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Citation: 39 Denv. J. Int'l L. & Pol'y 397 2010-2011

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INTERNATIONAL LAW AND SUSTAINABLE DEVELOPMENT— TOOLS FOR ADDRESSING CLIMATE CHANGE

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We are all in the same boat and we must learn to live responsibly - or we will sink together.

Muhammad Yunus¹

I. INTRODUCTION

Climate change and the more recent threats to the natural life-support systems have heightened the focus on international cooperation, sustainable development, and further limits to State sovereignty in order to solve these global problems. Climate change is one of the biggest sustainable development challenges. Much of the progress made toward the goal of sustainable development will very likely be destroyed by climate change. In the context of the recent flooding in Pakistan, experts project that it will take years, maybe even decades, to replace the lost infrastructure.²

Only by integrating the paradigm of sustainable development in a more effective way into international and domestic law can certain irreversible climate change impacts be avoided. Despite recent set-backs in international negotiations, such as occurred in Copenhagen, international law has an important role to play by offering the legal framework which can promote a move toward sustainable development. The sustainable development principles, though most of them are not legally binding, are central to the interpretation, implementation, and further development of the climate change regime. Addressing climate change requires a paradigm shift towards “a low-carbon development strategy [which] is indispensable to sustainable development.”³

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1. MUHAMMAD YUNUS, CREATING A WORLD WITHOUT POVERTY: SOCIAL BUSINESS AND THE FUTURE OF CAPITALISM 217 (2007).

2. Carlotta Gall, *Pakistan Flood Sets Back Infrastructure by Years*, N. Y. TIMES, Aug. 27, 2010, at A1, available at <http://www.nytimes.com/2010/08/27/world/asia/27flood.html?hp>.

3. U.N. Framework Convention on Climate Change [UNFCCC], Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action Under the Convention, 16th Sess., Cancun, Mex., Nov. 29 Dec. 10, 2010, U.N. Doc. FCCC/CP/2010/7/Add.1 (15 March 2011) <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf#page=2> [hereinafter Cancun Agreements].

The tension between developing and industrialized countries regarding economic development and protection of the environment has been on-going since the Stockholm Conference in 1972. However, in the context of climate change, the problem becomes critical. The anthropogenic effect on the climate system demands that strong action be taken now by all States to implement sustainable development to avoid the worst impacts.⁴ The tipping point before the onset of catastrophe is no longer decades away.⁵ It is in the mutual self-interest of nation states to acknowledge the seriousness of climate change and implement sustainable development principles.

Climate change is a global problem that calls for international cooperation. Sustainable development implies the need for industrialized countries to reduce their greenhouse gas (GHG) emissions to address climate change, but also, I argue, to give room for developing countries to develop.⁶ Developing countries will continue developing in order to eradicate poverty and, hence, they will require more of the polluting space in the atmosphere.⁷ If we are to effectively tackle climate change, development in developing countries needs to be sustainable, enabling developing countries also to reduce their emissions. I will argue that providing technology, capacity-building, and financial assistance to developing countries through funds established under the climate change regime and other institutions will be the most urgent element to facilitate developing countries' participation in addressing climate change by taking "mitigation actions" alongside industrialized countries complying with their emission reduction commitments. Requiring funding as a condition for action by developing countries to address climate change, needs to be recognized as one of the core elements in the climate regime based on the principle of common, but differentiated responsibility. However, it is paramount that these funds are managed in a transparent and accountable manner and that there is a balanced representation of developed and developing countries in the decision-making bodies.

This paper will examine the concept of sustainable development in the context of climate change. In this process, I will first briefly describe its origin and development. Second, I will focus on the definition, core elements, and principles

4. NICHOLAS STERN, STERN REVIEW: THE ECONOMICS OF CLIMATE CHANGE, at vi (2007), available at http://mudancasclimaticas.cptec.inpe.br/~rmlima/pdfs/destaques/sternreview_report_complete.pdf [hereinafter STERN REVIEW].

5. See Jeremy Lovell, *Interview – The World Has Under Decade to Act on Climate Crisis*, PLANETARK.COM (Nov. 22, 2006), <http://www.planetark.com/dailynewsstory.cfm/newsid/39096/story.htm>; see also Juliet Eilperin, *Debate on Climate Shifts to Issue of Irreparable Change*, WASH. POST, Jan. 29, 2006, at A1, available at http://www.washingtonpost.com/wp-dyn/content/article/2006/01/28/AR2006012801021_2.html; Ian Sample, *Warming hits 'tipping point'*, THE GUARDIAN (Aug. 11, 2005, 12:36 PM), <http://www.guardian.co.uk/climatechange/story/0,12374,1546824,00.html>.

6. See INT'L LAW ASS'N (ILA), COMM. ON THE LEGAL PRINCIPLES RELATING TO CLIMATE CHANGE, THE HAGUE CONFERENCE 26 (2010), available at <http://www.ila-hq.org/en/committees/index.cfm/cid/1029> [hereinafter HAGUE CONFERENCE].

7. *Id.*

of sustainable development. Third, I will analyze the legal status of the sustainable development in international law, and finally, I will examine which of its principles apply to climate change and what implications this has for the design of current and future climate change agreements, with a particular focus on the transfer of technical and financial assistance.

II. ORIGIN AND DEVELOPMENT

A. Stockholm Conference and the Brundtland Commission

Historically, sustainable development originated from efforts made for the conservation of nature which evolved into international environmental law.⁸ The concern for the extinction of certain species began in the late 19th century leading to cases surrounding fur seals⁹ and oysters.¹⁰ Yet, the environment as the whole biosphere, consisting of interdependent ecosystems, was first introduced as a matter of concern on the international scene from both a scientific and political perspective at the Stockholm Conference on the Human Environment in 1972.¹¹

Stockholm represented a turning point in the way environmental issues were addressed at the international level. Whereas earlier international efforts focused on the environmental problems of the industrialized countries, developing countries actively participated at Stockholm, insisting that the environment had to be examined in the context of development issues.¹² The following remark by the Sri Lankan ambassador to the U.N. in 1970 illustrates the outlook of most developing countries at the time:

[D]eveloping countries have of late been warned of the price that has to be paid in the form of environmental pollution for industrial development. All developing countries are aware of the risks, but they

8. PHILIPPE SANDS, *PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW I: FRAMEWORKS, STANDARDS, AND IMPLEMENTATION* 9 (Vaughan Lowe & Dominic McGoldrick eds., 1995).

9. *Id.*; See also *Bering Sea Arbitration*, N.Y. TIMES, Mar. 2, 1892, available at http://query.nytimes.com/mem/archive-free/pdf?_r=1&res=9500E3D81631E033A25751C0A9659C94639ED7CF. The 1893 Behring Fur Seal Arbitration between the U.S. and Great Britain was an early example of a natural resource, the fur seal being exploited to the point of near extinction, forcing international cooperation. After an unsuccessful attempt to agree on international rules to protect the fur seal fisheries, the U.S. seized British Columbian and British fur sealing vessels. The United States alleged that Great Britain was over-exploiting fur seals by pelagic sealing in the North Pacific Ocean. The parties to the dispute agreed to establish a tribunal to decide the case, and arbitrators granted an award in favor of Great Britain, adopting specific regulations to protect fur seals in the global commons.

10. Convention between France and Great Britain, relative to Fisheries in the Seas between France and Great Britain, Fr.-Gr. Brit., art. XI, Nov. 11, 1867, reprinted in 21 *INTERNATIONAL PROTECTION OF THE ENVIRONMENT: TREATIES AND RELATED DOCUMENTS* 1 (Bernd Rüster & Bruno Simma, eds., 1981). France and Britain agreed to a treaty for the protection of oysters by outlawing fishing outside certain dates.

11. See United Nations Conference on the Human Environment, Stockholm, Swed., June 5-16, 1972, *Declaration of the United Nations Conference on the Human Environment*, UN Doc. A/CONF.48/14/rev. 1 (June 16, 1972) [hereafter *Stockholm Declaration*].

12. DANIEL BODANSKY, *THE ART AND CRAFT OF INTERNATIONAL ENVIRONMENTAL LAW* 29-30 (2010).

would be quite prepared to accept from the developed countries even 100 percent of their gross national pollution if thereby they could diversify their economies through industrialization.¹³

However, the attitude among developing countries began to change as the international community realized it faced a common threat: the degradation of the global environment. On the international plane, “[n]ations cooperate when convinced that their interests will be served by cooperation.”¹⁴ This cooperation is evidenced by the hundreds of environmental treaties that have been adopted since Stockholm. By entering into these treaties the States voluntarily relinquished some of their sovereignty, allowing international law to dictate how they were to address some of their domestic environmental issues; this would have been unthinkable just a few years earlier.¹⁵ Most States eventually established environmental ministries and adopted environmental regulations domestically, thereby implementing their international obligations.¹⁶

The Stockholm Conference emphasized how human actions can irreversibly harm the environment and staked out a course: the human environment needs to be protected and enhanced through common efforts at the local, national, and international levels.¹⁷ At the Stockholm Conference, States did not adopt any treaties, yet they did agree on two important documents: the Declaration of Principles for the Preservation and Enhancement of the Human Environment (Stockholm Declaration) and an Action Plan, making suggestions for environmental management.¹⁸

The Stockholm Declaration, unlike a convention, is a non-binding “soft law” document consisting of 26 principles, which form the precursor to the Rio Declaration of 1992.¹⁹

While the Stockholm Declaration was the first of its kind and for the most part was merely reiterated in the Rio Declaration, it is the latter document that is most often referred to.²⁰ However, the Stockholm Declaration is credited as

13. H. Jeffrey Leonard & David Morrell, *Emergence of Environmental Concern in Developing Countries: A Political Perspective*, 17 STAN. J. INT'L L. 281, 282 n.2 (1981) (quoting M. Taghi Farvar, Margaret L. Thomas, Howard Boksenbaum & Theodore N. Soule, *The Pollution of Asia*, 13.8 ENV'T 10, 10 (1971)). Sri Lanka was known as Ceylon until 1972.

14. LYNTON KEITH CALDWELL, INTERNATIONAL ENVIRONMENTAL POLICY: EMERGENCE AND DIMENSIONS 5 (1984).

15. *Id.* at 19.

16. *Id.* at 78.

17. *Id.* at 19.

18. See *Stockholm Declaration*, *supra* note 11; United Nations Conference on the Human Environment, Stockholm, Swed., June 5-16, 1972, *Action Plan for the Human Environment*, UN Doc. A/CONF.48/5 (June 16, 1972).

19. United Nations Conference on Environment and Development, Rio de Janeiro, Braz., June 3-14, 1992, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev.1 (Aug. 12, 1992) [hereinafter *Rio Declaration*].

20. See, e.g., Daniel Barstow Magraw & Janice Gorin, *Laws and Regulations, International, POLLUTION ISSUES*, <http://www.pollutionissues.com/Ho-Li/Laws-and-Regulations-International.html>

introducing the most ambitious and forward-looking set of environmental principles of the international community of the time.²¹

In 1983, Gro Harlem Brundtland, the former Prime Minister of Norway, was appointed chair of the World Commission on Environment and Development by the UN Secretary General.²² The Brundtland Commission's mandate was to examine the divergence between continued economic growth and an environment that was steadily deteriorating.²³ Synthesizing earlier aims enunciated in instruments such as the World Charter for Nature, the Brundtland Commission introduced the concept of sustainable development to the broader international community and defined it as "[development that] meets the needs of the present without compromising the ability of future generations to meet their own needs."²⁴

The Brundtland Commission intended to demonstrate how human survival might depend on the international community's ability to elevate "sustainable development to a global ethic."²⁵ In its report, "Our Common Future," it set forth the main challenges to the world community: achieving sustainable development by the year 2000 and beyond by agreeing on multilateral solutions and a restructured economic system.²⁶ The Commission called for greater cooperation to eradicate international poverty, manage the global commons, and maintain peace and security worldwide.²⁷ In order to broaden the spectrum of issues addressed, it defined the "environment" as "where we all live," not a sphere separate from human actions and needs, and it defined "development" as "what we do in attempting to improve our lot within that abode," not the limited focus of development assistance for poor nations.²⁸ Hence, the Commission stated that the environment and development are inseparable, recognizing the growing interdependence among nations in dealing with economic and environmental problems.²⁹

(last visited Feb. 25, 2011).

21. VED P. NANDA & GEORGE (ROCK) PRING, *INTERNATIONAL ENVIRONMENTAL LAW FOR THE 21ST CENTURY* 83 (2003).

22. WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, *OUR COMMON FUTURE*, at ix (1987). The Commission also submitted its findings to the U.N. General Assembly with the same title in December 1987 as U.N. Doc. A/Res/42/427 [hereinafter *OUR COMMON FUTURE*].

23. *Id.* at 3-4.

24. *Id.* at 8.; *see also* World Charter for Nature, G.A. Res. 37/7, U.N. Doc. A/RES/37/7 (Oct. 28, 1982) (the World Charter for Nature is a set of ecological principles adopted by the UN General Assembly in 1982); PATRICIA BIRNIE & ALAN BOYLE, *INTERNATIONAL LAW AND THE ENVIRONMENT* 3-4 (2d ed. 2002).

25. *OUR COMMON FUTURE*, *supra* note 22, at 308.

26. *Id.* at ix.

27. *Id.* at 308.

28. *The History of Sustainable Development in the United Nations*, UNITED NATIONS CONFERENCE ON SUSTAINABLE DEVELOPMENT 2012 (Aug. 26, 2010, 09:37) http://www.uncsd2012.org/index.php?option=com_content&view=article&id=91:the-history-of-sustainable-development-in-the-united-nations&catid=55&Itemid=99.

29. *Id.*; *OUR COMMON FUTURE*, *supra* note 22, at xi-xii.

B. Rio Conference

In 1992, on the 20th anniversary of the Stockholm Conference, the international community gathered in Rio de Janeiro, Brazil for the UN Conference on Environment and Development (UNCED or "Earth Summit"). In addition to the 176 States that sent representatives to the conference, over 50 intergovernmental organizations and thousands of non-governmental organizations (NGOs) were present.³⁰ Essentially, the legal principles regarding sustainable development presented by the Brundtland Commission were confirmed when the nations gathered at Rio and formally adopted the concept of sustainable development as the new paradigm for international environmental law.³¹ Economic development, it was agreed, must simultaneously seek to protect and preserve the environment.³² The Rio Conference represents a watershed in the efforts to integrate environment and development issues.³³

Five legal instruments were adopted at Rio: the UN Framework Convention on Climate Change (UNFCCC),³⁴ the Convention on Biodiversity,³⁵ the Rio Declaration on Environment and Development, Agenda 21,³⁶ and the Non-Legally Binding Principles on Forests.³⁷ The Rio Declaration, Agenda 21 and the Forest Principles were all adopted by consensus.³⁸ The Rio Declaration's 27 principles seek to provide a framework for the achievement of sustainable development and evidence a compromise between the interests of developed and developing countries.³⁹

Agenda 21 is a comprehensive but non-binding action program for governments, development agencies, UN organizations, and independent sectors which addresses the major areas affecting the relationship between the

30. SANDS, *supra* note 8, at 52.

31. *Id.* at 54.

32. *Id.* at 55-56.

33. ANITA HALVORSSEN, EQUALITY AMONG UNEQUALS IN INTERNATIONAL ENVIRONMENTAL LAW: DIFFERENTIAL TREATMENT FOR DEVELOPING COUNTRIES 25 (1999).

34. United Nations Framework Convention on Climate Change, art. 4, May 9, 1992, 31 I.L.M. 849 [hereinafter UNFCCC].

35. Convention on Biological Diversity, *opened for signature* June 5, 1992, 31 I.L.M. 818, 818 (1992) [hereinafter Biodiversity Convention].

36. *Rio Declaration*, *supra* note 19, (Vol. 1), Annex 2. The Rio Declaration on Environment and Development and section I of Agenda 21 are in volume I; section II (Conservation and management of resources for development) of Agenda 21 is in volume II; and sections III (Strengthening the role of major groups) and IV (Means of implementation) of Agenda 21 are in volume III.

37. *Id.* (vol. III), Annex 3. This part of the *Rio Declaration* is also reprinted in United Nations Conference on Environment and Development: Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, June 13, 1992, 31 I.L.M. 881.

38. *Rio Declaration*, *supra* note 19, (Vol. 4), ch. IV, ¶¶ 13-14. For chapter I (resolutions adopted by the Conference), see volumes I-III of the *Rio Declaration*. For the rest of the chapters, see Volume IV.

39. See SANDS, *supra* note 8, at 38.

environment and the economy.⁴⁰ It is designed to merge the goals of continued economic development and environmental protection. In essence, Agenda 21 is a plan of action needed in order for States to achieve sustainable development.⁴¹ In chapter 2, the text outlines the four components necessary for achieving development and environment goals: “(a) [p]romoting sustainable development through trade liberalization; (b) [m]aking trade and environment mutually supportive; (c) [p]roviding adequate financial resources to developing countries and dealing with international debt; [and] (d) [e]ncouraging macroeconomic policies conducive to environment and development.”⁴²

In the year 2000, the international community gathered in New York for the Millennium Summit. There, 192 world leaders unanimously adopted the U.N. Millennium Declaration, which is a statement of values, principles and common objectives in areas such as peace and security, poverty eradication, environmental protection, and good governance for the international community for the twenty-first century.⁴³ The Millennium Development Goals (MDGs) emerged from this Declaration, focusing on poverty eradication, child mortality, maternal health, disease control, a global partnership for development, and environmental sustainability.⁴⁴ The MDGs were remarkable in that they were universally accepted as a benchmark for measuring sustainable development progress.⁴⁵

C. Johannesburg

The international community gathered again in 2002 for the World Summit on Sustainable Development (WSSD) on the tenth anniversary of the Rio Conference, this time in Johannesburg, South Africa.⁴⁶ Since Rio, poverty had been deepening, environmental degradation worsening, and unsustainable patterns of development continued.⁴⁷ The goal of Johannesburg was for the world leaders to “adopt concrete steps and identify quantifiable targets for better implementing Agenda 21.”⁴⁸ Kofi Annan, the former UN Secretary General, stated it as an “opportunity to rejuvenate the quest to build a more sustainable future.”⁴⁹

40. See *Rio Declaration*, *supra* note 19, (Vol. 1).

41. See John Dernbach & Widener University Law School Seminar on Law and Sustainability, *U.S. Adherence to Its Agenda 21 Commitments: A Five-Year Review*, 27 ENVTL. L. REP. 10504, 10504 (1997).

42. *Rio Declaration*, *supra* note 19, (Vol. 1), ¶ 2.3.

43. U.N. Millennium Declaration, G.A. Res. 55/2, U.N. Doc. A/RES/55/2 (Sept. 8, 2000).

44. *Id.*; see also *U. N. Millennium Development Goals*, UN.ORG, <http://www.un.org/millenniumgoals/poverty.shtml> (last visited Feb. 11, 2011).

45. MOHAN MUNASINGHE, *SUSTAINABLE DEVELOPMENT IN PRACTICE* 17 (2009).

46. World Summit on Sustainable Development, Johannesburg, S. Afr., Aug. 26-Sept. 4, 2002, *Rep. of the World Summit on Sustainable Development*, U.N. Doc A/CONF.199/20/Corr.1 (Jan. 8, 2003) [hereinafter WSSD].

47. International Fund for Agricultural Development, *The Rural Poor: Survival or a Better Life?*, at 1 (Aug. 2002), http://www.ifad.org/events/wssd/e/wssd_e.pdf.

48. *Outcomes on Sustainable Development*, UN.ORG, <http://www.un.org/en/development/devagenda/sustainable.shtml> (last visited Feb. 12, 2011).

49. U.N. Secretary-General, *Johannesburg Summit 2002: World Summit on Sustainable*

Johannesburg was to go beyond debate and move to action and results, unlike Agenda 21, by instituting targets and timetables. The Summit reaffirmed the Rio Declaration and Agenda 21 and produced two new goal-oriented documents: the Johannesburg Declaration on Sustainable Development and the Johannesburg Plan of Implementation, both non-legally-binding soft law instruments.⁵⁰ Rather than presenting new principles, the Johannesburg Declaration represented simply a political commitment by heads of State to sustainable development.⁵¹ The Plan of Implementation, on the other hand, presented a framework with targets and timetables for and reiteration of action already called for at UNCED.⁵²

As a whole, the WSSD created a new emphasis on sustainable development consisting of three elements: economic development, social development, and environmental protection.⁵³ The summit's overarching focus was more on the issues central to developing countries, such as poverty eradication and clean drinking water, rather than on stringent environmental commitments.⁵⁴ Five years later, the world leaders came together in New York to review progress since the 2000 Millennium Declaration.⁵⁵ The result of this World Summit was a document titled *In Larger Freedom: Towards Development, Security and Human Rights for All*.⁵⁶ This report was presented by Secretary-General Kofi Annan and reiterated, among other issues, the need for protection of the environment, "[o]ur efforts to defeat poverty and pursue sustainable development will be in vain if environmental degradation and natural resource depletion continue unabated. At the country level, national strategies must include investments in improved environmental management and make the structural changes required for environmental sustainability."⁵⁷ Annan further identified the three most pressing environmental challenges as desertification, loss of biodiversity, and climate change.⁵⁸

Marking another five year passage since the 2005 World Summit, current UN Secretary-General Ban Ki-Moon called world leaders to meet in New York before the start of the regular UN General Assembly meeting. With only five years remaining until the 2015 deadline to reach the MDGs, the goal of this summit was to accelerate progress towards the MDGs.⁵⁹ Some progress on moving toward

Development Aug. 26-Sept. 4, 2002, at 1 (Oct. 2001), <http://un.org/jsummit/html/brochure/brochure12.pdf>.

50. WSSD, *supra* note 46.

51. Marie-Claire Cordonier Segger, *Sustainable Development in International Law, in SUSTAINABLE DEVELOPMENT IN INTERNATIONAL AND NATIONAL LAW* 87, 108 (Hans Christian Bugge & Christina Voigt eds., 2008).

52. *Id.*

53. WSSD, *supra* note 46, at 1.

54. *Id.* at 2-4.

55. U.N. Fact Sheet, 2005 World Summit Outcome (Sept. 14-16, 2005), http://www.un.org/summit2005/presskit/fact_sheet.pdf.

56. U.N. Secretary-General, *In Larger Freedom: Towards Development, Security and Human Rights for All*, U.N. Doc. A/59/2005 (Mar. 21, 2005).

57. *Id.* ¶ 57.

58. *Id.* ¶¶ 58-60.

59. U.N. Secretary-General, *Keeping the Promise: A Forward-Looking Review to Promote an*

these goals has been made, evidenced by poverty eradication in several parts of the world. However, much work remains to be done, for instance, addressing alarming global levels of maternal and child mortality.⁶⁰

In 2012, twenty years after the first Rio Conference, the United Nations Conference on Sustainable Development (UNSCD, or "Rio+20") will take place again in Rio de Janeiro, Brazil.⁶¹ This Summit aims to "secure renewed political commitment for sustainable development, assessing the progress [towards internationally agreed goals on] sustainable development and addressing new and emerging challenges" and will focus on developing two distinct ideas: "green economy in the context of sustainable development and poverty eradication and the institutional framework for sustainable development."⁶²

III. DEFINITION, CORE CONTENT, AND PRINCIPLES

Sustainable development has been categorized as an ambiguous concept, yet it has afforded the flexibility needed for it to be incorporated into legal instruments in both hard law and soft law form at the international, regional, national, and local levels.⁶³ The quasi-official definition of sustainable development that is recognized by the international community is the one used in the Brundtland Report: development that meets the needs of the present without compromising the need of future generations.⁶⁴ The Brundtland Commission emphasized that the term "need" must be applied particularly to the needs of the poor.⁶⁵ Sustainable development requires meeting the needs of all because a world with widespread poverty will be prone to ecological and other catastrophes.⁶⁶ In addition, the Brundtland Commission's report emphasized that there were limits involved, dictated by the carrying capacity of the biosphere.⁶⁷ This carrying capacity is the extent to which the biosphere or natural environment can absorb the effects of human activities.

Agreed Action Agenda to Achieve the Millennium Development Goals by 2015, ¶ 61, U.N. Doc. A/64/665 (Feb. 12, 2010).

60. *Id.* ¶¶ 24, 30 (providing statistics on the less than marginal improvements in child and maternal mortality rates).

61. G.A. Res. 64/236, ¶ 20, U.N. Doc. A/RES/64/236 (Mar. 31, 2010) (endorsing the conference on sustainable development and accepting Brazil's invitation to be the host in 2012).

62. *Id.* ¶ 20(a); *see also* EARTH SUMMIT 2012, <http://www.earthsummit2012.org> (last visited Feb. 8, 2011).

63. Daniel Barstow Magraw & Lisa D. Hawke, *Sustainable Development*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW 614, 620-21 (Daniel Bodansky et al. eds., 2007).

64. Report of the World Commission on Environment and Development, G.A. Res. 42/187, ¶ 2, U.N. Doc. A/RES/42/187 (Dec. 11, 1987); *see also* Magraw & Hawke, *supra* note 63, at 618.

65. Magraw & Hawke, *supra* note 63, at 618.

66. *Id.* at 619; HALVORSSSEN, *supra* note 33, at 42 (emphasizing that sustainable development involves ensuring economic opportunities for all, else poverty will coexist with development and jeopardize the environment).

67. *See* Magraw & Hawke, *supra* note 63, at 621.

The Rio Declaration sets out the guiding principles necessary to achieve sustainable development. These include substantive and procedural principles. This paper will focus on five of the Rio Principles that promote sustainable development: the principle of sustainable utilization of the natural resources, the principle of integration, the principle of equity for present and future generations (the principles of inter- and intra-generational equity), and the principle of common but differentiated responsibilities, which includes the duty to cooperate.

The overarching objective of sustainable development is to protect and manage the natural resource base of economic and social development, also called sustainable utilization.⁶⁸ The importance of protecting the environment as an aspect of sustainable development, has also been expressed in terms of natural capital, defined as the natural resources and living ecosystems.⁶⁹ An important aspect of natural capital is its *ecosystem services*, such as the atmosphere, forests, and oceans, which function as sinks for societies' pollution.⁷⁰ These ecosystem services have only recently begun to gain attention because of their dwindling absorptive capacity due to human activities.⁷¹ For the most part, societies have not placed a value on these services and have disregarded their inherent limits.⁷²

The Rio Declaration addresses activities carried out within States affecting the environment and natural resources beyond States' territories in the second part of Principle 2, which stipulates that States have the responsibility to ensure that such activities do not cause damage to the environment of other States or of areas beyond the limits of jurisdiction, also known as the no-harm rule.⁷³ States have a duty to respect the environment of other States, and, hence, prevent harm as recognized in the advisory opinion in the Legality of the Use of Nuclear Weapons.⁷⁴ This obligation is the corollary to the States' sovereign right to exploit their natural resources stipulated in the first part of the Principle 2.⁷⁵ Effectively, State sovereignty is thus limited, and how a State manages its own domestic resources has now become a matter of international concern in a more systematic way.⁷⁶ Principle 2 is one of two principles in the Rio Declaration to be considered legally binding, reflecting customary international law.⁷⁷

68. *Id.* at 617; see also ALAN BOYLE & DAVID FREESTONE, *Introduction to INTERNATIONAL LAW AND SUSTAINABLE DEVELOPMENT: PAST ACHIEVEMENTS AND FUTURE CHALLENGES* 9 (Alan Boyle & David Freestone eds., 1999).

69. L. Hunter Lovins, *Natural Capitalism: Path to Sustainability?*, 19 NAT. RESOURCES & ENV'T 3, 3 (2004); see also Magraw & Hawke, *supra* note 63, at 620.

70. Lovins, *supra* note 69, at 3.

71. *Id.*

72. *Id.*

73. *Rio Declaration*, *supra* note 19, princ. 2, (Vol. 1), Annex 1.

74. *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226, ¶¶ 27, 29-30 (July 8).

75. *Id.* ¶¶ 27, 29-30.

76. BOYLE & FREESTONE, *supra* note 68, at 6.

77. PETER MALANCZUK, *AKEHURST'S MODERN INTRODUCTION TO INTERNATIONAL LAW* 251 (Routledge, 7th ed. 1997) (1970). Environmental impact assessments (EIAs), as stipulated in Rio

Furthermore, in order to achieve sustainable development and a higher quality of life for all, Principle 8 of the Rio Declaration requires States to reduce and eliminate unsustainable patterns of production and consumption.⁷⁸ This principle focuses on the need to avoid the overconsumption of natural resources, mostly a problem in the industrialized countries, and is also considered part of the “sustainable utilization” principle.⁷⁹

Sustainable development is also described as an integrative concept, particularly in relation to human rights and social, economic, and environmental objectives.⁸⁰ This was reconfirmed at the Johannesburg Conference which emphasized the three reinforcing pillars of sustainable development: economic development, social development, and environmental protection.⁸¹ The only way to successfully achieve economic and social progress is to link them with environmental protection. Principle 4 reiterates the intertwining of development and environmental protection, “[i]n order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.”⁸²

The International Court of Justice in the *Gabcikovo-Nagymaros Case* stated that the “need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.”⁸³ Together, these two principles reflect the core of the principle of sustainable development and articulate the shared expectations of developed and developing countries.⁸⁴ However, despite the international community’s commitment to adopt and implement national strategies for sustainable development, there is no lack of evidence of widespread unsustainable development in the world.⁸⁵ The world’s ecosystems, which form the basis of economic development and on which life in general depends, are worsening.⁸⁶ Poverty, though reduced dramatically in some places, such as in China, is still a towering problem.⁸⁷ The central factual premise

Principle 17, can now be considered a binding principle under customary international law, see *supra* note 116.

78. *Rio Declaration*, *supra* note 19, (Vol. 1), Annex 1, princ. 8.

79. BOYLE & FREESTONE, *supra* note 68, at 9.

80. NICO SCHRIJVER & FRIEDL WEISS, *Introduction to INTERNATIONAL LAW AND SUSTAINABLE DEVELOPMENT: PRINCIPLES AND PRACTICES* xii-xiii (Nico Schrijver & Friedl Weiss eds., 2004).

81. World Summit on Sustainable Development, Aug. 26–Sept. 4, 2002, *Plan of Implementation of the World Summit on Sustainable Development*, ¶ 2, U.N. Doc. A/CONF.199/20 Annex [hereinafter *Johannesburg Plan of Implementation*].

82. *Rio Declaration*, *supra* note 19, (Vol. 1), Annex 1, princ. 4.

83. *Gabcikovo-Nagymoros Project* (Hung./Slovk.), 1997 I.C.J. 7, ¶ 140 (Sept. 27).

84. BOYLE & FREESTONE, *supra* note 68, at 4.

85. John C. Dernbach, *Navigating the U.S. Transition to Sustainability: Matching National Governance Challenges with Appropriate Legal Tools*, 44 TULSA L. REV. 93, 95 (2008).

86. *Id.* at 96.

87. United Nations Dev. Programme, *Millennium Development Goals: Tracking Country Progress*, UNDP, 16-17 <http://www.undp.org/mdg/countries.shtml> (follow “China” hyperlink) (last visited Feb. 11, 2011); United Nations Dev. Programme, *Millennium Development Goals: Global Progress*, UNDP, <http://www.undp.org/mdg/progress/shtml> (last visited Feb. 11, 2011).

of sustainable development is, as Dernbach explains, that “environmental degradation undermines or limits economic development, social well-being, and security”⁸⁸ However, protecting and improving environmental quality should go hand in hand with economic development and can produce more growth together with social development, peace, and security.⁸⁹

Sustainable development, in addition to promoting protection of the environment and integrating it with economic development, also addresses the needs of present and future generations (intergenerational equity) and the needs of the world’s poor (intra-generational equity).⁹⁰ Principle 3 of the Rio Declarations states that, “the right to development must be fulfilled so as to equitably meet the developmental and environmental needs of present and future generations.”⁹¹ It’s a tall order to focus on future generations when, in many developing countries, people are still living on under \$1 per day.⁹² Intra-generational equity does, however, address the needs of *today’s* poor.⁹³ The international community needs to assist developing nations, and thus, the poor people within developing countries, by providing funding and technology to move toward sustainable development. The Rio Declarations refer to cooperation to eradicate poverty in Principle 5 and focuses on the special needs of developing countries in Principle 6.⁹⁴

The Rio Declaration’s Principle 7, common but differentiated responsibility (CBDR), introduces the principle of equity into the relationship between developed and developing countries in their joint approach in addressing global environmental problems.⁹⁵ Treaties addressing such issues require near universal participation for them to be effective.⁹⁶ CBDR recognizes that the different circumstances of developing countries need to be considered if they are to be encouraged to become parties to international environmental agreements.⁹⁷ Principle 7 of the Rio Declaration defines the principle as follows:

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth’s ecosystem. In view of the *different contributions* to global environmental *degradation*, States have common but differentiated responsibilities. The *developed* countries acknowledge the responsibility that they bear in the

88. Dernbach, *supra* note 85, at 96.

89. *Id.*

90. Magraw & Hawke, *supra* note 63, at 619.

91. *Rio Declaration*, *supra* note 19, (Vol. 1), Annex 1, princ. 3.

92. Ibrahim J. Gassama, *Transnational Critical Race Scholarship: Transcending Ethnic and National Chauvinism in the Era of Globalization*, 5 MICH. J. RACE & L. 133, 133 (1999) (“[m]ore than 1.3 billion people in the developing world still struggle to survive on less than a dollar a day, and the number continues to increase.”).

93. Albert Mumma & David Hodas, *Designing a Global Post-Kyoto Climate Change Protocol that Advances Human Development*, 20 GEO. INT’L ENVTL. L. REV. 619, 639 (2008).

94. *Rio Declaration*, *supra* note 19, (Vol. 1), Annex 1, princs. 5, 6.

95. *Id.* princ. 7.

96. HALVORSEN, *supra* note 33.

97. *Id.*

international pursuit of sustainable development in view of the *pressures their societies place on the global environment* and of the *technologies and financial resources they command*.⁹⁸

There are two elements included in the principle: the first stipulates the duty of all States to cooperate in protecting the environment and address environmental problems, while the second requires that differing situations in different States are to be taken into account in order to achieve equity. Hence, CBDR leads to different standards or commitments for developing countries compared to those developed countries that have historically put more pressures on the environment and have the technology and financial resources to better address the environmental consequences of human activities.⁹⁹ The differentiated norms can also take the form of a delayed compliance schedule for developing countries or commitments by developed countries to transfer technology or financial assistance to developing countries.¹⁰⁰ Currently, CBDR is not considered a binding principle in international law, yet it is used in many treaties addressing environmental, development, and social issues.¹⁰¹

IV. LEGAL STATUS OF SUSTAINABLE DEVELOPMENT

There is still much debate about whether sustainable development is an emerging principle of customary international law binding on all States, or just binding on some States that are party to treaties that include the principle, or whether it is a non-binding principle, merely a general policy objective of international law.¹⁰² Several treaties mention the importance of sustainable development in their Preambles, such as the Agreement Establishing the World Trade Organization (WTO),¹⁰³ yet recognize that it is not a binding principle of law.¹⁰⁴ The UN Framework Convention on Climate Change (UNFCCC)¹⁰⁵ includes sustainable development as part of its objective in its Preamble, and lists it as one of its principles in Article 3 of the operative text, but states specifically at the outset of this section that these principles are only to function as guidelines for the Parties to the treaty.¹⁰⁶

98. *Rio Declaration*, *supra* note 19, (Vol. 1), Annex 1, princ. 7 (italics added for emphasis).

99. HALVORSSSEN, *supra* note 33, at 4.

100. *Id.* at 73, 76-77.

101. Anita M. Halvorssen, *Common, But Differentiated Commitments in the Future Climate Change Regime - Amending the Kyoto Protocol to include Annex C and the Annex C Mitigation Fund*, 18 COLO. J. INT'L ENVTL. L. & POL'Y 247, 254 (2007).

102. Segger, *supra* note 51, at 117.

103. Marrakesh Agreement Establishing the World Trade Organization, pmb., Apr. 15, 1994, 1867 U.N.T.S. 154 [hereinafter Marrakesh Agreement]. In international law, preambles are not considered binding, yet they are part of the context in which the treaty is to be interpreted. *See* Vienna Convention on the Law of Treaties, art. 31, May 23, 1969, 1155 U.N.T.S. 331; *see also* MARKUS GEHRING, *Sustainable Development in World Trade Law*, in SUSTAINABLE DEVELOPMENT IN INTERNATIONAL AND NATIONAL LAW 281 (Hans Christian Bugge & Christina Voigt eds., 2008).

104. *See* Marrakesh Agreement, *supra* note 103, pmb.

105. UNFCCC, *supra* note 34.

106. *See id.*, pmb., art. 3, ¶ 4.

Sustainable development has, however, become an established goal of the international community and a concept with some degree of normative status in international law.¹⁰⁷ Boyle and Freestone posit that there is no international legal obligation that development must be sustainable and that the decision on what is sustainable is left to individual governments.¹⁰⁸ Yet, they argue that development decisions are required to be the outcome of a process which promotes sustainable development.¹⁰⁹

States which commit to sustainable development through treaties or other international legal instruments have an obligation to balance economic, social, and environmental priorities in their development process, in the interest of future generations.¹¹⁰ Procedures and substantive obligations differing according to the treaties where they appear can be used to achieve this balance.¹¹¹ Some States have operationalized the concept of sustainable development through new domestic policies and laws, using environmental impact assessments (EIAs), for instance, to ensure more sustainable use or management of a particular natural resource.¹¹² However, if States do not integrate development and environmental considerations into their policies, carry out EIAs, or encourage public participation, then they have failed to implement the main elements of the Rio Declaration and other international legal instruments for the purpose of enabling sustainable development.¹¹³ This is implicitly supported in the Gabčíkovo-Nagymoros case where the parties were directed in the interest of sustainable development to review the environmental consequences of the project according to international law standards.¹¹⁴ In the recent Pulp Mills case, Argentina won the claim that Uruguay had not followed its obligation to carry out an EIA for the project.¹¹⁵ For the first time, the International Court of Justice (ICJ) recognized the EIA as being part of customary international law.¹¹⁶

107. See Int'l Law Ass'n, New Delhi Conference, Apr. 2-6, 2002, *Legal Aspects of Sustainable Development*, Res. 3/2002 (Apr. 6, 2002) available at <http://www.ila-hq.org/en/committees/index.cfm/cid/25>.

108. BOYLE & FREESTONE, *supra* note 68, at 16.

109. *Id.*

110. Segger, *supra* note 51, at 182.

111. *Id.*

112. *Id.*

113. BOYLE & FREESTONE, *supra* note 68, at 17.

114. *Id.*; see Gabčíkovo-Nagymaros Project, *supra* note 83, ¶ 140.

115. Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, ¶ 131 (April 20, 2010), available at <http://www.icj-cij.org/docket/files/135/15877.pdf>; see also Cymie R. Payne, *Pulp Mills on the River Uruguay: The International Court of Justice Recognizes Environmental Impact Assessment as a Duty under International Law*, ASIL INSIGHTS (Am. Soc'y. of Int'l. L., Washington, D.C.), April 22, 2010, at 1, available at <http://www.asil.org/insights100422.cfm>.

116. Pulp Mills on the River Uruguay, ¶ 204.

V. APPLYING SUSTAINABLE DEVELOPMENT PRINCIPLES TO CLIMATE CHANGE

A. *The Climate Change Regime*

One of the two legally-binding instruments resulting from the Rio Conference was the 1992 United Nations Framework Convention on Climate Change (UNFCCC).¹¹⁷ The adoption of the UNFCCC was the beginning of a long and ongoing process of addressing climate change on the international level. The Convention, which entered into force in 1994, recognizes the environment as a shared resource whose integrity and stability relies on the actions of all international players.¹¹⁸ Therefore, it calls for intergovernmental cooperation to mitigate climate change and reduce emissions.¹¹⁹ The Kyoto Protocol to the UNFCCC was adopted in 1997 and entered into force in 2005.¹²⁰ While the UNFCCC only encouraged industrialized countries to reduce emissions, the Kyoto Protocol sets binding emissions reductions targets, committing Annex I Parties (the industrialized countries) to a five percent reduction compared to 1990 levels in the first commitment period extending from 2008 to 2012.¹²¹ The UNFCCC has near universal participation, Afghanistan and the United States are the only States that are not parties to the Kyoto Protocol.¹²²

The fifteenth Conference of the Parties to the UNFCCC (COP-15) met in Copenhagen in 2009. Following up on their mandate from the Bali Conference of 2007 (COP-13), two working groups, the ad hoc Working Group the Long-term Cooperative Action (LCA) and the ad hoc Working Group on Further Action in the Kyoto Protocol (KP), produced their reports with draft texts for further negotiations that were adopted by the COP-15.¹²³ On the side-lines of the official UNFCCC meetings, twenty-six political leaders, convened by the Danish Presidency of the Conference, held separate meetings which were headed for failure, but a last-minute understanding was reached by the leaders of the U.S. and four developing countries, the BASIC countries (China, India, Brazil, South Africa) resulting in the Copenhagen Accord.¹²⁴ On the last day of COP-15, the

117. UNFCCC, *supra* note 34.

118. *Convention*, UNFCCC ESSENTIAL BACKGROUND, http://unfccc.int/essential_background/convention/items/2627.php (last visited Feb. 3, 2011).

119. *Id.*

120. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11, 1997, 37 I.L.M. 22, available at http://unfccc.int/essential_background/kyoto_protocol/items/1678.php [hereinafter Kyoto Protocol].

121. *Id.* art. 3.

122. Andorra is not a Party to the UNFCCC or the Kyoto Protocol. See, e.g., Kyoto Protocol, *supra* note 120, at Annex B. Niue and Cook Islands are Parties to both treaties even they are not sovereign States. They are States in free association with New Zealand. COOK ISLANDS GOVERNMENT ONLINE, <http://www.cook-islands.gov.ck/parliament.php> (last visited Feb. 7, 2011); GOVERNMENT OF NIUE, <http://www.gov.nu/wb/> (last visited Feb. 7, 2011).

123. UNFCCC, Conference of the Parties, 15th Sess., Copenhagen, Den., Dec. 7-18, 2009, *Draft Decision, Copenhagen Accord*, pmbl., U.N. Doc. FCCC/CP/2009/L.7 (Dec. 18, 2009) [hereinafter COP-15 Report].

124. Martin Khor, *After Copenhagen, the Way Forward*, 43 SOUTH BULLETIN 1 (2010), available at http://www.southcentre.org/index.php?option=com_content&task=view&id=1233&Itemid=289.

plenary meeting took 'note of' the Copenhagen Accord,¹²⁵ rather than 'adopting' it, thereby producing only a non-binding, political agreement.¹²⁶ Although this document represents progress in that it was the first time that all States agreed to emission reduction cuts or mitigation action,¹²⁷ the Accord's lack of legal standing within the UNFCCC process means that countries have no binding responsibility to fulfill their emissions reduction or mitigation action commitments.¹²⁸ The Copenhagen Accord also introduced specific new and additional monies to be provided for developing countries for adaptation and mitigation, which has never been stipulated in earlier documents in the UNFCCC process, as described below.¹²⁹

B. Implication of the Sustainable Development Principles on the Climate Change Regime

The sustainable development principles can provide guidance for the further development of the climate change regime. One of the most critical questions regarding sustainable development is what the need to achieve equity requires the industrialized countries to do in order to facilitate developing countries' move toward sustainable development – in terms of offering funding, technology, and capacity-building.¹³⁰ This is a question of burden sharing. In the context of climate change, if developed countries want to effectively address the problem, they have to accept the burden of making it more feasible for developing countries to do their part in addressing climate change. I will focus specifically on the principle of CBDR and what this means in the context of the climate change regime.

Looking at the two elements of the CBDR principle there is general consensus that there is a common responsibility to address climate change through cooperation, due to the common concern for the climate system and its adverse effects.¹³¹ There is also agreement in the international community that the responsibilities of the developed and developing States must be differentiated as far as commitments under climate regime, including the UNFCCC, Kyoto Protocol, and the non-legally binding Copenhagen Accord.¹³² In the UNFCCC and later agreements, there has also been consensus that industrialized countries are to take the lead in addressing climate change.¹³³

125. COP-15 Report, *supra* note 123, pmb1.

126. Daniel Bodansky, *The Copenhagen Climate Change Conference: A Post-Mortem*, 104 AM. J. INT'L L. 230, 230-31 (2010).

127. COP-15 Report, *supra* note 123, ¶¶ 4-5.

128. Khor, *supra* note 124, at 2.

129. COP-15 Report, *supra* note 123, ¶ 8.

130. Magraw & Hawke, *supra* note 63, at 620.

131. UNFCCC, *supra* note 34, pmb1., art. 3(1); *Rio Declaration*, *supra* note 19, ch. 7, (Vol. I); see also HAGUE CONFERENCE, *supra* note 6.

132. UNFCCC, *supra* note 34, art. 4(2)(a)-(b); Kyoto Protocol, *supra* note 120, art.10; HAGUE CONFERENCE, *supra* note 6, § IV(2)(i).

133. UNFCCC, *supra* note 34, art. 3(1).

The crux of the problem is deciding what criteria to use to differentiate standards for developed and developing countries.¹³⁴ An example of such a criterion was used in another multilateral environmental agreement, the Montreal Protocol on Substances that Deplete the Ozone Layer.¹³⁵ In this treaty the developing countries were entitled to delay compliance with the Protocol's control measures by ten years based on their consumption and production of specified ozone-depleting substances.¹³⁶

The Kyoto Protocol, on the other hand, mandates emission cuts by Annex I Parties (industrialized countries), yet it has no emission reduction commitments for developing countries.¹³⁷ Based on the historical contribution toward the current high levels of GHGs in the atmosphere, the Kyoto Protocol places a heavier burden on developed nations, by assigning them binding emission cuts, while the developing countries have no reduction commitments.¹³⁸

However, as mentioned, this approach was adopted with the overall understanding that industrialized countries would take the lead in reducing their emissions. Logically, when certain parties are assigned a leadership role, those not leading will be the followers. This would indicate that developing countries were meant to take on commitments at some later, unspecified date. This was implied in the UNFCCC and the Berlin Mandate which set the stage for the Kyoto Protocol.¹³⁹ Already in 1992, at the Rio Conference, it was clear that climate change would have to be addressed by all States if we were to solve the problem.¹⁴⁰ It was never the intent that developing countries would indefinitely be exempt from any commitments.¹⁴¹

It is problematic that the United States, being a Party to the UNFCCC and having agreed to the Berlin Mandate which required industrialized countries to take the lead in reducing emissions, signed but never ratified the Kyoto Protocol. In 1997, the U.S. Senate voted 95 to 0 on a resolution expressing that it would not approve of what became the Kyoto Protocol, unless commitments were included requiring developing countries to limit their GHGs.¹⁴² The Bush administration

134. HALVORSSSEN, *supra* note 33, at 86.

135. Montreal Protocol on Substances that Deplete the Ozone Layer, pmbl., ¶ 4, art. 5(1), Sept. 16, 1987, 26 I.L.M. 1541 (entered into force Jan. 1, 1989) [hereinafter Montreal Protocol].

136. *Id.* art. 5(1).

137. Kyoto Protocol, *supra* note 120, art. 3(1), art. 10.

138. *Id.*

139. UNFCCC, Report on the Conference of the Parties, 1st Sess., Berlin, Ger., Mar. 28 - Apr. 7, 1995, *Decisions Adopted by the Conference of the Parties*, Decision 1/CP.1, art. I(1)(c), U.N. Doc. FCCC/CP/1995/7/Add.1 (Jun. 6, 1995).

140. *Rio Declaration*, *supra* note 19, art. 7 (Vol. 1); *Stockholm Declaration*, *supra* note 11, arts. 2, 7.

141. *Rio Declaration*, *supra* note 19, princs. 2, 4, 6, 7, 11, (Vol. 1), Annex 1.

142. *Id.*; See Expressing Sense of Senate Regarding U.N. Framework Convention on Climate Change (Byrd-Hagel), S. Res. 98, 105th Cong. (1997). This resolution also includes the requirement that the protocol would not result in serious economic harm to the U.S. economy, and that the Administration give an economic analysis of the treaty's impact.

then proceeded to “revoke” the signature the U.S. placed on the Kyoto Protocol, stating that it had no intention of ratifying the Protocol.¹⁴³

Unfortunately, there has been a constant circular argument every time climate change negotiations have resumed. The standard argument by the developing countries was: if the U.S. is not a party to Kyoto Protocol, why should India or China have any commitments? As explained by Su Wei, the head of the climate change office at the National Development and Reform Commission, the debate is still centered on the core Kyoto Protocol principle of CBDR.¹⁴⁴ This principle, first stipulated in the UNFCCC, as mentioned above, calls for the industrialized nations to take the lead in cutting greenhouse gases, and in the Kyoto Protocol they are the only Parties that have emission reduction commitments. Su states that industrialized nations are still seeking to “water down” the principle by asking large developing countries such as China and India to commit to quantifiable cuts in emissions,¹⁴⁵ rather than just mitigation actions. The two sides still disagree on how to distribute the burden of cutting emissions and also on the provision of funds and the transfer of key technologies.¹⁴⁶

With the Copenhagen Accords, a tentative move has been made to break the deadlock, since the developing countries have made voluntary pledges to take on mitigation actions. Yet the Copenhagen Accord is not legally binding and did not become binding at the 2010 Conference of the Parties (COP-16) in Cancun, Mexico, mainly due to the disagreements on burden-sharing. However, by adopting the Cancun Agreements in 2010 through a decision by the plenary at COP-16, the Copenhagen Accord was brought into the realm of the UNFCCC process. Yet a COP decision does not confer binding commitments on the Parties. For that to occur, the Cancun Agreements need to be adopted into a treaty text. This may still take place in Durban, South Africa at COP-17 in December, 2012.¹⁴⁷ It is now up to the industrialized countries to live up to their commitments under the Kyoto Protocol and Cancun Agreements, with the first commitment period under Kyoto running out in less than two years. In addition, showing good faith also means actually fulfilling the pledges stipulated in the Cancun Agreements regarding funding and the transfer of technology.

The criteria used for differentiation in the Kyoto Protocol is, arguably, the historic contribution to the environmental degradation, specifically, earlier emissions of GHGs.¹⁴⁸ Another criteria used to differentiate responsibilities under the CBDR principle is the capacity to address climate change. Having benefitted

143. *Q&A: The Kyoto Protocol*, BBC NEWS, Feb. 16, 2005, <http://news.bbc.co.uk/2/hi/science/nature/4269921.stm>.

144. David Stanway, *China Says Rich-Poor Divide Still Dogs Climate Pact Talks*, PLANET ARK, Sept. 14, 2010, <http://planetark.org/enviro-news/item/59506>.

145. *Id.*

146. *Id.* Yet the Cancun Agreements did bring the Copenhagen Accord into the realm of the UNFCCC process through a decision by COP-16, see *supra* text accompanying note 147.

147. Cancun Agreements, *supra* note 3.

148. HAGUE CONFERENCE, *supra* note 6, at 13.

from the environmental ecosystem services makes developed countries disproportionately responsible and has given them the greatest capacity to deal with climate change. Furthermore, the special needs of developing countries (Rio Principle 6), specifically the need to develop in order to meet their economic and social needs, will result in increased environmental degradation in those countries. Based on the equity element of sustainable development and the principle of CBDR, developing countries have good reason to argue that due to disproportionate share of past emission, developed countries must now allow developing countries more rights to pollute.¹⁴⁹

CBDR has become a cornerstone of the burden sharing systems adopted in the international environmental treaties.¹⁵⁰ Both of the criteria mentioned above, historic contribution and capacity to deal with climate change, resonate with the CBDR principle. In regards to climate change, industrialized countries have the capacity to address the problem, whereas developing countries are more vulnerable to its effects.¹⁵¹

The CBRD principle can also be seen as having affected the nature of the obligation to cooperate in international environmental law, the climate regime in particular.¹⁵² Developing countries are expected to cooperate to the extent that they receive funding and technology transfer from developed countries, whereas industrialized countries are expected to cooperate by also assisting developing countries with financial and technological assistance.¹⁵³ This theory entails that developing countries make the implementation of their commitments under the climate regime conditional on the receipt of assistance from industrialized States as stipulated in the UNFCCC, Art. 4(7): “[t]he 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...”¹⁵⁴

The limits to the CBDR principle relates to the purpose of the treaty. If the CBDR principle defeats the object and purpose of the treaty it is not being applied correctly. Clearly, the CBDR principle must be applied using the same limits that apply in regards to sustainable development. In the case of climate change, if the developing countries' emissions of GHGs continue to grow to meet their development needs as allowed for under the UNFCCC, but lead to dangerous anthropogenic interference with the climate system, then the UNFCCC's goal of preventing this interference would be defeated.¹⁵⁵ In that case the CBDR principle

149. MUNASINGHE, *supra* note 45, at 159.

150. HAGUE CONFERENCE, *supra* note 6, at 12.

151. UNFCCC, *supra* note 34, pmbl.

152. Magraw & Hawke, *supra* note 63, at 631.

153. *Id.*

154. UNFCCC, *supra* note 34, art. 4(7).

155. *Feeling the Heat*, UNFCCC ESSENTIAL BACKGROUND, http://unfccc.int/essential_background/feeling_the_heat/items/2914.php (last visited Feb. 15, 2011).

would have gone beyond its limits because such a development would be unsustainable. There needs to be a balance and developing countries need to make the shift to sustainable development. The balance would be adjusted depending upon how much funding and technology transfer was offered by industrialized countries.

In sum, using the criteria of historic contribution and the situation of developing countries, being less developed, resulting in a limited capacity to deal with climate change leads to the same result: industrialized countries have a duty to carry a heavier burden and assist developing countries in addressing climate change with funding and technology in order for developing countries to take mitigation actions and adaptation measures.

C. Funding

Recognizing the CBDR principle as the basis for the burden sharing in addressing climate change, it is clear that the onus is on the industrialized countries to addressing climate change. The new framework on climate change needs to provide the required funding for developing nations to transition to a clean energy economy and adapt to the impending negative effects of climate change, like floods and droughts. As mentioned above, financial assistance and transfer of technology is essential to facilitating the developing countries in implementing their mitigation actions. As mentioned in the Cancun Agreements, "... developing country Parties are already contributing and will continue to contribute to a global mitigation effort... and could enhance their mitigation actions depending on the provision of means of implementation by developed country Parties."¹⁵⁶

Ever since the adoption of the UNFCCC, funding instruments and measures has been a constant topic of debate at the treaty negotiations. The main source of development assistance used to come from Official Development Assistance (ODA), yet rather than all States increasing their contribution to reach the goal of 0.7% of their GDP as agreed to in 1970 UN Resolution and in countless instruments after that, this source of funding has shrunk.¹⁵⁷ Some of this has been replaced by other bilateral and multilateral funding sources, such as the Global Environment Facility (GEF), addressed below. Other entities have also been established to provide developing countries with funding for mitigation and adaptation.¹⁵⁸ A much larger factor is private financing through foreign direct investment (FDI) and other investment opportunities, in addition to the carbon market.

The funding mechanism under the UNFCCC is operated by the GEF. The GEF, established in 1991, is run jointly by the UN Environment Programme, the

156. Cancun Agreements, *supra* note 3, at III(B), para. 1.

157. International Development Strategy for the Second United Nations Development Decade, G.A. Res. 2626 (XXV), ¶ 43, U.N. Doc. A/8124 (Oct. 24, 1970).

158. G-24 Discussion Paper Series, *Financing and the Climate Mitigation and Adaptation Measures in Developing Countries*, UNCTAD, vii, U.N. Doc. UNCTAD/GDS/MDP/G24/2009/4 (Dec. 2009) (by Frank Ackerman).

UN Development Programme, and the World Bank.¹⁵⁹ The funding mechanism under UNFCCC was established in order that developed countries, specifically the richer OECD countries (Annex II Parties), could provide funds to developing country parties to assist them in implementing the Convention.¹⁶⁰ GEF is accountable to the UNFCCC for its management of the funding mechanism.¹⁶¹ GEF manages several of the funds established by decisions of the Conference of the Parties to the UNFCCC (COPs).¹⁶² Among them are the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF) which were established by the COP-7 meeting in Marrakesh in 2001.¹⁶³

The Kyoto Protocol uses the same funding mechanism as the UNFCCC. The Kyoto Protocol stipulates that developed countries should:

- (a) provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in advancing the implementation of existing commitments... (b) provide such financial resources, including the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of advancing the implementation of existing commitments . . .¹⁶⁴

In addition, the parties may avail themselves of funds through "bilateral, regional and other multilateral channels."¹⁶⁵

The Adaptation Fund was established under the Kyoto Protocol "to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change."¹⁶⁶ It is financed from a share of the proceeds (2%) from the clean development mechanism (CDM) project activities and other sources of funding.¹⁶⁷

The Copenhagen Accord gives a more detailed framework for the funding for developing countries to enable enhanced mitigation actions:

- Scaled up, new and additional, predictable and adequate funding as well as improved access shall be provided to developing countries, in accordance with the relevant provisions of the Convention, to enable and support enhanced action on mitigation, including substantial finance to reduce emissions from deforestation and forest degradation (REDD-

159. *What is the GEF*, GLOBAL ENVIRONMENT FACILITY, <http://www.thegef.org/gef/whatisgef> (last visited Feb. 15, 2011).

160. UNFCCC, *supra* note 34, art. 4(3).

161. *Id.* art. 21(3).

162. *Id.*

163. UNFCCC, Conference of the Parties, 7th Sess., Marakkesh, Morocco. Oct. 29–Nov. 10, 2001, *Marakkesh Accords*, Dec. 7/CP.7, paras. 2, 6, U.N. Doc. FCCC/CP/2001/13/Add.1 (Jan. 21, 2002).

164. Kyoto Protocol, *supra* note 120, arts. 11(2)(a) and (b).

165. *Id.* art. 11(3).

166. Adaptation Fund Board, *Operational Policies and Guidelines for Parties to Access Resources from the Adaptation Fund*, http://www.adaptation-fund.org/system/files/AFB.Operational_Policies_and_Guidelines.pdf (last visited Feb. 21, 2011).

167. *Id.*

plus), adaptation, technology development and transfer and capacity-building.¹⁶⁸

Furthermore, the Accord stipulates that the developed countries are to provide new and additional funds “approaching US \$30 billion for the period 2010-2012 with balanced allocation between adaptation and mitigation.”¹⁶⁹ “The objective of the funds, referred to as ‘fast start finance’ is to help developing countries adapt to the impact of climate change” and to pursue mitigation actions that put them on a low-carbon development pathway.¹⁷⁰ In the context of mitigation actions, developed countries “commit to a goal of mobilizing jointly US \$100 billion dollars a year by 2020 to address the needs of developing countries.”¹⁷¹ This financial assistance will come from “a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance.”¹⁷² “New multilateral funding for adaptation,” the Accord states, “will be delivered through effective and efficient fund arrangements, with a governance structure providing for equal representation of developed and developing countries.”¹⁷³ In addition, a significant portion of such funding should flow through the Copenhagen Green Climate Fund.¹⁷⁴ The Copenhagen Accord expressly states that such a fund “shall be established.”¹⁷⁵ The Cancun Agreements reiterated and expanded on all the funding provisions of the Copenhagen Accord.¹⁷⁶

The UN Secretary-General has already established a High-Level Advisory Group on Climate Change Financing, as called for by the Copenhagen Accord,¹⁷⁷ to study the potential sources of revenue for financing mitigation and adaptation activities in developing countries to make progress on the key issue of finance in the course of 2010. Raising US \$100 billion by 2020 is a huge challenge, but one that can be achieved. Many developing countries still call for six times that sum, equaling 1.5 % of the developed countries’ GDP.¹⁷⁸ Financing the investment of a new industrial revolution with the goal of moving toward a low-carbon economy is a major development paradigm shift.¹⁷⁹ As Nicholas Stern put it: “[h]igh carbon

168. COP-15 Report, *supra* note 123, ¶ 8.

169. *Id.*

170. *Fast Start Finance*, CLIMATEFUNDSUPDATE.ORG, <http://www.climatefundsupdate.org/fast-start-finance> (last visited Feb. 4, 2011).

171. COP-15 Report, *supra* note 123, ¶ 8.

172. *Id.*

173. *Id.*

174. *Id.*

175. *Id.* ¶ 10.

176. Cancun Agreements, *supra* note 3, at IV.

177. *Id.* ¶ 9.

178. *AWG-LCA discusses Finance Board, quantum, links between Fund and thematic issues, etc...*, THIRD WORLD NETWORK, 1 (June 3, 2010), http://www.twinside.org.sg/title2/climate/news/Bonn06/TWN_bonn6.up06.pdf.

179. *The UN Secretary-General’s High-Level Advisory Group on Climate Change Financing - A Briefing to UNFCCC Parties*, UNFCCC WEBCAST (Aug. 5, 2010, 22:30), http://unfccc2.metafusion.com/kongresse/100802_AWG/templ/play.php?id_kongresssession=2946&theme=unfccc (statement of Nicholas Stern).

growth is before very long a contradiction in terms.”¹⁸⁰ “It will kill itself,” he said.¹⁸¹ Stern explained that when millions of people need to move due to drought and sea level rise, there will be conflict and that will not be growth.¹⁸²

The reduction of emissions from deforestation and forest degradation, the REDD-plus program was launched in September 2008 as called for under the Bali Action Plan at COP-13.¹⁸³ This program was created after the realization that paying developing countries not to cut down their trees would reduce a substantial amount of CO₂ because forests serve as sinks for CO₂.¹⁸⁴ The difficult part is designing a program that works for all the stakeholders, including indigenous peoples and local communities. The program now supports REDD readiness activities in twelve countries, including Bolivia, Cambodia, Democratic Republic of Congo (DRC), Indonesia, Panama, Papua New Guinea, Paraguay, the Philippines, the Solomon Islands, United Republic of Tanzania, Viet Nam, and Zambia.¹⁸⁵ To date, US \$51.4 million has been approved by the UN-REDD Program’s Policy Board for eight of those pilot countries.¹⁸⁶ This money helps to support the development and implementation of national REDD+ strategies. The largest donors are, in order, Norway (US \$52.2 million committed for 2008-2009, another US \$32.1 million committed for 2010), Denmark (\$2 million committed in June 2009), and Spain (announced US \$20.2 million over 3 years).¹⁸⁷ The REDD program is still seeking more donors, given that donations are completely voluntary.¹⁸⁸ The Cancun Agreements essentially operationalized the REDD plus program outlined in the Copenhagen Accord.¹⁸⁹

Complementing other multilateral financial mechanisms, developed and developing countries designed the Climate Investment Funds (CIF) promotes “scaled-up financing for demonstration, deployment and transfer of low-carbon technologies with significant potential for long-term greenhouse gas emissions savings.”¹⁹⁰ Under the CIF, the World Bank (WB) established the Clean

180. *Id.* at 23:29.

181. *Id.* at 23:31.

182. STERN REVIEW, *supra* note 4, at 129-30 (2007).

183. *About the UN-REDD Programme*, UN REDD PROGRAMME. <http://www.un-redd.org/AboutUNREDDProgramme/tabid/583/Default.aspx> (last visited Feb. 11, 2011); Fisheries & Agriculture Organization of the United Nations [FAO], United Nations Development Programme [UNDP] & United Nations Environment Programme [UNEP], *UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD)*, 2 (June 20, 2008), http://www.unredd.net/index.php?option=com_docman&task=doc_download&gid=4&Itemid=53 [hereinafter *UN-REDD*].

184. *UN-REDD*, *supra* note 183, at 1-2.

185. *About the UN-REDD Programme*, *supra* note 183.

186. *Id.*

187. *Id.*

188. *Id.*

189. Canun Agreements, *supra* note 3, at III(c).

190. *Clean Technology Fund*, CLIMATE INVESTMENT FUNDS, <http://www.climateinvestmentfunds.org/cif/node/2> (last visited Feb. 21, 2011).

Technology Fund and the Strategic Climate Fund.¹⁹¹ These funds are governed by a Trust Fund Committee, a Partnership Forum, a Multilateral Developing Banks Committee, an Administrative Unit and a Trustee (the WB).¹⁹² The Strategic Climate Fund serves as a framework for the implementation of three programs: The Forest Investment Program, the Pilot Program for Climate Resilience, and the Program for Scaling-Up Renewable Energy in Low Income Countries.¹⁹³ As of April 17, 2011, 14 donor countries had pledged US \$6.5 billion to the Climate Investment Funds, with the United States, the United Kingdom, and Japan being the biggest donors.¹⁹⁴ The funds are distributed to 45 developing countries in the form of grants and loans through Multilateral Development Banks and the Copenhagen Green Fund to be replaced by the Green Climate Fund.¹⁹⁵ In addition, there are plans in place to mobilize some US \$40 billion for country-led low carbon growth.¹⁹⁶

Considering funding, transfer of technology, and capacity-building as decisive components in addressing climate change, it is important that the multilateral funding mechanisms have a balanced representation (by developed and developing countries) in the decision-making bodies, and that there is transparency and accountability. Examining some of the different funding mechanisms, it can seem overwhelming to track them all, especially for developing countries that may not have the capacity to digest all the information. However, there are NGOs doing just that, such as the Climate Funding Update which has a very clear presentation of the different international funding initiatives.¹⁹⁷ These civil society actors will become more and more important as the money starts flowing in substantial amounts, and tracking it to serve as an extra check on accountability will become vital.

VI. CONCLUSION

Developing countries will continue developing in their efforts to eradicate poverty, however, if it is to be sustainable development, especially at a time when it is clear that climate change is having and will continue to have major impacts in the not so distant future, developed countries will need to provide them with

191. *Trust Fund Committees*, CLIMATE INVESTMENT FUNDS, http://www.climateinvestmentfunds.org/cif/Trust_Fund_Committees (last visited Feb. 21, 2011) [hereinafter *Trust Fund Committees*].

192. *Governance*, CLIMATE INVESTMENT FUNDS, <http://www.climateinvestmentfunds.org/cif/governance> (last visited Feb. 21, 2011).

193. *Trust Fund Committees*, *supra* note 191.

194. *Funding*, CLIMATE INVESTMENT FUNDS, <http://www.climateinvestmentfunds.org/cif/funding-basics> (last visited Feb. 21, 2011).

195. Cancun Agreements, *supra* note 3 at para.102. Press Release, The World Bank, Donor Nations Pledge Over \$6.1 Billion to Climate Investment Funds (Sept. 26, 2008), *available at* <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21916602~pagePK:34370~piPK:34424~theSitePK:4607,00.html>.

196. Press Release, Climate Investment Funds, Climate Investment Funds set to Mobilize US\$40 Billion for Country-Led Low Carbon Growth (March 19, 2010), *available at* http://www.climateinvestmentfunds.org/cif/pf_2010_pressrelease_03_19.

197. CLIMATE FUNDS UPDATE, <http://www.climatefundsupdate.org/> (last visited Feb. 21, 2011).

technical and financial assistance. The sustainable development principles call for providing technical and financial assistance in the climate change regime, particularly the principle of common but differentiated responsibility. This principle, though not legally binding, is having an increased influence on the climate negotiations. Examining some of the funds that have been established, it is clear that a large effort is being made to enable developing countries to move to a sustainable pathway, specifically taking mitigation actions in order to address climate change alongside the emission reduction commitments by the developed countries. As more and more funds are created, the focus will constantly need to be on a balanced representation (by developed and developing countries) in decision-making bodies, and on transparency and accountability to make sure the funds actually facilitate a shift to a low carbon economy, enabling us to avoid the worst impacts of climate change.

