ISSN: 2249-7196
IJMRR/Oct. 2024/ Volume 14/Issue 8/49-59
Sushanta Kumar Das / International Journal of Management Research & Review

IMPACT OF MGNREGS FOR LIVELIHOOD UPLIFTMENT IN MIGRATION-PRONE BLOCKS OF ODISHA: A CASE STUDY OF BOLANGIR DISTRICT

Sushanta Kumar Das[1], Dr. Anita Kurre[2]
Research Scholar, Department of Social Science, ISBM University, Kosmi, Chhattisgarh[1]
Assistant Professor, Department of Social Science, ISBM University, Kosmi, Chhattisgarh[2]

ABSTRACT: *This study investigates the intricate relationship between climate change, distress migration, and the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in Odisha, employing a mixed-methods approach. The findings indicate that over 80% of surveyed households recognize the impact of climate change on their migration patterns, primarily driven by droughts and erratic rainfall that intensify economic hardships. While MGNREGS is designed to serve as a safety net against distress migration, its effectiveness is constrained, as households receive only 21.4 days of wage employment annually—far below the necessary days to sustain livelihoods. Consequently, inadequate income emerges as a significant factor driving distress migration. Additionally, the study highlights the lack of convergence between MGNREGS and other sustainable livelihood initiatives, further diminishing its effectiveness [1]. The research underscores the necessity for improved program integration, enhanced resource management, and active community participation in decision-making processes. Implementing these recommendations is vital for addressing the multifaceted challenges posed by climate change and distress migration. Ultimately, fostering resilience among vulnerable populations and promoting sustainable development in Odisha's high-migration districts will depend on these strategic measures.*

Keywords: *Climate Change, Distress Migration, Odisha, Environmental Degradation, Agricultural Production.*

1. Introduction

Climate change poses significant threats to livelihoods, particularly in vulnerable regions like Odisha, India, where environmental degradation leads to increasing instances of distress migration[2]. This phenomenon occurs when individuals and families are compelled to leave their homes due to adverse environmental conditions, such as droughts and erratic rainfall, which disrupt agricultural production and exacerbate economic hardships. In response to these

challenges, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) was implemented as a safety net to provide guaranteed wage employment to rural households. However, despite its intent, MGNREGS has faced criticism regarding its effectiveness in alleviating distress migration, primarily due to insufficient employment days offered to households. This study seeks to explore the intricate relationship between climate change, distress migration, and the efficacy of MGNREGS in Odisha, employing a mixed-methods approach to gather comprehensive data. By examining the perspectives of affected households, the research aims to illuminate the gaps in MGNREGS implementation and its interaction with other sustainable livelihood initiatives [3]. Ultimately, this investigation highlights the pressing need for enhanced program integration and community involvement to foster resilience and promote sustainable development in the face of climate-induced migration challenges in high-migration districts of Odisha.

2.**Problem Statement**

This study addresses the pressing issue of climate-induced distress migration in Odisha, where adverse environmental conditions significantly threaten livelihoods. Despite the implementation of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) as a safety net, its limited effectiveness in providing adequate wage employment has failed to alleviate migration pressures. The problem lies in understanding the complexities of how climate change impacts migration patterns and assessing MGNREGS's role in this context, alongside other livelihood initiatives, to identify effective solutions for vulnerable populations.

3. Methodology

This study utilized a mixed-methods approach, combining quantitative and qualitative techniques. A stratified random sample was drawn from three blocks in each of four high-migration districts. Two gram panchayats (GPs) were selected from each block using a lottery method, followed by two villages from each GP, where twenty-five households were surveyed, totaling 600 interviews with migrant households [4]. A questionnaire was developed, pre-tested, and translated into the local language. Research Assistants, trained in survey methods, conducted the interviews. Additionally, 66 Focus Group Discussions (FGDs) with Self Help Group (SHG) members and migrant households provided qualitative insights, analyzed through content analysis. Information on program convergence was gathered from interviews

with government and non-government officials. To assess the impact of climate change on distress migration, chi-square tests and Cramer's V tests were conducted.The paper is structured into five sections: the introduction, a literature review on climate change, migration, and MGNREGS; the framework and methodology of the study; an analysis of climate change-induced distress migration; a discussion of the relationship between climate change, distress migration, and MGNREGS; and concluding remarks with limitations and recommendations.

Climate Change, Distress Migration, and MGNREGS: Climate change is a pressing issue in Odisha, marked by irregular seasons, altered flowering patterns, and changes in farming practices. While these practices may contribute to climate change, summers have become longer, winters warmer, and monsoons have shortened from 120 to 90 days, becoming increasingly erratic [5]. Although Odisha receives an average of 1,451.2 mm of rainfall, its distribution is uneven, leading to frequent floods, droughts, and cyclones. Raleigh and Jordan note that chronic environmental degradation often results in intensified labor migration.Brown emphasizes the importance of distinguishing between climate and non-climate drivers of migration. Climate drivers include gradual changes like sea level rise and sudden events such as floods and storms, while non-climate drivers also significantly influence migration patterns. "A natural hazard, such as an approaching storm, transforms into a 'natural disaster' only when a community is vulnerable to its effects. For instance, a tropical typhoon results in disaster if there is no early warning system in place, if houses are inadequately constructed, and if people lack knowledge on how to respond during a storm."

Poverty is a critical factor, as poorer communities often lack the resources and capacity for adaptive mechanisms. Consequently, population, poverty, and governance serve as crucial mediating factors influencing the likelihood and type of migration caused by climate change. Castelli refers to these as 'macro-factors'—political, demographic, socio-economic, and environmental conditions that significantly contribute to migration. It is essential to distinguish between climate change and climate variability. Climate change refers to long-term shifts in average rainfall and temperature, whereas climate variability indicates increased variance in these factors, leading to extreme weather events. Thus, climate change can impact migration in two ways: (a) through frequent extreme events and (b) through changes in the variance of rainfall and temperature along with other climatic factors. The effects of climate change are particularly detrimental to the poor and marginalized, resulting in loss of life, livelihoods, crop yields, incomes, assets, and employment. The Intergovernmental Panel on Climate Change (IPCC) report emphasized the connection between migration, climate change, and

development, estimating that climate change could displace 250 million people by 2050 due to shoreline erosion, coastal flooding, and agricultural disruption. Understanding the complex relationship between climate change and migration requires considering social, economic, and environmental factors. Much of the literature on climate-induced migration stems from the 'Environmental/Ecological Refugees' discourse, which establishes a clear link between environmental degradation and migration in developing countries, including India. Before examining the relationship between climate change, distress migration, and MGNREGS, it's important to understand this employment guarantee scheme, which provides a social safety net to 15% of the country's population [6]. The Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA) was enacted to guarantee a minimum of 100 days of wage employment each financial year to rural households seeking unskilled manual work, which helps create productive assets in villages. According to the Ministry of Rural Development, this program aims to regenerate the natural resource base and stimulate the agrarian economy, thus raising rural wages and reducing distress migration. The performance of MGNREGS varies across states, influenced by local leadership commitment, institutional preparedness, and governance capacities. It is reported that the scheme benefits the poorest households, particularly Dalits and women, by providing a safety net and aiding poverty alleviation. Several studies confirm that MGNREGA has effectively reduced distress migration. In assessing the relationship between MGNREGS and migration, one study found no significant impact of household participation in the scheme on migration decisions. However, the extent of participation—measured by the number of workdays and earnings—significantly negatively affected short-term migration but not longer-term migration. Another study indicated a negative relationship between family member migration and agricultural income, showing that as off-farm income increases, the likelihood of family migration decreases. Nevertheless, it has been observed that migration is increasingly utilized by communities as a coping strategy for climate change impacts, regardless of policies in place.

4. Limitation

- The stratified random sampling may not represent all high-migration districts, limiting the findings' generalizability.
- Reliance on self-reported data may introduce biases or inaccuracies in migration and economic condition reporting.

- Focus Group Discussions with SHG members may not capture broader community perspectives.
- The chi-square and Cramer's V tests may not fully address the complex relationships between climate change, migration, and MGNREGS.
- Cross-sectional design may not reflect long-term trends in migration patterns.

5. Result & Discussion

Framework and Approach of the Study: To achieve a comprehensive understanding of the connections between climate change and migration, it is essential to consider both the vulnerability context of migrants—particularly asset vulnerability—and the factors influencing their migration decisions and destinations. This study examines the factors that may either push or pull families toward migration, along with the role of MGNREGS [7]. Figure 1 illustrates the relationship between environmental and non-environmental factors and distress migration.

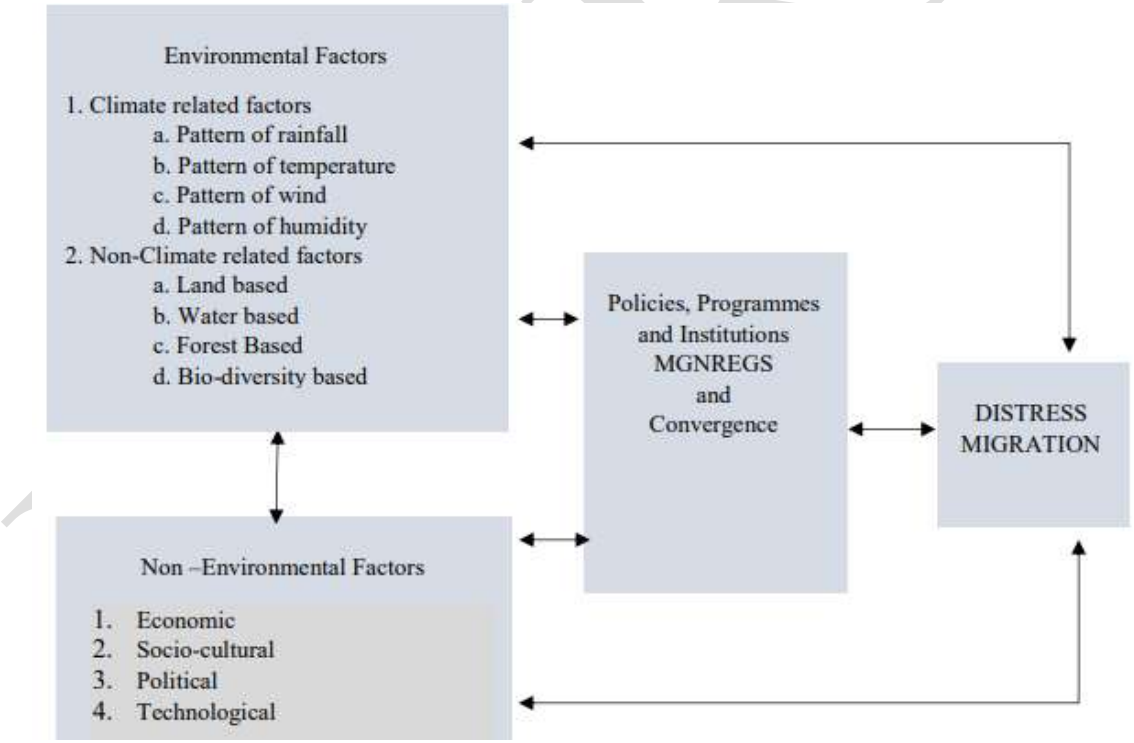

Fig 1 Distress Migration and its Linkage with Environmental and Non-Environmental Factors

It is essential to recognize that environmental and non-environmental factors are interconnected and significantly influence one another. For instance, rainfall patterns affect agricultural yields, which subsequently impact household economic conditions and may influence migration

decisions. Likewise, the introduction of drought-resistant crops can strongly affect families' migration choices, even in the face of inadequate rainfall. Consequently, the framework for this study includes environmental factors, non-environmental factors, and relevant policies, programs, and institutions, particularly focusing on MGNREGS and its convergence with other schemes.

Relationship between Climate Change, Distress Migration, and MGNREGS: A total of 600 interviews were conducted with individuals from migrant households, along with 66 focus group discussions (FGDs) involving Self Help Group (SHG) members and migrant household members. Data collection was based on a stratified random sample from three blocks in each of the four districts—Bolangir, Bargarh, Kalahandi, and Nuapada—where migration is prevalent [8]. The study identified two gram panchayats (GPs) from each block using a lottery method, selecting two villages from each GP and twenty-five households from each village for the research. Information on program convergence was gathered through interviews with government officials (from Block and Gram Panchayat offices) and non-governmental representatives. Among the surveyed migrant households, Scheduled Tribe individuals represented 40.8%, followed by 29.1% from Other Backward Classes and 28.1% from Scheduled Castes. Only 2% belonged to the general category, indicating a clear relationship between social categories and migration, with Scheduled Tribe individuals having a higher likelihood of migrating compared to others. On average, 40% of households (according to NSSO unit-level data) lacked job cards under MGNREGS. Additionally, 95.1% of households were small farmers (owning less than 2 hectares), while 4.8% were medium farmers (owning between 2 and 10 hectares), and the number of large farmers (owning over 10 hectares) in Odisha was negligible. In the four study districts, the production of pulses and cereals was primarily for subsistence, with Nuapada at 93.90%, Kalahandi at 82.20%, Bargarh at 76.50%, and Bolangir at 63.10%. More than 90% of households cited the lack of available wage labor in the local job market as the primary reason for out-migration.

For this analysis, climate change encompassed participants' perceptions of inadequate and excessive rainfall, frequent droughts and floods, delayed monsoons, and the duration of rainy and warmer days. As shown in Table 1, over 80% of households reported experiencing climate change in their area. Droughts and floods, along with increased infections from vectors in regions where countermeasures are challenging to implement due to limited resources, also indirectly affect morbidity rates [9]. The scarcity of water, food, and agricultural resources compels both people and livestock to migrate. Additionally, land degradation and declining

agricultural productivity have led to a decrease in wage employment opportunities in the local market.

Table 1 Population perceptions on climate change and migration issues.

Pop perceptions on climate change in %		% pop migrated due to drought		% pop able to get wage employment in the local market		% pop migrated due to insufficient income	
Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
82.6	17.4	61.5	38.5	92.5	7.5	70.4	29.6

In the study area, distress migration was characterized as movement driven by economic and social hardships, often occurring without any viable local livelihood alternatives. About 61.5% of households reported migrating due to drought. Drought conditions, determined by rainfall data, reveal that all blocks in the four districts receive limited rainfall (between 50 and 100 mm per week) during the rainy season. Rainfall exceeding 100 mm has been recorded for only 2 to 5 days. This finding aligns with participants' perceptions of rainfall and its effects discussed in the focus group discussions (FGDs). While the number of rainy days has decreased, the intensity of rainfall on those days has increased, leading to inadequate precipitation during critical agricultural periods, ultimately resulting in widespread crop damage. Overall, FGDs indicated that the annual rainy season has shortened from four months (July to October) to three months (July to September).

Table 2 % population benefitting from different structures.

% pop benefitted from plantations		% pop benefitted from Water harvesting structures	
Yes	**No**	**Yes**	**No**
11.7	88.3	22.9	77.1

Table 2 shows that approximately 23% of households reported being beneficiaries of water harvesting systems, while 11.7% indicated benefits from plantations. Additionally, no statistically significant relationship was found between natural resource management (NRM) initiatives and distress migration. Participatory Rural Appraisal (PRA) data revealed an inverse relationship between migration and the investment or implementation of NRM structures. In areas with a significant number of constructed water harvesting structures and farm ponds,

about 50% of the population still migrated out of the villages. Conversely, regions with fewer water harvesting structures and farm ponds experienced relatively low levels of out-migration. Focus group discussions (FGDs) identified poor-quality water harvesting structures as a major factor contributing to inadequate water retention. Furthermore, community members expressed a complete lack of involvement in the planning (site selection), implementation (quality of materials and workmanship), and utilization (who uses them and when) of the NRM structures.

Table 3 Relationship between NRM works and distress migration (PRA).

Details of work	**Kalahandi**	**Nuapada**	**Baragarh**	**Bolangir**
	Total no. of villages with NRM works under MGNREGS - 6	Total no. of villages with NRM works under MGNREGS-13	Total no. of villages with NRM works under MGNREGS-12	Total no. of villages with NRM works under MGNREGS – 8
No of WHS	0	9	25	14
No of farm ponds	6	22	48	14
No of plantations	95	2	6	150
No of land developed	0	133	0	7
No of canals	1	2	3	0
Total HH in the villages	613	3249	1883	821
No. of migrant HH in the village	209	468	419	414
% of migration	34	14	22	50

Distress migration primarily results from "insufficient income." Although the implementation of MGNREGS has partially curbed migration in the districts, individuals are typically able to secure only three weeks of wage work per year through the program, far below their need for seven months. Additionally, there is a lack of adequate livelihood asset creation, as well as the necessary supply chains and institutional support to enhance the effectiveness of MGNREGS. Convergence with other programs aimed at creating sustainable livelihoods is also not evident. On average, MGNREGS in the study area has generated only 21.40 days of wage employment, significantly lower than the stipulated requirement. This discrepancy is likely attributed to the characteristics of the four sample districts.

Table 4 Average days of employment provided per household.

Name	2018-19	2017-18	2016-17	2015-16	2014-15
Bolangir	38.34	47.82	43.79	54.63	39.58
Nuapada	34.04	39.63	38.70	43.54	32.28
Kalahandi	25.96	30.63	30.55	38.44	34.38
Baragarh	27.46	29.16	28.19	28.45	27.64
ODISHA	35.66	39.98	38.09	44.78	36.44

Insights gathered from FGD data regarding the low uptake of MGNREGS provisions reveal several key issues:

- **Limited Awareness**: Many community members lack understanding of the scheme's processes and provisions, which disadvantages those seeking work. Although families typically requested an average of 48 days of wage employment, they were only provided with approximately half of that.
- **Inadequate Facilitation**: There are few strong community-based organizations, including PRIs, to facilitate the various processes of the scheme effectively.
- **Delayed Payments**: On average, only 14.9% of households reported receiving payments on a fortnightly basis, leading to a significant trust deficit in the program and its officials.

Table 5 Relationship between Climate Change and Distress Migration.

Climate Change	Distress Migration	
	No	**Yes**
No	47.1	52.9
Yes	25.9	74.1
Chi-Square	18.538 (.000)	
Phi Cramer's V	.176 (.000)	

Table 5 illustrates the relationship between climate change and distress migration, presenting chi-square values that indicate a highly significant association between the two. The calculations for Phi and Cramer's V further confirm a strong and statistically significant relationship [10]. However, the results also show no statistically significant correlation between natural resource management (NRM) works and distress migration. This lack of association is largely attributed to the failure to establish technically sound systems for effective water retention and soil and water conservation.

6. Conclusion

In conclusion, this study highlights the complex interplay between climate change, distress migration, and the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in Odisha. Utilizing a mixed-methods approach, the research reveals that climate change significantly influences migration patterns, with over 80% of surveyed households acknowledging its impact. Droughts and erratic rainfall have exacerbated economic hardships, compelling many households to migrate in search of better opportunities. Although MGNREGS aims to provide a safety net and reduce distress migration, its effectiveness is limited, with households receiving only a fraction of the employment days needed. The findings underscore that insufficient income remains a primary driver of distress migration, as MGNREGS generates only 21.4 days of wage employment per household, far below the demand for sustained livelihoods. Additionally, the lack of convergence between MGNREGS and other sustainable livelihood initiatives further hampers its impact. This study emphasizes the need for enhanced program integration, improved resource management, and community involvement in decision-making processes to effectively address the challenges posed by climate change and distress migration in the region. Implementing these measures will be crucial in fostering resilience among vulnerable populations and ensuring sustainable development in high-migration districts of Odisha.

Suggestion

- Collaborate with other livelihood initiatives for a comprehensive safety net.
- Involve locals in decision-making to align interventions with their needs.
- Promote climate-resilient alternative income sources.
- Invest in climate-resilient farming practices.
- Train local leaders to manage climate-related challenges effectively.

7. References

1. Thakur, S. (2024). Resilience in the Face of Climate Change: Understanding Migration and Employment Strategies in Odisha.
2. Srivastava, R. (2023). Climate Change and the Dynamics of Migration in India: Policy Implications for MGNREGS.
3. Jha, S., & Chand, P. (2022). Assessing the Role of MGNREGS in Alleviating Distress Migration in Rural India.
4. Adger, W. N., et al. (2021). Climate Change, Human Mobility, and Resilience: Evidence from Rural India.
5. Varma, P. (2021). MGNREGS and Its Role in Climate Adaptation Strategies: Evidence from Rural Odisha.
6. Kumar, A., & Sinha, A. (2020). Climate Change and Migration: Implications for Employment Policy in India.
7. Rao, N., & Bandyopadhyay, S. (2019). Migration and Climate Change in India: A Study of Vulnerable Populations.
8. Ghosh, J., & Ranjan, A. (2018). The Impact of Climate Change on Migration Patterns in India.
9. Reddy, S. R., & Reddy, V. (2017). Mahatma Gandhi National Rural Employment Guarantee Act: Effectiveness in Addressing Migration Issues.
10. Wadhwa, D. (2016). Climate Change and Migration in India: The Need for a Comprehensive Approach.