

The Anthropological Ramifications of Climate Change: Climate Migration

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Abstract: Too often climate change is viewed through a purely ecological or zoological lens, which ignores the very present dangers presented to anthropological groups. This paper examines the current trends in climate migration and their perilous effects on the most marginalized communities, primarily located in the global South. As a result of climate change, mass swathes of people in the millions have already been displaced and forced to migrate from their homes in search of a hospitable place to live. This report synthesizes some of the most notable investigations into climate migration and its projections in order to give a more holistic understanding of a field that has yet to receive substantial enough emphasis. Through our analysis of contemporary climate migration, we hope to underscore the importance of further work and government intervention and cooperation regarding an ever worsening issue.

Keywords: climate migration, climate change, displacement, internal migration

INTRODUCTION

With the topic of climate change becoming more prevalent every day, the number of people impacted continues to steadily grow. People subjected to the harsh change in climate are forced to migrate to more habitable areas in search of refuge. Climate change's more adverse impacts are felt by developing countries that rely on their environment for resources and work. When these populations are affected, they're forced to migrate internally, or completely move out of their country of origin. This increased migration puts more stress on the neighboring countries as refugees and citizens are both grasping for resources. Accelerated climate change influenced by the Anthropocene is forcing people to migrate and threatens the rate at which we can adapt to global warming. Climate change does not just impact nature as it has begun to put stress on our borders, governments, citizens, and international relationships. This report will cover the background of climate migration, the current state, amount, and future projections of climate migration as it impacts the globe.

BACKGROUND

The International Organization for Migration (IOM) defines climate migration as a movement of a person or groups of people who, predominantly due to sudden or progressive change in the environment due to anthropogenic climate change, must leave their habitual land temporarily or permanently within a state or across an international border (IOM, 2016). There are two distinct drivers of migration: climate processes such as sea-level rise (SLR), salinization of agricultural land, desertification and growing water scarcity, and sudden climate events such as flooding, storms, and glacial lake outbursts floods.

Non-climate drivers of migration include government policies, population growth, and community-level resilience to natural disasters which can be byproducts of severe climate changes (IOM, 2008). In the time of a climate emergency, migrants have to flee their situations and habitations which puts their health at risk, but they additionally face an unprepared international system that is struggling to keep up with many harmful impacts of climate change. Climate migrants are likely restricted to receiving healthcare, work,

and/or resources and are even more vulnerable if coming from low-income and middle-income countries (The Lancet, 2020). Climate migration leads to several issues for individuals impacted and puts neighboring states and countries in a tight position in which they must take in those individuals fleeing from their habitations.

Our research includes statistics and data of migrants, countries, environmental factors currently calculated through climate migration impacts, as well as future projections of the issue. We used the lenses of multiple organizations currently reporting on the climate migration movement and researchers who have looked at specific cases across the globe. We have come to find that this is an unraveling issue with a plethora of moving parts. In this course, we analyze climate science and change over time. Climate migration allows us to understand the human, communal, and societal impact of anthropogenic climate change.

Current State of Climate Migration

On March 14, 2019, Tropical Cyclone Idai struck the southeast coast of Mozambique leaving 1.85 million people in need of assistance, and 146,000 people internally displaced (Podesta, 2019). Storms like these are happening more frequently and we are heading towards a future where major storms are common. We are in an era of large-scale human migration due to resource scarcity, increased frequency of extreme weather events, and other factors, particularly in the developing countries, landlocked countries, and island states. The sea level is rising at a rate of 12 millimeters per year in the western Pacific and has already submerged eight islands and two more are on the way (Podesta, 2019).

By the end of 2019, around 5.1 million people in 95 countries and territories were living in displacement as a result of disasters that happened not only in 2019, but also in previous years (Environmental Migration, 2021). The Internal Displacement Monitoring Center estimates that 21.5 million people per year on average over the past decade have had to flee their homes due to storms, floods, wildfires, droughts, and other weather events (Center for Strategic and International Studies, 2021). It is hard to find accurate numbers and information about climate migrants as the international

community has not come to a consensus on the terminology and measurement of what makes a climate migrant. Most climate migrants are displaced internally, placing them into an already wide gap in international forced migration frameworks; countries wary of outside intervention are generally less willing to accept outside support for internally displaced people (Center for Strategic and International Studies, 2021).

Around one third of the people living in least developed countries (LDCs) are currently living on less than USD 1.9 per day according to data published by the World Bank, and more than two thirds of people in LDCs live in rural areas where poverty is also most widespread and deepest (IOM, 2019). Areas vulnerable to droughts and floods have resulted in crop failure, land degradation and food insecurity, leading to disasters that compel farmers to leave their homes in search for somewhere where they can meet their basic needs (IOM, 2019). Landlocked developing countries are especially vulnerable with over 60 percent of the population consisting of small rural-based farmers. These challenges result in food insecurity, poverty, detriment of livelihood and decreased productivity and can therefore be drivers of both internal and international migration (IOM, 2019).

Since the 1990s, CO₂ emissions have increased by 37 percent, and global warming is expected to reach 3.5 degrees by the end of the twenty-first century. Despite their small contribution to global CO₂ emissions, small island developing states are the most vulnerable countries to the effects of climate change (IOM, 2019). These climate factors increasingly influence the decision of many islanders to uproot their lives in search of safer conditions and better life prospects. Today, building local resilience, creating global, regional and national partnerships and defining an international governance structure for climate migration are essential in order to secure the lives and rights of millions of people in island States (IOM, 2019).

On April 29, 2021, Hawaii became the first US state to declare a “climate emergency”. Hawaii has been struggling with issues of dwindling freshwater supply, rising seas washing away coastlines, and the double whammy of extreme drought and flooding as dry areas get drier and wet areas get wetter. Hawaii’s coral reefs are expected to virtually disappear by the end of the century, according to

the 2018 National Climate Assessment (Yoder, 2021). Hawaii is in a similar state to many island states and coastal areas. With the first US state acknowledging and declaring a climate emergency, there is hope that other states will recognize the urgency of climate change in the state we are in. It also acknowledges that an “existential climate emergency threatens humanity and the natural world” and calls for an immediate, statewide mobilization “that is rooted in equity, self-determination, culture, tradition,” and the belief that people have the right to drink clean water and breathe unpolluted air (Yoder, 2021).

While migration linked directly or indirectly to environmental degradation and climate change is a daily reality, there are vulnerable segments of population in LDCs, such as many women, children, elderly, disabled and indigenous people, who are unable to move in the face of calamities and are trapped in desolate environments. LDCs are still struggling to foster high productivity activities in the manufacturing and specialized sectors that are crucial for structural transformation. Therefore, they have limited institutional capacity and financial resources to build resilience against climate stress which can lead to climate-induced displacement (IOM, 2019). The vulnerable populations often bear the brunt of disasters. Their lack of assets, as well as lack of access to knowledge and skills, and restrictive employment policies and cultural norms constitute formidable financial and social barriers to safe and orderly migration. These “trapped populations” in LDCs reflect their lack of preparedness and capacity to adapt to climate change. In that respect, policy development needs to take into account the need to migrate and adapt when the impacts of climate change become impossible to manage (IOM, 2019).

Climate migration and planned relocations to adapt to the changing landscapes is not new. The Government of Fiji in 2018, developed Planned Relocation Guidelines: A framework to undertake climate change related relocation, following a six-year-long consultative process with affected communities, government representatives and non-State actors. The Guidelines represent the first national framework on planned relocation and propose to consider planned relocation solutions for affected communities as part of their adaptation strategies to slow-onset events occurring on the territory of Fiji (IOM, 2019). These smaller island states have been forced to take measures and make decisions about the longevity of their land.

Currently a lot of climate policy is lacking and it is a slow battle to make change. Policy makers tend to not take preventative action against climate change until it is too late and the problem becomes too large. In the case of climate migration, people are trying to flee these natural disasters or are forcibly displaced from their homes, yet are not recognized as refugees in some areas. Under current U.S. immigration law, people displaced by natural disasters and environmental degradation—including those displaced by the impacts of climate change—have traditionally not been considered eligible for protection as refugees. There are a few statutory provisions through which the United States has a clearer pathway to provide assistance to climate migrants. These include the Temporary Protected Status (TPS), the Deferred Enforced Departure (DED), Humanitarian Parole, and the Compact of Free Association (CFA) (Center for Strategic and International Studies, 2021). The current policies in place need a lot of work to account for the current pressing issues today. This new category of “climate refugee” needs to find a place in international agreements. We need to better anticipate support requirements, similar to those of people fleeing other unviable situations' (Center for Strategic and International Studies, 2021). In our current situation we are not doing enough to alleviate the consequences of climate change around the world. It has and will continue to force people to leave their homes without any protection or aid in hopes of a safer environment.

Future of Climate Migration

As seen in the previous section, climate migration has become a worsening problem in recent years, from migrants seeking refuge from droughts creating food insecurity, hurricanes devastating entire seaboards, ever-rising sea levels and beyond. However, the worst is yet to come. Projections of the climate migration crisis show it worsening severely in the coming years, with upwards of 140 million internal climate migrants by 2050 (Adamo et al., 2018). A popular estimate used in the media ranges between 200 million to 1 billion climate migrants by 2050, however, this is disputed and is based on crude assumptions based on “a simple push-pull effect on migration patterns,” (McLeman, 2020). As mentioned previously, like all future scenarios regarding climate change, the future of climate migration is entirely

dependent on actions taken by the international community now. Thus, future projections will primarily be determined by the IPCC's scenario approach: made up of multiple potential scenarios with varying levels of mitigation from an intense approach, resulting in a 1-1.5°C mean temperature increase, to a late approach, resulting in a 2°C mean temperature increase (Masson-Delmotte et al., 2018). This section will discuss extenuating climate change events and factors contributing to an increase in climate migrants, projections of climate migrant data (primarily internal), and close with suggested socioeconomic approaches to curbing climate migration in the future.

The numerous factors that contribute to an increase in climate migration have been previously noted in the Background and Current State of Climate Migration sections; however, it is necessary to highlight the factors that will be most efficacious at bringing about increased levels of climate migration.

According to the IPCC, those who will be most impacted by global warming in the coming decades are primarily found in the global South, in particular on Small Island Developing States (SIDS) and tropical regions; the IOM builds off of this extending at-risk regions to mountainous, drylands, and urban environments (Masson-Delmotte et al., 2018; IOM, 2019).

As a result of sea level rise, some states will have to drastically change their way of life or even be completely abandoned as they become “practically uninhabitable,” (McLeman, 2013). By 2050, there could be roughly 127 to 139 million people exposed to SLR at both a 1.5°C and 2°C increase (Masson-Delmotte et al., 2018). The lack of variation between the two temperature scenarios is a result of thermal expansion within the oceans which would “continue to rise even if the increase in global temperature is limited to 1.5°C.” However, a mean temperature rise of 2°C by 2030 could result in tropical populations needing to migrate up to 1000 kilometers from their place of origin.

In mountainous regions, drastic changes in snowfall coupled with the diametrical scarcity of water along circular migratory routes could increase severely as climate change advances. In addition, water scarcity has already been shown to force pastoral communities into sedentary lifestyles surrounding water and drastically altering their socio-economic lifestyle. This has the potential to push pastoral communities into surrounding sedentary communities which can lead to conflict (IOM, 2019).

Similar to mountainous regions, drylands will experience more thorough droughts resulting in increased water scarcity and food insecurity (IOM, 2019). This has previously been seen to lead to influxes in out-migration in regions—specifically in Mexico, Honduras, Guatemala, and El Salvador—which points towards heightened northern migration into the United States in the years to come.

Converging from SIDS, tropical, mountainous, and dryland regions, urban environments are primarily affected by the rapid increase in population. Cities provide both adaptive and maladaptive areas for migrants which will suffer if proper steps are not taken to mitigate arriving migrants (Masson-Delmotte et al., 2018; IOM, 2019). Proper care must be addressed towards marginalized groups in order to counteract maladaptive or hazardous urbanization—i.e. expanding slums in unsafe locations, lacking infrastructure for surplus populations, etc (IOM, 2019).

Finally, as researchers have categorized climate change as a threat multiplier, the exacerbation of preexisting ethnic and resource-related conflicts is a looming threat to induce further climate migration (McLeman, 2013). According to the IPCC Special Report, only a 1°C increase in temperature, droughts, or even “extreme rainfall increases the frequency of intergroup conflicts by 14%,” meaning that deviation from the 1-1.5°C mean temperature increase scenarios could have even more devastating effects on intergroup conflicts (2018).

Now that there is a common understanding of what forces will be most apparent in the future of climate migration, we can examine the projections more comprehensively. The most notable projected data for the future of internal climate migration comes from the World Bank’s 2018 “Groundswell: Preparing for Internal Climate Migration” Report. In this report, they primarily examine internal climate migration in Africa, Mexico, and Central America, South America, and South Asia through the use of Shared Socioeconomic Pathways (SSPs) based on economic data and climate projections in order to determine the number of climate migrants in these regions in 2050 and beyond.

The two primary SSPs they use is one of mutual, moderate development (SSP2), where low and middle-income countries experience similarly “moderate population growth, urbanization, income

growth, and education,” and unequal development (SSP4), characterized by unequal pathways where “[inequality] remains high, and economies are relatively isolated, leaving developing regions highly vulnerable to climate change with limited adaptive capacity.” (Adamo, et al., 2018). Following SSP4, the number of climate migrants is projected to increase exceedingly more than projected in SSP2 in most of the case studies by 2050 following unequal changes primarily in education, gross domestic product (GDP), and urbanization.

Table 1. Internal Climate Migrants by 2050

Region	Population of climate migrants under SSP2 (millions)	Population of climate migrants under SSP4 (millions)	Percentage of climate migrants to overall population under SSP2	Percentage of climate migrants to overall population under SSP4
South Asia	11.4	35.7	0.75%	1.6%
Mexico and Central America	1.7	2.1	0.85%	1.03%
South America	4.1	8.6	0.89%	1.86%
East Africa	6.9	10.1	1.28%	1.37%
West Africa	17.9	54.4	2.27%	6.87%
Central Africa	2.6	5.1	0.66%	1.31%
Southern Africa	0.9	1.5	1.4%	2.31%

(Adamo et al., 2018)

In order to combat the anthropogenic perils that lead to climate migration, we need a robust policy plan. Multiple climate migration researchers believe that the most effective way to curb the negative impacts of climate change on those most at risk is to implement the Global Compact for Safe, Orderly, and Regular Migration (GCM) (IOM, 2019; McLeman, 2020). The GCM calls for several international reforms and practices to create a more secure life and process for migrants at large, which, in turn, extends towards climate migrants (United Nations, 2018). Taking a proactive policy approach towards climate migration is necessary for the international community to mitigate both the detrimental effects on migrants and their destinations.

CONCLUSIONS

Based on our findings, it is clear that the results of climate change and, in turn, climate migration, have yet to be seen in full capacity. The actions of international organizations have become increasingly more urgent in order to curtail the impact of climate change on vulnerable countries and regions before they are forced to evacuate their native lands. The international community's ambivalence to, and, delay in action has been a driving factor in accelerating the impact of climate change, resulting in an increase in climate migrants. If action is not taken with respect to the IPCC's or other organizations' timelines we can expect to see the impact of upwards of 137 million climate migrants fleeing the global South. The 1.5°C and 2°C increase have the potential to collapse areas with unequal growth and no adaptation policies in place. Immediate action to decrease the production of greenhouse gases and slow climate migration needs to be taken by implementing environmentally conscious policies and human-focused migration policies, like the Global Compact for Safe, Orderly, and Regular Migration. However, with the slow progression of climate-based policies in international organizations, the amount of climate migrants will increase as action is delayed. The impact of anthropogenic climate change affecting the global South can result in a massive climate migration that threatens the rate of adaptation to global warming and resource sustainability.

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