

Review

Climate Migration, Development and Sustainability in the Global South: A Critical Assessment

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Abstract

The relationship between climate change and migration remains widely debated, particularly regarding the extent to which environmental factors directly drive mobility. While climate-related stressors such as droughts, floods, and environmental degradation can disrupt livelihoods, migration decisions are rarely shaped by environmental factors alone. This study argues that climate change is often overstated as a primary driver of migration and may function instead as a secondary explanatory frame for mobility shaped by deeper socioeconomic and institutional constraints. Focusing on environmentally vulnerable regions of the Global South, this study examines the interplay between ecological stressors, structural inequalities, governance frameworks, and development conditions in shaping migration outcomes. It adopts a sustainability-oriented perspective to highlight how migration is embedded within broader adaptive and developmental processes rather than operating as a direct response to environmental change. The analysis demonstrates that effective policy responses must move beyond climate-deterministic narratives and instead adopt integrated approaches that combine environmental management, socioeconomic development, and migration governance. Strengthening adaptive capacity, improving institutional resilience, and promoting inclusive urban and rural development are identified as key policy priorities. By linking climate-related migration to the Sustainable Development Goals (SDGs)—notably SDG 10 (Reduced Inequalities), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action)—the study contributes to a more holistic understanding of mobility in the context of environmental change. Overall, it calls for a re-evaluation of climate–migration dynamics in the Global South, emphasizing sustainable and context-sensitive governance approaches that reflect the complexity of migration processes.

Keywords: climate-related migration; climate reductionism; Sustainable Development Goals (SDG); Global South; climate adaptation



Academic Editor: William Haller

Received: 7 May 2026

Revised: 17 July 2026

Accepted: 29 July 2026

Published: 5 August 2026

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1. Introduction

Climate-related migration has become one of the most debated issues in contemporary migration research and international policy discussions. As the impacts of climate change become increasingly visible, migration is often portrayed as one of its most direct human consequences. This growing attention has generated a rapidly expanding body of literature, yet there is still no clear consensus on how climate influences migration or how climate-related mobility should be conceptualized. Terms such as ‘climate migration,’ ‘environmental migration,’ ‘environmental displacement,’ and ‘climate refugees’ are frequently used interchangeably, despite referring to different forms of mobility and carrying

distinct legal and analytical implications (McAdam 2012; Nicholson 2014). Such conceptual ambiguity not only complicates empirical research but also shapes public and policy debates by encouraging simplified understandings of why people move. Labels such as ‘environmental refugee’ risk portraying migration as an almost automatic consequence of environmental change while overlooking migrants’ agency and the wider social, political, and economic contexts in which mobility decisions are made (de Haas et al. 2019).

Scholars in migration have increasingly contested such deterministic readings over the past decade. Recent research indicates that environmental pressures are not a separate driver of migration but operate through broader systems of inequality, governance and development (Black et al. 2011; Castles 2002; de Haas 2021; Government Office for Science 2011). This perspective is especially relevant in the Global South, where climate risks are interlinked with poverty, uneven development, institutional capacity constraints, and fragile governance systems. Historical processes such as colonial legacies, unequal incorporation into global markets, and persistent socio-economic inequalities continue to shape both exposure to environmental risks and people’s ability to respond to them (Rodney 1972; Roberts and Parks 2007; Hickel 2017). Thus, migration cannot be simply seen as a reaction to environmental stress. Environmental change, livelihoods, governance, social protection, and adaptive capacity interact to determine whether people move, stay put, or get trapped in conditions of vulnerability (Adger 2006; Black et al. 2011; IPCC 2022).

But despite this growing body of scholarship, there are major gaps. The literature tends to treat environmental change, migration, development, and governance as separate fields of study, and reviews tend to focus on only one aspect of this nexus (e.g., climate drivers, legal debates, adaptation strategies). Consequently, there remains a dearth of synthesis that integrates these perspectives into a coherent analytical framework. One consequence of this fragmentation is the ongoing presence of what Hulme (2011) refers to as ‘climate reductionism’: the inclination to explain complicated patterns of human mobility primarily in terms of climate change, and insufficient consideration of the structural conditions that shape migration decisions. Environmental stress undoubtedly affects mobility in many contexts, but it rarely acts in isolation. Research from the Sahel, coastal Bangladesh and Central America consistently finds that migration outcomes are the result of the interaction of environmental pressures with labour markets, governance systems, livelihood insecurity, conflict and unequal access to resources (Raleigh et al. 2008; Black et al. 2011; Etzold et al. 2014; Mallick and Etzold 2015). Environmental change may even reduce mobility in some cases by limiting the financial and social resources necessary for migration, creating situations of involuntary immobility rather than large-scale displacement.

These observations raise a broader question that remains under-addressed in the literature: to what extent should climate-related migration be understood as a direct consequence of environmental change, and to what extent is it the outcome of wider socio-economic, institutional and developmental processes? This question requires a departure from explanations that underscore climate as the key driver of migration to an analysis of the ways environmental pressures interact with governance arrangements, adaptive capacities, and structural inequalities. Such an approach provides not only a deeper understanding of migration dynamics but also has important implications for sustainable development and migration governance.

The study offers three main contributions to the literature. First, it critically re-evaluates climate reductionism by demonstrating the limitations of explanations privileging environmental change as the prime mover of migration. Secondly, it combines knowledge from the literature on migration, development, sustainability and governance to build a more holistic perspective on climate-related mobility. Third, it provides an analytical framework that situates migration within wider processes of structural inequality, insti-

tutional capacity and adaptive livelihoods, thereby highlighting the interconnectedness of the climate–migration–development nexus. Rather than proposing a new theory of climate migration, the study presents a systematic synthesis of existing scholarship and suggests a deeper consideration of the social, political and institutional contexts within which mobility occurs to better understand climate-related migration. It does so with the aim of contributing to more context-sensitive research and more effective governance approaches to climate-related mobility in the Global South.

The remainder of the study is organized as follows. Part two deals with the methodology of the review, including the literature search strategy, the study selection process, and the analytical approach. The next sections discuss the conceptual debates around climate-induced migration, the links between migration, development, and sustainability, and the empirical patterns identified across the Global South. The study concludes with a discussion of the wider implications of these findings for migration governance, sustainable development, and future research.

2. Methodology

This study investigates the link between climate-related migration, development and sustainability in the Global South using a critical narrative literature review. The review does not present empirical findings in quantitative terms, but rather critically synthesizes conceptual and empirical research from the fields of migration studies, development studies, political ecology, climate adaptation and sustainability scholarship. In particular, a critical narrative approach is apt, as climate-related migration is still a conceptually contested field, informed by a range of theoretical perspectives and policy debates. The review thus focuses on the interaction of environmental change with wider political, economic, institutional, and developmental processes that shape migration outcomes across the Global South.

The literature was identified through structured searches of Web of Science, Scopus and Google Scholar, supplemented by reports from key international organisations such as the IPCC, IOM, World Bank, UNDP, and UN-Habitat. The review is mainly based on publications from 2010–2025, but also includes some earlier studies that have made important theoretical contributions to the field.

The combined terms were climate migration, environmental migration, climate mobility, environmental displacement, climate adaptation, migration governance, development, sustainability, Global South, and climate reductionism.

Rather than exhaustively catalogue the literature, the review used a purposive sampling strategy to identify influential and analytically relevant studies. Priority was given to peer-reviewed journal articles and widely cited theoretical works and policy reports examining the intersections of environmental change, migration, development, governance and sustainability in the Global South. Studies were included that made a substantive contribution to debates on climate-related migration, that examined migration in broader socio-economic and institutional contexts, and that focused on environmentally vulnerable regions including Sub-Saharan Africa, South Asia, Latin America and Small Island Developing States. We excluded editorials, opinion pieces, newspaper articles, duplicate publications, and studies that did not explicitly address the relationship between climate change and migration.

2.1. Analytical Approach

The selected literature was analysed through a thematic qualitative synthesis. Unlike synthesising quantitative results, the analysis aimed to identify recurring concepts, theoretical debates and policy perspectives across the literature. Particular emphasis was placed

on themes including climate reductionism, environmental stress, drivers of migration, the climate–migration–development nexus, governance, sustainability, and adaptive capacity.

Comparison of evidence from different parts of the Global South made it possible to identify both common patterns and important contextual differences. This comparative thematic approach reveals the role of environmental pressures, structural inequalities, governance arrangements and livelihood conditions in shaping migration outcomes, thus providing a more integrated view of climate-related migration within the framework of development and sustainability debates.

2.1.1. Climate Migration and Climate Reductionism

Climate change is widely acknowledged as a driver of human mobility, but its role in migration processes is frequently overstated in ways that mask the larger structural drivers of displacement and mobility. Environmental stressors such as flooding, salinization, drought, and land degradation may affect livelihoods and increase insecurity, particularly in climate-sensitive regions. However, the explanation of migration mostly or solely because of climate change runs the risk of overlooking the complex interaction between socio-economic vulnerability, governance failures, institutional fragility, and conflict dynamics (Black et al. 2011; Dewan 2023). Environmental stress is in many cases not an independent causal force. Instead, it is filtered through pre-existing inequalities that affect both exposure to risk and the capacity of individuals and households to respond (Adger 2006; Black et al. 2011; de Haas 2021; IPCC 2022).

A key implication of this approach is that the relationship between environmental stress and migration is not direct or linear. Migration outcomes are shaped by a range of intervening conditions that determine that people can move, are compelled to stay, or are pushed into precarious forms of mobility. In this regard, de Haas's (2021) aspirations-capabilities framework offers an especially useful analytical lens. In this sense, migration is a function of the desire or need to move and the resources, opportunities, and social conditions that enable movement. Climate-related stressors should thus be seen as one element of a wider range of forces that modify opportunity structures, rather than as direct and sufficient causes of migration. This understanding challenges deterministic readings and calls for alternative multi-causal and context-sensitive approaches to climate-related mobility. However, within this, the relations between climate and migration are analytically fractured. A body of literature stresses the direct and indirect environmental effects of climate variability on migration, typically highlighting displacement, resource scarcity and vulnerability (Black et al. 2011; IPCC 2022; Gray and Mueller 2012). A second body of work focuses on migration as an adaptive strategy, by which households diversify income, reduce risk, and respond to ecological uncertainty. A third approach focuses more on governance, inequality and political economy, arguing that migration outcomes are less determined by environmental change itself than by the structural contexts in which such change occurs (Hulme 2011; Farbotko and Lazrus 2012; Kaczan and Orgill-Meyer 2020). Each of these perspectives provides useful insights, but there has been a continuing conceptual problem in the field: the difficulty of defining "environmental migrants" as a distinct and stable category.

In this context the idea of climate reductionism becomes analytically useful. Hulme (2011) uses the term to describe the tendency to explain complex social, political, and economic transformations mainly through climate change. When applied to migration studies, climate reductionism refers to interpretive frameworks that privilege environmental change as the dominant explanatory variable, downplaying the role of structural inequality, governance deficits, land tenure insecurity, labor precarity, and conflict dynamics. Such reductionist framings risk misidentifying the root causes of migration and, consequently,

encouraging policy responses that are poorly aligned with the socio-economic realities of the affected populations. This is especially problematic in the Global South, where mobility is frequently the result of the confluence of environmental stress with pre-existing forms of marginalization and institutional weakness, rather than climate impacts alone (Boas 2015; Bettini and Gioli 2016; Dewan 2023). Climate reductionist narratives are not only conceptual misunderstandings but also reinforced through global policy discourses, humanitarian framings and funding priorities that privilege measurable environmental indicators over less easily quantifiable structural determinants (Hulme 2011; Bettini and Gioli 2016; Boas 2015; Baldwin 2016). This means that climate change may become the most visible explanation for mobility, even in settings where governance failures, conflict, or socio-economic exclusion are more decisive. This tendency produces a depoliticized understanding of migration, shifting attention away from historical inequality, asymmetries of development and the responsibility of states. It may also result in narrow policy frameworks that focus on climate adaptation in technical terms while overlooking broader reforms related to land rights, livelihood security, labor protection, and inclusive development (Adger et al. 2015; Eriksen et al. 2015; IPCC 2022; de Haas 2021). In this sense, critiques of climate reductionism are not meant to deny the importance of environmental change but rather to place it within an expanded matrix of structural and institutional conditions. Geographical and epistemological biases in migration literature further reinforce the limits of reductionist approaches. As Crawley and Teye (2024) contend, migration research has been long dominated by categories, priorities, and policy concerns of the Global North. This has resulted in a tendency to privilege forms of cross-border mobility and legal classification while paying less attention to the informal, internal, circular, and South–South movements that are especially prominent in the Global South. Consequently, migration dynamics in environmentally vulnerable regions are often understood through conceptual frameworks that do not fully capture local realities. Migration in many parts of the Global South is shaped by overlapping environmental, economic and political pressures, as well as weak social protection systems, precarious labour markets, and high levels of informality. Addressing these blind spots requires the creation of more context-sensitive and sustainability-oriented frameworks able to capture the heterogeneity of migration experiences across different socio-ecological contexts. Accordingly, this study conceptualizes climate-related migration as an outcome of interacting environmental, socio-economic, and governance processes rather than as a direct response to climate stress alone. By integrating critiques of climate reductionism with sustainability and development perspectives, it advances a multi-dimensional analytical framework that situates migration within broader structural and institutional contexts. The next section builds on this conceptual foundation by examining in greater detail how environmental stress interacts with socio-economic vulnerability, livelihood systems, and uneven adaptive capacity to shape migration drivers in the Global South.

2.1.2. Drivers of Migration in the Global South: Environmental Stress

Environmental change is becoming increasingly important in discussions about migration in the Global South. But its effects on human mobility are often more indirect than we typically assume. Droughts, floods, sea-level rise, salinization and changing rainfall patterns certainly affect livelihoods but rarely cause migration in isolation. Rather, environmental pressures interact with pre-existing socio-economic inequalities, governance arrangements, labour markets and access to resources to determine the way different individuals and households respond to similar climatic conditions (Black et al. 2011; Locke 2009). In sum, environmental stress should be conceptualized not as an in-

dependent cause of migration, but as one aspect of broader systems of vulnerability and uneven development.

This is especially apparent when we look at the range of environmental change itself. Not every climate process affects mobility in the same way. Sudden events, like cyclones, floods or storms, may require people to move quickly and often lead to temporary displacement or emergency evacuations. Processes that unfold slowly, such as desertification, rising sea levels, salinization and soil degradation, tend to happen gradually, over many years, and are less directly connected to people's choices about their livelihoods and migration (IPCC 2022; McLeman and Gemenne 2018). Declining environmental conditions may drive seasonal, circular or permanent migration for households that rely on agriculture or other climate sensitive sectors. At the same time, prolonged environmental degradation can also erode the financial and social resources needed to move, thus decreasing people's capacity to migrate. Climate change, then, can both promote and restrict mobility at the same time.

The complexity is evidenced in the experience of coastal Bangladesh. Increasing salinity, recurrent flooding and riverbank erosion have steadily reduced agricultural productivity and increased livelihood insecurity in many districts. Some households have reacted to the situation by moving to urban centres such as Dhaka, temporarily or permanently, while others have remained in place as their declining incomes have limited their scope to finance migration (Etzold et al. 2014; Mallick and Etzold 2015). Thus, similar environmental pressures lead to different migration outcomes depending on the economic resources of households, their social networks and their access to institutional support. These results provide evidence for the claim that environmental change is not a determinant of migration.

2.1.3. The Climate–Migration–Development Nexus

The relationship between climate change, migration, and development cannot be understood through simple cause-and-effect explanations. Although environmental change undoubtedly influences mobility, migration outcomes emerge through the interaction of climatic pressures with broader economic, political, and institutional conditions. Droughts, floods, ecosystem degradation, and changing rainfall patterns may alter livelihoods and increase uncertainty, but whether these pressures eventually lead to migration depends on people's access to resources, livelihood opportunities, governance arrangements, and institutional support (Black et al. 2011; de Haas 2021). Migration is therefore better understood as part of a wider development process than as a direct consequence of environmental change.

One of the defining characteristics of this nexus is that migration not only responds to development conditions but also reshapes them. Over time, migration can influence local economies, labour markets, demographic structures, and social relations. Remittances are perhaps the clearest example. They may strengthen household resilience by supporting consumption, financing education, diversifying livelihoods, or enabling investments that reduce future vulnerability. At the same time, their effects are not uniformly positive. Access to migration opportunities is rarely distributed equally, meaning that remittances can also reinforce local inequalities, deepen dependence on migration income, or concentrate adaptive resources within particular households or communities (de Haas 2021; Adger 2006; Eriksen et al. 2015; Ribot 2014). These contrasting outcomes illustrate that migration and development continuously influence one another through dynamic feedback processes rather than through a linear sequence of causes and effects.

The literature also reflects different ways of interpreting the relationship between climate and migration. One influential perspective approaches migration primarily through the lens of security, portraying large-scale mobility as a potential source of instability, con-

flict, or governance challenges (Boas 2015). A different body of scholarship places greater emphasis on migration as part of broader development and adaptation strategies. From this perspective, mobility allows households to diversify livelihoods, spread economic risks, and strengthen resilience under conditions of environmental uncertainty (de Haas 2021; Tacoli 2009). These perspectives are not simply competing academic interpretations; they shape policy priorities in important ways. Security-oriented approaches often encourage border control and migration management, whereas development-oriented perspectives tend to focus on protection, inclusion, and expanding migrants' adaptive capacities. The contrast demonstrates that how migration is framed has significant implications for governance.

Viewing migration through a development lens also highlights its uneven character. For many households, mobility provides opportunities to improve livelihoods through employment, remittances, and translocal social networks. Yet these opportunities remain highly unequal. Access to migration is shaped by income, education, legal status, gender, social networks, and institutional support, meaning that not everyone is equally able to use migration as an adaptive strategy (Black et al. 2011; UNDP 2020). While some households migrate proactively to reduce future risks, others experience distress migration under increasingly precarious conditions. Still others are unable to move at all because environmental deterioration has undermined the resources necessary for migration. These different trajectories remind us that mobility and immobility should not be treated as opposites but as outcomes produced by the same structural inequalities.

The interaction between migration and development is particularly visible across the Global South. In many environmentally vulnerable regions, migration serves as one element of broader household livelihood strategies rather than as a simple response to climate hazards. Seasonal migration, labour mobility, remittances, and translocal social networks often help households cope with environmental uncertainty and diversify sources of income (Tacoli 2009; World Bank 2023; UNDP 2020). However, these benefits are never automatic. Their long-term contribution depends on governance quality, labour market opportunities, social protection systems, and the broader institutional environment within which migration takes place. Similar environmental pressures may therefore produce very different development outcomes across communities facing comparable climatic conditions.

Despite growing recognition of these interconnections, climate policy, migration governance, and development planning continue to operate largely in parallel. Adaptation strategies frequently pay limited attention to migration, while migration policies often overlook environmental change and long-term development objectives (McLeman and Gemenne 2018; Zickgraf 2018; Almulhim et al. 2024). This fragmentation is particularly evident in many countries of the Global South, where institutional coordination remains limited and administrative capacities are often constrained. As a consequence, migration is still too often treated either as a humanitarian emergency or as a governance challenge instead of being incorporated into broader development and adaptation planning.

Taken together, the literature suggests that the climate–migration–development nexus is best understood as a dynamic relationship shaped by continuous interactions between environmental change, livelihoods, governance, and institutional capacity. Rather than asking whether climate change causes migration, a more useful question is under what social, economic, and political conditions environmental pressures translate into mobility, immobility, or other adaptive responses. Viewing migration through this broader lens makes it possible to move beyond deterministic explanations and provides a stronger foundation for designing policies that integrate climate adaptation, migration governance, and sustainable development. The following section builds on this discussion by considering how these insights can inform more coherent and context-sensitive policy approaches.

2.1.4. Migration, Sustainability and Policy Options

Migration has become an increasingly prominent element of debates on climate adaptation and sustainable development. In many parts of the Global South, moving is not simply a reaction to environmental change but one of several strategies households use to cope with uncertainty, diversify their livelihoods, and secure future opportunities (Tacoli 2009; McLeman and Smit 2006). Yet the outcomes of migration are far from uniform. Whether mobility ultimately contributes to resilience depends less on migration itself than on the social, economic, and institutional environments in which migrants live and work. Differences in governance quality, labour market conditions, and access to public services often determine whether migration opens new opportunities or reproduces existing forms of disadvantage (Black et al. 2011; Bettini and Gioli 2016).

This has important implications for policy. Climate-related mobility is still frequently addressed through policy frameworks that treat migration primarily as a consequence of environmental hazards. While such approaches have helped draw attention to the human impacts of climate change, they often overlook the structural conditions that make certain populations vulnerable in the first place. Poverty, insecure employment, unequal access to land, weak institutions, and limited social protection frequently play a far greater role in shaping migration outcomes than environmental stress alone. Policies that focus exclusively on climate adaptation therefore risk addressing the symptoms of vulnerability rather than its underlying causes.

A broader sustainability perspective offers a more comprehensive way of approaching migration governance. Instead of viewing mobility as an exceptional crisis requiring emergency intervention, migration can be understood as part of long-term processes of social and economic transformation. This perspective encourages closer coordination between climate adaptation, migration governance, urban planning, and development policy. Such integration is particularly relevant in the Global South, where environmental pressures often coincide with rapid urbanization, demographic change, and persistent socio-economic inequality.

Policy priorities naturally differ across governance levels. In rural areas, strengthening livelihood security remains fundamental. Investments in climate-resilient agriculture, sustainable water management, rural infrastructure, and social protection can reduce the pressures that force households into distress migration while also expanding their capacity to choose whether to move or remain in place. Supporting adaptation in situ is therefore not simply an environmental objective but also a means of broadening people's range of mobility options.

Urban areas face a different set of challenges. Many cities across the Global South continue to absorb large numbers of internal migrants, often without corresponding investments in housing, infrastructure, public transportation, sanitation, or employment opportunities. As a result, migration may shift vulnerability from environmentally exposed rural regions to informal urban settlements where new forms of insecurity emerge (Tacoli 2009; UN-Habitat 2020). Urban planning therefore needs to anticipate migration rather than react to it, ensuring that growing cities can accommodate new populations without reinforcing spatial and social inequalities.

National governments also have an important role in improving coordination across policy sectors. Migration policies, climate adaptation strategies, labour market regulation, and development planning are frequently designed independently, despite addressing closely interconnected issues. Greater institutional coordination would help create policy environments in which migration contributes more effectively to resilience, social inclusion, and sustainable development rather than becoming another source of vulnerability.

Migration can also generate important developmental benefits beyond the movement of people alone. Remittances, social networks, and the circulation of knowledge frequently support household adaptation, finance education, improve housing conditions, and strengthen local investment (de Haas 2021; UNDP 2020; World Bank 2023). These benefits, however, should not be assumed. They depend on broader institutional conditions, including access to decent work, legal protection, financial services, and inclusive governance. Without these enabling conditions, migration may deepen existing inequalities or create new forms of dependence, particularly for households and communities with limited resources.

Taken together, these observations suggest that migration should neither be celebrated as an automatic adaptation strategy nor portrayed simply as evidence of environmental crisis. Its developmental consequences remain contingent upon the political, economic, and institutional contexts within which mobility occurs. Policies therefore need to move beyond simplified narratives that frame migration either as a problem to prevent or as a solution to promote. More effective governance requires recognizing migration as a complex social process whose outcomes are shaped by unequal access to opportunities, resources, and rights (Adger et al. 2015; IPCC 2022). Framing mobility in this way allows sustainability policies to focus not only on reducing climate risks but also on addressing the structural inequalities that ultimately determine whether migration becomes a pathway towards resilience or a mechanism through which vulnerability is reproduced.

2.1.5. Empirical Patterns of Climate-Related Migration in the Global South

Evidence from the Global South consistently shows that there is no one pattern of climate-related migration that fits all. Environmental stress influences mobility without doubt, but its effects are highly variable across localities and mediated through broader social, economic and political conditions. The same climate hazards may induce migration in one context, temporary or circular mobility in another, or trap vulnerable populations without any options to move. Such differences undermine linear explanations of climate change as a direct driver of migration, and underscore the importance of context-sensitive analysis.

The Sahel is a useful example of this complexity. Agriculture and pastoral livelihoods have increasingly been under pressure from climate variability, but migration outcomes cannot be explained by environmental stress alone. Research indicates that climate variability, along with livelihood insecurity, weak state institutions and conflict dynamics, affects mobility decisions (Raleigh et al. 2008; Government Office for Science 2011). Instead of generating new migratory pressures, environmental change often exacerbates existing vulnerabilities, operating as a ‘threat multiplier’ that magnifies underlying socio-political challenges (Black et al. 2011). At the same time, environmental degradation is not necessarily a driver of increased migration. Households with limited resources may lack the financial and social capital needed to migrate when agricultural productivity and income decline, contributing to situations of involuntary immobility and the emergence of what Black et al. (2011) call “trapped populations.”

There is a broadly similar pattern in South Asia, although the environmental and institutional conditions vary. Bangladesh and parts of eastern India have often been identified as some of the most vulnerable areas to floods, cyclones, salinisation and riverbank erosion. Certainly, the impact of environmental pressures on migration decisions is in conjunction with enduring structural factors such as rural poverty, insecure land tenure, labour market opportunities and access to social networks (Islam and Shamsuddoha 2017; Gray and Mueller 2012). However, evidence from Bangladesh demonstrates that migration is often temporary, seasonal or circular rather than permanent. Many households do not

abandon areas of environmental degradation but use mobility to diversify income sources and manage livelihood risks (Tacoli 2009; McLeman and Smit 2006). These observations suggest that environmental change alters the conditions under which migration happens, but does not predict mobility outcomes in a simple or predictable way.

The dynamics are similar in parts of Latin America, especially in the Central American Dry Corridor. Countries such as Guatemala, Honduras and El Salvador have suffered from recurrent droughts and decreasing agricultural productivity which have affected rural livelihoods. But migration decisions are shaped by a much broader set of factors. In Guatemala, persistent drought has lowered maize and bean production, prompting many rural households to engage in seasonal labour migration while still producing crops at home. In Honduras, environmental pressures have combined with poverty, food insecurity, and limited economic opportunities, with migration being part of broader household livelihood strategies rather than purely a climate-induced response. In addition to environmental change, migration opportunities in the region continue to be influenced by remittance networks, labour market linkages with the United States, and local governance conditions (Warner and Afifi 2014; IPCC 2022). The cases here indicate that environmental stress affects migration indirectly through broader political and economic structures, rather than as an independent driver.

At the same time, this broader pattern does not include all types of climate-related mobility. The changing environment itself has become a much more direct driver of relocation in some small island states. Planned relocation has been carried out in places like Fiji, Kiribati, Tuvalu, and the Carteret Islands of Papua New Guinea, due to rising sea levels, coastal erosion, and increasing salinization of freshwater resources (McAdam 2012; IPCC 2022). These cases show that under certain conditions climate induced migration is possible. But rather than contradicting the broader argument of this study, they demonstrate that climate-induced mobility is one point on a much broader spectrum of migration experiences. Most climate-related migration in the Global South continues to be driven by environmental pressures interacting with existing patterns of inequality, governance and development.

There is a common theme running through these regional cases: comparable environmental pressures can generate quite different mobility outcomes. This diversity is usefully understood through the lens of the aspirations-capabilities framework developed by de Haas (2021). In this sense migration is not only about people's aspirations to migrate but also about the resources, opportunities and institutional conditions that enable movement. Thus, the effect of environmental change on migration is mediated by the reconfiguration of these capabilities rather than mechanically producing migration flows.

More recent research also draws attention to what happens post-migration. Rapid urbanisation in much of the Global South has made cities into large centres for populations affected by the environment, but migration often shifts vulnerability rather than eliminating it. Rural-to-urban migration has led to the expansion of informal settlements in many cities in Sub-Saharan Africa and South Asia, where migrants may live in unsafe housing, with inadequate infrastructure, limited public services and constant exposure to environmental risks like flooding and excessive heat (Tacoli 2009; UN-Habitat 2020; Rigaud et al. 2018; World Bank 2021). These experiences show that migration can displace vulnerability into new geographical and institutional spaces rather than eliminate it.

Another recent research finding of importance is about those who do not migrate. Despite the assumption that environmental change necessarily leads to mobility, many households remain in environmentally vulnerable locations because they lack the financial resources, social networks or institutional support to effect a move (Black et al. 2011; Zickgraf 2018). So, for one to understand the various ways in which people react to environmental change, it is crucial to distinguish between voluntary immobility, involuntary

immobility and various forms of migration. To stay put should not be interpreted as a voluntary choice; for many households it reflects severe structural constraints.

In sum, the empirical evidence reviewed here suggests that there is no single pathway connecting climate change to migration. Similar environmental pressures may in some contexts promote migration, in others facilitate temporary or circular forms of mobility, or in others again prevent populations from moving at all. The study suggests that these differences are not anomalies but are instead indicative of the normal state of climate-related migration in the Global South. To make sense of this diversity we need analytical tools that combine environmental pressures with issues of governance, development and structural inequality. This allows us to go beyond climate reductionism and to develop a more comprehensive basis for the analysis of the complex relationship between climate change, mobility and sustainable development.

The primary empirical results covered in this section are summarized in Table 1. It illustrates how environmental stress combines with livelihoods, governance, and socioeconomic inequality to produce a range of migration outcomes throughout the Global South by contrasting various geographical situations.

Table 1. Empirical patterns of climate-related migration across selected regions of the Global South.

Region	Dominant Environmental Stress	Key Mediating Factors	Typical Mobility Outcome
Sahel	Rainfall variability, drought	Conflict, governance, livelihood insecurity	Mixed migration and involuntary immobility
Bangladesh	Floods, cyclones, salinization	Poverty, land tenure, labour markets	Seasonal and circular migration
Central America	Drought, crop failure	Remittance networks, labour markets, governance	Labour migration and livelihood diversification
Small Island States	Sea-level rise	Limited territory, relocation policies	Planned relocation

Source: Compiled by the author based on Black et al. (2011), Government Office for Science (2011), Gray and Mueller (2012), Islam and Shamsuddoha (2017), Warner and Afifi (2014), McAdam (2012), IPCC (2022), and de Haas (2021).

3. Conclusions

Climate-related migration has become one of the defining issues at the intersection of environmental change, development, and human mobility. As this review has shown, however, migration cannot be understood through climate change alone. Rather than acting as an independent driver of mobility, environmental stress interacts with socioeconomic inequalities, governance arrangements, labour markets, livelihood systems, and institutional capacities that shape whether people migrate, remain in place, or become trapped in conditions of vulnerability. Understanding climate-related migration therefore requires moving beyond linear cause-and-effect explanations toward a more contextual and relational perspective.

A central contribution of this study is its critique of climate reductionism. While recognising climate change as an increasingly significant source of environmental stress, the review demonstrates that explanations focusing solely on climatic factors overlook the structural conditions that produce unequal mobility outcomes. Drawing on insights from migration studies, development studies, sustainability scholarship, and political ecology, the study advances a more integrated perspective in which environmental pressures are understood as interacting with broader political, economic, and institutional processes.

Across the literature reviewed, four consistent patterns emerge. First, climate change rarely acts as an autonomous driver of migration; instead, its effects are mediated by socioeconomic inequalities, governance systems, and livelihood conditions. Second, migration outcomes vary considerably across contexts, ranging from seasonal and circular mobility to planned relocation and involuntary immobility. Third, climate reductionist explanations

fail to capture the broader political and developmental processes that shape mobility decisions in the Global South. Finally, the literature consistently indicates that effective policy responses depend on stronger integration between climate adaptation, migration governance, and sustainable development rather than isolated sectoral interventions.

These findings have important policy implications. Instead of treating migration primarily as a problem to be prevented or as an inevitable consequence of climate change, policy responses should recognise mobility as part of broader adaptation and development processes. This requires closer coordination between climate adaptation, migration governance, urban planning, labour market regulation, and social protection. Investments in climate-resilient rural livelihoods, inclusive urban planning, decent work, and stronger institutional coordination are likely to be more effective than narrowly climate-focused interventions because they address the structural conditions that shape vulnerability before, during, and after migration.

Methodologically, this review demonstrates the value of combining conceptual debates with comparative empirical evidence from different regions of the Global South. Rather than relying on individual case studies, it identifies recurring patterns while acknowledging the importance of local variation. At the same time, several limitations should be recognized. As a critical narrative review, the study does not seek to establish causal relationships or provide exhaustive coverage of all empirical studies. Future research would benefit from more systematic comparative reviews, longitudinal analyses, and locally grounded empirical research examining how environmental stress intersects with governance, labor markets, gender relations, and social inequalities. Greater attention should also be given to underexplored issues such as planned relocation, climate-induced immobility, South–South migration, and the long-term developmental consequences of climate-related mobility.

Ultimately, climate-related migration should be understood less as an environmental phenomenon than as a development and governance challenge shaped by unequal political, economic, and institutional structures. Recognizing this complexity is essential for advancing both academic debate and policy design, enabling more equitable, context-sensitive, and sustainable responses to climate-related mobility in the Global South.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: No new data were created or analyzed in this study. Data sharing is not applicable to this article.

Acknowledgments: I only used artificial intelligence (Open AI, ChatGPT-5.5) to sort and organize my references.

Conflicts of Interest: The author declares no conflicts of interest.

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