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CLIMATE-INDUCED MIGRATION AND DISPLACEMENT

Syed Riyaz Pasha
Assistant Professor , HOD department of sociology
Sri D. Devaraj Urs Government First Grade College, Hunsur, Mysore , Karnataka, India.

ABSTRACT :

Climate change is increasingly reshaping patterns of human mobility by affecting livelihoods, housing, food and water security, public health, and the habitability of exposed areas. Climate-induced migration and displacement are not single-cause phenomena; they arise through the interaction of environmental hazards with poverty, inequality, demographic pressures, weak infrastructure, livelihood dependence, governance, and limited adaptive capacity. This paper examines the sociological dimensions of climate-induced migration and displacement, with particular attention to internal migration, disaster displacement, rural–urban mobility, livelihood insecurity, gender, social inequality, and the emerging need for planned relocation.

The study is based on a descriptive and analytical review of secondary sources including reports and assessments of the Intergovernmental Panel on Climate Change (IPCC), International Organization for Migration (IOM), World Bank, Internal Displacement Monitoring Centre (IDMC), United Nations agencies, and peer-reviewed scholarship. The evidence indicates that floods, cyclones, droughts, sea-level rise, extreme heat and other climate-related hazards can influence migration directly through sudden destruction and indirectly through declining agricultural productivity, water stress and employment insecurity. Most observed climate-related mobility remains internal rather than international. At the same time, migration can function as an adaptation strategy when people have resources and choices, whereas displacement reflects more constrained movement. The paper argues that effective responses require climate adaptation, disaster-risk reduction, social protection, livelihood diversification, inclusive urban planning, early-warning systems, accessible housing, and rights-based approaches to planned relocation. Special attention is required for women, children, older persons, small farmers, informal workers and other socially vulnerable groups. Climate mobility should therefore be addressed not only as an environmental issue but also as a question of social justice, development and human security.

KEY WORDS- *Climate Change; Migration; Displacement; Human Mobility.*

I. INTRODUCTION

Climate change has become an important factor influencing contemporary patterns of human mobility. Rising temperatures, changing rainfall patterns, floods,

droughts, tropical cyclones, sea-level rise, wildfire risk and other climate hazards affect where people can live and how they can sustain their livelihoods. The IPCC concludes that climate hazards can act as direct drivers of involuntary migration and displacement and as indirect drivers through the deterioration of climate-sensitive livelihoods. It also finds that most climate-related migration and displacement currently occurs within national boundaries. [1]

The relationship between climate change and migration is complex. People rarely move because of climate change alone. Economic opportunities, household strategies, social networks, political conditions, access to services, land ownership, infrastructure and government policies influence whether individuals remain, migrate temporarily, migrate permanently, or are displaced. The same climate event can therefore produce different mobility outcomes in different communities. A household with savings, land, social connections and access to transport may move voluntarily, while a poor household with limited resources may be trapped in a hazardous location or displaced suddenly by a flood or cyclone.

The distinction between migration and displacement is important for sociological analysis. Migration may involve a degree of choice and can be used as an adaptation strategy, particularly through seasonal, circular or labour migration. Displacement generally involves a stronger element of compulsion, especially when homes, land or essential services are destroyed. However, the boundary between voluntary and forced movement is often fluid. A family leaving a drought-affected village after several failed harvests may technically migrate, but the decision can be strongly constrained by livelihood deterioration. Climate-related mobility should therefore be understood as a continuum rather than a simple voluntary–forced binary.

The scale of the issue is substantial. The World Bank's Groundswell analysis estimated that, without strong climate and development action, climate change could drive up to 216 million people to move within their own countries across six regions by 2050, including about 40 million in South Asia. These are scenario-based projections rather than predictions, and actual mobility will depend on climate impacts, development, adaptation capacity and migration policy. [3] The IPCC similarly emphasizes that future climate-related mobility will vary by region and will be shaped by exposure, vulnerability, population growth and adaptive capacity. [4]

Recent displacement evidence also demonstrates the importance of disaster-related mobility. IDMC reported that disasters triggered 264.8 million forced movements across 210 countries and territories during 2015–2024, with storms and floods accounting for 89 percent of these movements. In 2024 alone, disasters triggered approximately 45.8 million movements, the highest annual figure recorded by IDMC. [5] These figures refer to movements and should not be interpreted as the number of unique individuals permanently displaced; one person may be counted more than once if they move repeatedly.

South Asia is particularly relevant to the study because of its large population, dependence on climate-sensitive livelihoods, densely populated river basins, long coastlines, rapid urbanization and uneven adaptive capacity. The region includes major agricultural areas exposed to floods, droughts and heat, as well as coastal and deltaic settlements exposed to sea-level rise and storm surges. India consequently needs to approach climate mobility through a combination of adaptation, disaster management, livelihood security and inclusive urban development.

From a sociological perspective, climate-induced migration raises questions about inequality, social stratification, access to resources, community networks, identity, social exclusion and the redistribution of environmental risks. Climate hazards may deepen pre-existing inequalities because households with fewer resources often have fewer options for prevention, relocation and recovery. The consequences can include loss of livelihoods, disruption of education, weakening of community institutions, insecure employment, housing problems and increased pressure on destination areas.

2. OBJECTIVES

• To examine the major environmental and socio-economic factors associated with climate-induced migration and displacement.
• To analyse the relationship between climate hazards, livelihood insecurity and human mobility.
• To understand the social consequences of climate-induced migration for households, communities and destination areas.
• To examine the vulnerability of socially and economically disadvantaged groups, including women, children, small farmers and informal workers.
• To identify policy and institutional measures for reducing forced displacement and improving safe, dignified and planned mobility.

3. RESEARCH METHODOLOGY

The study adopts a descriptive, analytical and review-based research design. It does not claim to generate a new household-level survey dataset. Instead, it synthesizes established evidence on climate change, migration and displacement in order to develop a sociological understanding of the phenomenon. Secondary information was collected from authoritative international and national reports, academic literature, policy documents and institutional publications.

The principal sources include IPCC assessments on climate impacts, adaptation and vulnerability; IOM's World Migration Report and climate-mobility research; World Bank Groundswell studies on internal climate migration; IDMC reports on internal displacement; United Nations documents on migration governance and human rights; and selected peer-reviewed research on climate–migration relationships. The literature was examined thematically under the following categories: climate hazards, livelihoods, internal migration, displacement, rural–urban mobility, gender, inequality, urbanization, adaptation, planned relocation and policy responses.

The analytical approach is sociological and interpretive. Climate-induced mobility is treated as a socially mediated process rather than as an automatic physical response to environmental change. The study considers how household assets, social networks, employment, caste and class inequalities, gender roles, public services, governance and institutional support influence mobility decisions and outcomes. The approach is consistent with the IPCC assessment that migration responses to climate hazards are strongly influenced by economic, social, political and demographic processes. [1,4]

A limitation of the study is that climate-related migration is difficult to isolate statistically from other drivers. Employment, poverty, conflict, infrastructure and environmental degradation may operate simultaneously. Furthermore, displacement statistics often measure movements rather than distinct individuals and may undercount short-distance, temporary or undocumented movements. Consequently, the paper uses cautious language and treats scenario projections as conditional estimates rather than certainties.

4. FEATURES OF THE STUDY

4.1 Climate Hazards as Drivers of Mobility

Sudden-onset hazards such as floods, cyclones, landslides and storms can destroy houses, crops, livestock, roads and public infrastructure, producing immediate displacement. Slow-onset changes such as drought, salinization, sea-level rise, groundwater stress and declining agricultural productivity can gradually undermine livelihoods and encourage seasonal or permanent migration. Extreme heat may also affect outdoor

labour and urban habitability. The IPCC identifies floods, storms, droughts and other climate hazards as important drivers, while emphasizing that their effects depend on vulnerability and adaptive capacity. [1]

4.2 Livelihood Insecurity and Rural Migration

Agriculture and allied activities remain particularly sensitive to climate variability. Repeated crop losses can reduce household income, increase debt and encourage young adults to seek employment elsewhere. Seasonal migration may become a household risk-management strategy, with remittances supporting families that remain in rural areas. However, when migration occurs under distress, migrants may enter insecure informal employment and inadequate housing, shifting rather than eliminating vulnerability.

4.3 Rural–Urban Mobility

Climate stress can reinforce existing rural–urban migration. Cities may offer employment, education and health services, but rapid in-migration can also intensify pressure on affordable housing, water, sanitation, transport and public services. Informal settlements may be located in flood-prone or heat-exposed areas, meaning that climate migrants can remain vulnerable after moving. Urban planning therefore becomes an essential component of climate-mobility policy.

4.4 Gender and Social Inequality

Climate-induced migration is experienced differently across gender, age, class and social position. Women may face unequal access to land, income, credit, transport and decision-making, while also carrying substantial unpaid care responsibilities during and after disasters. Children may experience interruption of schooling and increased protection risks during displacement. Older persons and persons with disabilities can face mobility barriers and may require specific assistance. Socially marginalized groups may also have weaker access to formal relief and rehabilitation mechanisms.

4.5 Internal Displacement and Human Security

Displacement can create immediate needs for shelter, food, water, health care, documentation and protection. Prolonged displacement may produce insecure employment, social exclusion and psychological distress. The IOM emphasizes that the human security of migrants must be considered across the migration cycle, while climate-mobility research highlights the importance of inequality, gender and local knowledge. [6,7] The social consequences therefore extend beyond physical relocation to questions of dignity, belonging, citizenship, social protection and access to rights.

4.6 Planned Relocation and Immobility

In some high-risk areas, adaptation may include planned relocation. Such measures can reduce exposure when implemented with community participation, adequate compensation, secure tenure and access to livelihoods and services. Poorly designed relocation can instead create new forms of vulnerability by separating communities from land, employment, cultural resources and social networks. Conversely, some households cannot move even when remaining is dangerous because they lack financial resources, transport, information or social support. This condition is often described as involuntary immobility or trapped populations. [1,8]

4.7 Climate Migration as Adaptation

Migration is not necessarily a negative outcome. When people have agency, information and resources, mobility can diversify household income, reduce exposure and strengthen resilience through remittances and social networks. The IPCC notes that migration can be among the available adaptation responses, while low-agency displacement is more often associated with adverse socio-economic outcomes. [1] Policy should therefore distinguish between migration that represents adaptive choice and displacement that reflects the failure of adaptation options.

4.8 International versus Internal Mobility

Public discussion sometimes treats climate change as primarily a driver of cross-border refugee movements. Available evidence indicates that most climate-related migration and displacement occurs within countries. International movement does occur, but it is influenced by migration policies, labour markets, geography, social networks and other factors. [1,2] This distinction matters for policy because national disaster-management systems, local governments, urban planning institutions and social-protection programmes play central roles in responding to climate mobility.

4.9 India and South Asia

South Asia is identified as a major climate-mobility region. World Bank scenarios have estimated substantial internal climate migration in the region by 2050, with migration hotspots associated with water scarcity, declining agricultural productivity, sea-level rise and other climate impacts. [3,9] India's large rural population, diverse agro-climatic zones and rapidly growing cities make climate-sensitive migration a significant development concern. Recent IDMC reporting also highlights disaster displacement in South Asia, showing the continuing relevance of floods, storms and other hazards. [5]

5. FINDINGS AND SUGGESTIONS

5.1 Findings

1. Climate change is an important driver of human mobility, but it normally interacts with economic, social, demographic and political factors rather than acting alone.
2. Most climate-related migration and displacement currently occurs within national boundaries, making internal governance, disaster management and urban planning central to the response.
3. Sudden-onset disasters such as floods and storms generate large numbers of temporary and repeated movements, while slow-onset hazards such as drought, land degradation, sea-level rise and water stress can contribute to longer-term migration.
4. Climate-sensitive livelihoods, particularly small-scale agriculture and informal employment, can increase exposure to climate shocks and reduce household economic security.
5. Migration can operate as an adaptation strategy when households possess resources, information, social networks and genuine choice; distress migration and involuntary displacement have different and generally more harmful social consequences.
6. Climate mobility can reproduce existing inequalities. Women, children, older persons, persons with disabilities, low-income households, informal workers and marginalized communities may face greater risks during movement and resettlement.
7. Destination areas can experience pressure on affordable housing, sanitation, health care, education, transport, water supply and employment when migration occurs without adequate planning.

8. Reliable data remain a major requirement. Displacement statistics, migration surveys and local climate-risk assessments need better integration so that temporary, circular and permanent mobility can be understood more accurately.

5.2 Suggestions

1. Strengthen climate adaptation and disaster-risk reduction at local level through flood management, drought preparedness, heat-action planning, resilient housing and ecosystem restoration.
2. Develop climate-sensitive social-protection systems, including portable benefits, livelihood support, crop and livestock insurance, employment programmes and emergency cash assistance.
3. Promote livelihood diversification in climate-sensitive rural areas so that households are not forced into distress migration after repeated environmental shocks.
4. Integrate migration into district, state and national climate-adaptation plans rather than treating mobility as an emergency issue only after displacement occurs.
5. Improve inclusive urban planning by expanding affordable rental housing, basic services, public transport, water supply, sanitation and employment support in areas receiving climate migrants.
6. Ensure that planned relocation is participatory and rights-based, with transparent consultation, adequate compensation, secure land or housing tenure, livelihood restoration and continued access to education and health services.
7. Adopt gender-responsive climate-mobility policies and ensure that women and vulnerable groups participate in decisions concerning relocation, rehabilitation and resource allocation.
8. Strengthen early-warning systems and last-mile communication in local languages so that vulnerable households receive actionable information before extreme events.
9. Create integrated climate-migration databases linking disaster-management authorities, local governments, migration agencies and research institutions while protecting personal data and privacy.
10. Promote regional cooperation in South Asia on river-basin management, disaster preparedness, climate adaptation, labour mobility and humanitarian response.

6. CONCLUSION

Climate-induced migration and displacement represent a major social dimension of environmental change. The available evidence demonstrates that climate hazards can disrupt livelihoods, destroy homes and infrastructure, and alter the spatial distribution of populations. However, climate change should not be treated as a deterministic explanation for migration. Mobility outcomes depend on household resources, social inequality, governance, infrastructure, labour markets, social networks and adaptation capacity. The distinction between migration as adaptation and displacement as constrained movement is particularly important.

For India and other South Asian countries, a comprehensive response should combine climate mitigation with locally grounded adaptation, disaster-risk reduction, social protection, resilient livelihoods and inclusive urban development. Migration itself can contribute to resilience when people can move safely and with dignity. The policy objective should therefore be to reduce involuntary displacement while expanding people's capacity to make informed and safe mobility choices. A sociological approach places human agency, social justice, equality and community participation at the centre of climate-mobility governance.

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