E-ISSN: 2583-9667
Indexed Journal
Peer Reviewed Journal
https://multiresearchjournal.theviews.in

Received: 01-02-2026
Accepted: 09-03-2026
Published: 15-04-2026

INTERNATIONAL JOURNAL OF ADVANCE RESEARCH IN MULTIDISCIPLINARY

Volume 4; Issue 2; 2026; Page No. 92-96

A Study of Distress Migration and its Impact on the Rural Demographics of Bundelkhand Region

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DOI: https://doi.org/10.5281/zenodo.19728513

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Abstract

Bundelkhand, a semi-arid plateau region spanning parts of Uttar Pradesh and Madhya Pradesh, has long suffered from chronic agrarian distress, recurrent drought, and ecological degradation. These factors have collectively driven large-scale distress migration — an involuntary movement of rural households seeking survival outside their native villages. This paper investigates the magnitude, causes, and demographic consequences of distress migration in Bundelkhand. Drawing on secondary data from Census of India (2001, 2011), NSSO reports, and published regional studies, the research analyses shifts in sex ratio, age structure, occupational composition, and village depopulation trends. Findings reveal that distress migration has severely feminised the rural population, accelerated ageing in sending villages, disrupted agricultural labour availability, and eroded traditional social structures. The paper also examines the role of MGNREGA and other policy interventions in mitigating distress, while highlighting structural gaps that perpetuate out-migration. The study contributes to broader discussions on climate-induced migration, rural demographic decline, and sustainable development in vulnerable dryland regions of India.

Keywords: Distress Migration, Bundelkhand, Rural Demographics, Agrarian Crisis, Drought, Feminisation of Agriculture, Depopulation, MGNREGA

1. Introduction

Migration has always been an intrinsic part of human history. However, when migration is driven not by aspiration but by desperation - by the failure of rains, collapse of livelihoods, mounting debt, and absence of local employment - it takes the form of 'distress migration.' This phenomenon is especially pronounced in Bundelkhand, one of India's most drought-prone and economically marginalised regions, straddling thirteen districts across Uttar Pradesh and Madhya Pradesh.

Bundelkhand covers approximately 71,000 sq. km with a population of over 18 million people (Census 2011). The region is characterised by thin, rocky soils, highly erratic monsoon rainfall (450–900 mm annually), depleted groundwater, deforestation, and endemic poverty. Between 2003 and 2010, the region experienced a prolonged drought cycle that devastated agricultural output and triggered massive out-migration of rural households to urban centres such as Delhi, Agra, Surat, and Mumbai.

Unlike economic migration, distress migration is involuntary, crisis-driven, and often involves the temporary or permanent displacement of the most economically vulnerable. It leaves behind ageing populations, feminised households, and depopulated villages - reshaping the rural demographic landscape in profound ways. Despite its severity, this form of migration has received comparatively less systematic geographic and demographic analysis. This paper attempts to fill that gap through a structured empirical and analytical review.

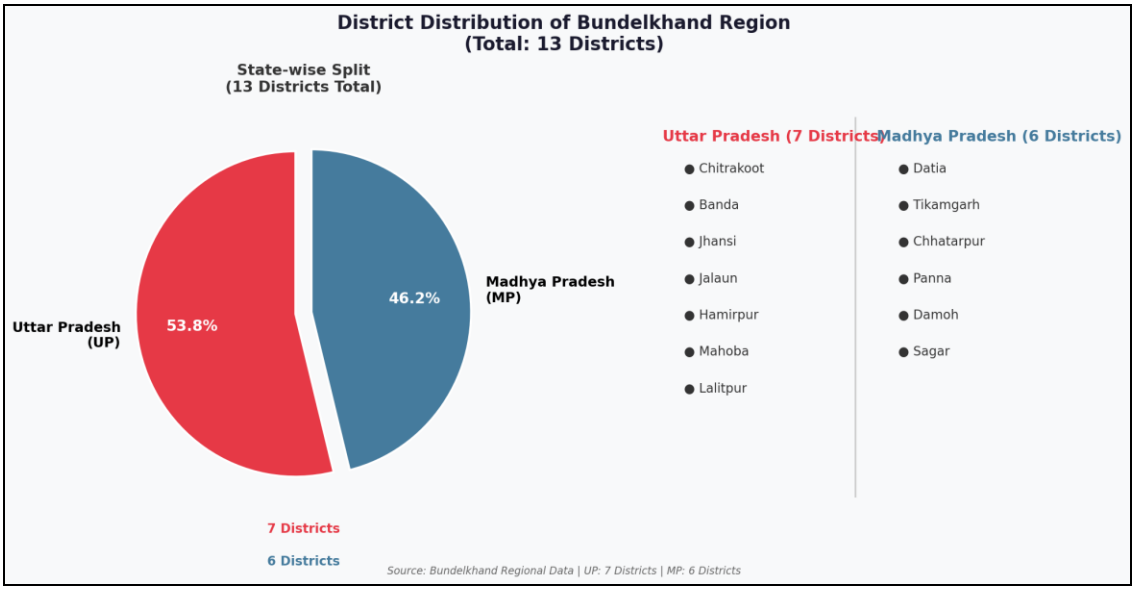
The objectives of this study are: (i) to examine the scale and patterns of distress migration in Bundelkhand; (ii) to identify the primary ecological, agrarian, and socioeconomic drivers; (iii) to assess the demographic impacts on sending rural communities; and (iv) to evaluate policy responses and their effectiveness in addressing root causes.

2. The Study Area: Bundelkhand Region

2.1 Geographic Profile

Bundelkhand is a historical and physiographic region

bounded by the Yamuna River to the north, the Vindhyan Range to the south, and the Betwa and Ken rivers flowing through its interior. The UP component includes districts such as Jhansi, Banda, Chitrakoot, Hamirpur, Mahoba, Jalaun, and Lalitpur; the MP component includes Datia, Tikamgarh, Chhatarpur, Panna, Damoh, and Sagar.



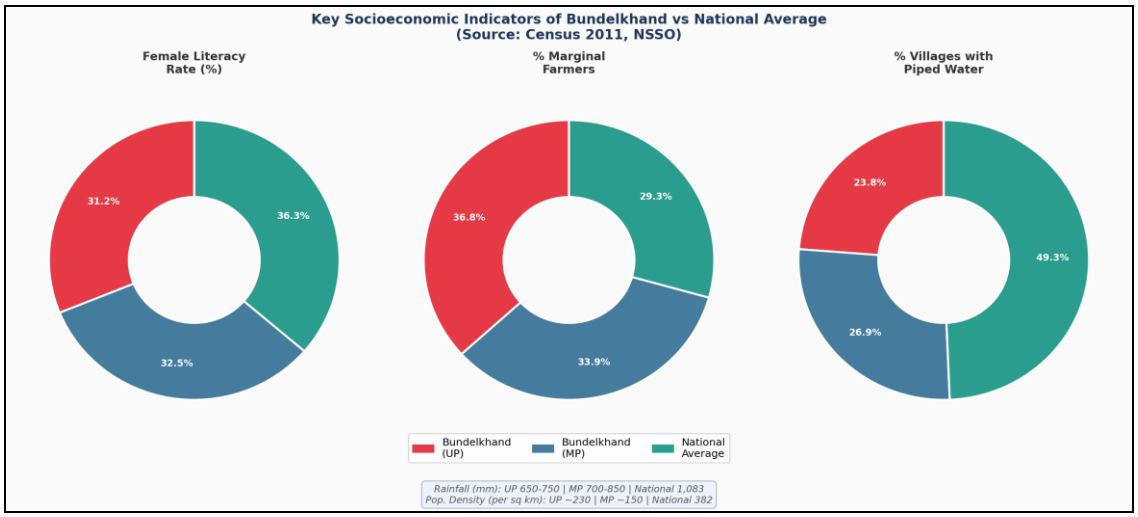
***Source*:** Census 2011, NSSO

Fig 1: This figure illustrates the administrative distribution of the Bundelkhand region across two Indian states. Out of a total of 13 districts, 7 districts (53.8%) fall under Uttar Pradesh - namely Chitrakoot, Banda, Jhansi, Jalaun, Hamirpur, Mahoba, and Lalitpur - while the remaining 6 districts (46.2%) belong to Madhya Pradesh, comprising Datia, Tikamgarh, Chhatarpur, Panna, Damoh, and Sagar. This cross-state spread of Bundelkhand is significant in the context of distress migration studies, as policy interventions and administrative responses to drought and livelihood crises differ between the two states despite the region sharing a common socio-economic and geographical identity.

The region's geology is dominated by Vindhyan sandstone and Bundelkhand granite. Soils are predominantly shallow, lateritic, and low in organic matter, severely limiting agricultural productivity. The tropical semi-arid climate results in highly variable and often deficient rainfall, making rain-fed agriculture - which accounts for nearly 70% of cropped area-extremely vulnerable to seasonal fluctuations.

2.2 Socioeconomic Context

Bundelkhand ranks among the least developed regions in India. Key socioeconomic indicators reflect persistent underdevelopment: literacy rates, particularly female literacy, remain below national averages. Land ownership is highly concentrated, with a majority of rural households being marginal farmers with holdings below one hectare. Scheduled Castes and Scheduled Tribes constitute a significant proportion of the population and are disproportionately affected by both drought and out-migration.



***Source*:** Census 2011, NSSO

Fig 2: This figure compares three socioeconomic indicators - female literacy, marginal farmers, and piped water access - between Bundelkhand (UP & MP) and the national average. On all three counts, both UP and MP parts of Bundelkhand lag behind national figures, with piped water access being the starkest gap (23–27% vs 49.3% nationally). These deficits in education, land holding size, and basic infrastructure collectively reflect the structural poverty that drives distress migration in the region.

3. Conceptual Framework

Migration theory offers several frameworks for understanding population movement. The classical Push-Pull model (Lee, 1966) [5] explains migration as the result of negative factors at origin (push) and positive factors at destination (pull). In the Bundelkhand context, drought, crop failure, debt, and lack of employment constitute strong push factors, while urban wage opportunities - however precarious - function as pull.

The New Economics of Labour Migration (NELM) theory (Stark & Bloom, 1985) [9] adds a household decision-making dimension, viewing migration as a risk-diversification strategy. In Bundelkhand, households frequently send one or more male members to urban areas as a survival strategy while women and elders remain in the village, explaining the observed feminisation of agricultural labour.

Vulnerability frameworks from climate change geography (Adger, 2006; Wisner *et al*., 2004) [1, 14] are also relevant, conceptualising distress migration as an outcome of social and ecological vulnerability exceeding adaptive capacity. The Pressure and Release (PAR) model links structural causes (marginalisation, lack of rights, fragile livelihoods) with dynamic pressures (inadequate infrastructure, endemic poverty) and unsafe conditions (exposure to drought, crop failure) to produce disaster - here, the disaster of forced displacement.

4. Causes of Distress Migration in Bundelkhand

4.1 Ecological and Climatic Factors

The most immediate trigger of distress migration in Bundelkhand is drought. The region experienced below-normal rainfall in 13 out of 20 years between 2000 and 2020 (IMD data). The severe drought of 2003–10 led to crop failures across consecutive kharif and rabi seasons, directly forcing out-migration from hundreds of villages. Groundwater depletion - due to over-extraction, degraded watershed systems, and loss of traditional water-harvesting structures (Johads, talabs) - has further reduced agricultural reliability.

Land degradation through soil erosion, waterlogging in lower areas, and encroachment by ravines (the 'chambal ravine' system extends into eastern Bundelkhand) has reduced net sown area over decades. Deforestation has disrupted local hydrology, increased evapotranspiration, and reduced biomass available for livestock - all compounding agricultural vulnerability.

4.2 Agrarian and Economic Factors

Agricultural distress in Bundelkhand is deeply structural. The dominant cropping system - coarse cereals and pulses - has low market value. Fragmented land holdings, absence of irrigation (only ~25% of agricultural land is irrigated), inadequate credit access, and exploitative informal lending create conditions of chronic indebtedness. Farmer suicides, while concentrated in Maharashtra, have also been reported in Bundelkhand districts particularly during drought cycles.

The collapse of non-farm rural employment - including traditional crafts, stone quarrying, and handloom weaving - has eliminated secondary income sources that previously buffered agricultural households against crop failure. Wage rates for agricultural labour in Bundelkhand remain among the lowest in north-central India, further accelerating out-migration.

4.3 Social and Institutional Factors

Caste-based land inequality means that Dalit and OBC households, who are often landless agricultural labourers, have fewer adaptive resources and migrate first during distress events. Poor road connectivity, inadequate public distribution system (PDS) coverage, and weak enforcement of MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) - particularly delays in wage payment - reduce the effectiveness of institutional safety nets.

5. Demographic Impacts on Rural Bundelkhand

5.1 Decline in Rural Population Growth Rate

Analysis of Census data (2001–2011) reveals that several districts in Bundelkhand recorded significantly lower population growth rates than the national and state averages. Districts like Mahoba (UP) and Panna (MP) showed growth rates below 10%, far lower than India's national decadal growth rate of 17.7%. While natural increase was positive, net migration losses offset population gains, resulting in near-stagnant or declining rural populations in many blocks.

5.2 Feminisation of Rural Population

Distress migration in Bundelkhand is predominantly male-selective. Young and middle-aged men migrate to urban construction sites, brick kilns, and factories while women remain behind to manage households, childcare, and agricultural operations. This has resulted in an unusually high sex ratio (females per 1000 males) in the rural working-age cohort in several villages.

Field studies and NSSO data indicate that women now perform over 60% of agricultural operations in several Bundelkhand villages - a significant increase from earlier decades. Despite this enhanced workload, women's access to land rights, institutional credit, and government support services remains structurally limited, creating a paradox of increased responsibility without commensurate economic empowerment.

5.3 Ageing Rural Population

The selective out-migration of working-age adults (15–45 years) has resulted in demographic ageing of rural villages. The dependency ratio - the proportion of non-working (young and elderly) population relative to the working-age population - has risen sharply in high-migration blocks. This ageing effect reduces community labour availability for collective activities like land maintenance, watershed restoration, and community infrastructure upkeep.

5.4 Village Depopulation

A significant consequence of sustained distress migration is the partial or complete depopulation of small hamlets. Census data records reveal that dozens of revenue villages across Bundelkhand had zero or near-zero population in the 2011 Census, having been inhabited a decade earlier. The phenomenon of 'ghost villages' - where houses stand empty and farmland lies fallow - is increasingly documented in Banda, Chitrakoot, and Panna districts.

Village depopulation creates self-reinforcing cycles: fewer residents mean reduced political voice, lower priority for government services, deteriorating public infrastructure (schools, health posts, roads), and further erosion of

conditions that could retain population. This dynamic trap makes rural recovery exceptionally difficult without targeted external intervention.

5.5 Impact on Agricultural Labour and Productivity

The out-migration of male agricultural labour has created seasonal labour scarcity during peak agricultural periods (sowing and harvest). Labour scarcity has pushed up wage rates locally - a theoretically beneficial development - but also forces some farmers to leave land fallow due to inability to hire sufficient labour. Agricultural fallow rates have increased in documented high-migration villages, reducing regional food output and household nutritional security.

6. Policy Responses and Interventions

6.1 MGNREGA and Rural Employment

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), enacted in 2005, was intended to provide 100 days of guaranteed wage employment annually to rural households. In Bundelkhand, MGNREGA has had a partial but demonstrable effect in reducing distress migration during drought years when implementation was effective. Studies show that in years and districts with high MGNREGA utilisation rates, seasonal out-migration declined by 15–25%, with households retaining members during the kharif growing season.

However, chronic weaknesses in implementation - irregular wage payments, corruption in muster rolls, and low asset quality of MGNREGA works - have undermined its potential. In many blocks, annual MGNREGA employment provided falls well below the guaranteed 100 days, leaving households with insufficient income to forgo migration.

6.2 Bundelkhand Special Package

The Government of India released a special rehabilitation package for Bundelkhand in 2009 and 2010, totalling approximately Rs 7,266 crore, directed towards drought relief, drinking water provision, irrigation development, and livelihood enhancement. While the package improved infrastructure in some areas, its impact on reducing structural migration has been contested. Critics noted high leakage, poor targeting, and inadequate focus on sustainable water resource management.

6.3 Water Conservation and Watershed Programs

Several watershed development programmes - including the Integrated Watershed Management Programme (IWMP) and revival of traditional water structures - have been implemented in Bundelkhand. Where successfully executed, these have improved soil moisture retention, extended the agricultural season, and provided supplementary irrigation to small farmers. Successful models include the revival of johads (traditional earthen check dams) in Tikamgarh and Chhatarpur districts, which increased groundwater recharge and reduced summer distress.

6.4 Policy Gaps and Recommendations

Despite these interventions, Bundelkhand continues to experience structural distress migration. Key policy gaps include: lack of climate-adaptive cropping support, inadequate access to crop insurance, insufficient cold storage and market linkage infrastructure, weak social security coverage for migrant workers, and absence of comprehensive return migration support for those who wish to come back. A rights-based approach to migration - ensuring both the freedom to migrate and the conditions to stay - is necessary to meaningfully address distress displacement.

7. Discussion

The evidence from Bundelkhand confirms that distress migration is fundamentally a symptom of a deeper vulnerability crisis rooted in ecological fragility, agrarian underdevelopment, and institutional neglect. The demographic consequences - feminisation, ageing, depopulation, and labour shortages - are not temporary disruptions but cumulative transformations that progressively degrade the socioeconomic foundations of rural life.

The Bundelkhand case also illustrates the complex relationship between climate change and migration. As global warming increases drought frequency and intensity across semi-arid South Asia, regions like Bundelkhand are likely to face accelerating pressures that current policy frameworks are ill-equipped to address. The region, in this sense, represents a preview of migration dynamics that may become widespread across the Indo-Gangetic fringe and Deccan Plateau in coming decades.

Importantly, distress migration must be distinguished from development-driven voluntary migration. The latter can be a legitimate livelihood strategy and engine of economic mobility; the former represents a failure of the development system to provide basic security. Policy must make this distinction explicit, targeting interventions at reducing the involuntary character of migration rather than attempting to restrict mobility per se.

8. Conclusion

Distress migration in Bundelkhand is not a spontaneous or isolated phenomenon; it is the predictable outcome of a region burdened by ecological stress, agrarian fragility, and chronic underdevelopment. Its demographic consequences - a feminised, ageing, and shrinking rural population - threaten the long-term viability of rural Bundelkhand as a productive and inhabited landscape.

Addressing distress migration requires a multi-pronged strategy: ecological restoration through comprehensive watershed management; agricultural transformation through improved irrigation, diversification, and market access; strengthened social protection through effective MGNREGA, crop insurance, and food security; and investment in rural public services to make rural areas viable places to live and work.

Future research should focus on longitudinal tracking of migrant households, gender-disaggregated analysis of migration's impact on women remaining in villages, and comparative studies of Bundelkhand against other distress-migration zones in India. The geography of distress migration deserves sustained scholarly and policy attention as climate variability deepens and rural vulnerability intensifies across India's dryland regions.

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