ADDRESSING CLIMATE SECURITY RISKS IN CENTRAL AMERICA

**By Cynthia Brady and Lauren Risi**

Cover Image: Flooded road in Central America. Image source: Jamen Percy / shutterstock.com

April 27, 2016 San Pedro la Laguna, Guatemala: rising level of water in Lake Atitlan flooded several properties. Image source: Barna Tanko / shutterstock.com

INTRODUCTION

Since 2017, the Wilson Center and its partners, the National Oceanic and Atmospheric Administration (NOAA) and the University Corporation for Atmospheric Research (UCAR), have coordinated on developing a framework to improve predictive capabilities for security risks posed by climate change.[1] Through workshops with analysts and key decision-makers from across relevant U.S. government agencies and related organizations, the project first explored four country and regional case studies—the Horn of Africa, Pakistan, the Caribbean, and the Pacific (specifically, the COFA states)—to better understand the compound risks posed by extreme weather and water-related events and identify entry points for more effective responses. Outcomes from the workshops made clear that existing core dynamics regularly interact with climate change in both predictable and unpredictable ways; focusing on these four core dynamics allows for a new framework for analysis:
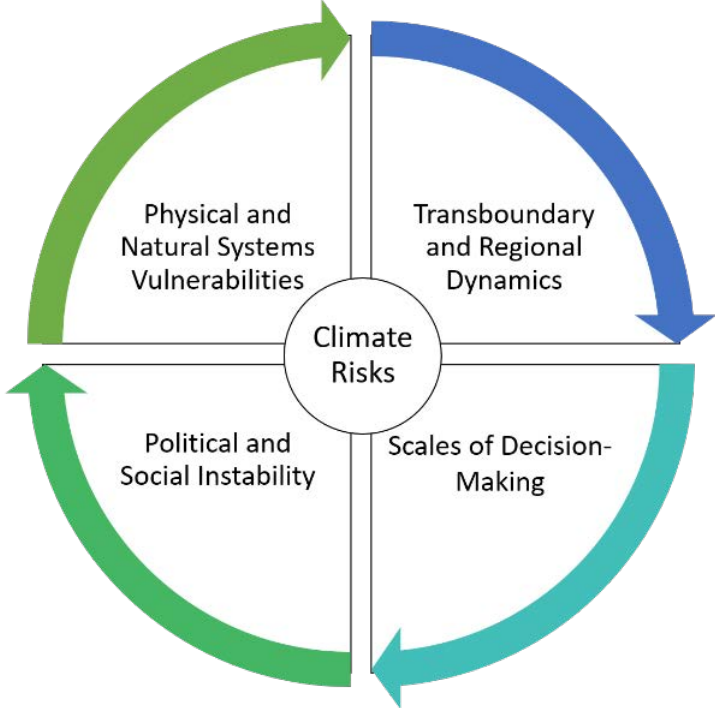
The framework informs an understanding of climate-related disruptions as proximate events that can have a cascading effect, compounding risks in ways that are often difficult to understand and complicated to unpack. Through application of the framework, we are also better able to link together assessments of risks spanning different durations, and more effectively recommend resiliency measures that can have long-term impact in addition to the short-term emergency response often prescribed in crisis mode.

Most recently, the project team applied the framework in an examination of climate-related risks connected to violence and migration in the Central American countries of El Salvador, Guatemala, and Honduras, through a series of workshops held in 2021 and 2022. This report distills key insights and policy recommendations derived from the Central American case study.

BACKGROUND

Latin America is experiencing a confluence of insecurity and migration challenges that are increasingly intertwined with climate change. High levels of ethnic, gender, and socioeconomic inequality are ubiquitous, and populism and authoritarianism are gaining traction. In the Central American countries of El Salvador, Guatemala, and Honduras, in particular, chronic conflict, violence, and weak governance are key constructs undermining human security. Insecurity in this region has for years been fueled by extreme rates of homicide, gang violence, and extortion, failing democratic governance and ineffective institutions, pervasive corruption, and drug trafficking. More recently, insecurity has also been propelled by the expansion of illicit networks, the limited capacity of cities and urban informal settlements to constructively absorb a growing number of migrants, and the compounding effects of the COVID-19 pandemic and recurrent natural disasters.

Latin America and the Caribbean (LAC) is the second-most disaster-prone region in the world.[2] Between 2000 and 2019, 152 million people were affected by 1,205 disasters in the region. Then came the 2020 Atlantic hurricane season—the most active Atlantic hurricane season and seventh costliest on record. Back-to-back Hurricanes Iota and Eta compounded the region's existing insecurity and economic strains and played a role in the larger wave of out-migration from the region in 2021. The agricultural sector in El Salvador, Guatemala, and Honduras contributes substantially to GDP, employment, and domestic food security in the three countries,[3] making them particularly susceptible to the impacts of changing precipitation, rising heat, climate change-related disasters, and other stressors.

One of the hallmarks of climate-related events, including both sudden on-set and slow-onset disasters, is that they do not operate as individual shocks but instead tend to weaken resilience and hinder preparedness for future disasters. The Central American region is ill-equipped to address these challenges for many reasons, not least of which is that multi-hazard risk-information systems and climate services are underdeveloped.

Central American Refugees are boarding a truck on their way north to the US border, 10/15/2018, Ciudad Hidalgo in Mexico. Image source: Saeschie Wagner / shutterstock.com

In the face of these complex dynamics, a focus on prevention can yield exponential resilience outcomes. This can be done by supporting relevant communities of practice and decision-makers at different levels to work together to strengthen and enhance predictive capabilities around climate, security, and migration in the region. Risk is socially constructed, meaning that it is the product of social conditions—and is often systemic—as opposed to an inevitable state of vulnerability in the face of environmental, climate, and other stressors. Thus, there is a need to be more user-centered in all risk assessments, including efforts to better understand affected population needs and interests. With stakeholder participation and buy-in, improved predictive capabilities can lead to more effective, strategic, and long-lasting policies and programming that recognize and address complex risks and vulnerabilities, generating co-benefits across issue areas and concerned groups.

In an effort to move quickly from identifying regional climate, migration, and insecurity risks towards informing interventions, the workshop series highlighted several necessary avenues for change: strengthening citizen-state relationships; investing in community-level resilience—especially urban informal settlements and other migrant-receiving communities; centering the rights of vulnerable populations; and leveraging existing place-based knowledge and efforts in climate, security, and migration, including recognizing vulnerable populations as agents of change and elevating existing local resilience efforts. Ensuring attention to different levels of decision-making—from the hyper-local to international—draws attention to specific points of entry and opportunities for action. For example, useful policies can range from addressing individual victim-perpetrators to investment in community level adaptation or negotiations around multilateral development initiatives.

Guatemala City, Guatemala, 10-19-2021. Civilians run seeking protection during a violent protest of ex civil patrol members. Image source: Daniel Hernandez- Salazar / shutterstock.com

Critical Insights Upfront:
Climate, Insecurity, Migration, and
Regional Collaboration

1. Risks and resiliencies are dynamic and interdependent. The physical impacts of climate change interact with ecological, political, economic, and social dynamics to ultimately determine points of vulnerability and resilience.

2. Technical and policy silos cannot solve complex problems alone. Responding to climate change in a way that secures peace, resilience, and equity in the region will require leveraging partnerships to strengthen governance and trust in public institutions, building the resilience of urban centers and elevating the experiences, voices, and knowledge of vulnerable populations.

3. In a changing world, people are already on the move. How do we better prepare? In the context of climate stress, migration should be recognized as an appropriate response. Mobility has long been a core component of adaptation in the Central American region and safe, orderly, and regular migration can be a successful and peaceful means of climate adaptation into the future, if enabled by smart policy.

4. Regional partnership on climate change holds promise. Regional collaboration offers the opportunity to build coordinated climate action across countries and sectors, not only addressing mitigation and adaptation to reduce negative climate impacts but also proactively utilizing concerted climate action as a mechanism to support structural transformation towards more equitable and peaceful societies.

5. Decision-makers need more than good data. Because robust data is only useful if it can be acted upon, there is a need for better systems in Central America to incorporate existing climate data into decision-making. Reliable access to integrated data on climate, migration, and violence is a must, and decision-makers should be equipped with an understanding of how to find and use such data to shape policy.

UNDERSTANDING THE NEXUS: KEY TAKEAWAYS FOR THE REGION

Complexity is real, solutions must account for it. The impacts of a changing climate are not only another layer on top of other factors that might result in instability or poor human development outcomes; climate change *is the context* in which economic, social, political, and other forces are acting in Central America. Climate change both influences and is influenced by these factors. Worsening climate risks are compounding pressures on communities already reeling from high levels of instability and violence. Climate variability and extreme weather can entrench existing vulnerabilities by magnifying economic hardship, food and water insecurity, and health crises. Therefore, there must be a multidimensional approach to risk management that incorporates understanding of both vulnerability and resilience and utilizes reliable information on social, economic, environmental, institutional, and governance in early warning systems.

There is a danger in modeling and predictive analytics of relying on climate change and its available data as a proxy for other vulnerabilities and variables that impact instability and security. Input from the dynamics of migration, food and water insecurity, and other factors affected by climate but beyond traditionally captured climate variables need attention when assessing climate risks. Certainly, data availability and collection methods in the region are highly imperfect and must be improved to measure and account for both the heterogeneous and more aggregate impacts on different populations. With a focus on the science of climate change and climate-risk analytics we see rapid improvement and models evolving to generate more accurate predictive outcomes, creating an opportunity to better inform not just climate action but a range of local and regional action and policy. No matter how good the climate science and data is, however, without considering the context to which the models are applied and without considering the existing capacity in the region to utilize the data, the science itself falls flat and will never alone be enough to motivate early action. Part of the answer is in the need to be more user-centered in climate-risk analysis efforts, including better understanding user needs and incentives.

La Limonada, located in Guatemala City, Guatemala. Image source: EU/ECHO/H. Avril / Flickr (CC BY 2.0)

An ounce of prevention is worth a pound of cure. As insecurity, migration, and climate change increasingly compound one another in Central America, a singular focus on response—without considering prevention—is a sure way to overwhelm response capacities. Instability, weak government institutions, and marginalization in the region means that communities are less able to respond and be resilient to climate stressors; at the same time, worsening climate conditions also threaten to reinforce poor governance and inequality, further destabilizing the region. Direct, short-term displacement from disasters has been and will continue to be a significant concern in the region. In addition, slower-onset climate impacts are projected to further exacerbate both instability and fragility in Central America. The region's vulnerability to climate change's effect on the ecological cycle and its dependence on subsistence agriculture, combined with ongoing land pressures, is severely affecting the current and future context of both livelihoods and food security in the region.

In light of the growing climate risks faced by already-vulnerable communities and people, such as small-holder farmers, there is a need for more robust national and regional efforts to establish shock-responsive social protection systems that are adaptive enough to help people cope with future shocks. Further, by applying a more systems-based approach to investments in disaster risk reduction and humanitarian response to acute crises, these investments could open up potential pathways to working with formal and informal local institutions in ways that strengthen governance and reduce corruption. Rebuilding from disasters with improved climate-resilience at the forefront and making investments in ways that benefit social cohesion and increase equitable distribution of resources can interrupt the feedback loop between climate and instability, ultimately strengthening the resilience of communities.

Local partnership and inclusion are not discretionary. Risks are distributed unequally across populations in the region. Women, youth, Indigenous peoples, and other marginalized groups regularly bear the brunt of regional challenges like climate impacts and violence. At the same time, as holders of knowledge of local perceptions of risk and resilience they can be key agents of change. To understand these dynamics, it is useful to apply an intersectional lens—looking at how climate, migration, violence, and different forms of marginalization interact, as well as the intersectionality of individual and organizational identities.

External support and investment should recognize the ways in which affected populations and communities think about their own priorities around the impacts of climate change, including understanding how climate impacts are affecting lives and livelihoods beyond the physical impacts of climate change. Outside actors may not always readily identify a community's adaptive behaviors and existing sources of resilience, especially when local communities do not frame their adaptive, resilience-building strategies as such. Yet, learning what these existing local approaches to resilience are and how they can be strengthened is a critical piece of addressing vulnerability in the region.

Greater attention to local community insights and priorities, participation of government bodies, attention to the needs of vulnerable communities, and reliable access to appropriately communicated data are all critical components of a robust regional response. From migration to climate-vulnerability, it is important to move past looking at people as potential victims and instead view them as empowered actors who can contribute to and enhance system resilience.

POLICY GUIDANCE AND RECOMMENDATIONS

The predictive capabilities framework was applied to the context of Guatemala, Honduras, and El Salvador across four workshops that focused respectively on migration, climate-risk analysis, insecurity and governance, and regional collaboration. The application of the framework in each topical area allowed for greater sharing of relevant technical expertise and deeper thematic analysis while maintaining a nexus perspective. These interdisciplinary conversations produced the following policy insights. Recommendations and guidance points have been categorized below to emphasize potential points of entry but the content of each intentionally integrates climate, migration, and insecurity considerations and are applicable across communities of practice and policy areas.

PHYSICAL AND NATURAL SYSTEMS VULNERABILITIES

- Climate-related investments, including investments in disaster risk reduction and humanitarian response to acute environmental crises, can provide key avenues for working with both formal and informal local institutions in ways that strengthen governance and reduce corruption.

- As investments are made to rebuild from disasters, climate-resilience, social cohesion, and equitable distribution of resources should be at the forefront of planning and implementation.

- Despite being relatively underreported, small-scale events are generally most responsible for eroding household livelihoods. Working at a local scale can better take into account these and other localized disruptions and support localized responses—distributed, localized energy resources, for instance, tend to be associated with faster community disaster recovery. At the same time, localized thinking need not be unidimensional—it can also support the broader integration of services like water, health, and education systems.

- There is a critical gap between research and decision-making due to a lack of regional climate data, however, it is clear that even existing data is not fully utilized by those who could benefit. Before investing in more data generation, it is important to consider what type of climate information will be most useful as well as to inform prevention and response planning by various actors. Data should be generated that is fit for purpose and considers accessibility and utility of user-groups.

- Information gathering and sharing should be decentralized to the most effective local institutions and communities. This includes striving to incorporate as many different types and forms of information-gathering and communication as possible (e.g. ground data can be improved by not just expanding a network of weather stations but by potentially establishing observation networks in the care of local communities to form more dense observation networks).

POLITICAL AND SOCIAL INSTABILITY

- Investments in climate as well as migration responses must account for the context of insecurity. Given the central challenges of violence and impunity that impact every facet of life for many people in the region, and the inability of their governments to effectively address those challenges, climate and migration responses should be developed in ways that also strengthen security in the region.

- Understanding local land tenure and property rights as a core concern in the region is a constructive means to surfacing the issues of livelihoods and food security as drivers of migration. More generally, advancement of land tenure and property rights promises multi-dimensional benefits including generating economic opportunity and supporting youth and gender equity, conflict mitigation, and sound natural resource management.

- A focus on women and girls, who face educational and employment inequities throughout Latin America and bear the brunt of climate's impacts, can spotlight opportunities for interventions that provide co-benefits for addressing the root causes of migration. In Guatemala, for example, half of the population is under 22 years of age and 21 percent of women ages 15-19 are pregnant or parenting. Investing in programs that advance the rights, health, and empowerment of women and girls[4] would strengthen the resilience of families and communities in the region.

- There is an important role for policies and investments focused on youth employment. There is a dramatic gap between formal sector jobs compared with the burgeoning number of youth entering the workforce each year and many must seek work in the informal economy or rely on irregular migration for employment.

- Parameters of aid and development investments across climate, migration, and violence can unintentionally delimit the type of data collected and used. To address this, more interdisciplinary monitoring and evaluation plans should be developed and cross-sectoral expertise should be integrated into project oversight and implementation teams in capitals and in the field.

- Acknowledging the pervasive public distrust of the state, there is a general unwillingness to engage with the government(s) which in turn complicates state efforts to provide resources and address needs among citizens. There could be a role for external mediators and bridge-building organizations to share information between the state and constituents.

- Given the extensive problem of corruption in the public sector in Central America, the role of public servants, as compared to political leaders, is central. Support for labor rights for public servants could prevent job loss during government transitions, which might promote stability and efficiency in government while reducing opportunities for corruption.

- Resilience-building efforts must rely on a clear definition of purpose and system components as well as include appropriate monitoring and evaluation mechanisms to measure improvements. Community resilience analysis toolkits like the one developed by Resilience Nexus[5] can aid in that effort.

TRANSBOUNDARY AND REGIONAL DYNAMICS

- Multi-hazard risk-information systems and climate services are underdeveloped, and the region has one of the largest capacity gaps in early warning systems. Strategic support for governments as well as science and technology communities to strengthen both early warning and implementation systems is required.

- There is a need to engage a wider set of stakeholders, better centering the priorities and risk-perceptions of affected populations while at the same time harmonizing climate-related agendas across the region. This includes support for climate, weather, and hydrological services coordination and collaboration to enable better service delivery as well as multi-hazard response. The UN could play an important role in enabling regional coordination.

- Due to both historical and current mobility within and out of the region, there are myriad opportunities to better leverage the high regional remittances for addressing climate-risk and building climate resilience since most remittances are currently used for consumption rather than investment in mitigating future risks. Mercy Corps has piloted a project in Guatemala to incentivize remittances in advance of forecasted extreme weather[6] with the recognition that cash flow in advance of a crisis can be more effective at reducing risk.

- Across the climate-insecurity-migration nexus, the digitalization of illicit networks in the Americas means that responding to challenges posed by criminal groups requires addressing new forms of communication and operation.

While moving inland, Hurricane ETA weakened into a tropical storm, but the unstopping and heavy rains it carried caused extensive floods, landslides, and massive damages in Nicaragua, Guatemala, Honduras, and Panama. Image source: EU, 2020 (D. Membreño) / Flickr (CC BY-NC 2.0)

SCALES OF DECISION-MAKING

- The international community must evolve its ability to understand and support local interests more directly, while not subverting legitimate governmental authority in the process. Opportunities for direct funding of local grants and engaging with civil society on efforts like climate data generation and dissemination (beyond universities and scientists, etc.) should be fostered.

- The people and communities most directly affected by the climate-insecurity-migration nexus are frequently not consulted directly or, if they are, the results are not returned to them for action. There is a helpful bridge-building role for more on-the-ground field analysis, reporting, and storytelling.

- Indigenous knowledge and technologies must be better leveraged and included in climate-risk analytics, and to be effective, policy approaches must also include consideration of traditional ways of communicating and coordinating (e.g. consider digital access and literacy).

- When donors coordinate across sectoral objectives to influence more multidimensional assessment, they wield influence over the type of data collected, who informs it, and how it is organized. Ensuring that the information and knowledge gathered is pertinent for affected communities can counter the challenge of donor-directed interventions.

- Risk is highly concentrated in the growing urban and peri-urban informal settlements which tend to be characterized by high insecurity and low resilience. It is important to focus policy attention and financial resources on these areas, particularly including investments to make formal socio-economic systems more robust and inclusive as a crucial aspect of ensuring just and safe migration in the region.

- Lessons can be harnessed from cities that have successfully integrated migrants in areas such as infrastructure, public health, and employment, and have countered harmful narratives about migrants.

- Marginalized groups can be key agents of change as holders of knowledge about local priorities and context. By centering Indigenous and marginalized voices, interventions can be modified to adjust "whose priorities" and "whose solutions" are advanced to have greater impact.

- The international community is often constrained by requirements to work through national governments and struggles to engage effectively with other levels of decision-making and as a result there is often inadequate consultation with the people and communities most at risk. Higher-level organizations must actively seek channels to hear from and collaborate with underrepresented groups and at the most local levels.

- To avoid decision paralysis, actors in the region can focus more on scales of decision-making to identify entry points that allow for disaggregation along both timescales (timeframes of risks and responses) and levels of action (from individuals to communities to regional entities).

CONCLUSION

Understanding the climate-insecurity-migration nexus is crucial for understanding the interplay of northern Central America's current challenges. The region's context of instability, weak government institutions, and marginalization has important implications for the ability of communities to respond and be resilient to stressors like climate change. At the same time, worsening climate conditions also threaten to reinforce poor governance and inequality, further destabilizing the region.

As the science of climate change and climate-risk analytics and models improve in their accuracy, we sit on the cusp of improving overall predictive capabilities to inform local and regional action. To do so effectively, we must start by understanding how existing capacity in adjacent fields of research and practice can be better utilized and improved to have better impact. For that reason, as governments, NGOs, the private sector, and the international community grapple with this complex set of dynamics, applying a scales-of-decision-making lens can provide a more effective way to identify how to match capacity and need with opportunities for interventions and early action. Finally, to make progress, we must open our technical silos and acknowledge the systemic nature of the challenges. We must ensure all responses include attention to understanding intersectional risk and fostering resilience (of people and systems) while seizing the opportunities for strengthening governance and improving human well-being in affected communities.

Rural women diversify incomes and build resilience. Scenes from the municipal market in Tucuru, Guatemala, April 10, 2018. Image source: UN Women / Flickr (CC BY-NC-ND 2.0)

ENDNOTES

1   "An Evidence-Based Collaborative Framework for Improving Predictive Capabilities," Wilson Center Environmental Change and Security Program, https://www.wilsoncenter.org/publication/evidence-based-collaborative-framework-improving-predictive-capabilities.

2   "Natural Disasters in Latin America and the Caribbean, 2000-2019," ReliefWeb. https://reliefweb.int/report/world/natural-disasters-latin-america-and-caribbean-2000-2019.

3   "How Climate Change Risks Further Destabilising Central America," IISS, https://www.iiss.org/blogs/analysis/2021/11/how-climate-change-risks-further-destabilising-central-america.

4   "Invisible Threads: Addressing the root causes of migration from Guatemala by investing in women and girls," Population Institute, https://www.populationinstitute.org/resource/invisible-threads-addressing-the-root-causes-of-migration-from-guatemala-by-investing-in-women-and-girls/.

5   ARC-D Toolkit, Resilience Nexus, https://resiliencenexus.org/arc_d_toolkit/what-it-is/

6   "Migration Policy Practice (Vol. XII, Number 1, February 2023)," International Organization for Migration, https://publications.iom.int/books/migration-policy-practice-volxii-number-1-february-2023.

Hurricanes ETA and IOTA hit one after the other, in a fortnight, wreaking havoc and disrupting the lives and expectations of more than 7.3 million people across Central America. Almost 400,000 people are still living in temporary and overcrowded shelters, while many others are living. Image source: © European Union, 2020 (photographer: D. Membreño)/ Flickr (CC BY-ND 2.0)

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