

## Chapter 4

### INTERNATIONAL INSTRUMENTS

In a globalised world of the 21<sup>st</sup> Century where the distances between two countries have shrunk so drastically that going on of any activity in one country cannot be kept uninformed in the neighbouring country or region. The development of information technology has made the borders between nations, non-existent and archaic sovereignty concept of the post World war era has been found to be insignificant in the present phase of globalisation.

The Industrial Revolution, especially in post-World War II brought in its wake new activities and enormous industrial operations. Though these activities have brought increased efforts and increased choices, they were not devoid of negative consequences. Environmental pollution is one of such consequences of the human activity. The problem of pollution has become a serious concern at the global level. The ever-expanding activities of man has crossed the frontiers of national, international jurisdictions and even entered outer space. These activities are often resulting in causing injuries to the people and properties, thus calling for the development of an international environmental law regime for preventing and controlling environmental pollution, further mitigating the damages arising out of the activities beyond national borders.<sup>1</sup>

The problem of environmental problem is global in an increasingly small world and concerns all countries irrespective of their size, level of development or ideology. Notwithstanding political division of the world into national units, the oceanic world is interconnected whole; the winds that blow over the countries are also one. Pollution is capable of moving from continent to continent. If U.S.S.R.<sup>2</sup> carries out a nuclear test, the

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<sup>1</sup> Foreword by Hon'ble Justice A.R.Lakshmanan in Dr.Padma's *International Environmental Law (1<sup>st</sup> edn.)*, Asia Law House (2005).

<sup>2</sup> Union of Soviet Socialist Republic (USSR), popularly known as the Soviet Union in the cold war era, was a Union of States with Russia as the Leader State. When the winds of change swept over Eastern Europe which was made up of Warsaw Pact countries (with Communist ideology), the

fall-out may be carried by the winds to any part of the world and such fall out of irresponsible disposal of radioactive waste from a remote energy plant in one country may turn out to have greater adverse effect on the neighbouring countries than the danger of a full-fledged war. Informed public mind is already agitated over the polluting affect of the Gulf War and the common concern of the entire homosapien race is obsessed by the apprehension of the acid rain, toxic effect on the seas and even in the atmosphere.<sup>3</sup>

The perception of the global concern about the environment is of recent origin. As Caldwell observed: "At the beginning if the twentieth century, neither environment was an integral ecological concept nor the biosphere as the planetary life support system was an object of international concern." But the second half of the twentieth century witnessed a sharp rise in the international concern about the environmental degradation and ecological imbalances.<sup>4</sup> The *Silent Spring*<sup>5</sup> published in 1962 brought about a new movement – environment movement, on the international arena. This book brought to fore the adverse effects of the use of pesticides, but made public opinion world over against the use of pesticide, fungicide and rodenticide. In decades to follow, the UNO and its other specialised bodies starts their organised programmes and expressed international concern about common safety of the planet and declared that environmental degradation and ecological imbalances are not of

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USSR, too, disintegrated into independent states. These States of the USSR, after the said disintegration, was initially held together by a loose arrangement in the form of Commonwealth of Independent States (C.I.S.), again with Russia in the lead as was the necessity due to their erstwhile political and economical connection. The CIS was a regional organization whose participating countries are former Soviet Republics, formed during the breakup of the Soviet Union .The CIS is comparable to a very loose association of states and in no way comparable to a federation, confederation or supra-national organization such as the old European Community. It is more comparable to the Commonwealth of NationsThe Winds of Change aforementioned in the form of *Glasnost* and *Perestroika*, policies of liberal politics initiated by the then Premier of U.S.S.R., Mr. Mikhail Gorbachev, led to the dismantling of the Berlin Wall and the end of the Cold War era. Presently Russia prominently exhibits the remnants of the erstwhile U.S.S.R. In the present world, Russia or the Russian Federation is identified as the erstwhile Soviet Union without the other States (already independent).

<sup>3</sup> *M.C.Mehta v Union of India*, (1991) 2 SCC 137.

<sup>4</sup> S.C.Shastrri, *Environmental Law*, (3<sup>rd</sup> edn.), Eastern Book Company, 2008 at p. 332 (Chapter XIII, *International Environmental Law*),

<sup>5</sup> Rachel Carson: *Silent Spring*, (1962).

national concern but of global concern. Therefore, all national governments should chalk out common global programmes to deal with such problems.<sup>6</sup>

Prior to 1950, the environment received little attention of the nations as transboundary problem, but such challenges were viewed as local or to some extent, regional problems. Therefore, even regional organisations elicited legislative and regulatory reaction of local nature only. But the continuous growth of population, over and unbridled exploitation of natural resources and increasing demand for a better life has led to a newer scientific and technological innovations, which in turn have posed serious risk to human being, flora and fauna and the Earth. Moreover, these problems like acid-rain and the effects of air and water pollution affecting the environment without boundary barriers has made it a problem of international regime. Looking at the international nature of the problem, international law has also started dealing with environment problems.<sup>7</sup>

Early attempts to develop international environmental law was relating to birds,<sup>8</sup> fishes,<sup>9</sup> seals, etc., only. As far as pollution is concerned, the Water Boundaries Treaty (1909) was first to prevent and control the water pollution in the United States of America and Canada. Another major transboundary coordination without compromising national sovereignty was the foundation of International Committee for the preservation of birds between the United States and the countries of European Continent in the year 1922. One major event in the first half of the twentieth century was the Convention on preservation of Flora and Fauna in their Natural State in the year 1933.<sup>10</sup>

After the Second World War, a new phase started in which nations started addressing the environmental issues and started forming international organisations. It was during this period

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<sup>6</sup> *Supra* Note 4 (S.C.Shastri's *Environmental law*).

<sup>7</sup> *Ibid.*

<sup>8</sup> *International Ornithological Congress and Convention to Protect Birds useful for Agriculture, 1902* (arising out of a proposal by Switzerland in 1872 for the same.)

<sup>9</sup> *The Convention between France and Britain*, dated Nov. 17, 1867.

<sup>10</sup> London, Nov. 8, 1933.

that there was a growing awareness about the relationship between development and environmental degradation and its preservation. During this period, the main reasons for the development of international environmental law were the advancement in science and technology and the precedent unscientific exploitation of the natural resources. Moreover, a by-product of the industrial revolution created transboundary pollution problems, for example, acid rain in North America because of the industries in Canada. Thus, the necessity for international action on environmental problems was brought to the world's attention first by scientists and then by inter-governmental meetings.

The establishment of the United Nations Organisation (UNO) in 1945 gave an impetus to the international environmental law. In 1954, the International Convention for the Pollution of the Sea by Oil was agreed upon. Similarly, the African Convention on the Conservation of nature and Natural Resources was made in 1968. The fundamental principles of this convention was that the contracting States shall undertake to adopt the measures necessary to ensure conservation, utilization and development of soil, water, floral and faunal resources in accordance with scientific principles and with due regard to the best interests of the people. Now, accordingly, it became the duty of each party to identify, protect, conserve and handed-over to the future generations the cultural and natural heritage primary to that State. A world Heritage was also established to which each party shall submit an inventory of its national heritage.

In 1970, the Organisation of Economic Cooperation and Development (OECD) also established a committee for environment, which also marked the beginning of the recognition of environmental problems.

In 1971, the Convention on International Liability for Damage caused by Space objects was made. The basis of the liability under the convention was not on the proof of

wrongfulness, but the absolute damage caused by space objects to the surface of the earth or to aircraft in flights.

A BRIEF INSIGHT ON THE DELIVERY MECHANISM: International law has been described as an 'indispensible body of rules regulating the relations between the States without which it would be virtually impossible for them to have steady and frequent intercourse,<sup>11</sup> and 'the system governing relations between States covering every aspect of inter-state relations such as jurisdiction, claims to territory, muse of the sea and State responsibility to name but a few'.<sup>12</sup>

The sources of international law are custom, general principles recognised by civilized States, decisions of international arbitral and judicial bodies, the view of international public lawyers of high renown and, most importantly, treaties, both general and particular, establishing rules accepted by States.<sup>13</sup> None of these sources is fully adequate as a bedrock of international environmental law, but though treaty based law is inevitably likely to be the principle pathway for future developments, customary law cannot be ignored.

### Customary International Law

Customary International Law though relevant in environmental issues has been weak in its impact for it has recognised the principle of State or territorial sovereignty, i.e. the rights of States to carry on their activities and to use their resources for their own benefit. However, the principle of State sovereignty is not unlimited<sup>14</sup> as argued in the *Trail Smelter*<sup>14</sup> case that: "No State has the right to use or permit the use of territory in such manner as to cause injury by fumes in or to territory of another, when the case is of serious consequence and the injury is established by clear and convincing evidence".<sup>15</sup> The United

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<sup>11</sup> Starke, *Introduction to International Law* (10<sup>th</sup> edn.) p. 15; Seen in Hughes' *Environmental Law* (3<sup>rd</sup> edn.), Butterworths, 1996, p. 115.

<sup>12</sup> Lyster, *International Wildlife law*, p. 3; *Ibid* Hughes.

<sup>13</sup> See Article 38 of the Statute of the International Court of Justice.

<sup>14</sup> *United States v Canada*, 3 RIAA p. 1907 (1941).

<sup>15</sup> *Ibid* at p. 1965.

Nations Charter of Economic Rights and Duties of States reiterate that sovereign rights should only be used 'without causing damage to the legitimate use of others' and modern State practice appears to be founded on it. It has also been adapted by the United Nations General Assembly<sup>16</sup> and adopted by in the Stockholm Declaration on Human Environment, 1972.<sup>17</sup> Furthermore many commentators now argue that concepts of sovereignty have to a considerable extent faded over the last 40 years as States have come to accept – to some extent at least – the concept of obligations to act within their jurisdiction for the benefit of humankind as a whole. This has led to recognition that States have a *common interest* in the global environment which may lead to a development of a body of international rules which apply to all states and are enforceable by all States. Similar linked emerging concepts are those of *common heritage* under which, for example, the management of natural resources may be seen to be a matter transcending State jurisdictions, and *common concern* which recognises the existence of entities such as the ozone layer and the global climate which are matters of international concern whose regulation demands that territorial jurisdictional claims must be transcended.

Two principles seem now to enjoy significant support:

- (a) To prevent, reduce and control polluting and environmental harms,
- (b) To cooperate in mitigating environmental emergencies and risks.

Other customary principles for which arguments are put forward include concepts such as inter-generational equity, sustainable development and 'polluter pays' principle.<sup>18</sup>

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<sup>16</sup> *Resolution 1629 of 1961*: Fundamental principles of international law impose a responsibility on all States concerning actions which might have harmful biological consequences..... by increasing levels of radioactive fallout.

<sup>17</sup> Principle 21: States have..... the responsibility to ensure that activities, within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

<sup>18</sup> David Hughes, *Environmental law (3<sup>rd</sup> edn.)*, Butterworths (1996), pp. 116-17.

## Treaty

Despite customary laws flexibility and current resurgence, its inherent problems have led to emphasis in environmental matters being placed on treaty based law. 'A treaty may be defined as an agreement whereby two or more States establish or seek to establish a relationship between themselves governed by international law' and 'the treaty is the main instrument which the international community possesses for the purpose of initiating or developing international co-operation.'<sup>19</sup>

Treaties can exist in various forms but in environmental terms the most commonly encountered treaties are likely to be multilateral instruments made in formal style by many States and institutions and known as 'Conventions, together with 'Protocols' which are less formal agreements often subsidiary or ancillary to a Convention, other nomenclatures include 'covenant', 'pact' or 'act'. Treaties may either be 'law-making' in that they lay down generally applicable rules, or 'treaty contracts' which deal with deal with individual issues concerning only two or a very few States. From a global point of view the first type is of great importance, but environmental treaties have been made in variety of forms by a variety of States from many years, dating from 1868<sup>20</sup> to the number of multi-party arrangement made from 1970s onwards. The treaties are often weaker than national legislation because no State can be bound without its consent. The greater the number of participants in the formulation of a treaty, the weaker or more ambiguous its provisions are likely to be since they have to make compromises making them acceptable to every State involved.<sup>21</sup> Treaties are not made rapidly and a five year negotiating time between States is average in relation to environmental issues.<sup>22</sup>

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<sup>19</sup> Starke, *Introduction to International Law* (10<sup>th</sup> edn.) p. 15; Seen in Hughes' *Environmental Law* (3<sup>rd</sup> edn.), Butterworths, 1996, pp. 436 & 437.

<sup>20</sup> *Mannheim Convention* on, inter alia, water supply on the River Rhine (between Belgium, France, Germany, the Netherlands and the United Kingdom).

<sup>21</sup> Lyster, *International Wildlife Law*, p. 4; *Ibid* Hughes.

<sup>22</sup> *The Vienna Convention on protection of the Ozone Layer, 1985* can be quoted as an exception. It was made and entered into force quickly.

Treaties may arise in a number of ways, for example because of pressure from a State, a group of States or an international organisation, and a treaty will normally be finally formulated at an international conference. State representatives at such a conference may sign the document, though this creates no legal obligation to ratify or to comply with the treaty's terms on the State's part, but a strong moral obligation and an expectation between signatories that none of them will frustrate treaty objectives. Ratification is the process whereby States undertake legal binding obligations under treaties and the State practice as to the mode of ratification varies.<sup>23</sup> It is usually provided in treaties that they will come into force after a specified number of ratification by States has been reached. Some treaties are restricted in that only certain specified States may be party to them; others are open to all to be original parties to them or, by accession, to become subsequent members of them, while others are also open to regional economic integration organisations such as the European Union (EU). Treaties may also be made subject to 'reservations' whereunder a State releases itself from certain treaty obligations. Reservations are useful in importing flexibility to treaties so that States which accept most, but not all, treaty obligations can become parties, but they also provide 'a loophole enabling a State to defend its vested interests, which conflict with the spirit of the treaty'.<sup>24</sup> In some cases making reservations is prohibited by the treaty itself, while reservations generally cannot be made which are incompatible with treaty objectives.<sup>25</sup>

The form and content of treaties also varies considerably. For example, it is now the practice to have basic general provisions in one document – which may receive the title of 'Convention' – while highly specified technical standards, say on emissions are placed in subsidiary documents – which may be known as protocols – to allow for their amendment in the light of

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<sup>23</sup> For India, See *Chapter I, Part XI*, especially *Article 253* of the Constitution.

<sup>24</sup> Lyster, *International Wildlife law*, p. 9; *Ibid* Hughes.

<sup>25</sup> See *Article 19 (c) Vienna Convention on the Law of Treaties*.

technical progress. This, however, has the disbenefit of allowing States to opt out of detailed control by objecting to the terms of the protocol. Other Treaties are mere 'Frameworks' simply creating no more than a generalised obligation on to States to take some, unspecified, action – of course the obligation can be 'fleshed out' subsequent protocol, but the initiative to do this lies with the States. A treaty can also take the form of an 'umbrella' whereunder there is a principal framework convention<sup>26</sup> and a number of protocols<sup>27</sup> each dealing with a specific issue. States ratifying the principal convention may also be required to ratify one or more of these accompanying protocols.

Certain writers<sup>28</sup> and commentators have pointed to important customary development such as the concept of global international environmental law, and the interplay which takes place between custom and treaty with the former's development underpinning the growth and importance of the latter as a system of international environmental regulation and protection.

It is now commonly accepted that the future development of law should reflect certain principles, particularly in drafting treaties. These principles are: the 'Polluter Pays', Precautionary Action, Inter-generational Equity and Non-Discrimination: i.e. that a polluter who causes transboundary pollution should be treated no less severely than if the harm was caused in the polluter's own country, and Common but Differentiated Responsibilities, i.e. States should divide the cost of environmental measures according to their contribution to environmental degradation.<sup>29</sup>

A convenient starting point for modern treaty based international environment law is the Stockholm Conference of 1972 and it's Declaration on Human Environment. Sufficient imprecise to leave much to the discretion of the States wishing

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<sup>26</sup> The United Nations Framework Convention on Climate Change (UNFCCC).

<sup>27</sup> *The Kyoto Protocol, 1997.*

<sup>28</sup> Patricia Birnie & Alan Boyle, *International Law and the Environment (2<sup>nd</sup> edn.)*, Oxford University Press, (2002), Chapter 3,

<sup>29</sup> *Supra* Hughes, p. 118.

to advance their own interests, the Declaration has served as a basis for subsequent international developments and formulations of legal principle. So in 1982 at its 60<sup>th</sup> Annual Conference in Montreal, the International Law Association defined transboundary pollution in terms of the introduction by human action of material or energy into the environment so as to effect deleteriously health, living resources, ecosystems, property, amenity and legitimate use of the environment where pollution originates wholly or partly in one State and invades another's territory. States, it was argued, should abate and control such pollution, and should limit new or increased pollution sources, and give warning of activities likely to cause significant transboundary pollution. Likewise in 1982, the United Nations set up the Inter-Governmental Committee on Development and Utilisation of New and Renewable Sources of Energy, and a gathering of 105 States at Nairobi, Kenya reaffirmed the Stockholm Principles. This was followed in 1983 by the creation of the World Commission on Environment and Development by the United Nations.

One current weakness of international environmental law is the problem of compliance. To ensure more effective compliance it is important to build into treaty provisions requirements that States: establish regular meetings to review treaty implementations and revise terms as and when necessary; create administrative agencies to assist with implementation; impose regular financial sanctions or rewards as 'carrots and sticks'. Supervision by means of the creation of international agencies has been found a useful means of law enforcement, though it 'also entails the negotiation and elaboration of detailed rules, standards and practices'.<sup>30</sup>

This is not to say that international environmental law is without significance. Some principles are translated into national practice<sup>31</sup> and 'there is another overriding effect which ensures

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<sup>30</sup> *Supra* Birnie & Boyle, p. 161.

<sup>31</sup> The concept of 'Sustainable development' and its principle features have been adopted by the Supreme Court of India in several cases; Environmental laws are being legislated in pursuant to the

that, by and large, States make an effort to enforce a treaty once they have become Party to it: it is in the interests of almost every State that order, and not chaos, should be a governing principle of human life and if treaties were made and freely ignored chaos would soon result'.<sup>32</sup> Moreover the future may see the development of a universal convention, consolidating existing and establishing new principles of environmental protection, and setting out the concomitant right and duties of States. A United Nations Commission for Environmental and Sustainable Development has been debated as a monitoring and investigative body, as has a High Commissioner or 'Environmental Ombudsman' to act as a 'trustee' for environment and to take action on behalf of its protection. In 1989, a twenty-four nation conference at The Hague called for such a new authority to be known as 'Globe'.

The Globe would be an executive body operating alongside the International Court of Justice (ICJ) at The Hague (the judicial compliance enforcing and arbitral body) and the United Nations General Assembly as a legislative organ, able to lay down the framework of international environmental regulation. 'Globe', however, would be an unprecedented agency able to make decisions by majority vote, and possessing powers to enforce environmental standards and would also be able to pursue actions for damages against polluting States before the ICJ. The concept of 'Globe' necessarily involves some surrender of the concept of State sovereignty.

The awareness of interaction of man with his environment is of recent origin. The Declaration of the United Nations Conference on Human Environment held in Stockholm in June 1972 stated:

"Man is both the creature and the moulder of his environment, which gives him physical substance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous

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international treaty obligations; Amendment of the Constitution of India by inserting Articles 48A and 51 A (g) arising out of the 42<sup>nd</sup> Constitution (Amendment) Act, 1976 is a case in point.

<sup>32</sup>Lyster at p. 11, *Supra* Hughes.

evolution of the human race on this planet a stage has been reached when, through rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on unprecedented scale. Both aspects of mans environment, the natural and the manmade, are essential to his well-being and to the enjoyment of the basic human rights – even the right to life itself.”

Principal 1 of the declaration went on to say:

“Man has the fundamental right to freedom, equality ad adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.....”

Norman Myers quoted in Sir Edmund Hillary’s *Ecology 2000* has rightly observed:<sup>33</sup>

“The fate of African environments is thus determined not only by local circumstances. It is influenced, in part at least, by the lifestyles of the developed world. These economic-ecological linkages recognised to date, but they represent a significant factor for land use patterns in Africa’s Savannahs.”

A diverse developing society such as ours provides numerous challenges in the economic, social, political, cultural and environmental arenas. All of this Coalesce in the dominant imperative of alleviation of mass poverty reckoned in the multiple dimensions of livelihood security, health care, education, empowerment of the disadvantaged and elimination of gender disparities.

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<sup>33</sup>Quoted by the Hon’ble Supreme Court in *M.C.Mehta v Union of India*, (1991) 2 SCC 137 now famously known as the Delhi Pollution Case.

A number of national policies<sup>34</sup> for environmental management together with some sector policies<sup>35</sup> have contributed towards protecting and improving the quality of the environment. Despite these policy documents, a need for a comprehensive policy statement has been evident for sometime in order to infuse a common approach to environmental management. As our development challenges have evolved, and our understanding of the centrality of environmental concerns in development has sharpened, there is also a need to review the earlier objectives, policy instruments and strategies.

The National Environmental Policy (NEP, 2006) is a response to our national commitment to a clean environment, mandated in the Constitutions by Articles 48 A and 51 A (g), and strengthened by judicial interpretation of article 21.

India also plays an important role in several significant international initiatives concerned with environment.<sup>36</sup> It is party to the key multilateral agreements, and recognises the interdependencies among, and transboundary character of, several environmental problems. The National Environmental Policy is also intended to be a statement of India's commitment to making a positive contribution to international efforts.

India has participated in major international events on the environment, since 1972. The country has contributed to, and ratified several multilateral agreements on environmental issues in recognition of the transboundary nature of several environmental problems, and has complied with its commitments. It has also participated in numerous regional and bilateral programmes for environmental co-operation. Given the need to enhance our own capacities to comply with our commitments, and ensure sustained flow of resources for environmental management, the following steps have been

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<sup>34</sup>National Forest Policy, 1988; the National Conservation Strategy and Policy Statement on Environment and Development, 1992; and the Policy Statement on the Abatement of Pollution, 1992.

<sup>35</sup>The National Agriculture Policy, 2000; National Population Policy, 2000; and National Water Policy, 2000.

<sup>36</sup>India was one of the forefront member countries in taking the initiative in the *UN Conference on Human Environment* in June 1972.

proposed to be taken under the National Environment Policy, 2006:

- (a) Avail multilateral and bilateral cooperation programmes, for capacity building for environmental management, particularly in relation to commitments under multilateral instruments.
- (b) Participate in mechanisms and arrangements under multilateral agreements for enhancing flows of resources for sustainable development.
- (c) Provide assistance to other developing countries, in particular for scientific and technical capacity building for environmental management.

We live in a rapidly changing global community, in a rapidly developing, highly diverse country. The environmental issues that are salient as of now may evolve over time, and new ones may take their place. Scientific understanding of environmental matters would advance rapidly. Changes in economic structure, technologies and resource availability, in each case nationally and globally, are likely, as are evolution of global environmental regimes, and norms arising from jurisprudence. To set forth an immutable National Environment Policy in this dynamic situation would be unwise. A prudent course would be to provide for updating every few years in light of new knowledge and developments, and a comprehensive review in about a decade. The following provisions are, accordingly made for review, updating and renewal of national Environment Policy:

- (a) Undertake consultations every three years with groups of diverse stakeholders, i.e. researchers, industry associations and voluntary organisations, and update the National Environment policy.
- (b) In the third of the three-year reviews, undertake a more comprehensive examination of scientific and policy understanding of environmental issues, redefine the Objectives and Principles, and recast the Strategic

Themes for Action. A new National Environment Policy should be the outcome.

The United Nations through its Conference on the Human Environment held at Stockholm in 1972, realising the need to protect and improve human environment for the well being of the people and economic development throughout the world,<sup>37</sup> rightly advises all nations to adopt an integrated and coordinated approach to their development planning and ensure that development is compatible with the need to protect and improve the environment for the benefit of their population.<sup>38</sup> It also directs them to carefully devise an appropriate planning of their natural resources for the benefit of present and future generations.<sup>39</sup> The World Commission on Environment and Development<sup>40</sup> headed by Gro Harlem Brundtland (the then Swedish Prime Minister), and the Rio Declaration on Environment and Development<sup>41</sup> have drawn attention of the international community to the critical relationship between environment and development and have, in fact, given a global perspective of environmentally compatible development.

The Rio Declaration contemplates a 'sustainable development'.<sup>42</sup> It proclaims that the right to development must be equitable to development and environmental needs of the present and future generations.<sup>43</sup> It insists that environmental protection must constitute an integral part of the developmental process.<sup>44</sup> It also appeals to all nations to (i) conserve, protect

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<sup>37</sup> Proclamation 2, U.N. *Report of the United Nations Conference on Human Environment*, Stockholm, 5-16 June, 1972.

<sup>38</sup> Principle 13, *ibid.*

<sup>39</sup> Principle 12, *ibid.*

<sup>40</sup> World Commission on Environment and Development, *Our Common Future* (1987).

<sup>41</sup> *Report of the United Nations Conference on Environment and Development*, Rio de Janeiro, 3-14 June, 1992.

<sup>42</sup> The term 'sustainable development' was first used in 1987 by the World Commission on Environment and development (popularly known as the Brundtland commission) to denote that development which meets the needs of the present generation without compromising the ability of the future generations to meet their own needs. [See its report entitled *Our Common Future*]. The 1992 United Nations Development Programme (UNDP) Report states: "Sustainable Development is a process in which economic, fiscal, trade, energy, agriculture and industrial policies are all designed to bring about a development that is economically, socially and ecologically sustainable."

<sup>43</sup> Principle 3.

<sup>44</sup> Principle 4.

and restore the health and integrity of the earth's ecosystem;<sup>45</sup> and (ii) reduce and eliminate unsustainable patterns of production and consumption to achieve sustainable development and a higher quality of life for all people.<sup>46</sup> It, like the Stockholm declaration, directs all nations to enact effective environmental legislation<sup>47</sup> and develop their national laws regarding liability and compensation for victims of environmental pollution and damage.<sup>48</sup>

Since the Stockholm Conference, almost every country has enacted one or more pieces of environmental legislation with a view to combating and improving air quality. Thus, the international community has assigned a significant role to (environmental) law in maintaining and enhancing the (global) environmental quality and, in achieving eco-friendly development.<sup>49</sup>

During recent years there is a world-wide concern for the deterioration of human environment as a result of the impact of science and technology and population growth on the global landscape. In this response to this, there is a new emphasis by scholars and decision makers on the role of law, both national and international, for protection of human environment and for ensuring the right to life.<sup>50</sup>

The problems of environment faced by mankind today are a result of accelerated economic growth, industrial development and urbanisation among the advanced countries on the one hand, and the poor rate of growth and backward economic conditions, among the developing countries on the other hand. With more and more application of technology to resources of earth, one sees an immense interaction of knowledge, economies and power.<sup>51</sup> Affluence is the basic cause, however,

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<sup>45</sup> Principle 7.

<sup>46</sup> Principle 8.

<sup>47</sup> Principle 11.

<sup>48</sup> Principle 13.

<sup>49</sup> K.I. Vibhute, *Environment, Development and Law: Indian Perspective*, Vol.37 (2) JILI (1995) 182 at p.183.

<sup>50</sup> S.Bhatt, *Some Aspects of Law Relating to the Environment*, Vol. 13 Banaras L.J. (1977), p.12.

<sup>51</sup> Barbara Ward & Rene Dubos, *Only One Earth*, p.47.

which has caused deterioration of environment in the advanced countries, for example, an American carries in his car and household eleven tonnes of steel giving out one tonne of waste per year.<sup>52</sup> Excessive utilization of resources of earth poses not only danger of pollution; the resources in themselves are likely to get depleted, and in certain cases exhausted, in course of time.

Thus we see the crises of environment as a result of accelerated exploitation of resources by technologically developed countries. The other picture is of dismal poverty among world's greater number of people living in the developing countries of Asia, Africa and Latin America.

The United Nations Declaration on Environment has called attention to the poverty aspect of environmental problems in the developing countries. It says: "In the developing countries most of the environmental problems are caused by underdevelopment. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, developing countries must divert their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment."<sup>53</sup>

Looking at both sides of the problem involving the developed and the developing countries, we are drawn to the conclusion that there has to be a balance between demand and available resources. An economic system for the worlds where resources can last better and where environments are kept at wholesome level, has to be stable and not competitive<sup>54</sup>

Therefore, the ecologists rightly believe that continuous economic growth is harmful for environments. Instead, we must consider how long can resources last and how best can environments be kept at wholesome level. The UN Declaration

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<sup>52</sup> *Ibid* at pp. 41-42

<sup>53</sup> See U.N. General Assembly Report of U.N. Conference on Human Environment, A/Conf. 48/14, 3 July 1972, Annex, pp.2-6.

<sup>54</sup> Garrett Hardin, *The Cybernetics of Competition: a Biologist's View of Society*, in Sheppard and McKinley (ed.), *The Subversive Science: Essays Toward an ecology of Man* (Boston, 1969), p. 287.

stresses this point explicitly: "For the developing countries, stability of prices and adequate earnings for primary commodities and raw material are essential to environmental management since economic factors as well as ecological processes must be taken into account."<sup>55</sup>

Therefore ecological organisation is closely related to the economic organisation at national and international level. Prudent use of resources by the rich and advanced countries, and skilful exploitation of resources by developing countries is to be the response of a new world economic order to the economic challenges involved in maintenance of wholesome environment.

In an attempt to chronologically record the establishment and development of distinguished International instruments broadly in the arena of environmental law the book *Silent Spring* by Rachel Carson, published in 1962, marked the beginning of the modern environmental movement.

Warning of the growing imbalance in the relationship between nature and humankind, Carson vividly described the sadistic impacts of pesticide use on humans and other living beings, which spearheaded widespread concern about the growing imbalance in the relationship between nature and humankind.

Carson's research findings were verified and reinforced in numerous evaluations produced during the *Decade of World Development* (1960-1970), as well as in strategies formulated during the Second Decade of World Development (1970-1980) by the United Nations (UN) Social and Economic Council.

On May 28, 1968 the UN Social and Economic Council (ECOSOC) accepted a proposal from Sveker Astrom, the Swedish Ambassador to the UN, to explore the possibility of holding an international conference on humans in the environment. Based upon the recommendation of ECOSOC, the UN General Assembly of December 6, 1968 authorized the council to conduct a conference. Subsequent reports by U Than,

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<sup>55</sup> Section 10, *UN General Assembly Report of UN Conference on Human Environment*, 3<sup>rd</sup> July 1972.

Secretary General of the UN, underlined the urgent need for new conceptions and attitudes toward the environment. These reports formed the basis for the resolution, adopted by the UN General Assembly on September 15, 1969 to sponsor *The UN Conference on the Human Environment*, and to accept the offer of the Swedish government to host the conference.

The Stockholm Conference, held on June 5-16, 1972, included the participation of 113 countries and dozens of observers, although the Soviet Union and a few other Eastern European countries boycotted the conference in protest against stipulations which excluded some countries from their region from participating in the conference on equal footing with other countries.

By special resolutions, the Stockholm Conference designated June 5 as *World Environment Day*, declared 26 principles for nature conservation, species protection and human rights; broadly encouraged better integration of development and environmental policies to foster more sustainable forms of development; and established the *United Nations Environment Program (UNEP)*.

Representatives at the first conference of UNEP the following year unanimously agreed that environment and development issues should be assigned highest priority, demanding the central integration of environmental considerations into all planning agendas.

The *World Conservation Strategy (WCS)*, issued by The World Conservation Forum (IUCN) in 1980, contained a systematic approach to development focused on ecological management of living resources to ensure the continuity of life and biodiversity for the satisfaction of human needs now and in the future. The World Commission on Environment and Development (WCED) was formed in 1983 to tackle critical issues which the WCS did not address, notably - the causes of environmental over-exploitation and degradation, and the failure of development policies to alleviate poverty and hunger. Headed by Gro Harlem Brundtland, a Swedish scientist, the WCED was

mandated to research and formulate a long term strategy for ecologically sustainable development.

The report of the WCED (*Our Common Future / Brundtland Report*), formed the foundation for the *United Nations Conference on Environment Development* (UNCED), also known as the *Earth Summit*, held in Rio de Janeiro on June 3-14, 1992. This conference, attended by delegates from 197 countries, resulted in the establishment and ratification of a number of international agreements, including, among others:

1. The Rio principles for sustainable development.
2. Local Agenda 21 (LA21) - a blue-print defining a framework for the legislation and implementation of sustainable development.
3. The Convention on Forests and other agreements about conservation.
4. The United Nations Framework Convention on Climate Change (UNFCCC).
5. The Convention on Biodiversity (CBD).

The Rio *Earth Summit* raised worldwide awareness of the close interdependence and mutual influence of social, economic and environment factors, and recognition that the success of any programs or actions taken to respond to the environmental crisis would depend upon continuous and concerted effort, and must be aim for long term sustainability. From here was born the concept of *Sustainable Development*, as a form of development which *meets the needs of the present without compromising the ability of future generations to meet their own needs*.

The World Summit on Sustainable Development (WSSD) was convened in Johannesburg, South Africa September 4, 2002, a decade after the Rio *Earth Summit* to mark its tenth Anniversary. The Johannesburg conference was attended by delegates from approximately 189 countries, including government leaders and representatives of concerned citizen and community groups, UN institutions, international financial

institutions, and other parties who share environmental concerns.

The WSSD was intended to evaluate how far nations have come on the road to sustainable development, to identify the constraints we have been facing, and to formulate the next steps we must take to improve the current world situation. Additionally, the purpose of the WSSD was to renew the commitments made by world leaders in Rio ten years ago, and to determine priorities for future action, both regarding the issues addressed in past commitments, as well as new issues which have arisen since then.<sup>56</sup>

### **The Practical Developments in Environmental Law taking place in the Global Arena**

The Global community have been more aware of the backlash to economic growth and development as a result of neglecting the environment after the Stockholm Declaration. This has been apparent from the interest taken by the various governments in protecting and improving the environment in their respective nations. Such positive development has been the contribution of several historical incidents resulting from a lackadaisical attitude towards the environment. An attempt is made to track the aforementioned developments in the perspective of transboundary air pollution which has actually opened the eyes and minds of the world to make integrated efforts to combat the menace of environmental degradation. It has also exposed to the international community that environmental pollution is not limited within national borders and sovereignty of a country can be jeopardised in the event of an environmental disaster.

The *Trail Smelter Arbitration*<sup>57</sup> is the father of developments in the area of international environmental law. It was the first judicial attempt of solving a transnational problem of air pollution involving two nations. It concerns the short-range

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<sup>56</sup> <http://www.ecouncil.ac.cr/discapacidad/INDEXENGLISH.htm> accessed and viewed on 20<sup>th</sup> June 2010.

<sup>57</sup> *United States v Canada*, 3 RIAA p. 1907 (1941).

transfrontier air pollution, especially by sulphur dioxide fumes, originating in Canada and causing damage in the United States. The underlying dispute covered a period of thirteen years from 1928 to 1941.

The facts of the case were that in 1896, a Smelter was built in Trail, British Columbia, Canada where zinc was smelted in large quantities. In 1906 the Consolidated Mining and Smelting Company of Canada acquired the said smelter plant. The plants emitted sulphur dioxide fumes in growing quantities, the amount which varied from 10,000 to 20,000 tonnes per month. From 1925, atleast until the end of 1931, damage occurred in the American territory, lying only at a distance of seven miles. The occurrence and the resultant damage to the American territory were brought to the notice of the smelting company. The first formal complaint was filed in 1926 by a farmer whose land was located in the affected area. This action was followed by others and the smelter company, Trail Smelter proceeded to negotiate with the complainants, the affected property owners, with a view to a settlement and even settled with some of them.

In June, 1927, the case was taken officially by the US government for the first time and proposed to the Canadian government to refer the matter to the International Joint Commission which had been set up under the Boundary Waters Treaty, 1909.<sup>58</sup> The report of the joint commission found the damage to amount of 350,000 US dollars and in addition recommended that Trail Smelter should make certain changes to its plant for the purpose of reducing the discharge of sulphur fumes from its stacks. The US government unsatisfied by the existing conditions and the still occurring damage made another representation to the Canadian Government. In pursuance to that and after hectic diplomatic negotiations, a convention was signed between the United States (US) and Canadian government in Ottawa on April 15, 1935 for the settlement of difficulties arising from operation of the Trail Smelter. Under the

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<sup>58</sup>U.S. Treaty Series No. 548, 2 *American Journal of International Law, Supplement*, p. 239 (1910).

convention the two governments agreed to constitute a tribunal consisting of an independent chairman and two national members for deciding the issue at hand. The proceedings of the tribunal and its ancillary subject matter were conducted under the articles of the convention. The portion of the decision or the award<sup>59</sup> of the tribunal relevant to our present study was part three of the judgement, which contains the most celebrated rulings of the case and which dealt with the issue whether trail Smelter should be required to refrain from causing further damage in the State of Washington and, if so, to what extent? The tribunal examined and found that there was no need to solve this problem as the law followed in the United States in dealing with the quasi-sovereign rights of the States of the Union, in the matter of air pollution, was in conformity with the general rules of international law. The tribunal, thus, declared:<sup>60</sup>

"... under the principles of international law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties of persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence."

The Trail Smelter Award has established that States have the right to be free from established injury of serious consequence. However, what establishes an injury of serious consequence has not been defined and as such technical and quantitative environmental norms, called eco-standards, are lacking in the field of international environmental law.

The Trail Smelter Award has been cited so often by publicists that the rules and principles referred to constitute the teachings of most highly qualified publicists of various nations. Since the States have accepted the rules and the principles stated, they constitute the *opinio juris* and since there has been no conflicting State practice, they are actually part of

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<sup>59</sup> *Trail Smelter, III United Nations Report of International Arbitral Awards (1949).*

<sup>60</sup> *Ibid* at p. 1963.

international customary law. Thus, the Trail Smelter Award has contributed significantly to the development of international environmental law in the initial stages.

During the 1970s, the problems of the emission of smoke, dirt, dust and grit lessened and coupled with the new approach to industrial processes a gradual improvement took place in the quality of the atmosphere in the UK. There was a move away from the use of coal as fuel to smokeless substances such as coke and gas. Additionally, the gap left behind with the introduction of clean air zones was met by an increase in the use of electricity for power and heat. Power companies changed its practices in a direct reaction to the difficulties encountered with local pollution by replacing the short chimneys traditionally used in power stations with larger and taller stacks. Unfortunately, this reduction in the levels of local pollution only shifted the problems to a different location. Whilst the pollution of the atmosphere declined nationally, the concern internationally rose. The change of policy from short to tall stacks for chimneys saw the creation of the first environmental problem which could properly be identified across national boundaries – the problem of acid rain.

The combination of sulphur dioxide and other acids from power stations and traffic combined with the atmosphere to produce not only acid rain, but also acid deposits in the atmosphere made of ammonium sulphate particles.

The effects of the production of such substances into the atmosphere have increased the acidity of rainfall in some areas to over forty times the natural level. This has led a terrible effect upon areas of not only England, Scotland and Wales but also other countries within Europe where the prevailing winds have carried such emissions.<sup>61</sup>

### **The Economic Commission for Europe (ECE)**

The Economic Commission for Europe (ECE) is a regional Economic Commission of the United Nations established by the

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<sup>61</sup> Bell & McGillivray, *Environmental Law*, p. 411-12.

Economic and Asocial Council (ECOSOC) in 1947. It comprises all UN member-states in Europe including Russia, Canada and the United States. The Commission has been concerned with environmental issues since 1956. The Commission has a Secretariat and 15 subsidiary committees.<sup>62</sup> A working Party on Air Pollution Problems was established within the ECE in 1969. In 1971, it adopted a recommendation calling for abatement of pollution by sulphur emissions. This was to be accomplished by desulphurisation of flue gases and fuels, fuel transformation, fuel substitutes, and the requirement that fuel burning installations store a quantity of low-sulphur fuels to reduce emissions.<sup>63</sup> In June 1978, the Committee of Senior Advisors to the ECE Governments on Environmental Problems established a Special Group on Long-Range Transboundary Air Pollution<sup>64</sup> with mandate to elaborate proposals for consideration at future sessions of Senior Advisors.<sup>65</sup>

The Special Group on Long-Range Transboundary Air Pollution drafted a convention on reduction of emissions causing transboundary air pollution. The draft convention paid special attention to the exchange of information and was discussed during the meetings of the Special Group. Different proposals for international co-operation were made. The Draft was later transformed into the ECE Convention on Long-Range Transboundary Air Pollution in 1979.

On November 16, 1979 the first international agreement covering acid rain, the Convention on Long-Range Transboundary Air Pollution was signed in Geneva by 34 member countries of the United Nations Economic Commission for Europe.

The Geneva Convention on Long-Range Transboundary Air Pollution 1979 is the only major regional agreement regulating transboundary air pollution and aims at protection of man and

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<sup>62</sup>*The European Yearbook* (1978) at pp. 16-17.

<sup>63</sup>Irene H. Van Liere, *Acid Rain and International Law* (1980), p.147.

<sup>64</sup>*ECE Report of the Meeting of the Officers of the Special Group on Long-Range Transboundary Air Pollution*, Doc. ENV/AC 9/ R.1 (1978) p.1

<sup>65</sup>ECE Report of Special Group on Long Range Transboundary Pollution, Doc. A/AC. 9/2 (1978), p.2.

his environment within regional cooperation in Europe.<sup>66</sup>The convention is open to all the member States of the ECE and States having a consultative status, as well as competent regional economic integration organisations constituted of ECE member States.<sup>67</sup> It entered into force on March 13, 1983.

On September 18, 1984, a Protocol to the 1979 ECE Convention on Long-Range Transboundary Air Pollution was concluded. The Protocol provides for the long term financing of the Co-operative Programme for Monitoring and Evaluation of Long-Range transmission of Air Pollutants in Europe (EMEP). Until the conclusion of the Protocol, the EMEP has been financed by the UNEP and voluntary contributions from governments. The protocol provides for mandatory contributions from parties to it. Presently this has been replaced by UNEP contributions.

It has provisions for air quality management, whereby, each contracting party uses the best available, economically feasible and non-waste technology. The parties are to initiate and cooperate in the conduct of research and development of the technologies, alternative measures for environmental assessment and training programmes. Besides, information of major changes in the national policies and their potential impact on transboundary air pollution is to be exchanged with the other contracting parties. Thus, the convention creates a network between the contracting States by committing them to sharing information, conducting research and consulting on policies and strategies to combat air pollution.<sup>68</sup> However, there is no provision on liability for air pollution damage. Besides, the convention only lays down broad principles and objectives for air pollution control without requiring the parties to commit to specific obligations and standards.

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<sup>66</sup>The Convention defines long range transboundary air pollution to mean 'air pollution whose physical origin is situated wholly or in part within the area under the national jurisdiction of one State and which has adverse effects in the area under the jurisdiction of another State at such a distance that is not generally possible to distinguish the contribution of individual emission sources or groups of sources.

<sup>67</sup>Article 14, ECE Convention on Long-Range Transboundary Air Pollution, 1979.

<sup>68</sup>Principle 3 to 8 of the *Convention*.

If a dispute arises between two or more contracting parties to the convention as to the interpretation or application of the convention, they shall seek a solution by negotiation or by any other method of dispute settlement acceptable to the parties to the dispute.<sup>69</sup> The convention does not provide for special mechanisms of supervision.

The convention does not contain rule on State liability as to damage. It is rather aimed at managing long-range transboundary air pollution than at providing injured States or individuals with a remedy.

The convention accords international recognition to the problem of acid rain. However, it provides merely for sharing of information, collaborative research and continued monitoring of pollutants and rainfall. It contains no numerical goals, limits and enforcement measures. It contains no rule on State liability as to damage. It only obligates the parties to endeavour to limit, and as far as possible, gradually reduce and prevent air pollution, including long-range transboundary air pollution. The accord contained in the convention is weak as it allows each signatory to decide within its borders. There is provision to control sulphur dioxide emission. To make the situation worse, Article 5 of the convention stipulates that a country anticipating harm from another country's increased sulphur imports must initiate a request for consultation with the polluting country and the consultation shall be held if the polluting country agrees that its activities pose a significant risk of transboundary air pollution. In the prevailing environment saturated with political hostility, such an admission of responsibility by the polluting State is likely to call for proof of damage and identification of specific polluting sources.

Hereinafter this work makes an attempt to dwell into a number of popular international environmental law sources in the form of conventions, declarations, protocols, etc., mainly concerned with the pollution of air. The objectives of sustainable use of automobile being the maintenance of ambient air quality

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<sup>69</sup> Article 13, *ECE Convention on Long-Range Transboundary Air Pollution, 1979.*

in the world and vehicular pollution being one of the constituent of pollution from the Transport sector, the following layout of legal activities in the international forum seemed necessary.

**United Nations Conference on Human Environment (UNCHE - Stockholm Conference), 1972**

The first international conference on human environment was held in Stockholm, capital of Sweden<sup>70</sup> where more than 107 member States of the United Nations (UN) participated. The International Conference on Human Environment (UNCHE) in the year 1972 at Stockholm was the turning point in international environmental law. It was for the first time that World Nations gathered at a place under the United Nations leadership to evolve a common strategy to combat environmental degradation, pollution and ecological imbalances. Twenty-six principles were declared in this conference which is known as the Magna Carta on human environment. The Stockholm Declaration was adopted by the UNCHE on June 16, 1972. The Stockholm Declaration was the first holistic approach to deal with the problems of environment. The conference adopted an action plan relating to natural resources, human settlement, human health, territorial eco-system, environment and development, ocean, energy, wildlife, natural disaster, transboundary pollution, nuclear energy and means of mass destruction. It also declares that there is a need for the international law relating to liability and compensation for the victims of pollution and other environmental damage.

The United Nations Conference on Human Environment (Stockholm 1972) was the first occasion at which the international community of States united to discuss international environment issues more generally and more coherently. Although no treaty was signed, the conference adopted an Action Plan of 109 Recommendations and a Declaration of twenty-six principles. It also adopted a resolution on institutional and financial arrangements that led, amongst other things, to

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<sup>70</sup> *United Nations International Conference on Human Environment, June 5-16, 1972.*

the establishment of the United Nations Environment Programme (UNEP).

For some, the Stockholm Declaration is the foundation of modern international environmental law. Its principles are, however, largely aspirational rather than mandatory – ‘should’ rather than ‘shall’ – and few impose clear duties on States. Nevertheless, the Declaration does include principles relating to the following:

- (a) The sovereign rights of States to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction of control do not cause damage to the environment of other States or of areas beyond their national jurisdiction (Principle 21);
- (b) A duty on States to co-operate in the further development of international law regarding liability and compensation for environmental damage caused by activities within national jurisdiction to areas beyond their jurisdiction (Principle 22);
- (c) A requirement (though not a duty) for international co-operation to ‘effectively control, prevent, reduce and eliminate diverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all States’ (Principle 24).

Perhaps more importantly, the Stockholm Conference marked the beginning of a rapid increase in the number of international environmental agreements concluded. It has been said that the development of European Community (EC) environmental law is the Conference’s most tangible outcome.

India participated in the conference and also signed the declaration known as the Stockholm declaration of 1972. The

then Prime Minister, Shrimati Indira Gandhi was the first head of State to address this conference.<sup>71</sup>

The Stockholm Declaration also became a basis for subsequent development of environmental law in the form of numerous bilateral and multilateral conventions and other legally binding instruments. It would be necessary to point out that this conference opted for a non-binding declaration of the principles and as observed it contains the principles 'embodying the aspirations of the world for the better environment'. It did not impose specific obligations on the World States to fulfil the duties and obligations agreed in the Stockholm Declaration. In spite of the 'non-binding character' of the principles, it is regarded to be the foundation of modern international law.

The conference called upon the governments and peoples to exert common efforts, for the benefit of all people and for their posterity. According to the preamble, the main aim of the declaration was to shape a common outlook and common principles to inspire and guide the world in the preservation and enhancement of human environment. This was considered to be imperative for the well being of the people and for economic development throughout the world. The proclamation, keeping in view the nature of the relation of man and his environment, emphasised the need for action to build a better environment. It further recognised the necessity to defend and improve the human environment for the present and future generations through established goals of peace and for worldwide economic and social development.<sup>72</sup>

Some principles of this declaration have provided the basis for the future international conventions and agreements on the protection of natural resources in general. Principles 1<sup>73</sup> and 2<sup>74</sup>

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<sup>71</sup>S.C. Shastri, *Environmental Law (3<sup>rd</sup> edn.)*, Eastern Book Company, (2008), p. 334.

<sup>72</sup> Sanjay and Videh Upadhyay, *Air Laws, Water Laws and the Environment, A Handbook on Environmental Law, Vol-2*, Lexis Nexis (Butterworths), 2002, p. 128.

<sup>73</sup> *Principle 1*: Man has the fundamental right to freedom, equality and adequate conditions of life in an environment of quality that permits a life of dignity and well being; and he bears a solemn responsibility to protect and improve the environment for present and future generation.

<sup>74</sup> *Principle 2*: The natural resources of the earth including air water, land, flora and fauna must be safeguarded for the benefit of present and future generation through careful planning and management.

of the declaration have enunciated the principle of 'sustainable development'. The premise for these principles is the responsibility of man 'to protect and improve the environment for the present and future generations'. Thus, it was cautioned that 'now renewable resources of the earth must be employed in a way so as to guard against the danger to the future generation. It also advocated establishing national institutions with the task of planning managing or controlling environmental resources with a view to enhance the environmental quality.

The declaration also lays down that the discharge of toxic and other substances and the release of heat should not exceed the capacity of the environment and in this context it has to be ensured that serious or irreversible damage is not inflicted upon the ecosystems. The just struggle of the people of all countries against pollution should be supported.<sup>75</sup> The declaration requires the signatory member-states to make environmental policies, regional planning including planning for human settlements and urbanisation and appropriate institutions with a view to manage environmental resources and hence environmental quality.<sup>76</sup> Significantly, States should adopt an integrated and coordinated approach to their development planning and ensure that development is compatible with the need to protect and improve human environment.

Perhaps the most important of all the principles laid down by the Stockholm Declaration is principle 21 which states that in addition to 'the States having the sovereign right to exploit their own resources pursuant to their own environmental policies', they have 'the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction'. It has been authoritatively opined that this principle has remained a highly influential statement in the subsequent development of law particularly in multilateral treaties including

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<sup>75</sup>Principle 6.

<sup>76</sup>Principles 11 to 17.

the Geneva Convention on Long-Range Transboundary Air Pollution and the Ozone Convention.<sup>77</sup>

Thus, it can be safely concluded that the Stockholm Declaration of 1972 became the main force of the modern international environmental law. It has principles dealing with renewable and non-renewable resources, toxic substances, sea pollution, use of science and technology, environmental education, to develop national institutions to enhance quality of environment, demographic policies, international cooperation for transboundary pollution, etc.<sup>78</sup>

**World Commission on Environment and Development (WCED - The Brundtland Report: *Our Common Future*), 1987**

Although a strictly non-legal text, the report of the World Commission on Environment and development also known as the Brundtland Report: *Our Common Future*, 1987 was pivotal in changing the direction of international environmental law. Its central concern was the increasing globalisation of various crises (environmental, developmental, energy, etc.), and the connections between them. As it memorably summarised this: 'They are all one'. The report is a landmark in respect of modern thinking about environmental problems, and gives prominence to the language of sustainable development, defined as 'development that meets the need of the present without compromising the ability of future generations to meet their own needs. However, the report provided little solid guidance on the exact components of what such a duty to future generations might entail.

What was perhaps more important was the attention it gave to the linkages between economic and environmental considerations. Among other things it advocated greater use of international financing of environmentally-beneficial projects, and arrangements under which the debts of developing countries might be traded for commitments to conserve their biodiversity.

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<sup>77</sup>Sanjay & Videh Upadhyay, *Air Laws, Water Laws and the Environment: A handbook on Environmental law, Vol-2*(1<sup>st</sup> edn.), Butterworths (2002). P. 129.

<sup>78</sup>S.C.Shastris's *Environmental Law*, at p. 35.

It is not at all clear, however, that the developing world should continue to bear the burden of the debts often incurred by former regimes, and although there are some examples of so-called 'debt-for-nature swaps', their use has not been substantive.<sup>79</sup>

### **The Vienna Convention for the protection of the Ozone Layer, 1985 and The Montreal Protocol on substances that deplete the Ozone Layer, 1987**

The Vienna Convention for the Protection of the Ozone Layer<sup>80</sup> is a Multilateral Environmental Agreement. It was agreed upon at the Vienna Conference of 1985 and entered into force in 1988.

It acts as a framework for the international efforts to protect the ozone layer. However, it does not include legally binding reduction goals for the use of CFCs, the main chemical agents causing ozone depletion. These are laid out in the accompanying Montreal Protocol.

The Montreal Protocol on Substances That Deplete the Ozone Layer (a protocol to the Vienna Convention for the Protection of the Ozone Layer)<sup>81</sup> is an international treaty designed to protect the ozone layer by phasing out the production of a number of substances believed to be responsible for ozone depletion. The treaty was opened for signature on September 16, 1987, and entered into force on January 1, 1989, followed by a first meeting in Helsinki, May 1989. The treaty was opened for signature on September 16, 1987, and entered into force on January 1, 1989, followed by a first meeting in Helsinki, May 1989. Since then, it has undergone seven revisions, in 1990 (London), 1991 (Nairobi), 1992 (Copenhagen), 1993 (Bangkok), 1995 (Vienna), 1997 (Montreal), and 1999 (Beijing). It is believed that if the international agreement is adhered to, the ozone layer is expected to recover by 2050. It has been ratified

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<sup>79</sup>Stuart Bell and Donald McGillivray, *Environmental law (5<sup>th</sup> edn.)*, Universal Law Publishing Co. Pvt. Ltd. (2001), p.96.

<sup>80</sup>[http://en.wikipedia.org/wiki/Vienna\\_Convention\\_for\\_the\\_Protection\\_of\\_the\\_Ozone\\_Layer](http://en.wikipedia.org/wiki/Vienna_Convention_for_the_Protection_of_the_Ozone_Layer) accessed and viewed on 21<sup>st</sup> June 2010.

<sup>81</sup>[http://en.wikipedia.org/wiki/Montreal\\_Protocol#cite\\_note-2](http://en.wikipedia.org/wiki/Montreal_Protocol#cite_note-2) accessed and viewed on 21<sup>st</sup> June 2010.

by 196 states.<sup>[3]</sup> The Vienna convention and the Montreal protocol were adopted to deal with an urgent environmental problem of global warming due to industrial emission of certain harmful gases in the atmosphere. Chlorofluorocarbons (CFCs), halons used in fire extinguishers and refrigeration, carbon-dioxide from burning coal, oil, fossil fuels and industrial gases.<sup>82</sup> Nations agreed to take "appropriate measures ..... to protect human health and the environment against effects resulting or likely to result from human activities which modify or likely to modify the Ozone Layer".<sup>83</sup> The convention provides for the scientific co-operation and periodic conferences to contain the emission of these gases. The protocol requires the parties to limit the consumption of ozone depleting substances. The standards set forth in 1987 protocol were strengthened and expanded to cover additional ozone depleting substance through various amendments later. The amendments were prompted by the development of the new technology and alternative 'ozone friendly' substances. One of the major innovations of the Montreal Protocol is its recognition that all nations should not be treated equally. The agreement acknowledges that certain countries have contributed greatly to ozone depletion while other countries have made very small contributions. Such countries must eliminate all CFCs by the year 2000. Developing countries were given a grace periods of ten years and as such must phase out CFC use by 2010.

The Protocol also contains provisions to deal with the problem of the few nations that have not signed the protocol and continue to produce and consume ozone-depleting substances, by banning traded in these substances with non-member states.<sup>84</sup>

### **United Nation Conference on Environment and Development (UNCED - Rio Conference), 1992**

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<sup>82</sup>Dr. Arvind Jasrotia, *Global Environmental law – Emerging Concepts and Dimensions*, Kashmir University Law Review -X, p. 177.

<sup>83</sup> Article 2(1) of the *Vienna Convention for the Protection of the Ozone Layer, 1985*.

<sup>84</sup> Shyam Divan and Armin Rosencranz, *Environmental law and Policy in India (3<sup>rd</sup> Impression)*, Oxford University Press (2002), p. 595.

The United Nations Conference on Environment and Development(UNCED) or the Rio Conference provided a platform for putting flesh on the bones of sustainable development in international law and to address the concern, noted in the Brundtland Report, of the 'sectoral' and 'piecemeal' nature of international environmental law. The Rio-de-Janerio Conference on Environment and Development known as the "Earth Summit" held from June 3 to 14, 1992, reaffirmed the Stockholm Declaration of 1972. It adopted a declaration on June 13, 1992 and proclaimed twenty-seven principles. The main objective of the declaration was to build upon the Stockholm convention with the goal of establishing global partnership through co-operation among States, key sector societies and the people. It recognised the integral and interdependent nature of the earth and aimed to work towards international agreements that seek global environment and developmental systems. In the light of the controversies, between the developed and the developing States on the use of ozone depleting substances, the assertion that: 'standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular the developing countries' assumes significance. In this context the declaration that environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply is particularly important.<sup>85</sup>

The various principles of the Declaration emphasize on 'Sustainable Development'<sup>86</sup> to equitably meet developmental and environmental needs of the present and future generations,<sup>87</sup> eradication of poverty programmes,<sup>88</sup> reduction and elimination of unsustainable patterns of production and consumption and promotion of demographic policies,<sup>89</sup> public participation in decision making,<sup>90</sup> national environment

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<sup>85</sup> *Principle 11* further says that 'standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries in particular developing countries'.

<sup>86</sup> *Article 1.*

<sup>87</sup> *Article 3.*

<sup>88</sup> *Article 5.*

<sup>89</sup> *Article 8.*

<sup>90</sup> *Article 10.*

legislation. Further the declaration mandates the developing of national law regarding liability and compensation<sup>91</sup> for victims of pollution and other environmental damages. Also of importance is the principle that national authority should endeavour the internalisation of environment costs and the use of economic instruments taking into account the polluter pays and precautionary approach to protect environment. Undertaking Environment Impact Assessment for proposed activities which are likely to have a significant adverse impact and the role of women in environmental management and development are some of the traits of sustainable development which find prominent place in the Rio Declaration. It also pronounces that 'peace, development and environmental protection are interdependent and indivisible'. Therefore, even armed conflicts should not harm the natural environment. Rio produced a number of disparate documents: the Rio Declaration – an expansion of the 1972 Stockholm Declaration; the Framework Convention on Climate Change – a treaty providing for further negotiated protocols on issues such as greenhouse gas emissions and deforestation; the Convention on Biological Diversity – a rather hurriedly negotiated document which nevertheless aims to arrest the rate of species loss consequent on pollution and habitat destruction; a declaration on forests and 'Agenda 21', an 800 page 'action plan' for the rest of the decade and the 21<sup>st</sup> century on a diversity of issues such as oceans, forests and industry. Although the legal texts to emerge from the Rio Conference mark an important stage in the development of international environmental law, it can be argued that they fall in some way short of providing the radical change in the direction some had envisaged. The legal texts to emerge from the said Conference were:

- (a) The Rio Declaration;
- (b) The Convention on Biological Diversity;
- (c) The Framework Convention on Climate Change;
- (d) Agenda 21; and

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<sup>91</sup> Article 13.

- (e) (In the absence of agreement on a Global Forest Convention) a 'non-legally binding authoritative statement' of principles in this area.

Though, as Professor Freestone points out in his 1992 inaugural lecture 'the Road from Rio', these treaties represent the lowest common denominator of consensus, i.e. what the most reluctant participant will accept', he also argues that Rio's main contribution to the development of international environmental law is 'through the crystallisation of principles', in particular with regard to enshrining the precautionary principle as a guideline for future treaty making on all environmental issues thus entailing 'a shift in the decision-making in favour of a bias towards safety and caution', i.e. 'preventive or remedial action is to be taken if scientific evidence makes it plausible that detrimental effects to the environment may result'.

In terms of the general development of customary international environmental law, however, the Rio Declaration is central. Agreed to by all 176 States attending, it is a key soft law document, an important test as regards the consolidation of a number of principles of customary international environmental law, including the precautionary approach,<sup>92</sup> the polluter pays principle<sup>93</sup> and risk communication,<sup>94</sup> as well as the development of customary principles concerning, for example environment impact assessment<sup>95</sup> and fostering of public awareness and participation in environmental decision-making.<sup>96</sup>

Although the preamble states that it is reaffirming and building upon the Stockholm Declaration, important principles are conspicuously modified<sup>97</sup> or even weakened. Thus Principle 1 of the Stockholm Declaration which refers to the 'fundamental right to ....an environment of a quality that permits a life of dignity and well being' becomes in Principle 1 of Rio: 'Human beings are at the centre of concerns of sustainable development.

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<sup>92</sup> Principle 15 of the *Rio Declaration*.

<sup>93</sup> Principle 16, *Ibid*.

<sup>94</sup> Principles 18 & 19, *Ibid*.

<sup>95</sup> Principle 17, *Ibid*.

<sup>96</sup> Principle 10, *Ibid*.

<sup>97</sup> Principle 21 of the *Stockholm Declaration*.

They are entitled to a healthy and productive life in harmony with nature'. Interestingly the Brundtland Commission has mandated an expert group, from the North and South, to elaborate a set of general principles which could be submitted to the general Assembly with a view to their forming the basis of universal declaration.<sup>98</sup> Ultimately, the Commission failed to give its endorsement to this work, which might have underpinned a more ecological 'Earth Charter' akin to the universal Declaration of Human Rights, as advocated by some States.

Other principles given special emphasis by Rio include those of 'differentiated responsibilities', i.e. a recognition that developed nations bear special responsibilities in respect of pursuing sustainable development because of pressures their societies place on the environment and the technologies and resources at their command, ensuring the effectiveness of environmental laws, and creating adequate systems of environmental impact assessment. Freestone is thus able to hail Rio as a coming of age of international environmental law, but he also points out that the framework laid down at Rio has to be developed into a truly effective system of protection..

In some ways international environmental law since Rio has developed apace. In UNCED's immediate aftermath considerable attention was given to the ozone depletion already addressed by the Vienna Convention, 1985 and the Montreal Protocol 1987. In 1992 in London an enhanced schedule of phasing out ozone depleting chlorofluorocarbon (CFC) gases was agreed. In 1994, the United States unilaterally decided to bring forward its CFC phase out programme to 1996. The Copenhagen agreement of 1994 committed other nations to a similar programme, made arrangements to ensure financial help for third world nations to help them comply with new requirements, and also brought within regulation for the first time hydro chlorofluorocarbons (HCFC) and methyl bromide which is used in commercial pesticides. In respect of the latter it was agreed to freeze production at 1991 levels by the end of 1995, with phasing out

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<sup>98</sup> See Munro & Lammers, *Environmental Protection and Sustainable Development: Legal principles and Recommendations*, Graham and Trotman, 1987.

to be postponed for some years; in respect of the former, production curbs will come into force in 1996 with production falling to one third of that level by 2015, while a ban on production will operate from 2030> Even so these curbs disappointed environmental activists as not being sufficiently stringent.

Even more a cause for concern was the 1994 conclusion of the Inter-governmental Panel on Climate Change (IPCC) which argued that stringent cuts in emission of 'greenhouse' or global warming gases of sixty per cent of current emissions are needed to stabilise the climate and achieve the Rio conference's objective on climate change. The deliberate vagueness of the 1992 Climate Change Convention – designed to ensure United State's support for the treaty – was modified by a provision requiring the adequacy of the convention to be reviewed at the first Conference of parties (CoP) to it. That conference was held in Berlin in 1995. Accepting the principle of differential obligation the 'Berlin mandate' requires the creation of a new protocol with time scales of action by 2005, 2010 and 2020 in contemplation. It was further agreed that nations may begin joint pilot programmes of emission reduction on a voluntary basis. However, it is clear that some nations will not reach their obligations under the Rio Convention to stabilize greenhouse gases by 2000, let alone be ready to take on new commitments, while further unfortunate features of Berlin mandate are: the refusal of some nations to participate at all on post 1997 processes, for example, Brazil; the entry of reservations by others, principally oil exporting States such as Kuwait, Saudi Arabia and Venezuela; and the non-creation of any voting mechanism: the old problems do not readily go away

The effect of the Rio Declaration, therefore, is something of a mixed bag as regards the development of international environmental law and legal principles. Specifically, the double-edged quality of the explicit incorporation of developmental concerns might be seen either as an important accommodation of developing world interests or as allowing generally for 'business as usual'. Similarly, the lack of development of

common heritage concepts might be viewed differently according to whether the focus is the global commons or biodiversity, and depending upon whether one adopts a 'northern' or 'southern' perspective. The failure, in 1997, of the follow-up 'Rio + 5' meeting in New York to advance the debate further is perhaps evidence of the many tensions that remain unresolved.<sup>99</sup>

**AGENDA 21:** Agenda 21 was, as one of the instruments, adopted at the United Nations Conference on Environment and Development held in Rio-de-Janerio in 1992.

It is a non-binding instrument and it has provided certain strategies and other detailed programmes to contain environmental degradation and to promote environmentally sound and sustainable development. It also advocates for global partnership among the world government, masses and non-governmental, voluntary agencies for abovementioned purposes.

Agenda 21 is divided into four parts, namely:

- (a) Socio-economic dimensions (habitat, health, demography, consumption and production pattern, etc.);
- (b) Conservation and Resources management (atmosphere, forest, water, waste, etc.);
- (c) Strengthening of role of N.G.O.'s and other social action groups (trade unions, women's organisations, etc.);
- (d) Measures of implementation (Finances, institutional machinery, etc.).

The said agenda has various provisions for the management of toxic-chemical hazardous wastes, solid and sewage wastes, radio-active wastes and biotechnology. Further, other provisions for the protection of oceans, seas, coastal areas, quality supply of freshwater resources and atmosphere has been provided. Some of the provisions deal with

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<sup>99</sup>Stuart Bell and Donald McGillivray, *Environmental law* (5<sup>th</sup> edn.), Universal Law Publishing Co. Pvt. Ltd., (2001), p. 98.

management of land resources, deforestation, drought, sustainable development of mountains, rural agricultural areas.

Sustainable Development in particular lies in the heart of Agenda 21, a document which builds on the earlier 1987 Brundtland Commission's finding that world poverty and environmental degradation are closely interrelated issues, so that environmental protection and providing for the development of the third world countries must go hand in hand for the future. All nations must co-operate to combat existing environmental problems, to develop and apply environmental sound technologies and also produce that level of economic growth and development in all countries necessary to combat poverty, especially in those countries already burdened with massive foreign debts. This involves the devotion of new financial resources on a vast scale to development coupled with environmental protection, while 'advanced' nations must also be prepared to afford favourable access to science and technology for the less developed States. The basis of this has to be the recognition by the States of their common interests, mutual needs and common, but differentiated responsibilities.

To achieve this, Agenda 21 has a number of themes: first, the revitalisation of growth with sustainability – this policy has implications for the pattern and content of treaties on world trade for reducing the debt burdens of poorer States, for lifestyle changes in wealthy nations, changes in consumer preferences and practices, for making the overall level, pattern and distribution of consumption and production compatible with the ecological capacity of the globe; secondly, the substantial reduction and the ultimate eradication of world poverty; thirdly, the creation of a habitable, healthy and sustainable living environment for all the world's people – this policy has particular implications for pollution control and waste minimisation; fourthly, the reversal of the destruction of natural resources and the implementation of strategies for the sustainable use of land, water, biological and genetic resources, biotechnology and energy – a policy having vast implications for the task of sustainably raising the productivity and incomes of the poor

without irreversibly degrading systems of life support, for energy production and consumption and for protecting the biodiversity of the world; fifthly, the creation of action programmes to protect on a total and global basis the world's atmospheric and oceanic resources; sixthly, the management of chemicals and waste to create a habitable 'clean world'.<sup>100</sup>

Agenda 21 recognises that government alone cannot achieve these goals, all relevant people and groups of people must be involved, which involves fundamental change in public education, awareness and training, great transparency in public decision making processes and a greater flow of relevant information to the public, not just within but between nations.

In order to ensure institutional arrangements to bring about the integration of environment and development issues, Agenda 21 also brought about the creation of a Commission on Sustainable Development (COSD). This body reports to the United Nations General Assembly.

### **The Inter-governmental Panel on Climate Change (IPCC)<sup>101</sup>**

The Intergovernmental Panel on Climate Change (IPCC) is the leading body for the assessment of climate change, established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to provide the world with a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences.<sup>102</sup>

The IPCC has been playing the most important part in the attempts and efforts to prevent global warming and as such control climate change. The findings of the body, reported to be controversial a few times,<sup>103</sup> have been playing the effective role in guiding the UNFCCC and Kyoto Protocol bodies to achieve their objectives and to frame policies to attain them both in the short-term and in the long-term.

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<sup>100</sup> David Hughes, *Environmental Law (3<sup>rd</sup> edn.)*, Butterworths (1996), p. 122.

<sup>101</sup> <http://www.ipcc.ch/index.htm> accessed and viewed on 23<sup>rd</sup> June 2010.

<sup>102</sup> <http://www.ipcc.ch/organization/organization.htm> accessed and viewed on 23<sup>rd</sup> June 2010.

<sup>103</sup> *IPCC Copy-Paste Under UN Review: Experts' Body To Monitor Climate Panel In Wake Of Row Over Sloppy Reports*, The Sunday Times, Kolkata, February 28, 2010, p.12.

The IPCC is open to all member countries of the United Nations (UN) and the World Meteorological Organization (WMO). There are at present 194 countries.<sup>104</sup>

The IPCC is a scientific body. It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. It does not conduct any research nor does it monitor climate related data or parameters. Thousands of scientists from all over the world contribute to the work of the IPCC on a voluntary basis. Review is an essential part of the IPCC process, to ensure an objective and complete assessment of current information. Differing viewpoints existing within the scientific community are reflected in the IPCC reports.

The Panel and its Plenary Session:<sup>105</sup> The Panel, comprised of government delegations of all member countries, meets approximately once a year at the plenary level. These Sessions are attended by hundreds of officials and experts from relevant ministries, agencies and research institutions from member countries and from observer organizations. Major decisions such as the election of the IPCC Chair, IPCC Bureau and the Task Force Bureau, the structure and mandate of IPCC Working Groups and Task Forces, as well as on procedural matters, work-plan and budget are taken by the Panel in plenary Session. The Panel decides also on scope and outline of IPCC reports and accepts the reports.

How the work of the IPCC is organized:<sup>106</sup> The IPCC is a huge and yet very tiny organization. Thousands of scientists all over the world contribute to the work of the IPCC on a voluntary basis as authors, contributors and reviewers. None of them is paid by the IPCC. Their work is supported by a central IPCC Secretariat, whose role is to plan, coordinate and oversee all IPCC activities and by the Technical Support Units of the

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<sup>104</sup> [http://www.ipcc.ch/organization/organization\\_structure.htm](http://www.ipcc.ch/organization/organization_structure.htm) accessed and viewed on 23<sup>rd</sup> June 2010.

<sup>105</sup> [http://www.ipcc.ch/organization/organization\\_structure.htm](http://www.ipcc.ch/organization/organization_structure.htm) accessed and viewed on 23<sup>rd</sup> June 2010.

<sup>106</sup> *Ibid.*

Working Groups and Task Force. The Secretariat and the TSUs employ 5-10 people each.

The IPCC is 21 years old, and experienced very important outcomes. Its latest major report, "Climate Change 2007", clearly brought to the attention of the world the scientific understanding of the present changes in our climate and led the organization to be honoured with the Nobel Peace Prize at the end of that same year.<sup>107</sup>

It is in fact because of the need of broad and balanced information about climate change that the organization was created back in 1989. It was set up by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) as an effort by the United Nations to provide the governments of the world with a clear scientific view of what is happening to the world's climate. The initial task for the IPCC as outlined in the UN General Assembly Resolution 43/53 of 6 December 1988 was to prepare a comprehensive review and recommendations with respect to the state of knowledge of the science of climate change; social and economic impact of climate change, possible response strategies and elements for inclusion in a possible future international convention on climate.

The scientific evidence brought up by the first IPCC Assessment Report of 1990 unveiled the importance of climate change as a topic deserving a political platform among countries to tackle its consequences. It therefore played a decisive role in leading to the creation of the United Nations Framework Convention on Climate Change (UNFCCC), the key international treaty to reduce global warming and cope with the consequences of climate change.

Since then the IPCC has delivered on a regular basis the most comprehensive scientific reports about climate change produced worldwide, the Assessment Reports. It also continued to respond to the need of the UNFCCC for information on scientific technical matters.

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<sup>107</sup> [http://www.ipcc.ch/organization/organization\\_history.htm](http://www.ipcc.ch/organization/organization_history.htm) accessed and viewed on 23<sup>rd</sup> June 2010.

The IPCC Second Assessment Report of 1995 provided key input in the way to the adoption of the Kyoto Protocol in 1997. The Third Assessment Report came out in 2001, and the Fourth in the course of 2007.

Along with the Assessment Reports, the IPCC has produced several Special Reports on various topics of growing interest, and many other papers and contributions to the advancements of the climate change science. It also prepared methodologies and guidelines to be used by Parties under the UNFCCC for preparing their national greenhouse gas inventories.

The participation of the scientific community in the work of the IPCC has been growing greatly, both in terms of authors and contributors involved in the writing and the reviewing of the reports and of geographic distribution and topics covered by the reports.

The IPCC is an intergovernmental body, and it is open to all member countries of UN and WMO. Governments are involved in the IPCC work as they can participate in the review process and in the IPCC plenary sessions, where main decisions about the IPCC work programme are taken and reports are accepted, adopted and approved. The IPCC Bureau and Chairperson are also elected in the plenary sessions.

Because of its scientific and intergovernmental nature, the IPCC embodies a unique opportunity to provide rigorous and balanced scientific information to decision makers. By endorsing the IPCC reports, governments acknowledge the authority of their scientific content. The work of the organization is therefore policy-relevant and yet policy-neutral, never policy-prescriptive.

### **United Nations Framework Conference on Climate Change (UNFCCC)**

Over more than a decade ago, most countries joined an international treaty - the United Nations Framework Convention on Climate Change (UNFCCC) - to begin to consider what can be done to reduce global warming and to cope with whatever temperature increases are inevitable.

The UNFCCC, signed during the Earth Summit in Rio de Janeiro in 1992, represents global effort to combat global warming. The Convention entered into force in 1994 upon the ratification by 50 nations.<sup>108</sup>

The Convention on Climate Change sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases.<sup>109</sup>

Under the Convention, governments gather and share information on greenhouse gas emissions, national policies and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; cooperate in preparing for adaptation to the impacts of climate change.

**RATIFICATION:**<sup>110</sup> The Convention was adopted at the United Nations Headquarters, New York on the 9 May 1992. In accordance with Article 20, it was open for signature at Rio de Janeiro from 4 to 14 June 1992, and thereafter at the United Nations Headquarters, New York, from 20 June 1992 to 19 June 1993. By that date, the Convention had received 166 signatures.

Pursuant to Article 22, the Convention is subject to ratification, acceptance, approval or accession by States and by regional economic integration organizations. States and regional economic integration organizations that have not signed the Convention may accede to it at any time.

The Convention entered into force on 21 March 1994, in accordance with Article 23, that is on the ninetieth day after the

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<sup>108</sup> Ritwick Dutta, *The Environmental Activists' Handbook – II*, Socio-Legal Information Centre, 2002, p.224.

<sup>109</sup> [http://unfccc.int/essential\\_background/convention/items/2627.php](http://unfccc.int/essential_background/convention/items/2627.php) accessed and viewed on 27<sup>th</sup> June 2010.

<sup>110</sup> [http://unfccc.int/essential\\_background/convention/status\\_of\\_ratification/items/2631.php](http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php) accessed and viewed on 27<sup>th</sup> June 2010.

date of deposit of the fiftieth instrument of ratification, acceptance, approval or accession.

Currently, there are 194 Parties (193 States and 1 regional economic integration organization) to the United Nations Framework Convention on Climate Change.

More recently, a number of nations approved an addition to the treaty - the Kyoto Protocol, which has more powerful (and legally binding) measures. The UNFCCC secretariat supports all institutions involved in the climate change process, particularly the COP, the subsidiary bodies and their Bureau.

CONFERENCE OF THE PARTIES (COP):<sup>111</sup> The Conference of the Parties (COP), established under Article 7 of the Convention, is the "supreme body" of the Convention, that is, its highest decision-making authority. It is an association of all the countries that are Parties to the Convention. The COP is responsible for keeping international efforts to address climate change on track. It reviews the implementation of the Convention and examines the commitments of Parties in light of the Convention's objective, new scientific findings and experience gained in implementing climate change policies. A key task for the COP is to review the national communications and emission inventories submitted by Parties. Based on this information, the COP assesses the effects of the measures taken by Parties and the progress made in achieving the ultimate objective of the Convention. The COP meets every year, unless the Parties decide otherwise. The COP meets in Bonn, the seat of the secretariat, unless a Party offers to host the session. Just as the COP Presidency rotates among the five recognized UN regions - that is, Africa, Asia, Latin America and the Caribbean, Central and Eastern Europe and Western Europe and Others - there is a tendency for the venue of the COP to also shift among these groups.

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<sup>111</sup> [http://unfccc.int/essential\\_background/convention/convention\\_bodies/items/2629.php](http://unfccc.int/essential_background/convention/convention_bodies/items/2629.php) accessed and viewed on 2<sup>7th</sup> June 2010.

There have been altogether 15 COPs meetings till December 2009 and the following are its chronological lay out:<sup>112</sup>

*COP 1 (Berlin, 1995)-21 decisions, 1 resolution:* Parties agreed that the commitments in the Convention were "inadequate" for meeting the Convention's objective. The result here was twenty-one decisions and one resolution. In a decision known as the Berlin Mandate they agreed to establish a process to negotiate strengthened commitments for developed countries.

*COP 2 (Geneva, 1996)-17 decisions, 1 resolution:* The Geneva Ministerial Declaration was noted, but not adopted. A decision on guidelines for the national communications to be prepared by developing countries was adopted. Also discussed - Quantified Emissions Limitation and Reduction Objectives (QELROs) for different Parties and an acceleration of the Berlin Mandate talks so that commitments could be adopted at COP 3.

*COP 3 (Kyoto, 1997)-18 decisions, 1 resolution:* The Kyoto Protocol was adopted by consensus. The Kyoto Protocol includes legally binding emission targets for developed country (Annex I) Parties for the six major greenhouse gases, which are to be reached by the period 2008-2012. Issues for future international consideration include developing rules for emissions trading, and methodological work in relation to forest sinks.

*COP 4 (Buenos Aires, 1998)-19 decisions, 2 resolutions:* The Buenos Aires Plan of Action, focusing on strengthening the financial mechanism, the development and transfer of technologies and maintaining the momentum in relation to the Kyoto Protocol was adopted.

*COP 5 (Bonn, 1999)-22 decisions:* A focus on the adoption of the guidelines for the preparation of national communications by Annex I countries, capacity building, transfer of technology and flexible mechanisms.

*COP 6 (The Hague, 2000)-4 decisions, 3 resolutions & Part II of the sixth COP (Bonn, 2000)-2 decisions:* Consensus

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<sup>112</sup> <http://unfccc.int/meetings/archive/items/2749.php> accessed and viewed on 27<sup>th</sup> June 2010.

was finally reached on the so-called Bonn Agreements. Work was also completed on a number of detailed decisions based on the Bonn Agreements, including capacity-building for developing countries and countries with economies in transition. Decisions on several issues, notably the mechanisms land-use change and forestry (LULUCF) and compliance, remained outstanding.

*COP 7 (Marrakesh, 2001)-39 decisions, 2 resolutions:* Parties agreed on a package deal, with key features including rules for ensuring compliance with commitments, consideration of LULUCF Principles in reporting of such data and limited banking of units generated by sinks under the Clean Development Mechanism (CDM) (the extent to which carbon dioxide absorbed by carbon sinks can be counted towards the Kyoto targets).

The meeting also adopted the Marrakech Ministerial Declaration as an input into the World Summit on Sustainable Development in Johannesburg. Decisions were adopted that outline the path to future international action on climate change.

The Parties to the Kyoto Protocol also formally adopted the "rulebook" of the 1997 Kyoto Protocol, the so-called 'Marrakesh accords', which sets the framework for implementation of the Protocol.

*COP 8 (New Delhi, 2002)-25 decisions, 1 resolution:* The Delhi Ministerial Declaration on Climate Change and Sustainable Development reiterated the need to build on the outcomes of the World Summit.

*COP 9 (Milan, 2003)-22 decisions, 1 resolution:* Adopted decisions focus on the institutions and procedures of the Kyoto Protocol and on the implementation of the UNFCCC. The formal decisions adopted by the Conference intend to strengthen the institutional framework of both the Convention and the Kyoto Protocol. New emission reporting guidelines based on the good-practice guidance provided by the Intergovernmental Panel on Climate Change were adopted to provide a sound and reliable foundation for reporting on changes in carbon concentrations resulting from land-use changes and forestry. These reports are

due in 2005. Another major advance was the agreement on the modalities and scope for carbon absorbing forest-management projects in the clean development mechanism (CDM). This agreement completes the package adopted in Marrakesh two years ago and expands the CDM to an additional area of activity. Two funds were further developed, the Special Climate Change Fund and the Least Developed Countries Fund, which will support technology transfer, adaptation projects and other activities.

*COP 10 (Buenos Aires, 2004)-18 decisions, 1 resolution:* Parties gathered at COP-10 to complete the unfinished business from the Marrakesh Accords and to reassess the building blocks of the process and to discuss the framing of a new dialogue on the future of climate change policy. They addressed and adopted numerous decisions and conclusions on issues relating to: development and transfer of technologies; land use, land use change and forestry; the UNFCCC's financial mechanism; Annex I national communications; capacity building; adaptation and response measures; and UNFCCC Article 6 (education, training and public awareness) examining the issues of adaptation and mitigation, the needs of least developed countries (LDCs), and future strategies to address climate change.

*COP 11 (Montreal, 2005)-14 decisions and 1 resolution:* COP 11 addressed issues such as capacity building, development and transfer of technologies, the adverse effects of climate change on developing and least developed countries, and several financial and budget-related issues, including guidelines to the Global Environment Facility (GEF), which serves as the Convention's financial mechanism. The COP also agreed on a process for considering future action beyond 2012 under the UNFCCC

*COP 12 (Nairobi 2006)-9 decisions 1 resolution:* Kenya hosted the second meeting of the Parties to the Kyoto Protocol (CMP 2), in conjunction with the twelfth session of the Conference of the Parties to the Climate Change Convention (COP 12), in Nairobi from 6 to 17 November 2006. The

conference also included, from 6 to 14 November, the twenty-fifth session of the Subsidiary Body for Scientific and Technological Advice (SBSTA 25), the twenty-fifth session of the Subsidiary Body for Implementation (SBI 25), and the second session of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG 2) including an in-session workshop.

*COP 13 (Bali, 2007)-14 decisions and 1 resolutions:* The Conference, hosted by the Government of Indonesia, took place at the Bali International Convention Centre and brought together more than 10,000 participants, including representatives of over 180 countries together with observers from intergovernmental and nongovernmental organizations and the media. The two week period included the sessions of the Conference of the Parties to the UNFCCC, its subsidiary bodies as well as the Meeting of the Parties to the Kyoto Protocol. A ministerial segment in the second week concluded the Conference.

The conference culminated in the adoption of the *Bali Road Map*, which consists of a number of forward-looking decisions that represent the various tracks that are essential to reaching a secure climate future. The Bali Road Map includes the Bali Action Plan, which charts the course for a new negotiating process designed to tackle climate change, with the aim of completing this by 2009. It also 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, as well as decisions on technology transfer and on reducing emissions from deforestation.

*COP 14 (Poznan, 2008)-9 decisions 1 resolution:* The United Nations Climate Change Conference concluded in Poznan on Saturday 13 December with a clear commitment from governments to shift into full negotiating mode next year in order to shape an ambitious and effective international response to climate change, to be agreed in Copenhagen at the end of 2009. Parties agreed that the first draft of a concrete negotiating text would be available at a UNFCCC gathering in Bonn in June

of

2009.

At Poznan, the finishing touches were put to the Kyoto Protocol's Adaptation Fund, with Parties agreeing that the Adaptation Fund Board should have legal capacity to grant direct access to developing countries. Progress was also made on a number of important ongoing issues that are particularly important for developing countries, including: adaptation; finance; technology; reducing emissions from deforestation and forest degradation (REDD); and disaster management.

A key event at the Conference was a ministerial round table on a shared vision on long-term cooperative action on climate change. The round table provided the opportunity to lay the foundations for further work on the components of an agreed outcome at COP 15 in Copenhagen. Further, it sent a clear message regarding the need to continue to build momentum on the many points of convergence among all nations. The next major UNFCCC gathering will take place from 29 March to 8 April 2009 in Bonn, Germany.

*COP 15 (Copenhagen, 2009)-13 decisions 1 resolution:* The United Nations Climate Change Conference, Copenhagen 2009, was hosted by the Government of Denmark. It was comprised of the following sessions:

- Fifteenth session of the Conference of the Parties (COP 15)
- Fifth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 5)
- Thirty-first session of the Subsidiary Body for Implementation (SBI 31)
- Thirty-first session of the Subsidiary Body for Scientific and Technological Advice (SBSTA 31)
- Tenth session of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP 10)

- Eighth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA 8).

The Conference was an exceptional event that attracted unprecedented participation and resulted in:

- Attendance by 120 Heads of State and Government, raising climate discussions to a new level. More Record numbers of participants including 10,500 delegates, 13,500 observers, and coverage by more than 3,000 media representatives.
- Intensive negotiations characterized by over 1,000 officials, informal and group meetings among Parties.
- Observers discussed climate change in more than 400 meetings and media attended over 300 press conferences.
- A vibrant programme of over 200 side events. Over 220 exhibits from Parties, UN, IGOs and civil society.
- A total of 23 decisions adopted by the COP and the CMP

Governments engaged at the highest political level, and the outcome of that engagement was reflected in the Copenhagen Accord. While much attention has focused on the Accord, the Conference in Copenhagen also made good progress in a number of areas including improvements to the clean development mechanism, amending Annex I to the Convention to add Malta, guidance on reduce emissions from deforestation and forest degradation (REDD-plus), and draft decisions on adaptation, technology, and capacity-building. However, the Bali Roadmap negotiations could not be concluded and negotiations will continue in 2010.

**SUBSIDIARY BODIES:**<sup>113</sup> The Convention established two permanent subsidiary bodies: the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for

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<sup>113</sup> *Ibid.*

Implementation (SBI). These bodies give advice to the COP and each has a specific mandate. They are both open to participation by any Party and governments often send representatives who are experts in the fields of the respective bodies.

As its name suggests, the SBSTA's task is to provide the COP with advice on scientific, technological and methodological matters. Two key areas of work in this regard are promoting the development and transfer of environmentally-friendly technologies, and conducting technical work to improve the guidelines for preparing national communications and emission inventories.

The SBSTA also carries out methodological work in specific areas, such as the LULUCF sector, HFCs and PFCs, and adaptation and vulnerability. In addition, the SBSTA plays an important role as the link between the scientific information provided by expert sources such as the IPCC on the one hand, and the policy-oriented needs of the COP on the other. It works closely with the IPCC, sometimes requesting specific information or reports from it, and also collaborates with other relevant international organizations that share the common objective of sustainable development.

The SBI gives advice to the COP on all matters concerning the implementation of the Convention. A particularly important task in this respect is to examine the information in the national communications and emission inventories submitted by Parties in order to assess the Convention's overall effectiveness. The SBI reviews the financial assistance given to non-Annex I Parties to help them implement their Convention commitments, and provides advice to the COP on guidance to the financial mechanism (operated by the GEF). The SBI also advises the COP on budgetary and administrative matters.

The SBSTA and SBI work together on cross-cutting issues that touch on both their areas of expertise. These include capacity building, the vulnerability of developing countries to climate change and response measures, and the Kyoto Protocol mechanisms. The SBSTA and the SBI have traditionally met in

parallel, at least twice a year. When they are not meeting in conjunction with the COP, the subsidiary bodies usually convene at the seat of the secretariat.

BUREAU:<sup>114</sup> Rule 22.1 of the draft Rules of Procedure of the Conference of the Parties being applied provides for a Bureau, comprised of a President, seven vice-presidents, the chairs of the subsidiary bodies established by Articles 9 and 10 of the Convention, and a Rapporteur, which serves as the Bureau of the session. Traditionally, the Bureau is responsible for advising the President and taking decisions with regard to the overall management of the intergovernmental process. The Bureau has overall responsibility for questions of process.

Bureau members often consult with their regional groups on issues. The Bureau is not a forum for political negotiations. The Bureau is mainly responsible for questions of process management. It assists the President in the performance of his or her duties by providing advice and by helping with various tasks (e.g. members undertake consultations on behalf of the President). The Bureau is responsible for examining the credentials of Parties, reviewing the list of IGOs and NGOs, seeking accreditation and submitting a report thereon to the Conference. The secretariat often seeks advice and guidance from the Bureau on relevant matters

The Bureau of the COP consists of 11 members comprising: the President, Vice-Presidents, and the Chairs of the subsidiary bodies and the Rapporteur. Each of the five regional groups is represented by two Bureau members, with one member from the Alliance of Small Island Developing States (AOSIS). Members are elected for an initial term of one year and may serve for not more than two consecutive terms of one year. They remain in office until their successors are elected. It is customary to invite a representative of the host country of the next COP to attend meetings of the Bureau if that Party is not already represented on the Bureau.

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<sup>114</sup> *Ibid.*

The post President and Rapporteur are subject to rotation among the five regional groups. When a COP is held at the invitation of a host country, it is customary to elect as President a Minister from that country, taking into account the principles of rotation. In the absence of an offer by a Party to host a COP, the session is held at the seat of the secretariat, and the region next in the line of rotation nominates a Minister for the Presidency. The President exercises such powers as are conferred by the rules of procedure (Rule 23). The president's main duties are to provide political leadership, to consult on issues and to chair meetings of the Bureau and the COP Plenary.

Meetings of the Bureau are convened by the President and are usually held on a regular basis during COPs; once during the sessions of the SBs, and between session periods as needed (typically once or twice per year). The agendas for Bureau meetings are prepared by the Executive Secretary under the guidance of the President.

ADHOC WORKING GROUP ON LONG-TERM COOPERATIVE ACTION under the Convention (AWG-LCA):<sup>115</sup> At its thirteenth session, the Conference of the Parties (COP),<sup>116</sup> launched a comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome and adopt a decision at its fifteenth session. It decided that the process shall be conducted under a subsidiary body under the Convention, the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), that shall complete its work in 2009 and present the outcome of its work to the Conference of the Parties for adoption at its fifteenth session. At its fifteenth session, the COP,<sup>117</sup> extended the mandate of the AWG-LCA to enable it to continue its work with a view to presenting the outcome of its work to the COP for adoption at its sixteenth session.

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<sup>115</sup> [http://unfccc.int/meetings/ad\\_hoc\\_working\\_groups/lca/items/4381.php](http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4381.php) accessed and viewed on 27<sup>th</sup> June 2010.

<sup>116</sup> By its decision I/CP.13 (the Bali Action Plan)

<sup>117</sup> By its decision I/CP.15 (Outcome of the work of the *Ad Hoc Working Group on Long-term Cooperative Action under the Convention*).

The AWG-LCA at its first session<sup>118</sup> agreed to undertake its work; seeking progress on all the elements assigned to it by the Bali Action Plan, and identified specific workshops to be held in 2008.

At the second session<sup>119</sup> Parties presented a number of concrete ideas and proposals on how to address the elements of the Bali Action Plan: shared vision, mitigation, adaptation, technology and finance. At its third session,<sup>120</sup> the AWG-LCA invited its Chair to assemble ideas and proposals into a document which could serve as a first version of a negotiating text. This Assembly document was updated by the Chair of the AWG-LCA, at the fourth session of the Group.<sup>121</sup>

At the same session, the AWG-LCA agreed to shift into a full negotiating mode. For that purpose, the AWG-LCA also requested its Chair to prepare a document, for consideration at its fifth session (Bonn, Germany, 29 March - 8 April 2009), that would further focus the negotiating process on the fulfilment of the Bali Action Plan and on the components of the agreed outcome.

The Group also requested its Chair to prepare a negotiating text for consideration at the sixth session of the AWG-LCA.<sup>122</sup> The document took account of the proceedings of the AWG-LCA at its fifth session and of further submission received from Parties by 5 May 2009.

During the sixth session, Parties provided general comments on the structure and content of the negotiating text, stated reservations and objections to elements of the text, and proposed additions and modifications. This resulted in a revised negotiating text,<sup>123</sup> which was the basis for discussions at the intersessional informal consultations.<sup>124</sup> The revised negotiating text, as well as material reflecting the work undertaken at the

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<sup>118</sup> Bangkok, Thailand, 31 March - 4 April 2008.

<sup>119</sup> Bonn, Germany, 2-12 June 2008).

<sup>120</sup> Accra, Ghana, 21-27 August 2008.

<sup>121</sup> Poznan, Poland, 1-10 December 2008.

<sup>122</sup> Bonn, Germany, 1-12 June 2009.

<sup>123</sup> (FCCC/AWGLCA/2009/INF.1); visit

[http://unfccc.int/meetings/ad\\_hoc\\_working\\_groups/lca/items/4381.php](http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4381.php)

<sup>124</sup> Bonn, Germany, 10 - 14 August 2009.

informal consultations is available here.

The AWG-LCA at its seventh session<sup>125</sup> requested the secretariat to compile the texts contained in the latest available non-papers produced by the chairs, co-chairs and facilitators of the groups during the seventh session of the AWG-LCA into an annex to the report on its seventh session<sup>126</sup> for facilitating negotiations of the AWG-LCA at its eighth session in order to enable the Conference of the Parties to reach an agreed outcome at its fifteenth session.

The AWG-LCA at its eighth session prepared conclusions presenting the outcome of the work of the AWG-LCA to the COP. The report of the AWG-LCA on its eighth session, held in Copenhagen from 7 to 15 December 2009 includes an **annex** containing the draft texts presented to the COP at its fifteenth session and is contained in document FCCC/AWGLCA/2009/17. The work undertaken by the Conference of the Parties at its fifteenth session on the basis of the report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention has been issued as document FCCC/CP/2010/2.

Further to the extension of the mandate of the AWG-LCA,<sup>127</sup> the ninth session of the AWG-LCA was held in Bonn, Germany, 9 - 11 April 2010 and focussed on organizational matters. The AWG-LCA invited its Chair to prepare a text to facilitate negotiations among Parties<sup>128</sup> and agreed that, in order to conclude its work, it would need to hold two sessions between its tenth session and the sixteenth session of the COP.

The Kyoto protocol of 1997<sup>129</sup> is a part of this convention as Article 17 (1) provided that the conference of the parties may adopt protocols to the convention.

### **Kyoto Protocol**<sup>130</sup>

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<sup>125</sup> Bangkok, Thailand, 28 September - 9 October 2009 and Barcelona, Spain, 2-6 November 2009

<sup>126</sup> FCCC/AWGLCA/2009/14 ; visit [http://unfccc.int/meetings/ad\\_hoc\\_working\\_groups/lca/items/4381.php](http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4381.php)

<sup>127</sup> Decision 1/CP.15.

<sup>128</sup> FCCC/AWGLCA/2010/6 visit [http://unfccc.int/meetings/ad\\_hoc\\_working\\_groups/lca/items/4381.php](http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4381.php)

<sup>129</sup> The Kyoto Protocol was adopted in the year 1997 in the Third Session of the COP at Kyoto vide decision 1/CP3.

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions. These amount to an average of five per cent against 1990 levels over the five-year period 2008-2012. The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992. The UNFCCC provides a framework to stabilize greenhouse gases at a level that would prevent "dangerous anthropogenic (human induced) interference with the climate system".

The framework convention recognized developed countries as the source of past and current greenhouse gas emissions, and made them responsible to cut their greenhouse gas emissions. Developing nations were given the time and space to increase their emissions in the pursuit of development. Thus, a principle of common but differentiated responsibilities was established.

In 1997, parties to the convention agreed to a Protocol to the UNFCCC in Kyoto, Japan and as such adopted the Kyoto Protocol. It consists of twenty-eight articles and two annexures, Annex 'A' and 'B'. Annexure 'A'<sup>131</sup> of the Protocol has provided a list of green-house gases and source categories such as energy fugitive emission from fuel, industrial processes, solvent and other product use, (Agriculture and Water). Annex 'B' clearly lists down the names of the countries on the left column and the right column lays down the quantified emission limitation or reduction commitment (percentage of base year or period).

The Kyoto Protocol commits industrialized nations (known as Annex I under the treaty) to emission reduction targets. The major distinction between the Protocol and the Convention is that while the Convention 'encouraged' industrialised countries to stabilize GHG emissions, the Protocol 'commits' them to do so. Recognizing that developed countries are principally

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<sup>130</sup> [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php) accessed and viewed on 1<sup>st</sup> July 2010.

<sup>131</sup> Viz Carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitro Oxide (NO<sub>x</sub>), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur Hexafluoride (SFO<sub>6</sub>).

responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

These countries agreed to reduce their overall emissions by 5.2% below 1990 levels in the first commitment period of 2008-2012. Specific targets varied from country to country, ranging from -8% for the EU collectively to +10% for Iceland. The Kyoto Protocol came into force in February 2005. The detailed rules for the implementation of the Protocol were adopted at COP 7 in Marrakesh in 2001, and are called the "Marrakesh Accords."

Negotiations are on for the reduction targets of Annex I countries in the second commitment period. The Bali Action Plan, adopted in Bali in December 2007, set a deadline for the conclusion of negotiations at Copenhagen in December 2009.

Signatories to the Kyoto Protocol were parties to the Convention on Climate Change (1992)<sup>132</sup>. This Protocol consists of twenty-seven Articles and one Annexure. The main aim of the Protocol is to protect and enhance the sinks and reservoirs of greenhouse gases (not controlled by the Montreal protocol), promotion of afforestation and reforestation, promotion, research, development and increased use of new and renewable forms of energy, limit or reduce emission of greenhouse gases including methane.

Article 3 of the Protocol provides that member nations have to reduce the emission of greenhouse gases by at least five percent, below 1990 levels in the commitment period of 2008 to 2012.

It also envisages international cooperations in the field of transfer of or access to environmentally sound technology, know and how, practices and processes pertinent to climate change. Such cooperation includes implementation of environment

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<sup>132</sup> The 1992 Convention came into force in 1994.

education programmes, training programmes and public awareness programmes.

The Protocol creates or consists a number of bodies to phase and carryout the objectives laid down by it. The implementation or compliance of the targets of cutting down emissions of greenhouse gases in the present world is a tedious task given the present unipolar global geo-politics, where the United States of America rules.

RATIFICATION:<sup>133</sup> The Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) was adopted at the third session of the Conference of the Parties (COP 3) in Kyoto, Japan, on 11 December 1997. In accordance with Article 24, it was open for signature from 16 March 1998 to 15 March 1999 at United Nations Headquarters, New York. By that date the Protocol had received 84 signatures.

Pursuant to Article 22, the Protocol is subject to ratification, acceptance, approval or accession by Parties to the UNFCCC. Parties to the UNFCCC that have not signed the Protocol may accede to it at any time.

The Protocol entered into force on 16 February 2005 in accordance with Article 23, that is the ninetieth day after the date on which not less than 55 Parties to the UNFCCC, incorporating Parties included in Annex I which accounted in total for at least 55 % of the total carbon dioxide emissions for 1990 of the Parties included in Annex I, have deposited their instruments of ratification, acceptance, approval or accession.

Currently, there are 191 Parties (190 States and 1 regional economic integration organization) to the Kyoto Protocol to the UNFCCC.

The major distinction between the Protocol and the Convention is that while the Convention encouraged industrialised countries to stabilize GHG emissions, the Protocol commits them to do so.

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<sup>133</sup> [http://unfccc.int/kyoto\\_protocol/status\\_of\\_ratification/items/2613.php](http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php) accessed and viewed on 1<sup>st</sup> July 2010.

Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

Countries with commitments under the Kyoto Protocol to limit or reduce greenhouse gas emissions must meet their targets primarily through national measures. As an additional means of meeting these targets, the Kyoto Protocol introduced three market-based mechanisms, thereby creating what is now known as the "carbon market."

THE KYOTO MECHANISM: The total percentage of Annex I Parties emissions is 63.7%. Under the Treaty; countries must meet their targets primarily through national measures. However, the Kyoto Protocol offers them an additional means of meeting their targets by way of three market-based mechanisms.

The Kyoto mechanisms<sup>134</sup> are:

- Emissions trading – known as "the carbon market"
- Clean development mechanism (CDM)
- Joint implementation (JI)

The mechanisms help stimulate green investment and help Parties meet their emission targets in a cost-effective way.

Under the Protocol, countries' actual emissions have to be monitored and precise records have to be kept of the trades carried out. Registry systems track and record transactions by Parties under the mechanisms. The UN Climate Change Secretariat, based in Bonn, Germany, keeps an international transaction log to verify that transactions are consistent with the rules of the Protocol.

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<sup>134</sup> [http://unfccc.int/kyoto\\_protocol/mechanisms/items/1673.php](http://unfccc.int/kyoto_protocol/mechanisms/items/1673.php) accessed and viewed on 1<sup>st</sup> July 2010.

Reporting is done by Parties by way of submitting annual emission inventories and national reports under the Protocol at regular intervals.

A compliance system ensures that Parties are meeting their commitments and helps them to meet their commitments if they have problems doing so.

The Kyoto Protocol, like the Convention, is also designed to assist countries in adapting to the adverse effects of climate change. It facilitates the development and deployment of techniques that can help increase resilience to the impacts of climate change.

The Adaptation Fund was established to finance adaptation projects and programmes in developing countries that are Parties to the Kyoto Protocol. The Fund is financed mainly with a share of proceeds from CDM project activities.

The Kyoto Protocol is generally seen as an important first step towards a truly global emission reduction regime that will stabilize GHG emissions, and provides the essential architecture for any future international agreement on climate change.

By the end of the first commitment period of the Kyoto Protocol in 2012, a new international framework needs to have been negotiated and ratified that can deliver the stringent emission reductions the Intergovernmental Panel on Climate Change (IPCC) has clearly indicated are needed

**EMISSIONS TRADING:**<sup>135</sup> Parties with commitments under the Kyoto Protocol (Annex B Parties) have accepted targets for limiting or reducing emissions. These targets are expressed as levels of allowed emissions, or "assigned amounts," over the 2008-2012 commitment period. The allowed emissions are divided into "assigned amount units" (AAUs).

Emissions trading, as set out in Article 17 of the Kyoto Protocol, allows countries that have emission units to spare - emissions permitted them but not "used" - to sell this excess

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<sup>135</sup> [http://unfccc.int/kyoto\\_protocol/mechanisms/emissions\\_trading/items/2731.php](http://unfccc.int/kyoto_protocol/mechanisms/emissions_trading/items/2731.php) accessed and viewed on 1<sup>st</sup> July 2010.

capacity to countries that are over their targets.

Thus, a new commodity was created in the form of emission reductions or removals. Since carbon dioxide is the principal greenhouse gas, people speak simply of trading in carbon. Carbon is now tracked and traded like any other commodity. This is known as the "carbon market."

More than actual emissions units can be traded and sold under the Kyoto Protocol's emissions trading scheme. The other units which may be transferred under the scheme, each equal to one tonne of CO<sub>2</sub>, may be in the form of:

- A removal unit (RMU) on the basis of land use, land-use change and forestry (LULUCF) activities such as reforestation.
- An emission reduction unit (ERU) generated by a joint implementation project.
- A certified emission reduction (CER) generated from a clean development mechanism project activity.
- Transfers and acquisitions of these units are tracked and recorded through the registry systems under the Kyoto Protocol.
- An international transaction log ensures secure transfer of emission reduction units between countries.

In order to address the concern that Parties could "oversell" units, and subsequently be unable to meet their own emissions targets, each Party is required to maintain a reserve of ERUs, CERs, AAUs and/or RMUs in its national registry. This reserve, known as the "commitment period reserve", should not drop below 90 per cent of the Party's assigned amount or 100 per cent of five times its most recently reviewed inventory, whichever is lowest.

Emissions trading schemes may be established as climate policy instruments at the national level and the regional level. Under such schemes, governments set emissions obligations to be reached by the participating entities. The European Union emissions trading scheme is the largest in operation.

THE CLEAN DEVELOPMENT MECHANISM:<sup>136</sup> The Clean Development Mechanism (CDM), defined in Article 12 of the Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO<sub>2</sub>, which can be counted towards meeting Kyoto targets.

The mechanism is seen by many as a trailblazer. It is the first global, environmental investment and credit scheme of its kind, providing standardized emissions offset instrument, CERs. A CDM project activity might involve, for example, a rural electrification project using solar panels or the installation of more energy-efficient boilers. The mechanism stimulates sustainable development and emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction or limitation targets.

A CDM project must provide emission reductions that are additional to what would otherwise have occurred. The projects must qualify through a rigorous and public registration and issuance process. Approval is given by the Designated National Authorities. Public funding for CDM project activities must not result in the diversion of official development assistance. The mechanism is overseen by the CDM Executive Board, answerable ultimately to the countries that have ratified the Kyoto Protocol.

Operational since the beginning of 2006, the mechanism has already registered more than 1,650 projects and is anticipated to produce CERs amounting to more than 2.9 billion tonnes of CO<sub>2</sub> equivalent in the first commitment period of the Kyoto Protocol, 2008–2012.

JOINT IMPLEMENTATION (JI):<sup>137</sup> The mechanism known as "joint implementation," defined in Article 6 of the Kyoto Protocol, allows a country with an emission reduction or limitation

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<sup>136</sup>[http://unfccc.int/kyoto\\_protocol/mechanisms/clean\\_development\\_mechanism/items/2718.php](http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php) accessed and viewed on 1<sup>st</sup> July 2010.

<sup>137</sup>[http://unfccc.int/kyoto\\_protocol/mechanisms/clean\\_development\\_mechanism/items/2718.php](http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php) accessed and viewed on 1<sup>st</sup> July 2010.

commitment under the Kyoto Protocol (Annex B Party) to earn emission reduction units (ERUs) from an emission-reduction or emission removal project in another Annex B Party, each equivalent to one tonne of CO<sub>2</sub>, which can be counted towards meeting its Kyoto target.

Joint implementation offers Parties a flexible and cost-efficient means of fulfilling a part of their Kyoto commitments, while the host Party benefits from foreign investment and technology transfer.

A JI project must provide a reduction in emissions by sources, or an enhancement of removals by sinks, that is additional to what would otherwise have occurred. Projects must have approval of the host Party and participants have to be authorized to participate by a Party involved in the project. Projects starting as from the year 2000 may be eligible as JI projects if they meet the relevant requirements, but ERUs may only be issued for a crediting period starting after the beginning of 2008.

If a host Party meets all of the eligibility requirements to transfer and/or acquire ERUs, it may verify emission reductions or enhancements of removals from a JI project as being additional to any that would otherwise occur. Upon such verification, the host Party may issue the appropriate quantity of ERUs. This procedure is commonly referred to as the "Track 1" procedure."

If a host Party does not meet all, but only a limited set of eligibility requirements, verification of emission reductions or enhancements of removals as being additional has to be done through the verification procedure under the Joint Implementation Supervisory Committee (JISC). Under this so-called "Track 2" procedure, an independent entity accredited by the JISC has to determine whether the relevant requirements have been met before the host Party can issue and transfer ERUs.

A host Party which meets all the eligibility requirements may at any time choose to use the verification procedure under the JISC (Track 2 procedure).

### **Kyoto Protocol bodies**

CONFERENCE OF THE PARTIES SERVING AS THE MEETING TO THE PARTIES TO THE KYOTO PROTOCOL (CMP):<sup>138</sup> The CMP meets annually during the same period as the COP. Parties to the Convention that are not Parties to the Protocol are able to participate in the CMP as observers, but without the right to take decisions. The functions of the CMP relating to the Protocol are similar to those carried out by the COP for the Convention. The first meeting of the Parties to the Kyoto Protocol was held in Montreal, Canada in December 2005, in conjunction with the eleventh session of the Conference of the Parties (COP 11).

THE SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE (SBSTA) AND THE SUBSIDIARY FOR IMPLEMENTATION (SBI):<sup>139</sup> *The Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI)* are two permanent subsidiary bodies established under the Convention also serve the CMP.

THE BUREAU:<sup>140</sup> The Bureau of the COP also serves the CMP. However, any member of the COP Bureau representing a non-Party to the Kyoto Protocol has to be replaced by a member representing a Kyoto Protocol Party.

ADHOC WORKING GROUP on FURTHER COMMITMENT for ANNEX-I PARTIES under KYOTO PROTOCOL (AWG-KP)<sup>141</sup>: To discuss future commitments for industrialized countries under the Kyoto Protocol, the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol established a working group in December 2005 called the Ad Hoc Working Group on Further Commitments for Annex I Parties under the

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<sup>138</sup> [http://unfccc.int/kyoto\\_protocol/kyoto\\_protocol\\_bodies/items/2772.php](http://unfccc.int/kyoto_protocol/kyoto_protocol_bodies/items/2772.php) accessed and viewed on 2<sup>nd</sup> July 2010.

<sup>139</sup> *Ibid.*

<sup>140</sup> *Ibid.*

<sup>141</sup> [http://unfccc.int/kyoto\\_protocol/items/4577.php](http://unfccc.int/kyoto_protocol/items/4577.php) accessed and viewed on 2<sup>nd</sup> July 2010.

Kyoto Protocol (AWG-KP). The AWG-KP is set to complete its work by the end of 2009.

### **Constituted Bodies<sup>142</sup>**

*Clean Development Mechanism (CDM) Executive Board:* The CDM Executive Board supervises the CDM under the Kyoto Protocol and prepares decisions for the CMP. It undertakes a variety of tasks relating to the day-to-day operation of the CDM, including the accreditation of operational entities.

*Joint Implementation Supervisory Committee:* The Joint Implementation Supervisory Committee (JISC), under the *authority* and guidance of the CMP, *inter alia*, supervises the verification of emission reduction units (ERUs) generated by JI projects following the verification procedure under the JISC.

*Compliance Committee:* The compliance regime consists of a Compliance Committee made up of two branches: a Facilitative Branch and an Enforcement Branch.

### **Global Climate Change Regime**

In the United Nations, the Department of Environment's White paper, *this Common Inheritance*, published in September, 1990 brought the international problem of global warming to the top of the environmental agenda.

Global warming is one of the biggest environmental challenges now facing the world. It calls for action by all the world's nations, as no single nation can solve the problem on its own.

The greenhouse effect, as it has come to be known, has risen because the production of various greenhouse gases has increased in the past century with progressive industrialisation. In the lower atmosphere the production of emissions from power stations, car exhausts and industrial plants have increased by almost 100 percent. These emissions absorb the radiated heat and create a higher ambient temperature level which has led to

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<sup>142</sup>[http://unfccc.int/kyoto\\_protocol/kyoto\\_protocol\\_bodies/items/2772.php](http://unfccc.int/kyoto_protocol/kyoto_protocol_bodies/items/2772.php) accessed and viewed on 2<sup>nd</sup> July 2010.

speculation that there could be shrinking global icecaps and rising water levels.

*Recently the President of Maldives to show his concern for global warming and draw the inevitable attention of other members of the global community, especially the Developed countries and BRIC (a conglomeration of countries with the developing and transition economies, namely, Brazil, India, China and Russia), its repercussion on his tiny island held a cabinet meeting underwater. Similarly, the prime Minister of Nepal to put his point across in respect of the melting glaciers in the Himalayas (which partly belongs to his country) held a meeting with his cabinet colleagues in the Base camp of Mount Everest, the highest mountain of the world in full mountaineering gear.<sup>143</sup>*

Additionally, the amount of ozone in the upper atmosphere screens the earth from harmful Ultraviolet (UV-B) radiation. This screen has deteriorated and there have been studies showing a 'hole' above Antarctica. This depletion of the ozone has been linked to the use of Chlorofluorocarbons (CFCs). The creation of greenhouse gases and the depletion of the ozone layer are worldwide problems which require international co-operation to solve. The use of international Law as a mechanism for environmental protection is relatively unproven and there are some limitations to its usefulness. However, the nature of the problem facing the worlds in terms of these two issues has led to significant steps being taken to prevent any further harm.

The development of the climate change regime in the late 1980s and the early 1990s rode a wave of environmental activity, which began in 1987 with the discovery of the stratospheric "ozone hole" and the publication of the Brundtland Commission report, Our Common Future (World Commission on Environment and Development, 1987), and crested at the 1992

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<sup>143</sup> *The Times of India*, September 2009.

Earth Summit (United Nations Conference on Environment and Development) at Rio de Janeiro.<sup>144</sup>

An earlier wave of international environmental activity, culminating in 1972 Stockholm Conference (United Nations Conference of Human Environment) and the establishment of the United Nations Environment Programme (UNEP), had tended to focus on the local, acute, and relatively reversible forms of pollution – for example oil spills and dumping of hazardous wastes in the ocean – by regulating particular pollutants. The more recent cycle of environmental activity has concerned longer-term, irreversible, global threats, such as the depletion of the stratospheric ozone layer, loss of biological diversity, and greenhouse warming, and has focussed on not merely on environmental protection per se, but on the more general economic and social policies needed to achieve sustainable development.<sup>145</sup>

The development of the climate change regime until the conclusion of the Kyoto Protocol in 1997 can usefully be divided into five periods: the foundational period, during which scientific concern about global warming developed; the agenda setting phase, from 1985 to 1988, when climate change was transformed from a scientific into a policy issue; a pre-negotiation period from 1988 to 1990, when governments became heavily involved in the process; the formal governmental negotiations phase, leading to the adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in May 1992; and a post agreement phase focussing on the elaboration and implementation of the FCCC and the initiation of negotiations on additional commitments leading to the adoption of the Kyoto Protocol in December 1997.

After the adoption of the Kyoto Protocol in 1997 and its coming into force in 2005 a lot has been happening in the

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<sup>144</sup> David Bodansky, *The History of Global Climate Regime* in Urs Luterbacher and Detlef F. Sprinz (ed.), *International Relations and Global Climate Change*, The Massachusetts Institute of Technology press, 2001, p. 23.

<sup>145</sup> *Ibid.*

Convention meetings (COP). They have been mentioned briefly in the aforementioned paragraphs.

### **The Present Status of the Kyoto Protocol**

THE PRESENT STATUS OF THE KYOTO PROTOCOL AND SOME OF THE FACTORS WHICH LED TO IT: The Kyoto protocol was premised on the following important guiding principle which captured the notion of equal right of access to the global commons of the atmospheric carbon spaces: "[T]he largest share of historical and global emissions of greenhouse gases (GHGs) has originated in developed countries.....[and] per capita emissions (PCEs) in developing countries will grow to meet their social and development needs." Accordingly legally binding emission reduction targets were set for the Annex-I (industrialised/developed) countries, "with a view to reducing their overall emissions.... by atleast below 5 percent below 1990 levels in the first commitment period 2008 to 2012. Whereas there were no binding commitments set for developing \*(non-Annexe-I) countries. However the Protocol being only an interim arrangement, weak reduction targets were set for the first commitment period, which comes to an end in 2012.

Significantly, the United States (US), which was the largest GHG emitter in the world until China overtook its place recently, is not a party to the Kyoto protocol even though it is one to the convention (UNFCCC).<sup>146</sup> Historically, the US accounts for nearly one-third of the total stock of carbon dioxide (CO<sub>2</sub>), the most important of the GHGs, in the atmosphere since 1850. The industrialised countries together account for nearly three-fourths of the total stock of CO<sub>2</sub>. Even today, the US accounts for over 18 percent of global GHG emissions. China with an economy that has grown rapidly in recent years, accounts for a little over 19 percent but its historic contribution is only 7-8 percent. India accounts for only 5 percent of the global GHG emissions and its historic contribution is 1-2 percent of the atmospheric CO<sub>2</sub> stock.

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<sup>146</sup> United States of America is the only country to have not-ratified the protocol (also Somalia), Source: [http://unfccc.int/kyoto\\_protocol/status\\_of\\_ratification/items/2613.php](http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php) accessed and viewed on 2<sup>nd</sup> July 2010.

Today China is the largest emitter of GHGs and India the fourth largest. But these numbers must be read along with the fact that the US accounts for about 4.5 percent of the global population whereas India and China accounts for about 17 and 21 percent respectively. Correspondingly, the annual per capita emissions (GHG) respectively are 26.3 tonnes (t), 5.5t and 1.7t (The PCEs of CO<sub>2</sub> are correspondingly 20t, 4.3t and 1.2t respectively). In terms of PCE, while the US ranks sixth, China ranks 70<sup>th</sup> and India 124<sup>th</sup> and this makes the US's persistent demand on legally binding commitments in the post-2012 phase on countries such as China and India unacceptable, especially without the required commitments on its own part of deep emission cuts.

The overall scientific opinion today is that if disastrous and irreversible impacts of climate change are to be avoided, the increase in the average global temperature, which according to the Fourth Assessment Report (AR4) of the IPCC (2007) is at present about 0.8°C should not exceed more than 2°C above the pre-industrialised levels. A 2°C limit corresponds (with a 50 percent probability) to 450 parts per million (PPM) of CO<sub>2</sub> equivalent (eq) concentration of GHG in the atmosphere. The present GHG concentration is about 4.5t of CO<sub>2</sub> eq. According to the IPCC's AR4, only a global cut of 85 percent from 2000 levels (of about 4.5t PCE) by 2050 has a high probability of preventing a temperature increase of over 2°C. This implies a cut of over 90 percent for Annex-I countries, whose average PCE per year is 10tr of CO<sub>2</sub> eq. The IPCC further suggests that Annex-I countries should cut their emissions by 25-40 percent by 2020. Given the 11.2 percent increase by Annex-I countries since 1990, this now seem even more unattainable unless the Annex-I countries accept immediate drastic cuts in emissions, such a commitment does not seem forth coming in the 15<sup>th</sup> Session of COP in Copenhagen.

It must be emphasised that all these numbers have to do with cutting down the current flow of CO<sub>2</sub> into the atmosphere. A non-paper submitted by the Indian delegation in July 2009 at

the UNFCCC estimated that if historic responsibility<sup>147</sup> were quantified and included in the calculations, Annex-I countries would have to cut their emissions by 79.2 percent by 2020. In effect the emissions reductions by 2050 would far exceed 100 percent; that is, they will have negative emissions. The negative quantity can, in principle, be converted into equivalent financial commitments towards non-Annex-I countries on the “polluter pays” principle.

Another way of looking at this is the “carbon budget” approach.<sup>148</sup> According to a recent paper,<sup>149</sup> the carbon budget available to the world as a whole from 2000 until 2050 is 1,000 gigaton [Gt (billion tonnes)] of CO<sub>2</sub> – this would have a 75 percent chance of containing the temperature increase to less than 2°C above pre-industrialised levels. A similar exercise undertaken more recently by the German Advisory Council on Global Change (WBGU) has put the available carbon space to be 750 Gt between 2010 and 2050 for a 67 percent chance of restricting the warming to under 2°C. For a 75 percent probability, the carbon budget comes down to 600Gt.

Given that the current annual emissions by Annex-I countries are about 30 Gt, the two estimates are consistent, and both mean that if the current emissions by Annex-I countries continue at the same rate, the carbon space will be exhausted within a short span of 15-20 years, leaving no space at all for developing countries’ economic growth. But the sad part is that even current flow targets are not being met by Annex-I countries. Any demands for deep cuts by them are not only rejected outright but binding commitments are sought from major developing countries such as India and China in the post-2012 phase.

All this indicates that if we accept that the “guardrail” of 2°C should not be breached, there will be squeeze on the available

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<sup>147</sup> Any kind of compensatory mechanism (such as emission cuts or otherwise) for the historic responsibility of occupying an unfair share of the carbon space – a global common – from 1850 has never been an integral part of the UNFCCC negotiations or IPCC’s calculations.

<sup>148</sup> This is through an equitable distribution of the available carbon space.

<sup>149</sup> A paper written by “Meite Meinhausen and others” in *Nature*.

carbon space for developing countries even if developed countries undertake substantive cuts. A recent joint modelling exercise has explicitly shown that the growth rate of emissions of developing countries must decline and subsequently converge with the PCE of the Annex-I countries around 2050. However, the average PCE of emerging economies such as India and China, given their developmental priorities and attendant emissions growth, will overshoot that of Annex-I countries in the medium-term around 2030. By apportioning the available carbon space on per capita basis and allocating national carbon budgets for each country on the basis of the 2010 population figures (and appropriate growth rates), the WBGU model predicts this for reasonable scenarios of emissions reductions of Annex-I countries.

In Bali in 2007, negotiators laid out the roadmap for a deal and gave themselves two years. The formula was simple and ethical: rich countries would cut emissions by 40 per cent below 1990 levels, by 2020, and put new money on the table. In exchange, emerging economies would join the effort, reducing emissions growth at home enabled by finance and technology from industrialized countries.

The last leg of the climate change talks held in Barcelona, Spain on November 2-6, 2009 in the run up to the all-important 15<sup>th</sup> Conference of parties (COP-15) to the United Nations Framework Convention on Climate Change in Copenhagen in December did not result in any dramatic development that could break the impasse in the negotiations, which has been in evidence since the June 2009 meet in Bonn where the 200-page Negotiating Text, including the proposals of Japan and Australia and an Implementation Agreement of the United States were drafted; it was consolidated and adopted in Bangkok.

The chief barrier to an effective agreement at COP-15 is the disconnect between the US and the world, that it is the world's largest emitter accounting for over 21 percent of the current CO<sub>2</sub> emissions with no legally binding emissions reduction

commitments.<sup>150</sup> The US was, in fact, the chief provocateur of the current move to dismantle the present climate regime. With concerted attempts by Annex-I countries, with the US in the lead, to turn tables on the non-Annex-I countries and push for an altogether new instrument or treaty that erodes the distinction between developed and developing countries had made the chances of approaching an agreement for future emission cuts, that is post-2012 had appeared non-existent. The US' main argument was that Kyoto does not bring into its ambit two of the world's largest emitter of GHGs, China and India.

In the meanwhile India, once seen as the leading light of G-77 countries (a conglomerate of developing and underdeveloped nations which were to be severely affected in some way or the other by global warming) seemed to be disassociating itself from its parent group taking into consideration the statements made by the Union Minister for Environment and Forests, Shri Jairam Ramesh. The said statements of the Indian minister gave an impression that it was siding with the US's perspective and objective when he indicated that India, though not legally bound under the Kyoto Protocol to cut emissions, was willing to make voluntary cuts. This was clearer when he, after returning to Delhi from a UN Special Summit on Climate Change in November 2009, penned a letter to the PM, outlining a 10 point agenda that would give India enough flexibility for Indian negotiators calling it the "per capita plus" approach. It included a proposal to have domestic legislation on climate change management and National Appropriate Mitigation Outcomes (NAMO)<sup>151</sup>. He had ended the letter by saying, "India must be seen as pragmatic and constructive, not argumentative and polemical". He, in the run up to the Copenhagen summit, had battled almost single-handedly to change what he call India's "do nothing" stand. He had deduced that it had outlived its usefulness and India was in

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<sup>150</sup> The US has not ratified the Kyoto protocol though it is a party to the UNFCCC (it is the only country being a party to the UNFCCC who has not ratified the Kyoto Protocol).

<sup>151</sup> The NAMO was the term coined defines that the developing countries that were willing to take voluntary energy efficiency measures that would enable them to reduce their carbon emission intensity would be accountable to their own parliaments.

danger of being branded the spoiler at the summit which was what the Prime Minister, Dr. Manmohan Singh did not want and had even expressed to Ramesh after he was made the environment minister in the United Progressive Alliance (UPA) government's second term.

Dr. Singh had taken a personal interest in the negotiations leading up to Copenhagen. At home he pushed the National Action Plan on Climate Change (NAPCC) that laid out eight proactive missions to help India combat the threat of global warming. In 2007, at the G-8 summit in Heiligendamm, Germany, he boldly announced that India's per capita GHG emissions would not exceed that of developed countries at any point of time. Much of the Industrialised world thought it to be a clever ploy by India to avoid any legally binding cuts in emissions that countries like US were pushing for.<sup>152</sup>

So with the tacit approval of the PM, he sent out a series of signals that India was ready for bold changes. That included putting on the table some form of voluntary emission cuts and even accepting international scrutiny for some of its climate change actions. India was now ready to negotiate at the high table.

Since the US had refused to become a party to the protocol, the Bali Action Plan<sup>153</sup> opened up a new negotiating track under the UNFCCC to bring the US into the negotiations for the post-2012 phase. A new Adhoc Working Group for Long-Term Cooperative Action (AWG-KP) was set in Bali to covers aspects of the UNFCCC of which the US is a member. The other track, the Kyoto track, with the Adhoc Working Group on Further Commitments for Annex-I parties under the Kyoto Protocol (AWG-KP), which was set in December 2005, would negotiate the new targets for Annex-I countries (minus the US) in the second commitment period beginning 2013, through an amendment to the protocol as mandated by its Article 3.9. These negotiations had to be completed by April 2009 and the

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<sup>152</sup> Raj Chengappa, *Warming up to a New Deal in India Today*, December 21, 2009, p. 38.

<sup>153</sup> Decision 1/ CP 13.

draft report was to be finalised by June the same year so that it could be taken up for discussions in December at Copenhagen. But there was hardly any progress on that front.

Under the AWG-LCA, however the US has proposed a bottom-up approach instead of the AWG-KP approach which calls for economy wide targets for all the parties that would be binding through a "pledge and review" approach. Under this proposal, which was first mooted in June in Bonn, each nation would pledge national mitigation actions, including "formulation and submission of low carbon strategies towards an emission pathway 2050" which are open to an internationally agreed mechanism of measurement, reporting and verification (MRV). While MRV is generally acceptable to developing countries only for NAMAs that are supported by finance and technology from developed countries, the US' all-encompassing proposal of "mitigation elements common to all parties" was perceived by developing countries to be inconsistent with the Convention and beyond the Bali Action Plan mandate, and it blurred the distinction between developed country mitigation commitments and developing country mitigation actions. The Bangkok talks began with a clash on this issue.

However the US insisted that it would not move forward without the proposal being discussed. The US negotiator even said that the Indian minister had taken a broader interpretation which led to much discomfiture in the Indian negotiating camp and somewhat lost the trust of the G-77 and China.

The European Union (EU) supported the US position towards evolving a single integrated instrument that would be a merger of the "agreed outcomes" of these two tracks (the AWG-KP & AWG-LCA). They argued that the new instrument would pick key elements of the Kyoto Protocol towards a new architecture to limit emissions in the post-2012 phase. Indeed, the draft protocols of Japan, Australia and the US made in Bonn favoured new binding single instrument under UNFCCC which found support by the other developed countries, namely, The EU, Canada, New Zealand and Russia. This move, which was

borne out of the developed countries demand of mitigation commitments of major developing countries such as China and India essentially, amounts to killing the Kyoto Protocol because it is premised on the differentiated architecture between developed and developing countries, which the single instrument aims to do away with. The plan of the developed economies was clear and apparent that they would seek a single agreed outcome from the second track AWG-LCA alone (since the US was only party to the convention and not the protocol), which does not have a legal underpinning of the Kyoto track, AWG-KP. That is any commitments under it would not be legally binding unless it is agreed to and given legal teeth as a new treaty or protocol which the Annex-I countries led by the US wanted.

The Australian proposal was a "schedules approach" that would be applicable to all countries, not unlike the World Trade Organisation (WTO), which was supported by many developed countries. According to this each party would submit a national schedule containing its mitigation strategies and emissions pathway that are dependent on national circumstances, capacities and capabilities. This could be in the form of economy-wide targets, from sectoral efficiency norms to technology and industrial process standards. The proposal required the developing countries "whose national circumstances reflect greater responsibility or capability" to take national mitigation commitments and/or actions aimed to achieving substantial deviation from baselines". While deviation from baselines of Business As Usual (BAU) is certainly desirable and essential for the developing countries' perspective, subjecting them to MRV amounts to commitment, which is against the Bali Action Plan, particularly if they are unsupported actions, in terms of finance and technology. The differentiation within the group of developing countries itself is inconsistent with the UNFCCC as is also the MRV structure proposed by the US.

In Bangkok, proposed an additional structure for MRV of mitigation actions that indicates one particular manner in which the distinction between the developed and the developing countries was being sought to be removed in these proposals.

The US has invoked Articles 4.1 (a)<sup>154</sup> and 12 to extend this proposed MRV structure to all parties. This obviously is in contravention of the UNFCCC because it ignores Articles 4.2,<sup>155</sup>

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- <sup>154</sup> 1. All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall:
- (a) Develop, periodically update, publish and make available to the Conference of the Parties, in accordance with Article 12, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed upon by the Conference of the Parties;
- <sup>155</sup> 4.2. The developed country Parties and other Parties included in Annex I commit themselves specifically as provided for in the following:
- (a) Each of these Parties shall 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 its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol would contribute to such modification, and taking into account the differences in these Parties' starting points and approaches, economic structures and resource bases, the need to maintain strong and sustainable economic growth, available technologies and other individual circumstances, as well as the need for equitable and appropriate contributions by each of these Parties to the global effort regarding that objective. These Parties may implement such policies and measures jointly with other Parties and may assist other Parties in contributing to the achievement of the objective of the Convention and, in particular, that of this subparagraph.
  - (b) In order to promote progress to this end, each of these Parties shall communicate, within six months of the entry into force of the Convention for it and periodically thereafter, and in accordance with Article 12, detailed information on its policies and measures referred to in subparagraph (a) above, as well as on its resulting projected anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol for the period referred to in subparagraph (a), with the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol. This information will be reviewed by the Conference of the Parties, at its first session and periodically thereafter, in accordance with Article 7;
  - (c) Calculations of emissions by sources and removals by sinks of greenhouse gases for the purposes of subparagraph (b) above should take into account the best available scientific knowledge, including of the effective capacity of sinks and the respective contributions of such gases to climate change. The Conference of the Parties shall consider and agree on methodologies for these calculations at its first session and review them regularly thereafter;
  - (d) The Conference of the Parties shall, at its first session, review the adequacy of subparagraphs (a) and (b) above. Such review shall be carried out in the light of the best available scientific information and assessment on climate change and its impacts, as well as relevant technical, social and economic information. Based on this review, the Conference of the Parties shall take appropriate action, which may include the adoption of amendments to the commitments in subparagraphs (a) and (b) above. The Conference of the Parties, at its first session, shall also take decisions regarding criteria for joint implementation as indicated in subparagraph (a) above. A second review of subparagraphs (a) and (b) shall take place not later than 31 December 1998, and thereafter at regular intervals determined by the Conference of the Parties, until the objective of the Convention is met;
  - (e) Each of these Parties shall:
    - (i) coordinate as appropriate with other such Parties, relevant economic and administrative instruments developed to achieve the objective of the Convention; and
    - (ii) identify and periodically review its own policies and practices which encourage activities that lead to greater levels of anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol than would otherwise occur;

4.3,<sup>156</sup> 4.4<sup>157</sup> and 4.7,<sup>158</sup> which requires that developed countries take the lead in limiting GHG emissions as well as assisting non-Annex-I parties through finance and technology.

The proposed structure requires all, except least developed countries (LDC), to provide "annual inventories". Though it prescribes a differentiated reporting timetable, it requires developed and developing countries with greater than [X] percent of world emissions – which is not the same way the UNFCCC differentiates between two groups – to report every two or three years. It creates a new category and significantly, it talks of only aggregate and not per capita emissions.

This proposal is quite along the line of Australian proposal of "schedules approach", and it is quite conceivable that some developing countries could be pressured to accept this and submit their domestic actions to a central "registry" and be subjected to international verification. The common objective of these proposals is to repeal Kyoto Protocol, which differentiated between developed and developing countries as Annex-I and non-Annex countries, and put some arrangement which did not

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(f) The Conference of the Parties shall review, not later than 31 December 1998, available information with a view to taking decisions regarding such amendments to the lists in Annexes I and II as may be appropriate, with the approval of the Party concerned;

(g) Any Party not included in Annex I may, in its instrument of ratification, acceptance, approval or accession, or at any time thereafter, notify the Depository that it intends to be bound by subparagraphs (a) and (b) above. The Depository shall inform the other signatories and Parties of any such notification.

<sup>156</sup> 4.3. The developed country Parties and other developed Parties included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1.

They shall 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 implementing measures that are covered by paragraph 1 of this Article and that are agreed between a developing country Party and the international entity or entities referred to in Article 11, in accordance with that Article. The implementation of these commitments shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties.

<sup>157</sup> 4.4. The developed country Parties and other developed Parties included in Annex II shall also 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.

<sup>158</sup> 4.7. The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties.

distinguish between the two groups and was beneficial to the developed countries.

But there is an essential difference between the US' Implementing Mechanism proposal and other proposals. While all of them amount to the demise of the Kyoto Protocol, the latter could include a legally binding mechanism (for the individual NAMAs) under the UNFCCC, but the US proposal implies being legally bound only under domestic law but admissible to international MRV. It was clear that such an instrument, based as it is on a unilaterally declared non-perspective and non-treaty-linked mitigation measures of developed countries, is unlikely to result in emissions reductions on the scale required by science. This is already evident from the lowly individual pledges and cuts envisaged by under the US law.

The very inclusion of these proposals in the negotiating text meant a discussion on "mitigation elements common to all parties" in Bangkok which led to a non-paper that collated the proposals of the US, Australia, Canada and Japan all of which argued for a single instrument that is a priori legally non-binding. This was further discussed in Barcelona but without resolution because of the unequivocal opposition of G-77 and China. In Barcelona new texts on finance and technology did result but witnessed zero progress. Discussions there included acrimonious debates and wrangling over the same issues. The discussions on what are "comparable" measures, what are the duration of the second commitment period and the role of the market mechanisms and "offsets", important per se, took place but seemed pointless when the basic issue of deep cuts by developed countries in their GHG emissions remained unresolved. This travelled to Copenhagen too.

The possible outcomes of the COP-125 at Barcelona were:<sup>159</sup>

- (1) No agreement.

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<sup>159</sup> R.Ramachandran, *Road to Copenhagen*, the Frontline, December 18, 2009 p.24

- (2) A decision or a set of decisions, a rather weak outcome.
- (3) A political implementing agreement, a kind that the US has favoured, which allows each party to decide its own goals and how to reach them according to domestic laws and not internationally legal binding
- (4) A new legally binding agreement (Copenhagen Protocol) that replaces the Kyoto Protocol and manages to bring the US on board by making it ratify it.
- (5) Two Protocols, Kyoto Protocol plus a new binding agreement that includes the US.

The 15<sup>th</sup> Session the Conference of the Parties was opened in Copenhagen on December 7, 2009 with the shadow of these alternative outcomes and with not much of hope of arriving at a fruitful agreement in regard to emission cuts according to the path laid by the Kyoto protocol in the second phase (post-2012). It would be pertinent to note and mention here that the first phase (2008-2012) of the Kyoto protocol had not been successful in achieving the emission reducing targets of greenhouse gases (GHGs) due to the spoiler's role played by the US, who is yet to ratify the said protocol; Australia, who has ratified lately (12 Dec 2007; entered into force in 11 Mar 2008) and some other Annex-I entities.

It has already been discussed above the attempts and strategies of the Annex-I countries popularly known as the industrialised or developed countries to supersede, if not repeal, the Kyoto protocol.

There are efforts to bulldoze a new agreement totally defeating the spirit of the UNFCCC and the Kyoto protocol by removing the distinction between the developed and developing countries in the matter of cutting down the emissions of GHGs. Again in the run up to the Copenhagen summit, India, until now

seen as the leader of the G-77 countries<sup>160</sup> and together with China sustaining the pressure of the US of accepting a new legally binding emission reducing arrangement, showed sign of being drawn towards the American proposal of bringing both the developed and developing (Annex-I and non-Annex-I) countries within the ambit of cutting emissions of GHG as legal obligations. This view was given life by the statement and attitudes of the Union Minister of Environment and Forests, Government of India, Shri Jairam Ramesh after coming back from a Special UN Session on Climate Change in last quarter of 2009 before the Copenhagen summit.<sup>161</sup>

The summit, though not memorable, brought the Presidents and Prime Ministers of various countries of the world having high standings in the present day global politics arena. They were in the form of Barrack Obama, the US President; the Indian Prime Minister, Dr. Manmohan Singh; Wen Jiabao, the Chinese Premier; to name a few. This demonstrated the high profile importance of the summit. The session, already predicted to fail, brought to the fore the intention and vested interests of the Annex-I countries on the demise of the Kyoto Protocol. Developed countries had been planning to subvert the Kyoto Protocol ever since the Bali Action Plan was prepared in 2007. The plan laid out the four-fold roadmap for climate change action-mitigation, adaptation, technology and finance. It was essentially a mandate to finalize two things: one, the emission reduction commitments of rich countries for the second phase of the Kyoto Protocol, and two, the global goals for long-term cooperative action till 2050. These negotiations were to conclude at Copenhagen. Their only justification to bring the non-Annex-I Countries, especially India and China, in to the loop of an legally binding emissions reducing agreement was that these two nations were emerging economies of the twenty-first century and were on track to become the global economic powerhouses

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<sup>160</sup> They are countries with developing economies and the ones facing uncertain future if climate change is uncontrolled. Thus G-77 is an unofficial body of countries having heavy stakes in the outcomes of the Copenhagen summit.

<sup>161</sup> Raj Chengappa, *WARMING UP to a New Deal*, in *India Today*, December 21, 2009, p. 38.

within the first quarter or third decade of this century. The last night in Copenhagen was the culmination of this campaign.

Whatever the expected fall out of the summit, a positive achievement of the meet was that Copenhagen saw global groups with various interests come together. The grand rally of global day of action against climate change on December 12 looked like a carnival, with flags of all possible hues. Participants ranged from savvy environmental groups like Greenpeace and Friends of the Earth to established humanitarian organizations like Oxfam and Actionaid, from traditional leftwing workers' parties to anti-green-capitalist Climate Justice Action, from Hare Krishnas to hardcore church activists.<sup>162</sup>

The politics of negotiations in the form of incentives, intimidations, underhand deals, groupisms, unity-breaking, etc took place in the thirteen day sessions of the COP 15 at Copenhagen. Leaders started making deals in secret, in the middle of the night, in backrooms, on the fly. Carrots were offered; sticks were wielded. In the end, industrialized countries, with the last-minute complicity of India and China, penned an alarmingly weak deal—the so-called Copenhagen Accord—that appears designed to undermine the negotiations to date. Certain basic rules seem to have been changed forever. Under the captaincy of the US, historical responsibility of the developed world in creating the climate crisis has been erased. The differentiation between rich and poor countries is gone. The rich world does not want to reduce emissions, but is trying hard to stunt the development of the poor world.<sup>163</sup>

A violent campaign, in comparison to other COP meetings, by various climate change activities in the form of NGOs, social and religious groups, was witnessed by the citizens of the World via the media, especially television channels. The period also exposed the brutality of the security agencies of the host country, Denmark and as such received a lot of flak in the same media reporting.

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<sup>162</sup> Chandra Bhushan, *Copenhagen According to USA*, Cover Story in *Down to Earth*, January 15, 2010.

<sup>163</sup> *Ibid.*

One hundred and ten heads of state were flying to Copenhagen to sign a declaration; they could not all return with their pens unused. More than that, the Nobel prize-winning US president had to emerge as a dealmaker. So in the final 48 hours, negotiators—who had laboured for years for a comprehensive deal—were brushed aside; heads of state, ministers and their top advisers took over.

Only Obama and basic leaders—Indian Prime Minister Manmohan Singh, Chinese premier Wen Jiabao, Brazilian President Luiz Inacio Lula da Silva and South African President Jacob Zuma—authored the final deal. About 25 countries were consulted later. The accord was then put before the delegates as a *fait accompli*. Danish Prime Minister Lars Lokke Rasmussen, presiding over the plenary, gave delegates one hour to go over the document and sign the accord. The US delegation and UK climate change secretary Ed Miliband threatened developing countries they would not get money if they did not sign the deal.

The ALBA group of Latin American countries threatened a walkout. Bolivian and Cuban delegates also criticized the accord, while delegates from many industrialized nations and small island states urged all to back the deal. Civil society groups were also disgusted at secretive negotiations.

UN Secretary General Ban Ki-moon was cautiously optimistic. From exhorting countries to "write a different future" with a fair, ambitious and comprehensive agreement a few days earlier, he climbed down to say: "It (accord) may not be everything we hoped for, but this decision of the Conference of Parties is an essential beginning...The importance will only be recognized when it's codified into international law."

Finally after the thirteen days of grinding in the Conference of the Parties meeting at Copenhagen held from 7<sup>th</sup> to 19<sup>th</sup> December 2009 produced the dissatisfactory "Copenhagen Accord".<sup>164</sup>

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<sup>164</sup> <http://unfccc.int/home/items/5262.php> accessed and viewed on 23<sup>rd</sup> June 2010.

The Copenhagen Accord was not officially endorsed. A few developing countries vocally opposed the document and the drafting process. But the accord—rather than any of the documents drafted through two years of multilateral negotiations—emerged as Copenhagen's only substantive outcome. It could well become the new starting point for future negotiations. This will be disastrous for the developing world.

Copenhagen Accord was a vaguely worded, three-page political document. "This was the chaotic, disastrous denouement of a chaotic and disastrous summit," said environment writer George Monbiot in a column in the British newspaper *The Guardian*.

### **The Copenhagen Accord**

**SOME INSIGHTS OF THE COPENHAGEN ACCORD:** The Copenhagen Accord is neither fair, nor ambitious and is far from being comprehensive. If anything, it destroys the very nature of the multilateral process. The accord is not legally binding and contains no details on long-term cooperative action, emission targets for developed nations and nationally appropriate mitigation actions for developing nations. There is no clear promise on finance either.

The Copenhagen Accord will erase the historical responsibility of industrialized nations to clean up greenhouse gases and blur the distinction between industrialized and non-industrialized countries when it comes to taking on commitments to reduce emissions. It will prevent science-based targets for global emissions and fatally undermine efforts to decide on second-phase targets under the Kyoto Protocol.

The accord changes the nature of environmental agreements. From the legally binding Kyoto Protocol, the world has now agreed to a political deal. While it does endorse continuing negotiations on a legally binding agreement as per the Bali Action Plan, its proposed pledge-and-review system acts as an undertow. The pledge-and-review system would commit all nations to voluntary domestic actions already on record.

What's worse, the preamble of the accord leaves enough space to bypass the principles of the UNFCCC. The accord states that the signatories will be "guided by" rather than "adhere to" the principles of the convention. This could easily allow the principle of common but differentiated responsibilities enshrined in the convention to be translated into the principle of common but differentiated responses, which could be used to dictate further action for developing nations. There is no recognition of poor countries' right to give priority to development. Despite Manmohan Singh's public statements that equitable burden-sharing should underlie any effective global climate regime, there are no formulae for equitable sharing of emission cuts or even a mention of historical responsibility in the accord. Lumumba Stanislaus-Kaw Di-Aping, the Sudanese ambassador and G77 negotiator, called it a suicide pact to maintain economic dependence of some countries.

The accord recognizes "climate change is one of the greatest challenges of our times" but keeps quiet on ways to deal with the challenge. While it recognizes the scientific view that the increase in global temperature should be below 2°C (small island states demand 1.5°C), there is no roadmap for ensuring this goal. A leaked UN report showed the current emission cuts offered by the industrialized countries would lead to a 3°C rise in global temperatures. There are no mitigation targets for industrialized nations, nor are there any references to these being legally binding. The proposal urges cooperation to "achieve a peaking of global and national emissions as soon as possible" but does not recognize that industrialized nations' emissions should have already peaked and should now be declining.

On finance, the accord states, developed countries collectively commit to an additional \$30 billion through international institutions for 2010-2012 mainly for adaptation by developing nations. Industrialized countries have, however, put a rider that only those who sign the accord will be eligible to the fund. It provoked Ian Fry, the lead negotiator of Tuvalu, the island nation in the Pacific Ocean, to retort, "In biblical terms it

looks like we're being offered 30 pieces of silver to sell our future. Our future is not for sale." Even the 30 pieces of silver are not yet on the table.

While calling for developed countries to provide "adequate, predictable and sustainable financial resources", the accord states "funding will come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance." Developing nations have for long argued that the market is prone to failure and that any finance for adaptation and mitigation must come from public sources and should be additional to budgeted official development assistance.

Under the accord, rich nations commit to mobilize \$100 billion by 2020 for mitigation actions by developing countries but there is no word on where the money will come from. Developing nations signing the accord commit to taking nationally appropriate mitigation actions. At present, projects that receive finance and technology from developed countries have to be measurable, reportable and verifiable (MRV). Developing countries insisted their domestic, voluntary actions should not be subjected to the MRV regime. But the US and other rich countries wanted international scrutiny. It became a sticking point.

The accord finally included provisions for "international consultations and analysis" of voluntary actions, euphemistic language for enforcing the MRV regime for all mitigation activities.

Top White House adviser David Axelrod reportedly said,

"We're going to be able to review what they're doing. We're going to be able to challenge them if they don't meet the goals."

In Copenhagen, there were two high-profile casualties of the overarching stalemate on funding and targets: proposals on technology transfer, and for reducing emissions from deforestation. Heading into the negotiations, both had been star

pupils, and—despite a few sticky issues—observers like the UN Secretary General were hopeful that draft texts would be turned into operational agreements.

Instead, it only added to the frustration of the overall outcome that even in areas where a deal seemed within reach, decisions ended up being postponed.

The accord commits industrialized countries to declare voluntary emission targets for 2020 by January 31, 2010. These targets are supposed to be listed in a document that will be kept on record (without legal status) at the UNFCCC. Developing countries that sign the accord would then become eligible to receive a share of the fast-track financing promised for 2010, 2011 and 2012.

One of the few decisions the parties adopted in Copenhagen was to prolong the mandate for the working groups on the Kyoto Protocol and long-term action, until the next conference in Mexico in December 2010. Until then the question of the legal basis for a future climate change agreement will remain unresolved. After all the Copenhagen Accord has no formal or legal standing.

And in the matter and question on whether these indicates the demise of the Kyoto Protocol, the Indian Environment Minister, Jairam Ramesh, unregrettfully, admitted, “ not yet but it is *in the intensive care unit*”.<sup>165</sup>

Lately, after the COP- 15 at Copenhagen, the countries, mostly target of the developed countries (Annex-I countries) have formed an association, namely, BASIC. The acronym BASIC stands for Brazil, South Africa, India and China who are in the scheme of the industrialised countries to include them in a legally binding agreement to cut down greenhouse gas emissions which is against the UNFCCC and Kyoto Protocol. The BASICs main agenda is to counter the onslaught of the Annex-I countries and to chart their own course in reducing the greenhouse gases in coordination with the global community but

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<sup>165</sup> Chandra Bhushan, *Copenhagen According to USA*, Cover Story in *Down to Earth*, January 15, 2009

voluntarily. If they are to be legally bound to such emission reduction targets post-2012, that is the next phase of Kyoto, they are to do it in their own terms without jeopardising their economic growth.

The members of the BASIC Group have already announced a series of voluntary mitigation actions for 2020. The Ministers expressed their intention to communicate information on their voluntary mitigation actions to the UNFCCC by January 31, 2010.<sup>166</sup>

The Ministers called for the early flow of the pledged \$10 bn in 2010 with focus on the least developed countries, small island developing states and countries of Africa, as proof of their commitment to urgently address the global challenge of climate change. In this context, the Ministers welcomed the progress made on the proposal for financing and implementation of the REDD+ mechanism and decided to undertake close coordination to this end.

The discussions and findings in the aforementioned paragraphs and the space it has occupied in this chapter in particular and this work in general raises some queries as to what does it bear upon the present research that attempts to look at the legal framework of sustainable automobile use in India. The answer at first is simple: Transport is a significant contributor to overall GHG emissions.

The sector as a whole accounted for approximately 13 percent of overall GHG emissions and 24 percent of CO<sub>2</sub> emissions from fossil fuel combustion in 2006. On a well-to-wheel basis, the IEA estimates that transport accounts for nearly 27 percent of total CO<sub>2</sub> emissions from fossil fuel combustion. Transport is the second largest CO<sub>2</sub>-emitting sector after electricity production. In OECD and ITF countries, the shares of transport CO<sub>2</sub> emissions are 30 percent and 26 percent respectively in 2006 – although some countries display very different shares.

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<sup>166</sup> *Joint Statement issued at the conclusion of the Second Meeting of Ministers of BASIC Group, New Delhi, January, 24th, 2010.*

Road transport emissions account for two thirds of transport CO<sub>2</sub> emissions. Much of the growth in emissions has been in step with GDP growth and the resultant increase in numbers of vehicles and international travel. The rate of transport emissions growth has accelerated globally from an annual average growth of 2.11 percent from 1990–2000 to an annual average growth rate of 2.26 percent from 2000–2006. This has largely been driven by non-OECD countries as OECD transport CO<sub>2</sub> emission growth rates have fallen in the past 6 years (1.16 percent) as compared to the period 1990–2000 (2.07 percent).<sup>167</sup>

The Intergovernmental Panel on Climate Change (IPCC) estimates that in the absence of additional climate policies to reduce GHG emissions, baseline global GHG emissions from human sources will increase between 25 percent and 90 percent between 2000 and 2030, with CO<sub>2</sub> emissions from energy use growing between 40 and 110 percent over the same period. The IPCC projects that global temperatures will rise between 2°F to 11.5°F by 2100, and global sea level will rise between 7 to 23 inches. More recent estimates that include the effects of polar ice sheet melting suggest a possible 3 to 4 foot sea level rise. According to the Intergovernmental Panel, global GHG emissions must be reduced to 50 to 85 percent below year 2000 levels by 2050 to limit warming to 2.0°C to 2.4°C (3.6°F to 4.3°F). To reach this target, GHG emissions from all sectors must be reduced through a multi-generational effort.

The transport sector emissions include all GHG emissions from road transport, railways, aviation and navigation. Due to rapid economic growth in India over the last two decades the demands for all transport services, particularly road transport and aviation has increased manifold, it has a share of 4.5 percent in India's GDP. The total number of registered vehicles in the country has increased from 5.4 million in 1981 to 99.6 million in 2007. Two wheelers and cars constitute nearly 88

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<sup>167</sup> *Reducing Transport GHG Emissions: Preliminary Findings of the OECD/ITF Working Group on Transport GHG Emissions Reduction Strategies – Report to be released in 2010*, p. 6.

percent of the total vehicles at the national level (March, 2008). The total commercial energy consumption in the transport sector in 2007 is estimated to be 1766.6 PJ, that includes an array of fuels, such as diesel, petrol, coal, ATF, kerosene, LDO, FO, CNG, and LPG. Diesel comprises 65 percent of total energy used in the road transport sector, followed by petrol (24 percent) and ATF (7 percent) respectively. The rest (4 percent) constitute of coal, LDO, FO, CNG & LPG. Consequently, it is estimated that the transport sector emitted 142.04 million tons of CO<sub>2</sub> eq in 2007, of which 138.86 million tons were emitted as CO<sub>2</sub>, 0.023 million tons as CH<sub>4</sub> and 0.009 million tons as N<sub>2</sub>O. The road transport sector emitted 123.55 million tons of CO<sub>2</sub> eq, which is 87 percent of the total emissions from the transport sector. In terms of specific gases, the road transport sector emitted, 121.21 million tons of CO<sub>2</sub>, 0.023 million tons of CH<sub>4</sub> and 0.006 million tons of N<sub>2</sub>O. Aviations emitted 10.21 millions of CO<sub>2</sub> equivalent in 2007 and are the second largest emitter in transport sector. Almost the entire emissions from aviation sector were emitted as CO<sub>2</sub> (10.12 million tons). The railways emissions are mostly driven by diesel, with very small use of other liquid fuels. The coal use in railways has become minimal. The railways emitted 6.84 million tons of CO<sub>2</sub> eq in 2007, and again more than 90% of the emissions were in the form of CO<sub>2</sub>. The navigation emitted 1.43 million tons of CO<sub>2</sub> equivalents and out of this 1.41 million tons were emitted as CO<sub>2</sub>.<sup>168</sup>

Looking at the gravity of the situation unfolding in the context of global warming, its consequential climate change and the negative contribution made upto now and will make in the prospective future, several countries both developed and developing countries (in Kyoto parlance, the Annex-I and the non-Annex-I parties) are preparing and some have already prepared study reports.<sup>169</sup> These study reports have highlighted

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<sup>168</sup> *India: Greenhouse Gas Emissions 2007*, A report prepared by the Indian Network for Climate Change Assessment (INCCA) (May 2010).

<sup>169</sup> *Reducing Vehicle Emissions in Asia: Policy and Guidelines*, "An Asian Development Bank (ADB)" sponsored Report, 2003; *CO<sub>2</sub> Emissions Reduction in Transport: Confronting Medium-Term and long-Term Options for Achieving Climate Targets in Netherlands*, A Policy Study Report of the "Netherlands Environmental Assessment Agency", July 2009; *2009 Report on*

the dangers of unsustainable automobile use in their respective jurisdictions and have suggested various measures to curb vehicular pollution and the means to do it in both the short - term and the long -term periods.

The era of sustainable automobile use of automobile in the world has already begun and countries of the world have joined the bandwagon in taking the initiative and focussing on the said issue, though late, with rejuvenated vigour. This particular, but positive, development in the context of the larger agenda of controlling global warming and preventing the consequential climate change has the potential to give a fillip to the new-age economic growth and development around the globe in the twenty-first century.

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*Environmental Protection Efforts: Promoting Sustainability in Road Transport in Japan*, A Report sponsored and prepared by the "Japan Automobile Manufacturers Association Inc.", October 2009; *Reducing Transport GHG Emissions: Opportunities and Costs*, Preliminary findings by "International Transport Forum (ITF)" sponsored by "Organisation for Economic Co-operation and Development (OECD)" 2009; *Transportation NAMAs: A Proposed Framework*, A Report prepared by the "Centre for Clean Air Policy", Washington DC, USA, January 10, 2010; *Transportation's Role in Reducing Greenhouse Gas Emissions, Vol-I, Synthesis Report* prepared by the "Department of Transport (DoT)" for Congress, USA, April 2010.