

LEGAL PROTECTION OF CLIMATE REFUGEES: A GAP IN INTERNATIONAL LAW AND THE THEORY OF ECOLOGICAL VULNERABILITY

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The lack of legal protection for climate refugees represents one of the main gaps in International Law, as the 1951 Convention and its 1967 Protocol do not include forced displacements caused by environmental factors. The increasing intensification of natural disasters and environmental degradation already affects millions of people, making it essential to expand the legal debate on the need for humanitarian protection for this vulnerable population. This study investigates the relationship between climate change and forced displacement, analyzing the insufficiency of the current legal framework and proposing alternatives to ensure fundamental rights for climate refugees. The research employs the hypothetical-deductive method with a qualitative approach, based on bibliographic and documentary review. The theory of ecological vulnerability emerges as a possible solution in the absence of a specific legal framework, as it highlights the interdependence between human beings and the environment. Together with the principle of non-refoulement, this theory can support more effective protection for climate refugees, preventing Human Rights violations. It is concluded that the formal recognition of climate refugees is an urgent necessity to ensure their security and dignity, requiring the adaptation of International Law and the implementation of global policies aimed at mitigation and adaptation to climate change.

Keywords: international law; climate change; climate refugees; humanitarian protection; ecological vulnerability.

PROTEÇÃO JURÍDICA DOS REFUGIADOS CLIMÁTICOS: LACUNA NO DIREITO INTERNACIONAL E A TEORIA DA VULNERABILIDADE ECOLÓGICA

A ausência de proteção jurídica para os refugiados climáticos representa uma das principais lacunas do Direito Internacional, uma vez que a Convenção de 1951 e seu Protocolo de 1967 não contemplam deslocamentos forçados por causas ambientais. A crescente intensificação dos desastres naturais e a degradação ambiental já impactam milhões de pessoas, tornando essencial a ampliação do debate jurídico sobre a necessidade de proteção humanitária para essa população vulnerável. Este estudo investiga a relação entre mudanças climáticas e deslocamento forçado, analisando a insuficiência do conjunto de normas legais vigente e propondo alternativas que possam garantir direitos fundamentais aos refugiados climáticos. A pesquisa utiliza o método hipotético-dedutivo, com abordagem qualitativa, baseada em revisão bibliográfica e documental. A teoria da vulnerabilidade ecológica surge como uma possível solução enquanto não há um marco jurídico específico, pois evidencia a interdependência entre o ser humano e o meio ambiente.

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Em conjunto com o princípio da não devolução (*non-refoulement*), essa teoria pode fundamentar uma proteção mais eficaz aos refugiados climáticos, prevenindo violações de Direitos Humanos. Conclui-se que o reconhecimento formal dos refugiados climáticos é uma necessidade urgente para garantir sua segurança e dignidade, exigindo a adaptação do Direito Internacional e a implementação de políticas globais voltadas para a mitigação e a adaptação às mudanças climáticas.

Palavras-chave: direito internacional; mudanças climáticas; refugiados climáticos; proteção humanitária; vulnerabilidade ecológica.

PROTECCIÓN JURÍDICA DE LOS REFUGIADOS CLIMÁTICOS: UNA BRECHA EN EL DERECHO INTERNACIONAL Y LA TEORÍA DE LA VULNERABILIDAD ECOLÓGICA

La falta de protección jurídica para los refugiados climáticos representa una de las principales lagunas del Derecho Internacional, ya que la Convención de 1951 y su Protocolo de 1967 no contemplan los desplazamientos forzados por causas ambientales. La creciente intensificación de los desastres naturales y la degradación ambiental ya afectan a millones de personas, lo que hace esencial ampliar el debate jurídico sobre la necesidad de protección humanitaria para esta población vulnerable. Este estudio investiga la relación entre el cambio climático y el desplazamiento forzado, analizando la insuficiencia del marco normativo vigente y proponiendo alternativas que garanticen los derechos fundamentales de los refugiados climáticos. La investigación utiliza el método hipotético-deductivo, con un enfoque cualitativo basado en la revisión bibliográfica y documental. La teoría de la vulnerabilidad ecológica surge como una posible solución en ausencia de un marco jurídico específico, ya que evidencia la interdependencia entre los seres humanos y el medio ambiente. Junto con el principio de no devolución (*non-refoulement*), esta teoría puede fundamentar una protección más efectiva para los refugiados climáticos, previniendo violaciones de Derechos Humanos. Se concluye que el reconocimiento formal de los refugiados climáticos es una necesidad urgente para garantizar su seguridad y dignidad, exigiendo la adaptación del Derecho Internacional y la implementación de políticas globales dirigidas a la mitigación y adaptación al cambio climático.

Palabras clave: derecho internacional; cambio climático; refugiados climáticos; protección humanitaria; vulnerabilidad ecológica.

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1 INTRODUCTION

The combination of climate change in the 21st century and migration is triggering an urgent debate on the protection of people affected by these phenomena. As the climate becomes more unstable, extreme events such as droughts, floods and storms force millions of people to leave their homes.

Unlike conflict and persecution refugees, which are discussed and provided for in the 1951 Geneva Convention and its 1967 Protocol, climate refugees have no legal protection. Despite the growing impact of environmental degradation on

human migration and the scientific studies that predict this scenario, international law and some of the legal doctrine still do not formally recognize this category, so there is a legal gap in the protection of these vulnerable populations.

The climate crisis and migration are inseparably related. Events such as desertification, rising sea levels and the scarcity of natural resources force entire communities to move. In coastal regions, for example, rising sea levels threaten to submerge islands and densely populated areas, fostering migration flows. In arid zones, desertification increases competition for resources such as water and food, resulting in conflicts that generate displacement. This cycle of environmental, social and economic impacts highlights the need for an in-depth debate on the relationship between refugees and the environment.

Colin Raymond of NASA's Jet Propulsion Laboratory in Southern California is the lead author of a study published in *Science Advances* (Raymond et al., 2020) on extreme heat and humidity. The study examines the emergence of extreme heat and humidity conditions that exceed the limits of human tolerance, emphasizing their direct impact on population displacement in affected regions. The scientists investigated the concept of wet bulb temperature (WBT), which combines heat and humidity. The wet bulb temperature is the lowest temperature to which an object can be cooled when moisture evaporates from it.

In 2024, the United States National Aeronautics and Space Administration (NASA) published a study highlighting that climate change is a complex, gradual phenomenon manifesting in several ways across different regions of the world. Climate models suggest that some regions will exceed these critical temperatures in the coming decades, between 30 and 50 years. The most susceptible areas include South Asia, the Persian Gulf and the Red Sea, which could face these extreme conditions by 2050. In eastern China, parts of Southeast Asia and Brazil, the forecast is for this index to be reached around 2070. The United States of America is not immune to warming, with NASA predicting that in 50 years the Midwestern states will probably suffer from the critical limit of wet-bulb temperatures (NASA, 2024).

Norman Myers (2001), an environment and development consultant and researcher at Oxford University, in his article published in 2001 in *The Royal Society*, estimated that rising sea levels could expose 162 million people to danger in nations such as Bangladesh, Egypt, China, India and several small islands. Myers also emphasized that approximately 50 million individuals could face severe consequences as a result of worsening droughts and other climate-related changes. Since 2001, this number has increased considerably. Bangladesh's population alone reached 156 million in 2016, making it the ninth most populous country in the world (Pires, 2016).

Climate refuge for Bangladeshis is a reality. Duarte (2022) published on BBC News the story of Jashim Salam, a Bangladeshi who considers himself a climate refugee from Bangladesh. Salam, who was working in New York at the time of the interview, justified his immigration by seeking the financial means to move his family out of their home country because of the fear of rising waters. Bangladeshi refugees immigrate to other continents every year. As an example of the magnitude of this phenomena, 6,033 Bangladeshi migrants landed in Italy, becoming 33.7% of the foreigners who arrived in that country (Ludovico, 2017).

According to Birkeland (2018), there is an estimation of 200 million people a year that are affected by slow-onset disasters related to environmental degradation processes that develop over the years, such as droughts. The debate on the emergence of climate refugees is crucial for the formulation of global policies respond to the climate crisis in order to seek solutions that safeguard the future, given the projection that the climate crisis could displace millions of people over the next few years.

It is important to remember that the populations most affected by climate change are usually those that have contributed the least to the crisis. Developing countries, with lower levels of greenhouse gas emissions, suffer disproportionately from the impacts of climate change (UN, 2022). Consequently, this imbalance requires an international response that addresses the mitigation of climate impacts and includes strategies for the adaptation and protection of the most vulnerable populations, particularly in situations where mitigation efforts have, unfortunately, proven insufficient.

It is clear that the discussion on climate refugees can no longer be postponed since climate changes are already causing mass displacement. The lack of recognition and protection for climate refugees exacerbates a humanitarian crisis. It is fundamental to design policies to address both mitigation and adaptation to this new reality in order to ensure the protection of future generations.

In this sense, we pose the following research question: how does the lack of recognition of climate refugees in international law affect the legal protection of these populations and what mechanisms could be adopted to guarantee this protection?

We consider the following hypothesis: the lack of explicit legal recognition for environmental refugees in international law exacerbates the vulnerability of these populations, excluding them from the protective scope of international treaties. This normative gap leads to the abdication of responsibility by states and the absence of binding standards for their reception. At the same time, it is argued that protection mechanisms can be built based on an extensive interpretation

of the non-refoulement principle, provided for in the 1951 Convention, and the incorporation of the ecological vulnerability theory as a hermeneutical foundation. Additionally, the expansion of concepts within regional treaties, such as the Cartagena Declaration and the OAU Convention, may provide viable legal pathways until the establishment of a specific international instrument is achieved.

This article is structured as follows. In the first section, we discuss the terminology and definitions regarding refuge, remarking on the differences of traditional refuge from climate refuge and discussing the lack of formal recognition of this category in international law. We also explore the differences in doctrines and their applicability and the provision for mass displacement due to environmental causes. In the second section, we identify the regions most affected by climate change and analyze the impacts of forced displacement on human rights, highlighting the consequences of the regulatory gap.

The third section proposes legal avenues for the protection of climate refugees. Based on an analysis of existing international treaties, we discuss how consolidated principles - such as non-refoulement - and concepts such as ecological vulnerability can support the protection of these individuals, even in the absence of a specific treaty. Additionally, we analyze regional normative experiences to assess their broad applicability. The article concludes with an argument in favor of an international legal instrument that guarantees adequate protection in the long term.

To carry out this study, we employed theoretical and qualitative research and the hypothetical-deductive method. We gathered data from bibliographical, documentary and legislative research, as well as magazine articles, blogs and texts from journalistic websites.

2 REFUGEE AND CLIMATE REFUGEES: TERMINOLOGY AND LEGAL GAPS

At the beginning of the 20th century, with the founding of the League of Nations, the international community began to discuss the creation of a legal statute to guide the protection of refugees resulting from the First World War. However, it was due to the horrors experienced in the Second World War that 51 countries signed the United Nations Charter, reaffirming the essential commitments of international society, such as the prevention of future wars and the guarantee of human rights (Goodwin-Gill, 1996).

The United Nations (UN) aims to promote international cooperation in various areas – economic, social, cultural and humanitarian – to guarantee global peace and security (Loescher, 1994). In this context, it became consolidated the

understanding that the protection of human rights should not be the exclusive concern of states, but of the international community. This principle was reinforced with the adoption of the Universal Declaration of Human Rights (UDHR) in 1948, which reaffirms the universality, indivisibility and interdependence of these rights (Piovesan, 2007; Zieck, 1997).

In order to improve refugee protection, the UN created the United Nations High Commissioner for Refugees (UNHCR) in 1950 as a humanitarian, apolitical and social body whose mission is to seek lasting solutions to challenges faced by these populations (UNHCR, 2018; Goodwin-Gill, 1996). Its mandate follows the principles established in the United Nations Charter, encompassing actions of prevention and implementation of measures to guarantee the rights and well-being of refugees. Its main functions include: 1) granting asylum; 2) defining minimum rules for the treatment of refugees; and 3) guaranteeing the principle of non-refoulement, which prevents the expulsion of refugees to places where they may suffer persecution or threats to their lives (Jubilut, Amaral Júnior 2007; Loescher, 1994; Zieck, 1997).

International Refugee Law is mainly structured around the 1951 Convention relating to the Status of Refugees, which defines a refugee as someone who,

owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of [their] nationality and is unable or, owing to such fear, is unwilling to avail [themselves] of the protection of that country; or who, not having a nationality and being outside the country of [their] former habitual residence, is unable or, owing to such fear, is unwilling to return to it. (UNHCR, 1951, Art. 1a).

This instrument was drawn up in a post-World War II context, focused on political persecution and conflicts, and does not cover climate refugees. The 1967 Protocol, which expanded the application of the Convention beyond Europe, did not include environmental causes as a justification for granting refuge (UNHCR, 1967). Thus, those fleeing natural disasters or environmental degradation remain in a legal limbo, without clear support in the international regulations in force.

The concept of traditional refuge differs from climate refuge in terms of the causes of displacement, but the discussion on refuge and its application to climate refugees also raises fundamental issues of international law and humanitarian protection. Traditional refuge refers to forced migration due to political persecution or armed conflict, while climate refuge encompasses those fleeing climate change or ecological disasters. This distinction is central to understanding the gap in international law, which has not yet managed to include climate refugees within existing legal instruments, regardless of the fact that they face conditions similar to those of traditional refugees, such as the need for protection and assistance.

In 1985, Essam El-Hinnawi, a researcher with the United Nations Environment Program (UNEP), was responsible for introducing and disseminating the term climate refugee, making the designation widely used today. According to his definition, climate refugees are individuals who, temporarily or permanently, have been forced to leave their places of origin due to significant environmental disturbances – whether natural or caused by human actions – which have jeopardized their survival or severely impacted their quality of life (El-Hinnawi, 1985). This definition, which is broader than that of the 1951 Convention, is not restricted to cross-border displacement, but also includes internal movements.

In addition to El-Hinnawi, Egyptian professor Jodi L. Jacobson proposed a more detailed categorization of climate refugees. In 1988, Jacobson established three distinct types of displaced persons: the first group includes those who migrate as a result of sudden natural disasters, such as earthquakes or avalanches; the second refers to people who leave their homes due to progressive environmental degradation that compromises their livelihoods and health; and the third refers to those who are forced into permanent resettlement due to irreversible environmental changes, such as desertification. Jacobson then presented a specific conceptualization for the so-called climate refugees, classifying them as individuals temporarily displaced by local environmental events, migrants forced by environmental degradation that threatens their livelihood or health, and those resettled due to permanent transformations in the ecosystem of their regions of origin (Jacobson, 1988).

The document Addendum - part two: Action taken by the Conference of the Parties at its sixteenth session, was published due to the 16th session of the Conference of the Parties (COP16) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Cancún (Mexico) in 2010, in which recognizes that climate change is an urgent threat. This document became a milestone in the international effort to tackle the challenges of climate change because it brought together decisions and commitments made by the participating countries and it covers issues such as mitigation measures, adaptation, climate finance, technology transfer and capacity building (UNFCCC, 2010). Although it did not explicitly employ the term climate refuge, the document recognizes the importance of addressing the challenges related to human displacement due to climate change, which is evidence that this concern was present, albeit in an incipient way.

In 2015, the International Organization for Migration (IOM) created the Environmental Migration Portal, a platform dedicated to gathering knowledge on population displacement related to climate change. The initiative was developed as part of the project “Migration, Environment and Climate Change: Evidence for Policy” (MECLEP), with funding from the European Union. Following the

conclusion of the project in March 2017, the OIM became entirely responsible for maintaining and updating the portal.

In 2019, the IOM described climate refugees as group of people who, due to sudden or progressive changes in the environment that negatively impact their living conditions or survival, are forced to leave their habitual residences, either temporarily or permanently, moving to other regions within their own country or abroad. The organization also pointed out that the terms climate refugee and/or environmental refugee are often used by activists and the media to draw attention to the reality of individuals who are forced to move as a result of disasters, climate change or environmental degradation, and that these people do not legally fall under the definition of refugee established by international law although their needs may be similar to those of traditional refugees (IOM, 2019).

Organizations such as the IOM and the UNHCR advised against employing these terms because they were legally imprecise and they could potentially weaken the protection system for refugees. For these organizations, these terms disregarded fundamental aspects, such as the fact that climate migration tends to be internal and does not always occur in a forced way. The argument of this narrative was based on the fact that individuals displaced by environmental causes were protected by human rights, and that this displacement occurred within the borders of a country. This position reflects the reluctance of organizations and states to give these populations a specific legal status. This stance showed a hesitancy to incorporate the concept into international legal instruments, remaining limited to the narrative of protection based on human rights.

Bangladesh is a significant example of forced displacement phenomenon due to environmental reasons. There are 1,390 Bangladeshis requested refuge in Brazil that year according to *Refuge in Numbers* (2022), a booklet promoted by the National Committee for Refugees (CONARE) in partnership with the Department of Migration of the National Secretariat of Justice and the Observatory of International Migration (OBMigra).

In addition to armed conflicts, another relevant cause of migration is environmental disasters, such as recurrent floods – a direct consequence of the country's geographical vulnerability, with most of its territory lying just above sea level (Pethick; Orford, 2013). As international law does not yet recognize environmental motivation as a legal basis for granting refugee status, official data does not capture the totality of displacement flows associated with the climate crisis, highlighting a vacuum in normative protection.

Climate change is playing an increasingly decisive role in the forced migration of populations exposed to extreme events such as cyclones, floods and rising sea levels. This type of displacement is not just the result of political or

social factors but is directly related to environmental crises that jeopardize the habitability of large regions, especially in the most vulnerable countries, such as Bangladesh.

One of the most emblematic cases on the severe impacts of climate change on forced displacement is the “Teitiotia v. New Zealand” case. This case gained worldwide relevance because the UN Human Rights Committee (HRC) considered for the first time that deporting a person to a place where their life is threatened by the adverse effects of the climate crisis could constitute a violation of the right to life (HRC, 2020).

Loane Teitiotia and his wife, originally from Kiribati, sought refuge in New Zealand in 2013 claiming that climate change had made their country uninhabitable. Their application was denied by the New Zealand Immigration and Protection Tribunal because it did not meet the criteria of the Refugee Convention. After his family was deported to Kiribati, Teitiotia appealed to the UN Human Rights Committee, claiming that Article 6 of the International Covenant on Civil and Political Rights (ICCPR), which guarantees the right to life, had been violated. The HRC recognized, for the first time, the existence of climate refugees and ruled that people at imminent risk due to climate emergencies should not be deported, equating their situation to that of refugees from war and political persecution (HRC, 2020). This decision sets a precedent for future legal analysis, especially when considering that Article 6 of ICCPR, which guarantees the right to life, can be interpreted in the light of severe climate impacts.

These debates raise questions about the legal protection of these people who sometimes consider themselves climate refugees but cannot apply for protection as such. It is clear that the legal gap and consequent lack of protection is partly the result of the lack of recognition of the terminology of climate refuge. Although it is recognized by many scholars and institutions, climate refugee has not yet been universally incorporated into international law. The doctrinal divergence on the term arises from the perception that there is a lack of recognition, by many scholars and organizations who oppose the term, of mass international migration being exclusively attributable to environmental factors, despite the fact that climate change is already influencing migration patterns.

Growing evidence of the impacts of climate change on displaced populations has led the UNHCR to re-evaluate its position. The intensification of natural disasters and environmental degradation has resulted in significant displacement, increasing the pressure on the international community to recognize and tackle these emerging realities. In response, UNHCR launched the “Refugees for Climate Action” initiative during COP29 – the 2024 United Nations Climate Change Conference – aimed at amplifying the voices of refugees and forced displaced people

in the global debate on climate change. This network brings together climate activists from different parts of the world, including countries such as Brazil, Afghanistan, Yemen, Haiti and Bangladesh, with experiences of displacement linked to conflicts and environmental crises (UNHCR, 2024).

This shift reflects the UNHCR's recognition of the urgency of considering the impacts of climate change on migration flows and protection policies. In recent years, the agency has adopted a more sensitive approach to the issue, integrating the experiences of affected communities into its analysis and guidelines. This is a significant step forward, especially coming from an institution that previously advised against using the term "climate refugee". Nevertheless, it is important to note that the term still does not have formal legal status under international law, and the UNHCR has not officially adopted it as a legal category, precisely because it is not provided for in the 1951 Convention. The complexity and emergence of the phenomenon, however, has spurred multilateral debates on the need to develop specific protection mechanisms for people displaced for environmental reasons.

The discussion on the need to recognize the term climate refugee represents one of the most complex and urgent debates in contemporary international law. The lack of formal recognition for climate refugees makes it impossible to formulate effective policies and perpetuates the vulnerability of millions of individuals forced to move for reasons that transcend borders and traditional spheres of responsibility.

In the current context, denying the validity of the term not only overlooks the ongoing reality of displacement but also undermines global humanitarian efforts to provide adequate protection. The distinction between climate refugees and other types of displaced people is mainly based on the level of protection that the state of origin can offer. An individual who leaves their home for environmental reasons finds themselves in a situation where the state is no longer able to guarantee their safety, thus justifying the need for protection by another state or even international society. On the other hand, when migration occurs voluntarily, it is assumed that state protection is still possible, making it unnecessary to claim international protection (Zetter, 2010).

While traditional refugees flee explicit persecution, climate refugees face a different kind of vulnerability, often gradual and systemic. Worsening environmental conditions, such as desertification, rising sea levels and recurrent natural disasters, can undermine a state's ability to guarantee decent living conditions for its citizens. This process, over time, pushes entire populations into inevitable displacement, creating a legal dilemma over the recognition of these people within the international refuge system.

Countries like Bangladesh, the Pacific islands and regions of sub-Saharan Africa are facing alarming scenarios where rising sea levels, prolonged droughts and natural disasters make it impossible for their populations to survive. According to recent data from the UNHCR (2024), extreme weather phenomena became responsible for 220 million internal displacements in the last 10 years, and one of the main causes of forced migration in the 21st century.

In this context, the distinction between voluntary migration and forced displacement is not always clear in practice. Extreme environmental events can gradually deteriorate living conditions, making it unfeasible to remain in a given region. Although at first glance some of these migrations may appear to be voluntary, they are often the result of a lack of viable alternatives.

Ignoring the impact of climate change as a determining factor for migration is an anachronistic stance that fails to recognize the multidimensionality of the phenomenon. By restricting itself to the traditional notion of political or ethnic persecution, international law ignores the fact that environmental changes, although less visible from a legal point of view, are just as devastating. Migration driven by climate factors, which is predominantly internal, places significant pressure on low-income countries, depleting their resources and capacity to respond. This, in turn, leads to increased international displacement. The lack of formal recognition of climate refugee status contributes to the legal invisibility of these populations, who remain on the margins of international protection and assistance structures and are often denied due to the lack of essential requirements since the environmental crisis is not a justification for refugee protection.

The recognition of the term climate refugee in international law is a necessary measure to respond to new forms of forced displacement. The term proposed by Essam El-Hinnawi in 1985 describes people forced to leave their habitat due to environmental disturbances that affect their survival. Although widely used, there is still no legal consensus on its definition. Part of the doctrine limits the concept to cross-border displacement while other advocates expanding it to include internal displacement. Progress in this debate is essential to increase the protection of vulnerable populations, strengthen international cooperation and adapt the law to the urgencies of the climate crisis.

3 THE IMPACTS OF CLIMATE CHANGE AND FORCED DISPLACEMENT FROM A HUMAN RIGHTS PERSPECTIVE

The escalating frequency and severity of natural disasters exacerbated by climate change have left millions of people in situations of forced displacement, exposing serious gaps in the international legal framework in force (UNHCR, 2024b). This dynamic shows that displacement should not be analyzed only as a demographic

or environmental phenomenon, but as a direct reflection of a systemic failure to protect fundamental rights. Climate justice emerges as an essential concept in connecting the environmental issue to human rights, reinforcing the need for equitable and people-centered approaches. For Mary Robinson, in her book *Climate Justice*, climate change is not just an environmental or scientific phenomenon, but a crisis that directly affects people's dignity and fundamental rights and must be treated as an ethical and political issue (Robinson, 2021).

According to Vicente Capella (2021), the concept of climate justice can be understood from four distinct perspectives: social, philosophical-moral, political, and legal. The first perspective approaches the mobilization of civil society in the pursuit of redress and justice in response to the impacts of climate change.

In the philosophical-moral sphere, climate justice is associated with the principle of equity, understood as an essential value for the promotion of justice. The political dimension is related to the design and implementation of public policies to tackle climate crisis and its consequences. Finally, climate justice from a legal perspective refers to the set of rules and regulations aimed at the governance of climate change and its implications. The multiple dimensions of climate justice contribute to understanding how environmental changes affect different social groups and violate guarantees provided for in international human rights treaties.

The relevance of understanding the particularities of climate justice lies in the fact that the challenges and inequalities in a scenario of environmental crisis are varied and require a careful analysis of the new socio-environmental tensions and vulnerabilities. This context highlights the urge for approaches that do not generalize the causes and agents responsible for climate change while recognizing the complexity of the phenomenon and its various dimensions (Lima, 2021).

In this context, the UNHCR plays an essential role in the field of these rights, since forced displacement and migratory flows have intensified the need for protection and humanitarian assistance. This reinforces the relationship between International Human Rights Law (IHRL) and International Refugee Law (IRL), which share the common goal of safeguarding the dignity and fundamental rights of displaced persons (Trindade, 2003).

When an individual is forced to leave their home, their basic rights are at stake, including the right to life, liberty, security, non-discrimination, privacy and protection against torture or degrading treatment, as well as the preservation of family ties (Menezes, 2011). Thus, IHRL and IRD complement each other, providing broader mechanisms for international protection. Both strands share the same purpose, which is to guarantee the protection of the human person in the international context (Trindade, 2003).

Despite being widely documented, the vulnerability of these populations to the climate crisis remains marginalized by international refugee protection instruments. The regions most affected by the climate crisis are often situated in coastal and island areas, which are experiencing rising sea levels, and in arid zones, which are suffering from accelerated desertification. From a critical perspective, this phenomenon reveals the structural incapacity of states and the international system to respond to emerging crises and also deepens the historical inequalities between the countries of the global north and south.

Studies by the Intergovernmental Panel on Climate Change (IPCC) highlight that greenhouse effect, intensified mainly by the emission of gases such as carbon dioxide and methane, has accelerated climate change and increased the average global temperatures (IPCC, 2019). Environmental degradation, in addition to generating forced displacement, also jeopardizes the livelihoods of refugee populations, who depend directly on fragile natural resources. Several concrete cases illustrate how the climate crisis results in severe rights violations, especially in countries of the Global South.

In host countries like Uganda, the pressure on basic resources exacerbates the vulnerability of both displaced people and local communities. This scarcity of resources tends to increase tensions between refugees and host populations, hindering integration and the search for sustainable solutions (Blanco, 2024). In 2022, torrential rains hit Pakistan and triggered an unprecedented humanitarian crisis, which affected 33 million people, destroyed essential infrastructure and left thousands displaced. The effects on regions such as Baluchistan and Sindh were severe, with the populations facing a lack of access to drinking water, the proliferation of diseases, and the collapse of medical services. According to Médecins Sans Frontières (MSF), an international humanitarian organization, children and pregnant women represented the most vulnerable segments of society, with thousands of planned deliveries occurring in the midst of this precarious situation. The crisis was aggravated by the destruction of 3,000 kilometers of roads and 150 bridges, hindering access to humanitarian aid (Herrera, 2022). This case highlights the gap in international protection in contexts of environmental disasters, since there is no binding legal instrument that recognizes environmental displacement as a legitimate ground for international protection.

The intensification of floods and natural disasters in regions such as West and Central Africa, highlighted by IOM's emergency action in 2024, exemplifies how the climate crisis disproportionately impacts vulnerable populations. In Chad, more than 1.5 million people have been affected, 164,000 homes have been destroyed, and more than 400,000 hectares of farmland have been devastated. In Nigeria, torrential rains displaced almost 650,000 people in 31 states, while in

Mali, the heaviest rains since 1967 impacted more than 180,000 people (IOM, 2024). These environmental disasters have compromised the food and economic security of these communities, triggering a crisis that goes beyond immediate material losses. The destruction of agricultural land and essential infrastructure directly impacts local food production in regions already marked by food insecurity that affects both the displaced and the host communities. This is because mass displacement overloads humanitarian assistance systems and increases pressure on natural resources in host areas.

The dynamic between conflicts, climate change and displacement is complex and multidimensional (Detges, 2023). The report *No Escape*, released at COP29 by the UNHCR in 2024, highlights that climate-related disasters have resulted in 220 million internal displacements in the last 10 years, which is equivalent to around 60,000 displacements a day according to the Internal Displacement Monitoring Center (IDMC, 2024). More concerning is the fact that 75% of these individuals reside in regions highly exposed to extreme weather events, often in countries already burdened by economic instability and armed conflict. This information underscores the scale of the crisis and its persistence and intensification (UNHCR, 2024c).

In contexts of acute vulnerability, climate change amplifies pre-existing inequalities. Such situations constitute a social risk and represent the failure of the international human rights system to adopt specific legal responses to populations highly exposed to multiple forms of vulnerability. According to Thomas (2023), women and girls, for example, are often disproportionately affected. In addition to generally being responsible for tasks such as collecting water and firewood, they face a higher risk of gender-based violence in displacement situations. It is known that 50% of refugee women in Ethiopia reported suffering sexual violence during daily survival activities. Girls are significantly more vulnerable, as they often drop out of school to devote long hours to collecting resources such as water and firewood, jeopardizing their educational future and job opportunities (UNHCR, 2024d).

Vulnerability is further exacerbated when social factors such as gender, age, and economic status are considered, which demands an intersectional analysis to determine which human rights are being violated. In light of this, it is crucial to assess the extent to which current international legal instruments are equipped to provide effective protection for populations displaced by climate change. The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW, 1979) establishes that states must guarantee the protection of women in situations of extreme vulnerability. However, the lack of public policies aimed at protecting women refugees and displaced for climate reasons shows a deficit in

the implementation of this treaty, which aggravates inequalities and exposes these populations to greater risks such as human trafficking and sexual violence. This data highlights the intersectionality between gender, poverty and displacement, underlining the need for a more inclusive and sensitive approach to recognizing and protecting these populations.

In 2024, the Global Report on Food Crises (GRFC) reported that approximately 282 million people faced severe food insecurity crises across 59 countries and territories. Among these nations, two thirds have faced food insecurity as a direct result of conflicts and climate change (GRFC, 2024). By the year 2023, more than 90 million individuals displaced by conflict and climate change resided in places where food crises were prevalent (GRFC, 2024). Food insecurity caused by extreme weather events directly compromises the exercise of the Human Right to Food, recognized in Article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR, 1966). However, the absence of an international regulatory framework recognizing environmental displacement as a legitimate cause for refuge makes it difficult to apply this right to populations forced to migrate due to environmental degradation.

The scenario is exacerbated by the drastically unequal funding for climate adaptation. While non-fragile states receive US\$ 161 per person annually for adaptation, extremely fragile states receive only US\$ 2 per person (Grandi, 2024). This disparity not only intensifies global inequalities, but also prevents the implementation of lasting solutions, deepening the vulnerability of those most affected.

Andrew Harper, special advisor to the UNHCR, highlighted the need to convey the urgency of concrete action in the face of climate change. His analysis pointed out that COP28 achieved media success by promoting wide-ranging discussions, but real progress was limited. According to him, although there was enthusiasm for speeches and public visibility, there was often a lack of willingness to implement effective measures. Harper questioned how much of the resources pledged during the event were actually allocated to support women and children affected by the ongoing disasters that hit various regions around the world. The answer, he emphasized, was “very little” (El País, 2024).

Sudan illustrates a critical scenario of the difficulty of raising funds, as only 29% of the funds needed to assist 10 million displaced people have been raised. More than 600,000 displaced people have found shelter in countries like Chad, recognized as one of the most vulnerable nations to climate change. Despite its economic limitations, Chad keeps its borders open, demonstrating a humanitarian commitment that goes beyond its capabilities (El País, 2024). This measure shows that countries least prepared yet most vulnerable to climate

crisis disproportionately bear the greatest responsibility for receiving displaced people. The climate crisis perpetuates this structural inequality, and it is crucial that the international community recognizes these efforts and advances towards designing international binding norms that ensure a collective, fair and legally structured response to human mobility induced by climate change.

Further evidence of the urge to recognize this type of refuge is the cross-border impact of climate change. Examples include Venezuelan refugees who find themselves equally exposed to extreme climate risks when seeking shelter in Colombia, or Afghan refugees who migrate to Pakistan, another country extremely vulnerable to climate. This “migration from one danger to another” illustrates how the climate crisis transcends borders and requires coordinated global solutions (UNHCR, 2024e). Such cross-border displacements without legal protection reveal the exhaustion of the 1951 Convention in the face of new patterns of human mobility induced by environmental factors.

Tuvalu and the Maldives are countries suffering the direct impacts of climate change such as the intensification of cyclones, coral bleaching and coastal erosion caused by the rising of sea levels (EJF, 2017). The states of Louisiana and California in the United States faces similar challenges. In Louisiana, one of the most alarming examples of this phenomenon is Isle de Jean Charles, where 98% of the territory is already submerged. In this context, residents have been forced to leave their homes and rebuild their lives elsewhere. In response, the US government has developed the first official resettlement program for climate refugees, guaranteeing support for families who have lost not only their homes, but also their history, culture and identity, according to the Louisiana State Division of Administration (Louisiana, 2016).

The wildfires in California demonstrate the devastating impact of climate change on people's lives, regardless of their geographical location or socio-economic status. In January 2025, flames hit several areas of the state, forcing around 100,000 people to evacuate their homes and highlighting how extreme weather events are becoming increasingly frequent and destructive. It is estimated that by 2050, around 79 million homes in the United States could be under threat from fire. The destruction of celebrities' mansions in Malibu and the insurance companies' difficulties in covering the billion-dollar losses resulting from the mass destruction of properties finally seems to be drawing the attention of the elite and the big economies to a crisis that has been devastating invisible populations in Africa, Latin America and Southeast Asia for decades (Chad, 2025).

Another example is the Greek island of Santorini, which has recently been experiencing unprecedented seismic activity. Since January 24, 2025, more than

1,200 tremors have been recorded in the region, with magnitudes exceeding 4.5 on the Richter scale. These seismic events have resulted in the evacuation of more than 7,000 people, including residents and seasonal workers, who have left the island by sea and air. Local authorities have closed schools and restricted access to areas near cliffs due to the risk of landslides. Experts say that this sequence of tremors is unprecedented since records began in 1964, and although it is not related to volcanic activity, the situation remains unpredictable (O Globo, 2025).

It is evident that the guarantee of human rights is intrinsically related to environmental protection because environmental degradation directly compromises the essential conditions for human existence. The fundamental principle of both global and regional human rights protection systems is the preservation of life, being the right to a balanced environment and peace a natural extension of latter. Mazzuoli (2013) argues that every international normative process influences both environmental issues and human rights. Although it was not expressly included in the Universal Declaration of 1948, the right to a healthy environment is indispensable for the full realization of the rights and freedoms it establishes.

All the examples above show the normative and political omission of the international community in offering legally binding responses to protect the rights of affected populations. The lack of actions by the international legal community to recognize and regulate the protection of climate refugees reflects a serious negligence in tackling an undergoing crisis affecting millions of people. The absence of a legal framework perpetuates the unequal allocation of resources and highlights the lack of commitment to evidence-based solutions. The regulatory vacuum compromises the effectiveness of international protection systems and the universality of human rights during global environmental crisis.

The concept of climate justice has been increasingly incorporated into the international debate, considering the need for differentiated accountability between countries that have historically emitted the most greenhouse gases and those that face the greatest consequences of the phenomenon (Lima, 2021). Those responsible for environmental degradation are also those who employ science-based evidence to prove their impacts. Although they have the means to mitigate the climate crisis, these countries are reluctant to adopt effective measures, hindering the implementation of policies and perpetuating inequalities. States are facing a wake-up call on their ethical and legal responsibility to address climate change in an inclusive and fair manner.

4 THE LEGAL GAP AND ECOLOGICAL VULNERABILITY IN THE HUMANITARIAN PROTECTION OF CLIMATE REFUGEES

The International Refugee Law, consolidated by the 1951 Convention and the 1967 Protocol, establishes the definition of a refugee as someone fleeing persecution based on political, religious, ethnic or social factors (UNHCR, 1951). However, the traditional concept of refuge does not cover those displaced by climate change, creating a legal gap and exposing these populations to extreme vulnerability. Unlike refugees from war or political persecution, climate refugees are not recognized within the international legal order. This means that those fleeing rising sea levels, desertification, storms and other environmental disasters are not entitled to international protection as refugees. This omission has a direct impact on the safety and dignity of these people, who often face barriers to obtaining refuge and recognition of forced displacement status.

When a state faces a precarious institutional situation and is unable to guarantee the basic subsistence of its population, the international community must intervene to ensure the dignity and fundamental rights of the individuals affected (Brown, 2008). Thus, when extreme weather events present significant risks to the lives of people within a territory, especially when the state of origin fails to offer adequate protection, the responsibility of the international community becomes imperative (Piguet, 2008).

In this sense, the UN and UNHCR are relevant international bodies to promote humanitarian cooperation and protection, however, the UNHCR's work is still limited by the classic definition of refuge, which does not include forced displacement due to environmental disasters. This reinforces the urge to reformulate international treaties to incorporate protection for climate refugees (Jubilut, 2007; Zieck, 1997).

Although organizations such as the UNHCR and the IOM have expanded their guidelines to include displaced people by environmental events in their reports and recommendations, the lack of specific normative provisions still prevents States coordinated action to protect these vulnerable populations (UNHCR, 2024f). The absence of a legal framework for climate refugees entails a series of violations of fundamental human rights since the right to life, adequate housing and security are constantly threatened as millions of people are displaced with no guarantee of reception or reintegration.

In this sense, understanding how regional and international regulations address forced displacement and which principles can be extended to this new reality is a fundamental step towards proposing effective solutions. Europe has several treaties that extend protection to refugees. These include the 1959 European Agreement on the Abolition of Visas for Refugees and the 1990 Dublin

Convention, which regulates the distribution of responsibilities between member states in processing asylum applications (UN, 2002; Selm-Thornburn, 1998).

The 1967 Resolution on granting asylum to persecuted individuals and the 1984 Recommendation on the protection of people, despite meeting the criteria of the Geneva Convention, do not have formal refugee recognition and demonstrate the European concern with harmonizing refugee procedures. The 1980 European Agreement on the Transfer of Responsibility for Refugees establishes criteria for determining which country is responsible for processing refugee applications. In addition, the 1981 Recommendation on the Harmonization of National Procedures relating to Asylum aims to standardize the procedures for granting asylum between European states, guaranteeing more equitable treatment for applicants. In addition, the European Conventions on Extradition and Social Security play an important role in the protection of refugees (UN, 2002; Selm-Thornburn, 1998).

In Africa, the 1969 Convention of the Organization of African Unity (OAU) brought an innovation by broadening the concept of refugee. Unlike the 1951 Convention, which restricted refugee status to those fleeing individual persecution, the OAU Convention extended this protection to individuals who, due to external aggression, foreign occupation or serious disturbances of public order, were forced to leave their countries of origin (OAU, 1974). The 1969 Convention of OAU also established that the right to refuge must be considered a humanitarian and peaceful act, and it cannot be interpreted as a hostile action by other states.

In Latin America, the Treaty of Montevideo of 1889 was a pioneer in addressing the issue of asylum. Later, the 1954 Caracas Convention on Territorial Asylum and the 1984 Cartagena Declaration on Refugees consolidated protection for displaced persons in the region. It is also worth mentioning the Extradition Agreement and the Conventions on Asylum (UN, 2002; Selm-Thornburn, 1998).

Although these treaties were drawn up in different historical contexts from the current climate crisis, their provisions offer a potential framework for interpreting and addressing climate-induced displacement. The OAU Convention, for instance, broadens the definition of a refugee by including individuals affected by serious disturbances of public order. In light of contemporary realities, this category can encompass extreme weather events, such as prolonged droughts and catastrophic floods, which undermine national stability. Similarly, the Cartagena Declaration allows for a broad interpretation, including environmental refugees among those fleeing circumstances that severely disrupt public order. Although the abovementioned regional norms do not expressly mention the climate issue, they offer a relevant legal starting point for the construction of normative protections

for this new category of displaced persons. The legal hermeneutics applied to these documents can and must take into account the transformation of global reality in order to ensure the principle of human dignity and non-refoulement.

Regarding the international norms, the Fourth Geneva Convention of 1949, for example, addresses the protection of civilians in times of war and emphasizes the need to guarantee the safety of refugees, displaced persons and stateless persons in its article 44. The 1977 Additional Protocol reiterates this protection by establishing that these individuals are covered by the system of guarantees provided for in the Geneva Convention, specifically in article 73. Another fundamental document for safeguarding refugees is the 1984 United Nations Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment. In Article 3, it reaffirms the principle of non-refoulement, preventing anyone from being expelled, returned or extradited to a country where they may be subjected to torture (UN, 2002; Squire, 2009).

The 1967 United Nations Declaration on the Granting of Territorial Asylum is a regulatory framework that outlines legal principles for granting asylum and reinforces the prohibition on deporting people to places where their physical or psychological integrity may be at risk (UN, 2002; Squire, 2009). Similarly, the Universal Declaration of Human Rights (UDHR) of 1948 establishes, in its articles 13 and 14, the right of any person to leave their country of origin and return to it, as well as guaranteeing the right to seek and enjoy asylum in other countries. However, this right does not impose a binding obligation on states, leaving the decision to grant asylum at the discretion of each individual government (UN, 2002; Squire, 2009).

Despite advances in the international protection of refugees, these treaties and conventions show that there is a legal gap in offering protection to those who are forced to move for environmental reasons. However, the fundamental principles established in these norms, such as non-refoulement and the obligation of humanitarian protection, serve as basis for the development of a more comprehensive legal regime that is appropriate to the challenges posed by climate change (Goodwin-Gill, 1996). The principle of non-refoulement, which is one of the pillars of international refugee law, prohibits the deportation of individuals to countries where they are at risk of persecution or degrading treatment. This perspective recognizes that environmental degradation and climate change can severely compromise living conditions in countries of origin, and the return of these populations constitutes as a violation of the right to life and dignity (Ippolito, 2024).

In this context, the ecological vulnerability theory became a fundamental concept to support this interpretation because this theory was developed to highlight the interdependence between human beings and the environment, showing how both are subject to mutual risks and impacts. The theory considers that both ecosystems and human communities share systemic weaknesses when facing environmental disturbances, whether natural or caused by human actions. This vulnerability includes dimensions such as environmental, social, economic and institutional, recognizing that ecological impacts produce direct risks to the survival, dignity and fundamental rights of populations (Ippolito, 2024). Ecological vulnerability, in this sense, should be understood as an extension of human vulnerability able to provide States' positive obligations within the framework of international refugee and human rights law.

According to Harris (2014), ecological vulnerability comes from the natural processes of aging, illness and death of individuals, the complexity of the ecosystems in which humanity is inserted. It stresses that human survival depends on interconnected macro- and micro-ecologies, which in turn are susceptible to environmental degradation and damage. Thus, in adopting this concept, it is necessary to recognize that human beings have modified and established themselves in all parts of the environment and that the environment itself is embedded in human bodies and minds, as Bennett (2010) argues. This understanding requires that political, technological and scientific actions be conducted prudently and responsibly, in order to minimize the negative impacts of environmental degradation.

In practical terms, the incorporation of ecological vulnerability into the legal framework could manifest in, for example, a relaxation of the criteria for granting asylum in both national and international courts. Judges could recognize that the forced return of individuals to uninhabitable regions – such as areas devastated by desertification, water contamination, or irreversible sea-level rise – would constitute a violation of the right to life, health, and adequate housing, thereby justifying the granting of international protection under the principle of non-refoulement. Furthermore, this understanding can guide the creation of specific clauses in regional treaties or additional protocols to the 1951 Convention, formally recognizing severe environmental risks as a legitimate cause of forced displacement and as a ground for international humanitarian protection.

This is an interpretation that broadens international protection based on human dignity and the duty to not be exposed to extreme existential precariousness, even if it is not directly related to political persecution. Thus, ecological vulnerability can serve as a legal parameter for recognizing new subjects

of international protection, in an effort to update the normative system in the light of the observable impacts of the climate crisis.

Soil degradation, scarcity of water, ocean warming and decline in fish stocks are factors that affect the ecological balance and structure the individuals' life choices and opportunities in the same sense as market dynamics and social relations do. In this context, the perspective that environmental processes are excluded from discussions on justice and human rights becomes increasingly untenable. Therefore, applying the ecological vulnerability theory to the debate can contribute to reformulating the legal interpretation of the principle of non-refoulement.

Understanding ecological vulnerability as a relevant legal factor can promote a positive expansion of traditional refugee norms. Recognizing this vulnerability would strengthen the right to non-refoulement and contribute to the creation of more comprehensive humanitarian protection mechanisms that take into account the challenges posed by the growing global climate crisis.

Moreover, there is no obstacle to the adaptation of existing refugee protection frameworks to address emerging challenges that demand the development of new legal approaches. In other words, although there is a conceptual gap regarding climate refugees based on the absence of a uniform and legally binding definition, this does not exclude the States' responsibility to tackle this phenomenon (Myers, 2001; Vliet, 2018).

The debate on climate refugees requires a multidimensional approach based on the formal recognition of this category, the progressive adaptation of international law and the formulation of effective public policies at national and regional levels. To overcome the existing normative gap, one potential solution would be the creation of an additional protocol to the 1951 Refugee Convention, similar to the 1967 Protocol, that expressly expands the definition of refugee to include those who were displaced by environmental disasters and severe ecological degradation. This new instrument could establish objective criteria for eligibility, such as imminent climate risk, loss of minimum subsistence conditions and absence of state protection, as well as provide binding resettlement obligations and solidarity funding between States. Another one is to incorporate the notion of ecological vulnerability as a legal basis for the principle of non-refoulement, which would broaden the already recognized interpretation of the right to life and human dignity. The consolidation of a specific legal regime for climate refugees would ensure their protection and it would reinforce the international community's commitment to an effective and legally structured humanitarian response to the impacts of the global environmental crisis.

5 CONCLUSION

This study addressed the lack of legal protection for climate refugees, highlighting the vulnerability of these populations in forced displacements caused by extreme environmental events. It was argued that the 1951 Convention and its 1967 Protocol do not cover those who are displaced by environmental disasters, presenting a worrying legal gap due to the intensification of the global climate crisis.

Empirical evidence and recent studies show that climate change-induced displacement is currently one of the main causes of forced human mobility and disproportionately affect vulnerable communities in regions such as Bangladesh, the Sahel, the Pacific Islands and the Horn of Africa. Cases such as *Teitiotia vs. New Zealand* show that climate-induced displacement can constitute a direct violation of the right to life despite environmental impacts are not formally included in the traditional definition of refuge.

In addition to denying institutional visibility to these populations, the regulatory gap jeopardizes their access to fundamental rights, such as the right to life, adequate housing, dignity and international protection. In this scenario, two theoretical approaches offer consistent foundations for building a new legal paradigm: the climate justice theory and the ecological vulnerability theory. The former proposes that historically more polluting countries should be held accountable for the impacts of climate change, especially on developing nations. The latter highlights the interdependence between human beings and the environment based on human rights approach, showing that environmental degradation directly jeopardizes the survival of the most vulnerable populations. Combined with the principle of non-refoulement, which prohibits the forced return of individuals to territories where their lives and dignity are at risk, the ecological vulnerability theory can provide a legitimate basis for the legal protection of climate refugees.

The connection between these approaches reinforces the need to reinterpret existing international regulations in order to broaden the scope of humanitarian protection and ensure that those affected by climate change are protected. It becomes urgent to create concrete mechanisms that tackle the challenges posed by the new environmental reality. To this end, we propose the following.

The drafting of an additional Protocol to the 1951 Convention, similarly to the 1967 Protocol, that formally recognizes environmental displacement as a legitimate ground for international protection; the evolutionary interpretation of regional treaties, such as the Cartagena Declaration and the OAU Convention, based on the principles of human dignity and non-refoulement; the incorporation of ecological vulnerability as a legal basis in refugee claims, allowing national and international courts to recognize serious environmental risk as a threat to

fundamental rights; the creation of binding environmental clauses in human rights treaties, especially within the UN framework, and the promotion of international solidarity financing between states. In addition, the proactive action of international organizations such as the UNHCR and the IOM is essential to develop global normative guidelines and good practices for climate resettlement.

Recognizing climate refugees as subjects of law is a necessary measure to update the international protection system in the light of the challenges posed by the environmental crisis. The consolidation of a specific legal regime, with objective and binding parameters, is not only a normative adjustment, but a requirement arising from the commitments already made by states in the field of human rights. The absence of clear mechanisms compromises the effectiveness of the international system, and it is therefore essential to adopt legal instruments that guarantee the protection of these populations in line with the principles of human dignity, international solidarity and non-refoulement. The construction of an inclusive and effective legal regime is therefore not only a necessity, but a moral and legal imperative that humanity must face with responsibility and urgency.

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