Do Location-Driven Perceptions Matter In Policy Governance? An Empirical Study Of MGNREGA Outcome In Assam

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Abstract

India's largest and most extensive government-funded right-based rural employment programme, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), has been instrumental in alleviating rural poverty. However, its outcomes vary across geographic and socio-economic contexts. This study examines whether location-driven factors influence the implementation and outcomes of MGNREGA policy across the Char (Riverine Island) and Plain areas of Assam using primary data of 450 households across four districts in Lower Brahmaputra Valley Zone of Assam. The study analyses socio-demographic profiles and perceptions of MGNREGA employing descriptive statistics and one-way MANOVA) and revealed significant location-based impacts on MGNREGA including education, caste composition and occupational patterns. The Char region unveiled higher illiteracy and greater work-related dependence on casual labour, whereas the Plain region confirmed more caste diversity and better educational accomplishment. MANOVA results indicate a statistically significant effect of location in three key domains. Char residents reported higher apparent benefits in lowering poverty, distress migration control and rural infrastructure development compared to their Plain correspondents. This is attributable to their heightened vulnerability and limited livelihood alternatives. In contrast, equal but significant location-based variation emerged in perceptions of corruption, wages and work conditions, women's empowerment and reduced dependence on moneylenders. Although nearly half of all respondents reported paying bribes to access the benefits of the scheme. The study concludes that a uniform state-wide implementation approach may downplay the development process considering geographical heterogeneity in programme outcomes. The risks of a one-size-fits-all approach may disrupt the core livelihood benefits, especially for vulnerable geographies like the Chars which indicates the need of location-specific implementation strategies, enhancing literacy and awareness and integrating climate-resilient infrastructure development in Char areas for balanced growth.

Keywords: *MGNREGA, Char areas, Assam, rural employment, poverty alleviation, MANOVA, socio-economic vulnerability*

INTRODUCTION

Since the commencement of the Crash Scheme for Rural Employment (CSRE) in 1971–72, the Government of India has launched multiple policies intended at addressing rural unemployment and uplifting marginalised communities. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), among these, was introduced in 2005. It stands as the world's largest government-funded employment programme, engaging about 279 million workers, including 121 million active workers (Ministry of Rural Development, GoI). Over the years, MGNREGA has notably contributed to increasing rural employment, particularly among disadvantaged groups such as women, Scheduled Castes (SCs) and Scheduled Tribes (STs) (Breitkreuz et al., 2017; Patwardhan & Tasciotti, 2022; Prakash, 2020). A substantial body of research has assessed and evaluated the performance of MGNREGA in improving rural livelihoods, fostering women's participation and creating rural assets (Pankaj & Bhattacharya, 2022; Ranjan, 2016; Karachiwalla et al., 2023; Malangmeih et al., 2014; Bose & Bhowmik, 2024; Choudhary, 2019; Kerai et al., 2014). Moreover, it has improved food security and reduced distress migration (Patel, 2024; Nayak et al., 2023; Choudhary, 2020; Parida, 2016; Kumar & Chakraborty, 2016; Kalita, 2017). Despite its wide reach, the outcomes of MGNREGA have not been uniform across regions (Dilip et al., 2013; Singh, 2021). While the scheme has played a crucial role in empowering marginalised sections with

its self-targeting mechanism, persistent challenges in its implementation and monitoring continue to hinder the potential outcomes (Vij, 2013; Patel & Gupta, 2024). However, the literature also reports several implementation issues, such as delayed payments, inadequate job provisioning and poor planning (Chakraborty, 2014; Salian & Leelavathi, 2014; Goswami & Dutta, 2014; Agrawal, 2019; Chopra, 2018; Stina et al., 2021). Furthermore, dissimilarities in geographical terrain, administrative negligence and socio-economic settings have resulted in substantial location-specific gaps in the efficacy and delivery of the programme (Pankaj & Tankha, 2010; Chakraborty, 2014; Corbridge & Srivastava, 2013; Saha, 2019; Reddy et al., 2021; Roy & NSR, 2025).

Several studies highlighted that MGNREGA's outcomes are shaped distinctly due to socio-economic and geographical factors, especially remoteness and the propensity for natural disasters (Saha, 2019; Gupta et al., 2021; Kumar, 2024; Manuvie, 2018; Srivastava, 2011). Assam, a northeastern Indian state with complex topography, propose a unique case for studying these disparities. Regions like the Chars with recurrent flooding have been found experiencing lower asset creation, irregular employment and weaker institutional presence (Manuvie, 2023). The "char" areas, riverine islands formed by the shifting Brahmaputra River, restrain access to basic amenities and distinct socio-economic vulnerabilities (Hoffmann et al., 2019; Asensio et al., 2024; and Sheikh & Datta, 2019). Frequent flooding, poor infrastructure and limited access to government services, potentially affects the promised performance of the government scheme, especially MGNREGA (Saikia & Mahanta, 2025; Flood and River Erosion Management Agency of Assam [FREMAA], 2016; Coelho, 2013). Yet, there is a dearth of empirical studies that thoroughly compare MGNREGA outcomes across the diverse socio-political landscapes in Assam. In the context of Assam, no research has been conducted comparing the MGNREGA outcomes between the Char and Plain areas. Without region-specific assessments, a comprehensive conclusion about the scheme's effectiveness may mask the local discrepancies. So, it is crucial to recognise the current situation of this flagship program for better implementation and mobilisation to the vulnerable community.

Hence, the existing literature examined MGNREGA's outcomes at national and state levels but there is a lack of comparative, location-based analysis within states like Assam. No data-driven comprehensive empirical study focuses on how locations, particularly in Char, which is ecologically vulnerable with developmental diversity compared to the Plain regions in Assam. Chars, treated as Assam's homogeneous unit, lead to a focus mainly on state-level statistics. This gap becomes critical for policy adjustments, inclusive growth and location-sensitive implementation of rural development programs. To understand the impacts of location on the effectiveness of MGNREGA outcomes in the Char and Plain areas of Assam, this study aims to empirically examine how location influences job card holdings, participation and corruption outcomes under the scheme.

MATERIALS AND METHODS

The study is based on primary data collected through a pre-tested questionnaire. A total of 450 samples have been collected equally from the char and plain areas out of four districts, namely Nalbari, Barpeta, Bongaigaon and Dhubri through stratified sampling. The districts are chosen based on the highest and lowest concentration of the char population. These four districts fall under the Lower Brahmaputra Valley Zone (LBVZ). The study has analysed the socio-demographic profile of the people across the Char and Plain areas using the percentage method. Moreover, it employs one-way MANOVA to distinguish the differences in perception under MGNREGA across the char and plain regions of Assam. **Hypotheses**

(i) H_0: There is no significant difference in the perception that MGNREGA is helpful for povertydriven people among the people of the Char and Plain areas.

(ii) H_0: There is no significant difference in the perception that MGNREGA reduced or checked distress migration between the Char and Plain areas.

(iii) H_0: There is no significant difference in the perception that MGNREGA has contributed to infrastructure development across the regions.

(iv) H_0: There is no significant difference in the perception that there is corruption in the implementation of MGNREGA across the Char and Plain areas.

(v) H_0: There is no significant difference in satisfaction with the wages and work conditions provided by MGNREGA among the people of the Char and Plain areas.

(vi) H₀: There is no significant difference in the perception that MGNREGA provided empowerment and economic independence to women across the regions.

(vii) H₀: There is no significant difference in the perception that MGNREGA decreased dependency on moneylenders among the people of the Char and Plain areas.

DATA ANALYSIS AND DISCUSSION

Table 1 presents a comparison of the socio-demographic characteristics of respondents from the Char and Plain areas in Assam. In gender distribution, the majority are male in both areas, though the proportion of females is higher in the Plain areas. The Char area is predominantly the General category (96.9%), while the Plain area has greater caste diversity, including a significant SC population (25.3%) in terms of caste distribution. In educational attainment, illiteracy is much higher in the Char area (72%) compared to the Plain (38.7%). Only 29.8 per cent of the total population attains Primary education, with a better attainment in Plain areas. Secondary, HS, Graduate and Post Graduates have low to no presence across the region.

Table 1: Socio-demographic Characteristics across the Char and Plain Areas

Zone →		Char Area	Plain Area	Total
Parameters ↓		Count (%)	Count (%)	Count (%)
Gender	1. Male	204 (52.2)	187 (47.8)	391 (100.0)
	2. Female	21 (35.6)	38 (64.4)	59 (100.0)
	Total	**225 (50.0)**	**225 (50.0)**	**450 (100.0)**
Caste	1. General	218 (96.9)	158 (70.2)	376 (83.6)
	2. OBC/MOBC	3 (1.3)	10 (4.4)	13 (2.9)
	3. SC	4 (1.8)	57 (25.3)	61 (13.6)
	Total	**225 (100.0)**	**225 (100.0)**	**450 (100.0)**
Education	1. Illiterate	162 (72.0)	87 (38.7)	249 (55.3)
	2. Primary	47 (20.9)	87 (38.7)	134 (29.8)
	3. Secondary	10 (4.4)	28 (12.4)	38 (8.4)
	4. HS	3 (1.3)	9 (4.0)	12 (2.7)
	5. Graduate	3 (1.3)	7 (3.1)	10 (2.2)
	6. Post Graduate	×	7 (3.1)	7 (1.6)
	Total	**225 (100.0)**	**225 (100.0)**	**450 (100.0)**
Occupational pattern	Self-employed in agriculture	3 (1.3)	2 (0.9)	5 (1.1)
	Self-employed in non-agriculture	12 (5.3)	12 (5.3)	24 (5.3)
	Regular wage/ salary earnings	15 (6.7)	21 (9.3)	36 (8.0)
	Casual labour in agriculture	33 (14.7)	38 (16.9)	71 (15.8)
	Casual labour in non-agriculture	63 (28.0)	61 (27.1)	124 (27.6)
	Others	39 (17.3)	34 (15.1)	73 (16.2)
	Not at work	60 (26.7)	57 (25.3)	117 (26.0)
	Total	**225 (100.0)**	**225 (100.0)**	**450 (100.0)**

Source: Primary Data

The occupational pattern reveals that casual labour, both agricultural and non-agricultural, is the most common employment in both regions. However, a substantial share of respondents in both areas is not engaged in any work. In general, the Plain area exhibits relatively better educational and caste diversity, while the Char area shows signs of greater marginalisation.

Table 2 explores whether perceptions of MGNREGA differ between respondents across Char and Plain areas in Assam. Using a one-way MANOVA, it is found that there is a statistically significant multivariate effect of location on overall perception. It indicates that location context expressively shapes how people experience the scheme.

Univariate ANOVAs revealed that three out of seven perception items significantly differed between respondents from the Char and Plain areas. In the perception of Hypothesis 1, "The scheme is helpful for poverty-driven people", with p-value 0.004, respondents from Char areas reported a significantly higher difference, rejecting the null hypothesis. Hypothesis 2 on the perception about reduced or checked distress migration, with a p-value of 0.000, shows a significant difference across the Char area respondents.

Table 2: Perception Differences between Char and Plain Areas

Hypothesis	Char Mean (SD)	Plain Mean (SD)	F	Sig. (p)	Partial Eta squared (η^2)	Significant
Hypothesis 1	3.991 (.7920)	3.771 (.8035)	8.414	0.004	0.019	Yes
Hypothesis 2	4.471 (.6070)	4.256 (.6453)	13.070	0.000	0.029	Yes
Hypothesis 3	3.538 (.9168)	3.341 (.9205)	5.138	0.024	0.011	Yes
Hypothesis 4	2.597 (1.158)	2.677 (1.140)	0.536	0.465	0.001	No
Hypothesis 5	4.367 (.6853)	4.444 (.6747)	1.439	0.231	0.003	No
Hypothesis 6	4.330 (.7594)	4.426 (.7307)	1.831	0.177	0.004	No
Hypothesis 7	4.452 (.6700)	4.480 (.7092)	0.174	0.677	0.000	No

Source: Primary Data

Again, for the perception on Hypothesis 3 of the scheme's contribution to infrastructure development in rural areas, respondents from Char areas believe more than those from Plain areas, indicating a significant perception difference by rejecting the null hypothesis. These findings also highlight those residents of Char areas place greater value on the core developmental and livelihood objectives of MGNREGA, due to greater socio-economic vulnerability and fewer alternative income sources.

Table 3 revealed that 47.6 per cent of respondents reported having paid a bribe to access benefits under the MGNREGA scheme, while 51.1 per cent stated they had not, and 1.3 per cent did not respond. **Table 3: Responses on Bribery in Accessing MGNREGA Benefits**

Responses	Frequency	Percentage (%)
Yes	214	47.6
No	230	51.1
No Opinion	6	1.3
Total	450	100.0

Source: Primary Data

The data highlights that nearly half of the beneficiaries face illegal payment demands, which is a serious indicator of corruption in the implementation of the scheme. However, Hypothesis 4 is on the perception about corruption in the implementation of MGNREGA across the Char and Plain areas, revealing that despite a high level of corruption, the distribution of corruption size is similar across the Char and Plain regions.

Moreover, Hypothesis 5 on satisfaction with the wages and work conditions provided by MGNREGA, Hypothesis 6 on the perception that MGNREGA provided empowerment and economic independence to women and Hypothesis 5 on the perception that MGNREGA decreased dependency on moneylenders among the people of the Char and Plain areas revealed no significant variation by accepting the null

hypotheses. The benefits of MGNREGA are perceived equally regardless of geographic location. Overall, the analysis reveals that regional location does influence how the scheme is perceived, particularly on poverty alleviation, migration control and infrastructure development.

CONCLUSIONS AND POLICY IMPLICATION

This empirical study in four districts of Assam sheds light on how beneficiaries perceive the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), particularly in char areas of Assam. In socioeconomic settings, a stark demographic disparity is observed, challenging its implementation. Char areas exhibit significantly higher illiteracy rates of 72.0 per cent compared to plain areas with 38.7 per cent. However, a greater social homogeneity can be observed with the presence of 96.9 per cent general caste population and a high distribution of casual labour in the non-agricultural sector. The investigation confirms that location shapes beneficiary experiences and outcomes on poverty alleviation, distress migration control and rural infrastructure development. Respondents from Char areas expressed stronger positive perceptions of MGNREGA contributions compared to those from Plain areas. The Char residents report significantly greater benefits in poverty alleviation (mean: 3.991 vs 3.771, p=0.004), distress migration reduction (mean: 4.471 vs 4.256, p<0.001) and rural infrastructure development (mean: 3.538 vs 3.341, p=0.024). However, perceptions regarding corruption, satisfaction with wages and working conditions, women's empowerment and reduced dependence on moneylenders showed not much location-based variations. Transcending geographical boundaries, systemic corruption remains a universal challenge, as nearly half of all respondents underscore bribery incidents in accessing MGNREGA benefits. MGNREGA's transformative potential lies in aligning execution strategies with the care of local socioeconomic realities. Acknowledging the heterogeneity between Char and Plain areas, policymakers need to design interventions that strengthen long-term resilience, equity and empowerment among rural communities.

The findings emphasise the need for location-sensitive policy interventions to maximise MGNREGA's effectiveness. Policymakers are necessarily to abandon the one-size-fits-all approach and develop locationspecific implementation strategies. The residents of the Char areas have tested a few development projects, but infrastructure deficits haunt them compared to the Plain areas. The scheme must be coupled with infrastructure resilience measures, such as flood-proof assets and climate-adaptive job creation in Char areas. Additionally, linking other rural development programmes can create more sustainable and diversified livelihood opportunities, particularly for women. Special focus on literacy enhancement in the Char regions can improve awareness of privileges and participation in the scheme. Furthermore, both the Char and Plain regions demand immediate systemic reforms in governance mechanisms such as digital wage disbursement and social audits to curb corruption and ensure timely wage payments. Largely, the differential perceptions and needs demonstrate that equitable outcomes require differentiated approaches rather than uniform execution between the Char and Plain areas.

REFERENCES

1. Agrawal, G. K. (2019). Mahatma Gandhi National Rural Employment Guarantee Act: Design Failure, Implementation Failure or Both? Management and Labour Studies, 44(4), 349-368. https://doi.org/10.1177/0258042X19871406
2. Asensio, O. I., Churkina, O., Rafter, B. D., & O'Hare, K. E. (2024). Housing policies and energy efficiency spillovers in low and moderate income communities. Nature Sustainability, 7(5), 590–601. https://doi.org/10.1038/s41893-024-01314-w
3. Bose, P., & Bhowmik, I. (2024). Asset Creation Under MGNREGS: The Case of Tripura. IUP Journal of Organizational Behavior, 23(1).
4. Breitkreuz, R., Stanton, C.-J., Brady, N., Pattison-Williams, J., King, E. D., Mishra, C., & Swallow, B. (2017). The Mahatma Gandhi National Rural Employment Guarantee Scheme: A Policy Solution to Rural Poverty in India? Development Policy Review, 35(3), 397–417. https://doi.org/10.1111/dpr.12220
5. Chakraborty, B. (2014). MGNREGA policy and application. International Journal of Sociology and Social Policy, 34, 263–300. https://doi.org/10.1108/IJSSP-09-2013-0094
6. Chakraborty, B. (2014). MGNREGA policy and application. International Journal of Sociology and Social Policy, 34(3/4), 263–300. https://doi.org/10.1108/ijssp-09-2013-0094
7. Chopra, D. (2018). Accounting for Success and Failure in Policy Implementation: The role of commitment in India's MGNREGA. Development Policy Review, 37(6). https://doi.org/10.1111/dpr.12404
8. Choudhary, R. (2019). Impact of MGNREGA in Improving Socio-Economic Status of Rural-Poor: a study of Jodhpur District of Rajasthan. International Journal of Humanities and Social Science Invention (IJHSSI).

9. Choudhary, R. (2020). The impact of mgnrega on employment and migration: A case study of Rajasthan. Asian Journal of Research in Social Sciences and Humanities, 10(10), 1–13. https://doi.org/10.5958/2249-7315.2020.00017.9

10. Coelho, S. A. B. I. R. A. (2013). Assam and the Brahmaputra: Recurrent flooding and internal displacement. The State of Environmental Migration 2013: A Review of 2012. Institute for Sustainable Development and International Relations (IDDRI)/International Organization for Migration (IOM), 63-73.

11. Corbridge, S., & Srivastava, M. (2013). Mapping the social order by fund flows: the political geography of employment assurance schemes in India. Economy and Society, 42(3), 455–479. https://doi.org/10.1080/03085147.2013.772758

12. Dilip, T. R., Dandona, R., Dandona, L., & Dandona, L. (2013). The national employment guarantee scheme and inequities in household spending on food and non-food determinants of health in rural India. International Journal for Equity in Health, 12(1), 84. https://doi.org/10.1186/1475-9276-12-84

13. Dilip, T. R., Dandona, R., Dandona, L., & Dandona, L. (2013). The national employment guarantee scheme and inequities in household spending on food and non-food determinants of health in rural India. International Journal for Equity in Health, 12(1), 84. https://doi.org/10.1186/1475-9276-12-84

14. Flood and River Erosion Management Agency of Assam (FREMAA). (2016). Initial environmental examination: Climate Resilient Brahmaputra Integrated Flood and Riverbank Erosion Risk Management Project (CRBIFRERMP). FREMAA, Government of Assam. Retrieved from https://fremaa.assam.gov.in/sites/default/files/swf_utility_folder/departments/fremaa_webcomindia_org_oid_4/menu/document/iee_pgp_west_guwahati_crbifrermp_0.pdf

15. Goswami, B., & Dutta, A. R. (2014). Status of Implementation of the MGNREGA in Assam:All is Not Well. Journal of Rural Development, 33(2), 173–182. Retrieved from https://www.nirdprojms.in/index.php/jrd/article/view/94272

16. Gupta, S., Anand, S., Thanmai, P. L., Reddy, K. M., & Ravisankar, T. (2021). Spatial Distribution of SDGs Accomplished Under MGNREGA Beyond SDG1. International Journal of Rural Management, 19(1), 26-44. https://doi.org/10.1177/09730052211037108

17. Hoffmann, V., Moser, C., & Saak, A. (2019). Food safety in low and middle-income countries: The evidence through an economic lens. World Development, 123, 104611. https://doi.org/10.1016/j.worlddev.2019.104611

18. Kalita, H. (2017). Impact of MGNREGA on the living condition of rural poor-a study in Barpeta and Marigaon districts of Assam (Doctoral dissertation).

19. Karachiwalla, N., Kosec, K., Kyle, J., Narayanan, S., & Raghunathan, K. (2023). Women's voice and agency in choosing assets: A new study on MGNREGA in India. Intl Food Policy Res Inst.

20. Kerai, R., Panda, S., Naik, S., & Tarai, S. K. (2024). Participation of Tribal Communities in MGNREGA Scheme and its Impact on their Livelihood. Parikalpana: KIIT Journal of Management, 20(2), 153-168.

21. Kumar, P., & Chakraborty, D. (2016). MGNREGA: Employment, Wages and Migration in Rural India (1st ed.). Routledge India. https://doi.org/10.4324/9781315652412

22. Kumar, S. (2024). What Moves People in Mountains: Migration and Sustainable Mountain Development in the Himalaya. Available at SSRN 4968056.

23. Malangmeih, L., Bhattacharyya, K., & Mitra, A. (2014). Impact of MGNREGA on livelihood security of rural households: A case study in Bankura district of West Bengal State, India. Economic Affairs, 59(2), 137.

24. Manuvie, R. (2018). Governance of climate change related migrations in Assam (India).

25. Manuvie, R. (2023). Governing Displacements. In: Climate Migration Governance and the Discourse of Citizenship in India. T.M.C. Asser Press, The Hague. https://doi.org/10.1007/978-94-6265-567-6_3

26. Ministry of Rural Development, Government of India. (n.d.). State Reports. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Retrieved August 4, 2025, from https://nrega.dord.gov.in/MGNREGA_new/NregaState_report.aspx?typeN=1

27. Nayak, N. C., Sahoo, B. K., & Mohanty, A. R. (2023). Do Mahatma Gandhi NREGA and convergence measures arrest distress migration? An empirical assessment of the migration-prone regions of Odisha, India. Letters in Spatial and Resource Sciences, 16(1). https://doi.org/10.1007/s12076-023-00332-0

28. Pankaj, A., & Bhattacharya, M. (2022). Income and livelihood promotion through individual assets under MGNREGS. Economic and Political Weekly, 57(4).

29. Pankaj, A., & Tankha, R. (2010). Empowerment effects of the NREGS on women workers: A study in four states. Economic and Political Weekly, 45(30), 45–55.

30. Parida, J. K. (2016). MGNREGS, distress migration and livelihood conditions: a study in Odisha. Journal of Social and Economic Development, 18(1), 17-39.

31. Patel, G. P., & Gupta, U. P. (2024). Study of Mahatma Gandhi National Rural Employment Guarantee Scheme in Saraipali area. Research Journal of Humanities and Social Sciences, 36–38. https://doi.org/10.52711/2321-5828.2024.00007

32. Patel, R. R. (2024). Addressing Rural Poverty, Efficacy of MGNREGA and Migration Against Agricultural Productivity: Case of Kalahandi, India. Journal of Poverty, 1–25. https://doi.org/10.1080/10875549.2024.2379783

33. Patwardhan, S., & Tasciotti, L. (2022). The effect of the Mahatma Gandhi National Rural Employment Guarantee Act on the size of outstanding debts in rural India. Journal of Development Effectiveness, 15(4), 353–372. https://doi.org/10.1080/19439342.2022.2103169

34. Prakash, N. (2020). The Impact of Employment Quotas on the Economic Lives of Disadvantaged Minorities in India. Journal of Economic Behavior and Organization, 180, 494–509. https://doi.org/10.1016/J.JEBO.2020.10.017

35. Ranjan, A. (2016). Mgnrega and Women Empowerment: MGNREGA AND WOMEN EMPOWERMENT: Promoting Women's Rights and Gender Equality through Rural Employment Programs in India. Prabhat Prakashan.

36. Reddy, A. A., Singha Roy, N., & Pradeep, D. (2021). Has India's Employment Guarantee Program Achieved Intended Targets? SAGE Open, 11(4). https://doi.org/10.1177/21582440211052281

37. Roy, S. M., & NSR, P. (2025). Deconstructing the Impact of Government Interventions Among the Marginalized Populations Using GIS: A Study of Burgula Cluster, Telangana. In Contemporary Social Physics: Decoding Social Behaviour with Advanced Geospatial Tools (pp. 439-456). Cham: Springer Nature Switzerland.

38. Saha, S. (2019). MGNREGS and livelihood responses: A geographical overview. CSMFL Publications.

39. Saha, S. (2019). MGNREGS and livelihood responses: A geographical overview. CSMFL Publications.

40. Saikia, M., Mahanta, R. (2025). An empirical investigation of factors affecting vulnerability to climate change of char dwelling households in Assam, India. J. Disaster Sci. Manag. 1, 11 . https://doi.org/10.1007/s44367-025-00012-4

41. Salian, P. V., & Leelavathi, D. S. (2014). Implementation of MGNREGA in Karnataka: issues and challenges. Journal of Rural Development, 261-279.

42. Sheikh, S. A., & Datta, K. (2019). Poverty and Microfinance in Char Areas of Dhubri District in Assam. In Advances in Finance, Accounting, and Economics (pp. 386–401). IGI Global. https://doi.org/10.4018/978-1-5225-5240-6.ch019

43. Singh, K. (2021). The extent of financial inclusion through MGNREGS: a district level analysis in West Bengal, India. International Journal of Social Economics, 48(1), 121-139.

44. Srivastava, R. (2011). Internal migration in India. Human Development in India.

45. Stina, K., Devarani, L., Sarkar, A., Singh, R., & Singh, R. J. (2021). Perceived Constraints Affecting the Desired Performance of MGNREGA and Strategies for Improvement. International Journal of Social Sciences, 10(2). https://doi.org/10.46852/2249-6637.02.2021.6