Climate Change and the Global Refugee Crisis: A Literature Review

Research Question: To what extent is there an increase in global refugees as a result of human-induced climate change and more frequent and severe extreme weather events?

(Broad audience: Climate scientists, policymakers, and generally anyone that lives on this planet)

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Introduction

From long periods of ice age conditions to heat cycles and melting periods, climate change has historically been understood to be a naturally-occurring phenomenon; however, more recent recorded and patterned climate data show gradual departures from expected numbers to be occurring at unnatural rates. This accelerated change in the climatic patterns of global regions is widely attributed to human activity in which the constant accumulation of waste, the overconsumption of fossil fuel energy sources, and overexploitation of natural resources at unsustainable and unreplenishable rates is corrupting the health of human and ecosystem life worldwide. Changes in climate can influence local weather, temperature, sea level, ocean acidity, agriculture, rainfall, species survival, and particularly, the likelihood of devastating natural disasters and recurring extreme weather events. And more frequently than ever, people in communities around the globe are being forced to abandon their livelihoods and uproot their families as a result of climatic conditions that threaten the persistence of human and ecosystem life. This literature review seeks to evaluate the relationship between climate change, human consumption, extreme weather events, natural disaster patterns, voluntary and forced migration events, and the effect all of these factors can have on people psychologically synthesized for a popular audience.

Global Climate Change as Human-accelerated

According to research from the European Geosciences Union and the Centre for Research on the Epidemiology of Disasters, human-activity is uniquely to blame for the 21st Century global climate emergency and "the possibility that certain types of natural disasters, such as floods, may be increasing as a direct consequence of human activity" (Guha-Sapir, 2004, p. 14). Carbon dioxide emissions worldwide have surpassed the threshold of return, reaching annual emissions levels in the tens of billions of tonnes per year largely attributed to electricity, heat, transportation, agriculture, and the industry sectors of the global economy. The neverending cultural cycle of consume, waste, repeat is one that leads to the depletion of the earth's natural resources—water, air, forests, natural gas, oil, etc—at rates in which they can not be replenished naturally. These cycles of overexploitation and overconsumption perpetuate global social, cultural, and economic injustice leading to events of water scarcity, food insecurity, habitat and biodiversity loss, and a general mental health crisis.

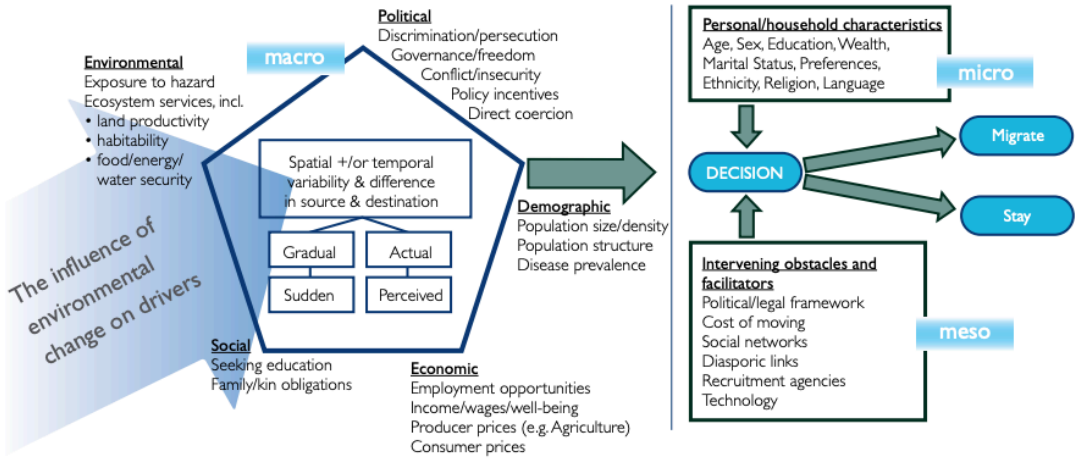
The burning of fossil fuels necessary to sustain the energy demand and the level of comfortability that the Global North requires is extensive and disturbing the earth's ability to return to any form of equilibrium before the next disturbance. Furthermore, the operation of capitalist societies requires that profit be prioritized over the planet, curating cultures where a tree is more valuable cut down and in production than alive and in the soil. These societies champion industry and large corporations that cut-corners on environmental standards, externalize their pollution onto the less powerful and more vulnerable communities, and ignore the long-term effects of their short-term profit maximization (Faber 2017). And the countries of the Global North, namely the United States, United Kingdom, France, Canada, etc, are

collectively responsible for 92% of excess emissions globally. Consequently, this polluting behavior serves to exacerbate the climate burden borne by the countries of the Global South—Indonesia, the Philippines, Madagascar, Latin America, etc—in the form of climate instability, natural disasters, and forced migration. Moving forward, "human-driven climate change seems poised to affect these most powerful overturning ocean circulation systems, systems that we know have had huge effects on the planetary environment in the past. We conclude that, in the common meaning of the word danger, 2 ◦C global warming is dangerous" (Hansen, 2016, p. 41).

The Driving Forces of Migration and Extreme Weather Events

Climate change threatens to pose the biggest international humanitarian threat and the largest global refugee crisis in recorded history (Chung, 2011). The proportion of voluntary vs. involuntary migrants is shifting towards the latter with forced migration events on the rise internationally. The emigration influences are expanding to feature a new category of push factors: environmental and climate threats. And in accordance with the research performed by the London Government Office for Science Foresight Project Team, the five contemporary driving forces of migration are economic, social, political, demographic, and now, environmental concerns. For example, an economic push factor would be a regional government steadily raising their property and income taxes to levels that the locals can not afford, whereas, an environmental push factor would be at play in the case of a drought, for instance, leading to water scarcity, crop failure, and the loss of a way of life. While the two emigration events were stimulated by economic and environmental concerns respectively, there is often a level of

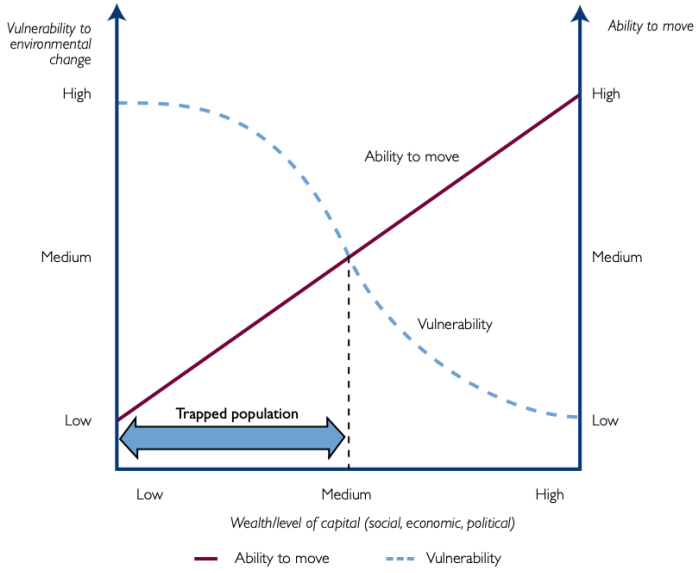
overlap between the five drivers of migration with economic and social factors notably heavily present in a decision to leave one's homeland.



"**Figure ES.1:** The conceptual framework that has been used in this project, showing the 'drivers' of migration and the influence of environmental change" (Foresight, 2011, p. 33)

The foresight project team acknowledges that this model is not entirely comprehensive; however, it does a suitable job of illustrating the complexities and confounding variables present in a decision to uproot one's self and family. A limitation of this model outlined in their study is that the desire to quantify this growing group of "environmental migrants" is nearly impossible, and likely, the numbers will continuously be characteristically inaccurate: "There is much evidence that millions of people will reside in areas of high environmental risk over the next five decades; indeed, this evidence is cited in some of the sources in Box 1.216. Other evidence reviewed in this report shows that a significant proportion of these people will lack the financial, social, political or even physical assets to migrate away from these environmentally dangerous areas, whilst those who have greater assets are more able to" (Foresight, 2011, p. 29). This injustice and failure of public policy is captured in **Figure 1.2** below in which it is the same social groups who have the least social, economic, and political power that are too, oftentimes,

the most vulnerable to environmental stressors and less capable of mitigating the dangers climate disasters pose. “Furthermore, the burden of environmentally-induced displacement is likely to fall disproportionately upon developing countries and the most vulnerable sectors within those societies” (Chung, 2011, p. 20). That is to say, the increase in the frequency and severity of natural disasters and extreme weather events pose a particular threat to the survivability of the most vulnerable regions of the globe and their communities, namely rural, coastline regions and the countries of the Global South.



“**Figure 1.2:** Schematic representation of ‘trapped populations’ and how the level of wealth/capital (social, economic or political) correlates with vulnerability to environmental change and at the same time determines the ability to move” (Foresight, 2011, p. 29).

The True Psychological Cost of Climate Change and Forced Migration

The threat of a growing global refugee crisis is upon us, and yet, we, as an international community, still have a limited understanding of the true psychological cost of this form of relocation trauma and that of climate change in general. A new wave of mental health triggers are appearing among the millenial and ‘gen-Z’ generations as those growing up in a world

stricken with climate crises and ecocide, in what therapists around the globe are now terming "climate anxiety" (Faber 2017). Aside from the negative impact climate change is having on our physical selves, given the pollutants continually contaminating our air and water sources, the climate crisis is positioning itself to have an equally as devastating impact on our mental and emotional well-being moving forward: "humanity is already suffering – and will increasingly suffer – varying degrees and types of psychological harm as climate-related disasters alter how and where we live, and, in some cases, if we live" (Van Susteren, 2018, p. 1). Involuntary emigration exposes its victims to vulnerable and unpredicatable situations in which they may encounter famine, dehydration, sexual violence, human-trafficking, and other life-threatening circumstances without the proper resources to protect themselves. Similarly, forced migration events drastically change the lives of the refugees in ways that are not feasibly quantifiable by cost or profit margins insofar as "environmentally-motivated migration and displacement leads to the disruption of existing social ties, with potentially adverse consequences for mobile populations as well as their family members who remain in places of origin. We propose that the disruption of social ties is a key mechanism by which climate-related migration may negatively impact mental health, in particular" (Torres, 2017, p. 2).

While there are social groups and geographic regions far more vulnerable to the devastations of climate change, the effects of this global crisis threaten the mental and physical health of all who live on this planet, now and in the future. People of all races, creeds, religions, ethnicities, cultural backgrounds, income-levels, and geographic locations will feel the influences of climate change in their own way and it will become increasingly harder to ignore. Climate-related flooding, warming, and extreme weather disturbances will likely make particular

regions of the globe uninhabitable by the end of the century, effectively forcing hundreds of thousands of people out of their homes with a question of where is truly safe from the climate burden (Oliver-Smith, 2009). And in actuality, the probability that refugees will develop anxiety, depression, and other mental health-related ailments have been observed to be increased with “a cross-national study uncovering that Mexican migrants to the U.S. had higher levels of depression compared to their counterparts who never left Mexico.” This is a failure of local, national, and international governments in their procured responsibility to advocate for the safety and general well-being of their people. It is an abuse of the power that the people have entrusted them with. It is time that public policymakers account for the changing realities and threats that endanger their people as a result of our accelerating climate problem. Climate change is real; it is upon us; and we must lead with compassion, empathy, and a dedication to the protection of the people and the planet over profit.

Annotated Bibliography

Faber, Daniel, Christina Schlegel. (2017). *Give Me Shelter from the Storm: Framing the Climate Refugee Crisis in the Context of Neoliberal Capitalism.* Capitalism Nature Socialism. 28:3, 1-17. doi: 10.1080/10455752.2017.1356494.

This source provides a critical investigation of the global climate refugee crisis and its framing in the broader discussion of international power dynamics, climate justice concerns, and the organization of society and consequent role of government. The critique of neoliberal capitalism and global governance adequately analyzes the failure of state and international governing bodies in advocating for and protecting their people from the dangers of human-induced climate change and the socioeconomic burdens of forced migration.

Foresight Project Team. (2011). *Migration and Global Environmental Change*. London: The Government Office for Science. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/287717/11-1116-migration-and-global-environmental-change.pdf.

The Foresight report is utilized in this literature review as a resource for the influence of climate and environmental change on the potential likelihood that communities will migrate or be forced to migrate in the near future. The report features unique models of environmental change over the past 50 years and the fundamental drivers of migration.

Guha-Sapir, D., D. Hargitt, P. Hoyois. (2004). *Thirty Years of Natural Disaster 1994-2003: The Numbers.* Centre for Research on the Epidemiological of Disasters. Belgium: Presses Universitaires de Louvain. https://www.unisdr.org/preventionweb/files/1078_8761.pdf.

This insight into 30 years of natural disasters around the world supplies my review with the raw and processed data in which to make inferences off of as I investigate the relationship between human-induced climate change and the threat of extreme weather events. The source effectively substantiates the popular conclusion that extreme weather events are gradually increasing in frequency and severity as time progresses and temperatures rise.

Hansen, J., M.H. Sato, P. Hearty, R. Ruedy, M. Kelley, V. Masson-Delmotte, G. Russell, et al. (2016). *Ice Melt, Sea Level Rise and Superstorms: Evidence from Paleoclimate Data, Climate Modeling, and Modern Observations That 2°C Global Warming Could be Dangerous.* Atmospheric Chemistry and Physics 16: 3761–3812. doi: 10.5194/acp-16-3761-2016.

This climate report analyzes changes in global carbon dioxide levels and the likelihood that they are connected to human activity. The resource also models predictions for the future rise in

temperatures, sea levels, and the threat these changes would likely pose for the environment, people, and their livelihoods.

Chung, Hane. (2011). *Environmentally-induced Displacement: Identifying the Complexities and Finding Solutions under the Current International Protection Regime.* Journal of Internal Displacement Volume 1 Number 1. https://journalofinternaldisplacement.org/index.php/JID/article/view/11/9.

This resource provides a solution-based approach to what the author terms "environmental displacement" and evaluates existing international law in its ability to mitigate and address the issue. Chung's interpretation of migration and displacement enhances my knowledge of the subject matter and works to differentiate voluntary vs. involuntary migration events.

Oliver-Smith, Anthony. (2009). *Nature, society, and population displacement: towards understanding of environmental migration and social vulnerability*. UNU-EHS InterSecTions. UNU- EHS. http://collections.unu.edu/eserv/UNU:1862/pdf5130.pdf.

This resource supplements my research and evaluates discrepancies in climate burden detailing how specific geographical locations and social groups are more vulnerable to and affected by the impacts of environmental and climate migration than others. The zoomed-in examination of Honduras and Hurricane Mitch of 1998: a case of exploited natural resources and severe environmental degradation illustrates a need to prioritize environmental protections on small and large scales.

Torres, J.M., J.A. Casey. (2017). *The centrality of social ties to climate migration and mental health.* BMC Public Health 17, 600. https://doi.org/10.1186/s12889-017-4508-0.

This source is a comprehensive analysis of the social and psychological considerations of traumatic events, specifically forced climate migration events. The piece evaluates the power of relationships and community as a safety net and the significance of social marginalization.

Van Susteren, Lise. (2018). *The psychological impacts of the climate crisis: A call to action.* BJPsych International, *15*(2), 25-26. doi:10.1192/bji.2017.40.

This call to action is motivated and grounding in its message of urgency and necessity for education and mobilization. The resource rounds out my research into the greater climate crisis and what it means for the human experience in acknowledging the rise in anxiety, depression, and general mental health illness as a result of increasing economic and climate instability.