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Debate on Climate Induced Labour Migration

Puja Kumari

Department of Economic Studies and Policy, Central University of South Bihar, Gaya

Abstract

There have been forecasts regarding how residents in areas susceptible to drought, flooding, and temperature fluctuations will react to such occurrences due to worries about the effects of climate change on humans. Early research predicted that when households were unable to adjust to the effects of climate change, there would be a sharp rise in human migration. More recently, empirical research on observable climatic trends and occurrences has shown how migration flows fluctuate depending on a number of parameters, including the household's ability to travel and the severity of the event. This work present a comprehensive analysis of this literature using a conceptual framework that explains how climate shocks—such as droughts, floods, or extreme temperature swings—affect two aspects of households' lives: (a) their ability to migrate, as they reduce the resources needed to do so, and (b) their vulnerability while remaining in their current location, as they raise the likelihood that they will fall (deeper) into poverty. When combined, these elements aid in the explanation of four major trends observed in the empirical literature: (1) There is no guarantee that climate-induced migration is more common in households with lower incomes; (2) Long-distance domestic migration is more common than local or international migration; (3) Slow-onset climate changes (like droughts) are more likely to cause increased migration than rapid-onset changes (like floods); and (4) The severity of climate shocks affects migration in a nonlinear way, depending on whether the capability or vulnerability channel predominates.

Keywords: Climate Change, Vulnerability, Migration, Households, Shocks JEL Code: F22, Q54

Introduction

According to the International Organisation on Migration (IOM), by 2050, environmental degradation and climate change may force between 25 million and 1 billion people worldwide to leave their homes. Climate migration is the term used to describe the movement of an individual or group of individuals who are forced to leave their usual place of residence due to abrupt or progressive changes in the environment brought about by climate change, or who voluntarily choose to do so, either permanently or temporarily, within a State or across an international border. (IOM, 2019). A subset of environmental migration known as "climate migration" designates a specific kind of environmental migration in which the cause of the change in the environment is climate change.

Many human-environment experts have long projected that large-scale human displacement due to climate change will result in a Malthusian storm of "climate refugees" (Myers, 2002). Rural communities in developing nations and Sub-Saharan Africa were of particular concern due to their heavy reliance on agriculture and lack of resources for adaptation (Müller et al. 2011). But a substantial corpus of scientific data that thoroughly assesses these claims has only recently started to gather. These studies have used multivariate techniques that take potential confounders into account to investigate

climate-migration hypotheses by linking climate data to georeferenced data on human movement, most frequently from specialised household surveys (Bohra-Mishra et al. 2014). Although these research have supported the hypothesis that climatic extremes may lead to an increase in human movement, their findings frequently contradict the widely accepted theory of climate-related displacement (Hunter et al. 2015). In particular, the effects of climate variability on migration are frequently greater for short-term or transient movements (Grey and Mueller, 2012), the effects of precipitation—which have drawn unfair attention—are frequently insignificant in comparison to temperature (Mueller et al. 2014), and there may be reversible effects—that is, vulnerable populations may be trapped in place by climate extremes (Black et al. 2011). It is true that environmental factors were given top priority in the initial systematic theories of migration. In addition to "bad or oppressive laws, heavy taxation, uncongenial social surroundings, and even compulsion," Ravenstein (1889) also noted the "unattractive climate" as having "produced and still producing currents of migration." But, most importantly in his opinion, he also mentioned economic incentives.

The following is the structure of this article. It begins by giving a brief synopsis of the debate's past. The effects of three main climate change-related environmental factors—tropical cyclones, torrential rains, and floods; droughts and desertification; and sea level rise—on migration are then covered. The relationship between migration and climate change raises several fundamental questions, which are explored in the sections that follow. These include the variety of factors that influence migratory dynamics, the social determinants of people's susceptibility to climate change, the diversity of migration patterns linked to climate change, and problems with data collection and methodology.

A revised understanding of climate-induced migration is also supported by theoretical advancements in the fields of human-environment and migration studies. The substantial social and financial costs of migration in developing nations, as well as the process' selectivity—which frequently favours better-off and more educated individuals—as well as the significant financial gains for migrants and sending households, have all been highlighted by demographers (Massey et al. 1993). According to this theory, we might witness a dynamic in which wealthier households send migrants abroad as an investment when the environment is conducive, as opposed to distress migration in response to climate shocks. In a similar vein, impoverished households may find it impossible to send migrants after shocks to their assets and income, resulting in "trapped populations." (Black et al. 2011).

The relationship between climate change and human migration is a subject that policymakers and academics are becoming more interested in. The Global Compact for Migration, the Global Compact for Refugees, the Agenda for Humanity, and the 2016 United Nations Summit for Refugees and Migrants all acknowledge climate change as a major cause of mobility . Target 10.7 on "facilitating orderly, safe, and responsible migration and mobility of people, including through implementation of planned and well managed migration policies" and SDG 13. on "climate action itself" are two of the 2030 Sustainable Development Goals (SDGs) that focus on areas that were not specifically included in the previous Millennium Development Goals. The subject has received substantial coverage in the popular press, with migration occasionally referred to as the "human face" of climate change (Gemenne 2011).

A conclusion backed by empirical research showing differences in the links between climate and agriculture and climate and conflict throughout Sub-Saharan Africa (Seo et al. 2009). Researchers studying the human environment have also drawn attention to the various local adaption mechanisms that households can employ in place of migration, implying that migration need not always be the primary response to environmental stress (Deressa et al. 2009).

Thus, generalising narratives that predict a monolithic and unidirectional migratory response to environmental variation are challenged by a wealth of theoretical arguments and a paucity of empirical data. The lack of comparable high-quality, cross-national datasets on migration has hindered our capacity to test for these tendencies more widely thus far. Existing survey data have limited previous studies to the national and subnational scale, or they have used national-scale data that ignores variability within countries (Marchiori et al. 2012). Additionally, most previous studies have used only one source of climate data and have concentrated on precipitation, ignoring evidence that suggests that temperature has a greater impact on migration than precipitation does, and that climate anomalies are frequently poorly correlated across alternative data sources (Auffhammer et al. 2013).

This growing significance stems from both high-profile research projecting possible migrant numbers and a better knowledge of the mechanisms through which migration is driven by climate change. These studies, which have varied degrees of empirical rigour, have warned that hundreds of millions of environmental migrants will be produced by climate change. These migrants will probably come from environmentally threatened areas, primarily rural ones, as a result of increased frequency of droughts, floods, sea level rises, and desertification, among other environmental changes . issued a warning, estimating that 200 million people will be mobilised based on who lives in the areas most vulnerable to climate change (Myers, 2002). Similar to this, compiled geographically specific estimates of migration from a range of climate shock types and found that the number of climate "refugees" by 2050 "could [conservatively] well be around or over 200 million" (Biermann and Boas , 2010). In light of global migration patterns, it is projected that there are 750 million internal migrants worldwide, including about 70 million people who were forcefully relocated. There are about 250 million cross-border migrants (UNDESA, 2017).

Significant critiques have been presented based on conceptual issues: The migration process is a more complex phenomenon than had been previously shown in examples from this literature, which frequently based estimates on the likelihood of a natural disaster and the potential numbers of people affected. This is because migration has many social and economic modifiers, as well as human adaptation capacity in many circumstances. This shortcoming results from what Suhrke (1993) called a "maximalist" perspective, which holds that environmental elements are what primarily motivate human migration. The other extreme, known as the "minimalist" position, holds that environmental elements are contextual aspects for which there is insufficient evidence to establish causality. Both are oversimplifications that, when they have policy-making power, can restrict the alternatives available for promoting family mobility or enhancing resilience locally, which will reduce the ability to adjust to a changing environment (Stapleton et al., 2017). When combined, these findings offer a more complex and causative picture of how migration has been affected by climate change thus far and what future migration may entail. The present research provides a summary of the emerging findings from the literature, taking into account the similarities among the studies, despite their diverse environmental, economic, and cultural contexts. Motivated by these results, we create a basic conceptual framework that contributes to the understanding of the significant variation observed in various circumstances.

Although migration is the main topic of our research, we recognise that there are numerous other potential ways for responding to climate change. Other tactics that households can adopt include selling assets, stepping up livelihood activities, investing in in-situ resilience measures, cutting back on unnecessary expenses, and reaching out to others through social networks or government programmes. Families will probably select a course of action based on the strategy's predicted net returns and

associated risk, as well as their awareness of the circumstance, values, social networks, and cultural norms (Adger et al. 2009). Droughts, floods, and other climate-related events are just a few of the numerous factors that influence families' or individual household members' decisions to move. Migration is thus a multi-causal phenomenon (Kibreab 2009).

Weather- Migration Nexus

Our concept of migration is based on NELM, as are the bulk of the studies we analyse, in that risk aversion is seen as a driving force behind migration decisions, and the household is regarded as the unit of decision-making. We expand on this hypothesis by contending that weather shocks influence the vulnerability and competence of households, which in turn affects migration. Capability refers to the activities that households (and/or individuals) can perform, or their "functionings," as well as their ability to make decisions and lead fulfilling lives (Sen, 1999). When combined, material resources and non-material rights allow households to choose mobility as a response to unfavourable weather shocks. Weather shocks can weaken a household's capacity by depleting their labour or wealth. Conversely, vulnerability is a measure of how sensitive a household is to weather shocks and how exposed it is to them . Unfavourable weather shocks exacerbate vulnerability by affecting households' plans for future incomes and subsistence, which makes risk-reduction measures like migration more important. For instance, weather shocks may have a detrimental impact on a household's natural capital's long-term production, like the condition of the land (Grey and Mueller 2012a), or livelihood strategies, like rainfed agriculture (Gray and Mueller 2012a).

Lastly, we distinguish between two overlapping migration types—"risk reducing" and "discretionary" migration—based on their respective risk profiles. We point out that migration may raise or lower the risk to welfare and household income. In reaction to climatic shocks, NELM would anticipate that a greater number of vulnerable households will send migrants to diversify income (i.e., lower risk).

COP_{27} and climate migration

In light of how a work programme for defining a Global Goal on Adaptation (GGA) was established in the 2021 Conference of the Parties (COP_{26}) in order to identify collective needs and solutions in light of the ongoing climate crisis that has already affected so many countries around the world, the 2022 Conference of the Parties, or COP_{27}, was seen as a platform that would lend visibility to the concept of climate migration. COPs have already discussed and recognised the significance of relocation caused by climate change, as evidenced by the establishment of a Task Force on relocation at COP_{21} and the approval of the Cancun Adaptation Framework at COP_{16}.

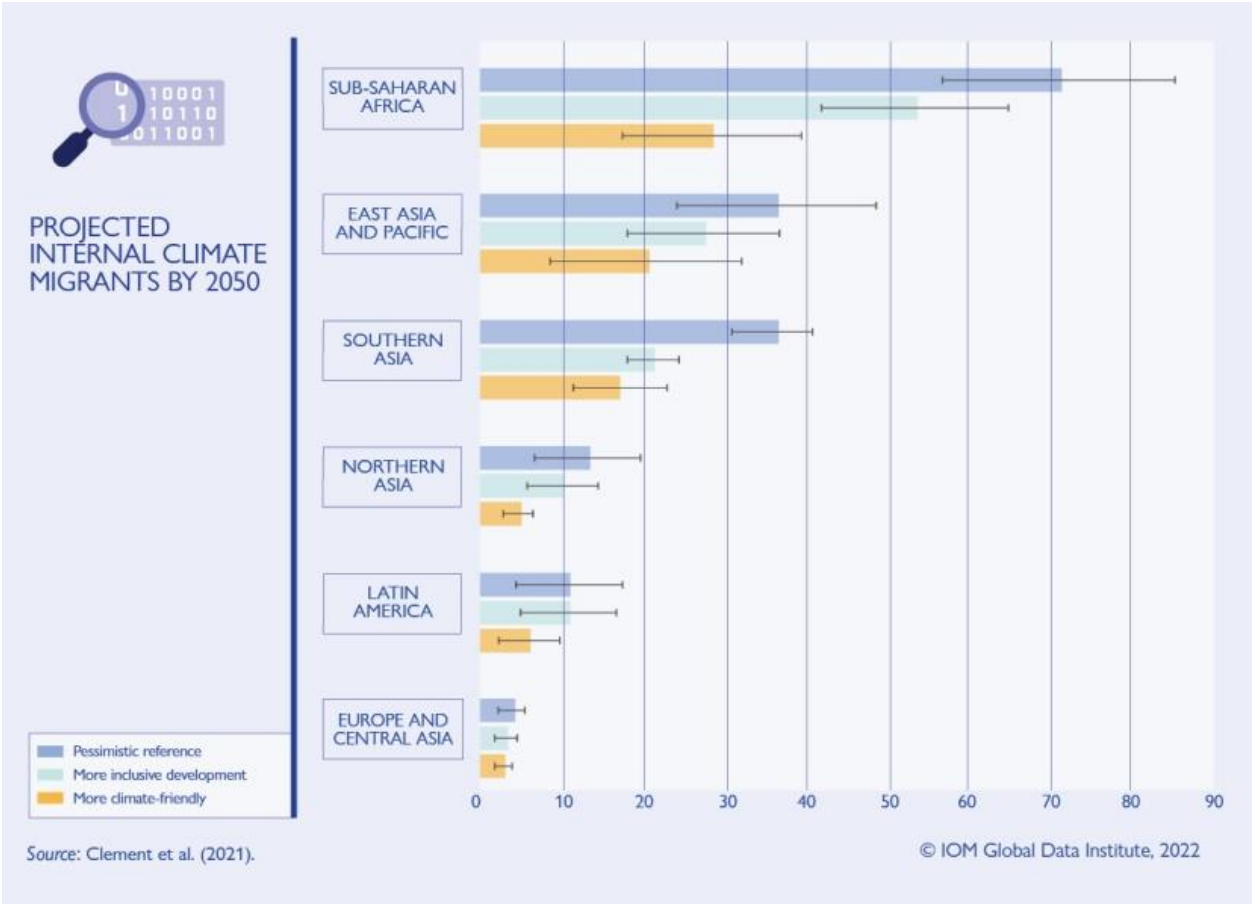
Even while decision-makers gathered at the COP_{27} to address a number of climate-related issues, nothing has been done to support climate migrants; instead, goodwill gestures have been the main source of support. This needs to be fixed right away because it appears to be a barrier to taking any meaningful action on the issue of climate migrants. Even while decision-makers gathered at the COP_{27} to address a number of climate-related issues, nothing has been done to support climate migrants; instead, goodwill gestures have been the main source of support.

While there is a growing body of literature on the issue, the academic community writ large is presently unable to provide consistent comprehensive evidence or guidance on these issues. Most obviously, there is no consensus about what terminology to use—climate change refugee? Environmental migrant (Dun and Gemenne 2008).

Global Scenario of Climate Induced Migration

Therefore, it shouldn't follow that weather-related migration is more common in households with lower incomes. Second, the choice of migration destination—international, long-distance domestic, or local—may be influenced by the kind and intensity of weather shock. In particular, we find that migration brought on by the climate causes comparatively more long-distance domestic migrations. Third, the type of shock—rapid or slow—is probably going to affect vulnerability and capability differently relative to one another, which will affect the results of migration. Lastly, the degree to which a household's vulnerability and competence are impacted depends on the shock's magnitude. For instance, a household's ability to relocate may be impacted by a severe shock more than its susceptibility, leading to less migration than in the case of a milder shock.

Globally, slow-onset phenomena like sea level rise and droughts are also having an increasing impact on people's mobility. In this regard, if immediate action is not taken to reduce global greenhouse gas emissions, the World Bank's Groundswell report predicts that by 2050, climate change may force up to 216 million people living in six different world regions—Sub-Saharan Africa, South Asia, Latin America, East Asia and the Pacific, North Africa, Eastern Europe, and Central Asia—to relocate within their own nations (Clement et al. 2021).



A total of 141 nations and territories reported 60.9 million internal displacements in 2022. Due to conflict, violence, and natural catastrophes, 71.1 million people were officially registered as displaced as of the end of 2022, spanning 151 nations and territories (IDMC). According to IDMC (2023), the top 5 nations with the greatest number of new internal displacements as a result of catastrophes in 2022 were Nigeria (2.4 million), China (3.6 million), India (2.5 million), Pakistan (8.2 million), and the Philippines (5.5 million). 98% of the 32.6 million additional internal disaster-related displacements that occurred in

2022 were brought on by weather-related disasters such storms, floods, and droughts. For the first time since 2016, floods outnumbered storms in 2022, accounting for six out of ten internal displacements brought on by disasters; in Pakistan, monsoon flooding contributed to a quarter of all internal displacements caused by disasters worldwide that year. The worst drought Somalia has seen in forty years resulted in 1.1 million migrations. Two percent of the people of Tonga were forced to evacuate as a result of an extremely uncommon volcanic eruption.

Globally, internally displaced people are still being impacted by the COVID-19 pandemic, mostly due to loss of livelihood and food insecurity (IDMC 2021; IDMC 2022; IDMC 2023). Furthermore, as a result of altered temperature and precipitation patterns brought on by climate change, as well as an increase in the frequency and intensity of extreme weather events globally, food security is negatively impacted by decreased agricultural productivity and the seasonal or permanent emigration of people from at-risk areas (IPCC, 2022). According to the Intergovernmental Panel on climatic Change (IPCC), by 2050, over a billion people may be exposed to climatic dangers particular to coastal areas, which might force tens or perhaps hundreds of millions of people to relocate in the next decades (IOM, 2022; IPCC, 2022).

Conclusion

Two main, related arguments emerge. The first addresses the importance of climate and environmental elements in migration and how they interact with other push or pull factors, such as social, political, or economic ones. Analysing how and why individuals are vulnerable to climate change as well as looking at the many coping mechanisms people adopt to deal with (or adapt to) environmental stress are necessary to comprehend the role of the environment in migration dynamics. One such coping mechanism is migration. The second debate centres on the political context that should govern these migration flows and how those who relocate should be treated in relation to environmental considerations. This suggests a discussion of the potential protections that can be afforded to individuals who are vulnerable, as well as the obligations of states and the international community to provide those protections. The degree to which the environment influences migration is closely linked to the status that individuals in question will have explains why the two issues are so interwoven.

This decline in interest in environmental or natural elements can be attributed to four key developments. First, Petersen sees environmental migration as a "primitive" form of migration that will eventually wane as humans steadily enhance their control over their environment. This theory is based on a strong Western-centric belief that technological advancement would lessen the influence of nature on human life. The rejection of environment-based migration theories was gradual, as they were perceived to be deterministic. This led to the advancement of socio-cultural methods and Marxist/economic viewpoints. The emergence of the economic paradigm in migration theory is a third cause. Although economic considerations were previously prominent in Ravenstein's work, they were accorded the highest priority in both neoclassical and Marxist study.14. Ultimately, research on forced migration may have taken into account displacements brought about by the environment, but they were primarily founded on the politically salient tenet that "States make refugees." (Marx, 2007).

The disciplinary difference appears to be gradually closing now, despite ongoing debate: environmental scientists are generally more cautious, while migration specialists acknowledge the relevance of the natural environment in migratory patterns. The majority of academics today, on the whole, reject the doomsday scenarios that once shaped discussions; they also all agree that the evidence currently at hand regarding the mechanisms involved is still far from adequate. Twenty The public's imagination is still

captured by the image of "climate refugees" fleeing environmental disasters, though, and this has led to a number of initiatives being taken by politicians, environmental activists, international organisations, and to some extent by lawyers, climatologists, or social scientists. Climate change has become a top priority for a wide range of actors worldwide (Biernann and Boas, 2010). As Nicholas Stern noted in his 2007 assessment on the economic effects of global warming, "Greater resource scarcity, desertification, risks of droughts and floods, and rising sea-levels could drive many millions of people to migrate," alarmist future projections are thus still widely held (Stern, 2007).

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