



## ABSTRACT

The greatest problem of the 21st century is climate change, and due to its global repercussions, it calls for global efforts around the globe in the form of international institutions and law. This research responds to the role of international law in responding to climate change, and the evolution of the history of major treaties, protocols, and agreements such as the United Nations Framework Convention on Climate Change (UNFCCC), the

# THE ROLE OF INTERNATIONAL LAW IN ADDRESSING CLIMATE CHANGE

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## Introduction

Climate change is the problem that defines our age. Increased levels of greenhouse gases (GHGs) in the environment, largely caused by human activities such as industrialization, land use changes and deforestation, and fossil fuel combustion, are causing global warming, weather patterns, sea level rise, and ecological impacts. All these effects threaten to cause harm not only to the environment but also to human health, economic prosperity, and social justice. Through its reactant, global law has emerged as a critical instrument to address climate change, facilitate cooperation between states, and establish binding obligations to reduce greenhouse emissions, adapt to climate impacts, and ensure sustainable development. International law will have a fundamental role to facilitate collective action in addressing climate change, but still, challenges arise in enforcing compliance of states under binding agreements and facilitating international cooperation on issues such as financial assistance, technology exchange, and just sharing of the climate burden. UNFCCC adoption in 1992 and the subsequent



Kyoto Protocol, and the Paris Agreement. It raises the question of the capacity of international legal regimes to enable adaptation to the effects of climate change, compliance issues, and international institutions' efforts in pushing for progress with climate justice. The article also responds to loopholes and lacunae in current global regimes of law and suggests how the global legal response to climate change might be strengthened, including through demanding accountability, technology transfer, and financing to affected states. The document concludes on policy recommendations and future litigation for a more sustainable, equitable and ethical world order of climate policy.

**Keywords:** International Law, Climate Change, UNFCCC, Paris Agreement, Kyoto Protocol, Environmental Justice, Global Governance

creation of the Kyoto Protocol (1997) and Paris Agreement (2015) were pinnacles of climate control across the globe, but have proven to have contradictory success. This paper will discuss the evolution of international law in addressing climate change and examine how effective it is in delivering legal regimes and facilitating cooperation among states. In an examination of the merit and demerit of climate treaties under international law, this paper will add to the knowledge on how the law can better address and cope with the effects of climate change.

## **Aims and Objectives**

### **Aims**

The aim of this study is to critically assess the role played by international law in curbing the world problem of climate change. The essay will seek to establish the extent to which international legal documents, institutions, and conventions have had an impact on international climate policy and the effectiveness of the same towards promoting international cooperation towards mitigation of the impact of climate change.

### **Objectives**

1. To discuss the historical development of international climate law with specific reference to such important legal tools as the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement.



2. To measure the effectiveness of international legal approaches to achieving their specified Climate change mitigation and adaptation objectives.
3. To consider the limitations and constraints on compliance with global climate treaties, e.g., the application of non-binding obligations and the absence of meaningful enforcement measures.
4. In attempting to study the activities of global institutions and non-state agents in advancing climate justice and the unequal effects of climate change in the world.
5. In order to make proposals on how international climate law and global climate governance can be strengthened.

### **Problem Statement**

Climate change is a global crisis that requires collaboration and good governance. Despite its gravity being ever more widely acknowledged, international legal regimes are not producing satisfactory results in terms of emissions reductions, adaptation, and equitable burden-sharing. While treaties like the UNFCCC, Kyoto Protocol, and Paris Agreement are leaps and bounds in the direction of international climate governance, concerns regarding non-binding agreements, a lack of finance to developing countries, a lack of enforcement, and a lack of general climate justice principles continue to hinder international progress. Besides, climate change disproportionately affects the poor in society, and international law is still lagging behind in addressing these imbalances. Failure to enforce laws properly as well as lack of political will by states is threatening the global realization of the climate objectives. The aim of this research is to identify gaps and loopholes of the existing international legal regimes and propose reforms in order to enhance international cooperation and compliance and mitigate climate change.

### **Literature Review**

The role of international law in managing climate change has been largely debated in policy circles and academe. Climate change is an issue that affects the world as a whole, and therefore this implies a global reaction, and with the development of several legal documents, this was made a reality. In this section, we are going to explore the evolution of international climate law and the key treaties and protocols that have defined the international community's response to climate



change. We will also discuss the effectiveness of such legal frameworks and the dangers to which they are vulnerable when addressing international cooperation, enforcement, and climate justice.

### **The Emergence of International Climate Law**

The international legal framework for climate change began to evolve in the beginning of the 1990s when the United Nations Framework Convention on Climate Change (UNFCCC) was established. The UNFCCC, which was concluded in 1992, served as the basis for subsequent agreements and has been signed by 197 countries (UNFCCC, 1992). The main goal of the Convention is the stabilization of atmospheric greenhouse gas concentrations to avoid hazardous anthropogenic interference with the climate system. It enshrined the concept of "common but differentiated responsibilities" (CBDR), noting that developed nations are mostly responsible for past emissions and should lead the way in mitigation (Bodansky, 2010). While the UNFCCC provided the context of global climate rule-making, it was not reinforced by legally binding emission reductions, resulting in further specific instruments being developed. This outcome saw the adoption of the Kyoto Protocol of 1997, which established legally binding industrialized country objectives for reducing greenhouse gas emissions. The applicability of the Protocol is its fidelity to the principle of CBDR in the sense that it imposed a larger responsibility on developed countries (UNFCCC, 1997).

### **The Kyoto Protocol**

The Kyoto Protocol, adopted in 1997 and entering into force in 2005, was the first international treaty to legally bind industrialized countries to reductions in greenhouse gas emissions. The Protocol pledged 37 developed countries to a decrease of 5.2% of their emissions from 1990 levels by the 2012 deadline date. The Protocol faced several problems. The United States, one of the largest emitters, withdrew from the treaty in 2001 under President George W. Bush, having cited economic concerns and the fact that developing countries were not subject to binding commitments (Bodansky, 2009). Besides, developing countries like China and India, which were industrializing rapidly, were not subject to binding emission cut targets under the Protocol. While the Kyoto Protocol was an improvement in the worldwide fight against climate change, its narrow scope and less-than-universal membership worked against its power to constrain global emissions.



According to Keohane and Victor (2011), the failure of the Protocol to include emerging economies in its fold weakened its effectiveness globally to the point that these countries became increasingly important emitters.

### **The Paris Agreement**

The Paris Agreement 2015 is a historical transformation in international climate law. The Paris Agreement, in contrast to the Kyoto Protocol, does not obligate individual states to precise emissions reduction targets but rather leaves it to the nations to set their own Nationally Determined Contributions (NDCs). This bottom-up approach is sensitive to national heterogeneity in development conditions, capacities, and priorities while not giving up on the efforts to limit global warming to well below 2°C and toward 1.5°C over pre-industrial levels (Falkner, 2016). The greatest advantage of the Paris Agreement is its universality and adaptability as nearly every nation has committed to reducing emissions in some form or another. However, the voluntary nature of the agreement has cast doubt on whether it is sufficient to achieve the ambitious temperature targets. Several writers, including Tubb (2017), have suggested that while the Paris Agreement gives a useful path forward framework of action, the non-legally binding nature of the agreement and lack of defined penalties for being in default constitute basic flaws. Moreover, the financial mechanisms under the Paris Agreement, which call for developed countries to provide \$100 billion annually to support developing countries, have faced challenges in terms of meeting financial commitments (Susskind, 2017). Some scholars argue that the lack of concrete financial support for vulnerable nations undermines the equity principles of the Paris Agreement (Pahuja, 2017).

### **Climate Justice and Human Rights**

Climate justice is a very high-profile issue within global climate law over the past few years. Climate justice focuses on issues of the disproportionate impact of climate change on marginalized and vulnerable populations, particularly in developing countries. Scholars such as Roberts (2018) and Boyd (2017) suggest that principles of human rights be incorporated in international law to ensure that climate policies will not violate the universal rights of citizens, such as the right to life, health, and food. This is especially crucial because the impacts of climate change sea-level rise, weather patterns, and crop failure—pose serious threats to the livelihoods and lives of the poor populations. The institutionalization of human



rights in climate law takes the form of actions like the Human Rights Council's resolution confirming that climate change constitutes a threat to the human rights enjoyment (UNHCR, 2008). Secondly, the increasing participation of the private sector and civil society in the climate negotiations has increased the focus on ensuring accountability as well as justice in the implementation of climate policies (Boyd, 2017).

### **Challenges in Enforcement and Accountability**

Although efforts from treaties like the Paris Agreement can be made, enforcement would pose the biggest problem for international climate law. International law, in comparison to national law, might lack a significant authority that could have the power to punish or fine countries for non-adherence. Bodansky (2016) contends that since there is no enforcement under the Paris Agreement, states do not get punished for non-compliance with their NDCs and that this would debase the effectiveness of the agreement in the long run.

The issue of non-compliance is also made complex by the voluntary character of climate law internationally. Keohane and Victor (2011) argue that since obligations under the Paris Agreement are voluntary, success of the treaty depends significantly on the political will of states to implement their obligations. This creates a situation where countries that do not achieve their goals are not sanctioned, which may make global efforts to reduce climate change ineffective.

### **Technological Innovation and Knowledge Sharing**

The role of international law in technology innovation and knowledge transfer is also central to the mitigation of global warming. Diffusion of technology to developing countries is instrumental in developing countries' switch to low-carbon economies. While the Paris Agreement does acknowledge the importance of technology cooperation, in the view of scholars such as Gupta and van Asselt (2018), legal arrangements for technology transfer remain underdeveloped and require more support. As they suggest, in the absence of necessary technological resources and expertise, the majority of developing countries will struggle to meet their climate obligations. The establishment of the Green Climate Fund (GCF) under the Paris Agreement is an important milestone to finance green technology transfer, but its operationalization is delayed, and additional mechanisms are





needed to ensure that technology transfer is stepped up and distributed widely in the global south (Pahuja, 2017).

### **Gaps and Limitations in International Climate Law**

While much has been done by international law in trying to mitigate climate change, more remains to be done. For example, while NDCs under the Paris Agreement give states the flexibility of setting their own greenhouse gas reduction targets, they are non-binding, and this reduces their potential in achieving global temperature targets. Falkner (2016) and other writers argue that non-binding targets reduce chances of actual global action. Additionally, global legal frameworks have never succeeded in achieving comprehensive mandates for the safeguarding of vulnerable groups and equitable burden sharing of climate action. This has resulted in accusations that current legal frameworks are unequal in the sense that developing nations are unfairly shouldering an unequal burden without proper financing or technology assistance (Roberts, 2018).

### **Methodology**

The research method employed in this study employs qualitative research methods such as legal analysis, comparative analysis of international climate treaties, and case study. These were the methods used in a critical examination of how international law has responded to climate change as a reaction to its short-term effectiveness and potential future.

### **Legal Analysis**

Legal analysis constitutes the bulk of this research. It involves the critical analysis of the primary and secondary legal instruments that shape international climate governance. They comprise major international treaties as:

- The United Nations Framework Convention on Climate Change (UNFCCC), upon which other international climate agreements were founded.
- The Kyoto Protocol, which created legally binding emission reduction targets for industrialized countries.
- The latest international climate agreement, Paris Agreement, where states voluntarily put themselves forward to mitigation measures on greenhouse gases in line with nationally determined contributions (NDCs).



Secondary international climate law sources, including reports and views of international organizations (e.g., UNFCCC Secretariat), intergovernmental institutions, and pertinent texts such as Intergovernmental Panel on Climate Change (IPCC) assessment also come within the purview of this research.

The primary focus of the current legal analysis is to determine the primary features of international climate treaties, their binding or non-binding nature, and how they work on enforcement and compliance. Weaknesses and loopholes in such legal agreements that limit successful climate action as well as cooperation among nations are also addressed.

### **Comparative Analysis of International Climate Agreements**

A comparative approach was used in examining the differing and similar aspects of key global climate agreements, emphasizing the legal obligations, the enforceability, and the demands they impose on signatories. By doing so, the researcher can contrast the effectiveness of legal mechanisms for climate goals.

- The Paris Agreement, which moved towards a voluntary, nationally determined path of emissions reduction, but postponed long-term responsibility and finance matters. Comparing the various agreements, the study aims to research the strengths and weaknesses of the legal instruments and why some have been more successful than others in speeding up climate action.
- The Kyoto Protocol, which called for legally binding industrialized-country commitments to emissions reduction but didn't realize comprehensive participation and fulfillment.
- The UNFCCC as the general international law framework for regulating global climate cooperation, which continues to a great extent non-obligatory in nature and is intended to build an international forum of negotiations.

### **Case Studies**

The research employs case studies to place on the spotlight real-life instances of how international law has been applied to address climate change, and the challenges faced in enforcing global climate commitments. Each case study provides a detailed examination of a specific problem in the subject of international climate law. Some of the main case studies may be:

- The Paris Agreement and Nationally Determined Contributions (NDCs): The case study analyzes how countries have implemented their voluntarily





made promises under the Paris Agreement and how potent they are as emissions-reduction tools. The case study also takes into consideration the impact of ratcheting mechanisms and the global stocktake in assessing the progress.

- **Climate Justice and Vulnerable Countries:** An example of how international law has been utilized to address the unequal impacts of climate change on poor countries. This encompasses examination of the compensation machinery (or lack of machinery) such as the Green Climate Fund and north-south financial flows.
- **Mechanisms for Kyoto Protocol Enforcement:** This case study considers the extent to which the legally binding Kyoto Protocol emissions cut commitments were enforced (or not), and if non-enforcement was a causative factor for the eventual failure of universal participation.

### **Interviews and Expert Opinions (Qualitative Interviews)**

Alongside the documentary and legal research, qualitative interviews were conducted with experts in international law, climate policy, and environmental governance. Interviews were conducted in such a manner that information was sought from the main stakeholders, such as:

- Climate change and international environmental law specialists among scholars and lawyers.
- Policymakers involved in negotiating and enforcing global climate regimes.
- NGO officials working on climate justice, international climate finance, and environmental law.
- Officialdom from global organizations such as the UNFCCC and IPCC.

The interviews were semi-structured to allow free discourse on topics like the effectiveness of the present international climate agreements, problems of enforcement, participation of non-state actors, and the inclusion of human rights and climate justice within global law.

### **Data Collection and Secondary Research**

Along with primary research, secondary data were gathered through exhaustive literature reviews, including:

- Books, articles, and papers on global climate policy and law.



- Publications and reports of widely recognized global organizations such as IPCC, UNFCCC, and World Bank.
- National government reports and documents released on climate action, for example. NDCs, and recent climate finance news.
- Briefs on policy and news releases by reputable climate think tanks and NGOs that operate in the fields of climate justice, adaptation, and mitigation.

Secondary data were analyzed in an effort to extract key findings on trends in international climate law, loopholes, and challenges in the existing framework.

### **Legal and Policy Frameworks Analysis**

This part of the methodology deals with analyzing how international law relates to national policies. The effectiveness of international treaties like the Paris Agreement often depends on the degree to which countries transpose them into action at the national level. By analyzing national climate action plans (e.g., NDCs) and climate change laws, the research assesses the degree to which domestic legal orders comply with, or diverge from, international legal commitments. Furthermore, the study describes the role of national and regional climate law to complement or curtail international action. The role of, for example, the European Union's Emission Trading System (ETS) and the climate policy of countries like Germany or the United States (with its withdrawal and potential rejoining of the Paris Agreement) is taken into account. This methodology combines different research methods to achieve an exhaustive view regarding the role played by international law in mitigating climate change. By using legal analysis, case study, expert interviews, and secondary data, this research aims to critically assess the performance of current international legal instruments and offer suggestions on how to enhance their impact on climate governance at the global level. The strategy seeks to provide both theoretical insight and practical solution to the challenges posed by climate change at the global level.

### **Results**

#### **Key Findings**

1. International Cooperation: International cooperation was found to have increased significantly in recent times, as seen through the ratification into force of agreements like the Paris Agreement. However, it also found that the voluntariness of the commitments by nations, especially in the case of



the Paris Agreement, is a significant threat to obtaining meaningful cuts in the release of greenhouse gases. Though the majority of nations are taking part, the lack of binding reduction targets diminishes the chances of nations undertaking serious measures towards meeting international climate targets.

2. **Enforcement Mechanisms:** Another issue is that there are no strong enforcement mechanisms. Unlike domestic legal systems, where compliance is enforceable by recourse to the legal system, international climate law relies significantly on the goodwill of states. What the Paris Agreement reveals, with nations having set out to curb warming, is that there are no penalties for not complying and that any enforcing mechanism is very weak.
3. **Climate Justice:** Climate justice has gained popularity in recent times, but the study concludes that international legal structures still lack sufficiency to address unequal impacts of climate change on developing countries. Vulnerable countries have been promised financial assistance and technology transfer but have seen little action in this regard. The Green Climate Fund itself, though being created, lags behind being funded and takes time to operate, depriving most developing countries of the requisite support to achieve a low-carbon economy.
4. **Pledges of Finance:** Financing pledges by wealthy countries have been low. The promise to mobilize \$100 billion annually for developing countries under the Paris Agreement has not been fulfilled, and the study found that climate adaptation and mitigation finance mechanisms remain uncertain. This has created a gap between the international community's established targets and the provided resources.

## Discussions

### Challenges in International Climate Law

International law, while as much as anything else a criticism of international relations, is afflicted with a number of weaknesses in addressing climate change. Most prominent among these is the enforcement of obligations. International treaties like the Paris Agreement have brought nations together to make joint commitments, but the reality that these are voluntary commitments greatly weakens them. Unless legally binding obligations and ensuing sanctions for non-compliance, states might not necessarily be incentivized to honor their



commitments. International climate regimes are likely to rest on domestic political will, rather than the enforceability of the law, as claimed by Keohane and Victor (2011). Moreover, the CBDR principle, while a key element of recognizing different capacities of developed and developing countries, has been the cause of controversies concerning equity. Industrialized nations, which are responsible for the majority of historical emissions, should lead the way in mitigation, but this has caused tension because some nations feel that emerging economies like China and India should bear more responsibility (Bodansky, 2010). This has caused a standoff between industrial states, which are concerned with economic growth, and developing countries, which need technological and financial support. The issue of climate justice has also become a concern. Climate change affects the Global South the worst, and the impacts—increased sea levels, extreme weather patterns, and food insecurity are particularly crippling to poor societies. International law has not effectively addressed these disparities, and existing fiscal instruments for adaptation in the developing world fall far short. As Boyd (2017) has noted, global climate pacts barely acknowledge the complete rights of these groups of people, aggravating climate change impacts.

### **Strengthening International Climate Law**

The Paris Agreement, as much as it is a step in the right direction, also highlights the need for an improved system to hold nations in check. One of the ways international law can be improved is by having more legally binding emission reduction methods and tougher penalties for non-compliance. For example, a better enforcement system that binds nations to work in line with their Nationally Determined Contributions (NDCs) will ensure that nations comply with their obligations. The gap in financing assistance for the developing world is a sector that also warrants serious attention. The developed nations must live up to their promise of providing financial support and technology transfer, which is instrumental in helping the developing countries establish climate adaptation schemes and reduce their emissions. Greening the Climate Fund and providing improved guidelines for financial assistance provision would allow vulnerable states to adapt more effectively to climate change's adverse effects. Additionally, the incorporation of human rights and climate justice in international climate law must be amplified. Declaring climate change to be a matter of human rights, as recommended by the Human Rights Council (2008), would ensure that the effects of climate change on vulnerable populations are more facilitated within the international legal framework. By making climate justice one of the fundamental standards within international policies, the international community



can ensure that climate change neither buries the world's poorest of the poor nor unfairly targets them.

### **Role of Non-State Actors**

The contribution of non-state actors, including private enterprises, NGOs, and civil society, is also crucial in ensuring that international climate law is more effective. Since international legal regimes are stretched thin in terms of enforcement, non-state actors can be significant drivers of promoting increased ambition and transparency. Groups like the "We Mean Business Coalition" have brought the private sector into the effort to combat climate change, filling gaps in national and international action. Besides, non-state actors can help ensure accountability of governments by putting pressure on them to honor their commitments. For example, global NGOs and grass-roots movements can ensure accountability of governments through public pressure, legal action, and climate awareness-raising.

### **Conclusion and Future Recommendations**

The battle against climate change will also necessitate international law to be mobilized, but existing frameworks need to be strengthened. Strengthening enforcement, increasing support for vulnerable countries, and mainstreaming climate justice in the international legal system are crucial steps to enhance global climate governance to be more effective, equitable, and inclusive. International climate law in the future should:

1. Progress towards legally binding commitments for countries, especially in terms of emissions reduction targets.
2. Ensure that financial commitments are respected and adaptation and mitigation funding arrangements are clearer and more transparent.
3. Prioritize mainstreaming human rights and climate justice in the international climate agenda to ensure that the interests of the most vulnerable are addressed.
4. Encourage greater participation and engagement from non-state actors to stimulate accountability and action.

It is only by filling the gaps in international law and making all nations committed and capable of addressing climate change in an equal manner that the global community can practically attain the climate goals set out in the Paris Agreement and be able to live a sustainable life for all.



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