

From Kyoto to Paris, the Strong versus Weak, a Snap Guide in Pursuit of Climate Justice

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Abstract: *Climate change, also referred to as global warming, denotes the rise in normal superficial temperatures on Earth. It is scientifically assumed that climate change is essentially due to human use of fossil fuels, which discharges carbon dioxide and other greenhouse gases into the air. These gases then capture heat within the atmosphere, thereby causing adverse effects on ecosystems, including rising sea levels, severe weather events, and droughts, etc. Because of the global effect of this hazard, attempt has been made to create normative and institutional framework to checkmate this danger so as to avoid its catastrophic consequences. The Kyoto Protocol, which is considered the most fundamental normative instrument aimed at curbing this menace has integrated an array of flexibility mechanisms which are seen as wheels upon which the costs of diminishing emissions can be achieved. A critical component of the Protocol requires states to transfer or purchase Emission Reduction Units from others in a Joint Implementation Mechanism and to institutes the Clean Development Mechanism; a measure of implementation where developed countries are allow to obtain certified emission reductions from clean development projects jointly implemented and use them for computation in summing up their commitments. This article critically evaluated and captured climate change from this perspective and distilled major insufficiencies integral in the Kyoto framework. In this connection, the work evaluated the foremost shortfalls in the three flexible mechanisms of the Kyoto Protocol. Suggestions designed to emasculate the menace of climate change have been proffered.*

Keywords: *Climate Change, Kyoto Protocol, Global Warming, Greenhouse Gases*

I. INTRODUCTION

Since climate change is a universal problem, it is important that key greenhouse gas emitting nations participate in the collective and global effort to cut the upsurge in the atmospheric absorption of greenhouse gases (Shim, 2002). The word ‘climate change’ according to United Nations Framework Convention on Climate Change, indicates the change in climatic configurations mostly traced to anthropogenic activities that alters the composition of the global atmosphere. As the search for solution to this critical and dangerous universal climate setback lingers, 158 states convoke and reached a historic covenant on reducing greenhouse gas emissions in Kyoto in 1997, with the Kyoto protocol as a follow up to the United Nations Framework Convention on Climate Change (UNFCCC) agreement adopted at the Earth Summit of 1992 (Zhang, 2001). The objective principally was to ease emissions of carbon dioxide (CO₂) and other forms of greenhouse gases at their 1990 levels by 2000, the Kyoto Protocol arrangements on cutting greenhouse emissions are lawfully binding as far as emissions targets, are concerned.

The Kyoto Protocol sets differentiated emissions targets for parties in Annex 1, for instance countries in Annex one, namely, Australia Austria, Belgium, Belarus, Bulgaria, Canada, Czech Republic, Denmark, Estonia, Finland, France Germany, Greece, Hungary, Ice-land, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg. The Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, turkey, Ukraine, the UK, and the US, are to reduce their emissions by 5.2% below 1990 over the commitment phase of 2008-2012, the EU, US (Canada withdrew from the protocol in 2012 and the United States of America is yet to Rectify the Protocol) Japan essentially are to cut theirs by 8,7 and 6%, respectively.

Reflecting on the important guide to the realization of this target, both individual and collective effort are encouraged under Article 3(3) which urge parties to adopt cost effective policies and measures to combat climate change so as to guarantee global advantage at the cheapest possible rate. The Kyoto Protocol has integrated an array of flexibility mechanisms which are seen as vehicle or wheels upon which the costs of lessening emissions can be achieve. Article 6 of the protocol indicates that states are permitted to transfer or purchase Emission Reduction Units (ERUs) from others in a Joint Implementation (JI) mechanism. And Article 12 institutes the Clean Development Mechanism (CDM), a measure of implementation where develop countries largely constituted in Annex one are allow to obtain certified emission reductions (CERs) from clean development projects jointly implemented with Annex 2 countries and use them for computation in summing up their Kyoto protocol commitments while Article 17 provides for emissions trading.

II. THE KYOTO PROTOCOL

The Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) is seen as one of the remarkable framework on climate protection in recent years, but whether the protocol indeed intended to safeguard the climate or set up new business frontiers is the crux of our discussion, the protocol formulated three market-based approaches under Articles 6, 12 and 17 (Shrestha, 2002). These mechanisms comprises Joint Implementation (JI), Emission Trading (ET) and Clean Development Mechanism (CDM) these mechanisms allow developed countries to achieve their emission reduction baselines by joint efforts or by engaging in projects abroad without relying solely on domestic plans. This can be seen in Article 3 of the Kyoto Protocol which allows countries to *individually or jointly* achieve their emission target. This offers the developed countries the chance to earn emission reduction credits *anywhere* in the world and at the *lowest cost* possible. However, since 1997, the Kyoto Protocol has been intensely debated as to whether the flexible mechanisms have significant advantage to contribute to the mitigation of climate change (Olsen, 2009). Prominent among them is the question on 'how effective are the mechanisms and whether they signify the best strategy to mitigate climate change?'

III. EVALUATION OF THE KYOTO PROTOCOL MECHANISMS

The Kyoto Protocol flexibility mechanisms can be seen as a kind of tradable permits anticipated to function at the global community level. For the States that have acceded to the lessening targets of GHE, the flexibility mechanisms provide these states with prospects of achieving the reduction targets at a marginal cost. It is also common that countries will consider and explore the availability of cheap means reaching the targets, especially when states anticipate whether to join the treaty and having the capacity to control pollution. The flexibility mechanisms also act as incentives for the states' partnership into the treaty.

The flexibility mechanisms essentially offer the developing countries with the prospects for technological transfers and fiscal gains, although this is to serve as motivation for the developing countries to join in the war to combat climate change.

The concerns that have been raise which intend to tackle in this work is to what extent have these flexible mechanisms led to emission reductions and the attainment of sustainable development as promise by the Kyoto Protocol? Secondly, whether the benefits that are contained in the flexibility mechanisms are striking enough to overcome the desire for economic prosperity amongst developing countries which are far from reducing

greenhouse gas emissions, for instance Nigeria flares gas from more than 250 locations that make it the second largest flaring country in the world after Russia, because Nigeria's economy is largely dependent on crude oil and gas flaring is predominantly from crude oil exploration.

a) Joint Implementation

Pursuant to Art 6, the Kyoto Protocol provides thus: Annex B countries are permitted to use Emission Reduction credit points resulting from the project lessening GHG emissions or appropriating the projects in any other Annex B country in meeting their emission reduction targets. Under JI, two industrialised states are permitted to jointly fund emission reduction projects and thereafter share the emission reduction credits generated from such project. JI allows industrialised countries to gain Emission Reduction Units or credits for financing emission reduction projects in other industrialised countries (Werksman, 1998). For any project to succeed as Joint Implementation, the projects must meet certain criteria, such as the project must have gained approval by the parties involved, and the project must be one that offer a reduction in emissions consider surplus to any that would otherwise occur, thirdly, the project must be in compliance with the obligation of states pursuant to Art 5 and Art 7 (Bodansky, 1993). By this mechanism states may permit private firms, who transact in greenhouse-gas-reducing development to gain credits in a bid to achieve its target, the companies in turn collect incentive as development partners in the ERUs of the domestic authorities (Yamin, 1998). While this helps in the credits for ERU for states, the procurement of ERUs partners must be "supplemental to domestic actions for the purposes of meeting commitments in line with Art 6. 1(d) of the Kyoto Protocol. This "supplementarity" provision is intended to limit the amount of overseas emission reductions that may be counted as fulfilling Annex B countries' reduction targets. The key benefit of Joint Implementation is relatively cost effect measure as states have the chance to cut greenhouse gas emission with help of other at cheaper rate and with suitable technology (Clare, 1998). The Guidelines for the Implementation of Article 6 of the Protocol indicate that if projects commencing in 2000 meet all the requirements, such projects are qualified for Joint Implementation. The Conferences of Parties (COPs) were expected to work out further details of Joint Implementation as obligated by Kyoto Protocol, Art 6, 1 2. and the COP-7 held in November 2001 finalized such details by adopting the Guidelines for implementation.

In synopsis Joint Implementation is intended to implement projects which benefit Annex 1 states towards realization of their targets, by executing the project in another Annex 1 state and reassigning the responsibilities and their performance of the one Annex 1 state to the other. For instance, if the Bulgaria finds it simpler to pay to implement emissions reduction project in Romania other than domestically, and this is fascinating for Romania to undertake, both the responsibility and the reduction can be transferred to Romania. Among the three main flexible mechanisms, JI has got fewer usages since the fulfillment period for Kyoto, 2008-2012 was considered.

b) Clean Development Mechanism (CMD)

Pursuant to Art 12 of the Kyoto Protocol, Annex B countries can invest in emission reduction projects in non-Annex B countries, and may apply certified carbon emission realized from the project, this may be utilized as an advantage in meeting their emission targets (Michael, 1998).

The Clean Development Mechanism appears to be the singular mechanism that permits developing nations to participate in the carbon market as can be distilled from art 12 (2) of the Kyoto Protocol. The CDM permits developed nations to gain the Certified Emission Reduction credits, by investing in projects that lessens or reduces GHEs in developing states. The CDM is strategically placed to favour mutually developed and developing state in the fight against climate change (Sujata and Bhandari, 2007). As CDM is structured, it has the potentials to promote sustainable development in developing states, same way it allows the developed countries to attain their emission reduction targets at cheaper rate. The Clean Development Mechanism under Article 12 is designed in a way that Annex 1 countries, by financing projects in non-Annex 1 countries, can receive reduction in their obligations in return. Scholars argued that they have been a trade-off witness in the nations where various known CDM projects have been implemented, the possibility of fulfilling the Kyoto

Protocol's two-legged mandate of reducing GHG emission and contributing to sustainable development is far from realistic (Christoph and Parrefio, 2007). With the current trend as CMD negates sustainable development part, Sutter, aptly put this as follows, reading in part, he said *we see a clear tendency of the CDM, to deliver likely emission reductions but not to contribute towards host country's sustainable development. The portfolio is dominated by a few large projects with a high likelihood to reduce emissions but no relevant contribution to host countries' sustainable development. This is evidence that the trade-off in the current Clean Development Mechanism between the two objectives is done strongly in favour of the cost-efficient emission reduction objective, resulting in neglecting the sustainable development objective.* It is discernible that the existing trade-off mainly by developed states indicates a clear objective to generate cheap credit exclusive of sustainable development (Damilola, 2012). This type of trade off must be shunned in the latest climate change regime development.

Unlike the JI, the Kyoto Protocol is silent on how the implementation of CDM in the developing countries. The protocol gives a wide discretion to developed countries to pick any developing state of their choice to invest. Accordingly, developed countries, just like any prudent investor, look out for those developing countries with minimum investable hazards. Therefore, volatile countries, no matter how dire in need may not have CDMs due to lack of conducive investment environment, considerations are also given to presence of suitable legal framework guiding CDM implementation (Martina, 2006). The forgoing couple with socio-political and economic settings among developing countries, has seen a whopping 67% of developing countries been incapable to meet the qualification to draw potential CDM investing countries (Silayan, 2006). CDM projects currently in the Asian continent is in the region of 80%, perhaps of the stability among nations like china, India and Indonesia accounts for this stride whereas elsewhere, Africa currently accounts for less than 2% of total CDM project portfolio. The forgoing disorders have contributed to enormous opposition to CDM by states who feel left out of the portfolio; even as many African countries claim CDM will not advance the course of sustainable development within the continent as promised in the Protocol.

The foremost criticism of CDM is that the measures does not support sustainable development, and can barely eliminate GHG emissions especially given the result that very limited on-going projects or those already completed can claim to have reduced net emissions. For this reason, there are calls to appraise and modify the CDM are already underway (Thompson, 2010).

c) Emissions Trading

The central market based mechanism for GHGs in the Kyoto Protocol is emissions trading under Article 17. Modeled on previous efforts to cap and trade for Montreal protocol gases, particularly CO₂, it anticipates the allotment of targets to emit greenhouse gases, and these allowances are in turn traded as though they were global market commodities (Folkmanis, 2011).

Article 17 of the Kyoto Protocol, conceptualizes emissions trading, for countries haven achieved their emission targets, are permitted to sell their surplus to those states that are fraught with the challenges of meeting their emission reduction targets. This implies that emission reductions and trading off surplus after target are sole are entirely obligation of states and demonstrate the propriety right states have over the cutting of greenhouse gas emissions (Cooper, 1999). Trading of this emission therefore has the benefit of keeping greenhouse gas emissions at a definite level, and stimulating technological growth. This official emission trading structure incentivizes developing countries so they can sign up to emission reduction targets (Jonathan, 2001). Given that several cheap reduction prospects are in developing states, commercial cash flows can drift from the rich developed states to poor developing states once developing states accept reduction targets. At the moment, the market appears to have regional push, key effort to implement emissions trading has led to the debate of how the already existing regional carbon markets might look, if such regional systems exist like in Europe that began in 2005, how can they be linked, so that the carbon market becomes truly global, and ensure the same carbon price applies to all?

d)Critical Assessment of the Flexible Mechanisms

Opinion is currently undivided on what should constitute appropriate strategies in the successive regime for attaining global reduction in greenhouse gas emission. The consensus amongst scholars (Depledge, 2000) is that markets based mechanisms like the three above are the answer to solving environmental problems and so they do dispute the retention of these flexible mechanisms, on the other side of the divide is the interventionists (Yarnin, 1998) (the group of Developing countries who were oppose to the US proposal) who argued elimination and substitution of the flexible mechanism with a regime that sets forth strict emission reduction framework that contain appropriate punishment for countries in disobedience (Damilola,). We set out in the part to extra the flexible mechanisms based on their implementation since 1997, from our readings there are many concerns that have been raise we would however not review all these concerns for space constraint. We limit this to... which have been at the centre of most of the debates: Instrument Choice, Sustainability Assessment, Additionality Assessment, Definition of Viable Projects, Carbon Leakage, and Equity Assessment.

IV. CHOICE OF IMPLEMENTATION MECHANISM

Some scholars have maintained that environmental issues, particularly global warming concerns are overly significant to be left to market sensitivities, arguing further that relying on the current market-based mechanisms means bestowing a right to pollute on the developed countries and permitting them to avoid taking domestic action in reducing their emissions (Sandel, 1997). Accordingly, these group of scholars argue in favour of a structure where define emission targets are set and prescribed penalties against defaulting states (Yarnin, 1998). The proponents of these market based mechanisms contends that environmental safety is too critical to be 'left out' of markets, because a market scheme provides the essential incentives for governments of developed countries to achieve emission reduction at the cheapest possible rate (Jackson and Parkinson, 1998). Those differing to the use of the flexible market based mechanisms believes that the Kyoto Protocol could become exclusively a means of overseeing the global emission trade while neglecting emission reduction, or delaying the target, because carbon trading can be confuse with difficult choices the key emitting countries have to make in order to cut their emissions (Ridley, 1998).

V. SUSTAINABILITY ASSESSMENT OF THE FLEXIBLE MECHANISMS

There is currently a sustainability trade-off, most industrialized countries in a bid to gain cheap credits undertake projects in a manner that is incompatible with sustainable development index. There is no unanimity on whether sustainable development and GHG emission reduction can both be achieve in a single instrument like the Kyoto Protocol (Cohen, 1998).

The trend at the moment encourages a poor sustainability approach to managing emission reductions, because of the market derivatives, if the sustainable development leg of the protocol must be met, then Industrialized countries have to elect between investing in costly and innovative skills projects that will support better sustainability focus or remaining with the cost effective projects that leads to emission reduction but do not support actual sustainable development in the host country, in the current practice most industrialized countries have settled for the latter (Anne, 2004). There is urgent need to apply a measure of sustainable development benchmarks on the flexible mechanisms to reflect in the projects so as to curb the rise in procuring cheap carbon credits with dirty technologies that is offer by the current mechanisms. The developing countries have questioned these mechanisms as it can foster the transfer of low-cost and dirty technologies in their countries in order to produce cheap Certified Emission Reductions and leaving behind lasting environmental harm in their countries (Christoph and Parrefio, 2007).

VI. PRINCIPLE OF ADDITIONALITY

The World Business Council on Sustainable Development, 'posit in the IETA submission of the principle of additionality when it says 'it is clear additionality refers to environmental additionality'(Pearson and Yin, 2006). Principle of Additionality is the decisive test of whether a particular project has occasional GHGs reductions which are additional to what would have occurred in a normal cause of event and whether such projects would be given carbon credits that are available to the Annex 1 parties to achieve their Kyoto Protocol

commitments. Evidently the Kyoto Protocol have no visible mechanism for measuring the additionality of any project, the obvious omission has witness the case where developed countries re-package and claim credits for projects that were already underway or had been completed long before Kyoto negotiations (Barbara, 2002). The environmental additionality and its condition precedent for award of credits entails that a project should result in more emissions reduction than what would have occurred without the project. The test implies that the best measure to determine if a given project is additional, also to comprise a design standard of the amount of emission that would have occurred without the project, and any emission in excess of the amount that would have occurred without the project should generate credit (Anja and Polycarp, 2008).

VII. CARBON LEAKAGE

Carbon leakage entails the increase in GHGEs in one state as a consequence of a decrease in another country (Christian, 2009) put differently, it is the transfer of emissions from one state to the other, for e.g. companies in industrialized countries that have firm policies on climate change tend to move their emitting industrial activities to the developing countries with less strong regulations and the circumstance causing relocation of carbon rather than reducing it, given the available mechanism like emission trading, it is feared that the regulatory costs in the United States of America could put companies at a competitive disadvantage as energy driven companies drift to China that has less restrictive regulations on emission, worse still is the fact that china been the highest emitter in the world is yet to commit to these mechanisms in the Kyoto Protocol.

VIII. DISTRIBUTION OF CDM PROJECTS

The CDM is a project based mechanism that allows developed countries to invest in a developing country by way of building projects that helps GHGEs reduction in exchange for credits, because CDMs is a market project base mechanism it give the developed countries the latitude to pick and choose where to invest as it deem fit, this has led to concentration of CDM projects in some places and in others it's a zero percent engagement. Silayan argued that this kind of arrangement should be resolved in the next framework on climate change if the CDM is retained (Jung, 2006).

IX. WAY FORWARD

Haven examine the pros and cons of the flexible mechanisms, we are in agreement that it is better late than never, the introduction of the mechanism although with gaps if improve then the twin objective of reducing greenhouse gas and sustainable development can be achieved. We observe therefore that cutting the concentration of projects in few developing countries is realizable if allocation by quotas system of the number of projects per country, to enable even distribution of projects so that no country may be left behind. When this is done it will help in redirect the focus from a project concentrated country to other yet spend their quota, thus guaranteeing an fair participation of all developing states as assured by the Kyoto Protocol.

Similarly, to avoid the leakage problem, a good idea will be the inclusion of a provision in the new climate change regime which will permit the Conference of Parties to occasionally review the Annex 1 and II list to add and or eliminate countries based on their current levels to emissions within a timeframe. By so doing emitting states like China would have more responsibilities in the new regime based on their existing emission record.

Finally, the succeeding regime of climate change should take into account new and efficient measure already introduce in the COP21 and new technologies that have been developed beyond the market. The CCS should be enlisted as an eligible project under these mechanisms. Standard rules must however be laid down to ensure its long term efficiency and to prevent leakage after some years.

X. CONCLUSION

In this paper, we have summarized the key inadequacies in the three flexible mechanisms of the Kyoto Protocol. The market idea in itself is a good strategy as it permits countries to supplement their domestic climate mitigation efforts with outsourcing. Bearing in mind the flexibility and cost benefits of the mechanisms, it might

be unlikely to imagine industrialized states to support a climate change regime that is devoid of any trading mechanism.

Reducing greenhouse gas emissions will create congenial environment and build healthier communities. Besides, it will generate economic innovation and create new jobs. To get around this intractable problem of climate change, Carbon taxes and levies should be increased. Carbon taxes make polluting activities more costly and green solutions more affordable thereby allowing energy-efficient businesses and households to save money. There should be a deliberate, consistent and regular global effort designed to preclude greenhouse gas emissions as a climate change prevention strategy.

But it is apparent from our discourse that changing the basic energy foundations of our industrial economy will not be easy or cheap, and will require broad global support which is currently lacking. We can therefore state unequivocally that it will take time for technological developments to support the desired and anticipated conversion to a low-carbon energy future. However, we should not be completely despondent; after all, some decades ago renewable energy sources such as wind and solar seemed improbable to substitute a significant fraction of carbon-based energy. Similarly, electric vehicles seemed unlikely to meet a significant share of our transportation needs. Today both are realistic alternatives. In this connection, we urgently need to develop a global normative and institutional climate change framework which will obligate states and create the needed energy paradigm shift.

References

- [1.] Anja, K., Zink, H. & Clifford, P.(2008). 'Making Sense of the Voluntary Carbon Market: A Comparison of Carbon Offset Standards'. Stockholm Environment Institute.
- [2.] Anne, O. *et. al.* (2014). 'CDT Sustainable Development Impacts' 10 Roskilde: UNEF Research Center on energy, Climate and Sustainable Development.
- [3.] Barbara, H. (2002). *Damming the CDM: Why Big Hydro is Ruining the Clean Development Mechanism 1*; Berkeley: International Rivers Network.
- [4.] Bodansky, D.(1993). 'The United Nations Framework Convention on Climate Change: A Community, 18 *Yale J. Int'l L.* 451,454
- [5.] Christoph, S. & Juan C. P.(2007). 'Does the Current Clean Development Mechanisms Deliver is Sustainable Development Claims: An Analysis of Officially Registered CDM Projects', 75 *Climate Change* 76-77.
- [6.] Clare, B. (1998). 'The Kyoto Protocol to the United Nations Framework Convention on Climate Change, 92 *AM. J. INT'L L.* 315,323.
- [7.] Cohen, S.D. *et. al.*(1998). 'Climate Change and Sustainable Development: Towards a Dialogue', 8/4 *Global Environmental Scene* 341.
- [8.] Damilola, A. (2012). 'From Kyoto to Copenhagen: Rethinking the Place of Flexible Mechanisms in the Kyoto Protocol's Post 2012 Commitment Period P.28
- [9.] Deborah E. C. (1999), 'The Kyoto Protocol and China: Global Warming's sleeping Giant,' 11 *Geo. Int'l Env'tl. L. Rev.* 401,423-24.
- [10.] Depledge, J. (2000). 'Tracing the Origins of the Kyoto Protocol: An Article-by-Article Textual History. Technical paper prepared tinder contract to UNFCCC. 1999-2000.' Available at <http://unfccc.int/resource/docs/tp0200.pdf>.
- [11.] Folkmanis A. J.(2011). 'International and European market mechanisms in the climate change agenda – An assessment of their potential to trigger investments in the Mediterranean solar plan', *Energy Policy* 39, 4490-4496.
- [12.] Jonathan, B. W. (2001). 'Policy Design for International Greenhouse Gas Control, In Michael Toman (Ed.) 2001 *Climate Change Economics and Policy – An Anthology*,
- [13.] Jung, M. (2006). 'Host Country Attractiveness for CDM Non-Sink Projects', 34 *Energy Policy* Vol. 34,15, 2173-2184.

- [14.] Michael, G.(1999). *The Kyoto Protocol a Guide and Assessment* 29. London Earth scan. Accessed 19/12/2016.
- [15.] Michael, S. (1998). ‘Bringing Developing Nations On Board the Climate Change Protocol: Using Debt-for Nature Swaps to Implement the Clean Development Mechanism. *Geo. Int’l Env’tl. L. Rev.* 163,166.
- [16.] Olsen, K. (2016). “The Clean Development Mechanism’s Contribution to Sustainable Development - A Review of the Literature”. Available at http://www.cd4cdm.org/publications/CDM_7_SustainDeveop_literature.pdf. Accessed 20/12/ 2016.
- [17.] Shim, S. (2002). ‘Korea’s Leading Role in Joining the Kyoto Protocol with the Flexibility Mechanisms as “Side-Payments”’ 5 *Geo. Int’l Env’tl. L. Rev.* 203.
- [18.] Shrestha R. M., Govinda R. T. (2002). “The Additionality Criterion for Identifying Clean Development Mechanism projects Under The Kyoto Protocol Energy Policy. 30, 73-79.
- [19.] Silayan, A. (2006). ‘Equitable Distribution of CDM Projects Among Developing Countries; Hamburg: Hamburg Institute of International Economics, HWWA Report 255.
- [20.] Sujata, G. &Preety, B. (n.d.). ‘CDM and Its Implications For Developing Countries in Clean Policy and Development – Flexible Instruments And Developing Countries.
- [21.] Thompson, K. (2010). ‘Mitigation through resource transfers to developing countries: expanding greenhouse gas offsets in: *Aldy and Stavins (Eds.), Post-Kyoto International Climate Policy.*
- [22.] Werksman, J. (1998). ‘Unwrapping the Kyoto Surprise’, 7 *Review European and International Environmental Law* 147.
- [23.] Yamin, F. (1998). The Kyoto Protocol: Origins, Assessment and Future Challenges. 7 *REV. EuR. Community & Int’l ENVILL.* 113,122.
- [24.] Yarnin, F.(1998). ‘Climate Negotiations: An Analysis of the Kyoto Protocol. *International Journal of Environmental Pollution*, 428-453.
- [25.] Zhang Z. X. (2001). ‘An assessment of the EU proposal for ceiling on the use of Kyoto flexibility mechanisms *Ecological Economics.* 37, 53-69.