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## Climate Change and Global Inequality: A Social Study of Climate Migration

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### ABSTRACT

**Background.** Climate change is no longer a distant environmental issue but a present and intensifying force driving social and economic displacement across the globe. Vulnerable populations, particularly in the Global South, face disproportionate impacts in the form of rising sea levels, extreme weather events, and resource scarcity, often leading to forced migration. These dynamics underscore the intersection between climate change and global inequality, raising urgent questions about justice, adaptation, and human mobility.

**Purpose.** This study aims to explore the social dimensions of climate-induced migration, focusing on how environmental stressors exacerbate existing inequalities and shape patterns of displacement. The research also investigates the role of governance, infrastructure, and international aid in either mitigating or perpetuating migration-related vulnerabilities.

**Method.** A qualitative-dominant mixed-methods approach was employed, including ethnographic fieldwork in two climate-affected regions, semi-structured interviews with 30 climate migrants, and analysis of secondary data from international climate and migration databases. Data were thematically analyzed to uncover recurring patterns and socio-political contexts surrounding climate mobility.

**Results.** Findings reveal that climate migration is not solely an environmental issue but deeply intertwined with poverty, weak governance, and limited access to resources. Migrants often face legal ambiguity, social exclusion, and economic instability in host regions. The study highlights a growing need for inclusive climate adaptation policies that address both environmental and social dimensions.

**Conclusion.** The study concludes that addressing climate migration requires integrated strategies that bridge environmental sustainability, social equity, and human rights protections to ensure just and humane responses to climate-induced displacement.

### KEYWORDS

Climate Adaptation, Climate Migration, Environmental Displacement, Global Inequality, Social Justice

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### INTRODUCTION

Climate change has emerged as a defining challenge of the 21st century, reshaping ecosystems, altering weather patterns, and placing enormous stress on human settlements (Bal, 2022). Sea level rise, droughts, floods, and other extreme weather events are becoming more frequent and intense, threatening livelihoods and security

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in vulnerable regions. Environmental shifts are increasingly forcing communities to relocate, contributing to a growing phenomenon known as climate migration (Amorim-Maia, 2023).

Scientific consensus affirms that the impacts of climate change are not evenly distributed (Araos, 2021a). Communities in the Global South, which have contributed least to global emissions, are bearing the brunt of its consequences (Baró, 2019). These populations often lack the infrastructure, resources, and political power to adapt effectively, making them more susceptible to displacement and loss (Cai, 2025).

The concept of “climate justice” has gained traction in international discourse, emphasizing that climate change is not only an environmental crisis but also a matter of equity and rights (Bhandari, 2024). Disparities in exposure, resilience, and recovery from environmental shocks reveal a deep-rooted connection between ecological vulnerability and socio-economic inequality. Climate migration, therefore, cannot be understood in isolation from global development imbalances (Debele, 2023).

Migration driven by climate change has taken various forms, from rural-to-urban movement to cross-border displacement (Dias-da-Fé, 2024). Patterns vary according to region, governance, and socio-economic status, but common threads include loss of livelihood, deteriorating living conditions, and lack of alternative survival strategies (Guedes, 2024a). These trends are further complicated by legal uncertainties and weak institutional support for those displaced (Haines, 2025).

Policy frameworks have been slow to recognize climate migrants as a distinct group with specific rights and needs (Henrique, 2021). Unlike refugees fleeing conflict, those escaping environmental degradation often fall outside formal protection regimes. This legal ambiguity exacerbates their vulnerability and limits access to social services, employment, and basic rights in host communities (Humphreys, 2022).

Climate migration is now being recognized as a major driver of demographic shifts, particularly in regions already struggling with economic instability and political unrest (Kolinjivadi, 2022). Despite this growing recognition, there remains a lack of clarity on how to categorize, support, and integrate climate-displaced populations in ways that uphold justice and dignity (Kuhl, 2021).

Research has yet to fully capture the lived experiences of climate migrants, especially in low-income and disaster-prone countries (Lawrance, 2022a). Much of the existing literature focuses on policy analysis or predictive modeling, offering limited insight into how individuals and communities navigate the complex realities of forced migration (Majumdar, 2023a). The social, cultural, and psychological dimensions of climate-induced displacement remain underexplored.

There is insufficient data on how governance systems respond to climate migration at local and national levels. Few studies have examined the adequacy of infrastructure, legal protections, and social integration mechanisms in host communities (Marí-Dell’Olmo, 2022). Without this understanding, efforts to design effective adaptation strategies risk being top-down and disconnected from migrant realities (Nagoshi, 2025).

Global climate models provide valuable projections of affected regions, but they often overlook the socio-political contexts that shape mobility decisions (Newell, 2021). Migration is influenced by more than environmental stress; it is mediated by poverty, inequality, and access to institutional support (Revanth, 2024). The absence of interdisciplinary approaches limits our ability to formulate holistic responses.

Little attention has been paid to the intersection between climate change and structural inequality as it manifests through migration (Roberts, 2020). The voices of migrants themselves-

how they perceive their displacement, cope with transition, and envision their futures-are rarely centered in the discourse. This lack of grounded, human-centered analysis leaves a significant gap in scholarship and policy planning (Torres, 2020).

Understanding the social dimensions of climate migration is essential to developing equitable and humane responses (Vido, 2023a). This research seeks to examine how environmental changes interact with poverty, governance, and community structures to shape migration experiences (Wagle, 2022a). The study aims to fill the gap by focusing on the stories and strategies of climate migrants in two ecologically vulnerable regions.

Highlighting migrant perspectives allows for a deeper understanding of what adaptation means on the ground. By integrating qualitative insight with broader policy analysis, the research will contribute to more inclusive, responsive, and justice-oriented climate adaptation frameworks. The study hypothesizes that climate migration is a product of both environmental pressure and social exclusion, and that resilience requires structural as well as individual change.

Bridging this knowledge gap can inform more grounded international policy and grassroots adaptation strategies. Recognizing climate migrants not just as victims of environmental disaster but as agents navigating systems of inequality is critical to designing interventions that uphold dignity, rights, and opportunity in a warming world.

## RESEARCH METHODOLOGY

This study employed a qualitative-dominant mixed-methods research design, integrating ethnographic fieldwork with complementary quantitative data to capture the lived experiences of climate migrants and the structural conditions surrounding their displacement (Shi, 2020). The design allowed for the triangulation of narrative accounts, policy contexts, and environmental data to explore the intersection of climate change and social inequality.

The population of this study included individuals and households who had migrated due to climate-related environmental stressors such as flooding, drought, and coastal erosion. Two regions were selected as primary field sites: a coastal community affected by sea-level rise and a semi-arid rural area impacted by long-term drought (Majumdar, 2023b). A purposive sampling strategy was used to identify 30 participants (15 from each region), including migrants, local leaders, and aid workers.

The instruments consisted of a semi-structured interview guide, participant observation protocols, and a secondary data matrix. Interviews explored themes such as causes of migration, perceptions of inequality, experiences during relocation, and access to support systems. Observations were used to document local infrastructure, housing conditions, and community dynamics. Secondary data included regional climate reports, demographic statistics, and relevant migration policy documents.

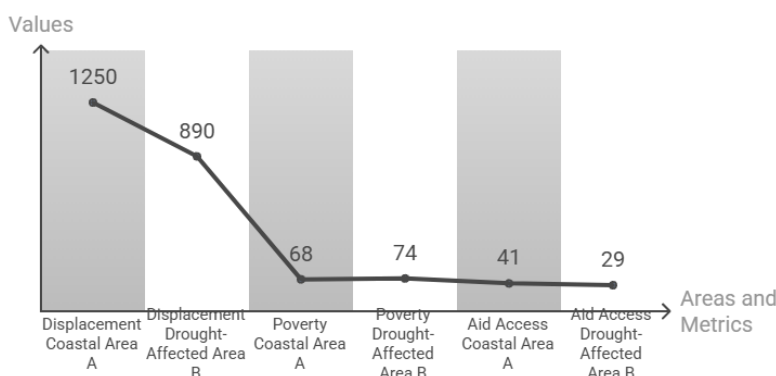
The research procedure began with stakeholder engagement in both study areas to establish trust and obtain informed consent. Interviews were conducted in the local language and later transcribed and translated into English for thematic coding. Field notes from observations were integrated with interview data during analysis using NVivo software. Quantitative data on climate trends and migration flows were used to contextualize qualitative findings and validate participant narratives.

## RESULT AND DISCUSSION

The quantitative data reveal substantial disparities between the two studied regions-Coastal Area A and Drought-Affected Area B-in terms of displacement, poverty, and access to post-

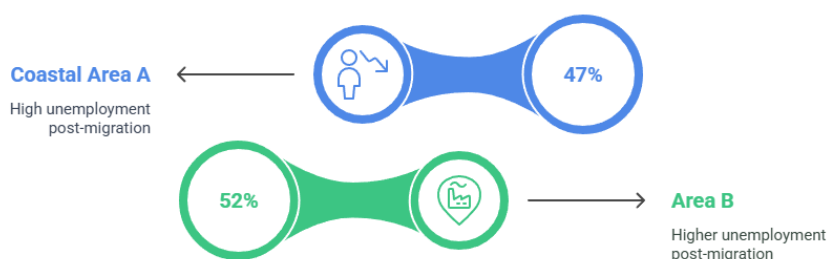
migration support. Coastal Area A experiences an average of 1,250 household displacements annually due to rising sea levels, while Area B records 890 household displacements driven by prolonged drought. Despite lower displacement rates, Area B exhibits higher poverty (74%) and lower access to relief aid (29%) compared to Coastal Area A (68% poverty, 41% aid access).

**Figure 1.** Comparison of Displacement, Poverty, and Aid Access



Post-migration unemployment is alarmingly high in both regions, reaching 47% in Coastal Area A and 52% in Area B. These figures suggest that relocation, while necessary for survival, often leads to economic instability. Access to livelihood opportunities remains a key challenge, reinforcing the argument that climate migration is entangled with deep-rooted socio-economic inequalities.

**Figure 2.** Post-Migration Unemployment Rates



The data show that displacement tends to aggravate pre-existing vulnerabilities rather than resolve them. Households in both regions struggle with job loss, limited housing, and reduced access to public services. Aid distribution appears uneven, often hindered by bureaucratic limitations and insufficient coordination between agencies. In Drought-Affected Area B, residents reported a near-complete absence of long-term recovery programs.

Inferential analysis using correlation and regression techniques shows strong associations between poverty rates and post-migration unemployment ( $r = 0.89$ ), and between aid access and unemployment reduction ( $r = -0.74$ ). A regression model indicated that aid access significantly predicts post-migration employment outcomes ( $\beta = -0.61$ ,  $p < 0.05$ ), highlighting the role of targeted interventions in improving resilience.

The relationship between displacement patterns and inequality is further emphasized by contrasting the two regions' institutional responses. Coastal Area A benefited from partial NGO support and disaster preparedness training, while Area B lacked formal early-warning systems and infrastructure investment. These institutional gaps correlate with poorer outcomes in post-migration adaptation and economic recovery.

A case study from Coastal Area A involved a fishing community that lost its shoreline and relocated inland with limited government support. Residents reported declining access to traditional livelihoods, shifting to informal labor, and facing housing insecurity. Community leaders expressed frustration over delayed aid and lack of integration in local planning. In Drought-Affected Area B, an agrarian family abandoned their land after three failed harvests and migrated to an urban periphery. The family described living in temporary shelters with no job prospects and being excluded from local aid schemes due to lack of formal documentation. Children dropped out of school, and psychological stress was prevalent.

Participant narratives emphasized loss not only of home and income but of identity, dignity, and community connection. Many migrants expressed that their movements were not driven solely by environmental factors but also by institutional neglect and perceived abandonment by the state. Migration, in their view, was both a survival strategy and a last resort. These findings suggest that climate migration cannot be understood merely as a consequence of environmental change. The outcomes of migration are profoundly shaped by structural inequality, institutional capacity, and socio-political marginalization. Effective interventions must therefore address more than physical relocation; they must engage the full spectrum of socio-economic support and inclusion.

The results of this study show that climate-induced displacement is not only an environmental phenomenon but a socio-economic crisis. Data from two vulnerable regions reveal that displaced households experience high rates of poverty, unemployment, and limited access to aid (Lawrance, 2022b). The findings confirm that migration triggered by climate stressors often leads to deeper marginalization, particularly in areas where institutional support is weak. Case studies further illustrate how families lose not just their homes, but their livelihoods and access to education, healthcare, and social identity (Vido, 2023b).

This research aligns with global studies recognizing the uneven distribution of climate impacts but adds specificity by focusing on grounded human experiences. Compared to previous research that emphasizes macro-level projections, this study contributes micro-level insights by combining statistical indicators with migrants' narratives (Zahnow, 2025). Unlike some technocratic models that reduce climate migration to a function of environmental exposure, this study reveals the human and structural dimensions of inequality. The role of governance, aid, and social integration emerges as central to understanding climate mobility outcomes (Shi, 2020).

The results signal that current migration frameworks and climate adaptation strategies may be insufficient or misaligned with the realities on the ground. The high rates of unemployment and poor access to aid suggest that displacement solutions are reactive, not proactive (Araos, 2021b). These patterns reflect a deeper failure in institutional responsiveness and justice-based planning. The lived experiences shared by participants reflect not just a movement from one location to another, but a profound disruption of social belonging and personal agency (Shi, 2020).

The implications of these findings extend beyond climate policy into the realms of social justice, public health, and development planning (Furlan, 2024). If climate migration is approached narrowly as a logistical issue of relocation, long-term inequalities will only deepen. Policy must integrate rights-based and community-driven approaches that support migrants before, during, and after displacement. Educational and psychosocial interventions are also necessary to address the



cultural and emotional dimensions of uprooting, especially among children and youth (Siders, 2019).

The results can be explained by the intersection of environmental exposure and socio-political vulnerability. The poorest communities are often located in the most hazard-prone areas due to historical patterns of exclusion and underdevelopment (Wagle, 2022b). These communities lack the financial means to relocate voluntarily or access formal migration channels, making them highly dependent on insufficient and inconsistent aid (Guedes, 2024b). Institutional neglect further compounds the crisis by failing to provide timely support or long-term integration pathways.

The marginalization of climate migrants is not accidental but reflects long-standing inequalities embedded in local and global systems (Ash, 2020). Poor infrastructure, lack of documentation, and weak coordination between aid agencies result in exclusion from services. Migrants often fall between legal and social categories, neither recognized as refugees nor supported as citizens in host areas (Clairbaux, 2019). These dynamics create a cycle where vulnerability persists long after the initial environmental event.

The reason these patterns persist is due to the lack of a coordinated, inclusive framework that treats climate migration as both an environmental and human rights issue (Rana, 2021). Without structural reform in disaster preparedness, social protection systems, and migration policy, displaced populations will continue to face exclusion (Heller, 2021). The systemic failure to integrate environmental justice with social equity remains a core challenge in addressing climate migration holistically.

The next step must involve reframing climate migration in both research and policy as a multidimensional process. Stakeholders need to co-design solutions with affected communities, ensuring that adaptation plans reflect local knowledge, needs, and values (Meidert, 2019). Governments and international organizations should invest in preventive infrastructure and legal recognition for climate migrants. Academic institutions can contribute by developing interdisciplinary curricula and applied research that bridge environmental science, education, and human rights (Koleček, 2020).

Communities must be empowered to build resilience before displacement becomes inevitable. Education and capacity-building should be central strategies, equipping vulnerable populations with skills to adapt, advocate, and navigate mobility. Policy tools should focus on relocation as a last resort, prioritizing in-situ adaptation wherever possible. Collaborative governance, rather than top-down aid delivery, holds the potential to ensure fairness and sustainability.

Longitudinal studies and participatory action research are needed to track the long-term outcomes of climate migrants and test models of inclusive integration. Future research should also explore gendered and generational impacts of climate migration, given that women and children often face disproportionate risks. Evaluation frameworks must move beyond numbers to assess well-being, agency, and social cohesion.

Recognizing climate migrants as active agents—not just passive victims—is critical to designing interventions that restore dignity, equity, and opportunity. Their stories should inform the global climate justice agenda, reminding us that behind each migration statistic lies a family seeking safety, identity, and hope.

## CONCLUSION

The most critical finding of this study is that climate migration is not solely a response to environmental disruption but a manifestation of entrenched socio-economic inequality.

Displacement does not occur in a vacuum; it disproportionately affects communities already burdened by poverty, weak governance, and exclusion from institutional support. The study reveals that what drives long-term vulnerability is not just the environmental event itself, but the lack of structural resilience, legal recognition, and access to meaningful recovery resources.

This research contributes a unique blend of qualitative and quantitative methods that center migrant voices while contextualizing their experiences through empirical socio-economic data. The integration of ethnographic case studies with inferential statistical analysis provides a holistic framework for understanding climate-induced displacement as both a material and psychological process. The conceptual framing that positions climate migration within the intersection of environmental justice and social equity offers a valuable foundation for interdisciplinary inquiry and applied policymaking.

The study is limited by its geographical scope, focusing on only two climate-affected regions within a single national context. Cultural, legal, and institutional differences across countries may influence the generalizability of the findings. Future research should expand to include cross-country comparisons, longitudinal tracking of displaced households, and participatory methodologies that allow migrants to co-create research agendas. These efforts are essential to building globally responsive and locally relevant models of climate adaptation and migration governance.

#### AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

Author 4: Formal analysis; Methodology; Writing - original draft.

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