

Assessing the impact of heat waves on narratives from refugees and migrants in transit; managing disasters in a climate of extremes in Latin America

Sandra Megens
WUR-SDC

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Summary

Analyzing heat wave narratives is important for formulating policies on disaster management. The limitations of existing institutional and social structures and their discrete approaches to disaster preparation and response call for a holistic, transdisciplinary, and multi-stakeholder perspective, in Spanish-speaking countries in refugee and migrant response, addressing risk and crisis management concerns with a focus on new extreme event scenarios, such as heat waves becoming more intense related to drought. Human activities also induce this phenomenon, triggered by excessive irrigation, deforestation, poor farming practices, and urban water overuse. There is a gap in the understanding of how refugees (on mobility) or migrants (transit) react to shocks. Is the current interaction of heat waves with migration and migrants understood as a response to their displacement? This text in question is based on the vulnerability to heat waves between urban and rural areas, not just on social and hydrological conditions, but also on other domains that increase risk and force mobilization. Understood as a decision-making domain-driven disaster. Shreds of evidence show that there exists a poor ability (from central and local governments) to understand, interpret, and effectively manage communication coverage when a community is prone to a lack of socialization of (educational) information regarding the response to extreme weather phenomena such as heat waves, flash drought, and water scarcity. We can conclude that the preparatory tactics must include the establishment of safety routes and humanitarian corridors. In addition, it is important to consider how the environment impacts behavior, especially since environmental shock might affect the individual or group unexpectedly due to a lack of preparation. Those interrelated aspects serve as a warning about the consequences of the absence of proper information on these climatic uncertainty phenomena for our future.

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En la literatura actual sobre la gestión del riesgo de desastres, hay una brecha en la comprensión de cómo los refugiados (en movilidad) o los migrantes (en tránsito) reaccionan a los impactos causados por eventos climáticos extremos. Entonces, la pregunta lógica es: ¿Se entiende la interacción actual de las olas de calor con la migración y los migrantes como una respuesta a su desplazamiento? Este texto en cuestión sostiene que la vulnerabilidad a las olas de calor entre las zonas urbanas y rurales no solo depende

de las condiciones sociales e hidrológicas, sino también de otros dominios que aumentan el riesgo y obligan a la movilización. Entendido como un desastre impulsado por el dominio de la toma de decisiones. Fragmentos de evidencia muestran que existe una capacidad deficiente (de los gobiernos central y local) para comprender, interpretar y gestionar de manera efectiva la cobertura de comunicación cuando una comunidad es propensa a la falta de socialización de información (educativa) con respecto a la respuesta a fenómenos meteorológicos extremos como olas de calor, sequías repentinas y escasez de agua. Podemos concluir que las tácticas preparatorias deben incluir el establecimiento de rutas de seguridad y corredores humanitarios. Además, es importante considerar cómo el entorno afecta el comportamiento, especialmente porque el impacto ambiental puede afectar al individuo o al grupo de forma inesperada debido a la falta de preparación. Estos aspectos interrelacionados sirven como advertencia sobre las consecuencias que tiene para nuestro futuro la falta de información adecuada sobre estos fenómenos de incertidumbre climática.

Introduction

Analyzing heat wave narratives is important for formulating policies on disaster management. The limitations of existing institutional and social structures and their discrete approaches to disaster preparation and response call for a holistic, transdisciplinary, and multi-stakeholder perspective, in Spanish-speaking countries in refugees and migrant response, addressing risk and crisis management concerns with a focus on new extreme event scenarios, such as *heat waves* becoming more intense (Issa et al., 2023), related with drought [abnormally high temperatures, as heat waves, proceed flash drought]. Human activities also induce this phenomenon, triggered by excessive irrigation, deforestation, poor farming practices, and urban water overuse.

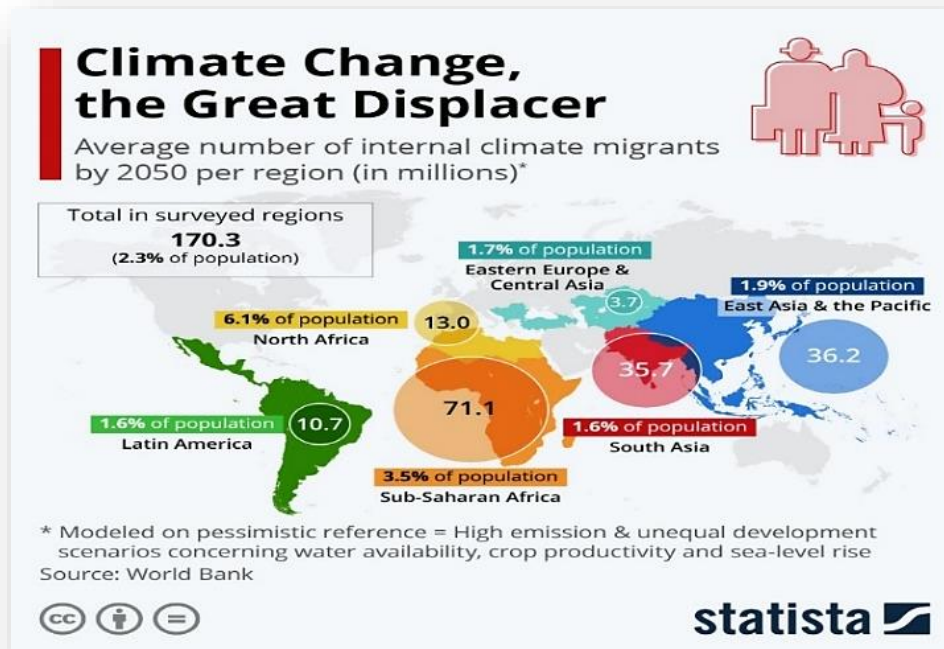
The Why?

There is a gap in the understanding, of how refugees (on mobility) or migrants (transit) react to shocks. Current studies examine how to interpret (refugee) and migration responses to severe climate affecting multiple dimensions and scales e.g., vulnerability to heat in rural and urban local populations, in Spain. (López-Bueno et al., 2021), where “*the interaction of heat with migration and migrants is little understood*”.

This text in question contends that vulnerability to heat waves between urban and rural areas, not just depends on social and hydrological conditions, but also on other domains that increase risk and force mobilization. Understood as a decision-making domain-driven disaster in this text, the poor ability to understand, interpret, and effectively manage communication coverage when a community is prone to a lack of socialization of (educational) information regarding the response to extreme weather phenomena such as heat waves, flash drought, and water scarcity. The factors that increase or decrease vulnerability are related to the level of exposure to a hazard and to other factors such as

poverty, social inequalities, the incorrect occupation of territories, to escape of conflict, and the indiscriminate exploitation of these groups in displacement. There is a growing concern that more people will move because of the adverse effects of climate change, natural disasters, and other hard-to-predict environmental factors.

Figure 1. [Migration and Climate](#)



Source: <https://www.statista.com/chart/26117/average-number-of-internal-climate-migrants-by-2050-per-region/>

-The Arguments -

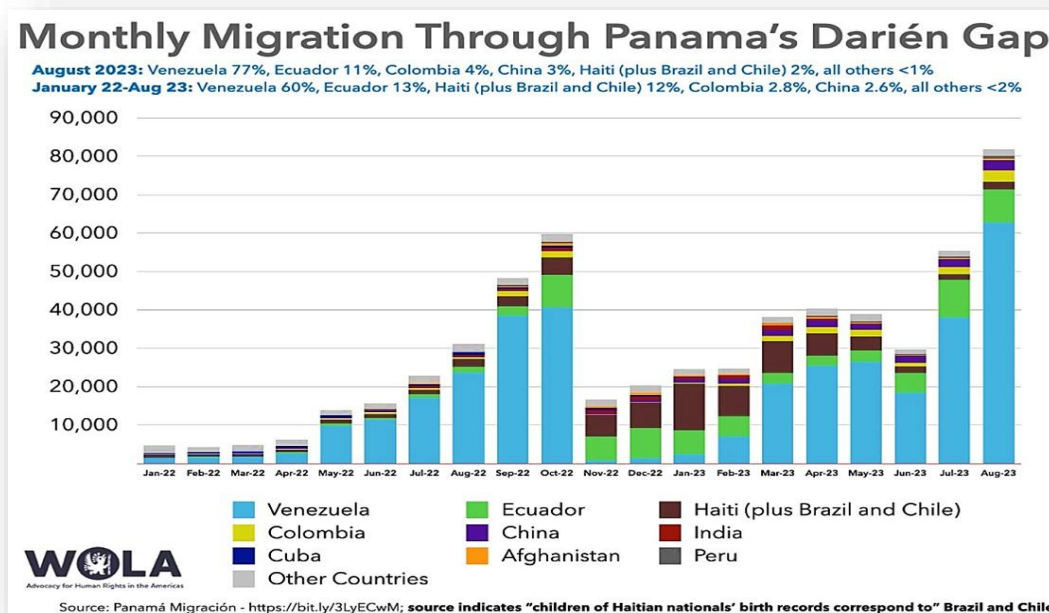
Extreme heat and migration are two concepts interlinked to civil conflict, social economic distress, and persecution that forced a large population to migrate. However, current migration evolves to other kinds of mobility, internal mobility due to increasing heat, through a variety of intersecting factors. One of the main questions to resolve should be what type of migration we confront, and how these new extreme weather scenarios impact this displacement, understanding migration as a physical, emotional, and social movement of people from one -location- to another, based on self-decision [own operationalization of migration concept for this text]. This definition does not include refugee status.

We might speculate that migration has sources and causes, and that heat may impact this type of unwanted displacement. *Heat waves-related risks* and disasters have a more well-known impact on permanent migrants. We believe that *heat waves* may not be a driver of migration in all circumstances, even though heat waves are expected to become more frequent and intense. Climate change, severe weather conditions, and inducing disasters, are significant issues in each place, but it is not the only one that triggers relocation. Other factors drive migrants to (mobilize), such as migration-related disasters linked to

environmental degradation, both structural and non-structural in nature, see Figure 2. Exploring other sources of migration-related environmental degradation besides climate change leading to similar impacts of prolonged extreme heat, slow on-set (drought, erosion, desertification), or sudden on-set (flash drought, fires), including the proponent concept by the OMS of “environmental refugees”.

There is no literature on a 'temperature threshold' at which migration is assured. Increasing comparability in heat measurements, heat impacts, and definitions of environmentally induced migration and migrants may aid future study, risk reduction, preparedness, and response to the impact of heat on migration and migrants.

Figure 2. Migration figures weekly updates; advocacy organization advancing human rights in the Americas (WOLA). Retrieved 04/11/2023



- The proposal strategies –

In response to how to increase migrants' knowledge and preparedness when confronted with sudden/unexpected climatic phenomena such as heat waves (flash drought). We believe that developing adaptation strategies for minimizing heat waves (Independent variable) affecting migration should consider a variety of factors and investigate mechanisms of vulnerability to elevated temperatures, particularly when we count (migrants in transit and refugees because of climate change or extreme weather events on mobility) rather than settling on locations.

The first step is to gather data to identify those roles and drivers who will benefit from using this data to reduce disaster risks and losses. Data may be accessed, analyzed, and shared by partners and stakeholders for risk-informed sustainable development, climate, and

humanitarian action. However, this must be related to a deeper grasp of the local issues to make better assessments and decisions. A variety of interconnected UN frameworks and guidelines (The UN Global Assessment Report on Disaster Risk Reduction; GAR 2023, among others) will be used to map resilience and early preparation for rural, suburban, and urban heat waves.

People move for economic, political, cultural, or environmental reasons. As in the case of Central America (Honduras, Guatemala, El Salvador, Venezuela), observing these migrants leads to an unexpected heat wave. Climate change is not just a future problem that will affect coastal communities and ecosystems. Rainfall patterns, as well as river flow timing and amount, can affect water supplies, quality, and hydroelectricity production. The United States is already experiencing (great displacement) migration due to climate change (The White House Report, 2021).

We conclude that the preparatory tactics must include the establishment of safety routes and humanitarian corridors. In addition, it is important to consider how the environment impacts behavior, especially since environmental shock might affect the individual or group unexpectedly due to a lack of preparation. Those interrelated aspects serve as a warning about the consequences of the absence of proper information on these climatic uncertainty phenomena for our future.

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