Beyond Borders: Rethinking Responsibility and Protection for Climate Refugees

"Climate refugees", according to the United Nations High Commissioner for Refugees (UNHCR), are people who are forced to leave their homes and communities primarily due to the adverse effects of climate change and global warming, including both sudden and slow-onset environmental disruptions.[1] These displacements are often the result of climate-related disasters such as floods, droughts, storms, and rising sea levels.[2] In 2015, environmental law specialist Benoît Mayer in the chapter "Climate Migration Governance" in *Handbook of Climate Change Adaptation*, estimates that as many as 143 million people would be displaced by climate change impacts such as desertification, water scarcity, and storms by 2050.[3] This projection disproportionately involve poorer nations: Asia, Africa, Latin America, and small island states have the largest populations at risk of becoming climate migrants.[4] Addressing climate refugees is especially complex because it is a large-scale issue that combines conceptual ambiguity, institutional incapability, reluctance of moral responsibility and economic and political concerns. Developing nations, which are most sensitively exposed to climate disasters' impacts yet least responsible for emissions, face disproportionate burdens. A fair solution requires an integration of new legal frameworks, substantial financial support for vulnerable regions, and innovative tools for prediction and planning—three mutually reinforcing strategies

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1 "Climate Change and Displacement," UNHCR, accessed May 8, 2025, https://www.unhcr.org/what-we-do/build-better-futures/climate-change-and-displacement.
2 "Climate Change and Displacement."
3 Benoît Mayer, "Climate Migration Governance," in *Handbook of Climate Change Adaptation*, edited by Walter Leal Filho, 1st ed. Springer Science+Business Media, 2, https://search.credoreference.com/articles/Qm9va0FydGljbGU6NDI0OTUxMQ==?aid=237298.
4 Mayer, "Climate Migration Governance," 2.

together enable timely, effective, and just responses to climate displacement.

Previous analyses highlight the unique challenges of climate-induced migration. Environmental migration specialist Carol Farbotko mentioned in chapter "Environmental Refugees" in the *Encyclopedia of Geography* that unlike traditional refugees, who flee persecution like wars, climate migrants often move for mixed reasons including sudden disasters and slow-onset resource loss, and many remain displaced within country borders.[5] Crucially, there is no international legal status of "climate refugee."[6] Mayer argues that simply extending the 1951 Refugee Convention, which defines who qualifies for 'refugees' and outlines international standardized refugee treatment, to environmental migration is neither politically feasible nor conceptually appropriate, since those displaced by climate still enjoy the protection of their home country and typically seek long-term development solutions rather than temporary shelter.[7]

To dive into the reasons why addressing climate refugees is an extremely difficult problem. First, the definition of who qualify as "climate refugees" is contested. Mayer points out that migration is rarely driven by one single cause, it always has multiple drivers, and it is problematic to appoint climate disasters as a unique cause to migration then draw a line between other causes of migration.[8] This is indeed true because in less developed areas, many people who are displaced by flood or drought

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[5] Carol Farbotko, "Environmental Refugees," In *Encyclopedia of Geography*, edited by Barney Warf, 1st ed. Sage Publications, 1, https://search.credoreference.com/articles/Qm9va0FydGljbGU6MTA5ODc4MQ==?aid=237298.

[6] Farbotko, "Environmental Refugees," 2.

[7] Mayer, "Climate Migration Governance," 5.

[8] Mayer, "Climate Migration Governance," 3-4.

concurrently have economic, social and political grievances. For example, in 2021, abnormally severe flooding of the Nile displaced an estimate 15000 individuals in South Sudan, however, due to long-standing poverty, civil wars, political instability and governmental corruption, according to the existing 1951 Refugee Convention, these migrants would more likely be labeled as political or economic migrants rather than climate refugees, even though climate disaster is the most direct cause.[9] As a result, they may not receive the specific protections or support they need, such as supported relocation with infrastructure, housing, and livelihood planning. In this case, climate refugees being considered economically driven or leaving their homeland because of weak governance disqualifying its specific climate refugee status. Therefore, the conceptual ambiguity makes it hard for a common agreement for rights and responsibilities.

Furthermore, current protections for refugees focus mainly traditional refugees, who flee persecution for race, religion or politics according to UN refugee regime, and extending the scope of refugees to include climate refugees would inundate the UN system.[10] In "Protecting the Climate Refugees: The Case for a Global Protocol" by environmental researchers Frank Biermann and Ingrid Boas, they note Maldives delegates' attempt to extend the UN refugee regime to 'climate refugees' as impractical as the UNHCR, is already under constant pressure and would be hard-

[9] "Sudan – Floods Cause Devastation in White Nile State," Floodlist, accessed May 12, 2025, https://floodlist.com/africa/sudan-floods-white-nile-state-september-2021; "Sudan Country Risk Report," GAN Integrity, accessed May 12, 2025, https://www.ganintegrity.com/country-profiles/sudan/.

[10] Frank Biermann and Ingrid Boas, "Protecting the Climate Refugees: The Case for a Global Protocol." *Environment* 50, no. 6 (December 2008): 13, https://www.proquest.com/docview/224023814/abstract/E474D612087A4D97PQ/1.

pressed to aid a flow of migrants tremendously larger than the stream they have in 2015.[11]

Moreover, since most climate displacement occurs within national borders, the burden of support falls heavily on developing countries, which are often the least equipped to manage large-scale internal migrations.[12] These governments may lack the infrastructure or resources to resettle and provide for displaced populations and may even resist acknowledging displacement for political reasons. In such contexts, climate refugees may face further marginalization or neglect. International actors, meanwhile, are constrained by the principle of state sovereignty, which limits their capacity to intervene or assist without the host government's consent. As Mayer argues, externally imposed legal or policy frameworks risk being ineffective or even counterproductive if they disregard the domestic political realities and institutional limitations of vulnerable states.[13] Thus, the problem of sovereignty acts as both a legal and a practical barrier to climate refugee protection.

The problem is further compounded by the difficulty of assigning accountability. The global distribution of responsibility for climate change is deeply unequal. According to the recent 2024 study “Attributing climate-change-related disaster displacement responsibilities along global production chains” by economists Guadalupe Arce and Ángela García-Alaminos, international law specialist Mateo Ortiz and data analysist Jorge Zafrilla, they found that that much of the environmental

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[11] Biermann and Boas, “Protecting the Climate Refugees: The Case for a Global Protocol,” 13.
[12] Mayer, “Climate Migration Governance,” 4.
[13] Mayer, “Climate Migration Governance,” 2.

displacement in poorer countries is linked to consumption and industrial production patterns in wealthier countries.[14] Through complex global supply chains, carbon-intensive manufacturing and consumption practices, environmental costs are cast onto developing regions.[15] However, the international system lacks effective mechanisms for tracing and redistributing this responsibility. For example, some developing countries like Bangladesh are trading their environments, such as lands, forests, mines for economic revenues by exporting resources to developed countries.[16] In this scenario climate disasters like landslides and debris flow are considered caused directly by the Bangladesh government's practice of deforestation or mining, rather than the countries who buy their manufactured products.[17] The indirect causality chain weakens the ethical basis for help, as countries might simply regard it as an in-board natural disaster and it is not their responsibility to provide assistance. Besides that, poorer states have little political power to demand support, that adds to the invisibility of the climate refugees and exacerbates the problem.

Another layer of complexity lies in the moral and political reluctance of potential host countries, particularly countries in Europe and North America, to accept climate refugees. First reason is that most of these developed countries are geographically distant from the countries in need for help, which are mostly located in Latin America, Asia, Africa and small island countries, and climate refugees would have difficulties

[14] Guadalupe Arce, Ángela García-Alaminos, Mateo Ortiz, and Jorge Zafrilla, "Attributing Climate-Change-Related Disaster Displacement Responsibilities along Global Production Chains," *iScience* 27, no. 11 (November 15, 2024): 3, https://doi.org/10.1016/j.isci.2024.111124.
[15] Arce et al., "Attributing Responsibilities along Global Production Chains," 3.
[16] Arce et al., "Attributing Responsibilities along Global Production Chains," 5-6.
[17] Arce et al., "Attributing Responsibilities along Global Production Chains," 5-6.

immersing in a different culture.[18] According to W.H. in the *Economist* article "Why climate migrants do not have refugee status," the cultures of host countries often differs significantly to refugees' native culture, accepting them might cause migrants to be socially isolated, have language barriers and struggle to find a living.[19] Secondly, climate researcher Bayes Ahmed in his study "Who takes responsibility for the climate refugees?", published in 2017, notes that even though developed countries are historically the largest contributors to climate change, they have not translated this responsibility into large scale commitments for climate-induced migrants.[20] Mayer echoes this and points that countries often cite national security concerns such as conducting human trafficking and actions of espionage and economic concerns such as the fear that accepting large numbers of migrants could undermine labor markets or social cohesion as reasons for limiting their intake.[21] In addition, Mayer points that the lack of a formal legal category for climate refugees enables governments to deflect responsibility by pointing to procedural gaps rather than addressing moral obligations.[22]

There have been many meaningful efforts into addressing the problem. For example, Ahmed analyzed global production chains to show countries that are most responsible for emissions, such as the US, China, Japan and Russia, are largely

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[18] Mayer, "Climate Migration Governance," 2.
[19] W.H., "Why Climate Migrants Do Not Have Refugee Status," *The Economist*, March 6, 2018, accessed May 8, 2025, https://www.economist.com/the-economist-explains/2018/03/06/why-climate-migrants-do-not-have-refugee-status.
[20] Bayes Ahmed, "Who Takes Responsibility for the Climate Refugees?" *International Journal of Climate Change Strategies and Management* 10, no. 1 (September 21, 2017): 2, https://doi.org/10.1108/IJCCSM-10-2016-0149.
[21] Mayer, "Climate Migration Governance," 6.
[22] Mayer, "Climate Migration Governance," 6.

wealthy and historically carbon-emit-intensive.[23] From this he argues that the major emitters should bear a proportionate share of the burden, for instance by contributing 0.2–0.5% of their GDP into a global fund for climate migrants.[24] This kind of targeted funding scheme, tied explicitly to historical responsibility, is one concrete way to address the "climate debt."

Beyond financial solutions, efforts have been made to develop technological tools for better climate refugee planning. Arce and her colleagues have developed a model extracting data such as previous migration patterns from the World Bank to forecast forced displacement years in advance.[25] Such predictive modeling can help governments to plan resettlement before crises peak.[26] In theory, similar models could be tailored to climate scenarios such as using satellite data to predict where drought or sea-level rise will force migration.[27] By anticipating the flows of climate refugees, aid organizations could direct funding and infrastructure to high risk areas proactively, reducing chaos and further improving dignity for migrants.[28]

In addition, Mayer argues that instead of waiting for a new international agreement, which he thinks politically unlikely, we should frame climate displacement as part of existing climate adaptation policy as soon as possible.[29] For example, integrating climate migration into Nationally Determined Contributions,

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[23] Ahmed, "Who Takes Responsibility for the Climate Refugees?" 11-13.
[24] Ahmed, "Who Takes Responsibility for the Climate Refugees?" 1.
[25] Arce et al., "Attributing Responsibilities along Global Production Chains," 10.
[26] Arce et al., "Attributing Responsibilities along Global Production Chains," 10.
[27] Arce et al., "Attributing Responsibilities along Global Production Chains," 11.
[28] Arce et al., "Attributing Responsibilities along Global Production Chains," 11.
[29] Mayer, "Climate Migration Governance," 4.

which are climate action plans under the Paris Agreement that outline goals for reducing emissions and adapting to climate change.[30] The goal is to make the legal framework more flexible and inclusive so that treating climate refugees would move from a marginal issue to an international collaboration of dealing with climate change problems. In 2021, The United States rejoined Paris Agreement and officially put treating climate refugees on the agenda and agreed to help the UN with data sharing and analyzing, which was an important step toward global coordination.[31] Though immediate after inauguration, which is on the 20th of January, 2025, Donald Trump signed an executive order to withdraw the US from the Paris Agreement, international momentum has never stopped.[32] In December 2023, Members of the European Union launched the Platform on Disaster Displacement (PDD), a state-led initiative working towards better protection for people displaced across borders in the context of disasters and climate change, which kept running despite the Trump's withdrawal, signaling that global cooperation remains consistent and possible even in the face of political fluctuation.[33]

These three strategies, fair financial support, predictive planning and legal adaptation, are mutually reinforcing. Flexible frameworks enable action, funding

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[30] Mayer, "Climate Migration Governance," 4; "Nationally Determined Contributions," UNFCCC, accessed May 15, 2025, https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs.

[31] White House, *Report on the Impact of Climate Change on Migration* (Washington, D.C.: National Security Council, October 2021), 13, https://www.whitehouse.gov/wp-content/uploads/2021/10/Report-on-the-Impact-of-Climate-Change-on-Migration.pdf.

[32] "Putting America First in International Environmental Agreements," The White House, accessed May 15, 2025, https://www.whitehouse.gov/presidential-actions/2025/01/putting-america-first-in-international-environmental-agreements/.

[33] "Forced Displacement," European Commission, accessed May 15, 2025, https://international-partnerships.ec.europa.eu/policies/migration-and-forced-displacement/forced-displacement_en.

makes implementation possible, and data-driven tools ensure that responses are timely and targeted. Together, they offer a blueprint for a proactive, just, and sustainable approach to climate displacement.

In conclusion, the issue of climate refugees cannot be solved by simple classification or resolution. It takes deep roots at the intersection of environmental, legal, moral, and political dilemmas, magnified by inequality and institutional inertia. While the term “climate refugee” captures the urgency of the problem, its conceptual ambiguity makes it difficult to concretely operate on. Most climate migrants remain internally displaced in countries ill-equipped to support them, while international governance mechanisms remain constrained by sovereignty, security concerns, and limited political will. Nevertheless, solutions do exist. Through global responsibility-sharing for financial aid, investing in predictive tools and flexible legal frameworks, we can ensure that climate displaced populations are protected with dignity and justice, and the international community can begin to address one of the most pressing humanitarian challenges of our time.