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#### **Abstract**

The UN Climate Change Conference, held in Indonesia in 2007, has acknowledged the findings of the UN Intergovernmental Panel on Climate Change (IPCC) that measures will be required to prevent global warming, deforestation, to fund developing countries adapt to the impacts of climate change, and to transfer technology to developing countries. Environmental issues have posed challenges to the legislative, administrative and adjudicative functions of international law. Moreover, there is discordance between international legal order and global environmental order, which consists of a biosphere of interdependent ecosystem, as it cannot comfortably coexist with the territorial boundaries of nations. Establishment of a just world requires the international environmental order to address the issues sufficiently. Though the developed countries are largely responsible for environment pollution, but the developing countries are facing flood, cyclone, drought, sea-level rise recurrently. Bangladesh, for example, is projected to lose 80 percent of its land if sea level rises. This paper has four sections. The first section describes various environmental challenges which have created formidable threat to the flora and fauna, particularly to the existence of mother earth.

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The second section points how environmental issues pose challenges to the international legal order and elaborates what measures have already been taken to establish a just international environmental order. Third section assesses the efficacy of the international environmental order to evolving combat environmental challenges. The fourth section identifies the predicament of the developing countries in the global environmental regime. It strongly channels the voice of the developing nations by presenting their concern and commitment to fight environmental challenges. This paper looks at and analyses the problems and prospects of establishing a just international environmental order in the context of developing countries' reality. The article strongly argues that global environmental justice, as envisaged in the Brundtland Report, requires that the global poverty and developmental needs of developing countries should be addressed sufficiently, if we want to establish a just international environmental order.

### 1. Environmental Challenges

The worldwide industrialization and urbanization of last two and half centuries have created serious adverse impacts on the environment. Men started using coal, gas and oil to operate factories, machines, railway, aero plane, and vehicles, which produced carbon dioxide, nitrogen oxide, sulphur dioxide, causing acid rain, green house effect, deforestation, and destruction of biodiversity. By product of fossil fuel, together with FCCH emanating from air coolers, refrigerators, and cosmetic spray caused the depletion of ozone layer, making the ultra violet ray of the sun to enter this earth, and cause cancer and other deadly diseases. Since 1750s on burning of fossil fuel, land use change and agricultural practices caused irreversible loss to the bio-capacity of our planet.

During this time about 60 per cent of the ecosystems were exploited unsustainably, making sheer imbalance in the functions of ecosystem. Scientific information of the global warming and

ozone layer depletion made the international community aware of the environmental issues. Emphasis has been put on greenhouse gases, particularly carbon dioxide, has exceeded its previous rate in last 6 lakh 50 thousand years and it caused the rise of global temperature by 0.740 C over the past 1 hundred years. If the global warming continues, the global average temperature will rise between 0.50 C and 1.70 C by the 2050s.

Extreme climate change will give rise to floods, droughts and cyclones, which will put food security, access to water and natural resources, better housing and infrastructure at risk. The developing countries will encounter mass hunger, malaria, flood and water shortage if warming will increase 20 C.

From the 1960s countries around the globe and international community started action after the publication of the paradigmbreaking books and articles such as Rachel Carson's "Silent Spring" (1962) and Garrett Hardin's "The Tragedy of the Commons" (1968). The destruction of flora and fauna became evident by 1970s, which prompted the scientific community to inquire into the environmental threats. As a result the potential consequences of ozone depletion, climate change, green house effect and loss of biodiversity were discovered in the 1980s. <sup>1</sup>

The atmosphere contains greenhouse gases, including water vapour, carbon dioxide(CO<sub>2</sub>), methane (CH<sub>4</sub>), CFCs, nitrous oxide (N<sub>2</sub>O) and tropospheric ozone (O<sub>3</sub>), which determines the climate of this earth. The earth's surface emits longwave radiation, which is absorbed by the greenhouse gases.

Different types of human activities have caused the increase of some greenhouse gases in the atmosphere which are largely responsible for an enhanced greenhouse effect and global climate change. Emissions of carbon dioxide from the combustion of fossil

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<sup>&</sup>lt;sup>1</sup> Philippe Sands QC, *Principles of International Environmental Law*, (United Kingdom: Cambridge University Press, 2003) at 4.

fuels, emissions of CFC-11 and 12, methane and nitrous oxide, the production of cement, agricultural and other land use, deforestation have been considered as catalyst behind the climate change.<sup>2</sup> The IPCC in its latest report in 2001 predicted that anthropogenic warming is likely to lead to increased floods and droughts.

The ozone layer<sup>3</sup> operates, it is believed, as a bulwark against ultraviolet radiation from the sun and controls the temperature structure of the stratosphere. At the lower altitude O<sub>3</sub>, as a greenhouse gas, can act as a respiratory irritant and can also adversely affect the growth of plant.<sup>4</sup> Since 1960s, losses in the ozone layer over the Antarctic have been evident.<sup>5</sup> Available scientific information reveals that increased levels of ultraviolet rays are harmful to environment and human health. CFCs are emitted from aerosol-spray, styrofoam, refrigerator and air coolers.<sup>6</sup>

Marine environment of oceans and seas are continuously contaminated by pollution from land-based sources, by dumping by vessels at sea, by offshore vessels and seabed activities.<sup>7</sup> The increase and pervasiveness of coastal pollution was reported by the Joint Group of Experts on the Scientific Aspects of the Marine

<sup>&</sup>lt;sup>2</sup> See IPCC, WG I, "Climate Change 2001: The Scientific Basis," in *Third Assessment Report: Climate Change 2001* (2001). See also IPCC, *Climate Change: The IPCC Scientific Assessment* (1990).

<sup>&</sup>lt;sup>3</sup> The ozone layer comprises a sheet of O3 molecules (ozone) that are found in the earth. Ninety per cent of atmospheric O3 is found in the atmosphere, with maximum concentrations occurring at altitude of 25 kms over the equator and 15 kms over the poles.

<sup>&</sup>lt;sup>4</sup> UNEP, Environmental Data Report (1991), at 9.

<sup>&</sup>lt;sup>5</sup> J. C. Farman, B. G. Gardiner, and J. D. Shanklin, J.D. "Large losses of total ozone in Antarctica reveal seasonal ClOx/NOx interaction." (1985) *Nature*. 315, at 207–10

<sup>&</sup>lt;sup>6</sup> Supra note 1 at 343.

<sup>&</sup>lt;sup>7</sup> Supra note 1 at 391, 392, 428, 438 and 445.

Environment (GESAMP) in 1990.<sup>8</sup> Large-scale destruction of coastal habitats, especially wetlands, mangroves, salt marshes and seagrasses have been resulted by the urban, industrial and recreational developments. The growing demands of housing, industry and recreation have altered or destroyed nearly 30 per cent of the land area in the world's coastal ecosystems.<sup>9</sup>

Urban air pollutants and transboundary atmospheric depositions are prevalent worldwide as anthropogenic emissions of gases. Combustion of fossil fuels, namely coal and oil, emits sulphur dioxide (SO<sub>2</sub>) which gives rise to the acid rain and is harmful to human health as a potent respiratory tract irritant. <sup>10</sup>

Biological diversity means and includes flora and fauna and the variety among the living organisms and the ecological communities they inhabit. According to the estimates of the scientific community biodiversity has not encountered a crisis like the magnitude of present time in the past sixty-five million years. <sup>11</sup>

# 2. Just International Environmental Order to Combat Environmental Challenges

The IPCC has been credited for their research and effort to spread out the knowledge about man-made climate change and the measures to address environmental issues, which pose challenges to the traditional international legal order. Birnie and Boyle mentioned that international environmental law is at an early stage of development and has been evolving at a time when the

<sup>&</sup>lt;sup>8</sup> GESAMP Reports and Studies No. 39 (1990), jointly sponsored by IMO, FAO, UNESCO, WMO, WHO, IAEA, UNEP and the UN. Subsequent studies have found a similar pattern of pollution; see GESAMP, 'A Sea of Troubles,' GESAMP Report No. 70 (2001).

<sup>&</sup>lt;sup>9</sup> *Supra* note 1 at 392.

<sup>&</sup>lt;sup>10</sup> *Supra* note 1 at 323.

<sup>&</sup>lt;sup>11</sup> World Resources Institute, World Resources (1992-3), 127 at 136.

heterogeneity of the international community has rapidly intensified, economic problems are increasing developmental needs of poorer countries have become urgent.<sup>12</sup> Philippe Sands QC mentioned that environmental issues pose challenges to the international legal order in three ways. First, environmental issues pose challenges for the legislative, administrative and adjudicative functions of international law. The legislative functions require the creation of legal principles and binding rules and the administrative functions require those to be applied by the state and non-state actors for conservation of the environment. Adjudicative functions aim to provide fora settling environmental disputes. Secondly, there is contradiction between global environmental order and existing international legal order as it is based on the artificial territorial boundaries of nations, but global environment is indivisible. Thirdly, all the state and non-state actors will have to play very significant role for fighting threats posed to environment.<sup>13</sup>

## 2.1 Measures Taken to Establish A Just International Environmental Order

In the context of a number of environmental catastrophes like acid rain which damaged thousands of lakes in Sweden, the United Nations Conference on the Human Environment was held in June 1972 at Stockholm, which turned the environment into a major issue at the international level. A Declaration of 26 Principles and an Action Plan of 109 Recommendations were the outcome of the Stockholm Conference. According to Long, the Declaration and Principles adopted in the UN Conference on Human Environment

<sup>&</sup>lt;sup>12</sup> Patricia W. Birnie and Alan E. Boyle, *International Law and the Environment*, (New York: Oxford University Press Inc., 1992) at 8.

<sup>&</sup>lt;sup>13</sup> *Supra* note 1, pp. 11, 12.

<sup>&</sup>lt;sup>14</sup> Munich Re, *Integrating Environment and Development:1972-2002*, Chapter 1, at 3

www.unep.org/GEO/geo3?pdfs/chapter1.pdf

constitute the first body of soft law in international environmental affairs. 15

One of the major achievements of the UN Conference on Human Environment was the establishment of the United Nations Environment Programme (UNEP), a small secretariat in the United Nations which has been enjoined to coordinate all the environmental action within the UN system. The UNEP is headed by an Executive Director who has lot of responsibilities, some of those include: (i) to coordinate environmental programmes within the UN system; (ii) to advise on the formulation and implementation of environmental programmes; and (iii) to submit proposals on medium and long-range planning for UN programmes in the environment field.<sup>16</sup>

A number of multilateral environmental agreements were adopted in the 1970s for wildlife conservation. Four conventions are worth mentioning.

Those are: 1971 Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar), 1972 Convention Concerning the Protection of the World Cultural and natural Heritage (World Heritage), 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and 1979 Convention on the Conservation of Migratory Species of Wild Animals (CMS).

Though it's initial focus was waterfowl and their habitats, but now Ramsar Convention deals with water quality, food production, general biodiversity and all wetland areas, including saltwater coasts.

<sup>&</sup>lt;sup>15</sup> B.L. Long, *International Environmental Issues and the OECD 1950-2000: An Historical Perspective*, Organization for Economic Cooperation and Development, 2000.

<sup>&</sup>lt;sup>16</sup> Supra note 14 at 3.

There are more than 1100 areas, covering 87.7 million ha, are currently designated as Ramsar sites, which promote wildlife conservation in different regions.<sup>17</sup>

In the context of growing concern for global warming the first World Climate Conference was held in Geneva in February, 1979. The anthropogenic carbon dioxide emissions, the conclusion of the Conference went, could have a long-term effect on climate. In 1980 the World Climate Programme (WCP) was established, which provided the framework for international cooperation in research and the platform for identifying the important climate issues of the 1980s and 1990s. <sup>18</sup>

The British researchers first reported the size of ozone hole in 1985. The Global 2000 Report admitted that biodiversity was threatened by the extinction of species. In the context of growing understanding that environment and development are interdependent, the UN General Assembly adopted the World Charter for Nature.

In 1983, the World Commission on Environment and Development, also known as Brundtland Commission, was formed to hold hearings with government leaders and the public worldwide on environment and development issues, including agriculture, forestry, water, energy, technology transfer and sustainable development. In its final report, *our common future*, the Commission defined sustainable development, making it a part of environment lexicon..<sup>20</sup>

In 1989, the UNEP and the World Meteorological Organization (WMO) established the Intergovernmental Panel on Climate

<sup>&</sup>lt;sup>17</sup> Ramsar Convention Bureau 2001.

<sup>&</sup>lt;sup>18</sup> *Supra* note 14 at 7.

<sup>&</sup>lt;sup>19</sup> J. C. Farnham, B. G. Gardiner, and J.D. Shanklin, "Large losses of total ozone in Antarctica reveal seasonal CIO<sub>x</sub>/NO<sub>x</sub> interaction," (1985) *Nature*, 315, at 207-10.

<sup>&</sup>lt;sup>20</sup> World Commission on Environment and Development 1987.

Change (IPCC) to develop a broad consensus on the science, social impacts and best responses to human-induced global warming. The formation of the IPCC was spectacular in that it was established with three working groups, which were enjoined to focus on the scientific assessment of climate change, environmental and socioeconomic impacts and response strategies. The study of IPCC made a sound understanding of the danger of global warming, specifically among the people and policy makers of the industrialized countries.<sup>21</sup>

A number of major Multilateral Environmental Agreements were signed in 1980s, three of them are very important. They are: (i) the 1982 United Nations Convention on the Law of the Sea (UNCLOS); (ii) the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (implementing the 1985 Vienna Convention for the Protection of the Ozone layer); and (iii) the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention). The UNCLOS is a landmark legal undertaking that covers a wide range of maritime issues, including environmental protection.

The parties to this convention are obliged (i) to adopt measures to manage and conserve natural resources; (ii) to minimize marine pollution, including land-based pollution; and (iii) to put restrictions on marine dumping by ships.<sup>22</sup>

The Montreal Protocol to the Vienna Convention on the Substances that Deplete the Ozone Layer has been considered one of the most successful examples of international environmental cooperation as it's multilateral fund is an inducement to the developing countries.<sup>23</sup> While the industrialized societies were benefiting from the technical progress, developing world did not

<sup>&</sup>lt;sup>21</sup> *Supra* note 14 at 11.

<sup>&</sup>lt;sup>22</sup> *Ibid*.

<sup>&</sup>lt;sup>23</sup> Ibid.

get any benefit out of it. Thousands of people died in 1999 in earthquakes in Turkey, floods in Venezuela and cyclones in India. The death toll from infectious diseases, like AIDS, malaria, respiratory diseases and diarrhea, was 160 times greater than the number killed in the 1999 natural disasters.<sup>24</sup>

The UN Conference on Environment and Development (UNCED) was held in June 1992 in Rio de Janerio. The conference has been considered to achieve seven major achievements: (i) the Rio Declaration on Environment and Development, which contains 27 principles; (ii) Agenda 21—an action program for environment and development to be achieved in the 21<sup>st</sup> century; (iii) two major international conventions—the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD); (iv) the Commission on Sustainable Development (CSD); (v) agreement to negotiate a world desertification convention; and (vi) the statement of Principles for the Sustainable Management of Forests.<sup>25</sup>

Agenda 21 is the major achievement of the UNCED which lays a strong foundation for the promotion of sustainable development in terms of social, economic and environmental progress. Agenda 21 has 40 chapters and its recommendations are divided into four main areas: (i) social and economic issues; (ii) conservation and management of resources for development; (iii) strengthening the role of major groups, including women, children and youth, indigenous people, NGOs etc. and (iv) means of implementation, which include financial resources and mechanisms, transfer of environmentally sound technology etc. <sup>26</sup>

<sup>&</sup>lt;sup>24</sup> IFRC, World Disaster Report 2000, (Geneva: 2000), International Federation of Red Cross and Red Crescent Societies.

http://www.ifrc.org/publicat/wdr2001/chapter1.asp [Geo-1-012]

<sup>&</sup>lt;sup>25</sup> *Supra* note 14 at 14-25.

<sup>&</sup>lt;sup>26</sup> Ibid.

Created in 1991 as an experimental partnership involving UNEP, UNDP and the World Bank, the Global Environment Facility (GEF) was intended to be the financing mechanism for Agenda 21 after the Rio Conference. National, regional, and global development projects get fund from the GEF which is conducive for the world's environment, particularly for climate change, biodiversity, ozone and international waters.<sup>27</sup>

After coming into force in 1993, the Convention on Biological Diversity (CBD) addressed, among others, the conservation of biological diversity, habitat preservation, intellectual property rights, bio safety and indigenous people's rights.<sup>28</sup>

The Convention to Combat Desertification (CCD) was adopted to develop "national action program' in association with local stakeholders to prevent desertification. In 1996 the Comprehensive Nuclear Test Ban Treaty (CTBT) was adopted by the UN General Assembly. Preparations for the World Summit on Sustainable Development in 2002 rekindled environmental interests and awareness. At the same time Global Compact was established to build the synergy between the private sector and three UN organizations—UNEP, ILO and the UN office of the High Commissioner for Human Rights.<sup>29</sup>

During the United Nations Millennium Summit in 2000 the environmental issues got huge importance, though the actual progress report was not so encouraging. The expert panel of IPCC, made of thousands of scientists from the world, became apprehensive of the consequences of climate change and global warming. IPCC, in early 2001, declared that the evidence for anthropogenic climate change was getting stronger, that the earth

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<sup>&</sup>lt;sup>27</sup> *Ibid*.

<sup>&</sup>lt;sup>28</sup> Ibid.

<sup>&</sup>lt;sup>29</sup> *Ibid*.

was warming faster and that the aftermath would be much more severe than they first predicted.<sup>30</sup>

The United Nations Climate Change Conference was held in Bali, Indonesia, from 3-14 December, 2007 which brought together more than 10 thousand participants, including representatives of over 180 countries together with observers from intergovernmental and nongovernmental organizations and media. Parties to the UNFCCC, its subsidiary bodies and parties to the Kyoto Protocol had a number of sessions during the two week conference, which was concluded by a ministerial meeting. The conference adopted Bali Road Map to ensure a secure climate future. The Bali Action Plan, a central instrument of the Bali Road Map, sketch out a new negotiating process to be completed by 2009 to tackle climate change. The Bali Road Map, in addition to the Action Plan, includes the AWG-KP negotiations and their 2009 deadline, the launch of the Adaptation Fund, the scope and content of the Article 9 review of the Kyoto Protocol, decisions on technology transfer and on reducing emissions from deforestation.<sup>31</sup>

# 3. Assessing the Competency of the Just International Environmental Order to Combat Environmental Challenges

Just international environmental order presupposes an effective international legal system which can adequately address all the environmental challenges. I have discussed how green house effect, global warming, depletion of ozone layer, sea level rise, destruction of bio-diversity have created threat for the environment and existence of living species. We require short and long-term measures in national and international level to fight environmental challenges. Just international environmental order presupposes:

<sup>&</sup>lt;sup>30</sup> IPCC, *Climate Change 2001: The Scientific Basis*. Contribution to Working Group 1 to the Thrid Assessment Report of the Intergovernmental Panel on Climate Change. (Cambridge, United Kingdom, and New York, United States: Cambridge University Press, 2001)

http://unfccc.int/meetings/cop 13/items/4049.php July 20, 2008.

- (1) international environmental principles, binding laws, regulations and treaties to address the environmental challenges adequately;
- (2) effective monitoring authority to oversee whether the industrialized countries are complying with their commitment to reduce the anthropogenic emissions of greenhouse gases by their agreed level;
- (3) efficacious international courts and other forums to resolve the bilateral and multilateral environmental disputes amicably;
- (4) international, regional, and non-governmental organizations which could organize conventions, conferences, seminars, symposiums to resolve the disputes between developed and developing countries and prepare a common ground to fight environmental challenges on the basis of equity and common but differentiated responsibilities;
- (5) strategy, action program and other initiatives to combat environmental challenges nationally and globally.

# 3.1 Status of the International Environmental Principles, Laws, Regulations and Treaties

There are general principles and rules of international environmental law as reflected in treaties, binding acts of international organizations, state practice and soft law commitments. These principles are general in the sense that they are generally applicable to all members of the international community as the international actors comply with these principles when carrying out their environmental responsibilities for the protection of the nature. Environmental rules and principles can be extracted from large body of international agreements and other acts and those rules and principles have broad support and are frequently practiced. <sup>32</sup>

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<sup>&</sup>lt;sup>32</sup> *Supra* note 1 at 231.

The first principle is that the states have sovereignty over their natural resources and the responsibility not to cause trans-boundary environmental damage. Principle of preventive action, second principle, requires the prevention of damage to the environment, which means to reduce, limit or control activities that might cause or risk such damage. The third principle is international environmental cooperation which has been developed in the context of the principle of 'good-neighbourliness' enunciated in Article 74 of the UN Charter in relation to social, economic and commercial matters.<sup>33</sup>

The fourth principle is that of sustainable development first coined by The Brundtland Commission. The precautionary principle, fifth principle, has been emerged out of the necessity to guide the development and application of international environmental law where there is scientific uncertainty. The sixth principle is polluter-pays principle. The seventh principle is the principle of common but differentiated responsibility of the states to protect environment and to prevent, reduce and control the environmental threat.<sup>34</sup>

It is difficult to determine the international legal status of each environmental principle or rule as there is no judicial authority and the interpretations under the state practice are conflicting. Some general rules and principles are concrete embodiment of customary laws, other may reflect emerging legal obligations. Among the seven general principles of environment, the first two principles, namely, the principles of sovereignty and cooperation, are well established as they reflect an international customary legal obligation, the violation of which would entitle the victim legal remedy. The precautionary principle, has got same status in European context. Although other principles may be binding as treaty obligations, or in particular contexts, as customary

<sup>&</sup>lt;sup>33</sup> *Supra* note 1 at 231, 246, 247, and 249.

<sup>&</sup>lt;sup>34</sup> *Ibid* at 252, 253, 267, 268, 279, 285, and 286.

obligations, but it is questionable whether they give rise to actionable obligations of general nature.<sup>35</sup>

The weakness of customary international law is recognized as it is difficult or often impossible to determine the responsibility where several states emit polluting emissions of the same type. International treaties come forward, in the context of weak customary international law, to address trans-boundary air pollution. Principles 21 and 22 of the Stockholm Declaration of the UN Conference on Human Environment are considered the modern treaty based international law on atmospheric pollution. Though not legally binding, they urge for international collaboration to develop laws concerning compensation for the victim of the trans-boundary pollution.

International environmental law is not the outcome of a settled body of state practice and judicial precedents which could be codified as in the 1982 UN Convention on the Law of the Sea. Rather the development of the corpus of international environmental law involves a continuous legislative process. When facing and fighting various environmental problems the world community responded through the use of multilateral framework treaties, UN General Assembly resolutions, inter-governmental declarations, such as those adopted at Stockholm in 1972 and Rio in 1992, and soft-law codes, guidelines, and principles promulgated by international organizations or the UN Environment Programme.<sup>36</sup>

Two techniques have helped the law-making process relatively rapid. First, in the context of 200 states with disparate interests and sharp differences between developed and developing countries on

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<sup>&</sup>lt;sup>35</sup> *Ibid* at 231 and 232.

<sup>&</sup>lt;sup>36</sup> Alan Boyle, "Codification of International Environmental Law and the International Law Commission: Injurious Consequences Revisited," in Alan Boyle and David Freestone, eds., *International Law and Sustainable Development*, (Oxford University Press, 2001) at 63.

environmental issues, the technique of consensus negotiating procedures and 'package deal' diplomacy was followed. The conventions on Climate Change and Ozone Depletion were concluded by following this method and which got universal or near universal, participation and support. Secondly, the use of framework treaties has taken a dynamic character as those are accompanied by regular meetings of the parties, followed by successive protocols, annexes, and related agreements to be negotiated, adding to or revising the initial treaty. These treaties have created different institutions and both the treaties and institutions constitute regulatory regimes. "They" Alan Boyle very correctly commented that "provide a basis for further, progressive action to be taken as scientific knowledge expands, and as regulatory priorities evolve or change. As a result, what may begin as a very bare framework treaty, such as the Ozone Convention, can become complex system of detailed law with its own machinery for ensuring compliance and implementation."<sup>37</sup>

In case of soft law, where the instruments are not formally binding on states, they: (i) have in many cases already contributed to the development of consistent state practice; or (ii) expressed the law-making intention necessary for the evolution of customary international law; or (iii) have promoted the negotiation of binding treaty commitments.<sup>38</sup>

The international environmental law is not the outcome of any comprehensive or systematic law-making, rather it has developed incrementally and in a piecemeal fashion. Much of it deals with particular sectors, such as global warming, pollution from ships, trans-boundary air pollution, protection of wetlands etc. The development of the body of international environmental law is accidental in nature as it has been developed time to time to respond environmental disaster. Later on a number of initiatives

<sup>&</sup>lt;sup>37</sup> Ibid.

<sup>&</sup>lt;sup>38</sup> Ibid, p, 64.

have been taken to systematize the subject, most notably in the 1992 Rio Declaration of Environment and Development, which gave a systematic foundation to all the elements of law relating to sustainable development and global environmental responsibility.<sup>39</sup>

### 3.2 Effective Monitoring Mechanism to Oversee the Reduction of Greenhouse Gas Emissions and Other Pollutants

All the countries of the world owe a common responsibility to conserve the nature and reduce or fully eliminate emission of pollutants. Some international mechanisms are required to monitor whether the country parties of the conventions are complying with their obligations to reduce greenhouse gases and other pollutants. Montreal Protocol to the Vienna Convention on the Substances that Deplete Ozone Layer and Kyoto Protocol to the UNFCCC are two examples of monitoring mechanisms.

The Montreal Protocol to the secretariat controls the production, import, and export of the ozone-depleting substances (ODS) and the parties to the protocol must annually submit statistical data of ODS. Over the years the implementation of the protocol has been tightened and expanded significantly. 40 The Kyoto Protocol to the UNFCCC entered into force on February 16, 2005. The Protocol mandates that the industrialized countries reduce their emissions by an average of 5.2% below 1990 levels during the period 2008 to 2012.

### 3.3 Efficacious International Courts and Other Forums to Deal **Non-compliance and Resolve Environmental Disputes**

Effective international forums can resolve the environmental disputes and can deal with the non-compliance of the states if they do not fulfill their environmental obligations. Non-compliance can include a failure:

<sup>&</sup>lt;sup>39</sup> Ibid, p. 64. <sup>40</sup> *Ibid*.

- (i) to give effect to substantive norms e.g. to limit atmospheric emission of greenhouse gases as needed by treaty or to allow transboundary emissions of hazardous substances in violation of any customary law;
- (ii) to fulfill procedural requirements e.g. to carry out an environmental impact assessment or to consult with a neighbouring state on the construction of a new plant;
- (iii) to fulfill an institutional obligation e.g. to submit an annual report to an international organization.<sup>41</sup>

The states fulfill their environmental obligations by adopting domestic implementing measures and by fulfilling international obligations and reporting it to relevant international organization. Almost all the environmental agreements identify certain information which the parties have to report to the specified international organization.

The information typically includes:

- (i) statistical information on production, imports and exports;
- (ii) information on emissions or discharges;
- (iii) information on the grant of permits or authorizations;
- (iv) information on implementation measures which have been adopted;
- (v) details of decisions taken by national authorities;
- (vi) scientific information; and
- (vii) information on breaches or violation by persons under the jurisdiction or control of the party. These reports may be required to be given annually or bi-annually or according to some other timeframe. 42

There are a number of international procedures and mechanisms to settle environmental disputes. Article 33 of the UN Charter

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<sup>&</sup>lt;sup>41</sup> *Supra* note 1 at 172.

<sup>&</sup>lt;sup>42</sup> Ibid, pp. 174, 180-181.

identifies the traditional mechanisms, including negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of the parties' own choice. The increasing numbers of environmental disputes are now resolved by the Chamber for Environmental Matters of the International Court of Justice, the International Tribunal for the Law of the Sea (ITLOS) and the WTO Appellate Body.

### 3.4 Conventions, Conferences, Seminars, Symposiums to Resolve the Disputes between Developed and Developing Countries

The United Nations Conference on Human Environment (1972) brought the developed and the developing countries to find out how to address environmental issues. Though there was big difference of opinion between the developed and developing countries, but the conference narrowed down the rift. The Drafting and Planning Committee for the Stockholm conference in April 1972 underlined that 'environmental protection must not be an excuse for slowing down the economic progress of emerging countries.' Further development took place in 1974 when UNEP and the United Nations Commission on Trade and Development (UNCTAD) organized a symposium of experts in Cocoyoc, Mexico. The Cocoyoc Declaration clearly expressed the agony of the poor and developing nations. According to the Declaration: "The combined destructive impacts of a poor majority struggling to stay alive and an affluent minority consuming most of the world's resources are undermining the very means by which all people can survive and flourish."43

Conference held in June 1974, Cocoyoc, Mexico.

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<sup>&</sup>lt;sup>43</sup> UNEP/UNCTAD, Patterns of Resource Use, Environment and Development Strategies.

Other statements in the Cocoyoc Declaration illustrate how difficult it is to meet human needs sustainably from an environmental point of view in a sharply divided world. The statements provide: (i) the problem today is not one primarily of absolute physical shortage but of economic and social maldistribution and usage; (ii) the task of statesmanship is to guide the nations towards a new system more capable of meeting the inner limits of basic needs for all the world's people and of doing so without violating the outer limits of the planet's resources and environment; (iii) human beings have basic needs: food, shelter, clothing, health, education. Any process of growth that does not lead to the fulfillment – or, even worse, disrupts them—is a travesty of the idea of development.

Though the Brundtland Commission assumed a common future for all the countries, but there is clear difference between the developed and developing country perspective to fight environmental challenges, which division emerged in the Earth Summit. Whereas the developed countries preferred further environmental regulation, developing states accord priority to development. The developing countries clearly conveyed that they were not ready to accept further environmental controls, without such financial assistance and transfer of technology as was necessary to offset the economic restrictions otherwise involved.

The Intergovernmental Panel on Climate Change released its fourth assessment report in 2007. As a result a series of political and economic meetings, including the G8 and World Economic Forum, took place and many countries updated their domestic policies to fight climate changes. In this context a good environment has been created for international climate negotiations. China has played a significant role in determining

<sup>44</sup> Ibid.

future response of developing countries to global warming and climate change. 45

# 3.5 National and Global Strategy, Action Program and Other Initiatives to Combat Environmental Challenges

After the conclusion of the UN Conference on the Human Environment, the Organization of African Unity (OAU), and around 50 governments have adopted instruments or national constitutions that recognize the environment as fundamental human right. In the countries of the Organization for Economic Cooperation and Development (OECD) 31 major national environmental laws were passed from 1971-75. After Stockholm conference 110 countries established ministries of environment by 1982, whereas there were only about 10 such ministries before this conference.

The understanding that environmental issues are systematic and addressing them requires long-term strategies was reflected in the World Conservation Strategy (WCS). Accordingly more than 75 countries took multi-sector strategies at national, provincial, state and local levels since 1980. <sup>49</sup> The multi-sector strategies were

<sup>&</sup>lt;sup>45</sup> Wu Changhua (Wu Changhua is director of the Greater China, The Climate Group), China and the world discuss the environment, "China and the EU: together in the climate fight." *China Dialogue*.

http://www.chinadialogue.net/article/show/single/en/2190-China-and-the-EU-together-in-the-climate-fight

<sup>&</sup>lt;sup>46</sup>M. Chenje, J. Mohamed-Katerere and W. Ncube,. *Environmental Rights and Fairness in* 

Zimbabwe's Environmental Legislation. (Ministry of Environment and Tourism, Government of Zimbabwe, 1996)

<sup>&</sup>lt;sup>47</sup> Supra note 15.

<sup>&</sup>lt;sup>48</sup> R. Clarke, and L. Timberlake, *Stockholm Plus Ten — Promises, Promises?*The Decade Since the 1972 UN Environment Conference. (London: Earthscan, 1982.)

<sup>&</sup>lt;sup>49</sup> A Lopez Ornat, Strategies for sustainability Latin America, (London, 1996) Earthscan in association with IUCN

taken to address environmental problems like land degradation, habitat conservation, and loss, deforestation, water pollution and poverty.

The establishment of IPCC has been an epoch-making incident as it has contributed (i) to develop a broad consensus on the science, social impacts and best responses to human-induced global warming; and (ii) to establish organizations to work on climate change in developing countries. Agenda 21, though an action programme covering social, economic, and environmental issues, is now the most important and influential non-binding instrument in the environmental field. 51

The Convention on Biological Diversity (CBD) is hailed for its comprehensive ecosystem approaches to biodiversity protection. The Convention to Combat Desertification (CCD) makes it obligatory for the member states to develop national action programme to prevent desertification. <sup>52</sup>

The global environmental initiatives under the auspices of the UN encourage private sector stakeholders to improve their environmental performance. Accordingly, the World Business Council for Sustainable Development (WBCSD) was established in 1995.<sup>53</sup> The transnational corporations had greatly improved their environmental image by the end of 1990s.<sup>54</sup>

http://www.iucn.org/themes/ssp/strategies.pdf [Geo-1-017]

<sup>&</sup>lt;sup>50</sup> *Ibid*.

<sup>&</sup>lt;sup>51</sup> *Ibid*.

<sup>52</sup> Ibid

<sup>&</sup>lt;sup>53</sup> Rabobank International , *Sustainability: Choices and Challenges for Future Development.* (The Netherlands: Rabobank International, 1998.)

<sup>&</sup>lt;sup>54</sup> M. Kuhndt, and C. Van der Lugt, C. "The Efficient Entrepreneur Calendar — an innovative tool to improve environmental performance in small and medium-sized enterprises worldwide," *Umweltwirtschaftforum*. (Springer Publishing, 2000).

For the "fundamental ethical principles for a sustainable way of life', civil society involving hundreds of groups and thousands of individuals adopted an Earth Charter. Civil society also organized massive demonstrations in different part of the globe against the perceived threat of globalization and also against the environmental pollution.<sup>55</sup>

The Global Compact, an initiative to build synergy between private sector and UNEP, ILO and the UN Office of the High Commissioner for Human Rights, was established to address protection of human rights, sound labour laws and environmental responsibility. The Millennium Ecosystem Assessment (MA) was launched on World Environment Day 2001 to examine the world's grasslands, forests, rivers and lakes, farmlands, and oceans, which are essential to support life.

# 3.6 Problems in Establishing a Just International Environmental Order and Its Prospects

Just international environmental order is *sine qua non* for fighting ever increasing environmental dangers. The world community has agreed to develop international environmental order, which already got significant pace as the world community understood that keeping the equilibrium of nature requires co-operation of developed and developing nations, binding laws, international for a and instruments to implement environmental obligations and to resolve disputes. But we have identified the following problems in establishing a just international environmental order:

- 1. Lack of consensus between the developed and developing nations to combat environmental challenges.
- 2. The rate of climate change is faster than our ability to assess it on the one hand and sustainable development remains unfulfilled due to insufficient institutional arrangements. The World Commission on Environment

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<sup>&</sup>lt;sup>55</sup> Supra note 14.

and Development in 1987 in its report said that the rate of "change is outstripping the ability of scientific disciplines and our current capabilities to assess and advise." National and international decision-making structures and institutional arrangements, the Commission went saying, simply could not cope with the demands of sustainable development. <sup>56</sup>

- 3. The Commission on Sustainable Development (CSD) was established in 1992 to oversee and help the international community achieve sustainable development, but it failed to respond sufficiently to the problems of institutional capacity.<sup>57</sup> The task of integrating economic, social and environmental policies, an inevitable pre-condition of sustainable development as stated by the Brundtland Commission, is difficult and continues to challenge institutions at all levels.<sup>58</sup>
- 4. There is gap between donor promises and their actual contribution to the Global Environment Facility (GEF). In 1997 GEF chairman Mohamed T. El-Ashry admitted that it was too early to assess the impact of more than 220 GEF supported projects in terms of sustainable development. Developing nations became anxious about the gap between donor promise and their actual contribution to the GEF as they committed to meet an ODA (official development assistant) target of 0.7 per cent annually, but ODA in 1995 stood 0.29 per cent, its lowest level since 1973. <sup>59</sup>

<sup>&</sup>lt;sup>56</sup> WCED, Our Common Future: The World Commission on Environment and Development. (Oxford, Oxford University Press, 1987.)

<sup>&</sup>lt;sup>57</sup> Supra note 15.

<sup>&</sup>lt;sup>58</sup> *Ibid*.

<sup>&</sup>lt;sup>59</sup> GEF, *The Global Environment Facility: A Self Assessment*. Global Environment Facility, 1997.

- 5. The progress of Agenda 21 has been very slow. Rio + 5, a review summit convened five years later of the UNCED, expressed its concern about the slow implementation of Agenda 21. The summit concluded that though there had been some progress in terms of sustainable development, but many of the targets of Agenda 21 remained unmet.
- 6. There has been gap between theory and practice which was reflected by the comments of former Secretary-General of UN Kofi Annan in the Millennium Summit in 2000. Regarding environmental management, he clearly said that international community was failing to provide future generations the freedom to sustain their lives on this planet. According to him, "we have been plundering our children's future heritage to pay for environmentally unsustainable practices in the present."

The problems mentioned above have been creating difficulties, but that does not undermine the ongoing process of building the edifice of a just international environmental order. The problems, indicating some potential flaws, in no way overshadow the evolving construction of the international environmental order, which has already started operation through some binding international principles, and laws, treaty obligations, monitoring systems, national laws, policy and programmes and various international organizations.

http://www.ecouncil.ac.cr/rio/focus/report/english/gef.htm [Geo-1-008]

http://www.un.org/millennium/sg/report/key.htm [Geo-1-001]

<sup>&</sup>lt;sup>60</sup> UN, *We the Peoples* — *The Role of the United Nations in the 21st Century*. (New York: United Nations, 2000).

## 4. Developing Countries' Predicament, Concern and Commitment for Environmental Issues

According to authentic scientific information, the industrialized countries of the world account for more than two thirds of annual carbon dioxide emissions worldwide and an even larger share of the radiative forcing of greenhouse gases that are principally responsible for climate change. Under the Framework Convention on Climate Change (FCCC), 1992, these countries took a greater burden than developing countries for slowing down the emission of greenhouse gases. Though the developed and industrialized countries have to shoulder the lion responsibility of emitting polluting gases, but it is the developing and least developed countries that have to endure the disastrous consequences of the climate change. As a result the predicament, concern, claims and commitments of developing countries occupy a prominent place in the global environmental regime.

### **4.1 Predicament of Developing Countries**

Scientific studies of the Intergovernmental Panel on Climate Change (IPCC) revealed that the developed countries, specifically the OECD countries, Eastern Europe and the former Soviet Union are responsible for over two thirds of past emissions and some 75 per cent of current emissions. Though the developing countries' emission rate is very low, but they are several times more susceptible to the aftermath of climate change than their well-off counter part. To per cent of the population resides in the less developed and developed countries, but they probably account for somewhere between 27 per cent and 35 per cent of the enhanced greenhouse effect. On average a citizen of a less developed country contributes 6 to 8 times less to the greenhouse effect than that of a developed country.

<sup>&</sup>lt;sup>61</sup> United Nations Department of Public Information, *Combating Global Warming: The Climate Change Convention*, February 1997.

Developed countries emitted greenhouse gases, but the developing countries, as an irony of history, have started to sustain and are mostly susceptible to the immediate and ultimate adverse effects of climate change. Developing countries:

- (1) have less resources, weaker economies and poorer access to technology compared to the industrialized countries. These countries, therefore, are facing and will face greater challenge in adapting to the climate change;
- (2) situate in drought-ridden regions, or low-lying coastal areas, or flood-prone areas, or they are small islands. The geographical vulnerability make them the first victims of climate change in its severest form and manifestation. Increased number of storms, floods and droughts make the situation worse in many developing countries where the density of population is high.

Extensive and highly populated coastline of many of the Asian countries made them vulnerable to the sea level rise. In Malaysia, Thailand and Indonesia huge land area could be threatened with flooding which include some of the most economically productive land. Small-island countries like Philippines, Marshall Islands and Maldives may be totally washed away because of the sea level rise. The climate change also has created adverse impact on coral bleaching and marine species. <sup>62</sup>

Countries of Africa, South, East, and Southeast Asia, the Paciific islands and Latin America are live examples how severely climate change impacts on the drought-ridden regions having isolated agricultural systems Food security of many developing countries is in danger as agricultural production is very sensitive to climate change and decrease in range-land productivity will result in a decline in overall contribution of the livestock industry to national

<sup>&</sup>lt;sup>62</sup> F. Koza, "Climate Change: Challenges for Developing Countries, Focus on Southeast Asia," (Greenpeace International Southeast Asia Climate and Energy Campaign.)

economies. Warmer temperature causes the spread of infectious diseases like malaria and dengue in tropical and subtropical zones. The developing countries situating in these regions, therefore, have to face serious health problem as they are less able to cope and have less access to health care services.<sup>63</sup>

Article 4 to the Climate Change Convention adopted during the United Nations Conference on Environment and Development, 1992 very clearly spelled out the obligations of developed countries what domestic measures they should take and what obligations they owe to the developing countries. The developed countries have to:

- (1) adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing their greenhouse gas sinks and reservoirs;
- (2) provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations;
- (3) provide such other financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures applicable to them;
- (4) assist the developing Country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects;
- (5) take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention.

<sup>&</sup>lt;sup>63</sup> Ibid.

In the context of resource constraints of the developing countries, the Article states that the developing Country Parties can implement their commitments if the developed Country Parties can implement their commitments relating to financial resources and transfer of technologies. The Convention recognized that economic and social development and poverty eradication are the first and overriding priorities of the developing country parties.

# **4.2** Participatory Role of Developing Countries to Fight Climate Change

In the early sessions of the Conference of Parties (COP) the international community took firm stand in favour of the developing countries. But in the second session of the COP<sup>64</sup> an understanding was reached that global climate protection could only be successful if action was taken on a worldwide level. This subtle shift of the attitude of the world community will promote the participation of the developing countries to fight the climate change. The United Nations Secretary General, in his statement<sup>65</sup>, observed that industrialized countries needed to take the lead in reducing greenhouse gas emissions, but the developing countries could also contribute to that process by increased energy efficiency. In the Third Session of the COP<sup>66</sup> the President of the Conference informed that developing countries were already making domestic efforts to attain sustainable development and it was hardly possible for those countries to take on new commitments under the new instrument. The Executive Secretary of the COP Session underlined the necessity of enlightened leadership of the industrialized countries and the transnational

<sup>&</sup>lt;sup>64</sup> Held at Geneva from 8 to 19 July, 1996.

<sup>&</sup>lt;sup>65</sup> At the First Plenary Meeting on July 8, Mr. Nitin Desai, Under Secretary General for the Policy Coordination and Sustainable Development, conveyed a message from the Secreatry-General of the United Nations to the Conference of Parties.

<sup>&</sup>lt;sup>66</sup> Held at Kyoto from 1 to 11 December, 1997.

corporations that can form a truly global coalition to combat climate change. This global arrangement will create such a situation under which all would participate according to their own capacities.

# **4.3** Role of Developed and Developing Countries under the Kyoto Protocol

The world communities' initial understanding of solving environmental problems made the developing countries passive as if they had nothing to contribute to the ever increasing disasters of environment, but only to get financial assistance and wait when the developed countries will transfer technology. In course of time the international community understood that fighting global environmental dangers requires the participation of all countries, both developed and developing.

From the adoption of the FCCC to the adoption of the Kyoto Protocol, the role of the developing countries was not active. Rather, they were expected to dispose of proactive role with the financial and technological support and cooperation of the developed countries. In the face of the daunting nature of the problem, the developing countries, it was consistently reminded by the negotiators, could not afford the luxury of lying back and expecting the developed countries only to do everything. <sup>67</sup>

The Kyoto Protocol to the UN Framework Convention on Climate Change was adopted on 11 December, 1997 and tried to keep a balance between the obligations of the developed and developing countries. It incorporated a number of provisions on the basis of common but differentiated responsibilities. Those are:

<sup>&</sup>lt;sup>67</sup> Tanim Hussain Shawon, "The Threat of Climate Change: Developing Countries' Concern and Commitment" *Journal of Law*, Volume Two, 2004, pp. 27-28.

- (1) each Annex I Party must strive to implement their commitments in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties (Article 3);
- (2) all Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, must formulate cost-effective national and regional programmes that improve the quality of local emission factors and contain measures to mitigate climate change and measures to facilitate adequate adaptation to climate change (Article 10);
- (3) the developed country Parties and other developed Parties must provide new and additional financial resources to meet the agreed full costs incurred by developing country parties in advancing the implementation of existing commitments; and also provide such financial resources, including for the transfer of technology, needed by the developing country parties to meet the agreed full incremental costs of advancing the implementation of existing commitments. (Article 11)

### 4.4 The Clean Development Mechanism (CDM)

The Clean Development Mechanism (CDM) is the most remarkable achievement of the Kyoto Protocol which it discovered to assist non-Annex I Parties in achieving sustainable development and to help Annex I Parties to comply with their own quantified emission limitation and reduction commitments under the Protocol. Non-Annex I Parties, under the mechanism, are to benefit from project activities resulting in certified emission reductions, which the Annex I Parties may use to comply with part of their quantified emission limitation and reduction commitments under the Protocol. This mechanism, therefore, ensures mutual gain of both the

developed and developing country Parties as the developed countries may attain their compliance by lending money to the recipient developing countries with which they may set up more environment-friendly projects. This will ensure the reduction of emission without compromising the developmental needs of the developing nations. Though the CDM has been criticized for some potential flaws, nevertheless, it marks a significant development in climate change regime as it enables the developing countries to offer something in exchange to the developed countries for their investment in emission-reduction in those countries.<sup>68</sup>

## 4.5 Triumph of Developing Countries and Their Active Role to Limit Emission, Promote Energy Efficiency etc.

Though the developed countries were expected to comply with all their commitments, but the necessity of more active role of the developing countries has been felt. This reality has been reflected in the Fifth Session of the COP, where the President of the Fourth Session informed that objectives of Article 4.2 of the Convention would not be reached by many Annex I Parties. Developing countries were emitting more and more greenhouse gases, though their per capita levels still remained low. She cautioned that the developed countries' stabilization or slight reduction of emission was not enough.

In the Sixth Session of the COP<sup>69</sup> the confrontation between the lobby advocating for the enhancement of the role of the developing countries and the developing countries themselves became visible. A "key Annex I country" placed a proposal to make financial assistance conditional to some form of new emissions reduction commitment by developing countries. But Nigeria, on behalf of the Group 77 and China rejected the proposal.

<sup>68</sup> Ibid at 28

<sup>&</sup>lt;sup>69</sup> Held in the Hague, the Netherlands, from 13-25 November, 2000.

Developing countries asked the developed countries to fulfill their obligations in protecting climate system on the basis of the principle of equity and common but differentiated responsibilities. The United States considered the success of the Protocol required involvement of all the countries, whereas Kuwait opposed the imposition of any additional obligations on developing countries. The Hague Conference ended with sheer disappointment as it failed to negotiate consensus on a number of key issues. Instead the split between North and South was deepened. In this context the Sixth session of the COP was suspended in The Hague and it resumed in Bonn on July 16, 2001. Here the UNFCCC members, at the insistence of the G-77 and China, agreed to establish a special climate change fund and a fund for least developed countries;

- (i) to help developing countries adapt to climate change impacts;
- (ii) to obtain clean technologies;
- (iii) to limit the growth in their emissions of greenhouse gases.

The developing countries, therefore, made a successful come back in the climate change regime. This paved the way for the developing countries to take lead role in the climate change discourse through the 8<sup>th</sup> Session of the COP in New Delhi, India<sup>71</sup> *en route* Marrakech, Morocco.<sup>72</sup> The Delhi Ministerial Declaration reaffirmed that economic and social development and poverty eradication were the first and overriding priorities of the developing country Parties. The Delhi Declaration entrenched the ethical and legal position of the developing countries. The few developed countries which tried to impose a precondition on the developing countries for performance of their own responsibilities

<sup>&</sup>lt;sup>70</sup> *Supra* note 67 at 29.

<sup>&</sup>lt;sup>71</sup> From October 23 to November 1, 2002.

<sup>&</sup>lt;sup>72</sup> Where 7<sup>th</sup> Session of the COP was held in October-November, 2001.

have become isolated from the rest of the international community. The international community at large now recognizes the role originally expected from the developing countries.<sup>73</sup>

It is important to mention that though there is no commitment on the part of the developing countries, they are already taking effective steps to reduce greenhouse gas emissions. Fourteen key developing countries reduced their fossil fuel subsidies by 45% between 1990 and 1995. China has reduced coal subsidies from 37% to 29% and oil subsidies from 55% to 2%. Mexico, India and Brazil have launched specific energy efficiency and renewable energy programmes. National Commission for Energy Conservation of Mexico has set up energy efficiency standards for new boilers, refrigerators, small air conditioners, buildings, and electric motors. In India the development of renewable energy is going on with the subsidy of government. In 1976, Brazil started an aggressive programme to use ethyl alcohol from sugar cane in automobiles. To

### 4.6 EU and Developing Countries

The mention of Europe and EU is very much pertinent here as always they have taken lead role in international climate negotiations. EU played a role of catalyst in the negotiations of the Kyoto Protocol, pushing participation from developed countries like USA as well as developing countries, to put limit on the greenhouse gas emissions and actively took on emissions reduction obligations. As a result the Kyoto Protocol came into effect which is the first binding agreement on specific emissions reductions. In negotiations for phase two of the Kyoto treaty, the EU proposed emissions reduction targets by putting them into practice in the

<sup>&</sup>lt;sup>73</sup> *Supra* note 67 at 29-30.

<sup>&</sup>lt;sup>74</sup> W.V. Reid and J. Goldemberg, "Are Developing Countries Already Doing as Much as Industrialized Countries to Slow Climate Change?", July, 1997 (Internet)

<sup>&</sup>lt;sup>75</sup> *Supra* note 67 at 30-31.

domestic energy and economic strategies of its member states. By using its diplomatic capabilities EU insisted the international community to form an international environmental protection mechanism.<sup>76</sup>

In the context of losing their competitive advantage and economic vitality in competition with developing countries, the member states of EU take climate change and energy issues seriously and value their relations with developing nations. Keeping this reality in mind, the EU has been working hard to integrate policies on energy and climate change in its member states and has put the issues on top in its foreign policy. In its effort EU became successful to convince US to return to the UN fold on climate change.<sup>77</sup>

In spite of its having mature and industrialized economies and its difference of opinion between developing nations, the EU has sketched a blueprint for future global economy, technology and society. It will be at the forefront of a new, low-carbon industrial revolution. It urged the developing nations not to prioritize economic growth ahead of environmental protection.<sup>78</sup>

### **4.7 Reality of South Asian Countries**

The sea level rise, as a result of global warming and melting of glacier, will drown considerable portion of Bangladesh. In the next 40 years Bangladesh may be reduced to 20 per cent of its present size, leaving only the highlands of Chittagong Hill Tracts and Sylhet stand out of water. The IPCC predicts that 35 million could flee Bangladesh's flooded delta by 2050. The condition of other South Asian countries, namely Maldives, Sri Lanka, India, Pakistan and Nepal, is not good. There is fair possibility of Maldives being submerged fully under the sea water, Sri Lanka

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<sup>&</sup>lt;sup>76</sup> Supra note 45.

<sup>&</sup>lt;sup>77</sup> *Ibid*.

<sup>&</sup>lt;sup>78</sup> Ibid.

may risk a similar fate. India, Nepal and Pakistan encounter up to 40 per cent drop in food production, frequent flood and erosion. The climate change today has created this reality for the South Asian region populated by 1.5 billion people, a majority of them are poor.<sup>79</sup>

The impacts of climate change have been felt severely as people have seen how super cyclones Sidr and Nargis struck Bangladesh and Myanmar, "sudden floods in Delhi and Bombay had wrought havoc on the cities... the paradisaic beaches of Maldives are receding with waves inching forward, Maize output in Nepal is dropping consistently and its Terai floodplains are facing frequent flooding as ice on the Himalayans is melting fast." In the context of Greenland's ice cap melting faster, Professor James Hansen, the director of NASA's Goddard Institute of Space Studies, predicts a 25-metre rise in sea level in this century. This would drown many SAARC countries including Bangladesh.<sup>80</sup>

A three-day SAARC conference on climate change from 1-3 July, 2008 was held in Dhaka. In the meetings of first two days climate change experts of eight SAARC countries drafted an action plan comprising seven thematic working areas to battle the impacts of climate change. The thematic working areas are: (i) adapting to the climate change; (ii) forming policies and finding out actions for climate change mitigation; (iii) actions for technology transfer; (iv) creating fund for investment in research; (v) working on climate change education, training, and awareness based on New Delhi work program; (vi) monitoring, assessment and management of impact risks caused by climate change; and (vii) capacity building program for the SAARC member states to deal international negotiations. The expert committee prioritized clean development mechanism (CDM) projects. India is implementing

<sup>&</sup>lt;sup>79</sup> Inam Ahmed, "S Asia braces for climate change fallout," *The Daily Star*, July 1, 2008. 80 *Ibid*.

342 CDM projects whereas Bangladesh is implementing 2 such projects.<sup>81</sup>

Finally Dhaka Declaration came after a ministerial level meeting of ministers from eight SAARC countries on July 3, 2008. They observed that climate change is the result of the greenhouse gas emissions by the developed countries for over last two centuries. The impacts of climate change and environmental regulation both have created formidable barrier for the developing nations to ensure sustainable development and achieve Millennium Development Goals, they observed. Dhaka Declaration sketched out an action plan to make sure that those were consistent with the national action plans. The action plan covers capacity building for Clean Development Mechanism projects, exchange of information on disaster preparedness and extreme events, exchange of meteorological data, capacity building and exchange of information on climate change impacts including sea level rise, glacial melting, and threats to biodiversity, mutual consultation in international negotiation process and media briefing as and when required.82

### 4.8 Developing Nations' Standing

The above discussion clearly delineates a sketch of the standing of the developing nations in international environmental regime. They never prioritize environmental issues ahead of their developmental needs. The developing nations want their development should take full pace which will help them to eradicate poverty, and ensure the basic needs of people, including food, shelter, education, medical treatment, employment, and social security. If the process of development is implemented at the cost of environment, the poor and developing nations do not hesitate to do so as global warming,

<sup>&</sup>lt;sup>81</sup> "SAARC Conference: Action plan made to fight climate change," *The Daily Star*, 3 July, 2008.

<sup>&</sup>lt;sup>82</sup> "SAARC nations vow to fight climate fallout: Declare to work together for capacity building," *The Daily Star*, July 4, 2008.

ozone depletion, loss of biodiversity—as a whole climate change is the outcome of the greenhouse gas emissions, and emitting of other pollutants from developed countries.

The developing countries are very much clear in their views that environmental protection must not be a pretext to slow down the economic growth or development process of emerging nations. The developing nations cannot afford the environmental standard pursued by the EU and developed countries and it will hinder their economic progress. They, therefore, are insisting the developed countries to fund them to make them capable to adjust with the aftermath of the climate change and transfer developed technology to reduce environment pollution. But it does not mean that the developing nations will lay dormant. Though there is no binding commitment on the part of the developing countries, but they have already started to take measures to reduce greenhouse gas emissions and to promote energy efficiency and renewable energy.

### Conclusion

The environmental issues, namely greenhouse effect, acid rain, ozone depletion, deforestation, loss of biodiversity, climate change, pollution of oceans, global warming, sea level rise, have created common challenges for the whole of humankind. National and international integrated and long-term policies, laws, regulatory and monitoring mechanism are required to combat environmental challenges. There is no alternative than establishing a just international environmental order if we want to reduce and eliminate greenhouse gases and other pollutants and elevate environmental standard. From UN Conference on Human Environment in 1972 to Bali Conference of 2007, many international conventions, treaties, and protocols were adopted, some regulatory and monitoring mechanisms were established. Though utmost environmental consciousness of the international

community imbued them to develop a vast body of international environmental law within 36 years time, but still many scholar consider it as 'soft law,' not sufficiently able to address the environmental issues. For example, Agenda 21 is worth mentioning. It is now the most influential non-binding instrument in the environmental field, serving as the sketch for the global environmental management. One can understand the reality from the fact that Kyoto Protocol is the first binding international agreement on the reduction of certain greenhouse gases which entered into force on 16 February, 2005.

85 per cent parties to the Montreal Protocol are regularly providing their data on the production, import and export of ozone-depleting substances. The enforcement of the Kyoto Protocol is also very encouraging. But progress of sustainable development has been very slow which is required for poorer countries to eradicate poverty and provide their people with all basic needs of life. Moreover, international community has failed to establish a just environmental management to fight environmental challenges.

The weakness of establishing a just international environmental order is evident as many scholars consider international environmental law has not got sufficient binding authority and monitoring mechanism to oversee the reduction of greenhouse inconsistent interpretation international gases. The of environmental law and absence of systematic state practice have made the situation complicated. Moreover, UN cannot fully resolve the deep-rooted difference of opinion between rich and poor nations. The limitations, it is important to mention, do not totally undermine the measures already taken to establish a just international environmental order. The UN Conference on Human Environment, 1972, the UN Conference on Environment and Development, 1992, the UN Climate Change Conference, 2007,

establishment of UNEP and IPCC, Agenda 21, Montreal Protocol and Kyoto Protocol have laid potential foundation for establishing a just international environmental order. There are reasons and grounds to believe that the evolving international environmental order, after developing sufficient number of tools, will address all the environmental issues.

The rift between developed and developing nations constitutes the most formidable barrier in establishing a just international environmental order to combat environmental challenges. The developed countries want more and more environmental regulations, but the developing nations are very clear in their stance that environmental protection must not be any ground for slowing down their economic growth. Our argument is that both the developed and developing nations should give some concession to each other to establish a just international environmental order, least the environmental dangers will create more threat to our existence. Though economic development and poverty eradication are overriding priorities for the developing countries, though their people have right to affluent life like US and EU, but considering the future of the next generation the developing nations should take proportionate emission control measures. As a result of the exemption given to the developing countries under the UNFCCC, their emission of dangerous gases may exceed those of industrialized countries by 2020. In this context the developing countries should not remain idle and it is significant to mention that they have already started to take significant steps to reduce greenhouse gases.

The developed countries on the other hand must extend their helping hands and admit the judicious demands of the developing nations. They must transfer technology and give funds to the

developing nations so that they can adapt themselves with the impacts of climate change.

The developed and developing nations must admit justifiable demands of each other. It is their conscious understanding and sincere cooperation which can erect an edifice of just international order able to fight environmental challenges. Constructing an international legal framework, establishing global environmental management and ensuring sustainable development for all the people of the globe, are not an impossibility. The developed and developing nations, in spite of their rift, have come under the umbrella of UN and many times manifested their intention to fight environmental challenges in a cooperative way. The main stimuli of establishing a just international environmental order to address environmental issues emanate from combined initiatives of all the countries.

The developing and least developed countries (LDC) have become victim of the urbanization and industrialization of the developed countries which they did for their comfort and luxury. In this context some affirmative actions of developed countries are necessary to mitigate the evil consequences of climate change. demands the establishment of an international environmental legal regime on climate change where the developed countries could dispose their lion responsibility and the developing nations could address the environmental issues on the basis of the principle of equity and common but differentiated responsibilities.