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Construction of a Comprehensive International Legal Protection Mechanism for Climate Refugees

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ABSTRACT: Climate refugee has become an unavoidable major right crisis challenge for the international community. However, the corresponding development of positive international law is obviously imperfect. The basic rights of climate refugees cannot be fully guaranteed by international law. They are always facing problems such as unclear legal status lack of protection of basic rights, and imperfect relief mechanism. Those vulnerable groups who lack resources and migration abilities suffer more serious rights violations because they are forced to stay in place. Compared with the risk-management framework and right-protection framework, the comprehensive international legal protection mechanism is the inevitable choice for climate refugees' rights relief in the post-2012 period. The rights of climate refugees set out in the preamble of the Paris Agreement in 2015, the New York Declaration on Refugees and Migrants in 2016, the Global Refugee Compact in 2018, and the Global Compact for Security, Order and Regular Migration formally incorporated the issues of refugees and migrants caused by climate change, laying the foundation for this choice. However, it is a long and difficult way to build a perfect comprehensive international response to climate change. It is not only necessary to realize the integration of human rights law and climate law at the conceptual level, but also to integrate the different perspectives of the two laws and build a set of scientific and reasonable cooperation mechanism.

Keywords: Climate refugee; Human right law; Climate law; Refugee law; Comprehensive legal protection mechanism



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1. Introduction

Climate change loss and damage is a pillar topic of international climate law. Among the various types of climate change loss and damage [1], climate change-induced displacement stands out as the most severe one. Climate refugees, in particular, demand special attention due to their inability to access their countries of origin and the heightened risk to their survival. The causes of climate refugees are multifaceted, stemming from a combination of environmental, cultural, economic, and familial factors. Consequently, there is currently no unified conceptualization of climate refugees in international legal theory and practice.

Conceptual definitions of climate refugees are diverse and intricate, including climate migrants, climate change-induced displaced persons, climate refugees, environmental refugees, eco-refugees, environmental migrants, and so on. While these concepts are either intertwined or overlapping or point to a single point, different scholars have relatively consistent recognition of the general constitutive elements of climate refugees: (1) temporary or permanent forced migration across national boundaries; (2) due to sudden or progressive environmental damage related to climate change; and (3) a causal relationship between human behavior and climate change-induced environmental damage [2]. The issue of climate refugees is not purely social phenomenon, but also raises a series of challenging problems in international law: can climate refugees be categorized as traditional political refugees? What fundamental rights of climate refugees have been violated, and can they be attributed to climate change? Do climate refugees have a right to redress within the established international legal regime, and what are the shortcomings of the existing rules? How should international legal protection mechanisms for climate refugees be structured in the post-Paris era? Focusing on the characteristics of the climate refugee problem and the nature of different sectors of international law, academics have put forward a series of legislative ideas used to address the climate refugee problem, including: (1) creating a new convention aimed at

protecting climate refugees; (2) amending the 1951 Refugee Convention or adding an additional protocol to cover the climate refugees; (3) amending the international human rights law to provide human rights for the climate refugees, and some scholars have proposed to add an additional protocol to the European Convention on Human Rights (ECHR); (4) including a separate article on climate refugees in the United Nations Framework Convention on Climate Change (UNFCCC) or add an additional protocol to enhance the disaster risk adaptive capacity of climate refugees; (5) the Guidelines for Internally Displaced Persons (IDPs) can be better implemented for internally displaced climate refugees; and (6) regional cooperation or bilateral mechanisms for the resettlement of climate refugees; (7) creating an “Environmental Based Immigration Visa Program” (EBIV) akin to the current Nansen Passport Refugee Asylum Mechanism, based on the principle of “common but differentiated responsibilities” established in international climate law [3]. In order to force large greenhouse gas emitting countries to take responsibility, some scholars have even attempted to measure the share of responsibility of these countries in the issue of climate refugees through a set of scientific programs [4].

The main body of this paper is divided into four parts. The first part provides background knowledge and, using small island states as examples, briefly analyzes the mechanisms by which global climate change induces the climate refugee problem, the adverse consequences of the climate refugee problem, and the limited responses that have been made by the small island states. The second part of the article briefly describes the functional limitations of established international legal protection mechanisms in responding to the climate refugee problem. The third part of the paper reviews in detail the need for and feasibility of a comprehensive international legal protection mechanism for climate refugees in the post-Paris era and proposes specific legislative ideas. The fourth part briefly summarizes the entire discussion.

2. Global Climate Change Induced Climate Refugees: The Case of Small Island States

The authoritative scientific evidence on climate change released by the United Nations Intergovernmental Panel on Climate Change (IPCC) has illustrated the profound impact of shifting global climate patterns. With changes in global climate patterns, the escalating certainty of global warming has not only altered the direction of the earth’s ocean currents and intensified tropical sea surface temperature, but also extended the duration and heightened the intensity of global ocean storms. Moreover, it has led to a surge in sea levels, a surge in extreme weather events, exacerbated desertification, and increased the frequency of droughts and floods. This climatic shift is rendering the weather increasingly extreme and unpredictable [5]. The repercussions of global climate change are far-reaching, affecting nearly every country, regardless of its geographical location, size, or economic status. However, the impact is notably uneven. For the small island States of the Pacific and Indian Oceans with low-lying atolls and a very limited natural resource base, their natural geological attributes and the objective reality of being developing countries (lack of financial and technological resources to respond effectively to climate change) increase their vulnerability and susceptibility to damage [6].

The major concern for small island States is the rising sea levels. Since 1901, the global sea level has risen by 0.2 m, with an average rate of 1.5–2.1 percent between 1930 and 2000. Presently, sea level rise is still accelerating, and without effective control of greenhouse gas emissions by 2050, it is projected to reach 1 meter. Further melting of glaciers and ice caps will eventually lead to a rise of tens of meters [7]. According to the IPCC’s Fifth Assessment Report projections, the global oceans will continue to warm, and sea levels will rise by an average of 8–16 mm per year. By 2100, sea level rising will reach between 0.17 and 0.82 m, affecting around 70 percent of the world’s coastline [8]. The rise in sea levels is likely to persist for decades or even centuries, and there is a high probability that the limited territories of small island states, which are low-lying and composed mainly of atolls, will be submerged or become uninhabitable. On the one hand, climate change-induced sea-level rise will “redefine the physical geography of the world” and the small island State nationals lose their habitable territory [9]. Instances of islands sinking as a result of sea-level rise are already commonplace in some small island States [10]. To varying degrees, small island States such as Maldives, the Maldives, Kiribati, Tuvalu, and Tokelau are facing the risk of being erased from the world map. On the other hand, before the complete submersion of their land territories, atoll islands with already fragile ecosystems may become unsuitable for human habitation. The rising sea levels will trigger a higher frequency of natural disasters [11], lead to coastal and groundwater erosion, and cause the collapse of the domestic resource supply systems and agricultural production systems of small island states, leaving their nationals without adequate freshwater resources and food products [12]. The IPCC’s Fifth Assessment Report systematically assesses the adverse impacts of climate change on the livelihoods of small island states’ nationals, including erosion of coastlines, and shoreline erosion, degradation of marine and coastal biodiversity (for example, coral bleaching as a result of rising ocean temperatures), disruption of water resources and food production systems, loss of tourism and economies of small island States, and human health

impacts [13]. Specifically, firstly, as small island State nationals and the infrastructure on which they depend for their livelihoods revolve primarily around coastal areas, sea-level rise could result in severe damage to coastal infrastructure such as railroads, roads, and ports, as well as the inundation or destruction of coastal buildings, farmland, beaches and so on. Secondly, it will pose a significant threat to the tourism industry of small island states. The Maldives, for instance, is heavily reliant on tourism revenue, which accounts for 70% of the national GDP, and sea level rise directly threatens the financial health of the Maldivian State. Thirdly, it will affect the distribution and survival of marine organisms, prompting fish stocks to move away from the coast and leading to a sudden decline in offshore fishery resources. At the same time, warming sea water will lead to an excess of carbon dioxide in the seawater, resulting in excessive acidification of the seawater, jeopardizing coral reefs on which fish depend for their survival and undermining the stability of the marine ecosystem. This is a catastrophe for small island states whose mainstay is marine fisheries and aquaculture. Fourthly, rising temperatures will create conditions conducive to the propagation and spread of viruses and bacteria, leading to frequent public health incidents that directly threaten the lives and health of small island nationals [14].

As sea-level rise progressively deteriorates, or even completely submerges, the living conditions of the island or low-coastline states, the inhabitants of small island states in the Pacific and Indian Oceans can no longer remain in their communities of origin and are to migrate. When migration occurs within the territorial jurisdiction of a country, these nationals are referred to as internally displaced persons (IDPs). The IPCC report has shown that meteorological disasters, such as floods and droughts, are the primary cause of IDPs. In 2010 alone, the number of displaced persons in Asia, including Pacific small island states, amounted to 29.45 million people, which accounted for 77% of the global figure [15]. In 2017, although the number of IDPs due to natural disasters decreased, there were still 18.8 million people internally displaced by natural disaster events within 135 countries or territories globally. Meteorological disasters (including floods, storms, droughts, landslides, extreme temperatures, etc.) triggered the largest number of IDPs, totaling 18 million [16]. In a technical report, the Internal Displacement Monitoring Centre (IDMC) projected that “the 21 small island states of the South Pacific will generate a total of 20,310 displaced persons per year on average over the 2014–2018 period, with Papua New Guinea (7019), Fiji (4608) and the Solomon Islands (2483) rounding out the top three [17].” According to a study by the European Environment Agency, developed European countries such as the Netherlands, Germany, Belgium, Romania, Poland, and Denmark will face the same problem. Frequent flooding events following sea level rise will result in the forced displacement of more than 13 million people [18]. When small island states are unable to provide suitable land for displaced nationals to live on, they are forced to become migrants or refugees in search of a chance to survive. The IPCC’s Fifth Assessment Report states that “Climate change can lead to population movements at specific times and areas, which can create uncertainty for both the migrants and their countries of origin, as well as the host countries with uneven risks and benefits” [19]. The International Organization for Migration (IOM) recognizes climate change as a causal factor contributing to migration in its World Migration Report 2020, citing examples of climate migration in different ecological regions (i.e., mountainous, arid, and coastal) [20]. In 2016, the United Nations Institute for Environment and Human Security (UNU-EHS) released a series of reports that further identified the impacts of climate change on the Pacific Ocean’s small island nations, such as Tuvalu, Nauru, and Kiribati, resulting in transnational migration of nationals from these regions [21]. Compared to climate migrants, forced migration is a key feature of climate refugees, who face greater existential risks and require additional and prioritized rights guarantees. At present, except for some research papers that have made simple predictions about the number of climate refugees in the future [22], no official organization has issued authoritative predictions. However, it is foreseeable that due to the increasing interaction between climate change, environmental degradation, and natural disasters and the factors that drive refugees [23], there will be an increasing number of refugees forced by climate change to migrate from their countries of origin to other countries in the future. Given the limited natural resources of small island states, especially land resources, their nationals are at greater risk of becoming climate refugees.

Small island states must make various efforts and attempts. As to the practical difficulties in resorting to international litigation directly [24], small island states have addressed the issue of climate refugees either by themselves or by seeking bilateral cooperation. First, some small island states have attempted to “coexist with the islands” by building artificial coasts or islands. The Maldives, for example, has constructed a 1 square kilometer, 6-foot-high protective “sea wall” around its capital, Male, to counteract flooding from rising seas, and has also created an artificial island spanning 2 square kilometers [25]. Of the 16 islands belonging to Funafuti, the capital of the Western Pacific island nation of Tuva, 11 have now been expanded through artificial additions [26]. Second, some small island developing states have begun to consider the acquisition of new land from other countries. Former Maldivian President Mohamed Nasheed has gone on record as saying, “The Maldives envisions a sovereign wealth fund to buy new land from India, Sri Lanka, or Australia to move 300,000 Maldivians to safer territories [27].” President Anote Tong has

mentioned Kiribati is exploring the possibility of buying a habitable island from Fiji or East Timor, or a floating artificial island from Japan [28]. Third, they will sign bilateral treaties with neighboring countries to address climate migration or refugee admission agreements. In 2001, Tuvalu and New Zealand agreed on a migration plan for 75 Tuvaluans per year to be admitted by New Zealand, provided that they are physically fit, of good character, under 45 years of age, with English language skills, and that they have been offered jobs in New Zealand. In practice, under this program, New Zealand would only be able to accommodate 2275 of the 11,000 Tuvaluans by 2050 [29]. Last but not least, and always of paramount concern to small island states, the international community has been urged to work together, recognizing that it has limited capacity to deal with the climate refugee problem on its own. Since September 2011, the President of Palau has submitted several independent proposals to the UN General Assembly, calling on the international community to face up to the deadly existential threat posed by climate change to all of humanity, including small island states [30]. Small island states have also formed a coalition to speak out as a unified voice in global climate negotiations, asking for international support [31]. In 2014, the UN General Assembly adopted the Small Island Developing States Accelerated Programme of Action (SIDS) (also known as the Samoa Pathway), a program of action for small island developing States. In 2014, the United Nations General Assembly adopted the Small Island Developing States Accelerated Programme of Action (also known as the Samoa Pathway), which identifies the unique environmental vulnerabilities of small island states, particularly emphasizing the urgency of the severe challenges posed by sea level rise to their survival and development, and calls on the international community to take action as soon as possible to assist these countries [32].

Unfortunately, the development of international law on the issue of climate refugees has been extremely limited. In the existing framework of positive international law, climate refugees have not developed into a clear legal concept. The emerging issue of climate refugees possesses cross-cutting and intersectional characteristics; it can be a basic human rights protection issue, a refugee issue, a natural disaster issue, and more likely an environmental issue and a development issue [33]. These characteristics theoretically allow for the inclusion of climate refugees within the scope of adjustment of traditional sectoral international law, including international climate law, international refugee law and international human rights law. However, these sectoral laws have their legislative objectives (e.g., control of greenhouse gas concentrations, relief of natural disasters, protection of political refugees, asylum for economic migrants, etc.), and they did not take into account the issue of climate refugees at the time of their creation. Within the existing framework of positive international law, there is a normative gap in the right to relief for climate refugees.

3. Established Mechanisms of International Legal Protection: Protection of Rights or Risk Management

Climate refugees are the result of the adverse effects stemming from climate change (primarily environmental damages and natural disasters caused by greenhouse gas emissions), and their essence is the violation of human rights and relief (the violation of rights due to the adverse effects of climate change, and the prerequisite for the completion of their dignified migration is also the guarantee of their rights). Vulnerable groups who lack the resources and capacity to migrate suffer more severe rights violations as a result of being forced to remain in their current locations, intensifying their need for remedies. Consequently, there are two potential framework options to solve the climate refugee problem, one is to consider the migration behavior of climate refugees as a response to climate change adaptation and disaster risk management, and then to solve the issue within the framework of international climate law. The other is to view the climate refugee problem as a human rights issue, from the perspective of rights protection, exploring the climate refugee problem within the framework of international refugee law or international human rights law. Therefore, it is essential to sort out and summarize the effectiveness of these two frameworks in responding to the climate refugee problem.

3.1. The Rights Protection Framework: The Limits of Human Rights Law and Refugee Law

The rights protection framework places the facts of the violation of the rights of climate refugees and the need for remedies at its core, aiming to clarify the content of the rights that should be guaranteed in the migration process of climate refugees [34]. Within the established international legal framework, the legal mechanism that could theoretically provide rights protection for climate refugees is international human rights law. However, from a practical standpoint, international human rights law, despite its success in many areas, has not been able to offer sufficient basic rights protection for climate refugees [35]. This is because the application of international human rights law presupposes a direct violation of human rights (either the violation itself is the result of state action, or the state fails to take action within its mandate to safeguard human rights from violation), whereas the violation of the human rights of climate refugees by climate change is indirect—the accumulation of greenhouse gases leads to various types of sudden or

gradual environmental damage—in turn constrains the enjoyment or realization of their basic human rights. While it is widely recognized that climate change caused by human greenhouse gas emissions not only affects the stability of global ecosystems and exacerbates the deterioration of the living environment in specific regions [36], it also poses a serious threat to the enjoyment and realization of fundamental human rights, including the rights to life, health, and property [37]. In 2003, 63 Inuit in the Polar Regions filed a lawsuit directly with the Inter-American Commission on Human Rights (IACHR), requesting that the commission recognize that warming caused by U.S. greenhouse gas emissions directly violates many of their fundamental human rights, including the rights to culture, property, life and health, person, residence, and freedom of movement [38]. Unfortunately, these academic and practical claims have not been supported by authoritative scientific evidence or recognized by legal rules, and the conclusion that climate change directly causes human rights violations has always been in dispute. The UN Human Rights Council, in its 2008 and 2011 resolutions, although acknowledging that climate change has an impact on human rights, did not explicitly confirm the direct causation of human rights violations by climate change [39]. In its 2009 report, the UN Human Rights Council explicitly mentioned that “three challenging questions need resolution before climate change can be recognized as a cause of human rights abuses: (1) proving that emissions in one country have specific impacts on another; (2) proving that climate change alone is responsible for human rights abuses; and (3) establishing the applicability of human rights law in addressing human rights abuses [40].” Indeed, due to the typically severe, transboundary, cumulative, and dispersed nature of climate change loss and damage, proving that specific human rights have been violated as a direct result of a particular country’s greenhouse gas emission behavior would face considerable difficulty [41]. What is more, as most modern states have taken proactive measures to address climate change, the complementary protection under international human rights law [42] faces difficulties in meeting the conditions for its application (e.g., protection against arbitrary deprivation of life, cruel, inhuman or degrading treatment) [43].

Additionally, the limitations of the rights-based mechanisms established under existing international human rights law and the application of the principle of individual rather than collective protection make them less effective in safeguarding climate refugees. Similarly, lawsuits under international human rights law are often arduous and time-consuming to win, as evidenced by the dismissal in 2006 by the Inter-American Commission on Human Rights of a lawsuit initiated by the Polar Inuit against the Government of the United States in 2003. Indeed, while the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the International Covenant on Civil and Political Rights (ICCPR) both outline the responsibility of states to protect human rights, their effectiveness is notably limited. The former lacks a protocol providing individuals the right to bring cases before an ombudsman institution for human rights abuses and the latter has few signatories, making it ineffective. The former does not yet have a protocol providing for the right of individuals to bring cases of human rights violations to an ombudsman institution, while the latter is significantly less legally effective owing to the very low number of signatories [44]. Finally, although international law has “loosened up” in recent years regarding the obligation of states to protect the human rights of nationals of another state, its adherence to the “principle of effective control” remains a golden rule, with states generally owing human rights protection obligations only to persons within their territory or jurisdiction. Consequently, it is difficult to establish legal responsibility at the international law level for violations of the human rights of people in one country due to the global movement of carbon particles resulting from greenhouse gas emissions in another country. In other words, it is difficult to argue that the Government of the United States is legally responsible for violations of the fundamental human rights of nationals of the State of Tuvalu as a result of the adverse effects of climate change [45].

International refugee law is a component of international human rights law. Originating in the 1920s, it has continued to grow and evolve and has so far formed an international legal protection mechanism for political refugees, with the 1951 Convention relating to the Status of Refugees and its 1967 Protocol as its cornerstone. Due to the natural semantic correlation between climate refugees and traditional refugees in terms of definition [46], some scholars have advocated interpreting climate refugees as traditional convention refugees (i.e., political refugees) or giving the UNHCR a new legal mandate by way of amending or enacting a treaty [47]. Unfortunately, this approach has always been characterized by theoretical limitations and moral dilemmas that are difficult to break through. Firstly, climate refugees, unlike political refugees, do not arise on grounds of political persecution, and they can still definitively seek protection from their countries of origin. Instead of fleeing their alleged persecutors, as traditional refugees do, climate refugees seek refuge in the industrialized countries that are their persecutors [48]. Secondly, sovereign states have arbitrary interpretations of the Convention’s refugee eligibility conditions and tend to adopt more stringent asylum/refugee vetting procedures based on national interests to limit the number of applicants. Thirdly, the inclusion of climate refugees in the protection range of Convention refugees raises the moral hazard of climate refugees’ countries of origin, which may be passive in their response to climate change and may not actively adopt mitigation and adaptation measures

[49]. Conversely, even if climate refugees were to be categorized as traditional Convention refugees through an expansive interpretation of treaty amendment [50], the Refugee Convention regime would provide only limited protection. This is because the Refugee Convention is designed to protect a very limited number of people, leading to a binary dilemma of refugee protection [51]. In addition, the overly broad nature of the Refugee Convention regime itself renders it inadequate to address climate refugees: first, it is difficult to satisfy the exile (outside the country of origin) requirement for climate refugees who have not yet migrated outside their country of origin. As long as nationals of small island states still living in imminent danger of island sinking have not yet left their country of origin, they cannot claim refugee status [52]; Second, traditional international refugee law does not provide for the principle of common but differentiated burden-sharing [53], and lacks provisions for similar funding mechanisms, such as the Global Environment Facility (GEF) [54]; Third, although UNHCR has adopted collective screening measures as a customary practice, in practice states are accustomed to screening measures in an individual sense, whereby applicants are judged to be eligible for refugee status through case-by-case adjudication, to the detriment of collective relief for climate refugees [55]; Finally, UNHCR faces a capacity shortfall, with an annual budget that is no longer sufficient to support its assistance mandate to protect the growing number of political refugees and internally displaced persons (IDPs) [56]. Indeed, regional refugee conventions in Africa, Latin America, and Asia do not provide sufficient legal guarantees for the rights of climate refugees [57]. The normative gaps in these refugee conventions make it possible for sovereign states to reject applications for climate refugee status. In 2014, citizens of Kiribati unsuccessfully applied for climate refugee status in New Zealand based on land loss due to rising sea levels [58].

In sum, the specificity of climate change loss and damage, along with the current inadequacies in the mechanisms for safeguarding rights under human rights law and refugee law make human rights law remedies for climate refugees not realistically feasible at present. However, as the direct alignment of the rights protection framework with the rights guarantee needs of climate refugees, the international community has always held faith in the potential for remedies for climate refugees through refugee law or human rights law with a broader outreach. The New York Declaration on Refugees and Migrants issued by the United Nations General Assembly of Delegates in 2016, as well as the Global Compact for Refugees adopted in 2018, both explicitly include “persons who may be forcibly displaced across borders as a result of sudden-onset natural disasters and environmental degradation [59].” Regrettably, the current Global Compact for Refugees is merely an international initiative and does not have mandatory legal effect. The rules it sets out to guarantee rights are only instructive when it comes to the relief of climate refugees, with states having the right to adopt only a limited number of the human rights guarantees for refugees set out in the Compact. As the Deputy High Commissioner of the Office of the United Nations High Commissioner for Human Rights has stated, “While international human rights law does provide for the protection of the fundamental rights and dignity of all migrating populations, there is still a gap in the rules protecting the rights of climate migrants, especially those fleeing slow onset climate events [60].” However, in recent years, there are still some intentions for improvement, and an increasing number of supreme courts discuss the potential obligations of political majorities regarding the climate catastrophe. The climate verdict of the German Federal Constitutional Court (FCC) of 24 March 2021, published on 29 April 2021, is arguably (one of) the most far-reaching ruling(s) on climate protection worldwide that has ever been passed by a Supreme Court. In the ruling, the FCC applies the precautionary principle to human rights and now argues that human rights are affected even if, as in the case of climate change, many people are affected. This will prompt the relevant legal system to pay more attention to human rights abuses caused by climate change and strengthen protection measures for climate refugees. It is expected that more legal support and protection will be provided to climate refugees, and more rights and remedies will be obtained for them [61].

3.2. Risk Management Frameworks: Progress and Gaps at the UNFCCC

The Climate Risk Management Framework characterizes the migration of climate refugees as a form of adaptation to the risks of climate change. The framework endorses institutional measures to reduce the vulnerability of human societies to the adverse impacts of climate change and seeks to find comprehensive approaches to avoiding, minimizing, and resolving climate change-induced displacement [62]. Displaced persons in this context include not only internally displaced persons but also climate refugees who are forced to move across borders. Responding to climate change involves complex interests on a global scale and is a priority that must be faced by all of humanity as a whole. After decades of legal efforts, the international community has finally formed a set of climate risk management frameworks centered on the United Nations Framework Convention on Climate Change (UNFCCC) and related climate agreements. Therefore, the logical starting point for exploring solutions to the problem of climate refugees in the context of the

climate risk management framework is to systematically sort out and summarize the normative content of the UNFCCC and the relevant climate agreements regarding climate change-induced displacement.

The objective of the UNFCCC in 1992 was to stabilize the concentration of greenhouse gases in the atmosphere through “emission reductions” (i.e., efforts to decrease greenhouse gas emissions to 1990 levels) and “sink enhancements.” The Convention, being a framework convention, does not specify the specific responsibilities of the Parties [63]. In 1997, to implement the emission reduction targets set by the UNFCCC, the Conference of the Parties (COP) to the UNFCCC established a supplementary protocol, the Kyoto Protocol, which also focuses on the emission reduction targets and corresponding measures. All the provisions of the Kyoto Protocol focus on the emission reduction targets and corresponding measures. Although the UNFCCC and the Kyoto Protocol do not deal with the conceptual terms related to climate displacement, some scholars believe that the “adaptation” mentioned in the commitment of Article 4(1)(b) of the UNFCCC [64] has left a window for understanding climate displacement [65]. Subsequently, COPs began to pay attention to climate displacement as the problem became more serious. Initially, the COPs only recognized the relationship between climate adaptation measures and displacement, emphasizing the strengthening of adaptation actions. The 2008 Poznan COP14 was the first to mention the concepts of climate change-induced migration, and displacement. COP15 and COP16 directly included climate displacement as an issue on the agenda of the Interim Working Group on Long-Term Cooperative Action (AWG-LCA, established by COP13). The COP16 Cancun Agreements explicitly used the concepts of Displacement, Migration and Planned Resettlement in Article 16f and reaffirmed the importance of enhancing the capacity of the international community to address climate change-induced migration and relocation. COP18 directly recognizes human migration and climate displacement as “non-economic losses” within the concept of climate change loss and damage. COP19 specifically establishes the Warsaw Mechanism on Loss and Damage (WIM), which covers climate displacement [66]. The preamble of COP20 reiterates the issue of climate change loss and damage. In 2015, climate displacement was systematically considered for the first time in the COP21 Paris Agreement, with several references to climate displacement in the text. First, the preamble of the agreement calls on parties to respect, promote, and take into account their obligations to climate-displaced persons in their response to climate change. Second, the text of the agreement makes multiple references to the importance of protecting the resilience and livelihoods of people, communities, and providing them with access to water, food, and energy, as well as opportunities for livelihoods to address climate displacement. Third, Article 8 of the Agreement requires the WIM Executive Committee to strengthen understanding, action and support in the area of loss and damage to address climate displacement, which is a non-economic loss, and Article 50 of the Agreement urges WIM to set up a dedicated Task Force on Displacement (TFD) to provide comprehensive solutions for avoiding, minimizing and resolving climate displacement. Cop22 reviewed WIM’s work, approving a new five-year rolling work plan for WIM, which calls for “enhanced cooperation and facilitation on climate change-induced human migration [67].” In 2018, COP24 adopted a proposal submitted by the TFD for a comprehensive program to address climate displacement [68], and renewed the TFD’s mandate, encouraging the TFD to continue its work on climate displacement and human migration under a rolling five-year work plan. In 2019, COP25 considered WIM’s work for the second time, launched an expert group on slow-onset disaster events and non-economic losses, and established the Santiago Network to facilitate technical assistance to the most vulnerable countries.

Thus, following the 2007 Bali Action Plan, the international community began to pay attention to climate adaptation and displacement beyond “emission reductions” and “sink enhancement”, which has been touched upon at successive COPs, but only briefly, with climate displacement placed under “adaptation” or “loss and damage” [69], rather than given a separate status. It wasn’t until 2015 that the Paris Agreement elaborated on climate change-induced migration and displacement. However, the text of the agreement does not explicitly use the concept of climate refugees, leading to the conflation of climate refugees with internally displaced persons, which to some extent has distracted and weakened the focus and confidence of the international community in addressing the issue of climate refugees. In terms of normative content, the agreement only requires parties to respect, promote and give due consideration to their responsibilities in responding to climate displacement and encourages climate displacement to be addressed within disaster risk management frameworks. While the agreement provides for preventive and supportive measures for climate displacement, it lacks mandatory binding force and is insufficient. In addition, the Paris Agreement does not address the issue of compensation for damages or remedies for climate-displaced persons [70]. Preventive measures are certainly conducive to reducing the number of climate refugees from the root cause, but they can not completely solve the problem of the rights of climate refugees. Because, no matter what kind of preventive or adaptive measures are taken by human society over a long period in the future, there are some inevitable losses and damages [71]. In this sense, the WIM Executive Committee made the recommendation that “Parties should actively develop laws, policies and

strategies for climate change-induced human migration, taking into account human rights obligations and other standards and obligations under international law [72].” It can be said that the agreement documents reached at successive Conferences of the Parties (COPs), including the Paris Agreement, refer only to preliminary measures, and that international climate law does not currently form a specific, comprehensive, and systematic response mechanism to climate displacement [73]. One of the main reasons for this is related to the legal nature of international climate law. This is because, unlike international human rights law and international refugee law, which take a national perspective, international climate law, with the UNFCCC at its core, has consistently taken an international cooperation and global perspective, which mainly regulates the rights and obligations of states, and is less concerned with the responsibility of states to deal with individuals and groups [74]. A noteworthy development, however, is the formal enumeration of the rights of migrants in the human rights guarantees contained in the preamble of the Paris Agreement [75], which provides a normative basis for remedying the rights of climate refugees who migrate across national borders. However, not only is this provision lacking in detail in the body of the Paris Agreement, but subsequent Conferences of the Parties (COPs) have not developed remedies for the rights of climate-displaced persons accordingly.

4. Building a Comprehensive International Legal Protection Mechanism for Climate Refugees

The rights protection framework articulates the need for remedies for climate refugees, but the unique of climate change loss and damage, coupled with the inadequacy of current human rights law and refugee law rights protection mechanisms have hindered climate refugees from obtaining adequate rights protection, as evidenced by the lack of support for the human rights grievances of Arctic Inuit and the absence of support for the climate refugee claims of nationals of Kiribati. The Climate Risk Management Framework, on the other hand, circumvents the need for remedies for climate refugees by treating their migration as an adaptation to climate change and emphasizing disaster risk prevention and management measures to address the climate refugee problem. Although this approach avoids the challenge of proving “direct human rights violations due to climate change,” the strong soft law attributes of climate law (further weakened by the bottom-up nationally owned contribution mechanism established by the 2015 Paris Agreement) have given the risk management approach a strong humanitarian quality, making it difficult to establish a mandatory legal responsibility of states to respond to the rights and remedies needs of climate refugees. From the perspective of the dynamic development of international law, both human rights law and refugee law, as well as climate law, on which the rights protection framework and the risk management framework are based, have already made great contributions to solving the increasingly serious problem of climate refugees, and have yielded numerous institutional outcomes. However, up to now, these frameworks have not completely met the needs of climate refugees for rights relief, and many climate refugees remain outside the scope of international law protection. In light of this backdrop, academics have begun to explore new solutions to the issue of climate refugees. The rights protection framework and the risk management framework are not opposed to each other, but only have different focuses, with the former emphasizing on results while the latter on prevention. The former pursues bipolar corrective justice (from a national perspective), while the latter advocates multilateral distributive justice (from a global perspective). Therefore, in dealing with the issue of climate refugees, can these two frameworks cooperate, giving full play to the synergistic effect of the system? In the current fragmented international law system, there is a growing interaction and integration between different sectors of international law. In the field of climate change, there is a constant interweaving and influence between human rights law (including refugee law) and climate law [76]. This reality confirms that the solution to the climate refugee problem can rely on a comprehensive international legal protection mechanism. In other words, the remedy of the rights of climate refugees necessitates the synergistic effectiveness of climate law and human rights law (including refugee law). This proposition was acknowledged in a resolution adopted in November 2017 by the UN Human Rights Council [77]. Indeed, the construction of a comprehensive climate refugee legal protection mechanism has already begun to take shape, starting with 2015, when the human rights guarantees contained in the preamble to the 2015 Paris Agreement explicitly enumerated the rights of climate migrants, and in 2016, when the UN General Assembly’s New York Declaration on Refugees and Migrants, as well as the two 2018 Compacts (the Global Refugee Convention and the Global Compact for Safe, Orderly and Regular Migration), formally incorporated the rights of climate-induced refugees and migrants. These herald the possibility of further convergence between climate law and human rights law on the topic of climate refugees in the post-Paris context. However, the journey to build a comprehensive international legal protection mechanism for climate refugees is destined to be lengthy and arduous; not only must we achieve the conceptual coherence between human rights law (including refugee law) and climate law, but

we also need to diligently to construct a set of scientific and reasonable division of labor and cooperation mechanism based on the integration of different perspectives of the two laws.

4.1. Conceptual Coherence: Sustainable Development and People-Centered Principles

Conceptual coherence is a prerequisite for building a comprehensive international legal protection mechanism for climate refugees. Although there are differences in the legislative objectives of climate law and human rights law, with the dynamic development of international law, the concepts of the two have begun to interconnect. On the one hand, both climate law and human rights law (including refugee law) take the “humanistic concept of international law” as their guiding principle. The concept of human-centered international law emphasizes, in particular, that “international law should pay increasing attention to transnational human-centered affairs” [78]. This has led to two major trends in modern international law: first, human-centered international law pays special attention to natural resources and natural disasters, such as the environment and outer space, which are of interest to humankind as a whole, and legislative activities concerning issues of integral interest to humankind have been strengthened in international law. Climate law is related to the overall interests of human beings and has had a strong humanistic color since its birth. For example, the principle of common but differentiated responsibilities and the principle of respective capabilities of the UNFCCC emphasize that ecologically fragile or economically underdeveloped countries or regions should be given protection in a skewed manner. Since the Bali Action Plan in 2007, climate law has paid attention to the issue of climate displacement or climate migration, so the humanistic considerations of climate law have been further extended from countries or regions to individuals, which is a deepening development of the concept of humanistic international law. Secondly, international law pays special attention to the protection and safeguarding of the rights of human beings, which has led to the rapid emergence and development of human rights law. International law from “nationalism” to “humanism”, not only promotes some of the traditional sectors of international law with the times but also directly gave birth to a series of new branches of international law, for example, the general international human rights law and special international human rights law (for example, labor law, refugee law, etc.) have rapidly emerged and developed [79]. In recent years, due to the continuous improvement of human rights law, the principle of respecting human rights under the concept of “people-centeredness” has become a basic principle of international law in practice [80]. As climate law and human rights law are both institutional carriers of the concept of human-centered international law, they have a common basis at the conceptual level.

On the other hand, the infiltration of the principle of sustainable development in the two laws has provided an impetus to promote the integration of the concepts of the two laws. Sustainable development is dispersed in the norms concerning climate change response objectives, principles and measures. The 1992 UNFCCC not only included sustainable economic development as one of the climate change response objectives in Article 2 [81], but its Article 3 directly identified sustainable development as a fundamental principle of climate law [82]. The Delhi Ministerial Declaration on Climate Change and Sustainable Development adopted by COP8 in 2002 explicitly addressed global climate change under the framework of sustainable development. The preamble of the 2015 Paris Agreement also explicitly mentions, “to emphasize that climate change actions, responses and impacts are intrinsically linked to equitable access to sustainable development and poverty eradication.” Articles 2 and 4, as well as Article 6 (8) of the Agreement, refer to climate change response measures as being “linked to sustainable development and poverty eradication.” In the case of human rights law, the interaction with sustainable development has also become increasingly close, as the right to development, spawned by the sustainable development movement, has been politically recognized by States since the adoption of the Declaration on the Right to Development in 1986, and the right to development has been referred to as a third-generation human right. The interaction between human rights law and sustainable development culminated in 2018, when two global agreements adopted by the United Nations General Assembly in 2018—the Global Compact on Refugees and the Global Compact for Safe, Orderly and Regular Migration - both explicitly proposed that the international community adopt a comprehensive response in line with the 2030 Agenda for Sustainable Development to address refugee issues [83]. The penetration of sustainable development principles in human rights and climate law is not unidirectional, and the 2030 Agenda for Sustainable Development also provides for climate change and human rights safeguards in a reverse and systematic manner. For one, the 2015 2030 Agenda for Sustainable Development refers to provisions promoting human rights safeguards in the preamble and in Articles 8, 10, 18 and 19, which cover the reaffirmation of the Universal Declaration of Human Rights, the rights of women and children, and the empowerment of various vulnerable groups (in particular, refugees, internally displaced persons), among others [84]. Sustainable Development Goal 10.7 refers to migration and population movements, requiring states

to “promote orderly, safe, regular and responsible migration and population movements, including through the implementation of well-planned and well-managed migration policies”. For another, the 2030 Agenda for Sustainable Development, while recognizing the UNFCCC as the primary international intergovernmental forum for negotiating the global response to climate change, lists goals directly related to climate change, including Goal 9, Goal 11, and Goal 13. Specifically, SDG 9, builds resilient infrastructure, promotes inclusive and sustainable industrialization and fosters innovation; SDG 11, builds inclusive, safe, resilient and sustainable cities and human settlements; and SDG 13, takes urgent action to address climate change and its impacts [85]. As can be seen, the principle of sustainable development is so closely related to climate and human rights law, that the principle has gradually infiltrated key aspects of the two bodies of law, and can serve as a guide for the institutional integration of the two bodies of law. The principle of sustainable development is closely related to climate law and human rights law.

4.2. Integration of Perspectives: Merging Global and National Perspectives

Before the 2015 Paris Agreement, the international climate law framework was based on the UNFCCC and the Kyoto Protocol, established a global climate governance mechanism characterized by a typical “top-down” model, the core of which was the “allocation of emission reduction targets based on a unified standard”—the international community first formulated a global emission reduction target based on the global demand for greenhouse gas emission reduction, and then decomposed this target into mandatory emission reduction targets for each Annex B country. Such a system design highlights even more the international cooperation and global perspective of climate law, and downplays the national viewpoint. On the other hand, international human rights law has consistently emphasized the state-centered perspective, advocating that the guarantee of international human rights mainly relies on sovereign states, which are responsible for formulating laws and regulations in line with their national conditions to guarantee the human rights of their citizens, and do not have the responsibility of human rights protection for citizens of other countries. For international refugee law, this national perspective has been implemented, the sovereign state on the determination of refugee status enjoys the right to arbitrary interpretation. There is a conflict between the global perspective of climate law and the national perspective of human rights law [86]. The global perspective of climate law in addressing human rights issues arising from climate change implies that sovereign states have a responsibility to protect citizens of other countries from human rights violations due to climate change. Many countries, especially the umbrella group represented by the United States, have consistently excluded the global perspective of human rights protection, advocating for the national boundaries of human rights protection, and resisting assuming the obligation to protect and assist vulnerable groups in developing countries suffering from climate change [87]. Let alone accepting those forced to migrate due to climate change as refugees. For a long time, the international community’s shelving of the issue of climate refugees, the legal debate over climate justice [88], and the lack of aid funding for developing countries have reflected the developed world’s total resistance to a global perspective on human rights protection. However, the difference in perspectives between climate law and human rights law is gradually being ‘eroded’, or climate law is attempting to incorporate national perspectives, and human rights law is increasingly reaffirming global perspectives.

Specifically, as far as climate law is concerned, the Paris Agreement signals a shift in climate law from a global perspective to a hybrid of a “national perspective” and a “global perspective” [89]. On the one hand, the Paris Agreement adopts a “bottom-up” climate governance mechanism that relies mainly on countries to formulate emission reduction targets and design and implement responsive emission reduction and adaptation measures by formulating Intended Nationally Determined Contributions (INDCs) according to their own circumstances. On the other hand, there is still a certain degree of “top-down” in the coordination and harmonization of GHG emissions reduction, such as the basic principles of GHG emissions, rules for emissions accounting, rules for regular inventory and review, and methodologies to achieve transparency of actions taken by all parties [90]. In the realm of human rights law, the concept of international cooperation has always played an important role in the protection of human rights, even though it has not yet established a mechanism for sharing responsibility on a global scale similar to the one developed under the global perspective of climate law [91]. As mentioned in the report of the Office of the United Nations High Commissioner for Human Rights (OHCHR), “a global perspective on human rights protection can be found in the international treaties represented by the Charter of the United Nations. For example, the UN Charter explicitly refers to international cooperation in human rights protection [92].” The Global Compact for Refugees and the Global Compact for Safe, Orderly and Regular Migration, both adopted by the UN General Assembly in 2018, explicitly refer to the need to strengthen cooperation between countries of origin of refugees or migrants and host countries, as well as the international community, in enhancing the protection of the rights of refugees and migrants. The fusion of the perspectives of climate and human

rights law provides a methodological reference value for the construction of a comprehensive international legal protection mechanism for climate refugees.

4.3. *Division of Labor and Cooperation between Human Rights Law, Refugee Law and Climate Law*

Conceptual coherence provides direction for the construction of a comprehensive international legal protection mechanism for climate refugees, and shapes the value bond between climate law and human rights law systematization. The combination of global and national perspectives signals the feasibility of integrating and building on each other's work. However, the idea of recreating a new convention is too utopian and faces more practical obstacles [93]. Therefore, making full use of the established rules (including human rights law, refugee law and climate law) and reshaping the existing rule system with the goal of integrative division of labor and cooperation and realizing the integration of the fragmented rules may be a more feasible legislative concept.

The prerequisite for integrating the fragmented rules is to clarify the institutional boundaries between climate law, human rights law and refugee law in responding to the climate refugee problem. Since the essence of the climate refugee problem is the impairment of the rights of human beings, individually or collectively, and the question of remedies, human rights law should play the primary function. However, the established international human rights system has no rights that can be directly invoked by climate refugees. There are two options for resolving this dilemma. One is by applying a dynamic treaty interpretation approach to relevant rights in established human rights law, such as cultural rights, property rights, the right to life and health, personal rights, the right to housing, the right to freedom of movement and so on, can be expansively interpreted. So that the rights violations suffered by the climate refugees can, to a certain extent, be resorted to the remedies and protections of the international human rights law [94]. However, this approach is time-consuming and requires extensive practice in international law. Moreover, it has a typical anthropocentric tendency to ignore the intrinsic value of the environment and climate by treating them as external conditions for the realization of human rights [95]. The second option is to introduce rights exclusively for the use of climate refugees into the international human rights system. It is not appropriate to choose environmental rights, the connotation and extension of which are not yet certain, for the rights of climate refugees. From the perspective of natural rights, climate refugees should enjoy two kinds of rights: first, the right to emergency evacuation as individuals. In the event of an imminent threat to their survival, climate refugees, as co-owners of the Earth, should have the right to claim emergency evacuation from other nations, which is distinct from the right to freedom of movement as outlined in Article 12 of the International Covenant on Civil and Political Rights [96]. Second, as a collective, they should have the right to collective self-determination, which is derived from the aggregation of individual rights to self-determination. This does not refer to the collective right to self-determination in the sense of national secession and independence, as advocated by traditional international law scholars and Article 1 of the ICCPR, but rather as a right to continue to be self-governing and to achieve independence in a legal entity recognized by international law, even if one is rendered homeless [97]. However, such an approach would inevitably constitute a major change to the international system of human rights and would easily be resisted by the international community. Therefore, in the short term, international human rights institutions are likely to follow the first option in safeguarding the rights of climate refugees. However, the empowerment of human rights law does not mean that refugee law is no longer applicable. Refugee law is a special component of human rights law, and human rights law focuses on the responsibility of the country of origin, which can play a complementary role in cases where the country of origin is incapable of, or even is itself a causal factor in, the creation of climate refugees (such as by failing to respond to climate change actively). However, the prerequisite for the application of refugee law is "persecution for political reasons" [98]. Therefore, refugee law naturally applies to climate refugees resulting from the interaction of climate change with armed conflict and violence [99]. In other words, climate refugees not linked to traditional triggers must be considered within the scope of climate law, alongside internally displaced persons. Climate law has developed a series of risk management measures to address climate displacement and migration. These measures include enhancing the defense and disaster mitigation capacities of the home countries of climate refugees, building community resilience, providing capacity and resource support for potential climate refugees from the international community, and offering support measures for host countries of climate migration. These actions not only assist in resolving climate refugee issues after the fact but also contribute to preventing or reducing the scale of climate refugees at the source.

The integration of established norms also needs to take into account the interplay of, and build upon, specific legal protection mechanisms under climate law and human rights law (including refugee law), to promote the "human rightsization" of climate law and the "greening" of human rights law [100]. On the one hand, refugee law can draw on

beneficial institutional experiences from the field of climate law, such as a global cooperation perspective and established multilateral cooperation platforms involving national decision-makers, legal experts, scientists, businesses, environmental organizations, and citizens, which can provide a more scientific and rational decision-making basis for the effective solution of the refugee problem including climate refugees. Refugee law could also draw on the “principle of common but differentiated responsibilities and respective capabilities” established in climate law to establish a fair and feasible burden-sharing mechanism for the resolution of climate refugee issues, particularly the level of admission of climate refugees and financial support for climate refugees. Refugee law can also draw on the mature financial, technological and capacity-building cooperation mechanism under climate law to provide financial, technological and capacity-building support for countries to cope with the climate refugee problem. On the other hand, climate law can also absorb the excellent institutional experience in the field of human rights law. For instance, climate law can draw on the national perspective of human rights law (including refugee law) to emphasize the responsibility of countries of origin and host countries for the protection of the rights of climate refugees in the future climate agreement. Climate law can directly determine the minimum human rights treatment of climate refugees and internally displaced persons. The human rights guarantee provisions of the Paris Agreement explicitly enumerate the right to movement for climate refugees, but do not elaborate on the content and standards of that right. Therefore, it is possible to draw on human rights law to establish the foundational, non-derogable, and inherent character of the right to movement, and to apply the non-refoulement principle of refugee law to the entry and exit protection of climate refugees [101]. To promote the safeguarding of the rights of climate migrants under the Paris Agreement, it is recommended that this issue be included in the Nationally Owned Contributions (NOC) commitments and taken into account in the global stocktaking and review. Finally, the sustainability of bi-law cooperation also requires that the implementing agencies under the two laws establish a coherent mechanism for cooperation. Just as the Task Force on Displacement established by the UNFCCC Warsaw International Mechanism for Loss and Damage includes the United Nations High Commissioner for Refugees as a core member, future Global Refugee Forums could also involve the participation of the UNFCCC Conference of the Parties Secretariat and its permanent committees.

5. Conclusions

The essence of the problem of climate refugees is that the rights of human beings, as individuals or collectives, are violated as a result of climate change risks, including the rights to health, water, food, housing, self-determination and the right to life. Neither a single rights protection framework nor a risk management framework can provide adequate guarantees for the rights remedies of climate refugees. Constructing a comprehensive international legal protection mechanism for climate refugee law is an inevitable choice to solve the problem of guaranteeing the rights of climate refugees. The 21st-century international society is one where economic globalization and political multipolarity are becoming increasingly complex. And to adapt to the challenges of the new situation, the development of international law is also presenting new features, with “people-centeredness” and “sustainable development” becoming the main themes of international legislation. In this context, “people-centeredness” and “sustainable development” have become the conceptual basis for the interaction and integration of climate law and human rights law (including refugee law). Since the Cancun Agreement in 2010 and the Paris Agreement in 2015, the right-based approach to climate change has become the main theme of climate law. Human rights law (including refugee law) can no longer objectively avoid the issue of climate refugees. The 2016 New York Declaration on Refugees and Migrants, as well as the Global Compact for Refugees and the Global Compact for Safe, Orderly and Regular Migration, adopted in 2018, formally incorporate climate refugees into the scope of adjustment. All these rule of law efforts have laid a realistic foundation for the construction of a comprehensive international legal protection mechanism for climate refugees. Since the legislative vision of recreating a new convention is too utopian and will face more realistic obstacles, making full use of the established rules (including human rights law, refugee law and climate law), reshaping the existing rule system with the goal of the integrative division of labor and cooperation, and realizing the integration of the fragmented rules may be a more feasible legislative concept. The specific integration plan should include four main aspects: first, to recognize the basic human rights of climate refugees through extended interpretation or treaty amendment; second, to incorporate climate refugees caused by the interaction between climate change and traditional political refugee-inducing factors in the scope of refugee law adjustment; third, to encompass climate refugees and internally displaced persons outside the purview of refugee law adjustments into the ambit of climate law adjustments; and fourth, to enhance collaboration between the enforcement agencies of climate law and human rights law, facilitating the exchange of exemplary institutional practices between them.

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1. Losses and damages due to climate change can be divided into two categories: Economic losses, which include the loss of resources, goods and services that can be generally traded in the marketplace, loss of income (including agricultural production and tourism, and business) and physical losses (including infrastructure and property); and non-economic losses, which are goods that cannot be generally traded in the marketplace, including non-economic losses to individuals (life, health and human migration); societal non-economic losses (cultural heritage, territory, indigenous knowledge, social and cultural identity); and environmental losses (biodiversity and ecosystem services). It can therefore be argued that climate change-induced human migration has been identified as a non-economic loss. See United Nations Framework Convention on Climate Change (UNFCCC), “Non-economic losses in the context of the work program on loss and human migration”. context of the work programme on loss and damage”, FCCC/TP/2013/2, Oct. 9, 2013, <https://unfccc.int/resource/docs/2013/tp/02.pdf>.
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3. The study of climate refugees from the perspective of international law began at the end of the twentieth century, and has since undergone rapid development, with a large number of new research results.
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33. See Jane McAdam, “Refusing ‘Refuge’ in the Pacific: (De)Constructing Climate-Induced Displacement in International Law”, in Etienne Piguet, Antoine Pécoud and Paul de Guchteneire eds., in Etienne Piguet, Antoine Pécoud and Paul de Guchteneire eds., *Migration and Climate Change*, Cambridge University Press, 2011, p. 107.
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36. According to the Intergovernmental Panel on Climate Change (IPCC) Report published on Aug9,2021, emissions of greenhouse gases from human activities are responsible for approximately 1.1°C of warming since 1850–1900, and finds that averaged over the next 20 years, global temperature is expected to reach or exceed 1.5°C of warming. The report projects that in the coming decades climate changes will increase in all regions. For 1.5°C of global warming, there will be increasing heat waves, longer warm seasons and shorter cold seasons. At 2°C of global warming, heat extremes would more often reach critical tolerance thresholds for agriculture and health, the report shows. But it is not just about temperature. Climate change is bringing multiple different changes in different regions – which will all increase with further warming. These include changes to wetness and dryness, to winds, snow and ice, coastal areas and oceans. (See <https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/n>)
37. The impacts of climate change affect millions of people in the enjoyment of a wide range of human rights, including the rights to food, water and sanitation, health and adequate housing. Migrants fleeing the effects of climate change do not do so out of choice, but out of a need to escape from conditions that do not provide even the most basic rights. Throughout their migration, they face xenophobia, poor access to food, water, health care and housing, and the ever-present threat of arbitrary detention, human trafficking, violent attacks, rape and torture. See UN Human Rights Council (UNHCR), “Summary of the panel discussion on human rights, climate change, migrants and persons displaced across international borders”, U.N. Doc. A/HRC/37/35, Nov. 14, 2017, <https://undocs.org/A/HRC/37/35>.
38. See Sheila Watt-Cloutier, Petition to the Inter American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming. Caused by Acts and Omissions of the United States, Dec. 7, 2005, http://law.uh.edu/faculty/thester/courses/ICC_Petition_7Dec05.pdf.
39. Rana B. Submerging Islands: Tuvalu and Kiribati as Case Studies Illustrating the Need for a Climate Refugee Treaty. *Environ. Earth Law J.* **2015**, *5*, 100–101.
40. See UN Human Rights Council (UNHRC), “Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship between Climate Change and Human Rights”, U.N. Doc.
41. Gong Y. Liability for Climate Change Damage in the Context of Human Rights Law: Illusion or Reality. *Legal Sci.* **2013**, *1*, 75–85 (in Chinese).
42. International human rights law extends the scope of States’ protection obligations from refugees to persons at risk of arbitrary deprivation of life, torture or cruel, inhuman or degrading treatment or punishment. This is often referred to as “complementary protection” because it provides protection that is additional to that provided by the Refugee Convention. These protections are derived from the International Covenant on Civil and Political Rights, the Convention on Economic, Social and Cultural Rights and the Convention against Torture, and are also embodied in the European Convention on Human Rights. (Article 5 of the

- Universal Declaration of Human Rights and article 7 of the International Covenant on Civil and Political Rights, both of which provide that no one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.)
43. Jane M. The Emerging New Zealand Jurisprudence on Climate Change, Disasters and Displacement. *PKU Int. Compar. Law Rev.* **2016**, *1*, 75 (in Chinese).
 44. Kara KM. Extending Refugee Definitions to Cover Environmentally Displaced Persons Displaces Necessary Protection. *IOWA Law Rev.* **2009**, *94*, p. 166, 1116.
 45. See Jane McAdam, Environmental Migration Governance, *UNSW Law Research Paper No. 2009-1*, Feb. 28, 2009, <https://law.bepress.com/cgi/viewcontent.cgi?article=1143&context=unswwps-flrps09>.
 46. Black's Law Dictionary even provides a conceptual definition of a "climate refugee" as "a person who has been displaced as a result of a severe weather event or climate change (e.g., flood, drought)." See Refugee, Black's Law Dictionary (10th ed. 2014).
 47. Angela W. Turning the Tide: Recognizing Climate Change Refugees. *Int. Law Policy* **2008**, *30*, p. 514. p.514.
 48. Tony GP. Rising Seas, Receding Coastlines and Vanishing Maritime Estates and Territories: Possible Solutions and Reassessing the Role of International Law. *Int. Comm. Law Rev.* **2014**, *16*, 27.
 49. Kara KM. Extending Refugee Definitions to Cover Environmentally Displaced Persons Displaces Necessary Protection. *IOWA Law Rev.* **2009**, *94*, 1115–1130.
 50. As new international situations have evolved in recent years, the concept of refugee has been appropriately expanded in the documents of a number of international organizations or in regional treaties. The United Nations Children's Fund (UNICEF), for example, defines a refugee as "a person who has left his or her country of origin because he or she is no longer able to live in his or her homeland or because he or she fears some kind of harm, which may include war or natural disasters such as earthquakes and floods." The 1969 Organization of African Unity (OAU) Convention on Refugees and the 1984 Cartagena Declaration, which include displacement caused by events that jeopardize public order, also imply, to some extent, that "environment" and "public order" can be considered as distinct from other factors, such as social, economic, social and cultural factors. These factors can be juxtaposed with other factors such as social, political, war and economic factors.
 51. Specifically, on the one hand, countries of origin of refugees tend to bargain in a moral and humanitarian manner to extend protection to asylum seekers, while on the other hand, other countries are reluctant to take on more responsibility. See Stellina Jolly and Nafees Ahmad, "Climate Refugees under International Climate Law and International Refugee Law: Towards Addressing the Protection Gaps and Exploring the Legal Alternatives for Criminal Justice," *ISIL Year Book of International Humanitarian and Refugee Law*, Vol. 14, 2014–2015, p. 237.
 52. See Jane McAdam, *Supra* note 45.
 53. See Rebecca Dowd, Jane McAdam, "International Cooperation and Responsibility Sharing to Combat Climate Change: Lessons for International Refugee Law," *Melbourne Journal of International Law*, Vol. 18, No. 2, 2017, pp. 180–218.
 54. See Bonnie Docherty, Tyler Giannini, "Confronting a rising tide: A Proposal for a Convention on Climate Change Refugees". *Harvard Environmental Law Review*, Vol. 33, 2009, pp. 393–394.
 55. See Liang Shuying, *International Refugee Law*, Intellectual Property Press, 2009 edition, p. 148 (in Chinese).
 56. The United Nations Commission on Human Rights has adopted resolutions authorizing the United Nations High Commissioner for Refugees (UNHCR) to deal with internally displaced persons, but has not yet explicitly authorized the International Refugee Agency (UNHCR) or the Office of the High Commissioner for Refugees (UNHCR) to respond to climate refugees. See General Assembly, Res. 47/105, U.N. Doc. A/RES/47/105, Dec. 16, 1992, at § 14, <http://www.un.org/documents/ga/res/47/a47r105.htm>. Although UNHCR's Executive Committee has advocated for the adoption of the refugee definition set out in the 1969 Organization of African Unity Convention on Refugees and the 1984 Cartagena Declaration, which could encompass persons displaced by climate refugees, UNHCR has consistently refused to provide relief to the entire population of climate refugees. See Elisa Fornale and Curtis F J Doebbler, "UNHCR and protection and assistance for the victims of climate change", *The Geographical Journal*, 2017, pp.329–335.
 57. Benoit M. Environmental Migration: Prospects for A Regional Governance in the Asia Pacific Region. *Asia Pac. J. Environ. Law* **2013**, *16*, 77–103.
 58. Ilan K. Difficult Decisions: Migration from Small Island Developing States under Climate Change. *Earth 's Future* **2015**, *3*, 133–142.
 59. The Global Compact for Refugees provides for solutions to the climate refugee problem in a number of articles. Examples include "disaster risk reduction" (Article 9), preparedness measures (Articles 52, 53), the importance of global, regional and national mechanisms for early warning and early action (Article 53), and "evidence-based projections of future population movements" and "integration of refugees into disaster risk reduction strategies" (Article 79).
 60. See UN Human Rights Council, "Summary of the panel discussion on human rights, climate change, migrants and persons displaced across international borders", U.N. Doc. A/HRC/37/35, Nov. 14, 2017, <https://undocs.org/A/HRC/37/35>.
 61. See Ekardt, F.; Bärenwaldt, M. The German Climate Verdict, Human Rights, Paris Target, and EU Climate Law. p.4
 62. Piguet E, Kaenzig R, Guelat J. The Uneven Geography of Research on 'Environmental Migration'. *Popul. Environ.* **2018**, *39*, 357–383.

63. Ruth G. Climate Change and the Poorest Nations: Further Reflections on Global Inequality. *Univ. Colo. Law Rev.* **2007**, *78*, 1583.
64. In accordance with Article 4, paragraph 1 (b), of the UNFCCC, all Parties shall take measures to facilitate adequate adaptation to climate change. Paragraph 4 of the same Article provides that developed country Parties and other developed Parties included in Annex II shall also assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation to those adverse effects.
65. Because migration and resettlement are used as an adaptation strategy, climate displacement can be analyzed through an adaptation framework. However, understanding climate displacement through the lens of adaptation may oversimplify the complexity of the issue.
66. The Warsaw International Mechanism for Loss and Damage associated with Climate Change was established at the 2013 Warsaw Climate Conference at the urging of small island States to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change, especially the least developed countries. The mechanism has three main functions: to increase knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including the impact of slow onset events; to enhance dialogue, coordination, coherence and synergies among relevant stakeholders; and to enhance action and support, including financial, technological and capacity-building action and support, to address loss and damage associated with the adverse effects of climate change. (See <https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage/warsaw-international-mechanism#:~:text=The%20COP%20established%20the%20Warsaw%20International%20Mechanism%20for,change%20at%20COP19%20%28November%202013%29%20in%20Warsaw%2C%20Poland.%20>.)
67. See https://unfccc.int/sites/default/files/resource/5yr_rolling_workplan.pdf p.11 Strategic workstream (d)
68. In line with the Recommendations on Comprehensive Approaches to Avoid, Reduce and Resolve Displacement Associated with the Adverse Effects of Climate Change, the WIM Executive Committee recommends that Parties be invited to consider developing laws, policies and strategies in the context of human migration, taking into account human rights obligations and other standards and obligations under international law; strengthening research and data collection, risk analysis and information sharing while ensuring the participation of affected and at-risk communities; strengthening preparedness and early warning; and finding durable solutions for IDPs. The Executive Committee also recommended the continued development of good guiding principles and practices, and called for enhanced cooperation to avoid duplication of efforts on climate displacement and to promote coherence within the United Nations system in addressing population movements in the context of climate change. See Task Force on Displacement (TFD), “Report of the Task Force on Displacement”. of the Task Force on Displacement,” Sept. 17, 2018, https://unfccc.int/sites/default/files/resource/2018_TFD_report_17_Sep.pdf.
69. Parties hold different attitudes on the relationship between the issues of adaptation and loss and damage, with developing countries supporting the independence of loss and damage from mitigation and adaptation, while developed countries advocate the inclusion of loss and damage in the adaptation framework. See Ma Xin et al., “The Progress on Loss and Damage Negotiation for Addressing Climate Change Under the UNFCCC”, *Progress in Climate Change Research*, No. 5, 2013, pp. 357–361 (in Chinese).
70. Stellina J, Nafees A. Climate Refugees under International Climate Law and International Refugee Law: Towards Addressing the Protection Gaps and Exploring the Legal Alternatives for Criminal Justice. *ISIL Year Book Int. Hum. Refug. Law* **2014**, *14*, 227–235.
71. Examples include land that has been or will be lost due to sea level rise, loss of arable land due to protracted droughts, lives that have been or will be lost due to an increasing number of severe extreme weather events, etc. See Roda Verheyen and Peter Roderick, “Beyond adaptation: the legal duty to pay compensation for climate change damage”, Nov., 2008, <https://www.mendeley.com/catalogue/b6531cce-4468-304b-a661-dc41a3b76fd0/>.
72. See Task Force on Displacement (TFD), “Report of the Task Force on Displacement,” Sept. 17, 2018, https://unfccc.int/sites/default/files/resource/2018_TFD_report_17_Sep.pdf.
73. There is a loophole in the international treaty system on climate change regarding compensation for climate change damages. See Jiang Xiaoyi and Qin Tianbao, “A Brief Analysis of the Issue of Compensation for Transboundary Damage Caused by Climate Change”, *Learning Forum*, No. 11, 2012, p. 73 (in Chinese).
74. Hari MO. Learning from Environmental Justice: A New Model for International Environmental Rights. *Stanf. Environ. Law J.* **2005**, *24*, 75–78.
75. The preamble to the Paris Agreement states, “Recognizing that climate change is a common concern of humankind, Parties shall respect, promote and take into account their respective obligations with respect to human rights, the right to health, the rights of indigenous peoples, the rights of local communities, the rights of migrants, the rights of the child, the rights of persons with disabilities, the rights of persons in vulnerable situations, the right to development, and the obligations of the parties to gender equality, the empowerment of women and intergenerational equity in taking action to address climate change.”
76. Cosmin C. Hybrid Legal Approaches Towards Climate Change: Concepts, Mechanisms and Implementation. *Ann. Surv. Int. Compar. Law* **2016**, *21*, 29–41.

77. See UN Human Rights Council (UNHCR), “Summary of the panel discussion on human rights, climate change, migrants and persons displaced across international borders”, U.N. Doc. A/HRC/37/35, Nov. 14, 2017, <https://undocs.org/A/HRC/37/35>.
78. Xiao Y, Yuan F. The Development of International Law and a Harmonious World in the New Century. *WU Int. Law Rev.* **2010**, *1*, 18 (in Chinese).
79. Zeng L. The Trend of Humanization in Modern International Law. *Chin. Soc. Sci.* **2007**, *1*, 89–103 (in Chinese).
80. The traditional view is that respect for human rights is not a fundamental principle of international law. However, some scholars believe that the consideration of whether a principle is a fundamental principle cannot be based solely on express legal documents such as the Charter of the United Nations and the Declaration of Principles of International Law, and that more evidence of the existence of such a principle should be found in international practice. See Xiao Yongping and Yuan Faqiang, “The Development of International Law and a Harmonious World in the New Century”, *WU International Law Review*, No. 1, 2010, p. 14 (in Chinese).
81. Article 2 of the UNFCCC states that “greenhouse gas emissions should be contained within levels sufficient to enable ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner within a time frame.”
82. Article 3 of the UNFCCC sets out five basic principles of climate law in turn, including: the principle of common but differentiated responsibilities and respective capabilities; the principle of taking into account the special circumstances of developing countries; the principle of risk prevention and cost-effectiveness; the principle of sustainable development; and the principle of international cooperation. In relation to the principle of sustainable development, Article 3.4 of the UNFCCC states that “Parties have the right to, and shall, promote sustainable development. Policies and measures to protect the climate system from anthropogenic changes should be appropriate to the specific circumstances of each Party and should be integrated into national development plans, taking into account that economic development is essential for the adoption of measures to address climate change.”
83. These include providing climate resilience in countries of origin through disaster risk management measures to radically reduce climate migration; facilitating the upgrading of host countries’ resources and capacities through international cooperation mechanisms to ensure that they are not undermined in their efforts to achieve sustainable development goals; and providing resources and expertise to support them in removing obstacles to return and creating conditions conducive to voluntary repatriation or exploring the conditions for the naturalization of refugees, among others. (See GLOBAL COMPACT ON REFUGEES United Nations • New York, 2018. pp. 88)
84. See General Assembly, “Transforming our world: the 2030 Agenda for Sustainable Development,” A/RES/70/1, Sept. 25, 2015, at https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.
85. See <https://sdgs.un.org/2030agenda>
86. He J. The Human Rights Dimension of the Paris Agreement. *Hum. Rights* **2017**, *6*, 99 (in Chinese).
87. John HK. Linking Human Rights and Climate Change at the United Nations. *Harv. Environ. Law Rev.* **2009**, *33*, 477–498.
88. Cao M. China’s Legal Position and Strategy for Participating in International Climate Governance: Taking Climate Justice as a Perspective. *China Law J.* **2016**, *1*, 34–38 (in Chinese).
89. The Paris Agreement has set up a system for allocating emission reduction obligations that combines a certain degree of top-level control with freedom and flexibility, making the bottom-up model of global climate governance visible. See Yu Hongyuan, “Capability Constraints for the Development of Artificial Intelligence in Russia and Evaluation for Russia’s Dilemma of Participation in Global Value Chain”, *Studies in International Relations*, No. 1, 2020, pp. 110–124 (in Chinese).
90. Cao M. *Supra* note 88, 34–38 (in Chinese).
91. Mao J. Multiple Practice Forms of International Cooperation for Human Rights. *PKU Int. Compar. Law Rev.* **2014**, *1*, 3 (in Chinese).
92. See UN Human Rights Council (UNHRC), *Supra* note 42.
93. Jane M. Swimming Against the Tide: Why a Climate Change Displacement Treaty is Not the Answer. *Int. J. Refugee Law* **2011**, *23*, 8.
94. Matthew S. Natural disasters, climate change and non-refoulement: what scope for resisting expulsion under Articles 3 and 8 of the European Convention on Human Rights? *Int. J. Refugee Law* **2014**, *26*, 404–432.
95. Gong Y. *Supra* note 41, 75–85 (in Chinese).
96. The basic idea of this view is that, in the process of the transformation of primitive societies into modern political societies, not only did they give rise to a system of private property rights (both private property rights in the sense of domestic law and territorial sovereignty and permanent sovereignty over natural resources in the sense of international law), but they also retained the same kind of limitation on property rights as pre-institutional rights of nature, i.e., the recognized right of private property in the national and global context is not an absolute and unfettered right, but rather it has always been limited in its scope and effect by the right of emergency shelter and the right of emergency refuge. Thus, in the event of a climate refugee tragedy, the preconditions implicit in humanity’s agreement on the property rule are triggered, the various natural resources of the planet are restored to their original state of communion (in order to sustain the basic survival of all human beings), and the climate refugees can claim their original collective ownership of the planet’s resources and use the resources appropriated

by others in order to achieve self-preservation. See Katrina Miriam Wyman, “Sinking Islands,” in Daniel H. Cole and Elinor Ostrom eds. *Property in Land and Other Resources*, Puritan Press, 2012, pp. 449–450; Mathias Risee, “The Right to Relocation: Disappearing Islands Nations and Common Ownership of the Earth”, *Ethics and International Affairs*, Vol. 23, No. 3, 2009, pp. 283–294.

97. Modern international law has established the self-determination of peoples as a fundamental principle of international law, the basic meaning of which is: “All peoples under alien colonial domination, foreign occupation and subjugation have the right to decide for themselves their own destiny, their own political status and to conduct their internal and external affairs independently, and this right shall be respected by the international community, and all States shall have the duty not to hinder, interfere with or deprive them of this right in any way. Any failure to do so shall constitute an internationally wrongful act for which the State concerned shall bear international responsibility. The peoples and nationalities of these countries have the right to conduct their internal and external affairs independently and autonomously, the right to choose their preferred political and social systems and the right to develop their own economic, social and cultural activities independently. With regard to these rights, all other countries are obliged to respect them without interference.” See Yang Zewei, “On National Self-Determination and State Sovereignty in International Law”, *Legal Science: Journal of Northwestern University of Politics and Law*, No. 3, 2002, p. 40 (in Chinese).
98. While the Global Compact on Refugees covers the issue of refugees due to climate change, the fact that the Compact is currently only an international initiative and is not mandatory and binding determines that states may only take the limited measures contained in the Compact to safeguard the rights of climate refugees.
99. See UN High Commissioner for Refugees (UNHCR), “In Harm’s Way: International Protection in the Context of Nexus Dynamics Between Conflict or Violence and Disaster or Climate Change”, Dec., 2018, <https://www.refworld.org/docid/5c2f54fe4.html>.
100. He J. The Human Rights Law Dimension of Climate Change. *Hum. Rights* **2015**, *5*, 84–101 (in Chinese).
101. The basic meaning of the principle of non-refoulement is that states are prohibited from refusing to receive climate refugees or returning them to territories where their lives are at serious risk, specifically not to be returned to the territory or borders of a country where they are unable to stay or reside due to environmental degradation caused by anthropogenic climate change. See Sun H. Research on the Right to Movement of Climate Refugees. PhD Thesis, Wuhan University, Wuhan, China, Jun. 1, 2013, pp. 74–78 (in Chinese).