CLIMATE-INDUCED MIGRATION AS A NEW GLOBAL INEQUALITY

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Abstract

This study highlights climate-induced migration to be a driver of global inequality, disproportionately impacting the vulnerable regions of the Global south least responsible in the crises. Analysis of Bangladesh, Tuvalu, and the Sahel shows how environmental pressures like floods and desertification interact with socio-economic disparities, and historical injustices. This research finds that structural inequalities, and limited legal protection as 1951 Refugee Convention does not recognize "Climate migrants", adds to the crisis. Critiquing the framing of migrants as threats, study recommends rights-based policies that promote mobility, and inclusion. It recommends integrating climate mobility within national adaptation plan, creating updated legal frameworks sensitive to local knowledge, and ensuring high-emitting nations provide financial and technological support. Finally, this study also touches upon the ethical responsibility which is crucial in designing future policies, being more attentive to shift from border patrolling and restricting the movement to cooperative, human-sensitive and rights-based solutions.

Keywords: *Migrants, Refugees, Human Rights, Socioeconomic Factors, Bangladesh, Policy*

1. INTRODUCTION

The accelerating effects of climate change are causing people to rethink their existing perceptions of migration drivers. While migration has historically been linked to war and poverty, currently environmental damage and climate change are being identified as critical displacement elements.[1] Rising sea levels, desertification, long-lasting droughts, extreme heat, and powerful storms have already displaced millions, and if global warming is not brought under control, up to 1.2 billion people could be affected by 2050.[2][3] However, the effects of climate-induced migration have an unequal distribution, where vulnerable demographics within the Global South, specifically those living in economically disadvantaged, and politically marginalized regions face serious challenges due to constrained adaptability and weak legal frameworks.

Understanding migration influencers require not just climate change trends in itself but also wider influencing factors involving socio-political and economic elements. Socio-economic factors are the key players in determining who is most vulnerable to climate hazards, who has the financial and legal means to migrate, and who might face systemic discriminations at both in their origin countries and their target destinations.[4] This interplay of socio-political and environmental elements emphasizes the urgency of a more equity-focused strategy to combat climate-induced migration.

Another concerning contributor in this challenge is the amount of greenhouse emissions produced in regions and their effects being unjustly faced by other regions. Countries in the Global South,

[1] D Mokhnacheva, D Ionesco and F Gemenne, 'Human migration, environment and climate change' (2017) 29 OECD (Development Matters) Retrieved January 2024

[2] IPCC, *Climate Change 2022: Impacts, Adaptation, and Vulnerability* (ontribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change 2022)

[3] Vally Koubi, 'Climate change and conflict' (2019) 22 Annual review of political science 343

[4] Giovanni Bettini, Sarah Louise Nash and Giovanna Gioli, 'One step forward, two steps back? The fading contours of (in) justice in competing discourses on climate migration' (2017) 183 The Geographical Journal 348

including regions in Africa, Asia, and Latin America, contribute minimally to greenhouse gas emissions, yet they are the most affected by climate disasters like floods, droughts, and rising sea levels.[5] Many of these countries lack resources to shield and support their population from environmental disasters. On the contrary, wealthier countries in the Global North (Europe, North America, and Australia) despite being major contributors often introduce strict immigration policies that make it difficult for climate-induced migrants to enter those regions or seek protection.[6] This inequity underscores a severe injustice where those with minimal contributions to greenhouse emissions are more prone to climatic disasters whereas major contributors fail miserably to acknowledge their role and compensate it with required support and refuge.

The focus of this systematic review is to explore climate-induced migration as the by-product of these systemic global inequities. It highlights that manifestation of climate-induced migration particularly in marginalized regions not only exposes current weaknesses but also play a critical role in complicating them further. In instances where there are mass displacements, regions at receiving ends often encounter increased pressures due to limited infrastructure, unemployment, and weak governances. These challenges initiate a cyclic process of poverty and instability which further intensifies these global inequalities.

Climate-induced migration is still under recognized particularly in the context of international law despite its urgency. Current international legal frameworks do not recognise climate migrants as refugees, abandoning millions of people with inadequate safety measures.[7] This gap raises serious questions about fairness, responsibility, and how countries should work together to support vulnerable populations, outlining the urgency of cooperative global solutions.

A striking feature of this case study is its focus on Bangladesh, Tuvalu and the Sahel as prime case studies, due to stronger evidence base of their vulnerability in the context of climatic effects which adequately demonstrate the junction of environmental displacement and the present global injustice. Bangladesh being at costal edge is more prone to acute floods and sea-level risks which makes the densely populated coastal communities more vulnerable. While Tuvalu represents slowly developing existential threats in the face of consistently increasing sea-levels that are reflective of concerns regarding their sovereignty and statelessness. Desertification in the Sahel is exemplified being brought about by intense droughts resulting in displacement of agrarian demographic. Selecting these regions were not merely based on their increased risk levels as indicated in the reports of IPCC, IOM, and UNHCR but also their opposite climatic influencers which provide a level field to comparatively analyze the factors leading to migration. There are some other regions with similar high-risk climate levels (e.g., Caribbean, Arctic), however, Bangladesh, Tuvalu and the Sahel present rigorous empirical evidence to critically assess systemic challenges, legal gaps, and adaptive failures.

This case study seeks to examine interplay of climate change, migration and systemic injustice. This study draws insights from several information sources like migration studies, environmental justice, and political geography revealing how climate-induced displacement further complicates hardships for marginalized groups. Additionally, this study also highlights the gaps in existing legal frameworks and underscores the need for rights-based approach in addressing current migration practices.

The significance of this study lies in rejecting the framing of climate-induced migrants as security threats instead of victims. It further presses upon the need of designing equitable and sensitive policies mitigating the rights of displaced populations, enhancing global solidarity and shared responsibility in combating climate injustice.

[5] Andrew Baldwin, 'Premediation and white affect: climate change and migration in critical perspective' (2016) 41 Transactions of the Institute of British Geographers 78

[6] Ingrid Boas and others, 'Climate migration myths' (2019) 9 Nature Climate Change 901

[7] Silja Klepp and Johannes Herbeck, 'The politics of environmental migration and climate justice in the Pacific region' (2016) 7 Journal of Human Rights and the Environment 54

2. UNDERSTANDING CLIMATE AND HUMAN MOVEMENT

2.1 Environmental Pressures and Migration

Climate change is rapidly altering the environmental conditions that sustain human life and build communities. As weather patterns becomes harder to predict, more people are compelled to leave their homes, sometimes slowly over time, and sometimes very suddenly.[8] The International Organisation for Migration (IOM) defines environmental migrants as people who are forced to leave their homes due to environmental changes, making it difficult for them to continue residing in those regions.[9] These changes include rising sea levels, stronger storms, longer droughts, desertification, and compromised accessibility to clean water and food.

2.2 Types of Climate Events and Responses

There are two main types of climate-related migration. First happens slowly over time, such as when farmland becomes unproductive in the face of drought or when coastlines are worn away by the sea. These changes make it harder for people in farming and fishing communities to earn a living over time, leading to undocumented migrations.[10] The second climate-related migration is exhibited in sudden instances like floods, storms, or wildfires resulting in mass displacements and creating urgent humanitarian crises for food, shelter, and support. In both instances, the danger individuals face arises not only from environment tragedies but also due to complex interplay of social, economic, and political factors such as poverty, inadequate government support, and insufficient resources.[11]

2.2.1 Timeline of Climate Displacement Trends (1990-2050)

The timeline "Climate Displacement Trends, 1990–2050 " shows key developments in climate-related migration. The horizontal axis spans 1990 to 2050, while the vertical axis suggests the estimated displacement numbers (units unlabelled) (Figure 1). The timeline marks important events that influence climate migration trends:

- 1990 - IPCC Acknowledgement: The Intergovernmental Panel on Climate Change (IPCC) formally recognised the idea of *environmental refugees* in its First Assessment Report.[12]
- 2005 – Hurricane Katrina: Approximately 1.5 million people were displaced in the United States.
- 2012 - Nansen Initiative: a state-led process by Norway and Switzerland to build mitigate the challenge of cross-border disaster displacement.[13]
- 2015 – Paris Agreement: Explicit recognition of *Climate-Induced Migration* in Article 8.[14]
- 2018 – World Bank "Groundswell" Report: Projection of up to 216 million internal climate migrants by 2050 across six major regions.[15]

The timeline highlights that while displacement increased slowly in the early years, it is expected to increase rapidly after 2020, warranting urgent, fair and effective policies to support displaced migrants.[16][17]

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[8] Robert A McLeman, 'Climate and human migration: Past experiences, future challenges' (2013)
[9] International Organisation for Migration IOM, *World Migration Report 2022*, 2021)
[10] Koko Warner and Tamer Afifi, 'Enhancing adaptation options and managing human mobility: the United Nations framework convention on climate change' (2014) 81 Social Research: An International Quarterly 299
[11] Richard Black and Michael Collyer, '"Trapped" populations: Limits on mobility at times of crisis' in *Humanitarian crises and migration*, (Routledge 2014)
[12] IPCC, *Climate Change: The IPCC 1990 and 1992 Assessments*, 1992)
[13] The Nansen Initiative, 2015)
[14] United Nations Climate Change UNFCCC, *The Paris Agreement*, 2015)
[15] Kanta Kumari Rigaud and others, 'Groundswell' (2018) 10 Washington, DC: World Bank doi 94
[16] W Neil Adger and others, 'Human security' in (Cambridge University Press 2014)
[17] IOM, *World Migration Report 2022*

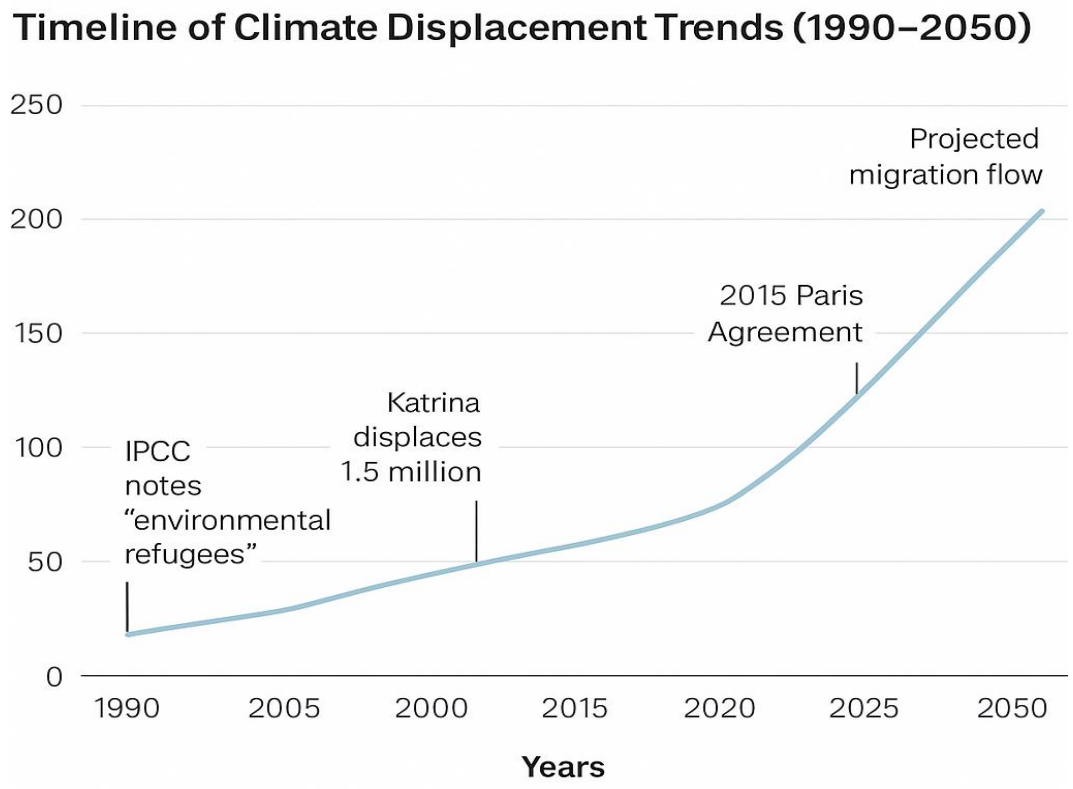

Figure 1. Timeline of Climate Displacement Trends (1990-2025)

2.2.2 Sudden-Onset and Slow-Onset Processes

The literature identifies two major drivers of climate migration: sudden-onset events (e.g., floods, hurricanes) and slow-onset changes (e.g., droughts, desertification, sea-level rise).[18][19] Both of these increase displacement risks, further complicated due to social resilience, political stability, and inadequate resources. Sometimes, even adaptation strategies like building dams or planned relocation of whole communities, might also displace people from their homes.[20]

2.3 Social, Political and Economic Factors

Geography plays an important role in how climate change affects people's movement. Countries such as Bangladesh, Sudan, and low-lying Pacific Island are most impacted by climate change due to costal proximity, arid climates, and limited adaptive capacity.[21] These challenges are further exacerbated due to inadequate funding, lack of stronger social safety nets systems, weak infrastructure leading to improper housing. Some vulnerable populations often referred to as "trapped populations", are people at high risk but cannot move due to poverty, social isolation or physical immobility.[22] Displacement capacity is dependent on many factors, such as gender, wealth, ethnicity, and age. It

[18] Ibid
[19] IPCC, *Climate Change 2022: Impacts, Adaptation, and Vulnerability*
[20] Carol Farbotko and Heather Lazrus, 'The first climate refugees? Contesting global narratives of climate change in Tuvalu' (2012) 22 Global environmental change 382
[21] Raoul Kaenzig and Etienne Piguet, 'Migration and climate change in Latin America and the Caribbean' (2013) People on the move in a changing climate: The regional impact of environmental change on migration 155
[22] Black and Collyer, '"Trapped" populations: Limits on mobility at times of crisis'

is crucial to consider fairness and equal treatment when studying the impacts of climate change on migration.[23]

Another underrepresented aspect taken into consideration within migration policies involves technological exclusion: many communities at risk facing lack of access to weather alerts, climate information, and mobile phones restricting their attempt at preparing and responding to environmental threats accordingly and timely.[24] This leads to the "climate mobility paradox" which entails that the people most affected by environmental changes are often the least able to move.[25] Socioeconomic status strongly influences how people experience climate-related migration. Wealthier populations are more likely to move early, buy property in safer areas, or apply for entry to countries with better services and stronger infrastructure. However, low-income or poorer households due to lack of options may rely on unsafe or unregulated migration pathways, exacerbating their exposure to exploitation, statelessness, and human rights violations.[26] Even after migrating to places with better infrastructure, climate migrants often live in poor-quality housing on the edges of urban areas, where services such as clean water, healthcare, and transportation are limited, further increasing hardship and insecurity.

Economic limitations and rigid immigration policies are not the only factors that affect climate-related migration. Historical colonial legacies are another barrier that climate-induced migrants face. Centuries of seizing land, extractive economies and imposed governance in formal colonial states has resulted in weak infrastructure and a heavy reliance on farming and fishing, both of which are vulnerable to climate change.[27] Modern immigration systems in wealthier countries often reinforces these inequalities, favouring individuals from certain nationalities or those with advanced education and work experience, while making it more challenging for people from formerly colonised countries to migrate and obtain protection.

3. GLOBAL INEQUALITIES AND CLIMATE MIGRATION

3.1 Historical Emissions and Unequal Responsibilities

Historically, high-emitting nations in the Global North, such as the United States and many Western European nations, have been the largest sources of greenhouse gas emissions, benefiting economically from centuries of fossil fuel-based industrialization.[28] In contrast, many of the communities now facing the gravest climate impacts, such as small island states, rural agrarian populations, and indigenous communities, have contributed minimally in causing the problem. This disparity reflects a wider pattern of climate injustice, raising critical questions about global responsibility, distributive fairness, and the moral obligation of high-emitting nations to support those most affected. Despite increased awareness, international migration policy rarely includes robust mechanisms to mitigate past harms or share resources more fairly. High-income countries continue to spend large amounts of money on border control and on domestic climate adaptation, while low-income or climate-vulnerable nations are left to adapt on their own, often with very limited external

[23] Mimi Sheller, 'Theorizing mobility justice in contexts of climate mobilities' in *Handbook on Forced Migration*, (Edward Elgar Publishing 2023)
[24] Petra Tschakert and others, 'One thousand ways to experience loss: A systematic analysis of climate-related intangible harm from around the world' (2019) 55 Global Environmental Change 58
[25] Black and Collyer, '"Trapped" populations: Limits on mobility at times of crisis'
[26] Bettini, Nash and Gioli, 'One step forward, two steps back? The fading contours of (in) justice in competing discourses on climate migration'
[27] Kyle Whyte, 'Too late for indigenous climate justice: Ecological and relational tipping points' (2020) 11 Wiley Interdisciplinary Reviews: Climate Change e603
[28] J Timmons Roberts and Bradley C Parks, 'Fueling injustice: globalization, ecologically unequal exchange and climate change' (2007) 4 Globalizations 193

help or funding.[29] As Nixon (2011) explains, this creates a form of "slow violence", a gradual and often invisible harm caused by environmental changes, affecting poorer and politically marginalized.[30]

3.2 Legal Gaps and Limited Protections

Although more people are being forced to move because of climate change, international legal frameworks have not evolved to address this growing problem or provide enough protection for those affected. The 1951 Refugee Convention, which is the cornerstone of refugee protection, describes refugees as those fleeing persecution based on race, religion, nationality, membership of a certain social group, or political beliefs. It excludes those displaced particularly due to environmental reasons (rising sea levels, droughts), or other climate-related factors.[31] As a result, many people affected by climate change are not recognized or supported under current refugee laws.

This gap in legal protection is not a mere oversight; it reflects deep-seated geopolitical power dynamics in how global migration is managed. Many countries are unwilling to change the definition of "refugee" to include climate-affected individuals, fearing legal obligations to offer support and admit more people arriving at their borders.[32] In wealthier countries, climate migration is often framed as a security problem rather than a humanitarian imperative, impacting rights-based solutions.

Some states have introduced limited and short-term protection, such as New Zealand's humanitarian visas for Pacific Island nationals.[33] However, these efforts are ad hoc, short-term, and discretionary, unable to offer long-term stability or legal status. In regions that are strongly affected by climate change and weak governance, such as sub-Saharan Africa and South Asia, protection remains weak or unavailable.

Moreover, most climate-displaced people stay within national borders, relying on domestic laws and support systems that may be under-resourced or political unwilling to provide adequate protection, assistance, or relocation support.[34] Simultaneously, migration policies of high-income nations are investing heavily in strict border control technologies such as border barriers, surveillance tools, and externalized migration management agreements, shifting responsibility to poorer countries.[35]

When climate-related migration is not formally recognised in legal and political systems, it leaves millions without access to justice, rights or safe migratory pathways. Addressing this situation requires moving beyond short-term, security-focused approaches toward legal frameworks that prioritise human rights, fairness, and international cooperation.

3.3 The Ethics of Global Responsibility

The failure to engage with the ethical dimensions of climate-related migration often results in uneven and selective concern. For example, Western media often show greater sympathy for victims of climate disasters in culturally familiar regions while presenting suffering in distant or less politically influential areas in abstract terms.[36] This influences public attitudes and political will, determining which populations receive support and which are overlooked. A fair response to climate-induced

[29] Baldwin, 'Premediation and white affect: climate change and migration in critical perspective'
[30] Rob Nixon, *Slow Violence and the Environmentalism of the Poor*, (Harvard University Press 2011)
[31] UNHCR, *Global Trends report 2023*, 2023)
[32] Jane McAdam, *Climate change, forced migration, and international law*, (Oxford University Press 2012)
[33] Bruce Burson and Richard Bedford, 'Clusters and Hubs: Toward a regional architecture for voluntary adaptive migration in the Pacific' (2013)
[34] IOM, *World Migration Report 2022*
[35] Todd Miller, *Storming the wall: Climate change, migration, and homeland security*, (City Lights Books 2017)
[36] Knut Lundby, *Mediatization: Concept, changes, consequences*, (Peter Lang 2009)

migration requires more balanced media narratives that ensure all affected communities are recognized and represented with equal respect and visibility.

The fundamental ethical question is: Whose lives are deemed worthy of protection, and whose lives are ignored as the climate crisis continues to escalate? Climate-related migration exposes not only the limits of international law, but also serious moral inequalities. Certain groups have the resources to stay safe, while others face high risks with little or no international assistance.[37] The idea of moral responsibility in how people are treated during climate migration calls for fairer and more human-centered approaches at both national and international levels.

Displaced individuals are often overlooked in political and media discussions, instead of being recognised as individuals seeking protection, rights, dignity and agency, they are framed as a danger to economic systems or national identity.[38] The underlying concerns highlighting this narrative involves economic competition, social cohesion, and cultural identity, emphasising on restrictive policies over fairness or responsibility.

Such framing reduces climate-related migration policy response to border controls and sidelining the need for cooperation, and structural reform. A fairer and human-focused response requires equal recognition of every climate-affected individual irrespective of their geopolitical or economic statuses.

A central policy challenge remains in describing climate-related global responsibility: What obligations do major producers of greenhouse gases have towards people who have to move because of environmental changes they caused disproportionately? How can international cooperation shift focus from control and restriction to care? These questions are not purely theoretical; they require immediate policy attention.

The neglect in global climate policy and attention is stark: high-profile disasters (e.g., hurricanes in the U.S.) receive increased media coverage and international support, whereas long-term environmental problems in regions such as the Horn of Africa (Somalia, Ethiopia, Eritrea, and Djibouti) which have been facing repeated droughts, food shortages, and environmental stress over several decades remains underfunded.[39] This reflects what Berlant (2014) described as *"compassion fatigue,"* where sustained crises begin to lose their urgency over time in general public perception.[40] Such patterns raise important questions about fairness and consistency in global climate responses.

Policy frameworks that prioritize fairness and shared responsibility must also integrate education, cultural exchange programs, and storytelling to humanize climate-related migration.[41] Lived experiences and community narratives are important for replacing distant or technocratic views of displacement, and encourage empathy and acknowledges the need for rights-based solutions.

4. REGIONS AT RISK: BANGLADESH, TUVALU AND THE SAHEL

4.1 Environmental Pressures

Bangladesh is consistently identified in scientific and policy reports as one of the most climate-vulnerable country in the world because of its low elevation, large coastal exposure, and high population density.[42] Rising sea levels, excessive monsoon flooding, and riverbank erosion is the reason millions have already been displaced. Tuvalu, a small island nation in the Pacific Ocean, going through an existential threat in the form of rising sea-levels, exacerbated by limited land elevations,

[37] Farbotko and Lazrus, 'The first climate refugees? Contesting global narratives of climate change in Tuvalu'

[38] Sheller, 'Theorizing mobility justice in contexts of climate mobilities'

[39] UNOCHA, *OCHA Annual Report 2022*, 2022)

[40] Lauren Berlant, *Compassion: The culture and politics of an emotion*, (Routledge 2014)

[41] Amitav Ghosh, *The great derangement: Climate change and the unthinkable*, (Penguin UK 2018)

[42] IPCC, *Climate Change 2022: Impacts, Adaptation, and Vulnerability*

it is on the verge of becoming uninhabitable, making it a strong case study of climate-driven migration that demonstrate the interplay between climate change, sovereignty, and statelessness. The Sahel, a semi-arid belt south of the Sahara Desert, is facing increasing droughts, soil degradation, and declining agricultural productivity, all of which contribute to food insecurity and people being forced to move. [43][44]

This map of climate-vulnerable regions (Figure 2) highlights coastal flooding in Bangladesh, gradual submersion risks in Tuvalu, and desertification in the Sahel, while environmental challenges differ, each area faces a significant risk of triggering large-scale displacement.[45][46]

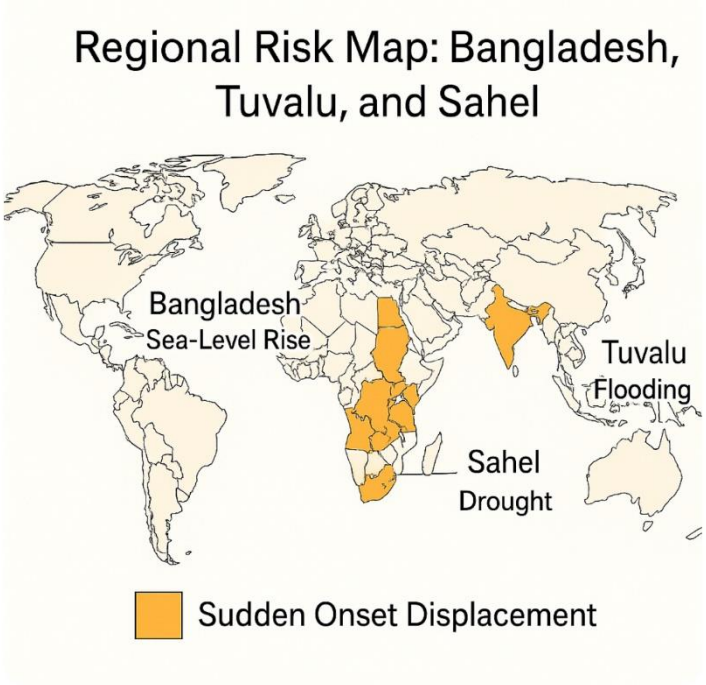

Figure 2. High-Risk Regions for Climate-Related Migration: Bangladesh, Tuvalu, and the Sahel

4.2 Local Responses and Challenges

Climate change affects not only *where* people live but *how* they live. Environmental stressors such as rising sea levels, extreme weather, and land degradation make it harder for some communities to maintain existing livelihood, forcing communities to relocate to safer places for better living conditions. These challenges are exemplified in the Global South such as Bangladesh, where riverbank erosion and saline intrusion force people to leave coastal areas such as Bhola and Khulna to urban centers like Dhaka. Mass arrival in urban regions results in overcrowded settlements where they are compelled to live in poor conditions with limited access to clean water, toilets, and stable employment.[47]

In the Pacific Islands, particularly Tuvalu and Kiribati, given that there is no safe land left in these regions, there is a growing trend of considering planned relocation abroad to be only effective solution. Bilateral migration agreements with nearby countries like Fiji are prime examples of the

[43] IOM, *World Migration Report 2022*
[44] UNHCR, *Global Trends report 2023*
[45] IOM, *World Migration Report 2022*
[46] Rigaud and others, 'Groundswell'
[47] Md Shamsuddoha and Rezaul Karim Chowdhury, 'Climate change impact and disaster vulnerabilities in the coastal areas of Bangladesh' (2007) COAST Trust, Dhaka 40

dire need to reevaluate sovereignty, citizenship, and borders in a time where climate-drive uninhabitability is inevitable.[48]

4.3 Case Comparisons

The selection of Bangladesh, Tuvalu, and the Sahel were not selected because of exclusivity. Other regions, such as the Caribbean, parts of South Asia, and the Arctic, also feel pressurized to experience climate-induced migration. However, they represent three different kinds of serious climate threats:

- Bangladesh: recurrent floods and storm surges (*rapid-onset water disasters*)
- Tuvalu: slow but irreversible sea-level rise (*slow-onset existential threat*)
- Sahel: prolonged drought and land degradation (*slow-onset aridification*)

Each case is supported by strong evidence from trusted international organisations. The IPCC (2022) report identifies these as highly vulnerable, low-adaptive-capacity regions.[49] The IOM (2021) report documents how climate risks are driving migration trends,[50] while UNHCR (2023) report also highlights these places as key examples of priority zones for climate-displacement monitoring in the coming years.[51]

Instead of recognising migration as a problem to stop, it should be emphasized as a symptom of systemic inequities. This framing can lead to long-lasting, caring, and effective solutions capable of mitigating underlying effects of both environmental risks and socio-economic hardships that intensify these challenges.

5. VOICES AND EXPERIENCES

5.1 Youth and Future Generations

Climate justice requires careful consideration of ethical responsibilities between generations. Young people in high-risk regions face overlapping challenges, including environmental harm, economic hardship, and limited political representation, yet, they are instrumental advocates of change, leading climate movements and grassroot adaptation efforts. Recognizing and supporting the active contributions of youth is essential to stop their portrayal of being passive victims rather ensuring fairness in both policy and practice across age groups.[52]

5.2 Gendered Impacts of Movements

Gender and age shape how climate-related migration is experienced. Women and girls may have limited mobility due to social expectations, caregiving responsibilities, or fear of violence during transit . Older adults, children, and those with physical or mental disabilities may encounter physical, financial, or logistical restrictions in relocating.

Women are specifically at the verge of variability within their experiences of climate-induced migration due to limited involvement in decision-making, a higher risk of violence, health vulnerabilities and restricted access to employment. It is recommended for migration policies to be inclusive of gender-sensitive protection measure such as safer shelters, access to healthcare services, legal and financial support mechanisms addressing gender-specific vulnerabilities, and active

[48] Karen E McNamara and Carol Farbotko, 'Resisting a ‘doomed’fate: An analysis of the Pacific Climate Warriors' (2017) 48 Australian Geographer 17

[49] IPCC, *Climate Change 2022: Impacts, Adaptation, and Vulnerability*

[50] IOM, *World Migration Report 2022*

[51] UNHCR, *Global Trends report 2023*

[52] Ann V Sanson and others, 'Young people and climate change: The role of developmental science' in *Developmental science and sustainable development goals for children and youth*, (Springer 2018)

inclusion of women's perspectives by enabling them the freedom to take on leadership roles, local consultations and participatory decision-making.[53]

Additionally, access to legal migration pathways is also not consistent. While some governments provide humanitarian visas or temporary protection for people affected by environmental disasters, most lack clear rules or systems for climate-affected populations. In high-income countries, migration policies focus more on controlling borders than offering support, further complicating inequality between those able to reach safety and those left without options.[54]

Conclusively, the ability to migrate is not only influenced by climate change but by power relations, socio-economic status, and political will. Understanding who migrates, how, and under what conditions is important for creating fair and inclusive policies. It is important to avoid using a single approach for all situations and instead develop responses that consider people's specific needs and challenges.

5.3 Role of Local and Traditional Knowledge

Fair and effective migration policies should integrate traditional and local knowledge systems, which have enabled these communities to adapt to these environmental changes through cooperation, long-term observation, and collective decision-making regarding sustainable resource management. The Sámi people of northern Scandinavia have adapted to shifting weather conditions through flexible reindeer herding routes, maintaining food security and cultural traditions.[55] The Māori of Aotearoa/New Zealand, practise *kaitiakitanga*, (guardianship), protecting ecosystems for future generations . While the Quechua communities in the Andes have developed sophisticated methods for managing mountain agriculture such as terracing and water storage systems that allow them to deal with drought and shifting rainfall patterns.[56]

Ignoring such systems in climate policy risks implementing maladaptive policies that do not respect local realities and may cause further harm.[57] Policy framework should support voluntary, cultural informed relocation when needed, while preserving and valuing traditional adaptation solutions.

A right-based approach to climate-related migration must reject the framing of migrants as helpless or powerless, but as active agents within these communities who shape their own futures, allowing them to engage in decision-making processes that honors their cultural backgrounds and values.[58] Fair climate migration policy is not only about changing laws and systems, but also about changing how people think, by focusing on care, empathy, and shared global responsibility.

As climate impacts intensify, the opportunity for proactive, equitable policy action is narrowing. Addressing climate-related migration is both a technical challenge and ethical responsibility. The international community faces a clear choice: respond with cooperation, fairness, compassion, or allow exclusion and fear to shape future of human mobility.

6. CITIES AND CLIMATE MIGRATION

6.1 Urban Planning and Preparedness

[53] UN Women, *UN Women Report*, 2021)
[54] Baldwin, 'Premediation and white affect: climate change and migration in critical perspective'
[55] Fikret Berkes, 'Implementing ecosystem-based management: Evolution or revolution?' (2012) 13 Fish and Fisheries 465
[56] Douglas Nakashima and others, 'Weathering uncertainty: traditional knowledge for climate change assessment and adaptation; 2012' (2012)
[57] Whyte, 'Too late for indigenous climate justice: Ecological and relational tipping points'
[58] Sheller, 'Theorizing mobility justice in contexts of climate mobilities'

Cities in high-income countries should prepare for the growing number of climate migrants by adopting inclusive, resilience-focused urban strategies. This includes affordable housing provisions, language assistance, and social programs that help newcomers adjust to their new environment.

Migration should not be always framed as a failure of climate adaptation, but a practical way for people to cope with environmental challenges.[59] When migration is supported properly, relocation can provide safety, economic opportunities, and long-term stability. However, this requires strong municipal planning to ensure access to housing, healthcare, schools, and infrastructure, enabling migrants to live with dignity and security.[60]

6.2 Best Practices from Global Cities

Cities like Toronto and Barcelona have already started to include migrants in their local climate action plans, showing how local governments can take initiatives even when national support is limited.[61] Expanding such models is crucial to ensure migrants from climate-affected regions feel included and avoid being treated unfairly in their new communities.

6.3 Involving Communities in Solution

Diaspora and migrant networks often play an active role in supporting climate-affected families and communities. Financial help, sharing practical knowledge, and raising awareness about the needs of affected communities may help speed up adaptation, reconstruction, and relocation planning. In some cases, migrant groups have assisted with relocating families, rebuilding schools and health centers, and gaining support from decision-makers in their host countries. Developing policies that recognize and strengthen these contributions can improve the ability of both home and host communities to respond to the impacts of climate change.[62]

7. LEGAL AND POLICY RESPONSES

7.1 Limits of Current Laws

Despite the constant increase in climate-induced migrants, international legal frameworks remain outdated. The 1951 Refugee Convention being a hallmark legal right for refugee protection does not acknowledge people who move because of environmental reasons in its definition.[63] As a result, million affected by climate change are not recognized or supported under formal refugee laws and protection systems

Gaps in legal protection are further intensified due to private-sector impact. Large multinational businesses, especially those involved in mining and oil, often cause serious harm to the environment ultimately forcing people to leave their homes. Yet corporate accountability remains scarce, warranting stronger legal actions assigning responsibility for climate-related harm.[64]

If legal reforms only focus on addressing the visible impacts without addressing the economic and structural drivers, policy obligations will always remain partial and reactive.

7.2 Rethinking Refugee Definitions

One important policy discussion is whether to revise the 1951 Refugee Convention to explicitly include climate-induced migrants, or if a new international agreement is required, often referred to as a

[59] IOM, *World Migration Report 2022*
[60] Adger and others, 'Human security'
[61] C40 Cities, *C40 releases 2021 Annual Report*, 2021)
[62] Oliver Bakewell, ''Keeping them in their place': The ambivalent relationship between development and migration in Africa' in *Globalisation and Migration*, (Routledge 2013)
[63] UNHCR, *UNHCR Global Trends 2011*, 2011)
[64] Peter D Buckland, Brandi J Robinson and Michael E Mann, 'Science alone will not save us. Civic engagement might' in *Teaching Climate Change in the United States*, (Routledge 2020)

Climate Displacement Protocol.[65] Supporters of a new agreement argue that it could outline clearer obligations and targeted financial support. Critics warn that creating a separate system for climate migrants might weaken protections, as governments might treat them differently from refugees covered under existing human rights law.[66] If a separate legal group is created without linking it to current refugee and human rights laws, it might provide short-term help rather than long-lasting safety, narrow applicability covering limited cases, such as natural disasters, but not slower changes like drought, and reduced state responsibility allowing countries to give less support, because this group may be classified as "climate migrants" and not be treated the same as others already protected by law.

To mitigate these challenges and provide a more practical and fair approach, scholars such as Jane McAdam (2012) recommend expanding current refugee system and human rights protections or developing regional agreements that integrate climate displacement into legal current legal frameworks . This approach would keep climate-related migrants within the same legal system used for other displaced groups; ensure they continue to receive the same rights and protections and promote a more equal and consistent way of supporting all people who are forced to move

7.3 Fair and Inclusive Strategies

As climate change continues to influence migration patterns, global policy must move beyond crisis management and adopt justice-based approach immersed in equality, shared responsibility, and human dignity. This ensures acknowledgement of the people most affected by climate change have done nothing to cause the problem.[67] This kind of approach calls for major changes in how movement across borders is managed and supported, with greater attention to long-term solutions and international cooperation. A well-balanced equitable system encompasses, climate mobility to be integrated within national adaptation approaches, instead of emergency relocations, earlier interventions and planned relocations should be prioritized. Furthermore, protection of rights should be ensured for all displaced communities, irrespective of the cause while also emphasizing on increased international cooperation to bear the expense and relocation efforts equitably.

8. BUILDING GLOBAL SUPPORT

8.1 Financial Contributions and Fair Sharing

Although awareness of global climate inequalities is increasing, international responses to climate-induced migration often remain insufficient. There is lack of addressing historical responsibility or share resources more fairly. High-income countries continue to spend heavily on border control and strengthening domestic infrastructure to protect against climate risks, while communities with fewer resources are expected to adapt on their own, often with minimal to no external support.[68]

As Nixon (2011) explains, this creates a form of "slow violence" which implies the gradual implication of harm which is cumulative and mostly invisible in policy discussions.[69] Effective global cooperation requires more equitable responsibility-sharing. Wealthier nations should provide financial and technical support for planned relocation, building infrastructure and promoting rehabilitation of livelihood regions facing increasing climate-related migration.[70] Strategies such as the Green Climate

[65] Roger Zetter, 'The politics of rights protection for environmentally displaced people' (2017) 43 Migration-Muuttoliike 5

[66] McAdam, *Climate change, forced migration, and international law*

[67] J Timmons Roberts and Bradley Parks, *A climate of injustice: Global inequality, north-south politics, and climate policy*, (MIT press 2006)

[68] Baldwin, 'Premediation and white affect: climate change and migration in critical perspective'

[69] Nixon, *Slow Violence and the Environmentalism of the Poor*

[70] Boas and others, 'Climate migration myths'

Fund could be more tactfully aligned with migration planning to ensure that adaptation funding directly supports the needs of displaced or at-risk communities.

8.2 Local, National, and International Roles

Policymakers, researchers, and communities need to develop long-term strategies that take these combined factors into account. Planning for climate mobility should be integrated into wider climate and development efforts, ensuring support for both migrant and host nations.[7172] International organisations such as the United Nations (UN), IMO, and the World Bank should work together more closely to support climate adaptation and planned migration in affected regions. This includes funding for early warning systems, cross-border cooperation on natural resources, and sustainable development projects that can reduce forced movement. National governments should also involve local authorities and affected communities in planning efforts and decision-making, as they often have the best understanding of local needs and conditions and also ensuring the policies are in alignment with grassroot realities.[7374]

8.3 Community Engagement and Inclusion

Fair and sustainable responses must also recognise the unequal distribution of global attention and empathy. Educational campaigns, cultural exchange programs, and storytelling reflecting real experiences of climate-affected communities can help change public perception about climate-related migration as a problem.[75] Integrating personal narratives and lived experiences is important for replacing distant or overly technical views with more human and relatable understandings of displacement to encourage rights-based solutions.

9. CONCLUSION

9.1 Summary of Key Messages

Understanding climate-related migration requires attention to both structural policy gaps and the lived experiences of affected communities. Measuring such movements remains difficult because migration related decisions are often shaped by a combination of environmental, economic, social, and political factors. Mitigating these compounded challenges warrants interdisciplinary research methods and inclusion of perspectives of impacted communities while collecting data and designing policy.[76]

Climate-related migration is not an isolated humanitarian concern but a global responsibility. It requires stronger international efforts that promotes shared obligations and ensure that people affected by climate change are not left without support or recognition.[77] The central question is no longer whether migration linked to climate change will happen, but how societies respond and plan for it.

Effective strategies should involve proactive policy planning prioritizing mobility, inclusion, and shared responsibility in a world increasingly shaped by environmental stress. A meaningful response

[71] Adger and others, 'Human security'
[72] IOM, *World Migration Report 2022*
[73] Adger and others, 'Human security'
[74] IOM, *World Migration Report 2022*
[75] Ghosh, *The great derangement: Climate change and the unthinkable*
[76] Bettini, Nash and Gioli, 'One step forward, two steps back? The fading contours of (in) justice in competing discourses on climate migration'
[77] Roberts and Parks, *A climate of injustice: Global inequality, north-south politics, and climate policy*

requires both recognition of the climate crisis and changes to the systems that contribute to inequality and forced movement.[7879]

is not only a result of environmental changes but also reflects deeper political and ethical imbalances. Key priorities include enhancing legal protection, incorporating mobility into national climate planning, and supporting safe and organised movement. As the effects of climate change become more intense, migration will increase. The way governments respond, either with restrictive measures or with cooperation and care, will shape the future of global justice and human mobility.[80]

Climate-related migration is both a symptom and a driver of global inequality, revealing long-standing disparities in political power, resource access and legal protection. Current legal instruments remain limited, and many national responses focus more on controlling borders than offering humanitarian protection.[8182] People affected by climate pressures must be recognised as rights holders rather than framed as threat to national stability.[8384]

9.2 Recommendations for Action

Delays in institutional response increase displacement risks and reduce the range of safe, voluntary migrations options. For these reasons, early and coordinated efforts are essential. Ensuring the safety of vulnerable population in time before the crises exacerbate, they also underscored reducing economic and social expenses by implementing planned relocation approaches in high-risk regions, and finally, acknowledging the equitable treatment of low-emitting regions.

9.3 Ethical Pathways Forward

Future policy reflects ethical as well as technical considerations. Governments must decide whether to respond by closing borders or by supporting human dignity and cooperation, with rights-based frameworks. A meaningful response to climate-linked migration depends not only on scientific understanding but also on ethical commitment. The goal is not just to control population movements but to create a world where movement is safe and supported and where climate-related impacts are shared more fairly. With this vision, climate justice can move beyond discussion and be realised in practice.[858687]

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[78] IOM, *World Migration Report 2022*
[79] Roberts and Parks, *A climate of injustice: Global inequality, north-south politics, and climate policy*
[8080] Baldwin, 'Premediation and white affect: climate change and migration in critical perspective'Farbotko and Lazrus, 'The first climate refugees? Contesting global narratives of climate change in Tuvalu'
[81] McAdam, *Climate change, forced migration, and international law*
[82] Sheller, 'Theorizing mobility justice in contexts of climate mobilities'
[83] Bettini, Nash and Gioli, 'One step forward, two steps back? The fading contours of (in) justice in competing discourses on climate migration'
[84] IOM, *World Migration Report 2022*
[85] McAdam, *Climate change, forced migration, and international law*
[86] Roberts and Parks, *A climate of injustice: Global inequality, north-south politics, and climate policy*
[87] Sheller, 'Theorizing mobility justice in contexts of climate mobilities'