

Economic Vulnerability and Resilience in the Chars of Assam: A Critical Review of Poverty, Displacement and Adaptation

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Abstract: The paper reviews the literature on poverty, economic vulnerability and resilience in the char areas of Assam, where communities are affected by ecological fragility, institutional negligence, and widespread poverty. Based on the classical literature and new research, including theoretical as well as empirical research across the different countries in the world, the review focuses on the topics of displacement caused by riverine flood, financial inclusion, livelihood diversification, social protection, erosion and water conflicts. However, the corpus is mostly descriptive and causes are hardly inferred and there are few impact evaluations. The critical analysis of the available studies in the article points out the problem of coverage as well as identifies research gaps, also paying little attention to gender, education, and rigorous impact assessments. Although the literature together supports a multi-pillar approach to alleviating poverty, much of it falls short of providing concrete causal mechanisms. This review reveals crucial insights by unfolding the research significances of future studies and placing the chars of Assam in the global context of climate displacement, unstable livelihoods and inclusive development. However, reconceptualising study designs around causality and comparability has the potential to create actionable evidence on inclusive, climate-resilient development within one of the most vulnerable riverine landscapes of Northeast India.

Keywords: *Economic Vulnerability, Climate Resilience, Livelihood Diversification, Char Areas, Poverty, Displacement, Adaptation and Migration, Assam.*

JEL Classification: *I32, Q54, O12, I38, O18& R23.*

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I. INTRODUCTION

The char region of Assam develops due to the wavering forces of the river Brahmaputra; there exists a paradoxical manifestation of fertility and fragility. Settlements are relying on the alluvial-rich soil of the river to earn a living, but experience erosion, floods, displacement and an overall lack of interest. An early literature, including Ahmad (1990), Crow (1982), Islam and Braden (2006), Hussain (2014) and the Directorate of Char Areas Development, reported service deficits, precarious settlement and political marginality and provided baseline data on structural vulnerability. Based on this, Kumar and Das (2019) emphasised that such areas remain poor and more recent publications by Saikia and Mahanta (2023, 2024, 2025), Saikia et al. (2024), Elahi (2023), Gogoi and Siddique (2023) and Ali Mondal (2019) place those sets of questions within the current debates on climate shocks, institutional deficits and displacement politics. At the same time, the studies about developing resilience in financial inclusion and financial diversification (Sheikh and Datta, 2019; Maity and Sarania, 2017; Maity and Sahu, 2021; Raha et al., 2024; Arfanuzzaman and Arfanuzzaman, 2024) and studies on social protection (Silchenko and Murray, 2023) focus on methods to improve resilience. In the meantime, the environment studies by Barman and Bokth (2024), Ghosh et al. (2003) and Ghosh and Bandyopadhyay (2009) are offered to expand knowledge about erosion, hydrology change, water content, etc. Collectively, this corpus highlights the complication of the concept of char poverty and resilience, albeit at the cost of integration and critical synthesis.

II. LITERATURE COVERAGE AND ORGANISATION

The list of domains covered by the literature includes poverty, institutions, finance, climate adaptation, social protection, erosion and displacement. Crow (1982), Ahmad (1990), Islam and Braden (2006), Hussain (2014) and the Directorate of Char Areas Development reflect baseline information on the isolation of chars, the vulnerabilities of settlers and the lack of political motivation. Kumar and Das (2019) measure tenacious poverty, but Saikia and Mahanta (2023, 2024, 2025), Saikia et al. (2024), and Elahi (2023) highlight the interaction of environmental vulnerability, poor governance and the displacement policies. The complementary works discussing displacement and identity politics, authored respectively by Gogoi and Siddique (2023) and Ali Mondal (2019), emphasise the fact that vulnerability tends to be politicised. Meanwhile, the topic of self-help institutions is studied in the literature on financial inclusion by Sheikh and Datta (2019) evaluate the Self-Help Group-Bank Linkage Programme (SBLP), Maity and Sarania (2017) examine the results of group lending, and Maity and Sahu (2021) evidence imbalanced benefits, especially in marginalised regions. These are further stretched by diversification and climate-resilient livelihoods (Raha et al., 2024; Arfanuzzaman and Arfanuzzaman, 2024). Social protection is also cited, with Silchenko and Murray (2023) emphasising the importance of protective institutions to decrease vulnerability in uncertain environments. The

analysis is further deepened through environmental and hydrological studies by Barman and Bokth (2024), which focus on erosion, Ghosh et al. (2003) focus on river processes and Ghosh and Bandyopadhyay (2009) focus on transboundary water disputes. It is robust and references some of the most current works (2023-2025), but still leans more towards environmental and financial, as health, education, and gendered impact are underrepresented.

A thematic literature review has been structured, including poverty and vulnerability, financial inclusion, livelihood diversification, adaptation, social protection, infrastructure, water disputes and displacement. With such an organisation, the material can be easily accessed and correspondingly similar studies are assembled. Thus, financial inclusion studies (Sheikh and Datta, 2019; Maity and Sarania, 2017; Maity and Sahu, 2021) are discussed as a block and livelihood diversification (Raha et al., 2024; Arfanuzzaman and Arfanuzzaman, 2024) is treated separately. Likewise, there are reviews of erosion and hydrology (Barman and Bokth, 2024; Ghosh et al., 2003) as well as the political economy of water (Ghosh and Bandyopadhyay, 2009; Crow, 1982) and displacement (Ali Mondal, 2019; Gogoi and Siddique, 2023). Although there is a sense of clarity in this thematic structure, at times this structure is disconnected, rather than glued together. To illustrate the potential linking of microfinance with diversification in a daisy chain, livelihood change and the consequent resilience due to SHG access could be, in turn, linked to access to credit in the form of microfinance (Sheikh and Datta, 2019; Maity and Sarania, 2017; Raha et al., 2024). Similarly, erosion and displacement might be directly related to questions of social protection (Silchenko and Murray, 2023). The review is therefore well organised and sometimes lacking in cross-thematic synergy.

III. CRITICAL ANALYSIS OF THE LITERATURE

The literature has different levels of depth. A lot of the review is a summary of other researchers, in many cases, a side-by-side reporting of results with no critical comparison. To explain, SHG literature (Sheikh and Datta, 2019; Maity and Sarania, 2017; Maity and Sahu, 2021) is presented but not compared to reveal contradictions between the empowerment discourse and unequal impact apprehension. Also, although in Raha et al. (2024) and Arfanuzzaman and Arfanuzzaman (2024) the benefits of diversification are celebrated, Saikia and Mahanta (2023) show that livestock-based adaptation is prone to floods; these discrepancies may be discussed further. The literature now also tends to consider chars homogeneously deprived (Directorate of Char Areas Development (n.d.); Kumar and Das, 2019), but they are also heterogeneous such as Mishing communities are characterised by a focus on livestock (Saikia and Mahanta, 2023), whereas the experience of displacement also differs by region (Ali Mondal, 2019; Gogoi and Siddique, 2023). Crow and Ghosh and Bandyopadhyay and more recent works on water politics (Crow, 1982; Ghosh and Bandyopadhyay, 2009; Elahi, 2023; Saikia et al., 2024) similarly write about hydro-political conflicts and climate risks, respectively; these

opposing emphases might be explicitly compared. Lastly, there are still some serious gaps. For example, little is known about gender-disaggregated impacts, education and health service delivery, thorough impact analyses of char-specific programmes and the interface of migration, finance and climate. The review recognises these gaps, but does not substantiate the implications in detail.

Although extensive knowledge on the char areas in Assam exists, there are still notable gaps in this area that constrain both theoretical progress and policy formulation. A considerable body of literature focuses on ecological vulnerability and financial inclusion (e.g., Saikia and Mahanta, 2023, 2024, 2025; Barman and Bokth, 2024; Sheikh and Datta, 2019; Maity and Sarania, 2017; Maity and Sahu, 2021), whereas very little evidence is devoted to gendered and social aspects of vulnerability. Very little literature breaks down results by gender, age or within-household processes, without answering the question of how displacement, microfinance or adaptation strategies impact members of different groups. Although displacement and erosion are well-known problems (Elahi, 2023; Gogoi and Siddique, 2023; Ali Mondal, 2019; Ghosh et al., 2003), educational and health service provision issues are among the least covered in the literature. Most of the studies are non-evaluative too. To illustrate this point, it is widely acknowledged that SHGs and the SBLP are effective, although there are no critical impact assessments that could be applied to test them in a char setting (Sheikh and Datta, 2019; Maity and Sahu, 2021). Similarly, even though erosion-control interventions are recognised (Barman and Bokth, 2024), cost-effectiveness studies are also absent. Moreover, even though some studies discuss migration, finance and climate risks individually, little has been done on their interactions as how choices regarding migration affect borrowing or remittance flows or how the process of financial inclusion affects adaptation to floods. Lastly, the literature does not describe a specific theory of change to tie specific vulnerabilities to specific interventions and quantifiable outcomes. All these lapses allude to the research gap that is gender appropriate, ethnically rigorous, intersectional, and holds the theory clearly developed.

IV. DISCUSSION AND THEORETICAL PERSPECTIVES

The literature reviewed suggests that the multi-pillar work of char areas should be linked to financial inclusion (Sheikh and Datta, 2019; Maity and Sarania, 2021), livelihood diversification (Raha et al., 2024; Arfanuzzaman and Arfanuzzaman, 2024; Sharna et al., 2024), climate adaptation (Saikia & Mahanta, 2023, 2024; Elahi, 2023), social protection (Silchenko & Murray, 2023) and infrastructure (Directorate of Char Areas Development (n.d.); Barman & Bokth, 2024). Historical assessments on erosion and river changes (Ahmad, 1990; Ghosh et al., 2003; Hussain, 2014) stem a sense of urgency over durable interventions, whereas political economy analyses of displacement (Ali Mondal, 2019; Gogoi and Siddique, 2023) highlight governance challenges. But the literature seldom defines a theory of change that links whether or not certain vulnerabilities are linked to interventions and to measurable

outcomes. For example, while erosion is linked to displacement, and SHGs to coping, this review offers no proof of a testable hypothesis on whether SHG access and relations of ferry connectivity bring better resilience results than SHGs did. Hence, the contribution of the literature is to support multi-pronged solutions, but future studies should identify causal mechanisms and empirically evaluate interventions.

Despite the char area in Assam has a long literature background, there remain several gaps that require investigation in the future. A clear demand is the consideration of gender and social aspects of vulnerability in a range of studies, in which the prevalent practice is to present findings without differentiating the role of gender, age or intra-household relations and the absence of empirical studies examining how displacement, microfinance and climate shocks impact men, women and children was not well explored. A second priority should be the systematic impact-evaluation of interventions, as programmes like self-help groups (SHGs), the Self-Help Group-Bank Linkage Programme (SBLP), erosion-control measures and social protection schemes are commonly launched but poorly evaluated in terms of cost-effectiveness and scalability to a large extent within char settings. Moreover, the relationships among migration, financial access and climate stress have not been well-studied. For example, how migration choices undermine borrowing or remittance flows or how financial inclusion affects flood adaptation, may provide important insights. Lastly, comparative, global perspectives are necessary, such as drawing the experience of Assam chars to other deltaic and riverine lands like Bangladesh, the Nile or the Mekong, would not only enhance theoretical knowledge on vulnerable geography but would also put the chars in context with broader discussions on adaptation and resilience in climate-vulnerable landscapes.

V. CONCLUSION AND METHODOLOGICAL INSIGHTS

As shown in this review, literature on Assam char areas has come a long way, with it contributing to the environmental processes (Barman and Bokth, 2024; Ghosh et al., 2003), political economy (Crow, 1982; Ghosh and Bandyopadhyay, 2009; Gogoi and Siddique, 2023; Ali Mondal, 2019), institutional and poverty studies (Directorate of Char Areas Development) taken together, this literature highlights the ecological vulnerability and the socio-economic marginality of char residents and identifies promising measures to reduce poverty and enhance resilience.

Moreover, the analysis identifies key gaps that researchers should fill in the future. They consist of the paucity of systematic research on the gendered and social aspects of vulnerability, the absence of systematic studies on the delivery of health and education services, the lack of rigorous impact evaluations of these interventions like SHG, SBLP or erosion-control strategies and the omission of interrelationships amongst the three risks (migration, finance and climate). In addition, the literature has not defined the specific theory of change to connect the identified

weaknesses to the interventions and measurable results. At the same time, through remedying such inadequacies, future researchers can cease to be descriptive and will rather become causal in nature and evaluation, strengthening scholarly arguments and policy-making. By locating the chars of Assam in the context beyond the narrow national frame of discussion in terms of fragility, climate displacement and inclusive development, it has been possible to ensure that this research is relevant to local policies as well as to international discourses of theory. In this way, the review offers an avenue towards the construction of a research agenda that is both gender-sensitive and empirically sound enough to guide sustainable interventions in one of the most vulnerable riverine landscapes in northeast India.

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