

# The Human Rights of Migrants and Refugees in The Context of Climate-Induced Displacement.

**Novera Bhatti**

Master of Law (LLM), DePaul University College of Law, Chicago IL, USA.

## ARTICLE INFO

**\*Correspondence:**

novera.bhatti1998@gmail.com

Master of Law (LLM),  
DePaul University  
College of Law, Chicago  
IL, USA.

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## Abstract

Climate change has emerged as a significant driver of human mobility, contributing to the displacement of millions of people across the globe. Environmental stressors such as sea-level rise, desertification, extreme weather events, and resource scarcity increasingly undermine livelihoods and compel communities to migrate. Despite the growing scale of climate-induced displacement, existing international legal frameworks offer limited protection to those forced to move for environmental reasons. The absence of formal recognition for "climate refugees" under the 1951 Refugee Convention leaves many displaced persons without adequate legal safeguards or institutional support. This study examines the human rights implications of climate-induced displacement and evaluates the extent to which international law and policy frameworks address the protection needs of migrants and refugees affected by climate change. Drawing on a human rights-based analytical approach, the study highlights the vulnerabilities experienced by displaced populations, including threats to the rights to life, housing, water, health, and livelihood. It further explores emerging legal and policy responses aimed at addressing protection gaps within existing governance structures. The paper argues that integrating human rights principles into climate migration governance is essential for ensuring justice, dignity, and protection for affected populations, while also strengthening international cooperation in responding to one of the most pressing humanitarian challenges of the contemporary era (Atapattu, 2020; Aleinikoff, 2024; Askland et al., 2022).

## INTRODUCTION

Climate change has increasingly emerged as one of the most significant drivers of human mobility in the contemporary global system. Rising global temperatures, sea-level rise, desertification, flooding, and extreme weather events are progressively altering environmental conditions and threatening the livelihoods of vulnerable communities. These environmental pressures have forced millions of individuals and households to migrate either temporarily or permanently in search of safer living conditions and sustainable livelihoods. As environmental degradation intensifies, the phenomenon of climate-induced displacement has gained growing attention within academic, legal, and policy discussions concerning migration, human rights, and global justice (Jayawardhan, 2017; Askland et al., 2022).

Climate-induced displacement refers to situations in which individuals or communities are compelled to relocate due to environmental changes associated with climate variability and long-term climatic shifts. These displacements may occur suddenly as a result of natural disasters such as hurricanes, floods, and wildfires, or gradually through processes such as desertification, coastal erosion, and declining agricultural productivity. Although migration has historically been influenced by environmental factors, the scale and frequency of climate-related displacement are expected to increase significantly as climate impacts intensify worldwide (Kälin, 2010; Bose & Lunstrum, 2012).

Despite the growing number of people affected by climate-related displacement, international legal frameworks have struggled to adequately address their protection needs. The existing international refugee regime, particularly the 1951 Refugee Convention and its 1967 Protocol, does not explicitly recognize environmental or climate-related factors as grounds for refugee status. Consequently, individuals displaced by climate-related events often fall outside the formal scope of international refugee protection, leaving them in a precarious legal and humanitarian position (Praveen, 2022; Jägers, 2022). This legal gap raises important questions regarding the responsibility of states and the international community in safeguarding the rights of displaced populations.

From a human rights perspective, climate-induced displacement presents profound challenges for the protection of fundamental rights. Displaced individuals frequently face violations of basic rights, including the rights to life, adequate housing, water, health, food, and livelihood. Moreover, displacement often exacerbates existing social inequalities and disproportionately affects marginalized groups such as women, children, indigenous populations, and low-income communities (Naser & Afroz, 2009; Guedes et al., 2024). In many cases, displaced populations encounter additional barriers related to legal recognition, access to services, and protection from exploitation or discrimination.

Scholars and policymakers have increasingly emphasized the importance of adopting a human rights-based approach to climate-induced migration.

Such an approach recognizes displaced persons as rights-holders and places obligations on states and international institutions to ensure their protection and dignity. Human rights frameworks provide normative guidance for addressing protection gaps, promoting equitable adaptation strategies, and ensuring that climate policies incorporate social justice considerations (Atapattu, 2020; Scott & Salamanca, 2020). In this context, the integration of climate governance, migration policy, and international human rights law has become an essential area of scholarly and policy debate.

This study examines the human rights implications of climate-induced displacement and explores the legal and policy frameworks that shape the protection of migrants and refugees affected by climate change. Specifically, the paper aims to analyze the conceptual foundations of climate migration, assess the limitations of existing international legal instruments, and evaluate emerging approaches that seek to strengthen protection mechanisms for displaced populations. By adopting a multidisciplinary perspective that incorporates insights from international law, human rights scholarship, and environmental governance, the study contributes to ongoing discussions on how the international community can effectively respond to the complex challenges posed by climate-related human mobility.

Ultimately, addressing climate-induced displacement requires coordinated global action, stronger legal recognition of climate migrants, and policy frameworks that prioritize human rights, climate justice, and sustainable development. As climate change continues to reshape patterns of migration across regions, the protection of displaced populations must become a central component of international climate governance and humanitarian response strategies (Toscano, 2015; Chotouras et al., 2024).

## **CONCEPTUAL AND THEORETICAL FRAMEWORK**

Climate-induced displacement is increasingly recognized as a critical global issue, linking environmental change to human mobility.

Environmental hazards, ranging from extreme weather events to slow-onset processes like desertification and sea-level rise, disrupt livelihoods and compel migration (Jayawardhan, 2017). Traditional refugee law does not adequately protect these populations, creating a gap that human rights frameworks aim to fill (Kälin, 2010; Praveen, 2022). This section examines the conceptual definitions, typologies, and theoretical approaches that underpin research on climate-induced displacement.

## Conceptualizing Climate-Induced Displacement

Climate-induced displacement refers to movement caused by environmental changes affecting safety and livelihoods. Migration decisions are shaped by complex interactions between environmental, social, and economic factors (Askland et al., 2022). Key distinctions include internal vs. cross-border displacement and sudden-onset vs. slow-onset events, highlighting the need for flexible legal and policy responses (Scott & Salamanca, 2020; Manou & Mihr, 2017).

## Typologies of Climate-Related Migration

### *Climate-induced migration can be categorized as*

- Sudden-onset disaster displacement – immediate evacuation due to floods, storms, or wildfires (Bose & Lunstrum, 2012).
- Slow-onset environmental migration – gradual relocation in response to drought, desertification, or soil degradation (Biswas & Chowdhury, 2012).
- Planned relocation – government-led

resettlement from high-risk zones, raising concerns about consent and participation (Manou & Mihr, 2017).

- Cross-border climate migration – migration to another country due to environmental pressures, not covered by traditional refugee law (Praveen, 2022).

## Climate Change as a Structural Driver

Climate change acts as a threat multiplier, intensifying environmental, social, and economic vulnerabilities (Askland et al., 2022). Regions like Bangladesh and Central America illustrate how sea-level rise, floods, and declining agricultural productivity force migration (Naser, 2013; Velez-Echeverri & Bustos, 2023). Recognizing climate as a structural driver allows policymakers to design interventions that address both environmental and socio-economic factors.

## Human Rights-Based Approaches

A human rights-based approach emphasizes that displaced populations retain fundamental rights, including life, health, housing, water, and livelihood (Naser & Afroz, 2009). Principles such as participation, accountability, and non-discrimination are critical in relocation and adaptation policies (Scott & Salamanca, 2020). This framework helps mitigate gaps left by conventional refugee law (Jägers, 2022).

## Climate Justice and Ethical Perspectives

Climate justice highlights the unequal distribution of climate impacts, particularly affecting low-emission,

**Table 1:** Typologies and Characteristics of Climate-Induced Displacement

<i>Type of Displacement</i>	<i>Key Drivers</i>	<i>Migration Characteristics</i>	<i>Human Rights Implications</i>
Sudden-Onset Disaster	Floods, hurricanes	Immediate, often temporary	Shelter, humanitarian assistance
Slow-Onset Migration	Drought, land degradation	Gradual, livelihood-focused	Right to livelihood, development
Planned Relocation	Sea-level rise, hazard zones	Government-led	Participation, compensation, land rights
Cross-Border Migration	Environmental degradation	International movement	Legal protection gaps

high-vulnerability communities (Draper, 2020). Ethical approaches stress international responsibility and the need for equity-focused policies, ensuring displaced populations receive protection, support, and inclusion (Chotouras et al., 2024).

In summary, Climate-induced displacement arises from the interaction of environmental hazards and socioeconomic vulnerabilities. Traditional refugee law does not fully cover these populations, making human rights frameworks and climate justice principles essential. Understanding the conceptual definitions, typologies, and theoretical perspectives provides a foundation for designing effective legal, ethical, and policy responses to protect displaced populations.

## CLIMATE CHANGE AS A DRIVER OF MIGRATION AND DISPLACEMENT

Climate change has increasingly emerged as a critical driver of human migration and displacement, affecting millions of people globally. Environmental changes both sudden and gradual alter livelihoods, undermine social stability, and exacerbate vulnerabilities among populations in climate-sensitive regions. Migration driven by climate-related factors is not only a humanitarian concern but also a pressing human rights issue, as it intersects with legal protection gaps, socio-economic inequalities, and state responsibilities (Biswas & Chowdhury, 2012; Jayawardhan, 2017).

The complex interplay between environmental hazards and socio-economic vulnerabilities

highlights the multidimensional nature of climate-induced displacement. Displacement can occur due to acute environmental shocks, such as floods and cyclones, or slow-onset processes, including drought, desertification, and sea-level rise (Bose & Lunstrum, 2012; Kälin, 2010). Understanding the mechanisms through which climate change drives migration is essential for policy development, legal reform, and human rights protection.

## Environmental Drivers of Migration

Environmental factors constitute the primary triggers for climate-induced migration. Sudden-onset events such as hurricanes, typhoons, floods, and wildfires force communities to relocate immediately to avoid life-threatening risks. Conversely, slow-onset events, including desertification, declining soil fertility, glacial retreat, and rising sea levels, gradually undermine livelihoods and induce migration over longer periods (Atapattu, 2020; Naser, 2013).

***The environmental drivers can be categorized as follows***

- ***Hydrological hazards***

Flooding, cyclones, and storm surges disrupt communities and displace populations internally and across borders (Tahir & Tahir, 2024).

- ***Meteorological hazards***

Prolonged droughts, heatwaves, and erratic rainfall patterns adversely affect agricultural production and food security (Jayawardhan, 2017).

**Table 2:** Major Socio-Economic Drivers of Climate-Induced Migration

<i>Driver</i>	<i>Description</i>	<i>Impact on Migration</i>	<i>Example Region</i>
Agricultural Collapse	Reduced crop yields, soil degradation	Seasonal or permanent migration	Bangladesh, Sub-Saharan Africa
Water Scarcity	Drought, groundwater depletion	Rural-to-urban migration	Sahel region, India
Livelihood Loss	Fisheries, pastoralism decline	Cross-border migration	Central America, Colombia
Extreme Weather Events	Floods, storms, cyclones	Immediate evacuation & displacement	Caribbean, Southeast Asia
Sea-Level Rise	Coastal inundation, salinization	Permanent relocation	Small Island Developing States

Source: Compiled from Biswas & Chowdhury (2012), Jayawardhan (2017), Velez-Echeverri & Bustos (2023), Guedes et al. (2024).

- **Sea-level rise**

Small island developing states (SIDS) and coastal communities are at risk of permanent relocation due to inundation and salinization of freshwater sources (Velez-Echeverri & Bustos, 2023).

- **Environmental degradation**

Soil erosion, deforestation, and desertification reduce livelihoods and push populations to migrate (Biswas & Chowdhury, 2012).

These environmental drivers are often interconnected with socio-economic vulnerabilities, amplifying displacement risks for marginalized communities.

## **Socio-Economic Vulnerabilities and Migration Pressures**

The impact of climate-induced hazards is not uniform; marginalized populations experience disproportionate exposure due to poverty, lack of social safety nets, and limited access to resources. Agricultural communities, coastal populations, and informal urban settlements are particularly vulnerable to climate shocks (Bose & Lunstrum, 2012; Guedes et al., 2024).

### **Socio-economic stressors intersect with environmental risks in the following ways**

- **Livelihood disruption**

Climate impacts affect crop yields, fisheries, and livestock production, creating economic pressures that push households to migrate (Biswas & Chowdhury, 2012).

- **Food insecurity**

Reduced access to food exacerbates malnutrition and vulnerability among displaced populations (Naser & Afroz, 2009).

- **Health risks**

Environmental changes increase the prevalence of waterborne diseases, heat stress, and respiratory illnesses, further motivating relocation (Scott & Salamanca, 2020).

- **Gendered vulnerabilities**

Women and children often bear the brunt of

displacement due to social and cultural constraints (Jayawardhan, 2017).

## **Regional Patterns of Climate Displacement**

Climate-induced displacement is highly localized, yet global in scale. Certain regions demonstrate recurring patterns of migration due to climate pressures:

### **South Asia (Bangladesh, India)**

High population density, low-lying coasts, and monsoon dependence result in extensive seasonal and permanent migration (Biswas & Chowdhury, 2012; Naser, 2013).

### **Central America and Colombia**

Hurricanes, drought, and environmental degradation trigger internal displacement and cross-border migration (Velez-Echeverri & Bustos, 2023).

### **Small Island Developing States**

Rising sea levels threaten entire populations with permanent relocation (Guedes et al., 2024).

### **Sub-Saharan Africa**

Desertification and water scarcity force rural-urban migration and regional movements (Bose & Lunstrum, 2012).

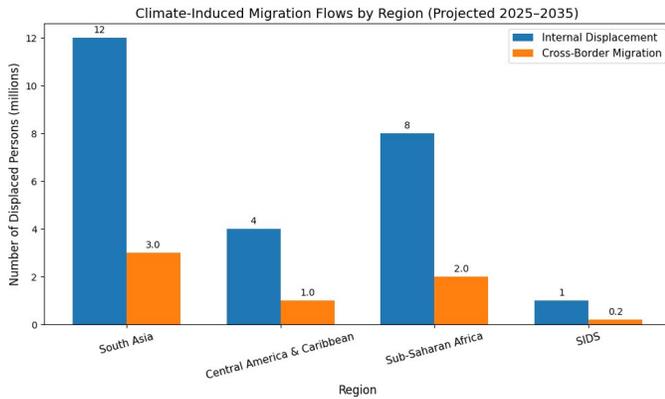
## **Interplay Between Environmental and Socio-Political Drivers**

Climate change rarely acts as the sole driver of migration. Environmental hazards interact with political, economic, and social factors to create complex displacement dynamics. Weak governance, conflict, and land tenure disputes amplify vulnerabilities, leaving populations with few options but to migrate (Askland et al., 2022; Toscano, 2015).

Migration may thus be seen as a coping strategy for climate-affected populations, where mobility becomes a mechanism for survival in the face of systemic vulnerabilities (Poddar, 2024).

## **Human Rights Implications of Climate-Driven Migration**

Climate-induced migration is inherently linked to



**Figure 1:** Climate-Induced Migration Flows by Region (Projected 2025–2035)

human rights concerns. Displaced populations face challenges including:

- Access to adequate shelter, food, and clean water (Guedes et al., 2024).
- Protection from exploitation, trafficking, and human rights violations (Atapattu, 2020).
- Recognition under international law, particularly for cross-border migrants and “climate refugees” (Aleinikoff, 2024; Praveen, 2022).

Failure to address these rights can exacerbate vulnerabilities and entrench cycles of displacement, poverty, and marginalization.

In sum, Climate change is a multidimensional driver of migration, shaped by environmental hazards, socio-economic vulnerabilities, and regional inequalities. Sudden-onset disasters and slow-onset processes jointly influence migration patterns, while marginalized communities bear the greatest burden. Understanding these drivers is crucial for developing human rights-based policies, legal protections, and adaptation strategies that mitigate displacement risks and uphold the dignity of climate-affected populations.

## HUMAN RIGHTS IMPLICATIONS OF CLIMATE-INDUCED DISPLACEMENT

Climate-induced displacement presents a profound challenge to the protection and realization of human rights for affected populations. As climate change exacerbates extreme weather events, sea-level rise,

and resource scarcity, individuals and communities are increasingly forced to relocate, often under conditions that compromise their fundamental rights. Displacement impacts a range of human rights, including the right to life, health, adequate housing, water, sanitation, and livelihood security. Vulnerable groups such as women, children, indigenous peoples, and those living in poverty face disproportionate risks, highlighting the intersection of climate justice and human rights protection (Naser & Afroz, 2009; Atapattu, 2020).

This section examines the human rights implications of climate-induced displacement in a structured manner, highlighting key areas of concern and discussing empirical evidence and legal frameworks relevant to the protection of displaced populations.

### Right to Life and Personal Security

The right to life and personal security is among the most fundamental human rights affected by climate-induced displacement. Sudden-onset disasters such as floods, hurricanes, and cyclones directly threaten lives, while slow-onset events like desertification and rising sea levels gradually undermine living conditions, creating risks of mortality and injury (Jayawardhan, 2017; Biswas & Chowdhury, 2012).

Displaced populations are often exposed to unsafe transit conditions, violence, and exploitation. In addition, the lack of early warning systems and inadequate disaster response mechanisms in vulnerable regions exacerbates mortality risks. According to Bose & Lunstrum (2012), displacement due to environmental factors is frequently compounded by pre-existing socioeconomic vulnerabilities, increasing the likelihood of human rights violations.

### Rights to Housing, Water, and Sanitation

Displacement often leads to inadequate shelter, overcrowded living conditions, and limited access to water and sanitation facilities. The inability to access safe housing undermines human dignity and violates international human rights standards, including the right to adequate housing as outlined

**Table 3:** Mortality and Injury Risks Associated with Climate-Induced Displacement

Disaster Type	Region	Estimated Mortality	Displacement Magnitude	Primary Rights Affected
Cyclones	Bangladesh	1,500	1,200,000	Life, Security
Floods	Central America	800	500,000	Life, Security
Drought	Sub-Saharan Africa	2,300	900,000	Life, Health, Livelihood

in the International Covenant on Economic, Social, and Cultural Rights (Guedes et al., 2024).

Access to clean water and sanitation is particularly critical. In many climate-affected regions, displaced populations are forced to settle in temporary camps or informal settlements lacking sufficient infrastructure. This scenario increases susceptibility to communicable diseases, malnutrition, and mental health issues (Scott & Salamanca, 2020; Chotouras et al., 2024).

### Right to Livelihood and Economic Security

Climate-induced displacement disrupts livelihoods, particularly for communities dependent on agriculture, fisheries, or other climate-sensitive economic activities. Forced relocation can sever access to land, employment, and social networks, undermining the right to work and economic security (Nucera, 2023; Poddar, 2024).

Displaced individuals often face barriers to formal employment in urban or host areas, which can lead to informal labor, exploitation, and persistent

poverty. The interplay between environmental stress and economic vulnerability reinforces systemic human rights challenges for displaced populations (Manou & Mihr, 2017).

### Rights of Vulnerable Groups

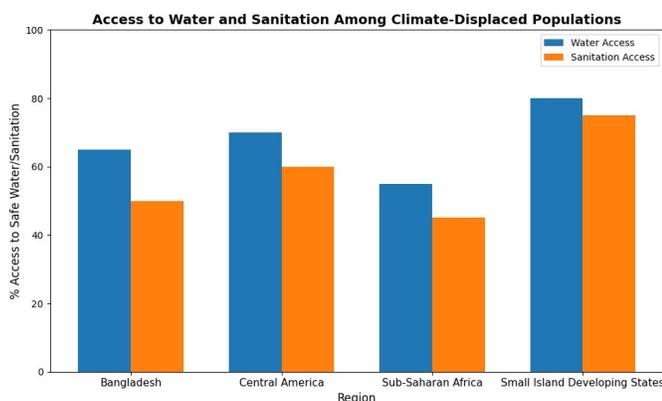
Certain groups are disproportionately affected by climate displacement. Women often face increased risks of gender-based violence, exploitation, and limited access to health services during migration and in temporary settlements. Children and the elderly face heightened exposure to health risks and disruptions to education and social care systems (Jayawardhan, 2017; Shamsuddoha & Chowdhury, 2009). Indigenous populations may lose cultural ties to ancestral lands, threatening cultural survival and identity (Velez-Echeverri & Bustos, 2023).

Protecting these groups requires targeted policies that integrate human rights principles into disaster risk reduction, emergency response, and long-term relocation planning (Aleinikoff, 2024; Atapattu, 2020).

### Health and Psychological Impacts

Climate-induced displacement significantly affects physical and mental health. Overcrowded shelters, poor nutrition, and inadequate healthcare infrastructure exacerbate risks of disease outbreaks and malnutrition. Additionally, displacement is associated with high levels of psychological stress, trauma, and anxiety (Praveen, 2022; Draper, 2020).

A human rights framework emphasizes the obligation of states and the international community to ensure access to health care and psychosocial support for displaced populations. Ensuring mental health services and preventive healthcare is critical to upholding the right to health under international law (Naser, 2013; Lyster & Burkett, 2018).



**Figure 2:** Access to Water and Sanitation Among Climate-Displaced Populations (%)

**Table 4:** Economic Impacts of Climate-Induced Displacement

Region	Primary Livelihood	Displacement Impact	Employment Disruption	Food Security Risk
Bangladesh	Agriculture	Land loss	High	High
Central America	Small-scale Farming	Crop loss	Moderate	High
Sub-Saharan Africa	Pastoralism	Water scarcity	High	Very High

## Access to Justice and Legal Protection

Displaced populations often face legal barriers to claiming rights and accessing justice. In many contexts, climate-displaced persons lack formal recognition as refugees or migrants under international law, leaving them vulnerable to exploitation, statelessness, and social marginalization (Kälin, 2010; Praveen, 2022).

Human rights-based approaches advocate for strengthened legal frameworks to ensure access to documentation, protection from arbitrary detention, and the right to seek asylum or humanitarian assistance (Tahir & Tahir, 2024; Chotouras et al., 2024). States and international institutions are called upon to expand protective measures for climate-displaced populations.

In conclusion, Climate-induced displacement affects nearly all dimensions of human rights, encompassing the right to life, housing, water, sanitation, livelihood, health, and legal protection. Vulnerable populations including women, children, indigenous peoples, and the economically marginalized are disproportionately impacted. Addressing these challenges requires a human rights-based approach that integrates

emergency response, adaptation measures, livelihood protection, healthcare provision, and legal recognition for displaced populations.

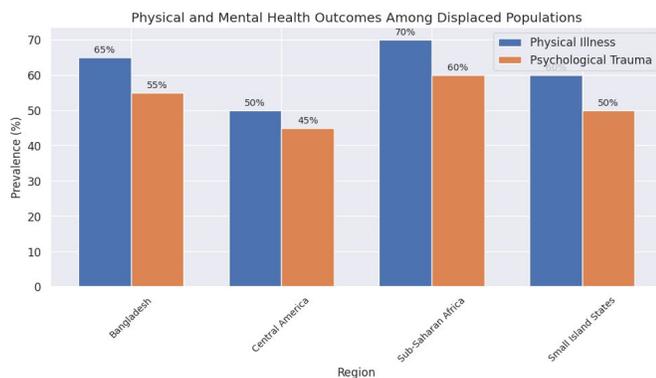
Effective protection of human rights in the context of climate-induced displacement demands international cooperation, national policy reform, and targeted interventions to mitigate risks and uphold the dignity and well-being of displaced persons (Atapattu, 2020; Guedes et al., 2024; Scott & Salamanca, 2020).

## INTERNATIONAL LEGAL FRAMEWORKS AND PROTECTION GAPS

Climate-induced displacement presents a profound challenge to the international legal system. While environmental degradation and climate change increasingly drive human mobility, existing international legal frameworks remain fragmented, insufficiently responsive, and often fail to recognize the unique vulnerabilities of climate-displaced persons. This section critically examines the legal instruments, identifies protection gaps, and highlights emerging approaches that aim to safeguard the rights of climate migrants and refugees.

### Limitations of the 1951 Refugee Convention

The 1951 Convention Relating to the Status of Refugees and its 1967 Protocol constitute the cornerstone of international refugee protection. However, the Convention’s definition of a refugee is narrowly focused on persons fleeing persecution based on race, religion, nationality, membership of a particular social group, or political opinion. Climate change-induced displacement does not neatly fit these categories, leaving climate migrants outside formal recognition (Praveen, 2022; Naser, 2013).



**Figure 3:** Physical and Mental Health Outcomes Among Displaced Populations

Several scholars have argued that this legal gap contributes to the “protection vacuum,” leaving millions of people, particularly from low-lying coastal areas and Small Island Developing States (SIDS), without international safeguards (Tahir & Tahir, 2024; Biswas & Chowdhury, 2012). Furthermore, temporary protective measures at the national level often lack binding international enforcement, making the legal protection of climate migrants inconsistent and fragmented (Jayawardhan, 2017).

## International Human Rights Law

Unlike refugee law, international human rights law provides a broader foundation for the protection of climate-displaced persons. Instruments such as the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR) offer rights to life, housing, water, sanitation, health, and adequate living standards (Atapattu, 2020; Scott & Salamanca, 2020).

However, while these instruments offer normative guidance, they lack specific provisions for cross-border climate displacement, limiting their practical applicability. Human rights law relies heavily on state enforcement mechanisms, which are often constrained by capacity, political will, and domestic legal limitations (Aleinikoff, 2024). Consequently, there is a persistent gap between the normative ideals of human rights and their operationalization in the context of climate-induced migration.

## Regional Legal Instruments and Soft Law Mechanisms

Regional human rights frameworks have emerged to address some gaps in international protection. For example, the Kampala Convention for the Protection and Assistance of Internally Displaced Persons in Africa recognizes displacement due to natural disasters and environmental degradation (Nucera, 2023). Similarly, the Inter-American human rights system increasingly interprets climate displacement through the lens of the right to life and the right to a healthy environment (Velez-Echeverri & Bustos, 2023).

Soft law instruments, including UN Guiding Principles on Internal Displacement and the

Platform on Disaster Displacement, provide additional normative guidance, though they are non-binding (Lyster & Burkett, 2018; Chotouras et al., 2024). These mechanisms highlight emerging consensus but underscore the need for enforceable international standards.

## Protection Gaps in Practice

***Despite normative and regional frameworks, significant protection gaps remain***

- Recognition Gap – Climate-displaced persons are often excluded from legal definitions of “refugees” or “asylum seekers” (Kälin, 2010).
- Enforcement Gap – Even when rights exist under human rights law, enforcement mechanisms are weak or underutilized (Draper, 2020).
- Cross-Border Gap – International law inadequately addresses transboundary displacement caused by slow-onset climate events such as desertification or sea-level rise (Toscano, 2015).
- Resource and Resettlement Gap – Limited funding and capacity for resettlement programs create practical barriers to protection (Manou & Mihr, 2017).
- Vulnerable Groups Gap – Women, children, and indigenous populations disproportionately face exposure to climate risks and are often underserved by existing protection frameworks (Guedes et al., 2024).

The table below summarizes major international and regional legal instruments, their relevance to climate-induced displacement, and existing gaps.

## Emerging Legal Approaches and Recommendations

***Emerging legal approaches aim to bridge existing gaps***

- Expanding the Refugee Definition – Scholars and policymakers suggest developing a supplementary protocol recognizing climate-displaced persons under refugee law (Praveen, 2022; Shamsuddoha & Chowdhury, 2009).
- Human Rights-Based Migration Governance – Integrating human rights principles into national

**Table 5:** Comparative Overview of Legal Frameworks and Climate-Induced Displacement

<i>Legal Instrument</i>	<i>Scope</i>	<i>Relevance to Climate Displacement</i>	<i>Strengths</i>	<i>Gaps/Limitations</i>
1951 Refugee Convention & 1967 Protocol	Defines refugees based on persecution	Limited; does not recognize climate drivers	Strong international recognition; procedural framework for asylum	Excludes climate migrants; state-dependent enforcement
ICCPR & ICESCR	Protects fundamental rights	Offers rights to life, housing, health, and standard of living	Universal applicability; normative protection	Lacks specificity for cross-border displacement; enforcement depends on states
Kampala Convention (Africa)	Protection of IDPs	Recognizes displacement due to natural disasters	Binding regional instrument; includes environmental factors	Limited to Africa; cross-border gaps remain
UN Guiding Principles on Internal Displacement	Non-binding guidance for IDPs	Provides framework for disaster-induced displacement	Normative clarity; widely cited	Non-binding; limited enforcement; no cross-border coverage
Platform on Disaster Displacement	Global coordination mechanism	Supports policy guidance and advocacy	Promotes international cooperation	Non-binding; implementation varies by state
Inter-American Court of Human Rights	Regional human rights jurisprudence	Right to life and healthy environment applied to climate impacts	Binding decisions in member states; progressive interpretation	Limited scope; few cases on climate displacement
Global Compact for Migration	International migration governance	Recognizes environmental drivers	Soft law framework; encourages cooperation	Non-binding; implementation varies by country

migration policies ensures the protection of dignity, safety, and basic services for displaced populations (Atapattu, 2020).

- Climate Justice and Responsibility Sharing – International cooperation is needed to ensure equitable resettlement, financial support, and capacity-building for vulnerable states (Draper, 2020; Aleinikoff, 2024).
- Regional and Multilateral Agreements – Strengthening regional instruments, such as the Kampala Convention, and establishing multilateral treaties for cross-border climate migration, can provide more systematic protections (Velez-Echeverri & Bustos, 2023).
- Legal Recognition of Planned Relocation and Adaptation Measures – Policies must embed

legal recognition for planned relocation, early warning systems, and adaptive infrastructure to mitigate displacement risks (Nucera, 2023; Lyster & Burkett, 2018).

In sum, Current international and regional legal frameworks provide partial protection for climate-displaced persons, yet critical gaps remain. The 1951 Refugee Convention, while foundational, excludes climate migrants, and human rights instruments, though normative, rely on state enforcement. Regional instruments and soft law offer promising models but are limited in coverage and enforceability. Moving forward, there is a pressing need for a comprehensive, rights-based, and globally coordinated legal framework to ensure climate-displaced populations are recognized,



protected, and supported. Emphasizing human rights principles, climate justice, and international cooperation will be essential for closing protection gaps and ensuring durable solutions for climate-induced displacement.

## **POLICY AND GOVERNANCE RESPONSES**

Climate-induced displacement presents complex challenges for policymakers and international governance structures. While climate change increasingly drives human mobility, legal and institutional frameworks have struggled to keep pace, resulting in protection gaps for affected populations (Aleinikoff, 2024; Atapattu, 2020). Addressing these challenges requires an integrated approach that combines adaptation strategies, migration governance, and human rights-based policies. This section explores the multi-dimensional policy and governance responses to climate-induced displacement, highlighting emerging practices, challenges, and potential solutions.

### **Adaptation and Resilience Strategies**

Climate adaptation is a critical policy tool to reduce displacement risks and enhance the resilience of vulnerable communities. Governments and international organizations are increasingly focusing on disaster risk reduction (DRR), early warning systems, and climate-resilient infrastructure to mitigate displacement pressures (Nucera, 2023). Adaptation policies may include:

- Investment in flood defenses, sea walls, and drought-resistant agriculture.
- Strengthening community-based disaster preparedness programs.
- Incorporating climate change projections into urban planning and land-use policy.

By reducing the immediate impact of climate hazards, adaptation strategies can help populations remain in situ, preventing forced migration whenever possible (Scott & Salamanca, 2020; Guedes et al., 2024).

### **Migration Governance and International Cooperation**

Effective management of climate-induced migration requires coordinated governance at national, regional, and international levels. Migration policies must account for both internal and cross-border displacement, ensuring that affected populations maintain access to protection, services, and livelihoods (Manou & Mihr, 2017; Jayawardhan, 2017). Key governance strategies include:

- Bilateral and multilateral agreements facilitating safe migration pathways.
- Regional platforms for shared adaptation and relocation strategies.
- Integration of migration planning into national climate action plans.

However, current international frameworks remain limited, as climate-induced migrants are often not recognized under traditional refugee definitions, creating legal and institutional gaps (Praveen, 2022; Biswas & Chowdhury, 2012).

### **Human Rights-Based Policy Framework**

Human rights-based approaches to policy emphasize the protection of displaced populations' dignity, security, and fundamental rights. This framework integrates human rights principles into climate governance, ensuring that displacement responses prioritize equity and justice (Atapattu, 2020; Chotouras et al., 2024). Core components include:

- Guaranteeing access to safe shelter, water, sanitation, and healthcare.
- Upholding the rights of vulnerable groups, including women, children, and indigenous communities (Naser & Afroz, 2009).
- Ensuring meaningful participation of affected communities in planning and decision-making.

By foregrounding human rights, policies can better address both immediate humanitarian needs and long-term social inclusion (Scott & Salamanca, 2020).

### **Policy Instruments and Funding Mechanisms**

Effective climate migration governance requires

dedicated policy instruments and sustainable financing. Governments and development agencies are increasingly allocating resources to climate migration programs, combining humanitarian aid, development finance, and adaptation investments (Draper, 2020; Nucera, 2023). Instruments may include:

- National climate adaptation funds supporting relocation and resilience projects.
- Regional climate migration frameworks integrating human rights protections.
- Insurance and compensation schemes for climate-affected populations.

## Regional and Global Governance Approaches

Several regional and global governance initiatives have emerged to address climate-induced displacement:

### Regional agreements

For example, Central American countries are exploring cross-border cooperation for internal and international climate migrants (Velez-Echeverri & Bustos, 2023).

### International initiatives

The United Nations Framework Convention on

Climate Change (UNFCCC) has begun integrating migration considerations into National Adaptation Plans (NAPs).

### Collaborative platforms

Multi-stakeholder partnerships involving governments, NGOs, and international organizations aim to develop best practices and guidelines for protecting climate-displaced populations (Aleinikoff, 2024; Jägers, 2022).

Despite these efforts, governance remains fragmented, and implementation gaps persist due to political, legal, and financial constraints (Toscano, 2015; Lyster & Burkett, 2018).

## Challenges and Opportunities in Policy Implementation

Policy implementation faces several challenges, including

### Legal gaps

Climate-displaced persons often lack formal recognition under refugee law (Praveen, 2022; Shamsuddoha & Chowdhury, 2009).

### Resource limitations

Funding for large-scale adaptation and migration programs is insufficient in many developing regions.

### Social integration

Relocated populations may face cultural and economic integration challenges.

**Table 6:** Comparative Overview of Key Policy Instruments for Climate-Induced Displacement

Policy Instrument	Objective	Implementing Actors	Strengths	Challenges
Disaster Risk Reduction (DRR) Programs	Reduce vulnerability to extreme events	National governments, UNDRR, NGOs	Proactive mitigation, community engagement	Requires long-term funding, local capacity gaps
Climate-Resilient Infrastructure	Protect livelihoods, reduce forced migration	Governments, multilateral banks	Reduces immediate displacement risks	High capital costs, long planning horizons
Planned Relocation & Resettlement	Provide safe migration pathways	Governments, IOM, UNHCR	Protects human rights, reduces hazard exposure	Social integration challenges, legal recognition issues
Human Rights-Based Policy	Ensure equitable treatment of displaced	Governments, NGOs, IGOs	Prioritizes dignity, participation, inclusion	Enforcement and monitoring difficulties
Financial Mechanisms & Funds	Enable sustainable adaptation	World Bank, Green Climate Fund, national funds	Facilitates scalable interventions	Access inequalities, conditionalities may limit effectiveness

Opportunities exist in adopting a proactive, multi-level governance approach, leveraging adaptation, migration, and human rights frameworks together (Atapattu, 2020; Chotouras et al., 2024; Draper, 2020).

In sum, Effective policy and governance responses to climate-induced displacement must combine adaptation strategies, migration governance, and a human rights-based approach. While progress has been made through regional agreements, international initiatives, and financial instruments, significant gaps remain in legal recognition, resource allocation, and implementation. Future policy frameworks should prioritize the protection of displaced populations' human rights, strengthen cross-border collaboration, and integrate resilience and adaptation into all levels of planning. By aligning governance and human rights, climate migration can be managed in a manner that safeguards the dignity and security of vulnerable communities (Scott & Salamanca, 2020; Guedes et al., 2024; Aleinikoff, 2024).

## **CASE STUDIES**

Climate-induced displacement is a global phenomenon with regional variations depending on environmental, social, and economic factors. Examining specific case studies provides insight into how climate change affects human mobility, the vulnerabilities of displaced populations, and the adequacy of existing legal and human rights protections. This section presents detailed analyses of Bangladesh, Central America and Colombia, Small Island Developing States (SIDS), Sub-Saharan Africa, and Arctic Indigenous Communities, highlighting human rights implications and policy responses.

### **Bangladesh: Climate Vulnerability and Internal Displacement**

Bangladesh is widely recognized as one of the most climate-vulnerable countries due to its low-lying topography, high population density, and dependence on agriculture. Frequent flooding, cyclones, riverbank erosion, and sea-level rise have displaced millions over the last few decades (Biswas & Chowdhury, 2012; Naser, 2013).

#### ***Human Rights Implications***

Displaced populations often lack access to

adequate shelter, clean water, sanitation, and healthcare, violating basic human rights (Guedes et al., 2024). Women, children, and the elderly are disproportionately affected, particularly during cyclones and floods (Jayawardhan, 2017).

#### ***Policy Responses***

Bangladesh has implemented the "Planned Relocation Program," which focuses on resettling communities from high-risk coastal areas. However, these measures often lack long-term economic sustainability and community participation, raising concerns about social justice and human rights (Shamsuddoha & Chowdhury, 2009).

### **Central America and Colombia: Cross-Border Climate Migration**

In Central America and parts of Colombia, climate-induced displacement intersects with socio-political instability. Prolonged droughts in Honduras, Guatemala, and El Salvador, coupled with violence and land insecurity, have forced migration both internally and across borders (Velez-Echeverri & Bustos, 2023; Aleinikoff, 2024).

#### ***Human Rights Implications***

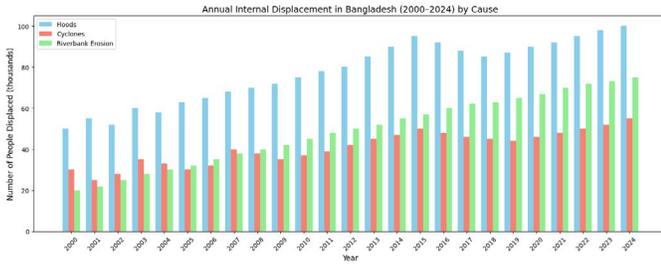
Displaced individuals face threats to life, security, and access to basic services during transit and in host communities. The lack of formal legal recognition of climate-induced cross-border migrants exacerbates vulnerabilities (Tahir & Tahir, 2024).

#### ***Policy Responses***

Regional agreements, such as the Central American Integration System (SICA), are increasingly considering climate-induced migration, but protection remains largely fragmented. Human rights organizations emphasize integrating environmental displacement into national migration frameworks (Chotouras et al., 2024).

### **Small Island Developing States (SIDS): Rising Seas and Permanent Relocation**

SIDS, including the Maldives, Tuvalu, and Kiribati, face existential threats from sea-level rise, saltwater intrusion, and intensified storms. These regions



**Figure 4:** Annual Internal Displacement in Bangladesh (2000–2024) by Floods, Cyclones, and Riverbank Erosion

experience both temporary and permanent population displacement.

### Human Rights Implications

Loss of territory challenges not only housing and livelihoods but also the legal recognition of displaced populations. The potential loss of national sovereignty raises questions about statelessness and nationality rights (Lyster & Burkett, 2018).

### Policy Responses

SIDS governments have pursued migration-with-dignity strategies, negotiating bilateral agreements for relocation and citizenship options in partner countries. International human rights frameworks are being used to support claims for climate justice (Atapattu, 2020).

## Sub-Saharan Africa: Drought, Desertification, and Migration

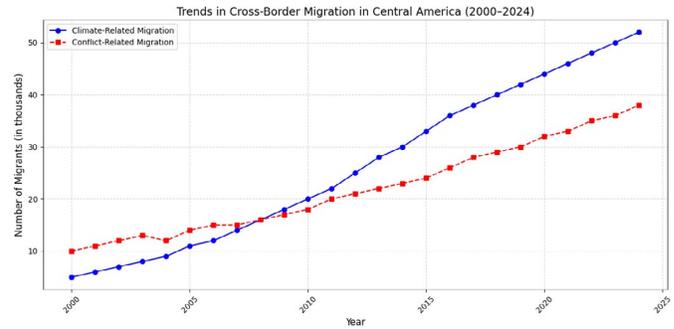
Sub-Saharan Africa faces repeated droughts, desertification, and resource scarcity, particularly in the Sahel region. These environmental pressures drive both rural-to-urban migration and cross-border displacement.

### Human Rights Implications

Displaced communities often encounter food insecurity, limited access to clean water, and inadequate healthcare. Pastoralist and agricultural communities are particularly vulnerable, facing violations of livelihood and cultural rights (Bose & Lunstrum, 2012).

### Policy Responses

Regional organizations such as the African Union are exploring adaptation measures and migration management strategies. However, enforcement



**Figure 5:** Trends in Cross-Border Migration in Central America (2000–2024): Climate-Related vs. Conflict-Related Drivers.

remains weak, and human rights protection is inconsistent across borders (Nucera, 2023).

## Arctic Indigenous Communities: Melting Ice and Cultural Displacement

Indigenous populations in Arctic regions experience displacement due to melting permafrost, coastal erosion, and changing wildlife patterns. This displacement often involves relocation within their traditional territories or to urban centers.

### Human Rights Implications

The disruption of traditional lifestyles undermines cultural rights, land tenure, and food security. Legal recognition of climate-related relocation remains minimal (Praveen, 2022).

### Policy Responses

National governments and international organizations have begun developing adaptation and relocation frameworks, integrating indigenous knowledge and community participation (Scott & Salamanca, 2020).

## Comparative Analysis and Key Insights

Across these case studies, several patterns emerge:

### Vulnerability and Human Rights

Marginalized populations are disproportionately affected by climate-induced displacement. Human rights frameworks must address access to housing, water, health, and livelihood.

### Legal Gaps

Existing refugee and migration law often fails to recognize climate-induced migrants, particularly cross-border and permanent displacements.

### Policy Innovation

Strategies vary by region, from Bangladesh’s planned relocation to SIDS’ migration-with-dignity initiatives. Integration of human rights into policy is essential for sustainable solutions (Draper, 2020; Atapattu, 2020).

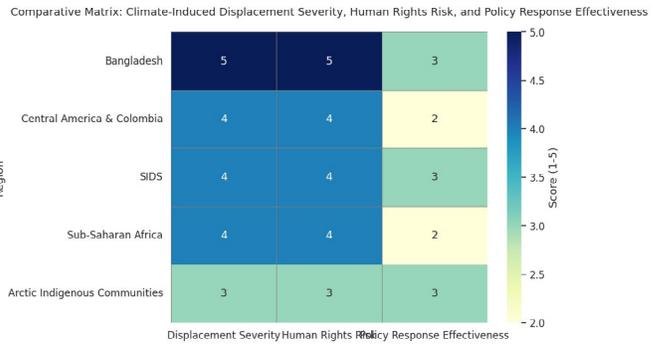
### Community Participation

Successful adaptation and relocation require active engagement of affected communities to ensure dignity, cultural preservation, and long-term resilience.

The case studies highlight the global scale and diversity of climate-induced displacement. From densely populated deltas to small island nations and Arctic communities, displaced populations face profound human rights challenges. Effective protection requires legal innovation, rights-based policies, and proactive international cooperation. Addressing these challenges necessitates integrating climate adaptation, human rights frameworks, and community-centered approaches to safeguard migrants and refugees in an era of accelerating environmental change.

## ADDRESSING THE CHALLENGES AND ADVANCING POLICY FOR CLIMATE-INDUCED DISPLACEMENT

Climate-induced displacement presents one of the most complex humanitarian, legal, and ethical challenges of the contemporary era. While the effects of climate change on migration are increasingly recognized, existing international legal frameworks and policy mechanisms remain insufficient to protect the rights of affected populations (Velez-Echeverri & Bustos, 2023; Aleinikoff, 2024). The interplay of environmental stressors, socioeconomic vulnerability, and legal gaps has produced a landscape where millions of



**Figure 6:** Comparative Matrix: Climate-Induced Displacement Severity, Human Right Risk, and Policy Response Effectiveness.

individuals ranging from internal migrants to cross-border climate refugees experience precarious living conditions, lack of access to essential services, and limited recognition under international law (Naser, 2013; Atapattu, 2020). This section examines the multifaceted challenges posed by climate-induced displacement, outlines future directions for research and governance, and proposes evidence-based policy recommendations anchored in a human rights framework.

### Legal and Institutional Gaps

One of the most pressing challenges is the absence of a coherent international legal framework recognizing climate-induced migrants as a protected category under refugee law. The 1951 Refugee Convention and its 1967 Protocol remain limited in scope, primarily covering persecution based on race, religion, nationality, political opinion, or membership in a particular social group (Praveen, 2022; Jägers, 2022). Consequently, millions of individuals displaced by slow-onset climate events such as desertification, sea-level rise, or prolonged droughts remain outside the protective umbrella of refugee status (Biswas & Chowdhury, 2012). Regional human rights instruments have made incremental progress, yet fragmented governance and inconsistent recognition continue to undermine legal protection (Chotouras et al., 2024).

### Socioeconomic and Humanitarian Challenges

Climate-induced displacement disproportionately

affects marginalized populations, including rural farmers, indigenous communities, and small island populations. These groups often face compounded vulnerabilities due to poverty, limited access to healthcare, and inadequate infrastructure (Jayawardhan, 2017; Bose & Lunstrum, 2012). The displacement process disrupts livelihoods, exacerbates food insecurity, and increases susceptibility to exploitation and human trafficking. Furthermore, receiving regions frequently lack adequate resources or planning to absorb displaced populations, resulting in overcrowded settlements, poor sanitation, and restricted access to education and employment opportunities (Guedes et al., 2024; Scott & Salamanca, 2020).

## **Ethical and Justice Considerations**

The phenomenon of climate displacement raises profound questions of global justice and ethical responsibility. Climate-vulnerable populations often contribute minimally to the drivers of climate change, yet bear the heaviest burdens, highlighting inequities between developed and developing nations (Draper, 2020; Toscano, 2015). Addressing climate displacement therefore requires policies grounded in principles of climate justice, recognizing historical responsibility, and ensuring equitable allocation of resources for adaptation, relocation, and humanitarian support (Nucera, 2023).

## **Challenges in Data, Monitoring, and Predictive Capacity**

Effective policy planning is hindered by inadequate data on climate-induced displacement. Current migration statistics often fail to capture the nuanced drivers of movement, including the interplay between sudden disasters and slow-onset environmental changes (Askland et al., 2022; Tahir & Tahir, 2024). Without robust monitoring systems, governments and international organizations struggle to anticipate migration flows, allocate resources, or implement timely interventions. Predictive modeling, integrating climate data with socioeconomic indicators, remains underutilized despite its potential to enhance preparedness and resilience (Naser & Afroz, 2009).

## **Policy and Governance Challenges**

Policy responses to climate-induced displacement are frequently reactive rather than proactive. National and regional governments often rely on emergency response frameworks rather than comprehensive adaptation strategies (Manou & Mihr, 2017). Existing migration and refugee policies inadequately integrate climate risk assessments, leaving gaps in protection and assistance. Coordination between governmental, non-governmental, and international actors is limited, resulting in fragmented approaches that fail to address the multidimensional nature of climate migration (Lyster & Burkett, 2018).

## **Future Directions**

### ***Legal Recognition and Reform***

Scholars and policymakers advocate for the creation of a legal category for climate-induced migrants or the expansion of refugee law to encompass environmental drivers of displacement (Atapattu, 2020; Praveen, 2022).

### ***Climate Adaptation and Resilience Planning***

Investing in climate-resilient infrastructure, early warning systems, and community-based adaptation measures can mitigate displacement pressures (Nucera, 2023).

### ***Data-Driven Migration Policy***

Integrating geospatial climate data with migration trends enables predictive policy planning, ensuring resources are allocated efficiently to at-risk communities (Askland et al., 2022).

### ***Strengthening Human Rights Protections***

Embedding human rights principles into displacement and migration policies ensures dignity, equality, and access to essential services for displaced populations (Scott & Salamanca, 2020; Chotouras et al., 2024).

### ***International Cooperation and Funding Mechanisms***

Global coordination, including funding for cross-border relocation programs, climate adaptation



projects, and humanitarian assistance, is essential to protect displaced populations in vulnerable regions (Velez-Echeverri & Bustos, 2023; Guedes et al., 2024).

In sum, Climate-induced displacement represents a multidimensional challenge, encompassing legal, socioeconomic, ethical, and governance dimensions. Existing frameworks remain insufficient to address the scale and complexity of climate-driven migration. A forward-looking approach requires legal recognition of climate migrants, human rights-based policy integration, robust data systems, and international cooperation. By combining justice-oriented principles with adaptive governance strategies, policymakers and scholars can create mechanisms that protect the most vulnerable, reduce displacement risks, and advance resilience in the face of escalating climate crises (Draper, 2020; Aleinikoff, 2024; Naser, 2013). Ensuring that human dignity remains central to climate migration policies is essential for equitable and sustainable global responses.

## CONCLUSION

Climate-induced displacement represents an urgent and growing humanitarian, legal, and ethical challenge in the contemporary global context. This research has demonstrated that climate change acts as both a direct and indirect driver of migration, affecting millions of individuals through extreme weather events, sea-level rise, desertification, and ecosystem degradation (Jayawardhan, 2017; Biswas & Chowdhury, 2012). The vulnerability of displaced populations is amplified by socioeconomic marginalization, inadequate infrastructure, and the absence of comprehensive legal protections, leaving many without access to essential services such as housing, water, sanitation, and livelihood opportunities (Guedes et al., 2024; Scott & Salamanca, 2020).

The analysis further underscores the limitations of existing international legal frameworks, particularly the 1951 Refugee Convention, in addressing the rights of climate-induced migrants (Praveen, 2022; Jägers, 2022). While human rights law provides broader protective mechanisms, the lack of a coherent, globally recognized legal category for

climate-displaced persons continues to generate protection gaps (Atapattu, 2020; Chotouras et al., 2024). Moreover, challenges in data collection, monitoring, and predictive modeling impede effective policy responses, leaving both origin and destination communities inadequately prepared for climate-related migration flows (Askland et al., 2022; Naser & Afroz, 2009).

Addressing these complex challenges requires a multidimensional, human rights-based approach. Policy solutions must combine legal innovation, proactive adaptation strategies, strengthened human rights protections, and international cooperation (Draper, 2020; Nucera, 2023). Specifically, the recognition of climate migrants within international law, investments in resilience and early warning systems, and the integration of predictive data into governance frameworks can enhance protection and reduce vulnerability. Furthermore, embedding ethical principles of climate justice ensures that the most affected populations often those least responsible for climate change receive equitable treatment and support (Toscano, 2015; Velez-Echeverri & Bustos, 2023).

In conclusion, the protection of migrants and refugees in the context of climate-induced displacement demands coordinated global action, innovative legal frameworks, and policies rooted in human rights and justice. Only through the integration of adaptive governance, ethical responsibility, and comprehensive international collaboration can the human rights of climate-displaced populations be safeguarded, and sustainable solutions achieved in the face of escalating environmental challenges (Aleinikoff, 2024; Praveen, 2022). Future research and policy initiatives must continue to refine these strategies, ensuring that displacement does not equate to marginalization, and that human dignity remains central to climate migration responses.

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