increasing. In 2001 the per cent of scheduled tribe female workers in cultivator's category was 41.2 and in 2011 this per cent was only 30.1 so the decrease of 11.1 per cent is noticeable while in 2001 the per cent of agricultural labourers of scheduled tribe female workers was 44.8 and in 2011 this per cent was 53.1 so there is a very sharp increase of scheduled tribe female workers in agricultural labourers' category in India. The fast transition is worth investigating to understand the reasons for the changing trends.

Keywords: Scheduled tribe female agricultural workers, Cultivators, Agricultural labourers, Regional patterns

Introduction

Females' studies in India have their origins in the West, where they began in the 1960s, gained momentum in the 1970s, and eventually developed into an ideology that took the form of feminism. In India, females' studies only gained traction in the 1980s. Females were primarily studied in relation to their domestic and family roles in rural and tribal studies. Kinship, family, and marriage studies predominated as well, but no special attention was paid to their roles in the economic and political spheres of society (Mehra, 1992) [2]. The distribution of scheduled tribe population has been extremely uneven across the country. Despite the uneven distribution, the scheduled tribes have a high rate of work participation, with 50 percent of their population actively working. The most important aspect of their work is that agriculture employs more than 90 percent of the tribe's working population. The patterns of tribal employment in agriculture, whether as a cultivator, agricultural labourer, or both, are inextricably linked to the issue of landholding (Singharoy, 2004) [3].

The regional variations among the scheduled tribe population in India and the nature of agriculture in different regions of India are significant and indicative of high complexities of these patterns. Regional variations are observed in the participation of scheduled tribe females in agriculture due to differences in land use, cropping pattern and local development initiatives. For example, scheduled tribe population dominated states like Madhya Pradesh, Odisha, Chhattisgarh, and Jharkhand etc. have shown different trends in the scheduled tribe female agricultural workforce than other states with a relatively low scheduled tribe population (Sharma & Mohan, 2024) [11].

The role of scheduled tribe females is further highlighted by the way in which tribal agriculture is organised, and females continue to participate at a high rate. Scheduled tribe females participate equally with males in most agricultural activities (Corbridge, 1988) [1]. The significant reliance on agriculture suggests that the secondary and tertiary sectors have not grown as intended (Kikhi, 2009). Females are more likely to stay in less desired jobs, like agriculture, for a longer period of time. Additionally, they have a tendency to be replaced more quickly when jobs grow more skilled and technologically advanced as well as in lower-paying, and less stable jobs like those in the "semi-formal" industrial sector. Their working conditions are typically worse, their pay is typically "stickier" than that of males, and they have less bargaining power (Mehra & Gammage, 1999) [5].

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Agriculture is becoming more 'feminised' as males leave the sector faster than females and as females become the preferred labour type (Singh, 2003). In agriculture, policies are needed that recognise scheduled tribe females' roles as farmers and make them eligible for the same services and resources as scheduled tribe male farmers, such as agricultural extension, credit, training, information, and new technologies. Scheduled tribe females, too, require access to land in their own right (Mehra & Gammage, 1999)^[5].

Data sources and methodology

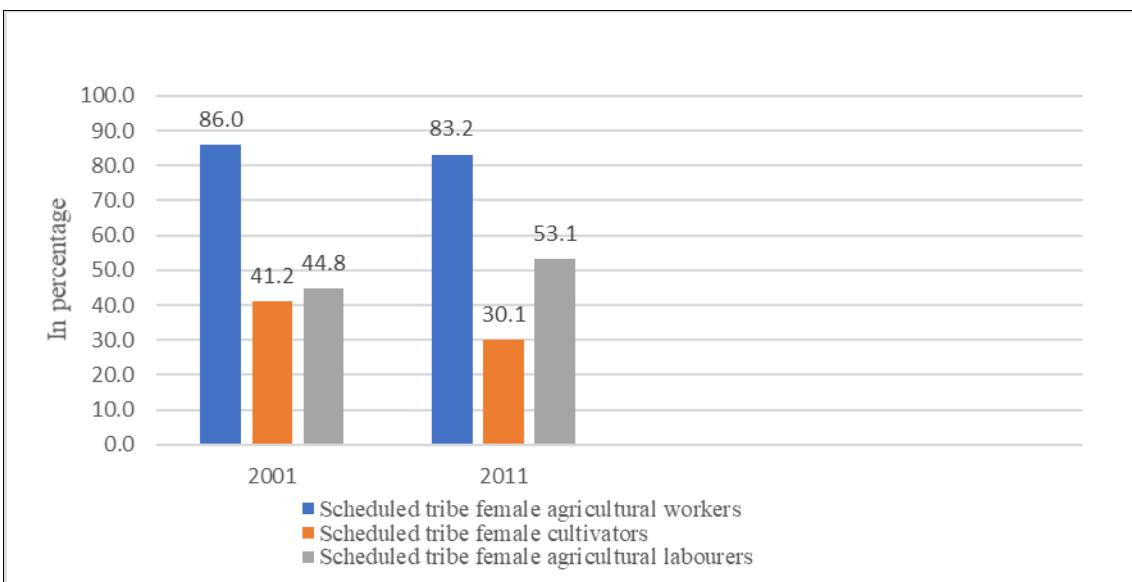
This study looks at the patterns and trends of scheduled tribe female agricultural workers from 2001 to 2011. Scheduled tribe female agricultural workers include cultivators and agricultural labourers. Data regarding for these two categories (scheduled tribe female cultivators and schedule tribe female agricultural labourers) has taken from the primary census abstract for the year of 2001 and 2011. To find scheduled tribe female agricultural workers, cultivators and agricultural labourers have been added together and to get work participation rate of scheduled tribe female agricultural workers, total scheduled tribe female

agricultural workers has been divided by the total scheduled tribe female workers. Likewise, the total number of scheduled tribe female cultivators and agricultural labourers were divided by the total number of scheduled tribe female workers to get the work participation of scheduled tribe female cultivators and scheduled tribe female agricultural labourers.

Results and discussion

Scheduled tribe female agricultural workers, 2001-2011: Country overview

From the year of 2001 to 2011, scheduled tribe female agricultural workers decreased 2.8 percent in India. The percent of scheduled tribe female cultivators fell significantly from 41.2 percent to 30.1 percent, suggesting a decrease in land ownership or self-farming, while overall agricultural involvement decreased little from 86 percent to 83.2 percent. In the meantime, the percent of scheduled tribe female agricultural labourers increased from 44.8 percent to 53.1 percent, indicating a stronger reliance on wage-based labour in agriculture.



Source: Primary Census Abstract, 2001-2011

Fig 1: India: Scheduled Tribe Female Agricultural Workers, 2001-2011

Section-I

Regional patterns of scheduled tribe female agricultural workers 2001-2011

- Regions of high proportion of ST female agricultural workers (80 percent and above)
- Regions of moderate proportion of ST female agricultural workers (Between 40.00 percent to 79.99 percent)
- Regions of low proportion of ST female agricultural workers (Below 39.99 percent)

Regional patterns of scheduled tribe female agricultural workers -2001

The percent of total scheduled tribe female agricultural workers is 86.0 at national level while this percent is 71.8 of female agricultural workers in India that shows a high degree of participation of scheduled tribe female workers in agriculture. Among 26 states 15 states have high proportion

of scheduled tribe female agricultural workers. States under high proportion category include Chhattisgarh, Madhya Pradesh, Rajasthan, Himachal Pradesh, Maharashtra, Andhra Pradesh, Jharkhand, Gujarat, Arunachal Pradesh, Bihar, Nagaland, Tripura, Assam, Odisha and Karnataka. In high proportion category Chhattisgarh state was on top with 92.8 percent scheduled tribe female agricultural workers while Karnataka was at the bottom with 80.7 percent and three states namely Chhattisgarh, Madhya Pradesh and Rajasthan had more than 90 percent scheduled tribe female agricultural workers. Union Territory Dadra & Nagar Haveli lie under this category with 87.5 percent scheduled tribe female agricultural workers. Out of 26 states 10 states fall under the category of moderate proportion of scheduled tribe female agricultural workers. There were wide disparities in the percent of this category as Uttarakhand had 78.5 percent scheduled tribe female agricultural workers with the top position in this category at the same time 59.2

percent scheduled tribe female workers of Kerala were engaged in agricultural work owing to the lowest position in this category. In 2001 Goa state had no scheduled tribe female agricultural workers while under Union Territories Daman & Diu showed 20.1 percent and Andaman & Nicobar had 0.8 percent whereas Lakshadweep had no scheduled tribe female agricultural workers.

Regional patterns of scheduled female agricultural workers -2011

According to 2011, census data, scheduled tribe female agricultural workers were recorded 83.2 percent that shows a very low decline from the 2001 census data. In 2011 there were 10 states which had high proportion of scheduled tribe female agricultural workers include Chhattisgarh, Madhya Pradesh, Maharashtra, Andhra Pradesh, Bihar, Gujarat, Rajasthan, Jharkhand, Himachal Pradesh, Odisha. No Union Territory lie under the category of high proportion of scheduled tribe female agricultural workers. States under moderate proportion of scheduled tribe female agricultural workers increased from 10 states in 2001 to 15 states and one Union Territory Dadra and Nagar Haveli with 72.1 percent in 2011. Dadra and Nagar Haveli recorded a sharp decline of 15.4 percent in 2011 in comparison to 2001 census data. States having moderate proportion of scheduled tribe female agricultural workers were Uttarakhand, Tamil Nadu, Arunachal Pradesh, Manipur, Uttar Pradesh, Nagaland, Karnataka, Assam, West Bengal, Tripura, Meghalaya, Sikkim, Mizoram, Jammu & Kashmir, Kerala. Union Territories of Daman and Diu and Andaman and Nicobar Islands had 18.8 and 2.6 percent scheduled tribe female agricultural workers respectively while Lakshadweep did not record the number of scheduled tribe female agricultural workers. In 2011, census data, recorded that Goa state experienced a sharp increase of 39.7 percent scheduled tribe female agricultural workers.

Change in scheduled tribe female agricultural workers, 2001-2011

Urbanization and migration are among the biggest reasons for the decline in percent of scheduled tribe female agricultural workers. Urban migration for jobs. Some of the scheduled tribe females are migrating to urban regions looking for better employment opportunities. Trends observed as accelerated urbanization in states like Nagaland (-8.2 percent), Meghalaya (-8.4 percent) and Mizoram (-7.5 percent). The lure of city-based work in construction, domestic labour and small businesses has shrunk the

number of females in agriculture, as has the backwardness of the sector. On the other hand, the figures from Tripura (-10.84 percent) and Arunachal Pradesh (-9.3 percent) reveal a decrease in agriculture-based employment as it is being replaced by non-farm occupations. Then there is the important question of agricultural distress and new economic structures. Unpredictable weather patterns, water depletion and reduced returns from farming have prevented females from working in agriculture in states like Rajasthan (-5.5 percent), Chhattisgarh (-1.6 percent) and Gujarat (-0.3 percent). Also, due to the increase in non-farm rural employment in Himachal Pradesh (-8.2 percent) and in Uttarakhand (-1.4 percent), like horticulture, tourism, government jobs etc., a considerable number of scheduled tribe females have to move to non-agriculture due to pull of non-farm rural employment. Government policies, especially the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), have created alternative employment options that lessen reliance on agricultural work. In states such as Jharkhand (-3.8 percent) and Odisha (-0.7 percent), numerous scheduled tribe females are opting for the stable income provided by government job schemes instead of the unpredictable income from agricultural labour. Furthermore, land acquisition for industrial and urban initiatives in regions like Dadra & Nagar Haveli (-15.4 percent) and West Bengal (-3.0 percent) has resulted in a decrease in arable land, prompting individuals to pursue jobs in other sectors.

Section-II

Regional patterns of scheduled tribe female cultivators, 2001-2011

- Regions of high proportion of scheduled tribe female cultivators (60.00 percent and above)
- Regions of moderate proportion of scheduled tribe female cultivators (30.00 percent to 59.99 percent)
- Regions of low proportion of scheduled tribe female cultivators (29.99 percent and below)

The high percent of scheduled tribe female cultivator's category includes the states and Union Territory that showed 60 percent or more of scheduled tribe female cultivators. Arunachal Pradesh (82.5 percent), Nagaland (79 percent), Rajasthan (71 percent), Manipur (66.4 percent), Assam (66.2 percent), Uttarakhand (65.3 percent), Sikkim (62.4 percent), Mizoram (62.1 percent), Dadra & Nagar Haveli (61.7 percent), and Himachal Pradesh (88.4) are these states and Union territories.

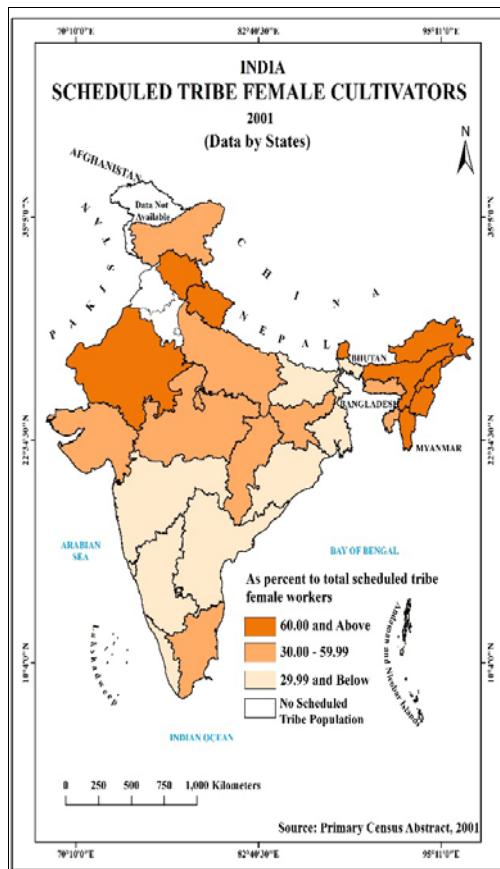


Fig 2: State-wise distribution of Scheduled Tribe female cultivators in India (2001 Census data).

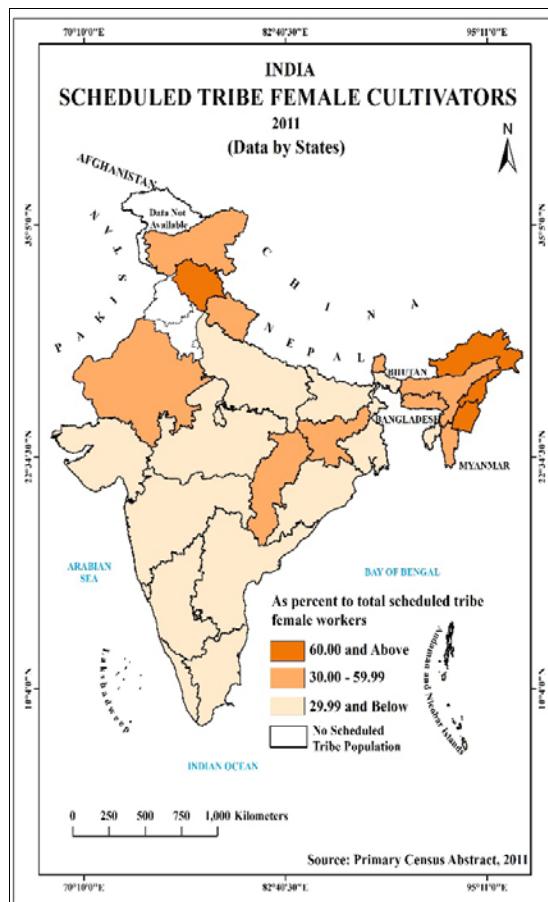


Fig 3: State-wise distribution of Scheduled Tribe female cultivators in India, 2011 (Census data).

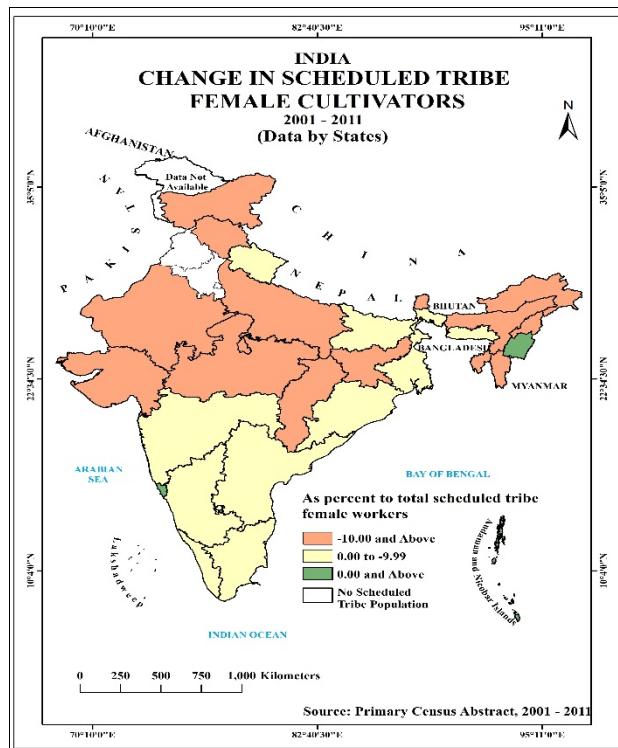


Fig 4: State-wise change in Scheduled Tribe female cultivators in India during 2001–2011 (Census data).

States and Union Territories with a scheduled tribe female cultivator percent ranging from 30 to 59.99 percent fall into the moderate category.

The following states are included in this category: Madhya Pradesh (43.1 percent), Uttar Pradesh (40.2 percent), Tripura (38.9 percent), Tamil Nadu (34.6 percent), Gujarat (32.9 percent), Jharkhand (49.9 percent), Meghalaya (54.5 percent), Chhattisgarh (50.7 percent), and Jammu & Kashmir (59 percent). States and Union Territories where percent of cultivator's is less than 30 percent are included in low category. Among these states are Kerala (8.7 percent), West Bengal (12.6 percent), Bihar (16.1 percent), Karnataka (21.3 percent), Odisha (21.9 percent), Maharashtra (29.4 percent), and Andhra Pradesh (29.4 percent). States like Goa (0), the Union Territories of the Andaman & Nicobar Islands (0.6 percent), and Lakshadweep (0) have very few or no scheduled tribe female cultivators. This is due to topographical and economic restrictions on farming.

Manipur (68.4 percent), Nagaland (68.1 percent), Himachal Pradesh (76.5 percent), and Arunachal Pradesh (70.8 percent) are the only four states out of 26 that fall into the high participation category of cultivators in 2011. The moderate category of scheduled tribe female cultivators includes states such as Uttarakhand (57 percent), Rajasthan (52.3 percent), Mizoram (51.7 percent), Assam (51.4 percent), Sikkim (50.8 percent), Jammu & Kashmir (47.7 percent), Meghalaya (47 percent), Jharkhand (38.5 percent), Chhattisgarh (37.2 percent), and Union Territory Dadra & Nagar Haveli (32.2 percent).

Change in scheduled tribe female cultivators, 2001-2011

In India, the participation rate of female cultivators from scheduled tribes dropped by 11.2 percent between 2001 and 2011, a significant decrease. In the majority of states and Union Territories, the number of females from scheduled tribes working as cultivators has significantly decreased. Dadra & Nagar Haveli, for example, recorded the biggest

drop, followed by Uttar Pradesh (24.8 percent), Rajasthan (18.7 percent), and Gujarat (16 percent).

These rapid decreases are caused by a variety of factors, including the fragmentation of landholdings, the decline in small-scale farming's profitability, migration to urban regions, and a shift toward non-agricultural jobs. The declining involvement of scheduled tribe females as cultivators in agriculture have been impacted by changing land use patterns and environmental concerns. However, a number of regions had either small changes or an increase in the participation percent, defying the national trend. The notable increases of 17.2 percent in Goa and 10.9 percent in Daman & Diu may have been caused by a variety of regional circumstances, such as more support for agricultural activity or a lack of other employment alternatives.

Section -III

Regional patterns of scheduled tribe female agricultural labourers, 2001-2011

- Regions of high proportion of scheduled tribe female agricultural labourers (50.00 percent and above)
- Regions of moderate proportion of scheduled tribe female agricultural labourers (25.00 percent to 49.99 percent)
- Regions of low proportion of scheduled tribe female agricultural labourers (24.99 percent and below)

Eight states out of twenty-six states have a high percent of scheduled tribe female agricultural labourers. Bihar (68 percent) leads in this category, followed by West Bengal (62 percent), Karnataka (59.4 percent), Maharashtra (59.3 percent), Odisha (59.1 percent), Andhra Pradesh (58.4 percent), Gujarat (53.3 percent), and Kerala state (50.5 percent). Madhya Pradesh (49.2 percent), Tamil Nadu (43.9 percent), Tripura (43.5 percent), Chhattisgarh (42.1 percent), Jharkhand (37.8 percent), Uttar Pradesh (37.5

percent), and Dadra & Nagar Haveli (25.8 percent) are among the states and union territories categorized as moderate. Meghalaya (20.3 percent), Rajasthan (19.3 percent), Assam (15.4 percent), Uttarakhand (13.3 percent), Manipur (8.5 percent), Mizoram (6.8 percent), Sikkim (6.3 percent), and Daman and Diu (17.1 percent) are among the states and union territories with the lowest participation of scheduled tribe female agricultural labourers. The states of Nagaland (3.9 percent), Jammu & Kashmir (3.5 percent), Arunachal Pradesh (2.5 percent), and Himachal Pradesh (1 percent) follow a trend of restricted engagement of scheduled tribe females as agricultural labourers. There are few or no scheduled tribal female agricultural labourers in the Andaman and Nicobar Islands (0.2 percent), Lakshadweep (0), and Goa (0) state, indicating significant economic diversification. The high category, which includes

states and union territories with scheduled tribe female agricultural labourer participation rate of fifty percent and higher, includes states where a significant portion of the scheduled tribe female population is employed as agricultural labourer. The 53.1 percent national average for India indicates that the scheduled tribe female labour force is largely reliant on agriculture. The largest percent of scheduled tribe females working as agricultural labourer are found in Bihar (74 percent) in the 2011 census. Gujarat (69 percent), Odisha (66.5 percent), Andhra Pradesh (65.9 percent), West Bengal (65 percent), Maharashtra (64.1 percent), Madhya Pradesh (62.4 percent), Uttar Pradesh (60.2 percent), Karnataka (56.5 percent), Chhattisgarh (54 percent), and Tamil Nadu (50.6 percent) are the next most common states in this category.

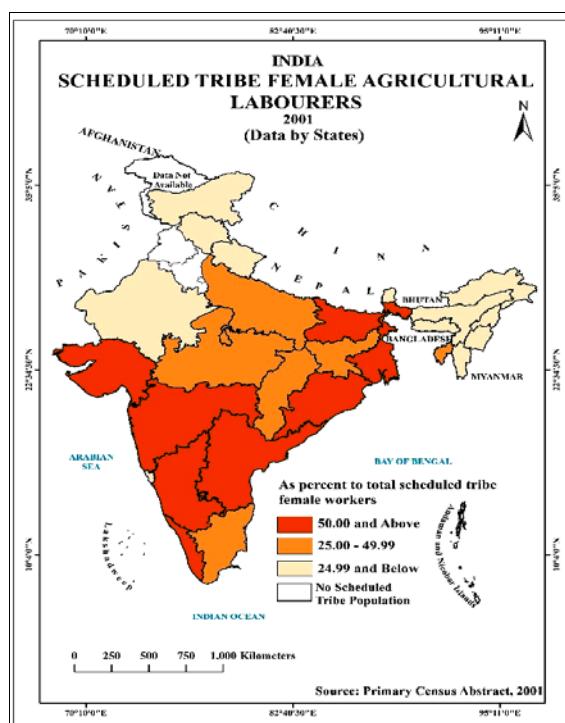


Figure 5: State-wise distribution of Scheduled Tribe female agricultural labourers in India, 2001 (Census data).

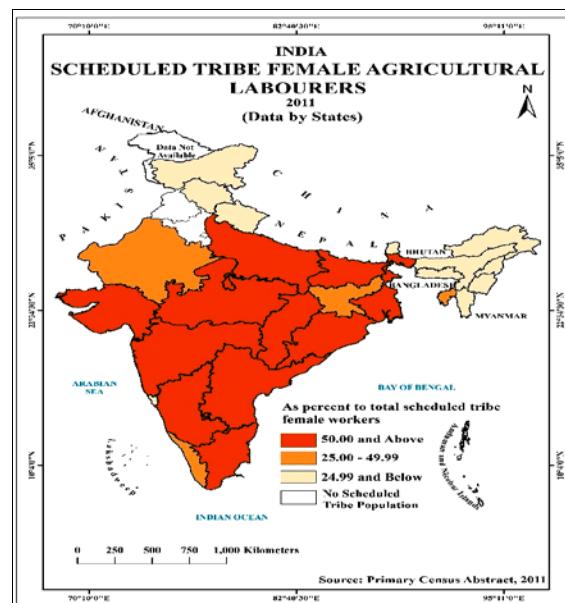


Figure 6: State-wise distribution of Scheduled Tribe female agricultural labourers in India, 2011 (Census data).

Only four states fall into the moderate category: Union Territory Dadra & Nagar Haveli (40 percent), Tripura (45.8 percent), Kerala (45.8 percent), Jharkhand (45.4 percent), and Rajasthan (32.5 percent). Assam (22.4 percent), Uttarakhand (20.1 percent), Meghalaya (19.4 percent), Sikkim (11.3 percent), Jammu & Kashmir (11.2 percent), Mizoram (9.7 percent), Manipur (7.4 percent), Nagaland (6.6 percent), Arunachal Pradesh (4.9 percent), Himachal Pradesh (4.8 percent), Daman & Diu (4.9 percent),

Andaman & Nicobar Islands (1.1 percent), and Lakshadweep (not recorded) are among the low category of scheduled tribe female agricultural labourers. The change in the scheduled tribe female agricultural labourer participation rate in India between 2001 and 2011, demonstrating an 8.3 percent increase on a countrywide scale. This shows that the number of scheduled tribal females working in agriculture has risen dramatically, showing a shift in their financial status as agricultural labourers.

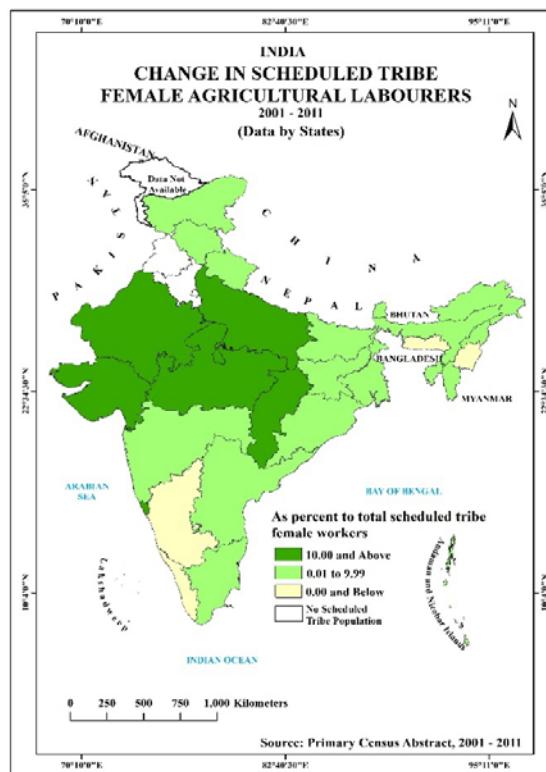


Fig 7: State-wise change in Scheduled Tribe female agricultural labourers in India during 2001–2011 (Census data).

Change in scheduled tribe female agricultural labourers, 2001-2011

Participation rates increased considerably in several states and Union Territories, with Uttar Pradesh and Goa leading the way with increases of 22.7 percent and 22.5 percent, respectively. Other states had significant increases in the number of scheduled tribal females working as agricultural labourers, including Madhya Pradesh (13.2 percent), Rajasthan (13.2 percent), Dadra & Nagar Haveli (14.2 percent), and Gujarat (15.7 percent). This notable increase is explained by determinants such as decreased land ownership in scheduled tribes, which involved more females to labour for income in agriculture. In some regions, the percent of scheduled tribe female agricultural labourers has declined. Daman and Diu recorded the highest loss, down 12.2 percent, followed by Kerala (-4.7 percent), Karnataka (-2.9 percent), and Manipur (-1.1 percent). The loss of farmland ownership by tribal people as a result of industrialization, urbanization, or debt-related misery is a driving force in the rise of scheduled tribe female agricultural labourers. Increasing land acquisition for infrastructure, industries, and non-tribal people have forced scheduled tribe females out of agricultural work on their own farms, compelling them to work on the farms of others in states such as Uttar Pradesh (22.8 percent), Gujarat (15.7 percent), and Rajasthan (13.2 percent). Many tribal people have been displaced as a result

of mining and deforestation in areas such as Jharkhand (7.6 percent) and Chhattisgarh (11.9 percent), prompting scheduled tribe female workers to hunt for work as farm labourers.

Conclusion

The research shows a significant change in the scheduled tribe female agricultural workers in India between 2001 and 2011. There was a notable decline in the percent of scheduled tribe female cultivators, which fell from 41.2 percent in 2001 to 30.1 percent in 2011. This decline emphasizes a movement away from independent farming toward wage-based agricultural labour. On the other hand, the proportion of scheduled tribe female agricultural labourers increased significantly from 44.8 percent in 2001 to 53.1 percent in 2011. This trend indicates an increasing dependence on casual and less stable work within the agricultural sector. These results indicate that economic hardships, land fragmentation, and decreasing agricultural profitability have driven more tribal females toward wage labour instead of land ownership and cultivation.

States such as Chhattisgarh, Madhya Pradesh, Odisha, Jharkhand, and Maharashtra consistently show high percent of scheduled tribe female agricultural workers, reflecting their ongoing dependence on agriculture. Conversely, states with smaller scheduled tribe population or more diversified

economies, like Kerala, West Bengal, and Tamil Nadu, experienced a reduction in agricultural participation. In states such as Nagaland, Meghalaya, and Mizoram, urbanization has resulted in a decrease in agricultural participation among scheduled tribe females as they go for alternative job opportunities in urban and semi-urban areas. Likewise, economic diversification in Goa, Daman & Diu, and Dadra & Nagar Haveli has created better work opportunities outside of agriculture.

Scheduled tribe female workers' access to resources and land ownership is becoming increasingly unequal. The decrease in the number of female cultivators indicates that landholding patterns are shifting as a result of infrastructural development and industrial growth, which is resulting in land to be sold, split, or lost. Hence scheduled tribe females are becoming more economically vulnerable and marginalised as a result of working on other people's fields rather than farming on their own fields, which is reflected in the rise in agricultural labour.

Although scheduled tribe females in India continue to work mostly in agriculture, their work profile is gradually changing from cultivators to agricultural labourers. The results highlight the necessity of particular measures, such as improved access to land rights, agricultural loans, technology, and training, that aid scheduled tribe female farmers. Their dependence on agricultural labour can be decreased by addressing rural suffering, encouraging sustainable agricultural methods, and expanding non-agricultural job opportunities.

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