**UNFCCC and the Kyoto Protocol: Key Legal Issues**

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**May 15, 2020**

**Abstract**

United Nations Framework Convention on Climate Change (UNFCCC)is one of the most important organizations of the United nations and helms the fight against global warming. A closer look at the past of the concept of adaptation as applied in the UNFCCC process highlights the novel intention that the treaty should concentrate on reducing the source of climate change, rather than on acclimatizing to the changes. The adaptive potential of the UNFCCC was considered to be an indicator of the degree to which societies could stand changes in climate, and was not understood as a policy objective. As a consequence of events that have unfurled since the inception of the UNFCCC, requirements and perceptions have changed. Today, there are robust grounds for having adaptation as a policy goal, but it must be documented that the UNFCCC, and its Kyoto Protocol in specific, are first and foremost about abating greenhouse gas emissions. Thus, adaptation policy may find a more suitable home beyond the current climate change regime.

**UNFCCC**

United Nations Framework Convention on Climate Change (UNFCCC) is an internationally recognized treaty for environmental protection. This started with the Intergovernmental Negotiating Committee (INC) of 1992 and since 1995, parties to the UNFCCC meet every year in the Conferences of the Parties (COP). It was adopted on May 9, 1992, and was an integral part of the Earth Summit in Rio de Janeiro (1992) and was signed by 154 countries to decrease barometrical centralizations of ozone harming substances with the objective of "forestalling perilous anthropogenic obstruction with Earth's atmosphere framework". This responsibility would require generous decreases in ozone harming emissions.[[1]](#footnote-2)

The UNFCCC objective is to balance out ozone-depleting substance fixations in the air at a level that would forestall hazardous anthropogenic obstruction with the atmosphere framework. The system sets non-restricting cutoff points on ozone-depleting substance emanations for singular nations and contains no authorization components. Rather, the system plots how explicit global bargains might be haggled to indicate further activity towards the goal of the UNFCCC.

Parties to the Convention are expected to preserve the climate as per the “*common but differentiated responsibilities and respective capabilities”*.[[2]](#footnote-3)

The degree to which developing-nation Parties will adequately execute their responsibilities under the Convention will rely upon the viable usage by developed nation Parties of their duties under the Convention identified with financial assets and transfer of technology and will consider that economic and social development and povertyreduction are the first and superseding priorities of the developing-nation Parties.

The UNFCCC is extended by the Kyoto Protocol 1997 that commits state parties to decrease greenhouse gas emissions, based on the scientific harmony that (part one) global warming is occurring and (part two) it is extremely likely that human-made CO2 emissions have principally triggered it. The objective of the Kyoto Protocol was to decrease the beginning of global warming by dropping greenhouse gas concentrations in the atmosphere to a level that would avert unsafe anthropogenic intrusion with the climate system.[[3]](#footnote-4) The Kyoto Protocol applies to the 6 greenhouse gases [[4]](#footnote-5):

1. Carbon dioxide (CO2)
2. Methane (CH4)
3. Nitrous oxide (N2O)
4. Hydrofluorocarbons (HFCs)
5. Perfluorocarbons (PFCs)
6. Sulphur hexafluoride (SF6)

**Kyoto Protocol**

The Kyoto Protocol, like the UNFCCC, is based on the same common but differentiated responsibilities. This concept is extremely important to exist. We can understand this with a simple case study. Take the United Kingdom and India. In simple words, the United Kingdom was undergoing their developmental stage a long time ago, during which period, there was no such environment related limits of development like what the Kyoto Protocol puts up. So, the UK was allowed to use or rather abuse this situation to develop at a faster rate. Now, they have enough resources and technology that they can switch to environment-friendly ways, owing to their developed status. But India is going through their development stage right now and therefore it becomes unfair to ask them to follow the same environmental limits as the UK as UK were not asked to do so during their developing stage and UK is currently more capable of doing so than India as they are already developed.

The Kyoto Protocol, therefore, recognizes that nations have various capacities in fighting environmental change, inferable from the financial turn of events, and in this way puts the commitment to decrease current outflows on developed nations on the premise that they are truly answerable for the present degrees of greenhouse gases in the climate. The Protocol's primary commitment began in 2008 and finished in 2012. Each of the 36 nations that took part in the primary commitment period followed the Protocol. Be that as it may, nine nations needed to fall back on the adaptability systems by financing outflow decreases in different nations because their national emissions were more than their targeted reduction than their objectives.A second commitment period was started in 2012, known as the Doha Amendment to the Kyoto Protocol, in which 37 nations have mandatory targets: Australia, the European Union (and its 28-part states), Belarus, Iceland, Kazakhstan, Liechtenstein, Norway, Switzerland, and Ukraine. Belarus, Kazakhstan, and Ukraine have expressed that they may pull back from the Kyoto Protocol or not treat the Amendment with second-round targets as binding upon themselves. [[5]](#footnote-6)

UNFCCC wanted industrialized countries to take charge and lead the way in the fight to reduce emissions of Greenhouse Gases, as per Article 4.2, with the primary goal for industrialized countries being to stabilize their emissions at the same level as they were in 1990 by 2000, which was a massive failure, leading to binding commitments. [[6]](#footnote-7)

**Paris Agreement**

2015 saw the Paris Agreement, which has a long-term temperature goal is to keep the surge in worldwide average temperature to well below 2 °C above pre-industrial levels; and to pursue methods to stop the surge to 1.5 °C, identifying that this would considerably decrease the risks and impacts of climate change. This should be done by decreasing emissions as soon as possible, to "*achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases*" in the second part of the 21st century. It also aims to grow the capacity of parties to adapt to the adverse impressions of climate change, and make "*finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development*." Analysts have developed situations of future changes in Greenhouse Gases discharges that lead to an adjustment in the environmental convergences of Greenhouse Gases. Climate models recommend that lower adjustment levels are related with lower extents of future an unnatural weather change, while higher adjustment levels are related to higher sizes of future a worldwide temperature alteration. [[7]](#footnote-8)

To accomplish adjustment, worldwide Greenhouse Gases discharges must peak and eventuallydecline.The lower the ideal adjustment level, the sooner this peak and decline must happen.For a certain stabilization level, larger emissions decrease allows for less strict emissions reductions later. On the other hand, less stringent near-term emissions reductions would, for a given stabilization level, require more stringent emissions reductions later on. [[8]](#footnote-9)

The Paris Agreement functions on Nationally Determined Contributions (Nationally Determined Contributions), as per Article 3 of the Paris Agreement. Under Nationally Determined Contributions, contributions are to be made by each nation to attain the global goal determined by all countries individually. They are required to set an ambitious goal for themselves and to progress with their goals with time. [[9]](#footnote-10) UNFCCC Secretariat is to be given the reports of the contributions of the countries every 5 years. Each goal must progress to be more than the previous goal.

The amount of Nationally Determined Contributions set by each country will determine that country's targets. However, the contributions themselves are not obligatory as a matter of international law, as they lack the specificity, normative character, or binding language necessary to create binding rules.Furthermore, there will be no apparatus to force a country to set a goal in their NDC by a certain date and no prosecution if a set target in an NDC is not met.There will be only a "name and shame" kind of arrangement where countries failing to meet their targets can be called out in a public forum and be required to give explanations for their failure. The representatives of the agreement negotiation process, however, specified that the NDCs and the target of no more than 2 °C increase were inadequate; in its place, a target of 1.5 °C maximum increase is essential, noting “*with concern that the estimated aggregate greenhouse gas emission levels in 2025 and 2030 resulting from the intended nationally determined contributions do not fall within least-cost 2 °C scenarios but rather lead to a projected level of 55 gigatons in 2030*”, and recognizing furthermore “*that much greater emission reduction efforts will be required to hold the increase in the global average temperature to below 2 °C by reducing emissions to 40 gigatons or 1.5 °C*”.[[10]](#footnote-11)

**Key Legal Issues**

1. Failure to produce results

The biggest and most stated criticism of UNFCCC and Kyoto Protocol is the failure to achieve the aims they had set out for the reduction of CO2 emissions, which is the main gas responsible for rising global temperatures in this century. [[11]](#footnote-12)

Only 6 of the world's top 20 economies, or the G20, which hold value for 78% of the worldwide emissions, are on course to meet their marks to reduce greenhouse gas reduction under the Paris Agreement — though most of these targets are woefully unambitious. Most G20 countries are heavily unlikely to meet their targets for the emissions set as per the Paris Agreement. Most of the gap is due to a complete lack of determination in most countries’ NDCs. The question of meeting the Paris Agreement is frequently concentrated on whether countries are on track to meet the first round of NDCs, which were proclaimed in 2015. As stated above, the Agreement needs countries to declare new, progressively ambitious goals every five years and the second round of NDCs are due in 2020.However, most countries have been found wanting to meet the first set of NDCs. Of the G20, which includes 19 countries and the EU, 7 will fail to meet their NDCs, 3 are on track, 3 will exceed their target by at least 15%, and the performance of 3 countries is uncertain, as per the 2019 Emissions Gap Report.[[12]](#footnote-13)

The letdown of failure to achieve legitimate progress and reach effective CO2-reducing policy legislations among the parties over the past 18 years has driven some nations like the United States to hold back from ratifying the UNFCCC's most important agreement, the Kyoto Protocol, majorly because the treaty did not cover developing countries which now include the largest CO2 emitters. However, this failed to take into account both the past responsibility for climate change since industrialization, which is anargumentative issue in the talks and also accountability for emissions from consumption and importation of goods.[[13]](#footnote-14)

The apparent lack of progress has also led some nations to seek and focus on substitute high-value activities like the formation of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants which pursues to regulate short-lived pollutants such as methane, black carbon and hydrofluorocarbons (HFCs), which together are held accountable for up to 1/3 of present global warming but whose controlled regulation is not as troubled with wide economic effects and opposition.[[14]](#footnote-15)

In 2010, Japan expressed that it won't join to a subsequent Kyoto term since it would force limitations on it not looked by its primary monetary rivals, China, India and Indonesia. A similar sign was given by the Prime Minister of New Zealand in November 2012. At the 2012 gathering, protests at the meeting by Russia, Ukraine, Belarus and Kazakhstan were disregarded by the administering authorities, and they have demonstrated that they will probably pull back or not ratify the treaty. These abandonments place extra weights on the UNFCCC procedure that is seen by some as expensive and long.In the UK alone, the environmental change department has taken more than 3,000 trips in two years at an expense of over ₤1,300,000.[[15]](#footnote-16)

The Hartwell Paper of the London School of Economics from 2010, written by 14 academics from numerous disciplines in the sciences and humanities, and also some political philosophers, and they contended that after the letdown of the 2009 Copenhagen Climate Summit, the Kyoto Protocol failed miserably and they appealed that it "*has failed to produce any discernable real-world reductions in emissions of greenhouse gases in fifteen years*."Theycontended that this letdown opened aprospect to set climate policy free from Kyoto and the paperbacks a provocative and fragmentary approach to the decarbonization of the worldwide economy. The Hartwell Paper proposes that "*the organizing principle of our effort should be the raising up of human dignity via three overarching objectives: ensuring energy access for all; ensuring that we develop in a manner that does not undermine the essential functioning of the Earth system; ensuring that our societies are adequately equipped to withstand the risks and dangers that come from all the vagaries of climate, whatever their cause maybe.*"[[16]](#footnote-17)

Before the 2015 United Nations Climate Change Conference, National Geographic Magazine added to the analysis, stating that since 1992, the year when countries concurred at Rio de Janeiro to dodge risky anthropogenic impedance with the climate framework, they've met multiple times without moving the needle on carbon discharges. In that time, we've added nearly as much carbon to the climate as we did in the past century.[[17]](#footnote-18)

**2. Carbon Trading**

Carbon Trading is the procedure of purchasing and retailingauthorizations and credits to emit carbon dioxide. It has been a dominantportion of the EU’s efforts to slow climate change. The world’s chief carbon trading system is the European Union Emissions Trading System (EU ETS). It is tormented with problems and bribery and yet nations such as Brazil and China continue to chase carbon trading as a way to tackle rising emissions.Carbon trading is increasingly disapproved, not least because carbon dioxide emissions in industrialized countries are not deteriorating at the necessary rate to avert catastrophic climate change.Many scientists, economists and NGOs trust that carbon trading is anunsafedisturbance from the need to end fossil fuel use and transfer to a low carbon future. The best way to do this is through direct regulation. Trees were seen as a way of counterweighing carbon cheaply, while concurrently providing money to protect trees. There is also no indication that carbon trading has lived up to the promise of providing money.Notwithstanding the flaws intrinsicto pollution trading, the concept remains to appear in proposals to decrease environmental harm. [[18]](#footnote-19)

Criticizers of carbon trading, for example,Carbon Trade Watch, claim that it creates inconsistent importance on individual existences and carbon footprints, distracting attention from the broader, worldwide changes and accommodating political action that is essential to be taken to attack climate change. The market will inadvertently select the easiest methods to save a given amount of carbon in the short term, which may be unlike from the pathway vital to obtain sustained and sizable decreases over a longer period, and so a market-led method is expected to reinforce technical lock-in. For example, minor cuts may regularly be accomplished modestly through an interest in making an innovative and progressive technological advancement, where bigger cuts would require rejecting the innovation and utilizing an alternate one. They additionally contend that carbon emission trading is subverting other ways to deal with contamination controlwith which it doesn't join well, thus the general impact it is having is to slow down huge change to less polluting innovations. Carbon Trading also leaves room for unverified manipulation in the process of trading which can be misused and can create uncertainty. In China, some companies initiated non-natural production of greenhouse gases with a solitary determination of their reprocessing and gaining carbon credits. Parallel practices happened in India. Received credits were then retailed to companies in the US and Europe.[[19]](#footnote-20)

Administrative offices risk giving such a large number ofemission credits, weakening the adequacy of guidelines for the process of carbon trading itself, and removing or diluting an upper limit. For this situation, rather than a net decrease in carbon dioxide emissions, beneficiaries of emissions trading simply contaminate more. The National Allocation Plans by member governments of the European Union Emission Trading Scheme were censured for this when it became evident that real emissions would be fewer than the government-issued carbon allowances at the end of Phase I of the arrangement. Certain emissions transaction schemes have been criticized for the exercise of grandfathering, where contaminators are given free allowances by governments, instead of being made to recompense for them.Criticsin its placeback for auctioning the credits. The profits could be used for the study and development of sustainable technology.Additional fresh disparagement of emissions trading is regarding enactment is that old-growth forests, which have sluggish carbon absorption rates, are being cleared and replaced with fast-growing foliage, to the disadvantage of the resident communities.[[20]](#footnote-21)

The alternate for this was the proposed plan for Cap and Share. Cap and Share was initially evolved by FEASTA (the Foundation for the Economics of Sustainability) and is an administrative and monetary system for controlling the utilization of fossil fuels according to climate stability. Accepting that environmental change is a worldwide issue and that there is a need to reduce and slow ozone harming substance emanations all around the world, the philosophy of Cap and Share maintains that the world's climate is a fundamentalconsistent asset. Therefore, it is contended that every individual ought to get an equivalent portion of the advantages from the constrained measure of non-renewable energy sources that should be burned and their emissions discharged into the environment in the period until the barometrical convergence of ozone-depleting substances has been balanced out at a sheltered level. It works on 4 basic principles [[21]](#footnote-22):

1. An upper limit or cap on carbon dioxide and other greenhouse gas emissions from fossil fuels ought to be calculated that averts an average global temperature rise of over 2 degrees Celsius.
2. The right to release such greenhouse gases is a human right, and ought to be publicly available on an equal-per-capita basis, with authorizations going to each person rather than to their governments.
3. The authorizations would be marketable through the post office and banking system to the traders and manufacturers of fossil fuels who would need to obtain enough licenses to cover the emissions from the fuels they introduce.
4. Any national or European Union scheme ought to be designed as a probable prototype for aninternational system that will also aidinsetting the conditions for the improvement of poverty and the preservation of biodiversity.

3. **The 1990 controversy**

There is disagreement surrounding the usage of 1990 as a base year, as well as non-usage of per capita emissions as a basis. Nations had diverse, different and uneven achievements in energy efficiency in 1990. For example, the erstwhile Soviet Union and eastern European countries did little to challenge the problem and their energy efficiency was at its poorest level in 1990, the year just before their communist governments fell. On the other hand, Japan, as a big trader of natural resources, had to expand its efficiency after the 1973 oil crisis and its emissions level in 1990 was healthier than most developed countries. Nevertheless, such efforts were set aside, and the dormancy of the former Soviet Union was ignored and could even produce big revenue due to the emission trade. There is a dispute that the usage of per capita emissions as a basis in the following Kyoto-type treaties can decrease the sense of disparity among developed and developing countries alike, as it can disclose in doings and responsibilities among countries.[[22]](#footnote-23)

4. **Developed vs Developing**

The longest debate that had plagued the Kyoto Protocol from the Bush Administration times was the disparity between its treatment of the developed and the responsibilities of the developing nations under the Kyoto Protocol. In 2001, in a struggle to appease his European critics in the hours before he left for Spain on his primary trip to Europe as President of the United States, Mr. Bush had recognized the brutality of the global warming problem and said the United States would “*lead the way by advancing the science on climate change*”. He designated several innovativeresearch initiatives that could mark a possiblysubstantialconcentration of American climate study.But while recommending a new method to the issue of global warming, Mr. Bush remained firm in snubbing the 1997 Kyoto accord, noticing that it set no standards for chief emitters of greenhouse gases, like China and India, while generatingorders for the United States that could prove economically damaging. His advisors further contended that the accord which aimed at dropping emissions of greenhouse gases below 1990 levels, was written to make it easier for Europe than for the United States to meettheirtargets.Mr. Bush's out-and-out denunciation of the treaty led to a pandemonium in Europe. While unremorseful about their choice to back away from the accord, White House administrators accept that they did a bad job of elucidating their oppositions or their approach to the problem of dropping heat-trapping gases.[[23]](#footnote-24)

The treaty sets goals for greenhouse gas emissions for each contributing nation based on its 1990 emission levels. Contrasting from much of the world, the United States has grown significantly since 1990, and this places it at an excessive shortcoming compared to nations whose economies have fallen. Those nations may even profit under the treaty since they will have "lost" emissions.Affluent Western Europe has ingeniouslyallied itself with collapsing Eastern Europe, and perhaps Russia, to take some sort of advantage of the deteriorations in emissions in those nations. Pleasing Europe as a whole, the area must decrease emissions only a few percent to reach its Kyoto goals.In contrast, the United States would have to decrease emissions by nearly 30% to reach its Kyoto goals. This means that while the European reduction program will cost approximately $5 per ton, the United States program could cost as much as $100 per ton.Addeddiscrimination in the Kyoto agreement is that it is neither universal nor everlasting. It relieves developing countries from any goals. Developing countries, nevertheless, are substantial contributors to greenhouse gas emissions now and particularly in the future. Every nation must be part of the arrangement for it to be effective in the longer period and that most certainlycomprisesofdeveloping countries.The Kyoto treaty is also impermanent. Acquiescence for the United States would require huge and instant changes in its capital stock. This would include but not be limited to its buildings, its power plants, and its factories. Such investments are very heavy on the economy and cannot be effortlessly started or stopped. A country would be imprudent to participate in such expensive capital investments before a long-term global treaty including all nations of the world is definitely in place and implemented.Theprice of extenuating climate change should be in tandem with the damage. That is how sustainable development works where such calculations are taken care of before the operations take place. Calculating the damages is frightening because the effects occur well into the future, are spread across the entireworld and affect different people differently. Still, based on what we know now, effects will not be the same for everybody across the world.The damages are expected to be superior for persons who at this time live in warmer climates that exist at lower latitudes and much less for people who live in the cooler mid-and-high latitudes. Warmer temperatures in hotter regions will cause large decreases in cultivation and large upsurges in energy (cooling) expenses. Cool regions are expected to see growths in agricultural production and some offsetting reductions in heating costs.Merging these effects advocates that present emissions will cause only minor net damages to the ecosphereupwardsof $5/ton. This and numerous other issuessuggest that present abatement efforts should also be modest and much earlier to the planned European programs than those the Kyoto protocol predicts for the United States.Global warming is a long-term issue that needs a dynamic policy. As greenhouse gases accrue in the atmosphere, impending global temperatures will be pushed even higher. Policies that require more substantial reductions in emissions will likely make sense in the future. However, policymakers must be careful to plan for these dynamic policies.Pushing abatement too rapidlyincreasesexpensesintensely but increases the benefits only to some extent. Ecological programs to protect the globe against climate change must be persistent, but easy-going and should spend funds where they will do the most good.[[24]](#footnote-25)

5**. Denial of Global Warming**

There was a petition by the name of Oregon Petition, which was prepared and distributed by Arthur B. Robinson, President of the Oregon Institute of Science and Medicine, a small autonomous research group, in 1998, and another time in 2007. Also known as the Global Warming Petition Project, this was a petition to advise the United States government to discard the global warming Kyoto Protocol of 1997 and parallel policies. The text of the petition was as follows:

*“We urge the United States government to reject the global warming agreement that was written in Kyoto, Japan in December 1997, and any other similar proposals. The proposed limits on greenhouse gases would harm the environment, hinder the advance of science and technology, and damage the health and welfare of mankind. There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth.”[[25]](#footnote-26)*

Attached to the cover letter from Seitz, the Oregon Petition was disseminated with a manuscript plus a reprint of a December 1997 Wall Street Journal opinion piecetitled"*Science Has Spoken: Global Warming Is a Myth*” authored by Arthur and Zachary Robinson.

The scientific community has established an extensive peer-review process where well-qualified experts can assess and test the veracity of scientific claims. In atmospheric science, there are dozens of high-quality scientific journals with a long history of profound articles. An incorrect major scientific claim would be extremely difficult to maintain because scientists earn their reputations by developing better explanations of observed phenomena. We know of no major scientific articles since the 1996 Intergovernmental Panel on Climate Change statement that "The balance of evidence suggests a discernible human influence on global climate," that directly challenges this conclusion. On the contrary, improved analyses, data sets, and models continue to support global warming as a real phenomenon.

6. **Economics of Climate Change**

The elasticityapparatuses that are well-defined in the Protocol could let the Annex B nations to meet their emission lessening commitments at a significantly smaller cost. Actual costs will be determined by how individual countries decide to meet their commitments. This can include the use of the worldwide flexibility mechanisms, but national policies can also contribute, such as increasing taxes on oil or supervisory fines for major polluters.The Kyoto Protocol was intended to be effective and unbiased but it has been the focusof attention related to the inadequacies of the Kyoto Protocol's flexibility apparatuses. Nordhaus clarified that meeting the emission reduction commitments detailed in the Kyoto-Bonn Accord, using the quantity-type apparatuses as demarcated in the Protocol, would be less effective compared to a situation where price-type apparatuses were used, for example, a synchronized carbon tax. Nordhaus recommended that given the Protocol's large expenses and small profits, it might be more appropriate for it to be reorganized along the lines of a worldwide carbon tax. The issue of the effective or optimum path for greenhouse gas (GHG) emissions depends on various expectations. Some of these expectations, e.g., accumulatinginfluences across regions and over time, rely on value decisions. In Nordhaus's scrutiny, the indirect emissions path of the Kyoto-Bonn Accord is more antagonistic than that recommended in his investigation. In other words, the effectivereduction path for emissions in Nordhaus's investigation, recommendssteadier near-term emissions abatement than that implied by Kyoto's emission reduction assurances. This is a mutual finding of economic cost-benefit analysis and is motivated by low approximations of marginal or incremental climate change damages, creating the social cost of carbon.[[26]](#footnote-27)

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