

Environmental Drivers of Migration from Northern Central America

Research Paper

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Pablo Escribano

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The [North and Central American Task Force on Migration](#) is a non-governmental forum of academics, civil society and business leaders, and former policymakers in dialogue with current government officials created to facilitate a broadly driven solution dialogue among the countries involved in the crisis of migration and forced displacement in the region.

Initiated by the World Refugee & Migration Council with the Center for U.S.-Mexican Studies, El Colegio de México, the Migration Policy Institute and the Inter-American Dialogue, the task force will issue concrete recommendations for collective, regional action based on evidentiary research to promote responsibility sharing across North and Central America.

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Executive summary

Internal and international human mobility are key features of contemporary societies of El Salvador, Guatemala and Honduras. Central America remains a fast-urbanizing region, with the urban population (currently 59 percent of the total population) expected to double in size by 2050 (Maria et al., 2017). International migration flows have increased over the last years according to UN DESA data, with differences between Central American countries: migrants from Guatemala and Honduras represent less than 10 percent of the countries' population, reaching a quarter of El Salvador's (UN DESA, 2020; World Bank, 2021).

Environmental drivers of migration have received increased attention in recent times, notably since the start of the so-called migrant caravan phenomenon in 2018. This attention has translated into an emerging body of research and new policies at the national and regional levels, addressing migration, disasters and climate change linkages in the region. However, despite this progress, different gap areas remain in terms of research, evidence and policy making (IOM, 2021).

Scientific evidence points to an increasing negative impact of environmental hazards in El Salvador, Guatemala and Honduras, with most studies focusing on the relationship between hurricanes or drought and human mobility. This relation is not always direct and invariable; on the contrary, multiple factors affect the way in which environmental drivers influence internal and international migration. The impact of environmental hazards in the three countries is compounded by their socioeconomic structures, including the reliance on rainfed subsistence agriculture, the limitations of social protection schemes, the weakness of existing climate adaptation mechanisms and the prevalence of significant multidimensional poverty levels and income inequality. Gender dimensions play a crucial role in shaping the environment/human mobility nexus, as women and girls typically have fewer resources to adapt to climate change and are differently affected throughout the mobility continuum (ChristianAid and Inspiration, 2019).

Climate change projections for Central America and their expected impact on human mobility (Rigaud et al., 2018) remain a cause for concern. Based on existing global agreements such as the Global Compact for Safe, Orderly and Regular Migration (objective 2) and work on mobility under the United Nations Framework Convention on Climate Change (notably the recommendations of the Task Force on Displacement), the current political focus on addressing the root causes of migration – including weak climate resilience – can bring positive results by relieving pressure on exposed communities.

Nevertheless, it is important to address environmental drivers carefully, avoiding a negative narrative on migration and promoting a nuanced understanding of the environment/migration nexus. Migration in El Salvador, Guatemala and Honduras is not only a reflection of poor adaptation to climate change, but also a contributor to development and to adaptation. Enabling safe migration pathways (in line with objective 5 of the GCM), protecting migrants and leveraging the positive outcomes of migration remain crucial aspects of public policy on the topic.

Scope and objective

The objective of this short paper is to contribute to the discussions of the recently created North and Central American Task Force on Migration, an initiative of the World Refugee & Migration Council in partnership with the Center for U.S.-Mexican Studies, El Colegio de México, the Migration Policy Institute and the Inter-American Dialogue. This short paper, on the environmental drivers of migration, is one of three prepared in the framework of the thematic axis on long-term development with a focus on economic and environmental drivers of migration and is intended to complement other background papers on the role of remittances and economic drivers of migration.

Given its length and objective, this short paper aims at providing a short summary view of the evidence on the environmental drivers of migration in three countries: El Salvador, Guatemala and Honduras. The three countries should not be considered as a single unique space, and it is fundamental to be cautious when generalizing statements to the three countries. Indeed, El Salvador, Guatemala and Honduras also have many specificities in terms of their migration profiles, their economies, and societies. Some of these are also similar to other neighboring countries, such as Nicaragua and Southern Mexico.

Scientific literature has increasingly addressed the linkages between climate change and human mobility, enhancing the conceptual understanding of this nexus. The reports of the Intergovernmental Panel on Climate Change reflect this enhanced understanding of environmental migration, where despite multiple remaining gaps, available peer-reviewed literature has burgeoned. Bibliometric reviews show both a continual increase in the number of publications and development of a more complex approach to the nuances of the migration/climate change nexus (Milán-García et al., 2021).

Evidence on the environmental drivers of migration in El Salvador, Guatemala and Honduras

Scientific literature on the relation between environmental hazards and migration has advanced in recent years but remains unequal. A recent review by IOM identified 228 documents addressing human mobility derived from disasters and climate change in Central America, with an increasing number in more recent years. Guatemala is the country most studied (20 percent of the total number of studies), followed by the entire Central American region (18 percent), and the three Northern countries of Central America (17 percent), Honduras (13 percent) and El Salvador (7 percent). This concentration of studies contrasts with a much weaker coverage of countries such as Panama and Belize. In terms of hazards, climate change appears as the most studied environmental factor (32 percent of studies), followed by drought (20 percent), hurricanes (19 percent), non-specific disasters (14 percent) and floods (10 percent). It should be noted that 39 percent of these documents fall into the category of grey literature, but another third (36 percent) are research articles that appeared in academic publications (IOM, 2021).

The focus of many publications on climate change at large reflects the systemic nature of hazards that affect El Salvador, Guatemala and Honduras. These countries are simultaneously exposed to multiple slow-onset processes and sudden-onset hazards, affecting the livelihoods of vulnerable

communities (Marin et al., 2014). Climate hazards interact with poverty, violence, land concentration and food security in a reciprocal manner: on one hand, climate change exacerbates poor living conditions across these variables, while at the same time, the degradation of living conditions enhances climate vulnerability. This creates a vicious circle that can lead to internal and international migration (IOM, 2021).

Drought has been associated with migration from Northern Central America, in particular in the area known as the Dry Corridor, an arid region spanning across El Salvador, Guatemala and Honduras (as well as other countries) where meteorological droughts are projected to worsen throughout this century (Depsky and Pons, 2020). It should, however, be noted that droughts do not affect all countries in the same way and hazards should be studied at a lower-than-national levels to understand their impact on communities (Anderson et al., 2019).

Food insecurity levels have risen in the Dry Corridor as a result of multiple variables, including environmental change. Drivers of food insecurity include high dependency on agricultural income, poverty, and consecutive drought patterns among other factors (Beveridge et al., 2019). For instance, in areas of Guatemala where rainfall is crucial to harvest and food security, migration appears as a risk management strategy, along with other non-migratory options, during times of drought (Milan and Ruano, 2014). Statistical correlations appear in Central America between climate variability, food insecurity and migration (WFP, 2017), with increased propensities to migration when droughts are recorded in areas of origin (Olivera et al., 2021).

Certain demographic categories present a higher tendency to migrate when confronted with drought scenarios: research has found that “younger individuals are more likely to migrate in response to these disasters, especially when confronted with droughts. Youth exhibit a stronger inclination towards relocating to rural and small town settings, motivated possibly by opportunities for nearby off-farm employment and financing limitations for urban transport and living expenses” (Baez et al., 2017). Generally, quantitative research is still limited on the prevalence of environmental migration among women and girls, and studies often remain qualitative and based on limited field evidence (ChristianAid and Inspiration, 2019; IOM, 2021).

Obviously, drought is not the only environmental hazard that affects Central American countries. Sudden-onset hydrometeorological hazards have had strong historical impacts in El Salvador, Guatemala and Honduras, and the recent 2020 hurricane season (in particular with hurricanes Eta and Iota) has driven massive displacement, with 1.7 million new displacements in Central America and the Caribbean (IDMC, 2021). Disaster displacement remains the most concrete example of environmental drivers of human mobility at play, where concrete hazards can be easily tied to mobility, while the migration outcomes of drought and other slow-onset processes are typically harder to pinpoint (Hermans and McLeman, 2021).

Various studies have shed light on a correlation between the impact of hurricanes in Central America and increased migration flows bound towards the United States of America (IOM, 2021). US Policy responses to these movements have included the designation of Temporary Protection Status for Salvadorians, Guatemalans, Hondurans and Nicaraguans after Hurricane Mitch in 1998 (and the El Salvador earthquakes of 2001). From 1989 to 2005, hurricanes were associated with a 6 percent increase in migration from 30 countries in Latin America and the Caribbean to the United States, with

stronger impacts from more harmful storms (Spencer and Urquhart, 2018). Internal mobility and planned relocations have also been recorded in Central America in the aftermath of hurricanes and damaging storms (IOM, 2021).

Flooding also appears as a key driver of vulnerability in the region, as multiple studies have highlighted. In Guatemala, extreme weather events – notably flooding – affect livelihoods and food security, but the impact on mobility is shaped by social circumstances (Lozano Sivilsaca et al., 2015). Similarly, community resilience appears to be a factor in the mobility outcome of flooding in the Garifuna communities of Honduras (Wrathall, 2012).

Given historical precedents and the recent attention to migration from Central America, attention has been focused on the potential impact of hurricanes Eta and Iota in November 2020 on human mobility. Media reports have collected anecdotal evidence of migrants leaving affected areas of Honduras and Guatemala due to losses of harvest, household goods and work opportunities. The long-term impact of these disasters on migration still needs to be further analyzed with scientific distance.

Geophysical hazards are often overlooked as sudden-onset events that also drive human mobility from Central America. Large disasters such as the El Salvador earthquakes of 2001 (which led to a TPS designation by the US government) or the Volcan de Fuego eruption in Guatemala in 2018 have sparked displacement and been tied to longer term migration. This is notably the case when housing is destroyed beyond repair or areas become unsuitable for human habitation. However, the relation between earthquakes and migration is nuanced and not always direct (IOM, 2021).

Environmental drivers of migration in context: social vulnerabilities in Northern Central America

The combination of sudden and slow-onset hazards exacerbates vulnerabilities in complex manners and in intersection with social and economic factors. It is important to understand the interaction between environmental change and other drivers of migration, given that the multicausality of human mobility as environmental hazards does not occur in a vacuum, but in concrete human societies (UK Government Office for Science, 2011).

In the case of Northern Central America, “factors including poverty, violence, food insecurity, limited government support, lack of land planning and land access, among others, compound environmental drivers in systemic manner, generating multifaceted scenarios in which individuals and communities take the decision to migrate” (IOM, 2021). High poverty levels, unemployment and reliance on subsistence agriculture drive vulnerability. Evidence shows that “municipalities with a high proportional area under subsistence crops in Central America tend to have less resources to promote innovation and action for adaptation” (Mbow et al., 2019). Areas under subsistence crops are typically grown by large numbers of smallholders, with limited capital, limited resources to cope with shocks and debt prevalence. Debt incurred by unproductive investments in agriculture, failed harvests and environmental change appear as compounding migration drivers in Central America, with, “cycles of fruitless investments and outstanding debts in agriculture as immediate drivers of decisions to migrate” (Johnson, 2021).

While the local impacts of climate change vary between and within countries, the limited capacity to adapt appears to depend on the location of farms, and becomes weaker in areas far from cities, in agricultural frontiers and in more drought-prone regions (Bouroncle et al., 2017). Land degradation is driven by multiple factors, including poor agricultural practices, deforestation and environmental change. At the same time, limited land ownership opportunities, land holding uncertainty and soil degradation appear as drivers of migration in studies of Maya Biosphere communities in Guatemala (López-Carr, 2012).

Contributing to these changes is the concentration of land in certain areas of Guatemala for African palm and sugarcane production, replacing traditional smallholding farming. Aggressive land buying practices, community displacement and limited employment opportunities in monoculture plantations create additional pressure in rural areas (IOM, 2021). The expansion of the palm oil industry has been tied to poorer food security outcomes for local populations and, with an exacerbation of migration drivers in rural areas.

Gender dimensions are critical to understand underlying vulnerabilities that are exacerbated by climate change and influence human mobility. Women working in agriculture are particularly exposed to climate change. They have limited access to land and resources and are attributed multiple tasks in line with predominantly traditional gender roles (IOM, 2021). These obligations may be exacerbated when men migrate, leaving women in rural areas in charge of smallholding farms and of household and care responsibilities (ChristianAid and Inspiration, 2019).

There are still limited studies on the specific impacts of climate change on Indigenous communities in Northern Central America, including from a human mobility perspective. However, initial research points to their vulnerability, given their dependency on climate-sensitive food production systems, the limited diversification of their incomes and their settlement in hazard prone areas (Camacho and Soto-Acosta, 2015). More information is required to better understand these situations and their mobility outcomes.

Migration should not only be considered as a negative consequence of unmanaged risks. It is also an important feature of Central American societies and a traditional risk management mechanism. In studied communities in Honduras, migration is employed by households to diversify incomes when hazards strike and enable the rest of the family to stay in their land (Vallejos Mihotek, 2020). In other cases, hazards actually inhibit migration by reducing the availability of resources to travel or by making households rely on external sources of funding (IOM, 2021). Public policy should address the potential cases of trapped populations who cannot rely on migration to escape hazardous situations.

While remittances are often used to cover basic needs rather than as productive investments, studies have also highlighted that migration and remittances tend to contribute to changes in land use, including land and pasture expansion, rather than intensification, with negative long term sustainability outcomes (Davis and López-Carr, 2014). In certain cases, land degradation due to migration-related investments in cattle and pasture have been reversed but the expansion of the biofuel economy may lead to increase in African palm cultivation (Taylor et al., 2016).

Recommendations

Following the approach pioneered by the Intergovernmental Panel on Climate Change, environmental drivers of migration from Northern Central America should be approached through a hazard/exposure/vulnerability lens. This prism sheds light on the increased occurrence of multiple sudden and slow-onset hazards – of which generic climate change, droughts, hurricanes and floods and geophysical events are the most studied – compounded by historical vulnerabilities and the intersection of social, economic and political factors.

Global frameworks have been developed to address the migration, environmental and climate change nexus, including: the Global Compact for Safe, Orderly and Regular Migration; the workstream on human mobility within the United Nations Framework Conference on Climate Change and the Warsaw International Mechanism for Loss and Damage; the Sendai Framework for Disaster Risk Reduction and the Nansen Protection Agenda. These different documents provide useful recommendations that can be tailored to the reality of Northern Central America. They are often summarized in three separate dimensions: providing the conditions for people to stay in their communities by strengthening their resilience to environmental hazards; providing support to people on the move due to slow and sudden onset hazards and leveraging the positive outcomes of human mobility for development and climate change adaptation.

Looking at the situation of Northern Central American countries, as described in earlier sections, the following recommendations emerge as opportunities for concrete action based on the content of global frameworks and the progress made in the region:

- 1. Localize climate adaptation and disaster risk reduction action:** Countries of Northern Central America are exposed to multiple compounding hazards, but these affect communities in distinct ways. It is important to consider the concrete specificities of communities and their exposure and vulnerability levels when designing climate adaptation and disaster risk reduction interventions to prevent forced migration. In this sense, research shows that one-size-fits-all approaches usually fail, since they don't account for concrete exposure to hazards at the community level. What works for a smallholding farming community in the Dry Corridor may not work for coastal communities or in mountain areas. Agricultural practices, gender dimensions and sociocultural aspects need to be carefully considered. While the conversation on climate change adaptation and disaster risk reduction is often carried out at the national level, further efforts are required to tailor interventions to lower administrative levels.
- 2. Address drivers of migration comprehensively:** Research on migration, environment and climate change regularly highlights the multicausality of migration and the intersection of drivers. In Northern Central America, the search for better economic opportunities (sometimes triggered by climate impacts) and the prevalence of violence appear as critical drivers of migration. Addressing the environmental drivers of migration in a vacuum may not yield expected results, as communities are affected by a combination of vulnerability factors. This calls for an enhancement of policy coherence based on an SDG-oriented agenda that can leverage development multipliers and bring positive change at community level. Cross-cutting development interventions are as important as specific climate change adaptation and disaster risk reduction actions to meet the needs of vulnerable communities and create

systemic change in the region.

- 3. Assist environmental migrants in slow and sudden-onset scenarios:** Given the prevalence of sudden-onset disasters in Central America (hurricanes, floods, geophysical events), strong and proactive humanitarian engagement is required to meet the needs of displaced populations and find durable solutions to their situations. With regards to migration due to slow-onset hazards, such as drought, it is important to understand the needs of Central American countries in managing urbanization and internal migration processes. Research gaps persist with regards to the situation of internal migrants in El Salvador, Guatemala and Honduras, while unplanned urbanization can create new vulnerabilities to environmental hazards. Investments in social protection schemes and in urban planning can yield positive results to improve the situation of internal migrants and prevent further forced mobility. In both sudden and slow-onset scenarios, the Humanitarian, Development and Peace Nexus provides a blueprint for long term interventions and a stronger involvement of development actors.
- 4. Make migration part of the solution:** Central American countries are countries of migration, so policies solely focused on preventing migration are bound to fail. Instead, well managed migration can bring positive outcomes in terms of development, as well as reduced exposure and vulnerability to environmental hazards. Households with the capacity to move can diversify their incomes, leave hazard-prone areas and seek protection from harm. In line with objective 5 of the Global Compact on Migration, regular pathways should be established for persons affected by disasters, environmental degradation and the adverse impacts of climate change.

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