Balancing Protection and Progress: Intellectual Property Law in the Context of Climate Justice

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***Abstract:***

*climate change is being a most pressing global issue in present 21st century, which is threating not only ecosystems but also human rights, economic stability, and international cooperation. The nature of this issue has needed collective global efforts, primarily through the international legal frameworks it also has a role in growing concern on Intellectual property rights (IPR’s) in looking about this crisis. This paper discovers the about how the international agreements like UN Framework Convention for climate change (UNFCCC), the Kyoto Protocol, and the Paris Agreement has attempted to influence a climate-access towards the technologies and innovation. It also evaluates the legal frameworks and what are there in those frameworks like sustainable development, access, and responsibilities by IPR policies and patent regimes. Even after working the enforcement of these agreements remains as a big challenge because of state sovereignty, lack of obligations and technology between countries Through this analysis this paper will show the strengths and weaknesses in the present legal as well as IPR frameworks and also suggests ways to improve the green technologies and strengthen climate governance.*

**Keywords:** Intellectual Property Rights, Climate Justice, Technology Transfer, Sustainable Development, Patent Law

1. **Introduction:**

Climate change means to the long-term changes in the global temperature, rain fall, and weather patterns, which has been majorly affected by some human activities like fossil fuel storing, deforestation, and industrial emissions[[1]](#footnote-2). Its impact is reflective- which affects biodiversity, sea levels, agriculture, public health and global political stability[[2]](#footnote-3). By recognizing the boundaries nature, climate change has become an key points in the international discussion for many ages[[3]](#footnote-4). The need to collaborate in order to gather solutions from countries is recognized by the international community.[[4]](#footnote-5) By coordinating the national efforts, establishing environmental targets, and guaranteeing towards the sustainable development, they have developed a few frameworks to reduce emissions and adjust to the climate change. The Paris Agreement, the Kyoto Protocol, and the UNFCCC are a few of these.[[5]](#footnote-6)

The point of the matter is that both agreements together create a legal framework characterized by justice, shared responsibility, and international cooperation so that.[[6]](#footnote-7) This article discusses the effect of international legal frameworks—intellectual property rights as being among them—on global climate policy and sustainable technologies' access. It also touches on their effectiveness, the legal principles of technology sharing, and the patent-based hurdles that may hinder technology sharing and implementation.[[7]](#footnote-8) Within this context, this paper's objective is to enhance the bigger picture of how the environmental laws coupled with the intellectual property laws which can create a stronger global response to the climate crisis[[8]](#footnote-9).

1. **Major International Legal Frameworks:**

At the time, the UNFCCC was being actualized in 1992 with the adoption of the United Nations Framework Convention on Climate Change. This treaty has its genesis in the recognition of a serious threat posed by humankind possessing the potential to interfere dangerously in the climate system and its practical usefulness in promoting the cooperation of states in measures for the protection of the environment.[[9]](#footnote-10) While the UNFCCC did not define specific binding restrictions on emissions by countries, it created a less limited environment for countries to assist and exchange information, including holding occasions where Countries that have Parties meet, also known as COPs deferring progress. It also set the stage for futuristic engagements on the topics of technologies development and transfer; intellectual property rights (IPRs) started to gain attention here as well.[[10]](#footnote-11)

Expanding upon the UNFCCC, the Kyoto Protocol of 1997 taught affluent countries something about binding agreements designed to limit emissions.[[11]](#footnote-12) The stance of recognizing historical responsibility of developed countries in carbon dioxide emissions is a significant marker.[[12]](#footnote-13) Emissions trading, joint implementation, and the Clean Development Mechanism were put forward to make it more efficient for parties to achieve their goals: the introduction of market-based mechanism.[[13]](#footnote-14) So the impact of the Protocol was somewhat limited: the withdrawal of the United States and other major emitters along with the absence of obligations for developing nations. Hence, in these terms, one may only regard the Protocol as a partial success.[[14]](#footnote-15)

The Parties Conferences (COPs) are the key decision-making bodies under the UNFCCC, which convene annually to assess progress, adopt strategies and negotiate new mechanisms.[[15]](#footnote-16) Unlike previous treaties, it grants nations the ability to submit their own climate action plans - termed Nationally Determined Contributions (NDCs) - assessed every five years. The goal is to limit the rise in global temperatures to well below 2 degrees Celsius and ideally to 1.5 degrees Celsius. Though not legally binding, the emission reduction targets are maintained with an attitude of shared responsibility and transparency, with a support framework for the developing world. In this context, the Paris Agreement equally makes a mention of technology transfer as an important means of facilitating developing countries' aspirations, and intellectual property rights now form a major area of consideration in negotiations[[16]](#footnote-17).

COPs are the main decisions making body under the UNFCCC. These annual gatherings play a major role in deal with updates, assessing progress, and adopting new strategies. COP3 gave birth to the Kyoto Protocol, whereas COP21 resulted in the Paris Agreement. COPs in recent years have addressed issues of climate finance, technology transfer, and ways of improving frameworks, especially in terms of ensuring equitable access by developing countries to green technologies[[17]](#footnote-18).

1. **Principles in International Environmental Law:**

Several core principles that reflect the laws around care for the environment and moves towards sustaining the environment can be seen in the framework that contributes to this. Sustainable development is widely believed to consider the environmental, social, and economic elements equally. This principle was enunciated in the Brundtland Report of 1987 and was further reaffirmed in the 1992 Rio Declaration. It calls upon countries to satisfy the present needs without compromising the capacity of future generations to satisfy theirs. [[18]](#footnote-19) It has become a major idea in international agreements and national environmental policies.[[19]](#footnote-20)

An additional cardinal point is the precautionary principle, which advises nations to adopt precautionary measures against environmental damage when scientific certainty is lacking[[20]](#footnote-21). This is especially valid for risks of climate, which could result in long-term, irreversible effects, thus necessitate proactive decision-making[[21]](#footnote-22). It puts the onus of proof onto the shoulders of those whose actions might cause harm, thereby encouraging activity in the face of uncertainty rather than waiting for full scientific evidence[[22]](#footnote-23).

The polluter-pays principle is one of the important concepts in addressing the problem that imposes a cost on those responsible for environmental damage[[23]](#footnote-24). This principle defines about the fairness, accountability, encouraging industries and government to internalize environmental costs rather making into action in the society[[24]](#footnote-25). It is for laws that reward or penalize activities like pollution that cause environmental degradation; these have no levels of elasticity[[25]](#footnote-26).

The most influential principle in the climate negotiations is the doctrine of common but differentiated responsibilities and respective capabilities (CBDR-RC). While all nations bear some share of the responsibility to avert climate change, different capacities and varying historical contributions are recognized by this principle as the basis for differentiating measures of mitigation, adaptation, or financial assistance. The principle is given some recognition under the UNFCCC.[[26]](#footnote-27) The moral and legal grounds therefore expect that developed nations should lead the climate action campaign and provide financial and technological support to developing countries. This would include assistance with clean technologies, where most access is hindered by stringent intellectual property protection constraints on the sharing of innovations across borders. These principles defend the fields of social and environmental justice with reasonable flexibility in legal terms, but must, therefore, take a further step toward integrating fair access to climate technologies under the doctrine of intellectual property law[[27]](#footnote-28).

1. **Challenges in enforcement:**

There are several international legal standards to tackle global climate changes, yet it is found that difficulties in their application often lead to significant week enforcement challenges. And the enforcement still remains as a great struggle. An important issue is the non-binding nature of commitments under the Paris Agreement. Among the 190 NDCs received by Nations, there exists no penalty for non-fulfilment of these country commitments. Not being held accountable has thus far provided countries with the liberty to slow down or severely weaken their commitments toward addressing climate change at will[[28]](#footnote-29).

Enforcement is even more complicated by state sovereignty, since these frameworks have a heavy reliance on cooperation whereby nations will hesitate to comply with obligations unless such compliance will serve their national interests or economic priorities[[29]](#footnote-30). Most developing countries have argued that stringent measures on climate change either promote or hinder development goals[[30]](#footnote-31). Thus, there exists a gap with respect to the international obligations and their counter implementation which serves to lessen the effectiveness of the climate frameworks.[[31]](#footnote-32).

The imbalance in the technological and financial capacity of developed and developing countries also remains a huge challenge. Wealthier nations invest in clean energy and infrastructure for their own benefits, while poorer ones have fewer technologies and very often have difficulty in dealing with even basic commitments to climate[[32]](#footnote-33). While international agreements typically have provisions for financial and technological assistance for implementation, these often arrive late or with such complicated conditions as to prevent vulnerable nations having the capacity of responding quickly and effectively. Many of these clean technologies are also patented, thus, they cannot affordably or easily enter developing countries, further widening the climate action gap[[33]](#footnote-34).

Additionally, the reporting and monitoring systems developed under these treaties have been burdened by problems of both transparency and accuracy. The Paris Agreement has established a global stocktake and framework for transparency; nevertheless, countries' inconsistencies in the reporting of emissions and progress still prevail[[34]](#footnote-35). There collect stressors in making it difficult to measure overall progress or pinpoint the most immediate need for closer attention. These combine to show that while there are laws in place, weak enforcement-in areas such as technology access and intellectual property rights-limits the overall effectiveness of international climate initiatives[[35]](#footnote-36).

1. **Role of Developed and Developing Countries**

The division between developed and developing countries continues to be a major challenge in the international climate negotiations. The divide gives rise to the principle of common but differentiated responsibilities (CBDR), which holds that all nations must act on climate change, but that their responsibilities and capacities vary[[36]](#footnote-37). Because of their significant contributions to historical greenhouse gas emissions through early industrialization, developed countries are expected to take the lead in emission reductions and treatment of other countries. Such treatment includes assistance in financing, technology transfer, and capacity building to less developed nations. However, most of the technologies dealt with in climate mitigation and adaptation are covered by intellectual property rights, making transfer of such technologies slow, costly, or even impossible for poorer countries[[37]](#footnote-38).

Developing countries, on the other hand, draw attention to their restricted resources as well as critical development factors, choosing goals such as fighting poverty, ensuring energy access and stimulating economic growth. In spite of the fact that those nations are actively engaging in the protection of their environment, a big part of them are still utilizing fossil fuels for their further developments and do not possess the necessary infrastructure to make this transition to renewable energy happen quickly. Therefore, they very often suggest to be given more freedom over climate-related duties and, at the same time, require technical assistance and financial aids from developed countries[[38]](#footnote-39).

This has led to conflicts in climate negotiations, with rich countries feeling overburdened and thus resisting such a position while poor countries look for equity and climate justice access. The issue of climate finance is still the leading cause of the problem, and one of the key points is whether the developed countries did what they had said and channeled $100 billion per year to finance the fight in developing countries[[39]](#footnote-40). This promise has become a central issue in the negotiations since the Copenhagen Accord in 2009 and remains largely unfulfilled across negotiation blocks[[40]](#footnote-41).

Developed and developing countries need serious cooperation in overcoming shared challenges so as to make progress towards achieving climate goals. The most important of such treaties is probably the Paris Accord that champions mutual assistance, where developed countries are to perform as leaders in sustainable policies while also providing financial resources and technologies for climate[[41]](#footnote-42). all these would make the gap closed for a truly global response which is both equitable and viable in relation to the climate change[[42]](#footnote-43).

1. **Climate Justice and Human Rights**

As a matter of fact, it is not only an environmental issue but also a major human rights crisis. Already, communities most vulnerable to climate impacts—namely, increased temperature, floods, droughts, and extreme weather conditions—already feel the burning effects of climate change. The marginalized, Indigenous peoples, and those living below the poverty line find themselves unable to amass resources for adapting to or recovering from climate-induced disasters. These groups, quite ironically, contributed the least to global emissions. Thus, climate justice entails that fairness should not only embrace an environmental conception but should also deal with social and economic aspects[[43]](#footnote-44).

The connection between climate change and human rights is becoming more prominent than ever before. The UN Human Rights Council has upheld that a clean, healthy, and sustainable environment is a fundamental human right. This means that governments can be held accountable not just under environmental law but also human rights law for not protecting life, health, and sufficient resources. The relationship between access to climate-resilient technologies—often restricted by intellectual property protections—and the fulfilment of basic human rights such as health, food, and water has also been established[[44]](#footnote-45).

Creation of this mechanism, the UN Special Rapporteur on Human Rights and Climate Change, marks a great turning point. This mechanism guarantees that states have some measure of accountability for the protection of their citizens from the human impacts of climate change. It also allows communities suffering from food insecurity, health issues, and displacement due to climate-related events to testify. Such testimonies impart emotional and moral force on legal and diplomatic spheres that are often dominated by data and technical language[[45]](#footnote-46).

Young people have played a leading role in demanding climate justice-it is theft of their future by governments that have acted slowly. Apart from Greta Thunberg, young activists and climate activists in the Global South are also using the courts to affirm that their fundamental rights are violated. By portraying climate change as a human rights issue, the definitions of government accountability are remade. It takes the emphasis from figures to people-their homes, health, and future. This transition may ultimately push governments to do what is needed with respect to the urgency this problem deserves.[[46]](#footnote-47)

1. **Alternative Recommendations for Strengthening International Climate Law**

Requirements first of all could pursue the restructuration of international climate law. Climate change is rapidly overtaking global treaties, giving an impression of employing sloth in international governance. The need arises for a flexible updating method in which treaties and protocols may be regularly revised based on new scientific finding, instead of waiting for major conferences every decade[[47]](#footnote-48).

The second call was for the establishment of an international climate court or tribunal. Presently, there is no disjunction between the existing courts and statutes at the regional or national levels. This kind of court would enable the affected states and vulnerable communities to seek formal justice through it from the polluters[[48]](#footnote-49).

Thirdly, international climate law should directly tackle corporate responsibility, because even if they are the biggest polluters, climate treaties only enforce responsibilities on states. Therefore, it must create clear legal frameworks channelling multinational corporations' accountability for their carbon emissions, environmental negligence, and misleading greenwashing practices. This must also include regulation of intellectual property rights to prevent using patents as barriers into technology access, especially for green innovations essential for mitigation and adaptation[[49]](#footnote-50).

To better distinguish its character, a treaty on GCB should come into play. It would set a global ceiling for emissions and apportion it to various countries according to three criteria: historical responsibility, current needs, and development status. Effectively, it would help prevent the overexploitation of atmospheric space by the richer countries while balancing the interests of poorer countries in participating in climate development[[50]](#footnote-51).

And lastly, climate law needs to protect the rights of nature itself. Some countries have already granted rights to rivers, forests, and ecosystems through the establishment of legal personality. If nature were to gain such international recognition as a being of rights rather than merely a resource, it would revolutionize the very legal paradigm of environmental protection[[51]](#footnote-52).

1. **Conclusion**

Climate Change is, in our times, an emergency and hence one that cannot be ignored or placed on the back burner. It affects basic essentials for survival such as weather, food, water, health, and so on, moreover, it is the people who contributed least towards the risk who are the most adversely affected. International climate law has seen some advancement in its path, primarily through agreements like the Paris Accord, but the responses taken so far are insufficient for the kind of challenge that it is[[52]](#footnote-53). In this case, stronger legal frameworks and real accountability, and much more, is required to better facilitate vulnerable countries. Climate justice is first and foremost recognizing that not all are affected at the same level in ensuring that law would meet this inequality[[53]](#footnote-54).

If the global leaders are inspired by science, they must hold hands with vulnerable nations, youth, and local communities: they ought to, indeed, assert more binding and equitable laws. That is, make the barriers of intellectual property rights fair for all those who enjoy the life-saving green technologies. It's in the end-not for saving the planet but for life, rights, and future[[54]](#footnote-55).

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