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COMBATING GLOBAL CLIMATE CHANGE : REVISITING KYOTO CLIMATE ACCORD

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1. Introduction

Over the last few decades, anthropogenic emissions of chemical compounds into the atmosphere have caused many environmental and health problems. Some chemicals like chlorofluorocarbons (CFCs) are produced deliberately and ended up in the atmosphere by accident from equipment or goods, very few of which such as sulphur dioxide (SO_2), carbon monoxide (CO), and carbon dioxide (CO_2) are avoidable by products of burning fossil fuels.[1] The change in global climatic systems is a major global atmospheric environmental problem which developed during the past three decades as being serious threats to the international community. It is commonly held that this vital global environmental problem is the results of the unscrupulous, heedless and persistent development process pursued by the industrialized countries of the North hemisphere over the last several decades.[2]

However, the control of climate change poses difficult choices for many states in matters of economic and industrial policy. The problems of adjustment in the use of energy and in the consumption of CFCs and other green house gases are substantial for industrialized countries, while they are also fundamental to the development aspirations and priorities of developing countries.[3]

Although international legal protection of this specific global atmospheric problem is a relatively new challenge to international

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1. *Global Environmental Outlook* 3, UNEP (2002) Earthscan (Past, Present and Future Perspectives) p. 210
2. Siddiqui, Liaquat A., 'Global Environmental Problems of Ozone Depletion And Climate Change: A Bangladesh Perspective'; *Journal of International Relations. Vol. 1-2, July-June 1999-2000,p.33*
3. Birnie, Patricia W., & Boyle, Alan E., International Law and Environment, Clarendon Press, Oxford (1992) p. 392

community, a significant international legal instrument have been adopted to address and prevent this specified environmental problem. The first outcome in the journey of making collective response to address the global climate change, was the United Nations Framework Convention on Climate Change (UNFCCC) adopted at the UNCED in Rio de Janeiro in 1992. The Convention set up to control dangerous human induced climate change[4] by stabilizing the atmospheric concentrations of green house gases.[5] Following the Convention, the historic Kyoto Protocol as the first legally binding instrument to the UNFCCC was adopted in 1997, requiring the developed countries to reduce their green house gas emissions after 2000. However, the most of the outstanding issues regarding the implementation of the Protocol was finalized by the Seventh Conference of the Parties (COP-7) to UNFCCC held at Marrakech, in 2001.

This Article will first examine the nature and consequences of global climate change. Then it will analyze the legal aspects of present state of international responses towards solving the problem of climate change and how far they are considered to be effective particularly with regard to compliance measures. In so doing particular attention is given to the interest and efficacy of such responses from the viewpoint of developing countries.

2. Nature and Consequences of Global Climatic Change

The earth maintains its equilibrium temperature through a delicate balance between the incoming solar energy (short wave radiation) it absorbs and the outgoing infra-red energy (long wave radiation) that it emits and some of which escapes into space.[6] Scientific evidence suggests that continued increases in atmospheric

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4. Article 1(2), The 1992 Convention on Climate Change. Climate change is defined as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."

5. Article 2 , ibid.

6. Global Environmental Outlook 3, supra note 1, at p. 214

concentration of certain green house gases is the cause of enhanced green house effects and global climatic changes.[7] The emission of carbon dioxide from the combustion of fossil fuels, deforestation, changes in land use, cement production and agricultural practices are some important factors that significantly contributes to green house effect and climate change problem.[8]

The world is overwhelmingly concerned about the enhanced green house effect due to anthropogenic emission of green house gases into the atmosphere at a rate faster than they can be absorbed by land surface or ocean leading to increase in mean global surface temperature.[9] Since the industrial revolution, the concentration of CO_2, one of the major green house gases in the atmosphere has increased significantly (currently about 370 parts per million).

The anthropogenic emissions of CO_2 from fossil fuels combustion, land use change, cement production, and biomass combustion have severely contributed to the enhanced global warming.[10] The concentrations of other green house gases such as methane, nitrous oxide released as a result of agricultural practices, halocarbons, halons and CFC-11 and CFC-12 also have significant contributions to the creation of the global warming problem.

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7. Sands, Philippe, Principles of International Environmental Law I: Framework, Standards and Implementation, Manchester University Press, Manchester and New York (1994) p.271

8. Siddiqui, supra note 2, at p. 35. The temperature of 'green house' is raised by using a shield through which solar radiation is allowed to enter but the consequential heat is prevented from escaping. Certain selected green house gases such as carbon dioxide (CO_2), methane (CH4), nitrous oxide, chlorofluorocarbons (CFCs), water vapors, ozone (O_3) etc. allow solar radiation to pass through the earth's atmosphere almost unimpeded but they absorb the infra-red radiation from the earth's surface and then re-radiate some of it back to the earth . This process is commonly known as the "greenhouse effect" or "global warming", and the gases responsible for this are called "green house gas".

9. Ibid.

10. Global Environmental Outlook 3, supra note 1, at p. 214

The Inter-governmental Panel on Climate Change (IPCC) in its various successive reports has enumerated the various powerful effects of the global warming problem (IPCC 1990, 1995 and 2001). In general, global warming brings various changes such as sea level rise, causing flooding, climate change, change in production pattern etc. each of which has severe impact in Bangladesh-forests, deserts, range-lands and other unmanaged ecosystems could become wetter, drier, hotter or colder. As a result, many will decline or fragment and individual species will become extinct. It has been estimated that if current trends continue, the mean sea level is expected to rise some 15-95 cm. by 2100 and that with only one meter rise in sea level, 17.5 percent landmass of Bangladesh will go under water.

It is anticipated that at least 24 million people of coastal areas of Bangladesh will be directly affected by the climate change. It has also been revealed that the world's largest mangrove forest, located in the southeast of the country is under depletion due to global warming.[11]

Apart from these, it has been projected that climate change in particular is likely to affect human health and well being through a variety of mechanisms. For example, it can adversely affect the availability of fresh water, food production, the distribution and seasonal transmission of vector-borne infections diseases such as malaria, dengue fever and schistomiasis (IPCC 2001).[12]

3. Background of the Kyoto Climate Accord

At first, in 1898 Swedish scientist Ahrrenius warned that carbon dioxide emission could lead to global warming. However, scientists began to attract policy makers' attention to global warming as an emerging global threat in the early 1970s. In 1979 the first World Climate Conference at the footsteps of scientists was held in Geneva where it was expressed concern about the atmospheric commons although the historic Stockholm Conference had been

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11. Siddiqui, supra note 2, at p. 36
12. Global Environmental Outlook 3, supra note 1, at p. 210

marked as the starting point for international efforts on climate variations and climate change.[13]

In response to growing scientific understanding, a series of Inter-governmental Conferences focusing on climate change were held in Villach, Austria in the late 1980s and early 1990s. At the 1985 Villach Meeting sponsored by WMO, UNEP and ICSU, an International Group of Scientific Experts reached a consensus on the seriousness of the problem and the danger of significant warming (WMO 1986).[14] As a result, in 1990 the Second World Climate Conference sponsored by the WMO, UNEP and other international organizations, called for a framework convention on climate change and emphasized the need for assisting the developing countries.[15] Then in December 1990, the UN General Assembly approved the start of treaty negotiations and established under its auspices an "Inter-governmental Negotiating Committee (INC)" supported by UNEP and WMO, for the preparation of an effective framework convention on climate change, enshrining appropriate commitments (INC/FCCC 1990). The INC met for five sessions between February 1991 and May 1992.

At the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in June 1992, negotiators from 150 countries finalized the Convention in just fifteen months. It was adopted at UN headquarters in New York on 9 May 1992 and was signed by 155 states and the EC in the following months at UNECD.[16] The 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change was adopted at the Third Conference of Parties (COP-3) held in Kyoto,

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13. Ibid., p. 216
14. Ibid., p. 216
15. United Nations Department of Public Information. DPI/18.72/SD-February 1997
16. New York, 9 May 1992. In force 21 March 1994; 31 ILM (1992). As of 24 September 2002, the Convention has 186 instruments of ratification.

Japan on 11 December 1997[17] as the legal instrument developed by the Convention to address the impact of developed industrialized countries (listed in Annex I to the Convention) on climate change. Being a framework treaty, the United Nations Framework Convention on Climate Change (UNFCCC) contained only a non-binding commendation for developed (Annex I) countries to return to the 1990 emission levels of CO2 and other green house gases (not controlled by the Montreal Protocol) by the year 2000.[18] Just as the Vienna Convention on Ozone Layer lacked detailed commitments and was followed by the Montreal Protocol setting binding limitations on the consumption of ozone depletion substances, the FCCC needed a subsequent protocol as per Article 17 for achieving its long-term objectives of preventing dangerous anthropogenic interference with the climate change. As such the First Conference of Parties (COP) to UNFCCC met in Berlin in March-April 1995 launched a new round of talks on strengthening the commitments of developed countries.[19] It resulted in consensus decision at COP-3 to be held in Kyoto (December 1997) to adopt a protocol under which only the developed countries will reduce their combined green house gas (GHG) emissions by at least 5 percent at 1990 levels by the period 2008-2012.[20]

However, as per Article 25 of the Protocol, it was required at least 55 instruments of ratification or accession for becoming legally

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17. Kyoto, Japan, 11 December 1997; 37 ILM (1998) 32. The Protocol was opened for signature from 16 March 1998 to 15 March 1999 at the UN headquarter. By that date the Protocol had received 84 signatures. Those parties that have not yet signed the Kyoto Protocol may accede to it at a time. As of 19 April 2005, 149 parties (representing 61.6 percent of total green house gas emissions) have ratified the Protocol.

18. *Global Environmental Outlook 3,* supra note 1, p. 215

19. Desai, Bharat H., 'Institutionalizing the Kyoto Climate Accord' in *Environmental Policy & Law, Vol. 29, No. 4, 1999*

20. Ibid. However, in this context, the European Union (EU) suggested a reduction of carbon dioxide emissions by 2010 to 15 percent below the 1990 emissions levels by developed countries . Japan suggested 5 percent reduction in the period between 2008 and 2012 and the United States suggested a reduction to 1990 levels by 2008-2010.

into effective, which must include developed (Annex I) countries whose total emissions account for at least 55 percent of the total global carbon dioxide and other green house gases emissions.

The complexity of the negotiations, however, meant that considerable "unfinished business" remained even after the Kyoto Protocol itself was adopted. The Protocol sketched out the basic features of its "mechanisms" and compliance system, for example, but did not flesh out the all-important rules of how they would operate. Although 84 countries signed the Protocol, indicating that they intended to ratify, many were reluctant to actually do so and bring the Protocol into force before having a clearer picture of the treaty's implementation rules. A new round of negotiations was therefore launched to flesh out the Kyoto Protocol's rulebook, conducted in parallel with negotiations on ongoing issues under the Convention. This round finally culminated at COP-7 to the UNFCCC in 2001 with the adoption of the Marrakech Accords[21] setting out detailed rules particularly for an effective relaxation of emission targets for Japan, Canada and Russia and provision of access to unrestricted emission trading, needed to allow ratification and implementation of the Kyoto Protocol.[22] However the parties at COP-9 held in 2003 and COP-10 held in 2004 completed some unfinished business of Marrakech Accords. Thus, finally the European Union, Japan and other nations then ratified the Protocol. Canada, Poland and New Zealand also ratified the Protocol in December 2002. The USA (representing the highest percentage of global green house gas emissions) and Australia surprisingly isolated in their rejection of multilateral cooperation on climate change. Nevertheless, Russia (representing the 17.4 percent of the total carbon dioxide/green house gas emissions of the world) after a long diplomatic bargaining, was convinced to ratify the Protocol

21. The Seventh Conference of the Parties (COP-7) to UNFCCC was held at Marrakech, Morocco from 29 October to 9 November, in 2001. The agreement so reached at the Conference is known as "Marrakech Accords". For text of the "Accords" see FCCC/CP/2001/13/Add.3, 21 January 2002,pp.1-77

22. http://unfccc.int/essential_background/kyoto_protocol/items/2830.php

and the Putin government submitted its instrument of ratification on 16 November 2004 and thereby the threshold for entry into force [23] (ratification by at least 55 countries representing at least 55 percent of developed country emissions in 1990) was met and a period of uncertainty has closed.

4. Methods of Addressing Climate Change under the Protocol

4.1 Commitments: quantified threshold

The Kyoto Protocol is the first substantive and real promise to implement United Nations Framework Convention on Climate Change collectively. It establishes quantified, legally binding commitments to limit or reduce green house gas emissions. Article 3(1) of the Protocol commits developed country parties listed in Annex B (that are parties in Annex I of the UNFCCC) to reducing their overall emissions of green house gases (GHGs)[24] by at least 5 percent below 1990 levels in the commitment period 2008 to 2012.[25] Thus, the Kyoto Protocol establishes a "Five Percent Club" by committing all developed countries to reduce their emissions of green house gases collectively while Australia is allowing an increase of 8 percent, Russia and Ukraine are aiming at stabilization. The Kyoto Protocol also requires that this Annex B listed developed country parties, as a group, be 5.2

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23. The Kyoto Protocol has entered into force on 16 February 2005- seven years after it was adopted.

24. This target covers emission of the six main green house gases namely: Carbon dioxide(CO_2); Methane(CH_4); Nitrous Oxide (N_2O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); and Sulphur hexafluoride (SF_6).

25. The following 39 developed countries were originally listed in Annex I of the UNFCCC: Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Denmark, EEC/EU, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, USA. Annex I was amended pursuant to the decision taken at COP-3 to include the countries like Croatia, Czech Republic, Liechtenstein, Monaco, Slovakia and Slovenia.

percent below 1990 levels in 2010. It requires that the OECD group parties (when their individual allocations are taken into account) be 6.6 percent below 1990 levels in 2010.[26] The targets are considered inadequate in terms of their existing emissions growth to substantially affect climate change.[27] Nevertheless, these are considered a start, and unless these are met, the task in the future will be even harder. Moreover, the Protocol makes room for the review of their commitments, so that these can be strengthened over time. Negotiations on targets for the second commitment period are expected to be held from 7-9 November 2005, at the First Session of the COP/MOP by which time Annex I parties must have made "demonstrable progress" in meeting their commitments under the Protocol.[28]

However, the very essence of the Kyoto Protocol lies in that it allocates the burden of this reduction among the developed country parties taking into account different targets for each country party pursuant to its quantified emissions limitations and reduction commitments embodied in Annex B of the Protocol.[29]

4.2 Developed Countries: primary responsibility

This is the first occasion on which the developed countries recognize differentiated emission targets among themselves under

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26. Article 3, The Kyoto Protocol. See also, *CLIMA ASIA*, Climate Action Network-South Asia (CANSA) Newsletter, July-December 2000 COP-6 Special Issue, p. 4

27. For example, a recent estimate puts US current emissions are 36 percent and are expected to be 54 percent over 1990 levels by 2020 although it has left the Protocol. Perhaps, the IPCC has avoided recommending a specific reduction target because this is politically sensitive for developed countries and socio-economic variables are also significant factors in what an 'acceptable' stabilization level may be. The IPCC does attempt to illustrate what are the likely outcomes of various levels of GHG stabilization. For further see http:// www.twnside.org.sg/title/ysl1.htm

28. See Article 3(9), The Kyoto Protocol.

29. Article 3, ibid. For example, the European Union agreed to reduce its green house gas emissions by 8 percent, the United States by 7 percent, Japan by 6 percent; on the other hand, Australia, New Zealand, Iceland and Norway can have a small increase in their emissions in the aforesaid commitment period.

a global environmental treaty. The inclusion of such a device was cushion their pain of some developed countries, which found the economic and political costs of emission reduction difficult in the short term.[30] Nevertheless, the Protocol did not originally set any limitations on the emissions from developing countries on the principle that those most responsible for historic emissions should act first. Thus, the Protocol mandates developed (Annex I) countries (DCs) to take the lead in arresting the green house gas emissions.[31]

The UNFCCC highlights the responsibility of the largest green house gas (GHG) emitters-early industrializers such as Europe, North America, Japan and some others –to curb emissions. This is underpinned by the Rio principle of common but differentiated responsibilities. Developing countries just beginning to increase their GHG emissions are for the moment exempted from cuts since their first focus should be on poverty alleviation, adaptation to climate change and development.[32]

At the very outset the Kyoto Protocol requires that "each developed country party (included in Annex I to UNFCCC) in achieving its quantified emission limitations and reduction (QELAR) commitments under Article 3, in order to promote sustainable development must implement and/ or further elaborate policies and measures".[33]

To achieve their commitments, Annex I parties must put in place domestic policies and measures. The Protocol also provides an indicative list of policies and measures that might help mitigate climate change and promote sustainable development.[34] However,

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30. Desai, supra note 19. See also, Report of COP on its Fourth Session, Buenos Aires, 2-14 November 1998.

31. *CLIMA ASIA*, Climate Action Network-South Asia (CANSA) News Letter, July-December 1998, COP-4 Special Issue, *Published* by Bangladesh Centre for Advanced Studies (BCAS) p. 6

32. http:// www.twnside.org.sg/title/ysl1.htm

33. Article 2(1)

34. See Article 2(1) (a) for details. See also, http://unfccc.int/essential_ background/kyoto_protocol/items/3124.php

the Protocol states that the net changes in green house gas emissions by biological sources[35] and sinks[36] shall be used to meet the commitments period (2008-2012), but these sources and sinks are limited to such "afforestation, reforestation and deforestation" that took place since 1990.[37] The Protocol also allows the developed country parties to use additional 'land use, land use changes and forestry' (LULUCF) and agricultural soil and other activities to meet their emission reduction target for carbon absorbed by them, for the first commitment period.[38] However, COP 9 to the UNFCCC developed good practice guidance (GPG) for LULUCF activities and other issues related to it by introducing common reporting format tables to be considered by the parties. It also included sectoral tables in Annexes I-III that will be integrated into inventory reporting software under development by the Secretariat.[39] The COP 10 to the UNFCCC further encourages the parties that have ratified the Protocol to submit, on a voluntary basis, estimates of green house gas emissions by sources and removals by sinks using the common reporting format.[40]

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35. The Convention defines "source" as "any process or activity, which releases a green house gas, an aerosol or a precursor of a green house gas into the atmosphere."

36. "Sink" is also defined in the Convention as "any process, activity or mechanism which removes a green house gas, an aerosol or a precursor of green house gas from the atmosphere."

37. Article 3(3). The Marrakech Accords added to the list of these eligible sink activities by incorporating forest management, cropland management, grazing land management and revegetation. The Accords also established specific limits on such various categories of eligible sink activities such as for forest management, Appendix Z sets forth country-specific caps, for each developed countries. For example Japan's forest management caps is 13 million tons and Canada's is 12 million tons. For details see, COP-7 Decisions 20/CP.7,21/CP.7 and 23/CP.7/FCCC/CP/2001/13/Add .3

38. Article 3(4). The inclusion of sinks is predicted on the hypothesis that forests and soil have the capacity to absorb large amount of carbon dioxide. Developed countries with last forest cover such as Japan, Canada, Australia and Russia have championed over sinks for joint implementation and CDM as set out in the Protocol .

39. FCCC/SBSTA/2003/L.22/Add.1

40. See FCCC/SBSTA/2004/L.26/Add.1, 17 December 2004

However, it can be noted that the present accounting approach only considers sinks within the commitment period (2008-2012), but does not consider them for the calculation of the 1990 baseline emission. In addition, Article 3(7) of the Protocol permits those countries for which LULUCF constituted a net source of GHGs emissions in 1990 to include in their 1990 emission base the sources from land use change. This diminishes the commitment to reduce energy related emissions.[41] In another study done by the German Advisory Council on Global Change (WBGC), it assessed that the present accounting approach can lead to incentives with negative impacts upon climate protection, bio-diversity conservation and soil protection.[42]

Finally, the Protocol states that the developed country parties (listed in Annex I) must have a national system for the estimation of anthropogenic emissions by sources and removal by sinks of all green house gases, subject to the guidelines made in this regard by the Conference of the Parties serving as the Meeting of the Parties to the Protocol. The Protocol also adds that such parties must incorporate in their annual inventory of anthropogenic emission of green house gases, the necessary supplementary information to meet their commitments under the Protocol at the latest by 1 January 2007. Such information will be reviewed by experts review teams pursuant to the decisions of the Conference of the Parties serving as the Meeting of the Parties to the Protocol.[43] However, the parties at COP-10 to the UNFCCC agreed to

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41. CLIME ASIA, supra note 27, at p.4

42. Ibid., p. 4

43. See Articles 5,7 and 8. The Marrakech Accords also required Annex-I parties to provide information in their national communications under the Protocol to demonstrate that their use of the flexible mechanisms (see below) is "supplemental to domestic action" to achieve their target. This information will be reviewed by the Enforcement Branch of the Compliance Committee within sixteen months of submission through a set of expedited procedures. Annexes I-II to the COP-10 decision provide in details for reporting guidelines and rules of procedures for review of information. For further see, Report of the Tenth Conference of the Parties to the UNFCCC held at Buenos Aires, Argentina from 6-18 December 2004.

established and maintain a national registry to track and accord transactions under the 'mechanisms'. A Secretariat will keep an independent transaction log (ITL) to ensure that accurate records are maintained. It will also publish an annual compilation and accounting report of each party's emissions and its transactions over the year.[44]

4.3 Kyoto Flexible Mechanisms

The Kyoto Protocol breaks a new ground by establishing three innovative market-based mechanisms (resulting from the intense negotiations and debates amongst essentially developed (Annex I) country parties at the Kyoto Conference in 1997) to meet a reduction of green house gases. They are (i) Emission Trading; (ii) Joint Implementation; and (iii) the Clean Development Mechanism or CDM.[45] These so-called flexible mechanisms are aimed at providing "geographical flexibility" and are expected to be reasonably lucrative to help the developed country parties in achieving quantified emissions limitations and reduction as cost effectively as possible i.e. a party facing high costs in cutting its own emissions can purchase credit for lower cost reductions undertaken by another party.

Now, we will examine these three market based mechanisms as stipulated in the Protocol.

International emission trading

Under an international emission-trading regime, the developed countries may transfer or acquire, among themselves, any excess reduction of GHGs beyond their respective quantified emission limitation and reduction (QELAR) targets. This market-based mechanism allows developed countries to buy and sell emissions credit among themselves.[46] Article 17 stipulates that the developed

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44. FCCC/SBSTA/2004/L.13/Add.1, 14 December 2004. For details see, Report of the Tenth Conference of the Parties to the UNFCCC held at Buenos Aires, Argentina from 6-18 December 2004.
45. Articles 4,6,12 and 17. See also, http://www.pweclimate. org/cop7/update.110901.cfm
46. Desai, supra note 19

country parties (listed in Annex B to the Protocol) may participate in emissions trading for the purpose of fulfilling their assigned emissions reduction commitments under the Protocol. Such trading will be supplemental to their domestic actions with a view to meeting the above-mentioned commitments.

Moreover, the Protocol says that if a party acquires any emission reduction units from another party through such trading, it is to be added to the assigned amount for the acquiring party.[47]

This arrangement is suited to the interests of those developed countries, which have the capacity to buy 'hot air' (emission credits) and do not want to incur immediate political cost domestically. An important issue in this trading will be the question of fixing on the purchase of such 'hot air'. In the absence of a ceiling, a country can, through 'market magic' either substantially reduce or even get away from meeting its (QELAR) target simply because it can afford to pay.[48] David G. Victor argued that the Kyoto trading system would fail because it was a shell game.[49]

Joint implementation

Like the emissions trading, the joint implementation (JI) is a market-based mechanism that has the potential of achieving low cost emission reductions while prompting sustainable development.[50] The Kyoto Protocol stipulates that developed country party may transfer to or acquire from other parties

47. Article 3(10), The Kyoto Protocol

48. Desai, supra note 19

49. See ibid.

50. The concept was first introduced in the Convention on Climate Change in Article 4(2), which stipulates that developed countries may implement policies to limit green house gas emissions jointly with other parties and assist them in contributing to the achievement of the objective of the Convention. The 1997 Kyoto Protocol has developed it by introducing clean development mechanism in a separate provision. See also, Halvorssen, Margrethe, Antia, Equality Among Unequals in International Environmental Law: Differential Treatment for Developing Countries, Westview Press (1999) p. 97

emission reduction units resulting from projects aimed at reducing anthropogenic emissions by sources (eg. an energy efficiency scheme) or enhancing anthropogenic removals by sinks (eg. a reforestation project) of green house gases in any sector of the economy, to meet its QELAR commitments.[51]

The concept of joint implementation, initially introduced by the delegation from Norway in 1992, thus, allows a developed country to fulfill its emissions reduction target in the Convention by associating with a developing country (Non-Annex I country) that produces a limited amount of green house gas emission. A system of binding quantitative targets is necessary in order for the joint implementation projects to produce credits for such emission reduction. Such as system of emission reduction targets and timetables was realized through the Kyoto Protocol.[52]

In this case, the capacity of a country to invest can be used to offload some of its burden of QELAR at home. These intra-developed countries mechanism may be beneficial if appropriate reporting rules, comparable methodologies as well as project guidelines are established by the COP.[53] Joint implementation, however, has been criticized as a license to pollute.

On the other hand, joint implementation promotes developing country participation in the Convention and its Kyoto Protocol because the developing countries stand to receive large sums of money and transfer of clean technology. At the same time, this incentive would be a positive argument for the developing countries to join future protocol or agreements where they would also have to commit themselves to reduce or limit future emissions of the green house gases.[54]

An additional advantage of using joint implementation is that it is cost effective. This would be of particular interest for developed

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51. Article 6 read with Article 4
52. Article 3(1), The Kyoto Protocol
53. Article 6, ibid. See also, Desai, supra note 19
54. Oddmund, Graham, 'International Law', 31 *(Erling Selvig and Hans Christian Bugge eds. 1995)* as quoted in Anita, supra note 48, at p. 98

countries because it is usually cheaper for them to use pollution abatement measures in developing countries than to do it at home. Moreover, joint implementation has the added attraction of prompting that transfer to technology and financial resources from developed to developing countries in carrying out the joint projects conducted in developing countries.[55]

Clean development mechanism

The Kyoto Protocol allows the developed countries that are unable to meet their entire green house gas emissions targets domestically to purchase such reductions from other countries (including developing countries). The mechanism under which such trading of green house gas emission reductions can take place is called the clean development mechanism or CDM, which enables developing countries to take advantage of the fact that their emissions are relatively low and trade emission reductions to the developed countries.[56]

Article 12 of the Kyoto Protocol defines CDM, which has been identified by the Protocol as a mechanism for the North-South cooperation. It states that the purpose of CDM is to assist developing countries on achieving sustainable development and allow them to assist developed country parties, which are willing to finance emissions-avoiding projects, in achieving compliance with their quantified emission limitation and reduction commitments. Therefore, one can ask a pertinent question: why does the Kyoto Protocol see no other role for developing countries in combating climate change than just helping developed countries to meet their commitment under the Protocol?

The purpose of the Protocol is to set a strategy that would ultimately help all countries to combat climate change in a way that would benefit both current and future generations on the basis

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55. Bodansky, Daniel, 'The United Nations Framework Convention on Climate Change; A Commentary' in *Greening International Law (1994)* as quoted in Anita, ibid., p.98

56. Bangladesh Environmental Newsletter, *Bangladesh Centre for Advanced Studies, Vol. 13 No. 1 March 2002, p.7*

of equity, which are the two guiding principles identified in Article 3 of the UNFCCC.

Therefore, the Kyoto Protocol strategy should be one, which helps all countries to combat climate change taking their "common but differentiated responsibilities" into account.[57] Thus, the developed countries are authorized by Article 12 to use credits accruing from projects in developing countries to contribute to compliance with their emissions reduction targets. In addition, the CDM can also be considered as a funding mechanism; developing countries that are "particularly vulnerable to the adverse effects of climate changes" will receive a share of the proceeds to assist them in meeting their adaptation costs.[58]

The CDM has been regarded as a surprise tool of Kyoto. It originated from the idea of a 'Green Development Fund", mooted by Brazil, at a late stage in negotiations preceding the Kyoto Meet. In Kyoto, the idea took an entirely different shape as compared to the original purpose to fund it from pollution fine paid by the parties in 'non-compliance'.

The developed countries succeeded in stalling efforts to designate this scheme as a fund, which would give an impression that they have an obligation to pay for it. Clearly the aim was not to make it a climate fund in future to assist the developing countries. G-77 countries accepted CDM at Kyoto in the belief that new additional funding as well as transfer of clean technology would flow through this mechanism.[59]

Finally, the Kyoto Protocol states that the clean development mechanism will be subject to the authority and guidance of the Conference of the Parties serving as the Meeting of the Parties to the Protocol and will be supervised by an Executive Board of the clean development mechanism. The COP serving as the MOP to the Protocol will also elaborate modalities and procedures to

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57. See Agarwal, Anil, and Narail, Sunita, 'The Atmospheric Rights of All People on Earth' in *CLIME ASIA*, supra note 27, at p.7

58. See Article 12(3) (4) and (8)

59. Desai, supra note 19

ensure transparency, efficiency and accountability through independent audition and verification of project activities.[60]

The clean development mechanism also offers some opportunities for reaching green house gases reduction target. This will only be possible if any reduction is considered and demonstrated as additional and a small portion of domestic GHGs emissions reduction.

The overall emphasis must be domestic activities, which will reduce the major share of the total amount. By attempting to make CDM as the major vehicle for carbon reduction in the physical space of developing countries must not be construed as carbon colonialism or as carbon dumping mechanism. Hence, all efforts must be made to ensure and demonstrate that the developed countries, which have made their commitment in the Convention on Climate Change and its Kyoto Protocol, must make most of the reduction at home.[61]

Since the Kyoto Accord, in effect was a step towards the acceptance of the principle of primary responsibility of the developed countries for the global climate change, many elements of the Protocol were controversial and left undecided, to be fleshed out later. Though the Kyoto Protocol imposes legally binding targets for emissions reduction, the process is clearly conditional upon the exercise of political will as well as the willingness to bear economic costs, on the part of the developed states.[62]

Interestingly, in the Kyoto Protocol, the developed countries have committed only to a 5 percent GHGs reductions based on the 1990 level by 2008-2012 budget period. Despite these limitations the Kyoto Protocol has created a new negotiating space.

However, the Protocol provides provisions for the establishment of the implementing mechanism, the Conference of the Parties to the Protocol, which is entrusted with the task of supervising the

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60. Articles 12(4), (7) and 13
61. *CLIME ASIA*, COP-6 Special Issue, July-December, 2000, p.2
62. Desai, supra note 19

implementation of the Protocol. [63] Therefore, the parties, at COP-7 on the basis of Bunenos Aires Plan of Action adopted at COP-4, finalized the operating rules for the flexible mechanisms. The Marrakech Accords establish that all the credits generated under the three mechanisms are equivalent and equally tradable. [64] The Accords also allow the activities in the CDM project for the first commitment period. But the modalities and procedures for such activities were developed at COP-9, which include a limit on the extent to which Annex I parties may use certified emissions reductions (CERs), generated from such sink projects towards their target.[65] Such CERs must be used for the commitment period for which they were issued (i.e. they cannot banked) and must be replaced by another credit (AAU, ERU or CER) prior to their expiration.[66] The COP-9, in addressing the environmental impact of sinks project involving genetically modified organisms (GMOs) and alien invasive species (AIS) also took a decision that host parties may evaluate risk associated with them according to their own national laws as well as information on the species identified in the projects design document (PDD).[67] However, COP-10 decision allows for the adoption of simplified modalities and procedures for small-scale afforestation and reforestation CDM project activities in the first commitment period. It limits such projects to net anthropogenic greenhouse gas removals by sinks less than eight kilotons of carbon dioxide per year if the average projected net anthropogenic CHGs removals by sinks for each verification period do not exceed eight kilotons of carbon dioxide

63. Article 13

64. See COP 7 Decisions 15/CP.7/FCCC/CP/2001/Add.3. Originally the credits generated under each mechanism were separate and in some cases static, i.e. once earned they could not be traded.

65. See Report of the Conference of the Parties (COP-9) at its Ninth Session held in Italy from 1-12 December 2003. The COP-9 also defines two types of CERs: temporary CERs, which are valid for only one commitment period; and long term CERs, which are valid for the project's full crediting period, which may extend to either for a period of 20 years, with two renewals upto 60 years total or 30 years with no renewals.

66. See ibid.

67. See FCCC/SBSTA/2003/L.27/Add.1, 12 December 2003

equivalent per year. If a small-scale project results in excess removals of eight kilotons of carbon dioxide equivalent per year, excess removals will not be eligible for the issuance of temporary or long term certified emission reductions.[68] A levy from each CDM project known as "share of proceeds"- will help finance adaptation activities in particularly developing countries. But COP-10 decision exempts small-scale project activities from the "share of proceeds"[69] A new adaptation fund was also established by the Marrakech Accords to manage the funds raised by the adaptation levy on the CDM, as well as contribution from other sources. The fund will be administered by the Global Environmental Facility (GEF), as the operating entity of the Convention and Kyoto Protocol's financial mechanism.[70] However, COP-10 decision provides additional guidance to GEF which includes: to submit report on the support of activities identified in Buenos Aires Programs of Work on Adaptation and Response Measures; and to continue to fund activities relating to educating, training and public awareness.[71]

4.4 Compliance Regime

The Protocol calls on the Conference of Parties serving as the Meeting of Parties to the Protocol (COP/MOP) to set up at its first session appropriate and effective procedures and mechanisms to determine and 'to address cases of non-compliance with the Protocol', including through the development of an indicative list of consequences, taking into account the cause, type, degree and frequency of non-compliance.[72] However, the Bonn agreement adopted at COP-6 in the Hague took a decision on consequences a party would face in the event of failure to meet its emissions target making the legal character of the compliance regime deferred. They include: penalties i.e. make up the shortfall, plus 30 percent in the next commitment period; suspension of its

68. See FCCC/SBSTA/2003/L.26/Add.1, 17 December 2004
69. Ibid.
70. See FCCC/CP/2004/L.17, 18 December 2004
71. See COP-7 Decisions 16/CP.7 to 19/FCCC/CP/2001/13/Add.3.
72. Article 18

eligibility to sell credits under emission trading; and development of a compliance action plan.[73] The parties at COP-7, as part of Marrakech Accords adopted a decision on the compliance regime for the Protocol, which is among the most comprehensive and rigorous in the international arena. It makes up the teeth of the Protocol, facilitating, promoting and enforcing adherence to the Protocol's commitment.[74] However, this is a big task, and the parties have not reached at a decision on whether non complying parties can be legally prevented from trading in emission. This may be made legally binding should an amendment to the Protocol be ratified.[75]

5. Conclusion

The foregoing discussions reveal that for the first time in the history of the international environment policy, the rules have been set for the use of unique instruments that allow emission reductions in the most cost-effective manner. The legally binding Kyoto Protocol is a first step toward combating global warming. It offers powerful new tools and incentives that governments, businesses and consumers can use to build a climate-friendly economy and promote sustainable development. Given the political will, it can go a long way in dealing with global warming. In fact, February 16 has marked the beginning of a new era in international efforts to reduce the risk of climate change. Now 35 industrialized countries and the European Union are legally bound to reduce their combined emission of six major greenhouse gases during the

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73. See FCCC/CP/2001/L.7,24 July 2001, Annex, Para VIII, pp. 13-14. At COP-4 held in Buenos Aires in November 1998, the parties established a joint working group (JWG) on compliance to develop a compliance system under the Protocol with a view to adopting a decision at COP-6.

74. It consists of a Compliance Committee, composed by a Plenary, a Bureau, and two Branches : a Facilitative Branch and Enforcement Branch. The Facilitative Branch intends to provide advise and assistance to parties including early warning that a party may be in danger of not complying. Whereas the Enforcement Branch has the power to determine certain consequences on parties not meeting their commitments. For details see COP Decision 24/CP.7/FCCC/CP/2001/13/Add.3

75. http://www. twnside.org.sg/title/ysl1.htm

five-year period 2008-2012 to below 1990 levels. [76] The flexible mechanisms will improve the efficiency and cost effectiveness of emission cuts by developed countries. The clean development mechanism has particularly got a major boost after the COP-7 and now it encourages investments in developing country projects that promote sustainable development while limiting emissions. In order to make the activities under such mechanisms, COP-7 together COP-9 and COP-10 the UNFCCC adopted in detail modalities and procedures. Moreover, a new adaptation fund under the Protocol established by COP-7, has become operational to assists developing countries to cope with the adverse effects of climate change.

However, whatever merits and significance the Kyoto Protocol may have, it has several deficiencies and inherent infirmities: The strategy outlined in the Kyoto Protocol allows developed country (Annex I) parties to meet their commitments without undertaking substantial green house gas reductions at home and may, therefore, not result in the "stabilization of green house gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system"- the ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC).[77] The basic weakness of the Kyoto Protocol is that it has turned compliance into intense number games. Countries, which have promised a higher percentage reduction, are seen as good players, and those arguing for a lower percentage reduction are seen as difficult one.[78]

Moreover, the worst aspect of the Kyoto Protocol is that it has already given the heaviest emitters of green house gases, namely the developed countries full entitlements to their heavy current emissions minus the small amount that they are expected to reduce as a percentage of their current emissions. This 'assigned amount' has gone well beyond being a mere target to be reached. It has been turned into an "entitlement" by giving developed nations full

76. http://www.climateark.org/articles/reader/asp?linked=38858

77. See CLIME ASIA, supra note 27, at p. 6

78. Ibid., p. 6

property rights over this assigned amount.[79] It is also thought that the Kyoto Protocol has become a political barrier due to its obsessive focus on technical detail and the physical factor of the climate change. The moneymaking opportunities of the so-called flexible mechanisms have overshadowed domestic action, which helps developed countries in avoiding their responsibilities.

Even though the strategy outlined in the Kyoto Protocol does not insist on participation by developing countries in the reduction targets, except through the clean development mechanism and emissions trading. It sets the world on a path that does not recognize the atmospheric rights of the current and future generations of developing countries. Because it provides the current generations of developed countries green house gas entitlements-not based on equity but on the basis of 'current emissions; and furthermore, provides developing countries perverse incentives to pollute further.[80]

The developing country negotiators, noting the Convention's emphasis on 'common but differentiated responsibilities', have said they will not be prepared even to discuss the timing or form of potential developing country commitment, until developed countries have demonstrated further progress in meeting their own emission targets.[81]

However, at the Fourth Conference of the Parties (COP-4) of the UNFCCC held at Buenos Aires in 1998, Argentina and Kazakhstan surprisingly accepted voluntary emission reduction targets. This would be a model for other developing countries since green house gas emissions from these countries are increasing and may overtake those of the developed world in the next 15 to 30 years. Hence, it is expected that the Kyoto Protocol will be amended in the near future to include voluntary emission targets for developing countries. It is also important for re-engaging USA; otherwise they would undermine the environmental effectiveness of the Kyoto Protocol. It is important to ensure that whatever target

79. Ibid., p. 8

80. Ibid., p. 6

81. http://www.pewclimate.org/policyguide/international_developing.cfm

selling strategy is undertaken for the developing countries, the principle of equity be established as its basis.

This will mean in particular that every citizen of the planet should have an equitable share of the right to pollute the global atmosphere. Then if any country takes more than its allocated share it must purchase further rights from those countries that do not use their full share.[82]

Finally, most importantly, although the Kyoto Protocol has had tremendous achievement on its own right, it will not ultimately solve the problem of global warming. Now it will only reduce green house gas emissions by 5 percent in the first commitment period; while the latest report of the IPCC has stated that reductions of about 60 percent are needed to prevent dangerous impacts of global warming. Nevertheless, it represents a major step forward in the right direction and is structured in a way to allow more stringent targets to be taken later as time goes on.[83] It is also safe to say that although many issues remained unresolved, much has been achieved in the past decade. But what has become crystal clear at COP-10 is that some parties are not ready to embark on post -2012 negotiations. For now, the best that can be hoped for is that Annex I parties will begin to comply with their emission reduction commitments and implementation of Protocol mechanisms. If such parties prove that emissions reductions are possible and compatible with the development, if carbon markets and/or other tools and incentives are in place so other parties can see the benefits of participating, and if the cost of climate change impacts start to accrue significantly, the international community may be ready to take further steps in the coordinated global response to climate change.[84] It is time, therefore, to look beyond the Kyoto Protocol to other issues in the Climate Change Convention, which are of grave concern particularly to developing countries such as Bangladesh.

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82. Bangladesh Environmental Newsletter, supra note 54, at p.7

83. Ibid., p.2

84. See Earth Negotiations Bulletin, Vol. 12, No. 260, Monday, 20 December 2004