

# ***Addressing Impacts from Climate Change Within International Legal System: More Precise Distribution of Responsibilities***

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**Abstract:** As the international challenges resulting from climate change become emergent, how to reform international law and institutions to reduce the effects of climate change has become a crucial issue. This paper carries out surveys on regulating and restructuring the present international law system about current issues and provides suggestions for further practice. We can also consider building a climate club. The existing climate regulation mechanism needs to improve, leading to problems such as carbon leakage and free riding. Climate clubs can urge countries to fulfill their obligations by rewarding member states that fulfill their obligations and cracking down on non-member states. Apart from efforts in environmental governance, the international law system should also attach attention to the issue of climate refugees as a reaction to climate change. The last article argues that international society should provide legal protection for climate refugees, and it is reasonable for them to acquire a formally defined legal status for future humanitarian care. This thesis also explores the potential role of regional bodies in addressing climate change outside of the United Nations Framework Convention on Climate Change (UNFCCC) and the legitimacy of their responsibilities based on constitutional treaties, their role in regulating the international commons, and their relationship to the UNFCCC. Based on this, this thesis suggests that regional institutions take on more responsibility in regulating state obligations and propose possible solutions to the climate change crisis. CBDR is an essential principle in the cooperation among countries to solve the problem of global climate change. It makes global cooperation fairer and more effective but also generates some problems. The main problem is that there is no clear division of responsibilities between countries, and policies must be implemented. This paper proposes three ways to divide responsibilities and argues that companies must actively participate in global emission reduction activities.

**Keywords:** International Law, CBDR, Climate Refugee, Climate Club, Regional Institutions

## **1. Introduction**

The principle of Common but Differentiated Responsibilities (CBDR) has been used as the guiding principle in the climate agreement since the parties mentioned the CBDR in the Rio Declaration issued in 1992. The connotation of CBDR is that the climate issue is a global issue that will affect every country, But countries differ from each other in the levels of economic growth, technological advancement, and contamination. Therefore each country should be given different responsibilities from the perspective of fairness and reality. Some problems have been exposed in the practice of CBDR for nearly three decades. The main problem lies in the different understanding of fairness between developed countries and developing countries, which is reflected in the dissatisfaction of developed countries with the distribution of responsibilities.

## **2. A Possible Way of Improving the CBDR System**

### **2.1. The Establishment of an Economic Commission Can Effectively Measure the Different Economic Levels of Different Countries**

The basis for perfecting the CBDR system is that the United Nations established a fair, powerful, and effective committee to set parameters and quantify countries' economic and technological levels. Based on the data given by the committee's working group, responsibilities are distributed more reasonably and fairly, such as Divide different countries into Group A, Group B, and Group C and assigning different parameter standards to each group, which will play a guiding and motivating role in NDCs [1].

#### **2.1.1. Developed Countries Should Take More Responsibility**

The first point is from a practical point of view. Developed countries pay less for emission reduction tasks than developing countries because of their high-level economy and technology. The burden brought by the emission reduction task to developed countries is more to slow down the speed of economic development. However, for some developing and least-developed countries, it may be an economic burden that cannot be borne. Based on this, developed countries should also give economic and technological assistance to developing countries while undertaking more significant commitments to reduce emissions. The second point is from a historical point of view; some developed countries' economies are derived from the direct or indirect exploitation of developing countries in the 16th to 20th centuries, such as the colonial aggression and expansion of the British Empire [1]. Based on this, developed countries should assume greater responsibilities in the 21st century and bring help to other countries.

#### **2.1.2. Differentiate Responsibilities According to the Harm Caused**

This point can be considered from two perspectives. The first point is to assign different responsibilities based on the current situation. Countries with significant emissions should assume more responsibilities in the CBDR. However, there is a unique situation here, that is, developing countries need a large amount of emissions to support their own development, and at the same time, more than the level of science and technology is needed to make them complete the task of reducing emissions. In this case, developing countries should prioritize satisfying their economic development to better complete emission reduction tasks in the future [2]. Before that, developed countries should provide guiding technical support to help developing countries do their best to reduce emissions. In this case, (whoever causes the most pollution is more responsible); developed countries should take the lead and prioritize emission reduction tasks because they have sufficient management capabilities

and technological levels. The second point is that from a historical perspective, countries that have caused high pollution levels should be more responsible now [1]. Since the Industrial Revolution, Western industrial powers have achieved economic and technological leaps through subversive and cross-generational development. At the same time, it has inevitably brought severe environmental pollution to the world. From 1750 to 2020, the cumulative carbon emissions of the United States were 416.72308 billion tons, accounting for 24.6% of the global cumulative carbon emissions of 1.69652417 trillion tons. The EU accounted for 17.1% (The country with the highest cumulative carbon emissions is the United States, South Korea ranks 18th, and China is currently the largest emitter Kuinan Jin Mindao Qi in Nov 2022). From this point of view, today's developed countries in the West are prosperous and robust, with mature technology, and global environmental problems are becoming increasingly severe. Developed countries should assume greater responsibilities based on their capabilities.

## **2.2. Enterprises with Large Emissions Should Actively Participate in Emission Reduction Tasks**

### **2.2.1. The Environmental Hazards of the Fossil Fuel Industry**

In many international issues, sometimes corporations can play as pivotal a role as states. Regarding the emission reduction task on the climate issue, enterprises should realize their responsibilities and capabilities, shoulder the mission of the times, and actively cooperate with the emission reduction tasks proposed by international organizations. Fossil fuel companies should bear the most significant responsibility. From 1965 to 2017, 20 fossil fuel companies worldwide continued to exploit oil, natural gas, and coal, producing 35% of the world's carbon dioxide and biogas, equivalent to 480 billion tons of carbon emissions.

### **2.3. How to Reduce Harm**

The United Nations can set up a climate issue foundation with the consent of the members, and the five permanent members and developed countries can take the lead in calling for enterprises to donate funds in their respective countries. The foundation's funds will assist climate refugees and help developing countries complete emission reduction tasks. In addition, countries should impose an additional pollution tax to limit the carbon emissions of industrial enterprises. This tax can be injected into the Climate Issues Fund through national donations. On this issue, developing countries should prioritize their own economic development and levy taxes as appropriate.

## **3. The Regional Institutions Should Take More Responsibilities**

This essay section provides a possible solution to climate change. It discussed the legitimacy of the responsibility of regional institutions, highlighting the effect of institutions on international commons and illustrating the relation between regional institutions and the UNFCCC. The possibility shown by the section is cohesively related to other sections of the essay and eventually combined to form a possible solution to the crisis posed by climate change.

### **3.1. Possible Role of Regional Institutions: Reconciling and Complementing Obligations of States in Climate Change Beyond the UNFCCC.**

"Regions are frequently defined as groups of countries located in the same geographic space." [3]. Regional institutions are an essential part of International Institutions, referring specifically to transnational organizations linked by geographical factors, such as the European Union (EU) and the Organization of American States (OAS). The Regional Institutions were mainly established to

safeguard the common interests of the countries in the region, which also included the sustainable benefits that could be derived from predictable environmental protection, which is mainly recorded in their constitutional treaties.

However, as Remi Moncel Harro van Asselt [4] has argued, the global emissions reductions achieved to date are far from sufficient to achieve the UNFCCC goals of "prevent(ing) dangerous anthropogenic interference with the climate system" and "reducing global greenhouse gas emissions to hold the increase in global average temperature below two °C above pre-industrial levels." While having more vital relativity and the advantage of regionalism, regional institutions should take more responsibility in regulating the rights and obligations of states in facing challenges along with climate change in particular fields. In the section, this view will be elaborated in terms of the legitimacy of the responsibility of regional institutions, the role of the UNFCCC in the practice, and the governance of international commons.

### **3.2. The Legitimacy of the Responsibility of Regional Institutions: From Constitutional Treaties.**

Constitutional treaties are on which international institutions are founded, such as The Treaty on The Functioning of The European Union (TFEU) and The Treaty on European Union (TEU) in the case of the European Union and the Charter of the Organization of American States (COAS) in the case of the Organization of American States (OAS). The Charter of the Organization of American States (COAS) of the Organization of American States (OAS) sets out the purposes for which the organization was established and the obligations of each member State.

Unfortunately, among so many constitutional treaties, only a few, such as the TFEU and the TEU, explicitly provide for the obligation of the EU to protect the environment, but this does not mean that the obligation of regional organizations to protect the environment which empowers institutions to regulate the obligations of states better lacks constitutional justification. Many constitutional treaties, such as the Charter of the Arab League, COAS, and the Declaration on Establishment of the Single Economic Space, include the purpose of their establishment as including the protection of the economic interests, social welfare, and health of inter-regional States. In contrast, the damage caused by climate change and its impact on the health of the citizens of States, and even on the reduction of the territories of some of the island States, fall within the scope of the protection of regional organizations. Just as Selin, H., & Van deveer [5] state, the benefits of expanding the utility of regional organizations in regulating climate change can be seen in four areas: benefiting from policy learning, capturing economic benefits, addressing adaptation challenges, and providing global leadership. In fact, "the EaEU, led by Russia, has a regulatory role to play in environmental governance within the global commons based on economic exchanges." [6].

### **3.3. International Commons and Regional Institutions**

As illustrated by Nico Schrijver [7], the global commons refers to areas and resources beyond any State's sovereignty, such as marine and atmospheric resources. Due to the public and global nature of the commons, the obligations of states in making use of international commons, especially the atmosphere and oceans, are playing significant roles in slowing climate change. The point is that regional organizations should play a more active role in the process via collaborative science, technology, and experience [8].

The 47 submissions on the regulation of the commons solicited by the UNFCCC 2020 Global Dialogue on Oceans for States Parties and non-States Parties could be used to argue the need for regional organizations to have a role in helping developing countries. For example, according to Dobush et al. [8], Panama expressed the need for transnational scientific research to support science-

based policies, focusing on assisting countries that cannot conduct in-depth studies of ecosystems in understudied areas in its submission and called on countries that have successfully integrated oceans into their national climate policies to provide advice and share experiences.

This kind of communication in science, technology, and experience can be better realized in countries with the same geographical conditions. For example, while it is difficult for island countries in the northern frigid zone, such as Iceland and Switzerland, to offer much empirical help to African island countries in the tropics, Japan's technical assistance to Cambodia, which is also in the Asia-Pacific region, is making sense.

### **3.4. Regional Institutions, centrality, or marginalization of the UNFCCC?**

When the United Nations Framework Convention on Climate Change (UNFCCC), as a global treaty under the United Nations, exerts a global constraining effect, as Moncel, R., & Asselt, H. [4] note, many in international jurisprudence have argued that giving a more significant role to regional institutions would diminish its power and marginalize it. Indeed, this concern has merit, and the United Nations Framework Convention on Climate Change has significant limitations in regulating the allocation of obligations and compliance mechanisms within regions, especially in sanctioning and compliance methods. As articulated by Hartwell, C.A. [6], in the case of the European Union, for example, geographically, regionalism has more sanctioning and compliance mechanisms than the "least common denominator" mechanism employed by multilateralism, i.e., the UNFCCC. The issues of compliance and liability regulation are discussed in other sections of the essay.

However, the provisions of the UNFCCC and its Conference of the Parties (COP) should be at the core of the regulatory process of environmental change, both in the agreements of international organizations in the region and the domestic laws of independent countries. This centrality can be embodied in setting emission standards and the responsibilities of different countries, with UNFCCC and COP having the responsibility of monitoring and supervising carbon emission standards globally. The standards set by the UN serve as the primary and minimum standards; regional institutions should be encouraged to set standards higher than the global standards and further subdivide the standards for countries in each region. The role of regional institutions in this centralized mechanism can also be seen as an improvement on the CBDR mechanism.

## **4. Building a Climate Club to Solve the Existing Problems**

Against the backdrop of the worsening global climate problem, the existing treaties need to be revised in terms of both the logic of dealing with the climate problem and the strength of the solution. Therefore, we need to analyze present problems and establish a climate club to solve climate problems with a new path. Following are several existing problems.

### **4.1. Three Existing Problems**

#### **4.1.1. Free-riding Problem**

Climate can be viewed as a public good, meaning that the efforts of some countries will inevitably benefit others who do not. Besides, climate treaties are too weakly enforced: In existing climate agreements, there are no penalties for those who do not participate or for those who break their promises [9].

Under the influence of these two factors, countries may be unwilling to fulfill their duties, prioritizing their national interests over global interests [9]. Figuratively speaking, to engage in hitchhiking.

#### 4.1.2. Carbon Leakage Problem

Carbon leakage refers to a company's decision to move production from a country with strict guidelines to one with more lenient policies. Ultimately, the effectiveness of global carbon emission reduction is not significant [10].

At present, governments set their carbon price (the price of greenhouse gas emissions in units per ton of carbon dioxide equivalent) or carbon tax, and the differences in the cost of emitting greenhouse gases between regions inevitably lead to carbon leakage, which objectively requires countries to strengthen the international coordination of carbon emissions.

#### 4.1.3. Instability of Climate Treaties

Article 28 of the Paris Agreement states: “At any time after three years from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement by giving written notification to the Depositary.”

Climate treaties are relatively unstable, with countries having the option of voluntarily joining or withdrawing from them, so their effectiveness must be firmly established.

### 4.2. Usages of a Climate Club

#### 4.2.1. The Concept of Climate Club

One of the representative transformational club models widely discussed was proposed by academic William Nordhaus: climate club is a coalition of countries organized to encourage high levels of participation and abatement [9].

#### 4.2.2. Differences between Climate Club and Existing Climate Regulation Mechanisms

Table 1 shows the differences between the Climate Club and existing climate regulation mechanisms to set the stage for the subsequent arguments for the superiority of the Climate Club.

Table 1: The differences between the Climate Club and existing climate regulation mechanisms

| <b>Difference</b>           | <b>Climate regulation mechanisms under the UNFCCC</b>             | <b>Climate club</b>   |
|-----------------------------|---|---|
| Members' interests          | No tangible membership benefits other than international prestige | Exclusive membership benefits   |
| penalties                   | Almost none   | Penalties will be imposed on non-members and member states that did not meet the target.                                |
| Level of compulsion         | States may voluntarily join and withdraw                          | Substantial coercive power exists: Non-member states will receive sanctions; member states will enjoy certain benefits. |
| Emission reduction measures | Allow countries to set carbon prices freely                       | Similar or identical carbon prices  |



#### **4.2.3. Solutions for Free-riding Problems and Instability of the Treaties**

The Climate Club requires countries to make solid commitments that serve the common interest, and they also penalize nonparticipants (e.g., using higher carbon taxes or flat percentage tariffs on imports) or countries that do not fulfill their duties (e.g., withdrawing club benefits, expulsion) [11].

States joining such clubs also expect specific benefits that are only provided for members (club goods) rather than available to non-members (public goods) [12]. For instance, tariff barriers to green products can be broken down, and green technology innovations can be shared among Member States.

Therefore, through the two-way push of incentive and penalty mechanisms, non-members are attracted to join, while members are reluctant to withdraw easily because of the benefits, increasing the stability of the climate club.

#### **4.2.4. Solutions for the Carbon Leakage Problem**

The same carbon tax or carbon credit price standard should be implemented among club members, which would prevent carbon leakage among club members.

In order to ensure that clubs achieve their environmental objectives, club members should fulfill more environmental obligations than non-club members, one aspect of which is to reduce carbon emissions. This goal can be achieved by applying a higher carbon tax or credit price within the club than outside (let this be the price increment  $x$ ). At the same time, an additional carbon tax could be levied on goods imported from non-members to members (let this be the price increment  $y$ ) to offset the erosion of the competitiveness of club member countries' products due to price increases. As long as  $x$  is guaranteed to be less than  $y$ , that is, for a company to produce a good and sell it in the market of a club member, the cost of producing it in the club member (actual cost plus  $x$ ) will be lower than the cost of producing it in a non-club member (actual cost plus  $y$ ). It will attract countries to join the club while preventing carbon leakage from club member countries to the outside.

#### **4.3. Method to Build a Climate Club**

Carne Ross, a former British diplomat, writes: "A broad architecture of international cooperation is needed to structure the climate club, covering a wide range of aspects including trade, development and technology."

The diplomatic outlook may be bleak at the moment, but if significant economies such as the EU, China, and the US look to shared environmental aspirations - the planet's health - they can agree on the terms of the climate club. Simone Tagliapietra and Guntram B Wolff of the Breugel Institute, an economic think tank in Brussels, point out that China, the US, and the EU have the power to push for global climate action because they represent 61 percent of global GDP and 43 percent of total goods imports. If they take the initiative to take responsibility for building the climate club, it will be a great incentive for other countries to join.

#### **4.4. Conclusion**

There are problems of free-riding, carbon leakage, and instability in the existing climate regulation mechanisms. For this reason, we can motivate more countries to join and take on climate obligations by creating a climate club with incentives and disincentives, in which a carbon price or a carbon tax can also be used to address these problems.

At the same time, the world's major economies should be responsible for building the climate club, leading the world's countries to engage in extensive cooperation in the climate field.

## **5. Proposal on Defining “Climate Refugees” in the International Law System: We Shall Provide Legal Protection for Them**

According to World Bank data in 2018, 143 million more climate migrants will appear by 2050 [13]. "Climate refugee," or "climate migrant," in some reports, has become an inevitable and urgent issue resulting from climate change. Both terms refer to the people who were displaced and fled to other countries because they could not live in their original place due to the impacts of climate disasters [14], like rising sea levels and droughts. The unclear legal status of climate refugees makes it problematic for governments and international institutions to act. It leads to controversies about the climate refugees' cross-national actions and the legality of their acquiring legal protection.

In order to effectively promote the well-being of those impacted by climate change, international law must better define climate migrants. This paper will show how climate refugees' lack of legal status has caused problems for displaced people and then offer further suggestions for the international legal system.

### **5.1. Lack of legal protection for people**

#### **5.1.1. Not included in the legal definition of refugees**

Several cases have proved that “climate refugees” are unable to claim legal refugee status. For example, one New Zealand court granted a climate refugee family from Kiribati the quality to live in New Zealand for their close family ties in 2014 [15]. However, the core point of the controversy is to which extent the country admits its refugee status [16]. The court's judgment implied they did not get any legal protection for the climate disasters they encountered and their struggles in departing their homeland. Although the family from Kiribati received help in the end, it is still hard for other suffering families in the same situation to receive the protection to live a secure life unless there exist legal reasons aimed at them.

Theoretically, "climate refugees" are not included in legal definitions of "refugee," and this results in climate refugees' failure to claim refugee status and apply for legal protection. Some researchers have pointed out a "legal gap" in the current legal framework [17]. According to the 1951 Refugee Convention Article I, "the term "refugee" shall apply to any person who: " 1) has been considered a refugee or 2) is unable or unwilling to accept protection from the country of his nationality owing to a well-founded fear of being persecuted for reasons of race, religion; as a result of events occurring before January 1, 1951." The definition of a refugee is mainly based on the wars before, focusing on the political aspects. In 1967, the United Nations published Protocol Relating to the Status of Refugees (Article 1.2), in which the definition of refugee omits the time limit as "occurring before January 1, 1951." Neither of the laws includes people leaving their country for climate disasters, so they cannot offer legal protection or refugee status to the so-called "climate refugees."

#### **5.1.2. Not Included in the Legal Definition of Migrants**

"Climate refugees" are not included in the definition of "migrants," which also makes them unable to receive international legal protection. Despite some reports calling the people "climate migrants," the definition of migrant covers none of their suffering situations: according to the International Organization for Migration (IOM), a migrant refers to “a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons.” [18]. It is still unreasonable for them to ask for additional legal protection in migrant status [19].



### 5.1.3. Issues in Proposing Legal System Improvement

Political skepticism as "vehicles of power" occurs when states and experts want to comment on "climate refugees," and this restrains proposing legal protection [16]. For example, in Tuvalu, one of the island's countries facing the danger of sinking into the water in a few years, the locals are against labels like "climate refugees" as they are unwilling to be treated as victims or suspected of leaving their country [20]. To some extent, their denying the label for a political reason shows their emotions for their states, but also makes it harder for solution-suggesting, as the states and experts have to be very careful about their narratives.

## 5.2. Possible Solutions for the Climate Refugee Issue

### 5.2.1. Make a New Independent Definition to lay the base for Proposals

In order to offer legal protection for climate refugees, we should first develop a new, independent legal system for "climate refugees," starting with defining the group [17]. A legally different definition helps to separate the status of the group of people will be separated from the somewhat obscured concept of "refugee" or "migrant," but refers to an independent concept. In this way, states and experts can construct legal systems with fewer worries about political criticism. People who suffer from climate disasters and are forced to leave their habitat for a living can also ask for the status they should get. Moreover, giving a new, independent definition stands for no arguing against the existing legal system, which maintains the credibility of the international law system and makes the processing procedure more straightforward.

### 5.2.2. Build Up a New Legal System for Climate Refugees

This article proposes on taking the following methods to define progress:

First, the United Nations should lead in constructing the legal system for climate refugees. United Nations should suggest that states develop a convention on climate refugees, including definitions, rights, and treatments, and construct a new institution in charge of climate refugees in less than one year. Moreover, the United Nations will support and observe it for at least one year in staff and funds.

Second, The new independent institution should function similarly but more flexibly to the UN Refugee Agency. The institution should keep the original copy of the convention for climate refugees, and the institution shall have the right to finalize explanations on the convention, also blessed with the court to hear the suit. As mentioned before, sometimes people deny being declared as "climate refugees," the institution should not grant all states' people included in the definition such status until certain governments apply for that.

Lastly, The final definition of climate refugee should contain several elements. Firstly, it should focus on people who have suffered from climate disasters, like floods that have destroyed their houses as a result of sea-level rise; secondly, such groups of people should depart from their habitual residence for climate disasters unless they are unable to departure financially or physically, as their possession before can be worthless for them to live on; thirdly, they are not qualified to apply for migrant status to stay in any other countries which were not endangered by climate disasters, because otherwise they can migrate to other countries and live as migrants.

## 5.3. Conclusion

Climate change has developed for a long time and can have severe impacts everywhere. While scientists can make efforts to reduce conditions for climate disasters, the legal system shall provide the bottom support for people suffering from them. According to the research in this paper, to

maintain global peace and security for human society in the following decades, the international legal system should protect climate refugees and claim their legal status.

## 6. Conclusion

This paper argues for more individual responsibilities and participation among subjects in the international legal system. The system should reduce inequality in responsibility distribution by urging large economies to respect the CBDR principle, helping undeveloped countries with science and funds, and establishing a climate club to monitor carbon trade with economic approaches. International law subjects should encourage regional institutions to function in climate change and reveal their significance to international cooperation. Humanitarian legal aid should enlarge its extent to include climate refugees, and the United Nations should lead the construction of a new system to assure legal status for climate refugees.

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